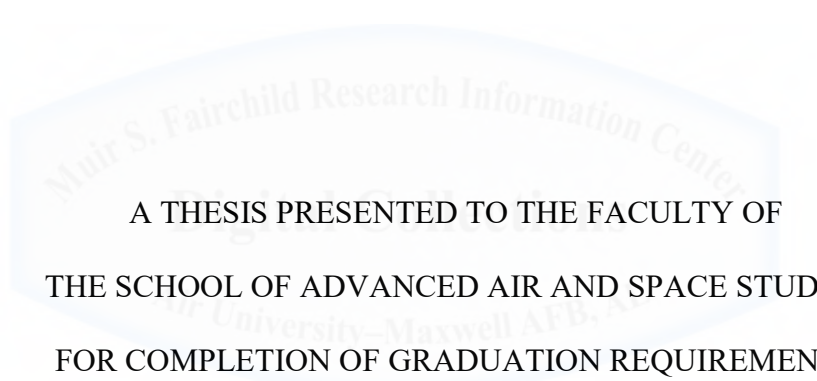


EXPEDITIONARY AIR BASE DEFENSE:
HISTORICAL CASES AND MODERN IMPLICATIONS

BY
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APPROVAL

The undersigned certify that this thesis meets master's-level standards of research, argumentation, and expression.

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DISCLAIMER

The conclusions and opinions expressed in this document are those of the author. They do not reflect the official position of the US Government, Department of Defense, the United States Air Force, or Air University.



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Lt Col Nicholas Petren was a 2002 graduate of Norwich University, where he majored in both history and political science. His 15-year career on active duty with the Air Force took him to a variety of assignments and places from the squadron level to Major Command staff, culminating with the command of the 569th US Forces Police Squadron in Germany. Prior to assignment to SAASS, he completed US Army Command and General Staff College at Fort Leavenworth, KS.



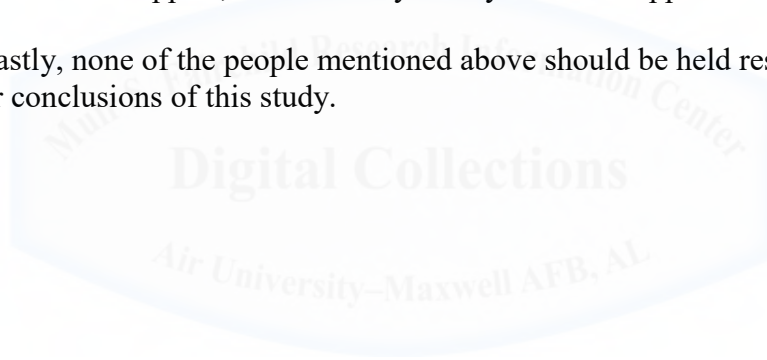
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ABSTRACT

This study is an analysis of expeditionary air base defense in the post-World War II era, focusing on Western military examples, with the goal of informing current and future leaders within the USAF and larger joint military force. The study begins with a brief overview of the contemporary operational environment and likely future trends in the threats to US expeditionary air bases. A concise comparison of USAF air base defense forces from the 1960s and the 2010s follows, highlighting the increase in training quality and competence, and the decrease in organic weapons capability. A series of case studies examines the defense of Dien Bien Phu by the French in 1954, Khe Sanh, Tan Son Nhut, and Bien Hoa by US Forces in the 1964-1972 period, the US coalition at Joint Base Balad during Operation Iraq Freedom, and the NATO coalition at Bastion-Leatherneck-Shorabak during Operation Enduring Freedom in 2004-2012. Analysis of these case studies reveals several themes of expeditionary air base defense in the modern era, including: the pervasive problem of standoff indirect fire attacks; the criticality of a competent and dedicated ground intelligence function, and its conspicuous absence; the importance of supporting fires; and, the tendency to underestimate enemy forces. The paper concludes by arguing that the Department of Defense should persist with and strengthen recent positive changes to Joint Doctrine. The Base Security Zone of expeditionary air bases should be identified as part of a terrain and threat analysis, and used to set the Base Boundary to enable effective base defense operations led by a single commander at the appropriate tactical level. Dedicated intelligence support, effective cross-functional base planning, from site selection to base layout, construction, and operation, and unity of effort and detailed integration of joint forces are critical elements. In the contested environment of possible future high-end conflict, adaptive basing is a necessity, but not the only answer. The USAF needs a Security Forces weapons school, and the strategic narrative battle matters more in the Information Age.

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Chapter 1

Introduction

It is easier and more effective to destroy the enemy's aerial power by destroying his nests and eggs on the ground than to hunt his flying birds in the air.

Giulio Douhet, 1921

In September 2012, the Bastion-Leatherneck-Shorabak base complex was attacked by 15 Taliban members. The attackers were mostly inexperienced young men with approximately three weeks of training. The attackers breached the perimeter of Bastion airfield, and caused over \$200 million in damage during an eight-hour attack. Six USMC AV-8B Harrier jets were destroyed along with several helicopters, making it the most damaging attack in terms of equipment destroyed on a US-led coalition airbase since the Vietnam War. While it was the most well-publicized and damaging attack of the war in Afghanistan up to that time, US and coalition expeditionary air bases were the target of frequent standoff attack and less frequent attack by assault teams, vehicle-borne improvised explosive devices (VBIED), or other forms of direct attack on numerous occasions during the last 15 years. Indeed, this was not a new phenomenon, nor is it likely to fade into history in the foreseeable future.

Insurgent attacks on expeditionary air bases have a long history. After World War II, the French military sought to create “hedgehog” like firebases, primarily supplied by air, in the wilderness of Vietnam in order to maintain control of their colonies in Indochina. After some success in the Na San Valley, the French forces and their local allies suffered a disastrous defeat at Dien Bien Phu in 1954 when the base was overrun.¹

During the US involvement the Vietnam War, expeditionary air bases operated by the USAF and USMC faced determined attacks by a wide array of forces, ranging from small teams of insurgents with little training to division-sized assaults from North Vietnamese Army (NVA) regulars supported by massed and accurate indirect fire.

¹ Martin Windrow, *The Last Valley: Dien Bien Phu and the French Defeat in Vietnam* (Cambridge, MA: Da Capo Press, 2006), 62.

In 1979, the Union of Soviet Socialist Republics (USSR) sent the Red Army into Afghanistan to suppress a revolt against Soviet rule by a rebellious dictator, only to face stubborn resistance fueled by the religious fanaticism of mujahedeen fighters and significant foreign support. The Soviet Air Force repeatedly suffered significant losses, often due to indirect fire, from attacks on their air base near Bagram.²

Moving ahead to more contemporary experiences, threats faced by US-led coalition forces during Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) during the last 15 years were decidedly less formidable than that posed by the large formations of the North Vietnamese Army, yet retained some disruptive ability. Similar challenges face the ongoing coalition operations in Iraq and Afghanistan, as well as other locations in Southwest Asia and East Africa.

For at least the next 20 years, any major US military operation will call for airbases in or near the theater of operations. These bases may be expeditionary or existing overseas installations. Informed, thinking adversaries understand the importance of US airpower to the success of US-led operations, and will likely attempt to attack forward airbases to degrade US air operations. These facts, assumptions and informed predictions are influenced by, and influence, assumptions about the global geo-political and threat environments, so the author owes the readers a brief explanation.

First, let us address general global trends. Noted counterinsurgency expert David Kilcullen's 2013 book *Out of the Mountains* includes a well-supported discussion predicting the next 50 years will see a continued geometric increase in global population, fueled largely by developing nations and immigrant populations in developed nations. This increase will continue to be focused in littoral areas, or generally within 50 miles of a major body of water. Additionally, the proportion of the total population that resides in urban areas will continue to increase, resulting in the rise of the mega-city.³ Lastly, the connectedness of populations enabled by globalization and the information age will

² Edward B Westermann, *The Limits of Soviet Airpower: The Bear Versus the Mujahideen in Afghanistan, 1979-1989* (United States: Biblioscholar, 2012), 92.

³ A mega-city is generally defined as a metropolitan area with a population that exceeds ten million people.

continue to progress, due to more trade and mobility, but primarily because of the reduced cost and increased availability of technology and connected devices.⁴

The myriad short- and long-term, global, regional, local, social, economic, and political implications of these trends are the subject of endless debate. However, there is relative consensus regarding the trends themselves among academics and governmental organizations. Furthermore, the likelihood of future conflict is the most confident prediction that results from analysis of global trends. For instance, the US Department of Defense released the *Joint Operating Environment (JOE), 2035* report in July of 2016. The JOE describes a vision of a global environment characterized by “contested norms” and “persistent disorder.”⁵ “Contested norms” refers to increased challenges to the post World War II international order regarding rule of law, trade, peaceful resolution of international disputes, and respect for the role of international organizations and national sovereignty. These challenges will come from both “state and non-state actors” and may take many forms.⁶ They will include hybrid warfare used by states, and operations in the “gray zone,” described as “intense political, economic, informational, and military competition more fervent in nature than normal steady-state diplomacy, yet short of conventional war.”⁷ Hybrid wars and gray zone operations will likely include the use of modern propaganda tools leveraging information age innovations such as social media platforms, concealed funding streams for sponsored terrorist or insurgent groups, and proxy organizations carrying out state supported actions coordinated with false narratives which obscure the facts for the international audience sufficiently to prevent a sufficiently strong or swift coalition response.

In addition to the trends of shifting economic and military power, eroding international institutions, and increasingly contested international norms, the JOE

⁴ David Kilcullen, *Out of the Mountains: The Coming Age of the Urban Guerrilla* (New York, NY, Oxford University Press, 2015), 28.

⁵ US Department of Defense, *Joint Operating Environment (JOE), 2035: The Joint Force in a Contested and Disordered World*, 14 July 2016, 4.

⁶ *JOE*, 2035, 5.

⁷ Joseph L. Votel, Charles T. Cleveland, Charles T. Connett, and Will Irwin, *Unconventional Warfare in the Gray Zone* (Washington D.C.: Joint Force Quarterly, Vol. 80, National Defense University Press, 2016), 101.

predicts “strife, conflict, and war are certain to endure through 2035.”⁸ This persistent disorder will include the “collapse of weak states,” and “fracturing of weak states by strong states” which may contribute to increased chances for the proliferation of Weapons of Mass Destruction, and difficulty containing pandemic disease outbreaks.⁹

The above statements should not be interpreted as alarmist and self-serving hyperbole, but rather as a clear-eyed review of the current global security environment and the socio-economic trends driving change. General war between great powers remains unlikely, but possible. Limited conventional clashes between powerful states over key areas of national interest divergence are certainly plausible. Continued conflict in ungoverned areas and developing states is almost a certainty. Throughout, the US will likely remain engaged globally through economic interests and security alliances, or at least retain the option to project conventional (and nuclear) military power globally. Against this hazy milieu of an unpredictable future in the next 20 years, is the US prepared to project power, specifically airpower, across the spectrum of conflict? In order to do so, forward airbases will be required.

Forward air bases will face attack across the spectrum of conflict. Non-state or weaker state adversaries will likely be inspired by successful attacks carried out against US airbases during operations in Iraq and Afghanistan. Near-peer adversaries would likely use both conventional methods such as ballistic or cruise missile attack as well as unconventional means such as special operations forces or local proxy forces to attack forward US airbases. Additionally, newly fielded technologies such as small unmanned aerial systems, advanced electronic attack, or cyber attacks may be employed as well.

This paper offers recommendations for improving the posture of the USAF and the larger Joint Force in terms of expeditionary air base defense. This will be accomplished through a historical review of case studies in expeditionary air base defense from the 1950s through the US involvement in Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF). The author will identify strengths and weaknesses in operational approaches or tactical trends with the goal of ascertaining implications and

⁸ *JOE*, 2035, 1.

⁹ *JOE*, 2035, 9.

recommendations regarding how US forces can better defend airbases in future conflicts. The author also intends to highlight how well the force was prepared, through force structure and training, to take on the missions it was asked to perform and the threats it was asked to face. This paper is not intended to address the myriad of questions surrounding the efficacy of air, space, and cyber forces in future conflict. Nor is it able to review in detail all attacks against air bases from the beginning of the 20th century through today, as that would result in a massive tome. The historical case studies are all from the post-World War II era, and chosen specifically for their resemblance to conflicts the US may be involved in during the next 20 years. In this way, the author hopes the paper may provide insights relevant to today's warriors, rather than simply sate historical curiosity.

Within this work, an "expeditionary" air base is one that is located outside of US territory, and temporarily occupied or built to support a military operation. Enduring main operating bases located in foreign countries, such as Ramstein Air Base or Kadena Air Base, are not considered "expeditionary," but forward main operating bases. Examples of expeditionary air bases were Balad and Al Assad during OIF or Bagram, Kandahar, and Bastion-Leatherneck during OEF. Expeditionary bases can transition to enduring forward bases over time, when temporary bases transition to long term presence with permanent structures and formal status of forces agreements, etc. An example of this is Al Udeid Air Base in Qatar.¹⁰

In order to build the background, the next chapter provides a brief summary of how USAF security forces were structured and equipped, and what missions they were postured to execute, in the pre-Vietnam War era. This summary will then be contrasted with today's force, to consider both the types of operations the respective forces were expected to tackle, and their suitability to do so.

¹⁰Al Udeid Air Base. *CNN Special Report: War in Iraq*, <http://www.cnn.com/SPECIALS/2003/iraq/forces/coalition/deployment/air.force/al.udeid.html>.

Chapter 2

Historical USAF Base Defense Capabilities Comparison

Every airfield should be a stronghold of fighting air-groundmen, and not the abode of uniformed civilians in the prime of life protected by detachments of soldiers.

Sir Winston Churchill, 1941

The purpose of this section is to provide the reader with background on the organic ability of USAF tactical units to defend expeditionary air bases. Contrasting the corporate decisions regarding this issue the USAF made 30-60 years ago with the current state of affairs is informative in two ways. It exhibits the types of wars that the USAF planned to fight, as part of the larger joint force, and the force structure intended to carry out those operations.

The initial strength of USAF Air Police went from approximately 10,000 to 39,000 during the Korean War, then dropped down to approximately 30,000 again following the war, as the perceived requirement for expeditionary air base defense faded.¹ The USAF Air Police force of the 1950s and early 1960s was primarily focused on strategic nuclear strike mission assurance.² Air Force Regulation 205-5 was focused on protecting critical operational assets and critical enabling assets against sabotage or damage from covert enemy action. Most of these assets were located at established bases in the continental United States or at overseas installations in friendly countries. Asset protection was accomplished chiefly through strict personnel entry and circulation control.³ As such, there was little focus on ground combat training or expeditionary base defense. Security policies focused primarily on nuclear security and resource protection created persistent problems in locations where an air base defense emphasis and posture

¹ Karl Hoover, *Air Base Ground Defense, the Training Controversy* (Research Report, Randolph Air Force Base, TX: History and Research Office, Air Training Command, 1991), 3.

² Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 8.

³ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 8.

was required by the Air Police, such as air bases in the Republic of Korea and in the Philippines.⁴

The focus on protection of the nuclear mission and standard garrison law and order duties was reasonable based on the intellectual and political climates both internal and external to the USAF. President Dwight Eisenhower's New Look budget priorities and strategic outlook focused on massive nuclear strike capability, and a sound rationale underpinned this strategy.⁵ The resultant budget and organizational dynamics, however, served to reinforce pre-conceived notions about how and when airpower could be a decisive instrument of policy. For instance, the senior leaders of the USAF generally chalked up the USAF operations in the Korean War as an aberration. Nothing that took place on the Korean peninsula undermined their belief that airpower should be focused on strategic bombing. Once the "police action" in Korea ended, the USAF quickly returned its focus to Strategic Air Command (SAC) and general nuclear war with the Soviet Union.⁶ Following suit, the emphasis on creating ground defense capabilities within the Air Police career field shifted back to resource protection. The ground defense training ranges at Beale Air Force Base were closed, and by July 1955, the training focus of the former ground defense course was shifted to "Air Police instruction."⁷

The Air Force regulations and manuals covering security and base defense from this period were resource-centric. In other words, the focus of security police was the security of important equipment and assets. The regulations also drove a compliance-based approach. This approach forced local commanders to ensure their security policemen were securing resources in accordance with regulation, rather than creatively applying available manpower in the most effective way. To illustrate, Air Force Regulation 355-4, *Defense – Local Ground Defense of Air Force Installations*, published

⁴ Johnson, Edward E., Colonel, USAF, *End of Tour Report, June 1979 – August 1981*, (Hickam AFB, HI: HQ PACAF), 6.

⁵ Kaplan, Edward. *To Kill Nations: American Strategy in the Air-Atomic Age and the Rise of Mutually Assured Destruction* (Ithaca, NY: Cornell University Press, 2015), 223.

⁶ Crane, Conrad C. *American Airpower Strategy in Korea, 1950–1953* (Lawrence, KS: University Press of Kansas, 2000), 170.

⁷ Conrad, James and Jerry M. Bullock. *Defenders of the Force: The History of the United States Air Force Security Forces, 1947-2006* (Draft Research Report, 2009), 87.

in March 1953, stated: “Active local ground defense of Air Force installations by Air Force personnel (except normal internal security measures) is an emergency function, normally of short duration, and the capability which the Air Force must achieve is an emergency capability. This emergency capability does not include provision for sustained ground defense operations.”⁸ The legacy resource-centric, compliance-based approach to security and base defense would continue to serve the SAC nuclear enterprise soundly, but proved ill-suited for the majority of expeditionary challenges and mission sets America’s Airmen would face, beginning in the 1960s. To illustrate, the security police squadron commander at Phu Rang Air Base in South Vietnam stated in his after-action report: “we found ourselves constantly facing a choice between compliance with Seventh Air Force policies and getting the job done.”⁹

Units were organized as Air Police, and after 1966, Security Police squadrons, along the lines of an Army unit with a commander, commander’s support staff, an operations and training officer in charge of the operations flights that made up the bulk of the squadron, and a supply section.¹⁰ Conspicuously absent from this organization was an intelligence section as an Army unit would include. The commander of the Security Police Squadron at Tan Son Nhut Air Base from 1969-1970 would later state, “From first to last, self-help in air base defense was a permanent means of plugging the support holes in critical areas such as ground defense intelligence, logistics, and training.”¹¹ Regarding training, the career field was officially split in January 1971 into Law Enforcement and Security specialties.¹² Airmen were trained along either a law enforcement (LE) or security specialist track, with law enforcement similar to civilian police training and security focused on the techniques, tactics, and procedures (TTP) of safeguarding important USAF equipment and facilities on established bases.

The LE Airmen were primarily armed with the Smith and Wesson Model 15 .38 caliber revolver, while the security Airmen wielded M1 Carbines as standard duty

⁸ Bean, Michael D. *United States Air Force Security Forces in an Era of Terrorist Threats* (Maxwell AFB, AL: School of Advanced Air and Space Studies, 1999), 24.

⁹ Conrad and Bullock, *Defenders of the Force*, 116.

¹⁰ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 12.

¹¹ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 153.

¹² Conrad and Bullock, *Defenders of the Force*, 211.

weapons, then M-16 rifles after their introduction in the 1960s. Heavier weapons were available depending on the mission set and location. These included .30 and .50 caliber machines guns such as the M60 and M2, recoilless rifles, various grenades and grenade launchers, mines, and 81mm or 60mm mortars.¹³ The availability and frequency of training with heavier weapons varied over the years based on the character and scope of ongoing expeditionary operations.

The basic organization of the squadrons is certainly recognizable today, as squadrons use the general staff structure, similar to a modern Army unit. At the squadron level, S-1 is the commander's support staff, performing administrative functions. The S-2 is the force protection intelligence and investigations section. The S-3 incorporates the majority of the unit. Lead by the operations and training officer, the S-3 includes the operations staff, training section, and the operations flights that perform the unit's primary mission every day. The S-4 is the supply section. The S-5 is the plans and administration support section.

The career field was consolidated as "Security Forces" in 1997, merging the LE and Security career fields, and incorporating combat arms training and maintenance and military working dog handlers as well. The modern USAF Security Forces force structure includes approximately 24,000 active duty Airmen.¹⁴ Including civilian and total force Air National Guard and Reserve members, the total is 38,000.¹⁵ The size of the force is smaller than it was during much of the Cold War, but it now comprises a greater proportion of the active duty enlisted force than before, largely because of increased threat perception in the post 9/11 world. As of FY17, the 3P0 and 31P (Security Forces) enlisted and officer career fields make up approximately seven point five percent of active duty USAF end strength, versus approximately three point six

¹³ Conrad and Bullock, *Defenders of the Force*, 484-488.

¹⁴ Gooding, Aeneas. *Doing it All: The USAF COIN Force?* (Maxwell AFB, AL: School of Advanced Air and Space Studies, 2009), 27.

¹⁵ General David L. Goldfein, USAF. Chief of Staff of the Air Force official Facebook account post: "Thanks to the more than 38,000 dedicated Defenders...", 17 April 2017.

percent in 1960.¹⁶ While this is not a statistically proper comparison, as the active duty end strength dropped from nearly 815,000 to under 320,000 during the same period and the number and importance of civilian employees as a proportion of the total force increased, it still points to a significant change in resource prioritization.

Current Security Forces personnel are better trained and equipped to perform expeditionary base defense than was the force of 1960, but in terms of tactical firepower are arguably inferior in some ways to SP units in Vietnam circa 1970. Some equipment, such as radios and vehicles, both tactical and non-tactical, have improved as technology advanced and common use across the Department of Defense (DoD) was encouraged. The current force is organized and deploys primarily in 13 member squads, built from three fire teams of four airmen, and a squad leader, similar to the USMC squad configuration. The standard weapons are the M9 pistol (9x15mm) and the M4 Carbine (5.56x45mm). In standard configuration, each squad consists of two fire teams with one M249 Squad Automatic Weapon (SAW), and one M203 or M320 40mm grenade launcher, and a third fire team that includes M240B light machine gunner and assistant gunner. These are supplemented with specialized Unit Type Codes (UTC) as appropriate that can include Tactical Automated Sensor System (TASS) operators and kits to flight, squadron or group command and control elements, or heavier weapons teams equipped with M2 .50 caliber heavy machine guns or Mk19 automatic 40mm grenade launchers. Other capabilities, however, such as mortar teams for organic indirect fire support and anti-personnel mines, were phased out of use over the last two decades for reasons of programmatic efficiency, as unnecessary, or as politically unsuitable. To illustrate the contrast, consider this excerpt from a PACAF report on Vietnam, published in 1967: “Critical areas around the perimeter of the bases and within a 4,000 yard radius have been mined to discourage penetration by the Viet Cong should they slip through ARVN patrols.”¹⁷ US forces placing land mines in populated areas outside of the controlled

¹⁶ Coleman, David. *US Military Personnel, 1954-2014*. (Data sourced from the Defense Manpower Data Center, Office of the Secretary of Defense, U.S. Department of Defense), <http://historyinpieces.com/research/us-military-personnel-1954-2014#fnref-5821-fn1>.

¹⁷ Meylan, Wesley R. C. *The War in Vietnam, 1965* ((HQ PACAF, Directorate, Tactical Evaluation, CHECO Division, 25 January 1967), 176.

perimeter of bases is not feasible today. The differences in weapons and equipment reflect changes in technology as well as evolved mission requirements.

The contemporary USAF Security Forces are built for nuclear weapons surety, installation security, law enforcement duties, and base defense in a semi-permissive expeditionary environment. Doctrinally, Security Forces are supposed to be capable of defeating a Level I or Level II threat to USAF, joint, or coalition missions. Level I threats “include enemy agents and terrorists whose primary missions include espionage, sabotage, assassination, and subversion.”¹⁸ Level II threats include “small-scale forces conducting irregular warfare that can pose serious threats to military forces and civilians...and are capable of conducting well-coordinated, but small-scale, hit-and-run attacks; improvised weapons attacks with roadside or vehicle-borne IEDs; raids; and ambushes...may include special operations forces that are highly trained in irregular warfare as well as operations typically associated with terrorist attacks.”¹⁹ This lengthy quote was included to highlight the breadth of the threats covered by Level II, and the high expectations for expeditionary base defense forces. A base defense force sized, trained, and equipped to defeat attacks by terrorists or small groups of insurgents in a counterinsurgency (COIN) environment is less capable than one that can be reliably expected to defeat attacks by highly trained special forces teams from a near peer/peer competitor state. Dealing with the Taliban or Daesh²⁰ is much easier than stopping first-rate enemy special operations forces (SOF) teams from destroying resources or disrupting base operations through standoff attacks or infiltration. Lastly, the current base defense C2 architecture is not necessarily postured to understand and effectively deal with threats posed by cyberattacks or small unmanned aerial systems (SUAS).

The current USAF doctrine of “Integrated Defense” is a schema intended to deal with the complex 21st Century threat environment. It is effects-based and risk-centric, designed to enable base commanders to understand risk to assigned missions through a consolidated risk analysis. Base commanders are then empowered to maximize the use

¹⁸ JP 3-10, *Joint Security in Theater*, I-2.

¹⁹ JP 3-10, *Joint Security in Theater*, I-3.

²⁰ Daesh is the abbreviation of the Arabic title for the Islamic State in Iraq and al Sham – better known as “ISIS.”

of available resources to achieve the desired effects of defeating, delaying, disrupting, and recovering from enemy attempts to interrupt mission accomplishment. The concept of Integrated Defense earned credence since its introduction in 2007 through successful execution of base defense operations in deployed locations, and use by USAF installation commanders around the world to manage risk. While the doctrine is sound, it requires active participation from internal and external organizations in order to function as intended, especially in the expeditionary environment. Capabilities not traditionally associated with “air base ground defense,” such as cyber expertise and local air defense, must be included in the Integrated Defense Risk Management Process (IDRMP), as well as base defense planning and operations. Failure to do so leaves base commanders with the challenging task of using an incomplete risk analysis process to manage operational risk emanating from potential adversaries. These adversaries have no incentive to present a threat array that meets existing US paradigms. Instead, they may strive to cause US base defenders maximum difficulty by using tactics US forces are ill prepared for. ID is designed and intended to incorporate external capabilities in order to meet the widest possible range of threats. Chapter five of this paper features case studies of contemporary examples that highlight successes and challenges in effectively applying ID in the expeditionary environment.

In terms of expeditionary base defense, the current USAF force is organized, trained, and equipped to prevent small groups of irregular forces from consistently disrupting USAF or joint missions in a permissive or semi-permissive COIN environment. The current base defense construct may or may not reflect the character of conflicts or missions the USAF is called to perform in the next 20 years. In order to review how the USAF and other military forces have dealt with expeditionary air defense in the last 65 years, several case studies follow. Many of these forces faced environments and threats they did not expect, and for which they were unprepared. Why and how they succeeded or failed is informative.

Chapter 3

The French at Dien Bien Phu

Major Botella took the handset from Brechignac: 'Dede to Bruno. It's all over - they're at the command post. Goodbye - tell Gars Pierre we all liked him a lot.'

Martin Windrow

The above quote from Martin Windrow's *The Last Valley* offers a hint of the fighting spirit of French forces at Dien Bien Phu, and begins to dispel some common misconceptions about why the French lost. The French forces and their local allies did not surrender following a small artillery bombardment or a brief attack. Rather, the defeat and surrender of approximately 10,000 French and local forces occurred after a 55-day siege that included frequent and brutal hand-to-hand fighting and intense artillery barrages, in a style reminiscent of World War I trench warfare. Nevertheless, the French suffered a disastrous defeat that ended their colonial presence in Indochina after being outmatched by Ho Chi Minh's Vietminh. The Vietminh would become the People's Army of Vietnam (PAVN), normally referred to in this paper as the North Vietnamese Army (NVA).

While the performance of French and local forces does not earn the same accolades as the 101st Airborne Division's refusal to surrender during the Battle of the Bulge in World War II, or the USMC, Army, and Air Force base defenders' performance during the 1968 Tet Offensive in Vietnam, the primary cause of this defeat was not cowardice or widespread incompetence at the company or platoon level. The French defeat at Dien Bien Phu was the result of poor operational decisions based on flawed assumptions in the context of muddled and myopic strategic guidance. The French military leader in Indochina, General Henri Navarre, underestimated the strength as well as the tactical and logistical acumen of the opposing forces.¹

By fall of 1953, General Navarre reasonably assumed a defensive posture in northern Indochina, where the Vietminh had numerical superiority, while going on the

¹ Fall, Bernard. *Hell in a Very Small Place: The Siege of Dien Bien Phu* (Cambridge, MA: Da Capo Press, 1966), 50.

offensive in the south.² Raids and spoiling attacks in the north were intended to prevent the Vietminh from launching a major assault in Indochina. The French selection of Dien Bien Phu was logical, given their low-order of terrain analysis and inaccurate assumptions about Vietminh capabilities. The French command wished to interdict movement of Vietminh supplies and personnel between the northern border region, where military supplies were flowing in from Mao's China, to the Vietminh units operating to the south and east in modern day Laos, Cambodia, and Mekong River delta area. Only three valleys ran through the mountains, therefore the French mounted a series of operations to attempt to control movement through these valleys.

Operation Castor was the name for the air-supported seizure of the valley surrounding the town of Dien Bien Phu, launched in November 1953. The concept behind this operation was called *base aero-terrestre* or "airland base."³ In short, the French would airdrop or march-in initial light infantry forces in battalion strength to establish a secure airhead, then airland additional forces in regimental strength as rapidly as their modest airlift capacity in theater would allow. The additional forces would include a company of light or medium tanks, and several batteries of field artillery. The French believed the *base aero-terrestre* would provide a secure "hedghehog" from which the infantry could project patrols covered by artillery and close air support to command the valley. In 1952-53, this concept seemed to work at Na San, where the French garrison successfully defeated a determined siege by General Vo Nguyen Giap with two Vietminh divisions. Human wave attacks by the Vietminh were met with mutually supporting and interlocking fields of machine gun fire and effective artillery fire from the *base aero-terrestre* at Na San. While the outer perimeter was twice briefly breached, the inner defensive layers held, and the end result was heavy Vietminh casualties.⁴

Expecting to face a Vietminh force with similar capabilities as at Na San, the French forces executing Operation Castor set about digging a system of strong points and building up the airfield at Dien Bien Phu. There were little pre-existing defensive works

² Davidson, Phillip B. *Vietnam at War: The History, 1946-1975* (Novato, CA: Oxford University Press, 1988), 166.

³ Fall, *Hell in a Very Small Place*, 24.

⁴ Fall, *Hell in a Very Small Place*, 24.

and the airfield, a former WWII Japanese airstrip, was austere, so they were starting from scratch. After a concerted two month airlift effort, by January 1954 the French garrison at Dien Bien Phu mustered 12 infantry battalions, three heavy mortar companies (120mm), two tank companies (with a total of 10 light M24 *Chaffee* tanks), three batteries of 105mm howitzers, and one battery of 155mm howitzers.⁵ The force totaled in excess of 10,000 men, approximately 7,000 of which were in combat infantry units, and would receive an additional 3,000 French reinforcements over the next three months.⁶ The infantry battalions were made up of four French Foreign Legion battalions, mixed nationality units that were deployed from Morocco and Algeria. Three of the other battalions were T'ai,⁷ and another battalion equivalent were T'ai and local Vietnamese mountain tribesman. The rest of the force was comprised of two brigades of well-trained French paratroopers.⁸

General Giap fielded a formidable force against the French garrison. The Vietminh force consisted of three divisions of fully trained regulars. This translates to 33 infantry battalions. Each division was task organized with supporting artillery and Anti-Aircraft Artillery (AAA) battalions, although the weaponry these units were equipped with varied. In total, Giap's force boasted 24 105mm howitzers, and 24 75mm pack howitzers. The howitzers were supplemented by approximately 162 81 or 82mm mortars and 179 60mm mortars. In summary, this meant the Vietminh could produce a similar volume of artillery fire as the French forces. Critically, Giap fielded over 100 AAA pieces in the surrounding hills, at least 36 of which were 37mm.⁹ In all, Giap commanded over 49,000 combat troops and 10,000 to 15,000 additional support personnel in the area of Dien Bien Phu by March 1954.¹⁰

⁵ Windrow, *The Last Valley*, 309.

⁶ Windrow, *The Last Valley*, 42; Davison, 224.

⁷ "T'ai" in some historical literature was used to describe local soldiers recruited from modern Laos and Thailand, often from mountainous areas. T'ai and "Montagnard" descriptors were sometimes used interchangeably.

⁸ Windrow, *The Last Valley*, 42, 310.

⁹ Boylan, Kevin M. "No Technical Knockout: Giap's Artillery at Dien Bien Phu," *The Journal of Military History*, 78:4 (October 2014): 1366-1368; Davidson, *Vietnam at War*, 224.

¹⁰ Davidson, *Vietnam at War*, 223.

A doctrinal rule of thumb used in planning offensive and defensive land operations is that a local numerical superiority of three-to-one should be used when attacking a prepared defensive position. Therefore, even with a five-to-one personnel deficit, a successful defense of Dien Bien Phu was not outside the realm of the possible, given the French assumptions of superior firepower and their monopoly on heavy artillery and air support. Unfortunately for the French, General Giap was well prepared to effectively negate the assumed French advantages.

The surrounding geography exacerbated the glaring problems with the defensive scheme. The airfield and its protective strong points were in the Nam Yum River valley surrounded by mountains, whose peaks surpassed 1,000 meters in elevation and were within easy artillery range of the airfield from the North, East and West sides. The French leaders assumed they could control the surrounding high ground by using patrols and precise artillery fire. However, the aforementioned numerical superiority of the Vietminh forces precluded any French offensive patrols by late December 1953, so the surrounding key terrain was controlled completely by General Giap. During January and February 1954, General Giap tightened the noose around Dien Bien Phu by moving his infantry regiments slowly into positions which completely surrounded the valley, closer and closer to the French strong points, under the cover and concealment of terrain features and the jungle canopy. Additionally, in an astounding demonstration of the resolve of Vietminh soldiers, the dozens of heavy artillery pieces were hauled up steep mountainsides through rough jungle paths, often solely by large teams of men pulling thick ropes. These artillery batteries and anti-aircraft artillery (AAA) weapons were then dug into fortified and/or concealed bunkers in the mountainsides. General Giap stated: “We made roads, cleared paths to haul up artillery pieces, built casemates...prepared the ground for the offensive and encirclement; in short transformed the relief of the terrain with a view to solving the tactical problems.”¹¹

The French defense around Dien Bien Phu consisted of several strong points around the central camp, designated (from north to south) Gabrielle, Beatrice, Anne-

¹¹ Giap, Vo Nguyen. *The Military Art of People's War* (New York, New York: The Monthly Reader Press, 1970), 133.

Marie, Dominique, Huguette, Eliane, Claudine, and Isabelle. These strong points were laid out on the Nam Yum River valley floor in a manner designed to dominate the approaches to the airfield and control traffic on the ground lines of communication, the “Pavie Track” and Route 41, that passed through the valley. Unlike at Na San, where the strong points were grouped tightly together, the distance from the northernmost position to the southernmost was over 13 kilometers.¹² Gabrielle, Beatrice, and Isabelle were separated from the central area. Gabrielle was approximately two-point-five kilometers north of the main airfield, and Beatrice was situated on a small forested hill two kilometers northeast of the airfield, and one-point-five kilometers northeast of the eastern perimeter of the central strong points. Anne Marie was on a small rise northwest of Huguette and southwest of Gabrielle. Isabelle was by itself five kilometers south of the main airfield, in between the River and Route 41.¹³ There was a small reserve airstrip near Isabelle, but the fortified positions did not encircle it.¹⁴ Dominique, Eliane, Huguette, and Claudine were situated close together in a roughly one-and-a-half kilometer-square pattern around the airfield and the central position. The central position housed the command post, ammunition storage dump, logistics support area, and the 155mm artillery battery. Mortar teams were positioned in the strong points, but much of the 105mm artillery was housed at Isabelle to the south. The positions were largely earthworks designed to stop direct small arms and heavy machine gun fire. Almost none of the positions except for the main command post, and a singular artillery battery position, incorporated any overhead cover to protect the soldiers and equipment from indirect fire. One rare exception: “5th Battery, II/four RAC, whose Warrant Officer - one of the few World War II veterans - managed to lay hands on some teak logs and had iron clamps fashioned from old ammunition boxes; his battery would suffer fewer casualties than the others.”¹⁵

¹² Windrow, *The Last Valley*, 15.

¹³ Windrow, *The Last Valley*, 14.

¹⁴ Giap, *The Military Art of People's War*, 132.

¹⁵ Windrow, *The Last Valley*, 353.

The main battle is generally considered to have started on 13 March 1954 and would continue until 7 May.¹⁶ Giap ordered his forces to begin artillery bombardment of the French positions, targeting the airfield with its centrally positioned command post and the northern strongpoints of Gabrielle and Beatrice. In his own writings about the battle, General Giap described the multitude of tactical actions during the battle as falling into three phases, 13-30 March, 30 March-30 April, and the 1-7 May 1954.¹⁷ On 13 March, the Vietminh started their attack earlier than planned when the French discovered Vietminh soldiers in assault trenches only 200 meters from the perimeter of strong point Beatrice. Six battalions of Vietminh regulars assaulted under the cover of a devastating artillery fire, which destroyed much of Beatrice and killed everyone in Beatrice's battalion command post (CP). Until 13 March, Vietminh artillery fire had been intermittent and not very damaging, because it consisted mostly of ranging shots, used to ensure the gunners' aim would be true. However, on the afternoon of 13 March, the full fury of Giap's artillery was revealed for the first time. An officer at the central position counted the incoming shell rate at 60 per minute at about 1730.¹⁸ By the morning of 14 March, the French Foreign Legion battalion at Beatrice was destroyed and overrun, and Beatrice was in the hands of Giap's 312th Division.¹⁹

As a result of the separation of Beatrice, Gabrielle and Isabelle from the central area, the only means of mutual support was through indirect fire from mortars and artillery, or counterattack. French leaders envisioned using artillery supported counterattacks led by the light tanks to crush enemy infiltrations into the outer strong points, but an attempt to mount such a counterattack at 0530 on 14 March was stopped in its tracks by Vietminh artillery and mortar fire. The days 14-15 March saw similar devastation at Gabrielle, the commander killed by Vietminh artillery, and a multiple-battalion strength attack overwhelmed the defending legionnaires. Again, the attempted counterattack, this time led by a crack French paratroop company but supported by an

¹⁶ Davidson, *Vietnam at War*, 223.

¹⁷ Giap, *The Military People's Art of War*, 133-139.

¹⁸ Windrow, *The Last Valley*, 377.

¹⁹ Davidson, *Vietnam at War*, 236.

exhausted T'ai battalion, ground to a halt under the weight of Vietminh artillery and machine gun fire from the captured defensive positions.²⁰

The capture of Beatrice and Gabrielle was costly to both sides. From 14-16 March, the French lost 1,500 soldiers killed, while the Vietminh suffered between 1,600 and 2,600 killed in action (KIA). On 17 March, strong point Anne-Marie was captured by the Vietminh, but at far less cost in casualties, as the bulk of the defending T'ai battalion deserted or defected to join the Vietminh. Effective Vietminh information operations contributed to this and other desertions of local forces throughout the battle.²¹

As the fighting continued, the French realized the Vietminh artillery pieces in their hillside bunkers were able to place all French positions in the valley under effective fire. This led to a furious trench and tunnel digging effort by the French forces in and among the central area and the four surrounding strong points of Huguette, Dominique, Eliane, and Claudine. The Vietminh mountain artillery bunkers proved nearly impervious to French counterbattery fire due to the earthen frontal and overhead protection, and jungle foliage concealment. Colonel Piroth, in charge of the French artillery at Dien Bien Phu, eventually committed suicide on 14 March out of depression and frustration at his inability to effectively target enemy artillery.²² Equally alarming, French close air support strikes by fighters using napalm and high explosive, as well as medium bomber sorties, were largely ineffective in silencing Giap's artillery. The increasingly effective fire from Giap's newly revealed AAA pieces in the hills surrounding the valley significantly inhibited French efforts to provide close air support and to supply the French forces from the air. No longer able to airland supplies, air drops were conducted from higher altitudes or at great risk. Such altitudes meant about half of the dropped supplies ended up in Vietminh hands. The French commander at Dien Bien Phu, Colonel de Castries, was by this point considered ineffective by subordinates on the ground and superiors in Saigon alike, but nevertheless retained his position.²³

²⁰ Davidson, *Vietnam at War*, 238.

²¹ Davidson, *Vietnam at War*, 240.

²² Roy, Jules. *The Battle of Dien Bien Phu*, translated by Robert Baldick (New York, NY: Harper and Row, 1965), 175.

²³ Roy, *The Battle of Dien Bien Phu*, 209.

On 30 March, the next major series of attacks began. Giap's focus in Davidson's second phase of the battle was on the eastern set of strong points which protected the airfield and command post. As they did at Beatrice, Vietminh forces were able to approach in battalion strength due to jungle concealment and terrain masking. The first few days of assaults, mostly during hours of darkness, resulted in the Vietminh capture of portions of Eliane and Huguette. The fighting was often brutal, at close quarters, and sometimes hand-to-hand, as company and battalion sized elements fought back and forth for control of the French trenchworks. By 5 April, the Vietminh had captured all portions of Eliane east of the Nam Yum River, and also held the north-west section of strongpoint Huguette, which protected the northern approach to the airstrip and placed Giap's forces within 500m of the airfield.²⁴ Over the previous week, the airfield had ceased to function as such, and any aircraft that attempted to operate or land at the field was in grave danger of destruction due to enemy direct and indirect fire. French tactical air support was able to have some effect on the fighting in spite of the stiff and accurate AAA fire. On 4 April, most of a Vietminh infantry battalion was destroyed after being caught in the open during the day by French fighters.²⁵ It should be noted that the fighters were operating from the safety of distant and secure air bases like Da Nang.

The rest of the second phase consisted of muddy, bloody, World War I-style trench warfare with the addition of a modest amount of 1940s vintage French tanks and air support. The French mounted several artillery and tank supported counterattacks to attempt to retake the lost areas of Huguette, Dominique, and Eliane. Some were temporarily successful, but without any reinforcements the French forces lacked sufficient manpower to hold the positions against the inevitable Vietminh counterattack with overwhelming numbers. The weather had turned, and torrential rain transformed the trenches into mud pits, rendering conditions even worse for casualty care, re-supply, and general tactical movement.

In Saigon, General Navarre recognized how desperate the situation at Dien Bien Phu was, and authorized the airborne insertion of a battalion of French paratroopers to

²⁴ Davidson, *Vietnam at War*, 258.

²⁵ Davidson, *Vietnam at War*, 257.

reinforce Colonel de Castries' force on 1 April 1954. Due to heavy and effective AAA fire, only one company of the battalion jumped from their aircraft, while the rest of the aircraft aborted mission and returned to base with heavy losses.²⁶ In the early hours of 4 April, the last significant reinforcements were dropped into the only remaining drop zone between Huguette and the central position.²⁷ Three hundred and nine of the men made it to the ground within French lines.²⁸ Over the next few weeks, squad and platoon sized elements were airdropped at night to attempt to replace losses of critical skilled soldiers such as artillerymen, but due to the geographically shrinking drop zone and heavy enemy fire, an unknown but likely significant quantity became immediate casualties or prisoners of the Vietminh.²⁹ French aviators who were veterans of World War II stated the AAA fire was heavier over Dien Bien Phu than over targets in Germany.³⁰

The latter half of April saw continued fighting at the small unit level, but major battalion level or larger assaults by the Vietminh did not take place, as General Giap brought in reinforcements and fresh units to relieve his infantry battalions that were exhausted or destroyed due to the heavy fighting. French air interdiction efforts had no effect on Giap's ability to re-supply. French plans to potentially march in a rescue force from the south failed miserably, defeated by superior Vietminh blocking forces and the environment itself. This relative lull in major action also saw General Giap adapt his tactics to deal with the fierce resistance from the French. In order to avoid losing more battalions of soldiers to French machine guns and direct fire from French artillery at close range, Giap used took another cue from World War I and ordered his men to dig assault trenches in order to move closer and closer to the remaining French strong points. The Vietminh also tunneled underneath some French strong points in order to place massive explosive charges, or "mines" to destroy the especially stubborn positions. The French paratroopers led several counterattacks from 14-24 April to attempt to clear or destroy the encroaching Vietminh assault trenches, with mixed results. The French always took casualties in doing so, however, which they could not replace. The French position was

²⁶ Davidson, *Vietnam at War*, 253.

²⁷ Roy, *The Battle of Dien Bien Phu*, 217.

²⁸ Windrow, *The Last Valley*, 489.

²⁹ Davidson, *Vietnam at War*, 259.

³⁰ Davidson, *Vietnam at War*, 259.

similar to prey caught in the coils of a boa constrictor. They desperately bit and scratched, doing some damage, but with every struggling exhalation, the coils drew a bit tighter. In order to complete the metaphorical strangulation, Giap moved reinforcements into positions around the French. Once the fresh units were in place, Giap began his decisive assault on the central strong points and Isabelle in the south.

After darkness fell on 1 May 1954, the final phase of the battle began. Giap had two divisions to throw against the central position and another to target Isabelle. By the morning of 2 May, the Vietminh took more of Eliane and Dominique away from the French.³¹ Both sides used artillery to devastating effect. The Vietminh would often prepare a strongpoint with an hour of high intensity artillery fire before the infantry assault began. The French used coordinated fire from their remaining 105mm and 155mm batteries to kill hundreds of attacking Vietminh as they stormed out from their trenches. Giap was able to move 12 102mm Multiple Rocket Launchers into the area by this time.³² These did not markedly increase artillery strength, but the distinctive screaming sound likely did not help the morale of French forces as they rained down in support of Vietminh assaults on 6-7 May. By 6 May, the French strong points were crumbling. That night, a Vietminh mine with 3,000 pounds of TNT destroyed most of what remained of the French occupied strongpoint of Eliane, and by 0500 on 7 May the Vietminh controlled the eastern strongpoints, leaving the central command post area open to assault.³³

Heavy fighting continued through to the afternoon of 7 May. The French flew 25 B-26, 30 F-8F Bearcat, and 16 F-4U Corsair sorties on seven May in a last ditch maximum effort to blunt the Vietminh assaults, but they had little effect. On the west side of the central area, the Vietminh captured much of strongpoint Claudine by noon.³⁴ Colonel de Castries and Lieutenant Colonel Langlais understood the hopelessness of their tactical situation, and had been attempting to plan a breakout to the south to link up with the remaining forces at Isabelle and escape down the valley with as many men as

³¹ Davidson, *Vietnam at War*, 261.

³² Boylan, *No Technical Knockout*, 1357.

³³ Davidson, *Vietnam at War*, 262.

³⁴ Windrow, *The Last Valley*, 609.

possible. This plan had very slim chances of success, and aerial reconnaissance photos dropped to the French command post early on 7 May revealed the Vietminh had constructed at least three lines of trenchworks south of Isabelle. As a result of this information, and the rapidly deteriorating tactical situation, the remaining French battalion commanders met and decided a breakout was not possible. Additionally, they felt that with the loss of Eliane, Dominique, most of Huguette, and much of Claudine, the number of casualties rendering most units ineffective, and ammunition running critically low, continued resistance would merely delay the inevitable complete loss of the camp for a matter of hours or perhaps days. They informed Colonel de Castries of this assessment shortly after 1300 on 7 May.³⁵ De Castries concurred, and faced with the choice of ordering his men to continue to fight and die in a losing battle, or surrender, he declared that a “cease-fire” should begin at 1730, and no further resistance would be offered.³⁶ Once word began to spread about this decision, organized resistance on the rapidly shrinking perimeter faltered, and Vietminh soldiers began to infiltrate among the small groups of French or local forces that still fired on them. By 1730 active resistance ceased and the central command post was occupied by the Vietminh.

Five kilometers to the south, the fight was still on at Isabelle. Lieutenant Colonel Laulande did in fact attempt to organize a break out south down the valley. Under intense artillery fire from the Vietminh, two company columns fought their way south against stiff resistance. Only about 70 Foreign Legionnaires broke through and eventually made the 100-kilometer march through the jungle to safety. The rest at Isabelle were overrun or surrendered at 0100 on 8 May.³⁷ Thus, the Vietminh captured the French hedgehog base at Dien Bien Phu, and took approximately 10,000 prisoners, at least 1,500 of whom were seriously wounded.³⁸ According to Bernard Fall, only 3,900 were eventually repatriated.³⁹

Assessing the events at Dien Bien Phu reveals several lessons of enduring value relevant to expeditionary base defense. The absence of sufficient base defense planning

³⁵ Fall, *Hell in a Very Small Place*, 400.

³⁶ Windrow, *The Last Valley*, 609.

³⁷ Windrow, *The Last Valley*, 618.

³⁸ Windrow, *The Last Valley*, 622.

³⁹ Fall, *Hell in a Very Small Place*, 647.

was conspicuous. The critical importance of Agile Combat Support functions to the operational health and sustainment of an expeditionary air base is unambiguous. The lack of engineer (civil or combat) input into the base defense planning process was a significant failing. The lack of material available to build survivable defensive fighting positions, such as steel or hardwood beams and concrete, as well as major problems with dust and water management further complicated a very challenging tactical situation. After Operation Castor was already well underway in December 1954, the Second Company of the Thirty First Engineering Battalion was airlanded at Dien Bien Phu. The commander, Major Sudrat, estimated he required 36,000 tons of materials to build sufficient defensive fortifications for the French *base aero-terrestre*.⁴⁰ The garrison was only able to gather 2,000 tons of material such as wood locally, and due to very limited airlift capacity, the French were only able to airlift or airland 4,000 tons of supplies.⁴¹ Additionally, during the battle, the French forces spent considerable man-hours simply attempting to dig drainage ditches so their trenches would not be completely flooded.

Many planning assumptions made by the French before and during the early stages of Operation Castor were deeply flawed, some foreseeably. The willingness to place a large French garrison in a valley surrounded by mountains and hills within easy artillery range was based on a questionable assumptions of French artillery superiority and the corresponding inability of the Vietminh to use artillery. The assumption of superior firepower was an example of a catastrophic over-confidence which enabled French leaders to overlook or dismiss the obvious tactical problems of the operation.

The lack of defense in depth and single defensive lines proved lethal. The strongpoint system appeared to provide a layered defense, but the combination of distance between strong points and lack of effective direct and indirect weapons range for mutual support meant the strongpoints often had to fight separate small unit actions rather than function as a system. Since Beatrice, Anne-Marie, and Isabelle were not connected to the central area by secure routes, re-supply or supporting counter-attacks were high-risk affairs under intense and effective enemy fire. Given the fact that French plans to

⁴⁰ Fall, *Hell in a Very Small Place*, 88.

⁴¹ Fall, *Hell in a Very Small Place*, 89.

hold Dien Bien Phu featured counter-attacks led by tanks and supported by artillery, the lack of exercises or rehearsals for said counterattacks was inexcusable. Compounding this problem, the insufficient training levels or desertion of T'ai and other local battalions rendered an additional 20-30% of the French command at Dien Bien Phu non-combat effective, or simply absent, by April 1954.

Giap's dual capabilities to bring effective AAA fire to bear on supporting cargo or close air support aircraft, and to deny the French use of the runway through artillery fire, prevented the function of the French garrison as an air base, blunted French firepower, and prevented effective reinforcement or supply of the garrison.⁴² Lastly, the highly restrictive terrain, commitment of French forces elsewhere in the region, and very limited airlift capacity restricted General Navarre's ability react to unforeseen Vietminh strength at Dien Bien Phu and reinforce or relieve the garrison.

General Petraeus described the most important aspect of his change in operational approach during OIF as a "surge of ideas" rather than just a surge in troops-to-task.⁴³ Conversely, the French command in Saigon suffered from a failure of imagination. A primary mission of the *base aero-terrestre* operations was to interdict Chinese supplies flowing to conventional, increasingly well trained ground forces commanded by General Giap. Therefore, it was foreseeable that the Vietminh would learn from their past failures, and attempt to address the capability gaps that created the firepower advantage of the French-led forces. Bernard Fall's observation rings true: "A major study of the battle of Dien Bien Phu, prepared at the French War College, held that the high command in Saigon had 'substituted the preconceived idea it had of the Vietminh for the facts; that is, for intelligence based upon the verified information it had received.' The supercilious rejection by the general staff of unpopular facts reported to them by the fighting men in the field was to remain a constant factor in the Vietnamese situation."⁴⁴

⁴² Boylan, *No Technical Knockout*, 1382.

⁴³ Petraeus, David H. "The Surge of Ideas: COINdinitas and Change in the U.S. Army in 2006," *American Enterprise Institute Online* (6 May 2010), <https://www.aei.org/publication/the-surge-of-ideas-2/>.

⁴⁴ Fall, *Hell in a Very Small Place*, 50.

After his defeat at Na San, General Giap understood he needed to locally match or overmatch the French artillery, use terrain features to maximum advantage, protect his men from French firepower through trenchworks, and blunt their air support with AAA. He accomplished all of those objectives at Dien Bien Phu. The French could not react quickly enough to rescue their *base aero-terrestre*, and the rest is history.

In the next decade, the United States would engage in a long effort to prevent the take-over of South Vietnam by the communist government in North Vietnam. During the conflict, expeditionary air base defense became an important mission for which set the USAF was inadequately prepared. Chapter four examines three examples of how the joint force defended air bases in South Vietnam.



Chapter 4

The US in Vietnam: Khe Sanh, Tan Son Nhut, and Bien Hoa

I expect that our combat battalions will be used primarily to go after the VC and that we will not be forced to expend our capabilities simply to protect ourselves. Therefore...All forces of whatever service who find themselves operating without infantry protection...will be organized, trained and exercised to perform the defense and security functions.

General William C. Westmoreland, 1965

This section summarizes attacks against three US operated airbases in South Vietnam between 1964 and 1968. Those against Khe Sanh and Tan Son Nhut were major actions during the 1968 Tet Offensive, while Bien Hoa Air Base suffered a series of stand-off attacks. The goal in doing so is to understand the impact of different style attacks on mission accomplishment and to understand as well as assess the conduct of the defense of these air bases during the Vietnam War. In the interest of brevity and remaining on topic, strategic-level frameworks as well as larger issues such as national political climates and policy decisions are only addressed briefly and in their direct relevance to the subject matter.

The United States military was involved in the defense of South Vietnam (Republic of Vietnam, RVN) with the stated goal of preventing Ho Chi Minh's communist North Vietnam (Democratic People's Republic of Vietnam) from forcibly unifying the country under one flag, which appeared to be part of the aggressive expansion of the communist bloc led by the Union of Soviet Socialist Republics (USSR). As such, there were very limited positive objectives and several negative objectives, most importantly, not escalating the conflict into a direct war with the USSR or China. The North Vietnamese objective was to unify the country, and create an independent, socialist Vietnam. The political will of the North Vietnamese leadership, people, and military was generally supportive of this goal. The lower level of political commitment in the US would become clear as the war progressed, highlighting the contrast in political alignment which favored the North Vietnamese. This dynamic would manifest itself in the Tet offensive, unquestionably a clear-cut tactical victory for the US forces which did

not translate into strategic success, but conversely, had a deleterious effect on US domestic political will.

Unlike the French during the early 1950s, the US brought in an increasing amount of joint forces and mobility in theater to attain tactical superiority over the North Vietnamese Army (NVA). In order to ensure small detachments of US and allied ground forces could retain tactical advantage over the Vietcong guerrillas and NVA formations of regulars in South Vietnam or Laos, and to conduct coercive air operations against North Vietnam, the US Air Force, Navy, and Army deployed significant numbers of air assets to the region. These deployments began in earnest in 1964. The majority of these aircraft were tactical fighters and Army helicopters, which can generate more sorties if they are based close enough to the target to minimize aerial refueling requirements. Therefore, several air bases were built up in South Vietnam and Thailand, and of course the US Navy operated carrier task forces in the South China Sea and Gulf of Tonkin. Unlike the previous US military experiences in World War II and Korea where airfields were generally safely located behind the forward edge of the battle area, there was a significant irregular warfare threat from Vietcong (VC) guerrillas within South Vietnam. For logical reasons, the Cold War US military was structured to take on the USSR in World War III, not to win a major counterinsurgency campaign in a country with unfamiliar languages, cultures and historical context.

In terms of the ability to forward deploy and project airpower to coerce North Vietnam and support US and allied forces on the ground, the USAF Security Police were not trained or equipped to defend airbases against effective large scale standoff attacks using rockets or mortars, and certainly not determined sieges by regiment or division sized formations of enemy regulars supported by heavy artillery. Yet, the quote from General Westmoreland, commander of Military Assistance Command, Vietnam (MACV), at the top of this chapter reflects the same sentiment expressed by US Army Lieutenant General John L. Throckmorton, the deputy COMUSMACV in 1964, when he said: “major installations have priority for defense, but only against strong VC mass attacks. There are no plans to tie down U.S. troops to defend U.S. air bases against mortar

and sneak attack, it costs too much in troops.”¹ The desire to use the best combat arms units available offensively, in “search and destroy” missions to eliminate Vietcong cells and prevent NVA regulars from operating in South Vietnam, was predictable and logical from the perspective of US Army leaders. However, it reflected an underestimation of the ability of harassing standoff attacks to destroy aircraft and support equipment on airbases, as well as the political toll the accompanying headlines would take on US domestic political support for the war.

Similarly, USAF leaders focused on the offensive use of airpower to attack North Vietnamese forces, working to increase bomb tonnage and sortie rates. However, by 1966, some USAF senior leaders recognized the need for an organic competent base defense force, and the 1041st USAF Security Police Squadron was born. Army Ranger Instructors trained a regiment-sized force of USAF Security Police in combat skills, and the force was deployed to Vietnam in 1967.² The unit deployed to Phu Cat Air Base, and the Operation Safeside report generated from the unit’s year performing the mission resulted in some beneficial training improvements throughout the force. Improvements in base defense training and equipment reduced the effectiveness of Vietcong penetrating attacks, but standoff attacks proved difficult to stop, as they still are today.³

In total, Vietcong ground attacks on airbases in South Vietnam, Thailand, and Laos, destroyed 374 to 393 US aircraft, and damaged between 1,170 and 1,203.⁴ Most of these losses were due to standoff indirect fire attacks with mortars or rockets. Exact costs are difficult to estimate, but the number would be in the billions of dollars. These numbers are staggering today, but extremely formidable NVA anti-aircraft fire threat was the greatest threat to aircraft in theater. The USAF alone lost a total of 1,727 aircraft destroyed by enemy action from 1962-1973 in or over South Vietnam, North Vietnam, Laos, and Cambodia.⁵ Notably, the number of US aircraft lost in air to air combat in the

¹ Lane, Lawrence R., and Albert F. Riggle. *Airfield Defense for Global Reach/Global Power*. Military Studies Project Report (Carlisle Barracks, PA: US Army War College, 1993), 10.

² Conrad and Bullock, *Defenders of the Force*, 144-147.

³ Vick, Alan. *Snakes in the Eagle’s Nest: A History of Ground Attacks on Air Bases* (Santa Monica, CA: RAND, 1995), 68.

⁴ Vick, *Air Base Attacks*, 68; Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 173.

⁵ Schligh, *A War Too Long*, 103-104.

same time-period was only 62.⁶ In terms of the human toll, the US lost 155 service members killed and 1,702 wounded during 475 attacks on US expeditionary air bases from 1964-1973.⁷

The United States Marine Corps, (USMC) meanwhile, did not suffer from the organizational divide that caused bureaucratic friction between the US Army and the USAF regarding who was responsible to defend airbases and the immediate area surrounding them. That cohesiveness and integration of responsibility served them well during the siege of Khe Sanh in 1968.

Khe Sanh Combat Base

USMC corporal Bill Gilbert was busily preparing breakfast in his battalion mess hall at 0530 on 21 January 1968, when the shriek of incoming enemy rocket and artillery fire disturbed the routine. The mess hall collapsed around him as he hustled his men out to the nearest bunker. On the way, they were “lifted off their feet” when Khe Sanh’s Ammunition Supply Point (ASP) One exploded after direct hits from incoming indirect fire (IDF), but they made it to the bunker.⁸ These rocket impacts were part of a much larger plan, itself the result of an in-depth planning process involving North Vietnamese leaders.

In 1967, North Vietnamese Politburo was busy planning and preparing its forces for an audacious three phase attack on South Vietnam. In the first phase, regular NVA units would conduct attacks on military outposts on the northern and western border regions of South Vietnam. The NVA intended to overrun the US air base at Khe Sanh as part of this plan.⁹ The second phase was the simultaneous attack from Vietcong cells on as many South Vietnamese cities, South Vietnamese Army (ARVN) posts, and prominent US headquarters as possible during the Tet holiday (31 January 1968). These two moves,

⁶ Vick, *Snakes in the Eagles Nest*, 69.

⁷ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 204.

⁸ Ewing, Michael. *Khe Sanh*. (New York, New York: Bantam Books, 1987), 22.

⁹ Davidson, *Vietnam at War*, 443.

in combination with ongoing propaganda campaigns, were intended to initiate the third phase, a nationwide revolt of the South Vietnamese people against Thieu's government.¹⁰

Khe Sanh "combat base," as the USMC referred to it, housed an improved runway long enough to accommodate C-130 Hercules and C-123 Provider cargo aircraft in the mountains of northeastern South Vietnam, only 15 miles (24 kilometers) south of the De-Militarized Zone (DMZ). It was home to the 26th Marine Regiment totaling approximately 6,000 men.¹¹ The Regiment included three infantry battalions, an artillery battalion, as well as light tank and anti-tank detachments.¹² The 26th Marine Regiment was supported by three batteries of 105mm howitzers, one battery of 155mm howitzers, and a four-point-two-inch mortar section, dispersed by battery around the base.¹³ Supplementing the organic artillery, the Army's 2/94 Artillery Battalion was located at Camp Carol to the east on Route Nine and could range the Khe Sanh area with their 175mm howitzers.¹⁴ To provide some perspective on comparative artillery capabilities, the most incoming NVA rounds recorded by the defenders of Khe Sanh in a single 24 hour period was 1,307, on 23 February.¹⁵ On 20 January, the 1st Battalion of the 13th Marines (Artillery) alone fired more than 2,200 rounds during the hours of darkness in support of an eight-member reconnaissance squad surrounded by NVA soldiers on Hill 689.¹⁶ The NVA's capabilities were a serious threat, but not equal to those of the US forces. Of course, the Khe Sanh's defenders also had the benefit of massive air support from USAF, USMC, and some USN aircraft as well, which would be crucial.

Khe Sanh was important to MACV for several reasons. Army Special Forces (Green Berets) and air surveillance monitored enemy movements through and near the

¹⁰ Davidson, *Vietnam at War*, 444.

¹¹ Jones, Gregg. *Last Stand at Khe Sanh: The US Marines' Finest Hour in Vietnam* (Philadelphia, PA: Da Capo Press, 2014), 36.

¹² Shumlison, Jack, LtCol Leanord A. Blaisol, USMC, Charles R. Smith, and Capt David A. Dawson, USMC. *U.S. Marines in Vietnam, The Defining Year 1968* (Washington D.C.: Department of the Navy, USMC, History and Museums Division, HQ, USMC, 1997), Shumlison et al., *U.S. Marines in Vietnam*, Loc 8195.

¹³ Shumlison et al., *U.S. Marines in Vietnam*, Loc 8316.

¹⁴ Drez, Ronald J. and Douglas Brinkley. *Voices of Courage: The Battle for Khe Sanh, Vietnam* (New York, NY: Bullfinch Press, 2005), 76.

¹⁵ Davidson, *Vietnam at War*, 561.

¹⁶ Shulimson et al., *U.S. Marines in Vietnam*, Loc 8195.

border areas to the north and west. General Westmoreland wanted to use Khe Sanh to support a planned invasion of Laos to cut off the Ho Chi Minh and Sante Fe Trails along which the North Vietnamese moved vast quantities of men and material south to support Viet Cong units in the South. Additionally, it was critical to the build-up and operation of Secretary of Defense McNamara's ill-fated "Operation Dye Maker" project to create a physical and electronic sensor barrier along the DMZ.¹⁷ Khe Sanh's function as an air base was the essential factor in MACV's ability to deploy ground forces into this area and support their operations. The airfield was critical due to the surrounding terrain and lack of roads in the area to allow for ground re-supply.

Khe Sanh was located on a flat area just west of the Rao Quan River which ran northwest to southeast, and bordered on the south by Route Nine, an unimproved road running east to west. The runway was the main feature of the base itself, situated east to west. To the north and northeast six mountains dominated the terrain. Designated for their height in meters, Hills 881 North, 881 South, 861, 558, 950 and 1015 ran from west to east approximately two to 10 kilometers to the east, northeast and north of the base perimeter. Hill 663, also a significant terrain feature, stood eight kilometers southwest of the base. The Marines understood the importance of controlling these mountaintops to defending the base and protecting its ability to operate as an air base. Therefore, USMC company and platoon sized elements occupied prepared defensive positions on four of the seven closest mountains (Hills 881S, 861, 558, and 950). A USMC communications relay station was atop Hill 950, which was just west of Hill 1015, both about six kilometers north of Khe Sanh air base.¹⁸

Extensive base defense planning was incorporated into the buildup and military units assigned to Khe Sanh. The USMC leaders and planners involved did not grossly underestimate enemy capabilities. As a result, the base defensive perimeter, personnel bunkers, and aircraft shelters were constructed to facilitate base defense against determined attacks. The shelters and defensive fighting positions all incorporated significant overhead cover, to protect the inhabitants from enemy mortar, rocket and

¹⁷ Shumlison et al., *U.S. Marines in Vietnam*, Loc 8110.

¹⁸ Jones, *Last Stand at Khe Sanh*, 6; Drez, *Voices of Courage*, 12.

artillery fire. Shelters and Defensive Fighting Positions (DFP) were built from trenchworks, layers of sandbags, and large timbers, some with corrugated steel toppers. Additionally, basic elements such as sanitation and flood control were considered to allow the units on base to continue to function effectively in various weather conditions over long periods of time. One weak point was the fact that the main source of water for Khe Sanh combat base fell outside the defensive perimeter.¹⁹ Curiously, the NVA forces failed to exploit this vulnerability during the siege; it is unclear whether they were aware of it or not. Lastly, the USMC's aforementioned hill outposts were emplaced to deny enemy control of the surrounding high ground.

In April and May 1967, General Giap attempted to wrest control of the mountains around Khe Sanh with the 325C NVA Division, which incorporated significant artillery and mortar support.²⁰ USMC companies and platoons clashed with NVA units in battalion and regiment strength during vicious fights over control of the key terrain around Khe Sanh. I Company, 3rd Battalion owned the summit of Hill 881 South. In an act of defiance, the company commander Captain William Dabney, ensured the US flag was raised every morning just outside of his company command post bunker. Later on in the battle, he would add the aural flourish of "To the Colors."²¹ Through the quality of their defensive preparations, solidly built bunkers and trenchworks, aggressive counterattacks, and massive air and artillery support, the Marines ensured the NVA 325C Division paid a heavy cost in casualties whenever the NVA units attempted massed attacks on the hills.

MACV and the 26th Marine Regiment had solid intelligence about NVA unit movements into the Khe Sanh area from November 1967 through January 1968, to include approximate locations of enemy units down to the battalion or company level. This intelligence came from USMC patrols, humans, aircraft photography, and electronic sensors dropped or placed in the surrounding jungles. As a result of an expected large

¹⁹ Davidson, *Vietnam at War*, 560.

²⁰ Drez, *Voices of Courage*, 24.

²¹ Shumlison et al., *U.S. Marines in Vietnam*, Loc 8465.

scale attack, Khe Sanh was reinforced with the 37th ARVN Ranger Battalion in late January.²²

Khe Sanh looked like a lucrative target for the North Vietnamese due to its proximity to the DMZ and border with Laos, relative isolation from other US combat formations, and the ability of the NVA to cut the only ground line of communication, the narrow dirt road called Route Nine. The NVA leaders planned to use the 325C and 304th Divisions to overrun Khe Sanh, while a reinforced regiment from the 324th Division executed a blocking force action to prevent re-supply or reinforcement from the ground along Route Nine.²³ The NVA force working to capture Khe Sanh totaled between 32,000 and 40,000 troops.²⁴ The plan bore many similarities to the assault on Dien Bien Phu a decade earlier. The NVA would infiltrate an overwhelming amount of infantry to the surrounding area, occupy the high ground and emplace artillery and AAA to attempt to blunt American firepower and air support, then overwhelm the perimeter and take the base. In late 1967, General Giap was reportedly in Hungary receiving medical treatment for kidney stones, and did not return until February 1968, after the battle for Khe Sanh was well underway.²⁵ Regardless, it is very unlikely Giap's personal presence at the battlefield would have changed the outcome of the battle considering the massive combat power available to the US forces in the form of air and artillery support, as well as ground reinforcements.

The siege of Khe Sanh lasted from 21 January through 14 April 1968, a grueling 77-day duel of NVA manpower and will versus US firepower and grit.²⁶ As predicted by a NVA deserter to USMC intelligence officers the preceding day, at 0530 on the 21st, NVA artillery, rockets and mortars began bombarding Khe Sanh, destroying a battalion mess hall and setting Ammunition Supply Point one aflame, resulting in massive

²² Shumblison et al., *U.S. Marines in Vietnam*, Loc 8465.

²³ Drez, *Voices of Courage*, 57-58.

²⁴ Davidson, *Vietnam at War*, 552.

²⁵ Pribbenow II, Merle L. *General VJ Nguyễn Giáp and the Mysterious Evolution of the Plan for the 1968 Tet Offensive* (Berkely CA: Journal of Vietnamese Studies, Volume 3, Issue 2, Summer 2008), 18,
<http://aufric.idm.oclc.org/login?url=http://search.proquest.com.aufric.idm.oclc.org/docview/219225995?accountid=4332>.

²⁶ Jones, *Last Stand at Khe Sanh*, 168.

secondary explosions, as noted at the beginning of this section. However, earlier in the night, the NVA attempted to take Hills 861 and 881S with battalion strength assaults.²⁷

On Hill 881S, however, Captain Dabney had decided not to wait for an attack, and instead requested and received permission to conduct a reconnaissance in force up Hill 881N.²⁸ Pushing out at 0500, India company ended up in a fierce meeting engagement with an NVA battalion fighting from dug in positions, supported by machine guns in bunkers, mortars and artillery of their own. After a relentless assault up the hill, significant airstrikes utilizing napalm and numerous acts of bravery in the face of extreme danger (two of Dabney's platoon leaders were posthumously awarded the Navy Cross), India Company took the ridgeline of Hill 881N from the NVA and destroyed the positions. The NVA attackers were forced to retreat, although it cost India Company seven dead and 25 wounded.²⁹ Additionally, a CH-46 helicopter was destroyed by NVA AAA guns while attempting to evacuate wounded and re-supply the Marines.

On Hill 861, Kilo Company fought off the repeated attempts by the 6/2 Battalion of the 325C NVA Division. Outnumbered approximately three to one, the perimeter of the 150 Marines was only breached once, and those NVA soldiers who slipped through were located and killed at dawn. Kilo Company also retained possession of their hilltop through sound tactical preparations such as strong overhead cover for bunkers, trip flares, and well-sighted M-60 machine gun emplacements, as well as the determination to prevail in fierce hand-to-hand fighting in perimeter trenches. These successful hill defenses denied key terrain to the NVA. Mortar round, sniper fire, and occasional sapper attacks continued to target the USMC hilltop bastions for the remainder of the battle for Khe Sanh.³⁰

Back on the main Khe Sanh combat base, the bombardment continued during the day, and once darkness fell NVA sappers and platoons began to probe the perimeter. In the early hours of 22 January, platoon- and company-sized NVA attacks on the west and south perimeters of the base were thrown back, normally followed by USMC artillery or

²⁷ Jones, *Last Stand at Khe Sanh*, 36.

²⁸ Drez, *Voices of Courage*, 76.

²⁹ Drez, *Voices of Courage*, 79.

³⁰ Jones, *Last Stand at Khe Sanh*, 22, 36, 89.

mortar rounds, or a USAF or USMC airstrike on their revealed positions.³¹ This type of indirect fire and intermittent perimeter assaults during the hours of darkness would continue through the end of January, when the Tet Offensive would launch throughout the country.

After the Tet Offensive began, the next major actions during the siege of Khe Sanh, beyond the steady state bombardment, sniper fire and sapper attacks, were the NVA attacks against Hill 861A, Hill 64, and a nearby US Army Special Forces camp during 5-8 February. On 5 February, a full battalion of NVA attacked a recently established defensive position on Hill 861A, near Hill 861. Echo Company did not have much time to prepare their defensive positions, so there was not much more than hasty trenchworks and lines of concertina wire in place. USMC Captain Breeding led the defense, and described numerous acts of heroism by his men, as well as the indispensability of supporting artillery and air support. NVA soldiers temporarily gained control of some of the hilltop during the night, but were dislodged by a Marine counterattack in the early hours of 6 February. The attempt failed, and the NVA left 109 dead on Hill 861A.³²

Meanwhile, on 6-7 February, another NVA battalion overran the US-led Special Forces camp at the village of Lang Vei to the Southwest. On 7-8 February, the NVA attempted to take Hill 64. Hill 64 was located approximately a kilometer west-southwest of the of the Khe Sanh perimeter, and was held by a reinforced platoon of Marines from Alpha Company, 1st Battalion, 9th Marine Regiment. There were 64 Marines on the hill, hence the name (rather than the elevation as per standard operating procedure).³³ Through vicious fighting that included hand to hand combat, and devastating artillery support from the main base, the US Marine platoon held onto Hill 64.

After the failure of the previous attacks to achieve their objectives, on 10-12 February, General Giap (now back in Vietnam) shifted some elements of his three divisions surrounding Khe Sanh to support the battle for Hue City.³⁴ However, there

³¹ Jones, *Last Stand at Khe Sanh*, 69.

³² Drez, *Voices of Courage*, 122, 129.

³³ Jones, *Last Stand at Khe Sanh*, 139

³⁴ Davidson, *Vietnam at War*, 564

were still better than two NVA divisions to deal with, albeit weakened from US air, artillery, and the failed assault attempts. The US defenders settled into a surreal routine dealing with regular incoming rockets, artillery, and sniper fire.

The NVA forces made two more significant efforts to damage or overrun Khe Sanh combat base. On 23 February, the aforementioned peak of incoming indirect fire occurred when 1,307 incoming rounds or rockets were recorded. The US forces were so well dug in by this point that the massive barrage resulted in a relatively small 12 US KIA and 19 WIA that were flown out due to the seriousness of their injuries. The US casualties were tragic on a personal level, but hardly constituted a significant blow to the combat power of the 26th Marine Regiment.³⁵

On 29 February, Colonel David E. Lownds, the regimental commander, was informed that a major enemy movement was detected to the front of the ARVN Ranger battalion's position on the Southeast base perimeter. It appeared to be at least an entire NVA regiment of about 1,500 preparing for an assault on the ARVN lines. The command post staff called on all their supporting fires to target the suspected enemy positions, including US tactical aircraft, the diversion of B-52 strikes, and the 175mm guns from Camp Carroll. In spite of this barrage, the NVA regiment made three attempts to breach the lines, the first at 2130, then at 2330, and again at 0315 on one March. Once the NVA soldiers revealed themselves to assault the base, all of these attacks were smashed by accurate artillery and close air support, and the Khe Sanh perimeter was not breached.³⁶

After this attack failed, the NVA forces began to retreat from the immediate area surrounding Khe Sanh. Occasional indirect and sniper fire continued, but General Giap gave up on Khe Sanh, and repositioned what remained of his divisions for future fights. Due to shifting plans and operational priorities, MACV subsequently ordered the closure of Khe Sanh, and in July 1968, the last US forces left, preferring to control the border area from a more easily defended base at Ca Lu.³⁷ Later, Giap would excuse the failure

³⁵ Jones, *Last Stand at Khe Sanh*, 190.

³⁶ Jones, *Last Stand at Khe Sanh*, 222.

³⁷ Jones, *Last Stand at Khe Sanh*, 279.

to over-run Khe Sanh in a press interview by saying that the air base was “more important to the Americans than it was to the North Vietnamese.”³⁸

Several factors contributed to the successful defense of Khe Sanh. Critically, the NVA forces were never able to focus sufficient indirect fire on the airfield, nor AAA on aircraft in the approach or departure corridors, to force closure of the runway for more than a few hours at a time. After the loss of ammunition supplies from enemy artillery fire on 21 January, a stream of C-123s and C-130s arrived at Khe Sanh loaded with pallets of ammunition and other supplies totaling 250 tons per day for the next eight days.³⁹ These supplies were especially important the day after the battle, in order to replenish the ammunition lost during the fire at ASP One. It was a harrowing experience for the air and ground crews, with mortar and artillery rounds sometimes impacting around aircraft or around the pallets just after aircraft departure. C-130 landings were suspended on 12 February after a Marine KC-130 was lost. C-130s continued to conduct low altitude airdrops (with 597 of 600 containers hitting the Drop Zone), and C-123s continued to conduct airland deliveries and retrieve wounded, often at a constant slow taxi. In total, 1,128 air mobility sorties delivered 12,430 tons of sorely needed supplies to the defenders of Khe Sanh during the siege.⁴⁰ This re-supply enabled the 26th Regiment to continue to fight the base, without running out of the ammunition, food or medical supplies they needed. Lastly, the Marines’ dogged refusal to cede the surrounding key terrain was an important enabling factor in ensuring Khe Sanh continued to function as an air base.

Air support combined with US artillery superiority to take a terrible toll on the NVA forces. US Army and USMC artillery batteries fired more than 200,000 rounds during the siege. In terms of air, General Westmorland designated the Seventh Air Force commander, Lieutenant General William Momyer, as the coordinating authority for Khe Sanh air support, including excess USMC tactical air sorties. The effort was colossal. B-52 Arc Light strikes targeted suspected enemy positions farther away from the base, while fighter and attack tactical aircraft conducted strikes closer, many within 100 meters

³⁸ Davidson, *Vietnam at War*, 566.

³⁹ Boyne, Walter J. “Airpower at Khe Sanh” *Air Force Magazine* (August 1998), 87.

⁴⁰ Boyne, *Air Power at Khe Sanh*, 88.

of friendly troops. During 2,548 sorties in defense of Khe Sanh, the Arc Light strikes dropped 59,542 tons of bombs around Khe Sanh. In 22,000 fighter and attack aircraft sorties, more than 40,000 tons of ordinance were dropped on NVA positions, including high explosive, napalm, and various other munitions.⁴¹ Without this massive air support effort, the hills would almost certainly have been lost, and the defense of Khe Sanh as a functioning air base would have been much more difficult.

The 26th Marine Regiment, with support from the US Army on the ground, and extensive air support from the USAF and USMC, successfully defended Khe Sanh against two and a half divisions—the best the NVA could throw at them. This was a determined effort that included NVA jamming of US tactical radio nets, a regiment-sized infantry assault on the base perimeter, and massive logistical and indirect fire support. The US forces inflicted several times the number of casualties that they took, and were the clear tactical victors. However, MACV decided to deconstruct the base and withdraw from Khe Sanh in the summer of 1968 because the base was no longer operationally necessary considering the demise of the “McNamara Line” concept after the Tet Offensive. Therefore, Khe Sanh was not worth the effort to operate and defend. In that way, the battle for Khe Sanh is representative of the entire US involvement in the Second Indochina War.

Tan Son Nhut Air Base

Security Police personnel and augmentees were well-supervised and well-trained in fire control and discipline and in basic tactics, but were neither equipped nor trained well enough to effectively counter a regiment-size enemy assault. Consideration should be given to Base Security Police receiving more infantry type training prior to assignment in Southeast Asia. Emphasis should be placed on crew served and heavy weapons, assault tactics, and deployment procedures. Existing Air Force training in the ZI and in Southeast Asia is not sufficient to enable Security Police forces to effectively counter forces of this size, equipped as they were.

Billy J. Carter, Lieutenant Colonel, USAF, 377 SPS/CC

⁴¹ Boyne, *Air Power at Khe Sanh*, 86, 87.

Tan Son Nhut Air Base (TSNAB) was one of the North Vietnamese targets during the Tet offensive. Tan Son Nhut was one of the three most significant US air bases in South Vietnam, the others being Dan Nang and Bien Hoa. It was located on the outskirts of Saigon, and the home to MACV headquarters and Seventh Air Force headquarters. It was therefore important operationally and strategically, in terms of political narratives domestically and internationally. It also served as Saigon International Airport. The assigned population of TSNAB in 1968 was approximately 25,000, which grew to as much as 55,000 during the day on duty days.⁴²

The main defensive force for Tan Son Nhut Air Base were host nation forces and the 377th Security Police Squadron (SPS). On 31 January 1968, 815 Airmen from the 377 SPS were present for duty.⁴³ The 377th was directly supplemented by three platoons totaling 90 Army soldiers from the 69th Signal Battalion, and many ground and air units were potentially available to support if requested by the base Joint Defense Operations Center (JDOC). The host nation forces in the area included RVNAF base defense units reinforced with a few light tank platoons, and several ARVN infantry battalions. US Army attack helicopter Light Fire Team (LFT) and USAF tactical air support, including AC-47 “Spooky” or other model gunships were also available to provide support. Additionally, there were at least three batteries of 105mm US Army and ARVN howitzers supporting TSNAB. Most aircraft parked on TSNAB were protected by revetments or shelters to minimize damage from indirect fire, and the base was divided into sectors for tactical defense purposes, with significant Military Police presence controlling the MACV and Seventh Air Force headquarters sectors. The perimeter consisted of one-to-three lines of triple-strand concertina wire (one spiral stacked on top of two spirals), followed by a mined area and fencing. Defensive Fighting Positions (DFPs) hardened with concrete and sandbags covered interlocking sectors of fire. The DFPs in combination with manned towers and sufficient lighting provided visual observation of the perimeter around the clock.⁴⁴

⁴² Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 62.

⁴³ Dennison et al. *Project CHECO Southeast Asia Report: Local Base Defense in the Republic of Vietnam, Jan 68 – Jun 71*, 48.

⁴⁴ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 50.

Due to its metropolitan location, TSNAB was for the most part surrounded on three sides by built up areas and villages. There were some areas of vegetation to the west, particularly near the 051 Gate, and the 051 Bunker which anchored the defense of the western corner of the base perimeter. The northern perimeter of the base also bordered large areas of vegetation. The southern, eastern, and much of the western perimeter bordered buildings and roads. However, countless rice paddies, areas of thick jungle, and rural paths and sufficient numbers of sympathetic or scared civilians provided ample possibilities for Vietcong or NVA infiltration into the Saigon area.⁴⁵

That rampant infiltration became obvious on 30 January 1968. Due to intelligence indicating an imminent attack against TSNAB, as well as numerous other targets in Saigon, Seventh Air Force ordered TSNAB to alert level red (option one) at 1732, which required the maximum security forces on duty, organized into two 12 hour shifts.⁴⁶ As a result, 652 Airmen and Soldiers were posted in defensive positions or sitting alert as quick response team members, with an additional 254 with weapons and duty gear ready, but resting or asleep in their barracks area.⁴⁷ This intelligence indicating an attack was accurate, but the scale of the attack was entirely unexpected. One sapper battalion and four infantry battalions made up of a combination of Vietcong (Main Force) and NVA soldiers, were moving into position to attack TSNAB.⁴⁸

Between 0320 and 0340 on 31 January, the Entry Control Point for the MACV HQ compound, bunkers along the northern perimeter, and Bunker 051 reported enemy movements as well as incoming small arms and mortar fire. The Joint Defense Operations Center (JDOC) ordered alert status red (option two), which recalled all off-duty security force members. At 0344, the Airmen in Bunker 051 reported that Vietcong blew a hole in the perimeter fencing to their front with a Bangalore torpedo, and dozens of men were pouring through the breach.⁴⁹ In fact it was much worse than dozens--the

⁴⁵ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 51.

⁴⁶ Lee, Richard R. *7 AF Local Base Defense Operations, July 1965–December 1968* (Hickam Air Force Base, Hawaii: Headquarters PACAF, July 1, 1969), 35.

⁴⁷ Carter, Billy J. *Briefing of Attacks on Tan Son Hut Air Base on 31 January 1968*, personal papers of Colonel Carter (Air Force Historical Research Agency).

⁴⁸ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 51.

⁴⁹ Lee, *7AF Local Base Defense Operations, July 1965–December 1968*, 36.

Vietcong C-10 Sapper Battalion and 267th Vietcong infantry battalion were flowing through the breach. They were armed with assault rifles, Rocket Propelled Grenade (RPG)-2s and RPG-7s, light machine guns, as well as hand and rifle-fired grenades. The US defenders within weapons range were hopelessly outnumbered and outmatched in terms of firepower, as the assaulting force totaled over 500 men.⁵⁰ The JDOC dispatched three quick reaction teams (QRT) and two of the Army platoons, a force of approximately 100 men, to the area of Bunker 051 block the breaching enemy forces. USAF Security Police Sergeants Louis Fisher, William Cyr, Charles Hebron, Roger Mills, and Alonzo Coggins manned Bunker 051 at the time of the attack. Under withering small arms, machine gun, and mortar fire, they used their M-60 machine gun and small arms to delay the assaulting forces long enough to buy the blocking force a few precious minutes to move into position. Eventually, direct hits from RPGs damaged the bunker, killed four of the men, and severely wounded Sgt Coggins. For their heroic actions, all five of these men were awarded the Silver Star, four of them posthumously.⁵¹

While the breaching attack was underway, the 90th NVA battalion was largely positioned in and around a textile factory northeast of the 051 gate, where 12 mortar teams were firing a large volume of rounds at the defending security forces, as well as the airfield and other locations on TSNAB. Another mixed battalion, the 16th Vietcong, was ready to follow the 90th through the perimeter breach, and squad-size elements of the Vietcong battalions were firing on other perimeter towers and gates around TSNAB.⁵²

The USAF QRTs and US Army soldiers were able to hold a secondary defensive line behind Bunker 051, which was now occupied by Vietcong forces, but US forces were still outnumbered and outgunned, as supporting artillery and air was not yet cleared to fire outside the base perimeter or in such close proximity to friendly forces. To illustrate the fire power of assaulting Vietcong and NVA forces, at approximately 0500 three RVNAF light tanks arrived and commenced firing on the enemy forces in the vicinity of the 051 Bunker. Within 15 minutes, two of the three were destroyed by RPGs,

⁵⁰ Hettinga, Benjamin, E. *The Defense of Tan Son Nhut, 31 January 1968: A Study in the Nature of Air Base Security* (Wright-Patterson Air Force Base, OH: The Department of the Air Force & The Ohio State University, 2001), 54.

⁵¹ Air Force Manual 31-201, Volume 1, 10.

⁵² Lee, *7 AF Local Base Defense Operations, July 1965–December 1968*, 36.

and the third withdrew.⁵³ As recounted in the Project CHECO report, “By 0530 hours, the enemy had penetrated 600 meters into the base in an area about 300 meters wide. Heavy automatic weapons fire was received around the entire base perimeter, defended primarily by ARVN and VNAF Security Police units. USAF Security Police...were at various positions around the perimeter where incoming fire seemed to be concentrated.”⁵⁴

After 0530, the momentum of the fight swung in the direction of the US and South Vietnamese forces. Supporting artillery units finally received permission to fire on the Vietcong and NVA positions, and 105mm shells and mortars began to rain down. US Army helicopter LFTs were cleared to engage and began strafing concentrations of enemy soldiers. By 0630, a US Army armored cavalry troop (company) had arrived from Chu Chi, after a 20-mile trip down Highway One during which they defeated moderate resistance. Additionally, two companies of ARVN airborne soldiers had reinforced the Airmen and Soldiers holding back the Vietcong and NVA assaulting forces. The fresh ARVN soldiers and US Army Cavalry troop combined with supporting fires to allow the US forces to achieve fire superiority. A robust counterattack began as the base security forces pushed toward the perimeter, and C Troop, 3/4 Cavalry Regiment attacked along the flank of the 267th and 16th Vietcong Battalions outside the perimeter.⁵⁵

By 1217, the breach was closed and the base perimeter re-established after USAF Security Police assaulted and re-occupied Bunker 051 and the 051 Gate. The MACV compound was declared secure by 1300.⁵⁶ Over the next two hours, airstrikes decimated the nearby textile factory, with much of the 90th NVA Battalion still inside. While significant action continued in the general area of Saigon and intermittent small arms fire or rocket fire was received at Tan Son Nhut, by the early afternoon of 31 January the regiment-sized attack on TSNAB as part of the Tet Offensive was decisively defeated.

The fierce fighting did come at a significant human cost. US and South Vietnamese losses totaled 55 KIA and 155 WIA. The “US confirmed” Vietcong and NVA body count was 792. Of those, 157 were found inside the base perimeter, 267

⁵³ Lee, *7 AF Local Base Defense Operations, July 1965–December 1968*, 37.

⁵⁴ Lee, *7 AF Local Base Defense Operations, July 1965–December 1968*, 38.

⁵⁵ Lee, *7 AF Local Base Defense Operations, July 1965–December 1968*, 38.

⁵⁶ Carter, *Briefing of Attacks on Tan Son Hut Air Base on 31 January 1968*.

immediately outside the breach and at the textile factory, with another 368 at various other locations around the base. Aircraft on base escaped major damage since the perimeter breach was contained. Thirteen aircraft were damaged, but none destroyed.⁵⁷

In a demonstration of the lack of tactical effectiveness of the Vietcong attack, the runway at TSNAB was operating again by the afternoon of 31 January 1968. However, the “applied principles of air base defense” as described and executed at TSNAB by Colonel Billy J. Carter, USAF, enabled a successful defense of a determined attack by a force of approximately 2,500 Vietcong and NVA troops.⁵⁸ Like many other bases in Vietnam, TSNAB repeatedly suffered standoff attack by indirect fire (IDF). We now will examine the IDF problem in more depth by looking at how it affected Bien Hoa Air Base.

Bien Hoa Air Base

Bien Hoa Air Base (BHAB) was originally built by the French during their occupation of Indochina, and hosted US forces from 1962 through 1973. It was located in a more rural setting than Tan Son Nhut Air Base, approximately 25 kilometers northeast of Saigon. The geography is mostly flat in the immediate area of the base, sitting 24 meters above sea level. The city of Bien Hoa was just outside the perimeter to the southeast, with more villages to the south, but the northern perimeter of the base largely looked out into vegetation, with the Dong Nai River to the west.

BHAB was attacked by two Vietcong Battalions as part of the Tet Offensive. At 0300 on 31 January, a brief rocket and mortar barrage was followed by penetration of the perimeter at four locations simultaneously. The base Security Police responded, and supported by ARVN soldiers and air support from helicopter LFTs, defeated the attack and re-established the perimeter by mid-morning. 24 friendly forces were KIA (four were USAF) and 26 WIA, while the Vietcong KIA was officially listed at 423. Also, 34

⁵⁷ Lee, *7 AF Local Base Defense Operations, July 1965–December 1968*, 38; Carter, *Briefing of Attacks on Tan Son Hut Air Base on 31 January 1968*.

⁵⁸ Carter, *Briefing of Attacks on Tan Son Hut Air Base on 31 January 1968*; Carter, *Applied Principles of Air Base Defense in Southeast Asia*, personal papers of Colonel Carter (Air Force Historical Research Agency).

Vietcong prisoners were taken alive.⁵⁹ Even though this was a very deadly eight-hour period, only two US and RVNAF aircraft were destroyed, with an additional 10 damaged. This attack is not the focus of this section, because most damage done to air power projection at Bien Hoa, and in the Southeast Asian theater during the Vietnam War, was accomplished through standoff attacks rather than penetrations or attempts to over-run US air bases. In fact, BHAB suffered more indirect fire rocket, mortar, or artillery rounds impacts, and more aircraft damaged and destroyed, than any other air base the US was operating from during the Vietnam War.⁶⁰

The first standoff attack that grabbed the attention of US military leaders, and the USAF in particular, was the 1 November 1964 mortar attack on Bien Hoa Air Base. Soon after midnight, Vietcong insurgents covertly emplaced six 81mm mortars approximately 400 meters from the base perimeter. They then rapidly fired 70-80 rounds at the aircraft parking area and a barracks area housing mostly US Army soldiers. The rounds were well aimed, and the attack succeeded in destroying seven friendly aircraft, five of which were USAF B-57 Canberra bombers, and further damaged 22 other aircraft. There likely would have been more B-57s destroyed, but two squadrons were removed from the base prior to the attack due to intelligence warnings. The US also lost four service members KIA, and 72 were wounded by the mortar rounds.⁶¹ In effect, the Vietcong destroyed or heavily damaged enough Canberras to equip a squadron. While the loss of seven aircraft by no means prevented US air attacks, it highlighted the vulnerability of parked aircraft at forward bases in Southeast Asia. The US could not continue to absorb similar losses indefinitely, so a number of passive and active defense measures were initiated at Bien Hoa and other major airbases, with mixed results.

Active measures included attempting to use ARVN personnel, supported by US Army or Marine units, to control an area up to 8,000 meters from air base perimeters, as well as increased counterbattery detection and fires capabilities.⁶² Passive measures included aircraft dispersal, the construction of aircraft shelters and revetments designed to

⁵⁹ Dennison et al. *Project CHECO Southeast Asia Report: Local Base Defense in the Republic of Vietnam, Jan 68 – Jun 71*, 39.

⁶⁰ Vick, *Snakes in the Eagle's Nest*, 93.

⁶¹ Caudill et al., *Defending Air Bases*, 12.

⁶² Caudill et al., *Defending Air Bases*, 12.

limit damage from rocket, artillery or mortar fragmentation, sandbag walls around and over housing units, and response tactics, techniques, and procedures (TTP). All of these efforts had an effect, but none completely solved the problem. The efforts to patrol the surrounding area were frustrated by the fact that the terrain favored the enemy, and by the ineffectiveness of many ARVN units. Additionally, the language and culture barrier hindered US forces' ability to interact with the local populace, complicating the general lack of sufficient counterinsurgency (COIN) training for soldiers and Marines. These factors complicated and contributed to the conspicuous absence of a ground intelligence function within the USAF.

In 1965, BHAB was hit with one stand-off attack in which 97 rounds impacted on base, damaging 11 aircraft. The following year, a single sapper attack took place. In 1967, the pace picked up a bit, with one sapper and two stand-off IDF attacks totaling 204 rounds that destroyed four and damaged 32 friendly aircraft. 1968 was, of course, a much more intense year. The major attack on 31 January during the Tet offensive resulted in two destroyed and 17 damaged aircraft. However, 14 other IDF attacks later in the year destroyed an additional seven and damaged another 64 aircraft with a total of 247 rounds fired. In 1969, a total of 221 rounds were fired at BHAB during 19 IDF stand-off attacks. Three aircraft were destroyed and 40 damaged. In 1970, nine IDF attacks lobbed 78 rounds, destroying one and damaging six aircraft. In 1971, there were 18 IDF attacks against BHAB, but none fired more than five rounds. No aircraft were damaged or destroyed. Lastly, in 1972, the attacks ramped up again. During 15 IDF attacks, Vietcong forces fired 331 rounds or rockets, destroying six aircraft and damaging 141 more.⁶³

The data in the preceding paragraph reflect the larger complex competition happening over the years. The passive defense measures reduced the effectiveness of stand-off IDF attacks against BHAB during the conflict. For example, the relatively small number of aircraft destroyed in the face of a greater than ever volume of fire in 1972 is largely attributable to the construction of aircraft shelters and revetments, as well as dispersal efforts. By 1970, Seventh Air Force completed construction of 373 aircraft

⁶³ Vick, *Snakes in the Eagle's Nest*, 128-153.

shelters and 1,000 revetments at bases in the Republic of Vietnam.⁶⁴ The active defense measures such as interdiction and patrolling, likely reduced the number of IDF attacks, but could not stop them. The major North Vietnamese effort in 1968 resulted in significant attrition of their regular and Vietcong forces, reducing both the number and skill level of available fighters. However, by 1972, the massive reduction in US ground forces in country due to Vietnamization likely equated to a corresponding reduction in active defense measures, leaving the resurgent Vietcong and NVA more able to operate freely in the area of BHAB.

In 1968, the commander of the 3rd Security Police Squadron at Bien Hoa stated “Air Force bases were prohibited from sending reconnaissance teams off base...The present system of the OSI being assigned the responsibility of off base intelligence is completely unsatisfactory.”⁶⁵ The inability to patrol off base, the lack of force protection intelligence, and other doctrinal and “organize, train, and equip” problems would remain unsolved during the Vietnam War. In the next two decades, the primary DoD focus returned to winning the potential general war or a conventional European war against the Warsaw Pact. With some exceptions, the concept of an entirely unsecure rear area was left on the shelf, until new missions emerged in the wake of September 11th, 2001.

⁶⁴ Fox, *Air Base Defense in the Republic of Vietnam, 1961-1973*, 71.

⁶⁵ Caudill et al., *Defending Air Bases*, 14.

Chapter 5

21st Century: The US at JBB, NATO in Afghanistan

Great battles, like epic tragedies, are not always staged or the product of human calculation; and disaster is less likely to derive from one gross blunder than from reasoned calculations which slip just a little.

Brig Gen S. L. A. Marshall

Joint Base Balad, Iraq

During Operation Iraqi Freedom (OIF), Balad Air Base and the adjacent Logistic Support Area (LSA) Anaconda were among the largest and most important sustainment and power projection hubs for US and coalition forces. Balad's central location approximately 60 kilometers north of Baghdad, near Main Supply Route Tampa, was convenient for air and ground movements around the country. Positioned in the northern section of Iraq's agriculturally rich "fertile crescent," the geography was largely flat. Some elevation change did exist, and the land was crisscrossed with small canals, unimproved roads, wadis, and towns among the farm fields surrounding the base complex. The base population would swell to 20,000 US and coalition personnel, while a line drawn 10 kilometers around the base perimeter included a host nation population of 120,000.¹

In late 2004 Balad Air Base was under frequent indirect fire (IDF) attack and located in one of the region's most violent areas.² Balad Air Base had an effective perimeter defense, but the base commander had no authority outside the perimeter, and the reactive approach of the US Army units performing area security operations outside the base perimeter was not successfully preventing attacks.

At the level of theater military strategy, these attacks were a tactical annoyance. Unlike many of the damaging, well-executed IDF attacks during the Vietnam War, 87 percent of these attacks consisted of only one or two mortar rounds or rockets, and 66 percent were a single round or rocket.³ To further contrast with Vietnam, where eight

¹ Caudill et al., *Defending Air Bases*, 208.

² Air Force Manual 31-201, Volume 1. *Security Forces History*. Certified current 1 June 2015, 16-17.

³ Vick, *Air Base Attacks and Defensive Counters*, 24.

attacks included more than 80 rounds fired at air bases, the highest number of mortar rounds or rockets recorded during a single attack on Balad during OIF was 16.⁴ Furthermore, the accuracy of fire was very low. More than half of the rockets or mortars fired at Balad Air Base from 2004 through 2011 landed outside the perimeter of the base.⁵ Several factors contributed to this lack of effectiveness. Low levels of training and experience among many insurgents; low quality, poorly maintained, or improvised equipment; hasty, improvised launch sites; and fear of counterbattery or armed quick reaction force (QRF) response likely all contributed. However, some operations were briefly interrupted and the rockets or mortars sometimes did harm coalition personnel or damage equipment. After a rocket attack in 2004 resulted in the death of four coalition personnel and injury of 20 others, USAF Lt Gen Walter E. Buchanan III, the Air Forces Central (AFCENT) Commander, lobbied to create an air force-led task force to undertake a proactive approach and protect Airmen and other coalition personnel from IDF.⁶

As a result, US Central Command (CENTCOM) and Multi-National Force-Iraq (MNF-I) granted AFCENT the authority to stand up a temporary task force to tackle the problem. Task Force 1041 consisted of a reinforced company-sized element of USAF Security Forces whose mission was to operate off base in a five by 10-kilometer area between the base perimeter and the Tigris River, where the majority of IDF and Improvised Explosive Device (IED) attacks effecting base operations originated. After focused intelligence preparation, Operation Desert Safe Side commenced 1 January 2005. Over the next 60 days Task Force (TF) 1041 captured 17 High Value Individuals (HVI), 98 other insurgents, and eight major weapons caches. IDF attacks on the base and other attacks inside TF 1041's area of operations (AO) were "reduced to nearly zero."⁷ This reprieve was very temporary, however. After the TF 1041 completed its brief 120-day mission, IDF attacks began to increase again. In the following year, there were nearly 300 IDF attacks against Balad Air Base and LSA Anaconda.⁸

⁴ Caudill et al., *Defending Air Bases*, 232.

⁵ Caudill et al., *Defending Air Bases*, 231.

⁶ Christensen, Glen E. *Air Base Defense in the Twenty-First Century* (Fort Leavenworth, Kansas: School of Advanced Military Studies, 2007), 6.

⁷ Air Force Manual 31-201, Volume 1, 17.

⁸ Caudill et al., *Defending Air Bases*, 203.

As violence in Iraq's urban areas surged in 2006, IDF attacks against Balad Air Base reached their peak, with approximately 475 recorded during the year.⁹ Incidents of damage or casualties continued to be rare relative to the number of incoming IDF rounds, but the volume was alarming. Some service members wryly referred to Balad as "mortaritaville."¹⁰ The problem continued in 2007, with over 350 IDF attacks targeting Balad and LSA Anaconda.¹¹

MNF-I was the coalition command in charge of Operation Iraqi Freedom, led by a US Army four star general. In 2008, MNF-I took steps to better enable positive protection. Balad Air Base and LSA Anaconda were re-organized as Joint Base Balad (JBB). The 332d Air Expeditionary Wing (AEW) took on Base Operating Support Integrator (BOS-I) responsibility for JBB. According to JP 4-0, the BOS-I is the "designated service component or joint task force commander assigned to synchronize all sustainment functions for a contingency base... This includes but is not limited to master planning... prioritizing construction requirements, seeking funding support, and force protection... the personnel, equipment, services, activities, operational energy, and resources functions required to sustain operations at an installation."¹² Therefore the BOS-I and Senior Airfield Authority (SAA) responsibilities were combined in one organization, greatly simplifying logistical support, mission support operations, civil engineering and base planning activity. As a result of this change, the 332d Expeditionary Security Forces Group (ESFG) stood up. The 332 ESFG commander was a colonel leading a nearly 1,000-person coalition team focused on the mission of defending JBB.¹³ This combination of unity of command, authority, responsibility, and clear task organization set conditions for more effective base defense.

Several important aspects of JBB Integrated Defense concept execution are worth highlighting. First, the assignment of sufficient Airmen to the 332 ESFG who were trained and equipped to perform area security operations outside the perimeter of JBB in order to reduce the threat of IDF, surface-to-air fire such as man portable air defense

⁹ Vick, *Air Base Attacks and Defensive Counters*, 24.

¹⁰ Caudill et al., *Defending Air Bases*, 235.

¹¹ Caudill et al., *Defending Air Bases*, 232.

¹² Joint Publication 4-0, *Joint Logistics*, II-9, III-3, GL-5.

¹³ Air Force Manual 31-201, Volume 1, 17.

systems (MANPADS), and Improvised Explosive Device (IED) attacks on nearby ground lines of communication. Second, the operational approach that guided off base operations was based on the recently updated Army-Marine Corps Counterinsurgency Manual.¹⁴ Third, the creation of a Joint Intelligence Support Element (JISE) provided dedicated intelligence support to the base defense mission. Lastly, the ESFG leaders ensured a detailed integration of ESFG operations with the Army battlespace owning units in the area, and incorporated other joint capabilities important to base defense.

Though 332 ESFG personnel still fell under the tactical control (TACON) of the brigade battlespace owner¹⁵ with authority outside of the base boundary,¹⁶ the 532 Expeditionary Security Forces Squadron (ESFS) was intended to perform active patrolling within the Base Security Zone (BSZ). The USAF uses the term Base Security Zone (BSZ) to describe the area outside of the base perimeter fence/obstacle line from which enemy forces could attack the base or affect air operations using standoff threats. It is important to note that the pre-deployment training, weapons, communication equipment, and armored vehicles used by the elements of the 332 ESFG all needed to be suitable to the task of off base patrolling, similar to and compatible with those in use by Army or Marine ground units performing similar missions. Instead of assuming the role of previous units tasked with base defense, the ESFG chose to lead a proactive, intelligence-driven approach, based on an understanding of the larger COIN operation.¹⁷

The ESFG included the creation of a JISE, a dedicated ground intelligence organization led by USAF intelligence professionals with cross-functional membership. The JISE was the key to enabling intelligence-driven operations designed to gain an understanding of the correlation and causality of IDF and other threat locations, perpetrators, and their social and support networks. The JISE staff had the skills to plug

¹⁴ For more information of COIN doctrine, see US Army Field Manual 3-24/Marine Corps Warfighting Publication 3-33.5.

¹⁵ “Battlespace owner” is not a doctrinal term, but often used informally to describe the military unit responsible for a designated land area of responsibility.

¹⁶ JP 3-10 defines the Base Boundary as “A line that delineates the surface area of a base for the purpose of facilitating coordination and deconfliction of operations between adjacent units, formations, or areas.” It may be entirely separate from the physical base perimeter, but in the case of JBB, they were essentially the same.

¹⁷ Caudill et al., *Defending Air Bases*, 294.

into national assets as well as the local Army ground intelligence networks to enhance effectiveness. Additionally, Non-traditional Intelligence Surveillance, and Reconnaissance (NTISR) sources were leveraged to great effect.¹⁸ Platforms dedicated to persistent ISR such as aerostats and Remotely Piloted Aircraft (RPAs) were very beneficial, but of course limited in number. However, excess fuel and loiter time allowed Air Force fixed wing assets and Army rotary wing platforms not traditionally used for ISR missions, but equipped with sensor capabilities, to offer significant supplementary surveillance of areas or persons of interest. The intelligence from the JISE informed operations and leaders, and the Joint Defense Operations Center (JDOC) was the heart of JBB defense effort.

To encourage appropriate integration with the Army battlespace owner, the unit Tactical Operations Center (TOC) was collocated with the JBB JDOC.¹⁹ The JBB JDOC was very robust in order to ensure a common, accurate operational picture and enable synchronized command and control of joint base defense capabilities. The level of cooperation was described as such: “Almost every day, Soldiers and Airmen at all levels were coordinating joint and combined operations for the next effects cycle, while simultaneously executing the current one.”²⁰ The Army infantry battalion commander responsible for the area was very appreciative that the 532 ESFS was able to provide “more than an additional company’s worth of combat power” to help secure the battlespace.²¹ In another positive example of joint integration, the JDOC staff incorporated command and control of the Counter-Rocket Artillery and Mortar (C-RAM) system, operated by Army and Navy personnel.²² C-RAM provided the capability to detect incoming rockets or mortars, warn the base populace through loudspeakers, and, if the ballistic track indicated a dangerous point of impact on base, the possibility to destroy

¹⁸ Caudill et al., *Defending Air Bases*, 207.

¹⁹ Caudill et al., *Defending Air Bases*, 222.

²⁰ Caudill et al., *Defending Air Bases*, 212.

²¹ Caudill et al., *Defending Air Bases*, 214.

²² Caudill et al., *Defending Air Bases*, 211.

the round or rocket using a 20mm cannon adapted from the Navy's Phalanx Close-In Weapons System (CIWS).²³

It was unrealistic to expect the ESFG could completely stop IDF attacks due to the local geography and population. However, the ESFG did achieve a 52 percent reduction in IDF attacks, from over 220 to less than 130 per year.²⁴ Additionally, the incidents of surface to air fire against aircraft in the area dropped by 40 percent.²⁵ Concordantly, the amount of time between attacks increased, and the accuracy of IDF attacks decreased from 2008 to 2010.²⁶

Members who served in the 332 ESFG have good reason to be proud of these results. An Army Captain wisely stated in 2012: "The most successful counter-IED operations nest within counterinsurgency...doctrine. They do not focus on the devices themselves, but on the population."²⁷ The same is true of preventing IDF threats. Modern C-RAM systems are highly important capabilities that should continue to be developed and fielded. This is especially true since COIN operations often take time to work, and the threat must be nullified with more immediacy. Nevertheless, COIN remains the best approach to reducing or eliminating the number of people willing and able to launch IDF attacks in the first place.

While IDF was the most persistent danger to air base operations during OIF, other threats were prominent in the CENTCOM AOR. Improvised Explosive Devices (IED) and vehicle-borne IEDs (VBIED) caused over 60 percent of combat casualties in Iraq.²⁸ VBIED, Person-Borne IEDs (suicide vests), as well as sapper and other penetrating attacks against air bases, must not be neglected. After OIF was ended and replaced by Operation New Dawn, a penetrating attack caused significant damage on a NATO base in Afghanistan.

²³ US Army Program Executive Officer for Missile and Space official website, <https://www.msl.army.mil/Pages/C-RAM/lpws.html>.

²⁴ Caudill et al., *Defending Air Bases*, 232.

²⁵ Caudill et al., *Defending Air Bases*, 214.

²⁶ Caudill et al., *Defending Air Bases*, 234.

²⁷ Eisler, David. *C-IED Strategy in Modern War* (Military Review, January-February 2012), 10.

²⁸ Wilson, Clay. *Improvised Explosive Devices (IEDs) in Iraq and Afghanistan: Effects and Countermeasures* (CRS Report for Congress, RS22330, 28 August 2007), 1.

Bastion-Leatherneck-Shorabak Attack, 2012²⁹

In September of 2012, Taliban insurgents conducted one of the most significant attacks against an airfield from which US forces were operating since the Vietnam War. On 14 September at 2200 local time, 15 insurgents exploited a weakness in the sprawling Bastion-Leatherneck-Shorabak (BLS) complex's perimeter to gain access and attack coalition equipment and personnel. Over the next six hours, responding US and UK personnel killed 14 of the attackers and captured the wounded fifteenth. However, the insurgents were able to destroy six USMC AV-8B Harriers and severely damaged two others. In addition, a USAF C-130 Hercules, a C-12, three MV-22 Ospreys, and a UK Sea King helicopter were damaged while several aircraft shelters, hangers, fuel bladders, and other equipment in the area were damaged or destroyed. In all, the attack caused over 200 million dollars in damage,³⁰ but the most tragic losses were two US Marines killed during the firefight that also injured 17 US and UK personnel.³¹

Clearly the losses during this incident required investigation and assessment of responsibility. The US commanders responsible for the defense of the BLS complex, USMC Major Generals Charles Gurganus and Gregg Sturdevant, were censured and asked to retire following the completion of the CENTCOM investigation. Furthermore, as the British House of Commons Defence Committee's report concluded: "Insufficient attention was given to the fundamental requirement of defending Camp Bastion from external assault. We believe that this was complacent. Given that the attack took place in

²⁹ This section is an adaption of an original article by the author, "Improving Joint Doctrine for Security in Theater: Lessons from the Bastion-Leatherneck-Shorabak Attack," published in *Joint Force Quarterly*, Volume 85, 1 April 2017.

³⁰ Allyssa K. Rubin, *Audacious Raid on NATO Base Shows Taliban's Reach*, NewYorkTimes.com, http://www.nytimes.com/2012/09/17/world/asia/green-on-blue-attacks-in-afghanistan-continue.html?pagewanted=all&_moc.semityn.www.

³¹ CENTCOM Army Regulation (AR) 15-6 Investigation of the 14-15 September 2012 Attack on the Camp Bastion, Leatherneck, and Shorabak (BLS) Complex, Helmand Province, Afghanistan, 2013, [https://www.mcu.usmc.mil/epme/Sergeants%20Major%20Course%20Documents/Bastion%20-%201_AR%2015-6%20Bastion%20Investigation%20Report%20\(Final-UNCLASS,%2019%20Aug%202013\)\).pdf](https://www.mcu.usmc.mil/epme/Sergeants%20Major%20Course%20Documents/Bastion%20-%201_AR%2015-6%20Bastion%20Investigation%20Report%20(Final-UNCLASS,%2019%20Aug%202013)).pdf), 2.

the British sector of the camp, British commanders must bear a degree of responsibility for these systemic failures.”³²

By September of 2012, the International Security Assistance Force (ISAF) was in the midst of the drawdown or “phase II recovery” from the Afghanistan surge and was under pressure to begin turnover of responsibility for security to the Afghan forces. The overall number of ISAF soldiers in Afghanistan or “Force Management Level” (FML) was steadily drawing down from a high of over 130,000, and on 10 September stood at 112,579, with 74,400 of those from the US.³³ The BLS complex (now called Camp Shorabak by the Afghan government) was located in Helmand province, and home to more than 20,000 coalition personnel. Major General Gurganus was commander of ISAF’s Regional Command-Southwest (RC[SW]), headquartered on BLS. RC(SW) encompassed a 99,700 square kilometer area made up of Nimruz province and the troubled Helmand province, with a host nation population of approximately one million, one hundred thousand people.³⁴ RC(SW) was supported by the 3rd Marine Aircraft Wing, Forward (MAW[FWD]), commanded by Major General Sturdevant, headquartered and primarily operating from BLS. In March 2012 RC(SW) included 17,800 US Marines. By September of 2012, there were 7,400.³⁵ This force drawdown necessitated operational and tactical force allocation and mission curtailment decisions. These decisions were risk management calculations, accounting for force protection. Major General Gurganus’ higher commander, US Army Lieutenant General James Terry, stated “there was a constant balance between projecting forces and protecting the force during this period with priority to protecting the force.”³⁶

The base complex was located in a dry, mostly flat section of Afghanistan, with small amounts of vegetation. There are terrain features, such as small wadis and hills, but

³² UK House of Commons, Defence Committee, 16 April 2014, *Afghanistan—Camp Bastion Attack*, 15.

³³ ISAF Placemat, 10 September 2012, <http://www.rs.nato.int/images/media/PDFs/2012-09-10%20isaf%20placemat.pdf>.

³⁴ Institute for the Study of War, *RC-South*, 2009, <http://www.understandingwar.org/region/regional-command-south-0>.

³⁵ Michaels, Jim. *Two Generals Asked to Retire in Wake of Bastion Attack*, USA Today, 30 September 2013, <http://www.usatoday.com/story/news/world/2013/09/30/bastion-marines-afghanistan-gurganus/2897953/>.

³⁶ CENTCOM, *Attack on the Camp Bastion*, 7.

it is vastly different from the soaring vistas of the Hindu-Kush mountains visible from Bagram Air Base far to the northeast. The flat terrain, existing airfield and proximity to an improved road for a ground supply route likely drove the site selection.

In terms of tactical elements organized to defend BLS, the base was a complex of camps grouped primarily in three areas. Camp Bastion, including the airfield, was operated and defended largely by UK forces. Camp Leatherneck was the USMC area, and Camp Shorabak was the Afghan National Army area. The entire complex was contained within a 37-kilometer-long perimeter. The security force (SECFOR) available included a broad array of coalition forces and contractors that were not operating as one team. The interactions between these units were regulated by a Memorandum of Understanding (MOU), updated in 2011. Under the MOU Camp Bastion and Camp Leatherneck SECFOR operated independently, with separate Standard Operating Procedures (SOP), and did not effectively coordinate perimeter surveillance or patrol activity on and off base.³⁷

Camp Bastion was defended by a 134-person unit from the Royal Air Force (RAF) Regiment, assisted by an augmenting force drawn from other assigned units along with a small force of the Tongan Defense Services. The RAF provided command and control, Quick Reaction Force (QRF), and patrols, while the Tongans and the augmentation force personnel manned the perimeter towers. Of the 24 towers on Camp Bastion, 11 were routinely manned due to a lack of available personnel, a risk accepted by the RAF Camp Bastion commander.³⁸

Camp Leatherneck was defended by a combination of US Marines, coalition military forces, and contractors. The defense forces consisted of a 255-person contracted force from Triple Canopy, a 288-person force from the Jordanian military, a 105-member element from the Bahraini Armed Forces, and a 110-member team from 2d Battalion, 10th US Marine Regiment (two/10), a Field Artillery (FA) unit.³⁹ The contractors and non-US military personnel manned Entry Control Points (ECP), perimeter towers, and provided internal QRF for Camp Leatherneck, while the USMC force performed a

³⁷ CENTCOM, *Attack on the Camp Bastion*, 8.

³⁸ CENTCOM, *Attack on the Camp Bastion*, 8.

³⁹ CENTCOM, *Attack on the Camp Bastion*, 9

myriad of security related tasks. BLS was located in Area of Operation (AO) Belleau Wood, and the USMC 2/10 commander served as the Task Force (TF) Belleau Wood SECFOR commander, with primary responsibility for off-base patrolling in the approximately 1,000 square kilometer AO surrounding BLS.⁴⁰ TF Belleau Wood's responsibilities included "providing field artillery support for Task Force (TF) Leatherneck, operating the Combined Joint Operations Center (CJOC), manning ECPs on Camp Leatherneck, manning a QRF, manning Patrol Base Boldak, and manning the Tactical Recovery of Aircraft and Personnel (TRAP) mission."⁴¹ As mentioned, by September 2/10 had 110 personnel with which to accomplish these tasks. Due to their varied responsibilities, 2/10 could only generate one squad per 24-hour period to patrol off base. The RAF Regiment element was able to generate one to three squad-sized patrol(s) as well, but their activity was not consistent or effectively integrated with TF Belleau Wood SECFOR. Although the CJOC existed in order to coordinate force protection activity and performed in that task during the attack, coordination was primarily reactive, as structured in the MOU. If the combined manpower available for force protection operated as a single, effective unit, the BLS perimeter would likely have been more secure.⁴²

In June of 2012, a Joint Staff Integrated Vulnerability Assessment (JSIVA) team visited Camp Leatherneck and Bastion airfield. The team concluded that Bastion airfield's security was inferior to Bagram Air Field and identified six vulnerabilities. Further, the team "assessed the two routine patrols assigned to the airfield as largely ineffective from a preventative/detection perspective, primarily because of the size of the airfield and ramps...the lighting, the lack of detection and warning systems in place," and "not being able to control access (vehicle and pedestrian) to the airfield."⁴³

During June and July 2012, Camp Bastion perimeter breaches were discovered after the fact, but were accepted by the 3d MAW(FWD) and RAF Camp Bastion

⁴⁰ Keleher, Katherine. *Task Force Belleau Wood Celebrate Corps' 236th Birthday*, 12 November 2011, <http://www.iimef.marines.mil/News/NewsArticle/tabid/472/Article/528985/task-force-belleau-wood-marines-partners-celebrate-corps-236th-birthday.aspx>.

⁴¹ CENTCOM, *Attack on the Camp Bastion*, 10.

⁴² CENTCOM, *Attack on the Camp Bastion*, 11, 14.

⁴³ CENTCOM, *Attack on the Camp Bastion*, 17.

commanders as criminal “scrapping” rather than evidence of insurgent probing of perimeter defenses in preparation for an attack.⁴⁴ The July breach was performed by two individuals who penetrated the same area of Camp Bastion targeted in the September 2012 attack, then exited the base through their breach point undetected. Surveillance video of another breach revealed an individual reconnoitering an empty guard tower, then departing undetected.⁴⁵

In terms of Taliban preparations for the attack, the 15 men were trained in Pakistan for approximately three weeks, and provided with information on their targeted area of the Camp Bastion airfield. They were transported to just outside the camp and donned US Army uniforms. At approximately 2000L they made their way towards the Camp Bastion perimeter using a wadi to mask their approach. They were armed with AK-47s, Rocket Propelled Grenades (RPG), and fragmentation grenades. Some of the attackers were huffing paint, presumably to provide some chemically induced “courage.” On that night, there was two% illumination so there was almost no natural light, but per Camp Bastion SOP only every other perimeter tower was manned.⁴⁶

The insurgents breached the perimeter fence with wire cutters 150 meters from unmanned tower 16 and entered the base undetected to begin their attack at approximately 2200. They split into three groups of five, targeting Harriers, helicopters, and personnel respectively. After the insurgents started shooting, it took 16 minutes for the first elements of the Camp Bastion QRF to make contact with the enemy. Over the next few hours the insurgents caused the 200 million dollars’ worth of damage previously described, before 14 of them were killed by RAF, USMC, and USAF personnel on the ground or fire from coalition attack helicopters. The fifteenth was captured wounded.

The day of the attack, 14 September, was just another day in paradise as far as Major Robb McDonald knew. A USMC Harrier pilot in VMA-211 and veteran of three tours as a Forward Air Controller, he awoke to the sound of explosions and instantly knew something was wrong. After sprinting to the squadron area, he found his squadron

⁴⁴ UK House of Commons, Defence Committee, 16 April 2014, *Afghanistan—Camp Bastion Attack*, 12.

⁴⁵ CENTCOM, *Attack on the Camp Bastion*, 18

⁴⁶ CENTCOM, *Attack on the Camp Bastion*, 22.

commander was down and enemies were attacking the aircraft. Accompanied by three Marines, he moved tactically to recon the nearby flight line. As he rounded a line of T-walls (large concrete barriers), he was faced with four Taliban in ACUs armed with a light machine gun (LMG) and AK-47 assault rifles. Without hesitation, he lined up the sights on his M-16 and squeezed off several rounds, dropping the insurgent with the LMG and scattering the others. Major McDonald would go on to coordinate air support from USMC Super Cobra helicopters and lethally engage another insurgent with his M-16.⁴⁷

Analysis conducted after the attack showed the attackers used Soviet-era F1 grenades to destroy the Harriers, meaning they were close enough to accurately roll, throw, or place them under the aircraft.⁴⁸ The use of hand grenades is significant because it illustrates the failure of the combined elements of the Camp Bastion SECFOR or organic units to detect the approach of the Taliban, their breach of the perimeter, or their free movement around the USMC Harriers on the flight line until the attack was underway. Furthermore, the initial contact with the enemy and disruption of the Taliban attack was conducted by maintenance/support personnel and pilots of the 3rd MAW(FWD), rather than base SECFOR. Additionally, integration of highly effective fire from USMC aviation during the attack was as much the result of ad hoc coordination by Marines and Airmen who rose to the occasion as it was a controlled integration of fires in the BLS CJOC. As the CENTCOM report states “only heroic action by US and UK forces on the scene prevented greater loss of life and equipment.”⁴⁹ Of note, Lieutenant Colonel Christopher Raible, VMA-211 [Harrier] squadron commander, and Sergeant Bradley Atwell were killed while valiantly leading the charge to defend their aircraft and fellow Marines.⁵⁰ The USAF pararescue team that voluntarily ran into the firefight and played an important role in defeating the attackers by coordinating with

⁴⁷ Aikins, Mathieu. *Enemy Inside the Wire: The Untold Story of the Battle of Bastion*, 3 September, 2013, GQ Magazine, <http://www.gq.com/story/battle-of-bastion-taliban-afghanistan-air-base>.

⁴⁸ CENTCOM, *Attack on the Camp Bastion*, 6.

⁴⁹ CENTCOM, *Attack on the Camp Bastion*, 2.

⁵⁰ Komatsu, Matthew. *Responding to an Insurgent Attack on an Afghan Base*. 29 Oct 2013, NewYorkTimes.com, http://atwar.blogs.nytimes.com/2013/10/29/responding-to-an-insurgent-attack-on-an-afghan-base/?_r=2].

attack helicopters and participating in clearing operations with the RAF QRF is another of numerous examples.

As is often the case, the causal factors for the penetration of the BLS perimeter by Taliban forces were varied and complex. They included a convoluted force protection task organization, lack of unit integration, and failure to identify a single tactical level commander with the responsibility for base defense; all contributing to and exacerbated by failures in risk management.⁵¹ Even though the RC(SW) commander was operating in a very complex coalition environment including national caveats for tactical use and contractor restrictions, this tragic incident was avoidable. If the defending security forces were better organized, and not decremented to the point that they were not reasonably capable of effectively maintaining a secure perimeter or dominating the terrain immediately around the base, it is much less likely the insurgents would have gained access to the aircraft parking area.

Tactically, that attack was soundly defeated, but that was likely expected by the Taliban planners. It took nearly eight hours to clear the flightline, which seems excessive, even considering large area. The USMC flew in replacement AV-8B Harriers within a few days, and there was no gap in close air support coverage within Afghanistan, so there was no operational impact in theater. The Taliban attack likely achieved Taliban goals in terms of strategic messaging. Politicians and interested members of the populace in the US and UK were shocked at the damage the Taliban was able to do to what was supposedly a fortress-like coalition military base. Inevitably, media questions regarding the “resurgence” of the Taliban, as well as the impact, cost, and value of continued NATO commitment to combat missions in Afghanistan followed.

S.L.A. Marshall’s quote at the beginning of this chapter is prescient in the case of the BLS attack. The two USMC major generals who were relieved of command following the attack were no doubt superior performers throughout their careers. They probably were outstanding leaders. They were put in an extraordinarily challenging situation with a convoluted multinational command structure. Nevertheless, several

⁵¹ CENTCOM, *Attack on the Camp Bastion*, 23-31.

incorrect risk management judgments, likely “reasoned calculations” at the time, combined to result in an unacceptable level of vulnerability which the enemy exploited.



Chapter 6

Analysis of Case Studies

The majority of bases do not have a positive approach or active planning program for the protection of their operational assets...There are no criteria established for the construction of air bases in a combat environment. New construction and redesigning is based on peacetime criteria.

Seventh Air Force Base Defense Study Group, 1967

The Dien Bien Phu case study offered many tactical lessons, but most prominent are the mistakes of underestimating the enemy, assumptions of superior firepower, overestimation of the effect of limited airpower, and failing to complete adequate cross functional base planning. An air base which was supposed to be supported primarily from the air cannot remain viable if enemy action effectively closes the runway and limits drop zones.

The examples from the US experience in Vietnam provide different perspectives. At Khe Sanh, the USMC leaders did a commendable job of terrain analysis and planning an adequate base defense. The main air base itself was well defended by properly sited perimeter defensive fighting positions with interlocking fields of fire, and well planned artillery target reference points. The Marines' ability to retain possession of key terrain close to the base, combined with the massive air and artillery support available allowed a greatly outnumbered force to defend an isolated expeditionary air base. Other than the air support planning and execution, the absence of interservice disputes over responsibilities and authorities since it was a USMC combat base was notable.

The Tan Son Nhut Air Base example is notable as it highlights the doctrinal, interservice, and integration of host nation force problems typical of the Vietnam War. It also is an example of excellent leadership and strident determination to win by Airmen and Soldiers working together to defeat a regiment-sized attack by a well-armed force. Unlike Dien Bien Phu and Khe Sanh, heavy reinforcements were available nearby, and could reach TSNAB via ground routes. Also different were the severe restrictions on the use of air and artillery support due to the location of TSNAB in a heavily populated area within seven kilometers of the center of Saigon. These restrictions resulted in two-plus

hour delay of the delivery of air and artillery support as the JDOC sought permission to fire. The TSNAB case also highlights the importance of base defense plans which incorporate joint and coalition forces are executable and exercised. Based on intelligence prior to the attack during Tet, the 377 SPS commander led a base-wide exercise that simulated a battalion-level enemy attack. They predicted and simulated the Vietcong attack through the west side of the base, near the 051 gate. Within a week, the actual attack was carried out in a very similar manner.¹

The study of Bien Hoa Air Base's struggle with IDF attacks by insurgent forces served to exhibit the most pervasive and destructive threat to air bases during the Vietnam War. Such a threat would again become pervasive and problematic during OIF and OEF, and remains so today. Leaders within the USAF recognized this problem after the mortar attack on BHAB in 1964 that temporarily took a B-57 squadron out of action: "Directors of Security Police at the original four major bases (Tan Son Nhut, Bien Hoa, Da Nang and Nha Trang) soon realized that the AFM 207-1 concept was not adequate for this environment. In December 1964, PACAF initiated a study of base defense posture for the purpose of obtaining recommendations for improvement in air base defense."² Even so, the organization struggled to respond effectively, both internally and as an entity within the Department of Defense.

In terms of deterring and preventing standoff attacks from IDF, veterans of more recent counterinsurgency and nation-building campaigns in Iraq and Afghanistan will no doubt be able to relate to the frustration of the author of the following quotation from the Project CHECO report on Local Air Base Defense Operations in Vietnam 1965-1968, and thus it is worth quoting at length:

MACV Rules of Engagement require commanders to negotiate with the local political administrator to determine the conditions which must be met before returning fire into inhabited areas outside the base perimeter... Enemy forces are well aware of this constraint and use it to advantage in planning attack positions and withdrawal routes. Standoff mortar/rocket attacks at Bien Hoa Air Base consistently come from the same source near populated hamlets and between ARVN positions...Permission to return

¹ Carter, *Combat After Action Report, Attack on Tan Son Hut Air Base*, 31 January 1968.

² Lee, Richard E. *Project CHECO Southeast Asia Report: 7 AF Local Base Defense Operations, July 1965-December 1968* (HQ PACAF Directorate of Operations Analysis: 1 July 1969), 44.

fire may be delayed or not granted for a large variety of local political reasons, including ownership of property, nearby friendly residents, or friendly forces patrolling in the area. Although the requirement to obtain permission to return fire restricts the deterrent effect of the ability to retaliate in force, the rules undoubtedly represent a delicate balance between U.S. passive defense posture and widespread destruction of innocent civilian life and property.³

This excerpt also highlights the focus on counterbattery fire as the primary appropriate way to prevent standoff IDF attacks. Although this certainly reflects the perspective of the Seventh Air Force authors, this is not always the case, and is only part of the solution. The pervasive nature of standoff attacks against expeditionary air bases during the Vietnam War was summed up by Alan Vick in his 1995 RAND study, “the standoff threat, particularly from rockets... Given the nature of the conflict and the terrain, there was no foolproof countermeasure to this threat.”⁴ This statement could very easily be made in the context of JBB during OIF and be just as accurate.

Similarly, the dilemma of “winning the hearts and minds” of the host nation population would return to the fore during OEF and OIF. After a slow start, the application of modern COIN doctrine would become more nuanced and based on a sophisticated understanding of social dynamics, networks, and culture. COIN is an operational approach well suited to post conflict environments where a lack of effective governance exists, but it is not a stand-alone strategy or panacea for failed states.⁵ The significant improvement in application of COIN doctrine by many US units during OIF and OEF still met with numerous challenges. COIN should be incorporated into expeditionary air base defense operations when appropriate, but it is not a singular solution for quickly or completely reducing violence in the area of air bases.

The case of JBB is an examination of the efforts of the joint team operating from the Balad Air Base and LSA Anaconda base complex to deal with the challenge of standoff IDF attacks, VBIED and IED attacks, and securing the population in the

³ Lee, Richard R. *7AF Local Base Defense Operations, July 1965–December 1968* (Hickam Air Force Base, Hawaii: Headquarters PACAF, July 1, 1969), 10.

⁴ Vick, *Snakes in the Eagles Nest*, 102.

⁵ Simpson, Emile. *War from the Ground Up: Twenty- First-Century Combat as Politics* (New York, NY: Oxford University Press, 2012), 131.

surrounding area while pursuing milestones on MNF-I lines of effort. It took several years, the motivating factor of US casualties, and creative leadership of officers from the flag level to the company grade, to overcome bureaucratic inertia and organizational cultural pressures to design a command organization that enabled effective base defense operations. The first lesson of JBB is not to ignore lessons learned from previous conflicts, such as Vietnam. The second was that unity of command is critical to achieving unity of effort. A single base complex must fall under the leadership of a single commander responsible for base defense, and possessing tactical control (at a minimum) of adequate base defense forces. The third is the importance of a focused ground intelligence function to support air base defense. Lastly, the integration of joint capabilities and fires in a functional Joint Defense Operations Center (JDOC), which may also be called a BDOC (base), CDOC (combined), or CJDOC (combined-joint) in coalition operations. This JDOC must be the focal point of base defense activity, regularly practiced, exercised, and in control. At BLS, a JDOC existed, but due to the deep stratification of resources and responsibilities, it was more of a deconfliction office than an authoritative center of base defense action.

The BLS attack served as a painful reminder that the enemy has a vote. As at Dien Bien Phu, the boldness and resourcefulness of the enemy was underestimated. The appearance of, and indeed the potential for, a strong perimeter defense was revealed as more security theater than fact, by a group of 15 motivated Taliban members with low levels of training. Reconnaissance by Taliban members, supporters, or coerced collaborators, revealed that the base was vulnerable to a penetrating attack. Indications of this Taliban pre-attack reconnaissance were ignored or rejected by BLS intelligence analysts and leaders.

Reinforcing the observations from the JBB case, the second major take away of BLS is the need for a single base commander at the tactical level. The fact that responsibility for base defense did not unite under a single commander until the RC(SW) level was recipe for failure. It was unrealistic to expect that a major general at the operational level, responsible for the entire region and all NATO operations therein, would have sufficient time and mental capacity to make the best tactical risk management decisions for defense of a single base complex. Third, the BLS attack highlighted the

need for adequate numbers of base defense forces to influence the Base Security Zone, under the command of a single authority to coordinate activity.

US forces exhibited courage during attacks on Bagram, JBB, and BLS. In 2010 at Bagram, a complex attack was defeated without significant impact on coalition operations, and JBB was never penetrated by a significant insurgent force. Both stand in stark contrast to BLS, where the appearance of a secure perimeter did not withstand scrutiny. The key differences at BLS were the fragmented base defense chain of command, incoherent responsibility for security below the two-star RC(SW) level, and lack of base defense force integration. These factors, combined with optimistic risk management decisions by key leaders, left the base vulnerable to enemy attack. This vulnerability was unfortunately exploited by the Taliban.

Losses of expensive fighter aircraft and helicopters due to comparatively cheap and less sophisticated weapons in the hands of the often ill-trained mujahedeen was not a sustainable proposition for the economically ailing USSR during its foray in Afghanistan. While not facing similar economic distress, US policy makers must answer similar questions today about the cost effectiveness of a high-cost/high-technology force in low end COIN and counterterrorist fights. As long as the US remains globally engaged as a matter of national policy, the possibility and consequences of losing a high-end fight are such that the US military must keep building that high-end capability. However, the lessons learned from the recent COIN operations must be retained in the form of doctrine, and portions of the joint force should retain COIN and counterterrorism (CT) as their primary mission set, as the likelihood of future COIN and CT operations is very high. For instance, consider General David Petraeus' "how does this end?" question in the context of Operation Inherent Resolve and the Syrian Civil War, or ongoing counterterrorist operations in other parts of Southwest Asia or Africa.

While the preceding case studies are rich with contrast, there are also numerous commonalities. These case studies inform several conclusions regarding how to better prepare USAF security forces and the joint force for potential future expeditionary air base defense operating environments, covered in the next chapter.

Chapter 7

Conclusions & Implications

The defensive form of war is not a simple shield, but a shield made up of well-directed blows.

Carl von Clausewitz

Conflict does not play out on a blank slate that actors can make and remake as they wish. Instead, the past shapes leaders' options in the present. Without Afghanistan's war in the 1980s, the Taliban's social basis would not have been formed; without the rapid collapse of French control over rural areas after March 1945, the Viet Minh would have faced far greater challenges in building local presence.

Paul Staniland

The final, and most important, element of any defensive plan is the counterattack. Sooner or later any defensive position will be breached by a determined attacker.

Philip B. Davidson

In 2014, Colonel Erik Rundquist, USAF, wrote in his essay *A Short History of Air Base Defense* that expeditionary air bases “may represent an American center of gravity, or decisive point, that an enemy force can exploit and attack.”¹ A 2015 RAND study about *Air Base Attacks and Defensive Counters* echoed this sentiment, stating “the United States is dependent on access to overseas bases to achieve political and military objectives.”² Eventually technology may lessen this reliance, but for the next 20 years, it will remain. Since the end of the Cold War, airpower has featured prominently in US military power projection. The development and proliferation of armed RPAs has only increased this reliance for a combination of reasons, most notably political expedience and functional practicality.

In future operations, enemies will continue to target critical coalition air and logistics hubs in theater in order to disrupt US ability to project power and sustain operations. During major combat operations, these threats will likely include

¹ Caudill et al., *Defending Air Bases*, 4.

² Vick, *Air Base Attacks and Defensive Counters*, 2.

unconventional means such as enemy special operations forces or proxy insurgent/terrorist groups, in addition to conventional attack using ballistic or cruise missiles. Future threats may be much better trained and prepared than the attackers were during OIF and OEF. Therefore, effective integrated base defense planning and execution in theater is critical across the spectrum of conflict, and must not be dismissed as an exercise in preparing for the last war. Given the lessons extracted from the preceding case studies set in the contemporary context and considering emerging trends, several conclusions suggest themselves.

Strengthen recent positive changes to Joint Doctrine. Doctrine is relevant to the tactical-level decisions of base defense because it guides how leaders in the joint force think about and prepare for expeditionary base defense. The 2014 version of Joint Publication (JP) 3-10, *Joint Security Operations in Theater*, incorporated numerous constructive updates based on lessons learned in OIF and OEF. However, given the likelihood of similarly complex Joint Interagency Intergovernmental Multinational (JIIM) operations in the future, there is still room for significant improvement.

First, large, joint-use airfields, frequently co-located with equally critical ground-force-operated sustainment hubs, are often the primary platforms from which the force projects military power across Joint Operating Areas or theaters. Given their primacy, the protection of such airfields must be a priority. This priority must be formally acknowledged and planned for in initial phases of joint operations planning process. Defending these types of bases or base clusters is critical across the spectrum of conflict. Surely, they will appear on a near peer enemy's High Value Target list equivalent, just as they will continue to be targeted by insurgent or terrorist forces. JP 3-10 states when facing Level I and II threats (including terrorists or enemy special operations forces) commanders should organize security forces "drawing from the units available."³ This is appropriate for small combat outposts (COP) or forward operating bases (FOB) in lower threat environments, but for large expeditionary air bases or sustainment hubs, it exacerbates the tension between projecting power and force protection. JP 3-10 should direct commanders to incorporate all available units into base security plans, but not draw

³ Joint Publication 3-10, *Joint Security Operations in Theater*, 13 November 2014, xiv-xv.

from them as the primary source of the Security Force (SECFOR⁴). Units tasked as SECFOR must be specifically identified, trained, and deployed for that mission. This will provide commanders in theater the flexibility to shift focus without taking imprudent risk.

Secondly, doctrine must stress the need for a single commander at the appropriate level with the authority and responsibility over not only the base or base cluster, but the surrounding tactically relevant area of operation (AO). JP 3-10 currently includes “Air Base Defense Considerations,”⁵ and the “establishment of base and base cluster command relationships,” directing “it is critically important that the [Joint Force Commander] JFC, normally through the [Joint Security Coordinator] JSC, delegate the authority to conduct [Joint Security Operations] JSO within the base boundary to a single commander.”⁶ These are valuable improvements to the document, but it still avoids some thorny issues.

For example, the challenge of incorporating coalition forces is addressed only superficially. US military leaders understand that US Joint Doctrine only applies to US forces. However, Joint Doctrine should strongly urge commanders to ensure a single commander retains tactical control (TACON) of all coalition forces incorporated into a base cluster SECFOR. The relevant US negotiators should be energetic on this issue when it comes to coalition command and control arrangements. Rather than dismissing this assertion as politically naïve, challenge others to justify why irresponsibly vague command structures are acceptable. In the case of BLS, the CENTCOM report stated “The BLS Complex also lacked a single commander with unity of command...unity of command would have provided the single commander with common oversight and enforcement of standards for all units responsible for protection of the BLS Complex.”⁷ If current or future leaders see a fragmented SECFOR chain of command or lack of organization similar to that which existed at BLS prior to the 2012 attack, corrective action should be recommended with alacrity. The political realities of coalition

⁴ SECFOR is a term often used in US military channels to describe the units tasked to perform base defense or base security missions. It is used here to ensure consistency with Joint Doctrine.

⁵ Joint Publication 3-10, *Joint Security Operations in Theater*, IV-17.

⁶ Joint Publication 3-10, *Joint Security Operations in Theater*, II-11, II-12.

⁷ CENTCOM, *Camp Bastion Attack*, 26.

operations mean that national caveats will likely exist. Successful integration calls for base defense leaders to “seek understanding of partners’ capabilities and limitations, and then act to incorporate them into the base defense as much as they are capable of, willing, or authorized to participate.”⁸

Lastly, the joint force must overcome cultural resistance to expanding the base boundary of critical airbases in theater based on threat, vulnerability and terrain analysis. The concept of expanding the base boundary is now included in JP 3-10 as something commanders should “consider.” Rather, it should be the preferred procedure, while retaining the flexibility to adjust due to local conditions. A base commander with base defense as a key component of their mission will have the focus and ability to drive intelligence-based operations to reduce indirect, direct, small unmanned aerial systems, and IED attacks affecting the area. For proof, one need look no further than the success of Task Force 1041 at Joint Base Balad during OIF or Task Force 455 at Bagram Air Base during OEF.

This evolution of command structures and responsibilities evolved at JBB and Bagram from lessons learned, some re-learned from the Vietnam War. They should serve as positive examples of expeditionary base defense. This is not to say that each should be replicated exactly in the future, but the basic model of unity of base defense responsibility, authority, command, and effort is critical to success of joint or coalition forces. It is important to note that the Base Security Zone (BSZ) concept is not unique to the Air Force, as it is equally important to all large joint use bases supporting joint operations.

The BSZ of expeditionary air bases should be identified during a terrain and threat analysis, and used to set the Base Boundary to enable effective base defense operations led by a single commander at the appropriate tactical level. The Cold War era concept of rear area security and expeditionary air base defense is no longer suitable for 21st Century operations. Ground force commanders may be highly competent and capable, but will rarely place the necessary emphasis on air base defense due to competing priorities and organizational culture. The case studies lend credence to this

⁸ Caudill et al., *Defending Air Bases*, 348.

concern, especially during COIN-heavy campaigns. In Vietnam, MACV guidance emphasized that base defense was too low a priority for which to dedicate US combat units. In the 21st Century, experience in Iraq and Afghanistan reinforced this problem. As Caudill, Packard and Trembeull stated, regarding the Army battlespace owner in the area of JBB:

To put the [Battle Space Owner] BSO's operational challenges in perspective, he had responsibility for a large geographic area far beyond the IDF threat ring affecting the air base—specifically, over 3,000 sq km rather than only the 243 sq km encompassing the JBB standoff-attack threat area. Analysis of the JBB operational environment easily indicates how a BSO can be stretched beyond capacity and how external force protection of an air base could be relegated to a low priority.⁹

Similar difficulty of resource prioritization is clearly identified in the CENTCOM report about the BLS attack in 2012. The RC(SW) commander had an AOR of 99,700 square kilometers, which included Helmand province, and host nation population of just over one million people. One can safely assume similar errors in resource prioritization judgement will continue in the future, unless doctrine and training normalize attitudes among military leaders favorable to an Integrated Defense of air expeditionary bases that includes the BSZ.

Bagram Air Base was mentioned in the 2012 BLS JSIVA report as an example of superior perimeter security. In May 2010, the Taliban conducted an attack on Bagram Air Base that was more determined than the September 2012 attack on BLS. Twenty to 30 Taliban insurgents assaulted the base around 0300.¹⁰ They were armed with AK-47s, RPGs, hand grenades, and were supported by coordinated indirect fire. The attackers were wearing US military uniforms, and some had suicide vests.¹¹ They attempted to breach the perimeter in two separate locations simultaneously. In contrast to the BLS incident, the

⁹ Caudill et al., *Defending Air Bases*, 212.

¹⁰ Amir Shah, Rahim Faiez, Heidi Vogt, and Anne Flaherty. *Taliban attack key US base in Afghanistan* (Associated Press, 18 May 2010), <http://www.foxnews.com/world/2010/05/18/insurgents-launch-complex-attack-bagram-air-field.html>.

¹¹ Caudill et al., *Defending Air Bases*, 33.

attackers were detected outside the perimeter, and were defeated before they could penetrate the base defenses. Sixteen of the attackers were killed in the firefight.¹² The attack failed to inflict any major damage to the base, although nine friendly personnel were injured. A critical factor that contributed to a better outcome than the BLS attack was clear responsibility and authority for base defense.

The 455th Air Expeditionary Wing (AEW) commander was the base commander responsible for base defense at Bagram, and the SECFOR was led by the 455th Expeditionary Security Forces Squadron (ESFS) commander. The ESFS was responsible for the perimeter defense, internal QRF, and screening of personnel and vehicles entering base. The 455 ESFS also operated the JDOC, which effectively coordinated support from USAF aircraft, Army aviation, and Army ground units operating outside the perimeter during the attack. In order to build upon this success and better defend the largest coalition military operating location in Afghanistan, in November 2012 Task Force 455 stood up. The initial 1,200 member 455th Expeditionary Security Forces Group (ESFG) evolved into a 2,200 person Expeditionary Base Defense Group (EBDG) and Combined Joint Task Force with the addition of a US Army Field Artillery Battalion, a Jordanian Infantry Battalion and a Czech Republic Force Protection Company. Tasked to defend Bagram and patrol the surrounding AO, the 455 EBDG Commander effectively operated as a brigade-level battlespace owner within a 570-square-kilometer area, under the tactical control of the 101st Airborne Division (Air Assault)/RC East Commanding General.¹³

The example of TF 455 is the closest the joint force has come thus far to creating a doctrinally ideal expeditionary air base defense task organization and command and control structure. The Bagram Air Base commander (455 AEW/CC) still did not have authority or responsibility for the area security operation outside the base boundary throughout the Base Security Zone, but did have significant influence. In terms of

¹² Caudill et al., *Defending Air Bases*, 34.

¹³ Willis, Christopher J. *Bagram Security Forces Group Stands Up* (Defense Video and Imagery Distribution System. 1 January 2013), <https://www.dvidshub.net/news/104996/bagram-security-forces-group-stands-up>.

tactical practicality, the air base commander should generally function as the battlespace owner within the Base Security Zone for reasons already discussed. However, there are potential complications from the standpoint of joint command and control (C2) planning. For instance, if operating under a functional component command structure, there could be concern about diluting the authorities of the Joint Force Land Component Commander (JFLCC) since the air base commander may functionally and administratively fall under the control of the Joint Force Air Commander (JFACC). This concern could be allayed by simply reaffirming existing precedence. When exercising authority on the land Area of Responsibility (as a battlespace owner), the base commander would fall under the TACON of the JFLCC. When executing air operations, the base commander would follow the guidance of the JFACC. Therefore, the interest, authority, and missions of Base Operating Support-Integrator (BOS-I), Senior Airfield Authority (SAA), and base defense would be combined in a single commander with the authority to match their responsibility. These considerations all must be caveated with the understanding that doctrine does indeed require judgment in application. A Jominian templating of task is unsuitable to all possible future situations.

Appropriate intelligence preparation of the operational environment and dedicated intelligence support is key. Achieving understanding of the operational environment is critical from the perspectives of joint planning or mission analysis, as well as executing air base defense on the tactical level. An intelligence cell focused on air base defense, and working for the commander responsible, is critical to a successful base defense operation. The importance of this function was as evident in its absence in the case of Dien Bien Phu, and to some extent in Tan Son Hut and Bien Hoa, as it was in its successful application in the JBB and Bagram Air Base examples. If intelligence is properly incorporated into site selection, then many base defense problems may be minimized. Organic, dedicated intelligence support such as the JISE at JBB and within TF 455 at Bagram, were a necessary element of operating an effective, intelligence driven operation to secure the Base Security Zone.

Effective cross-functional base planning is critical, from site selection to base layout, construction, and operation. Not only airfield operations and logistics experts, but civil engineers, intelligence, security forces, maintenance, and communications

experts should all be involved in air base site selection, through the build-up and operations process. Civil engineers who understand air base operations are critical to site planning. For example, previous to the 332 AEW taking BOS-I for JBB in 2008, a waste disposal burn pit was sited upwind of the Balad Air Base flight line, sometimes impacting flight operations with thick black smoke.¹⁴ In the Dien Bien Phu case study, the lack of engineering support caused insufficient protection from enemy fire, and an inexcusable lack of water management planning. Flooding of defensive trenchworks and shelters seriously hindered operations of the French and allied troops. The lack of security expertise in site selection and planning, as well as base build-up, can have significant negative effects. All expeditionary air bases should be built with the ability to effectively defend them in mind. The location of the base itself, siting of critical infrastructure on base, the location of Entry Control Points, and the availability of standoff space to create effective perimeter defenses all require security expert input. Additionally, an understanding of threat capabilities and intent inform the requirement for overhead hardened shelters for personnel and aircraft, asset dispersal, and other passive defense measures. This understanding comes from the collaboration of intelligence and security experts with flight operations specialists and civil engineers.

Whenever possible, avoid using expeditionary air bases in large cities or densely populated areas. This generalization is not intended to apply in countries where the people are not hostile to US presence, and where the government is locally recognized as legitimate and able to enforce the rule of law, such as Germany or Australia. It is intended for areas with higher threat presence and less effective governance, or ungoverned spaces. Avoiding large cities may seem an overly simplistic notion, or too easily dismissed as logistically unfeasible. However, the decision to use existing air bases to support expeditionary operations is normally driven by joint logistical concerns, and reasonably so. If an operation cannot be sustained, it is doomed to failure. However, the same is true if it cannot be effectively defended. Furthermore, attrition from attacks can erode political support for a mission. The point is that logistical concerns alone

¹⁴ Dwyer, Richard E. *Base Operating Support Integrator and Senior Airfield Authorities at Deployed Airbases* (Maxwell AFB, AL: Air Command and Staff College monograph, 2009), 2.

cannot drive basing decisions. It may be a better choice to locate a base where supporting ground or sea lines of communication are not as favorable, but where it can be effectively defended. Heavily urbanized areas in questionably governed spaces pose significant problems for detection, tracking and targeting of threats while avoiding significant collateral damage. Furthermore, those ground supply routes that run through the surrounding urban areas may become effectively impassable due to enemy attacks. Other than nuclear or massive conventional attacks, the worst situations for modern base defenders include densely populated, built-up areas immediately surrounding the base, with an unsupportive civilian population.

“True joint warfare involves caring less about getting credit and more about producing effects.”¹⁵ Unity of effort and detailed integration of joint forces is key. In terms of operational art, the execution of a joint base defense effort at JBB was perhaps the best recent example. Although the 332 AEW and ESFG commanders were not delegated sustained authority outside of the base perimeter, the level of integration and cooperation between the 332 ESFG and the Army battlespace owner responsible for outside the wire base defense activity was remarkable. The integration of the both units into the JDOC, integration of the C-RAM unit underneath the ESFG, and high-functioning Joint Intelligence Support Element were all outstanding examples of cooperation worthy of study and imitation.

Senior USAF leaders must deal with the tension between the need to prevent sensational ground or IDF attacks at expeditionary air bases, and the budget-minded hand-off of that responsibility to the Army or Marine unit(s) responsible for the surrounding AO. This issue is longstanding, and is exacerbated by organizational dynamics such as bureaucratic inertia, obsessive focus on the offensive, and the desire to avoid “paying bills” for another service (likely related, in part, to the psychology of prospect theory).¹⁶

¹⁵ Caudill et al., *Defending the Joint Force*, 98.

¹⁶ Daniel Kahneman, *Thinking, Fast and Slow* (New York, NY: Farrar, Straus and Giroux, 2013), 278-288. “Prospect theory” describes some psychological mechanisms involved in decision making. Kahneman described three main features: First, “evaluation is relative to a neutral reference point,” so gains are better results than the reference point while losses are less. Second, “the principle of diminishing sensitivity,” which is why the difference between \$100 and \$200 is

The organizational dynamics internal to the Army may cause base defense to be de-emphasized. Prevailing attitudes include notions that the defense doesn't win wars, offensive decisive action does, and therefore most aggressive Army combat arms officers worth their salt would prefer not to be assigned base SECFOR duties. There is truth to this axiom in many types of conflict, especially when primarily concerned with the land domain. However, given the dynamics of information age conflict in "the gray zone" and hybrid war, neglecting to defend forward air bases could have catastrophic strategic consequences. Consider the political consequences of a major attack on an expeditionary air base that results in a large number of US casualties and loss of aircraft. In the context of a COIN or counterterrorist fight not seen as vital by the US political class, it may result in termination of the mission or air base closure, rather than hardening US resolve. One must always strive to understand the evolving character of conflict, as an opponent with a superior perception may design a more effective strategy. Unity of effort and unity of command have long been part of joint doctrine, but often not a reality of task organization. The best way to approach modern conflict is through a detailed integration of joint and coalition forces.

Large expeditionary air bases must be covered effectively by Joint Fires. The need to retain the ability to achieve local firepower superiority remains a critical and enduring element of warfare in the 21st Century. This may seem obvious, but can be lost in the din of valid discussions of the need for more focus on information operations, interagency cooperation, or host nation engagement. The asymmetric advantage American forces have historically enjoyed due to air superiority and joint fires integration is being challenged, but will be equally as important in defense of future expeditionary air bases.

In the contested environment of possible future high-end conflict, adaptive basing is a necessity, but not the only answer. The prospect of conventional conflict with a near peer or peer competitor in the future means US expeditionary, and forward,

perceived greater than between \$1,900 and \$2,000. Third, the "principle of loss aversion," which holds that avoiding losses are perceived as more important than the potential for equally valuable gains. The psychology of loss aversion is likely in play (among numerous other factors) when military leaders engage in interservice budget battles.

airbases could be subject to attack from ballistic, hypersonic, or cruise missiles, enemy aircraft, enemy special operations forces, cyber-attack, electro-magnetic spectrum, or enemy directed proxy forces using terrorist tactics. Options for dealing with this threat include improving active and passive defenses of existing forward major operating bases, dispersing airpower assets to a much larger number of bases, or a combination of both. Adaptive basing proposes to “disaggregate capabilities from a single base and disperse forces and capabilities to many locations for operational maneuver. Adaptive basing results in complicating the enemies’ ability to target and deliver mass, while providing a means for U.S. forces to survive, persist and operate in an Anti-Access/Area Denial (A2/AD) environment.”¹⁷ US Pacific Command (PACOM) and its Air Force service component Pacific Air Forces (PACAF) are already developing adaptive basing, but significant work remains in terms of updating doctrine, organization, training, and equipment in order to execute on a large scale. PACAF’s “Agile Combat Employment (ACE) concept of operations...uses operational maneuver, adaptive basing, assured command and control, protection of the fielded force, and it puts it all together...Ultimately, ACE ensures survivability in a contested environment and enables U.S. Airmen to fight from a position of advantage.”¹⁸

Essentially, by dispersing assets in an unpredictable manner, an enemy’s targeting problem is complicated. This approach to basing is promising, but comes with implementation problems. For instance, unless commanders intend to risk the destruction of air assets, the need to provide sufficient defenses for temporary basing at austere locations will require the creation of alert squads of base defense forces. These could be USAF Security Forces members, Army Soldiers, Marines, or allied ground forces, prepared and trained for the agile basing mission set. Additionally, capabilities such as easily set-up and maintained deployable sensor kits and scalable counter SUAS

¹⁷ Dammeier, David et al., *Overcoming a power projection problem*. USAF Civil Engineer Center, CE Online, Spring 2016, <http://www.afcec.af.mil/News/CE-Online/Article-Display/Article/1004470/overcoming-a-power-projection-problem/>.

¹⁸ Dillitte, Candice. *PACAF Commander Describes Command’s Focus at AFA Symposium*, (Headquarters Pacific Air Forces Public Affairs, March 06, 2017), <http://www.pacaf.af.mil/News/Article-Display/Article/1104315/pacaf-commander-describes-commands-focus-at-afa-symposium/>.

capabilities would be required. Lastly, if USAF Security Forces are tasked to defend ACE bases, they would be at a disadvantage compared to Soldiers or Marines if they were not provided with additional capabilities. The ability of USAF Security Forces to defend adaptive basing sites from enemy SOF or proxy forces could hinge on organic firepower if they are operating far away from friendly fires support. For these reasons, the USAF should take a fresh look at the equipment and training requirements of Security Forces that could be tasked to support this type of operations. Some capabilities that have been phased out or long neglected could be re-incorporated at low cost, such as the use of trip flares or access to claymore mines for use when collateral damage is unlikely. Also, re-establishing a small number of organic mortar teams would provide a sorely needed capability to help defend small, temporary, or austere locations outside the coverage of traditional joint fires from enemy proxy force or SOF attacks.

The USAF must start addressing capability gaps now. Concerns about Small Unmanned Aerial Systems (SUAS) are significant. The technology is developing rapidly and provides capability at very low cost. For instance, Daesh is reportedly using the ubiquitous quad-copters and other commercially available drones to surveil Iraqi troops, and drop small explosive munitions on them.¹⁹ In terms of new commercially available drones, a Scandinavian company is producing a model called the Griff 300tm that is about as large as a queen-size bed, and has a payload of up to 500 pounds. The flight time of this drone is quoted at 30 minutes (at what speed and payload were not stated). The possibilities related to SUAS attacks are many and very concerning, but easily exaggerated as well.

The US joint force needs scale-able and economical counter SUAS capabilities as exquisite, expensive technological solutions to problems caused by inexpensive, easily produced, and expendable assets are not sustainable. Current and foreseeable small drone technology will be limited by battery life or fuel capacity, and therefore by flight time, especially if operating with a maximum payload. Additionally, although autonomy is

¹⁹ Warrick, Joby. *Use of Weaponized Drones by ISIS Spurs Terrorism Fears* (Washington Post Online, 21 February 2017), https://www.washingtonpost.com/world/national-security/use-of-weaponized-drones-by-isis-spurs-terrorism-fears/2017/02/21/9d83d51e-f382-11e6-8d72-263470bf0401_story.html?utm_term=.da4a8a4828be.

rapidly developing, guiding drones to mobile or moving targets or targets of opportunity, for surveillance or attack purposes will probably be best done via human remote control for some time. Human remote control will probably require line of sight radio communication, which again leads to geographic proximity. The US military demonstrated air delivery of autonomous swarming SUASs in January 2017.²⁰ Air delivery would negate the need for proximity, but would also likely correspond with an advanced conventional strike capability. Defense against such an adversary would require conventional local and theater air defense and counter air capabilities. The low end SUAS threat will likely continue to require proximity. This means that the SUAS problem will remain a concern in the Base Security Zone. Like IDF or MANPADS, there will be a predictable geographic threat envelope that can be influenced and patrolled by base defense forces. The solution to future air base threats will involve a technological component, but likely rests on a combination of technology, techniques, and procedures (TTP), joint force organization, and new capabilities.

Other foreseeable gaps exist in the lack of organic mortar support, as previously mentioned regarding creating a security force to support adaptive basing, and in how the USAF trains and prepares its Security Forces leaders to build and operate a Joint Defense Operations Center in a coalition environment. Preparation must include the incorporation of joint fires, ISR, and joint base defense capabilities.

The USAF needs a Security Forces weapons school. Since leaders must creatively apply doctrine and innovate in order to adapt to ever changing contexts, tactical security forces leaders require advanced training to meet logically high expectations. As Colonel Caudill states in his *Ten Propositions on the Defense of Airbases*: “One cannot simply create dynamic leaders in predeployment training. Doing so takes time and care in their development.”²¹ In the USAF, weapons schools “train tactical experts and leaders of Airmen skilled in the art of integrated battle-space

²⁰ McCandless, Brit. *Capturing the Swarm*, “60 Minutes Overtime,” <http://www.cbsnews.com/news/60-minutes-capturing-the-perdix-drone-swarm/>.

²¹ Caudill et al., *Defending Air Bases*, 341.

dominance across the land, air, space and cyber domains.”²² Weapons school completion connotes tactical expertise and competence. The USAF also provides resources to weapons schools at levels commensurate with the importance of propagating tactical expertise within the ranks of officers leading tactical level action.

The existing formal training for security forces officers leaves a significant gap in development of company grade officers trained to perform effectively as an S3 (operations officer) for a large expeditionary air base, especially considering the need to integrate joint capabilities and communicate with adjacent ground combat leaders from the Army or Marines. Previous examples of outstanding leadership or innovation in the face of adversity are no excuse for failing to prepare current and future leaders as effectively as possible.

Just as Numbered Air Force staffs need to train to act as the core multi-domain command and control element for a Joint Task Force, Security Forces flight, squadron, and group level command elements tasked for deployments should be prepared to lead a combined force. The combined force may include joint and coalition forces, and contractors. USAF Security Forces leaders must also be prepared to build and operate a Joint-Combined Defense Operation Center.

USAF Security Forces are the only ground combat capability within the joint force that exists and trains with air base defense as their primary mission. The preceding statement does not argue that Army or Marine units are not ready to perform the air base defense mission. In fact, at times their greater organic combat power will mean they are best suited to defend particular expeditionary air bases. However, the conduct of the defense, and specifically the defense of air bases, is a relatively specialized skill set that represents a small part of the mission set for which an infantry unit needs to prepare. While the tactical skills for ground combat are transferable, the mindset, planning considerations, and specialized techniques specific to defending expeditionary air bases are not ubiquitous to combat leaders preparing for all aspects of land warfare. For instance, if one infantry unit trained primarily to defend air bases, while another was

²² Nellis Air Force Base Fact Sheet – *USAF Weapons Schools*, <http://www.nellis.af.mil/About/Fact-Sheets/Display/Article/284156/united-states-air-force-weapons-school/>.

required to practice offense and defense, focusing more on offense, which unit would likely be more proficient at defending air bases? The USAF's 820th Base Defense Group should be the best unit within the DoD at expeditionary air base defense. None of this diminishes the primacy of the Army in the land domain, or dilutes the focus of the Air Force. It is merely a logical recognition of the practical overlap of the land and air domains, as well as the natural organizational and cultural focuses of the respective services as they pursue mission accomplishment. USAF security forces expertise in expeditionary air base defense should be cultivated and used to make the joint force more effective.

The narrative battle matters. Current and future military leaders must be cognizant of the importance of narratives, locally, regionally, and internationally. As the irreverent Jeremy Clarkson stated, “looking good is more important than looking where you are going.”²³ This quote is in jest, of course, but the relationships of facts and perceptions, truth and misrepresentations, are convoluted and constantly evolving in the information age. The ability of a military commander to minimize stand-off attacks on an expeditionary air base is often inextricably tied to the relationship of friendly security forces with the indigenous population (if a significant population is present). The ability to exert influence over the surrounding terrain includes a narrative competition within the local population as much as the ability to physically dominate key geographic features. The success of the 332 ESFG at JBB and Task Force 455 at Bagram AB in reducing the frequency and lethality of stand-off attacks was in part due to the establishment of relationships with local community leaders and key influencers. These relationships enabled US leaders to influence local narratives credibly, and reduce the influence of opposing forces. Understanding how and what to communicate, in words and actions, is important. Furthermore, understanding how narratives will be cultivated, communicated, and viewed through the lens of target audiences is critical. As Emile Simpson asserted in *War from the Ground Up*: “for a strategic narrative to be legitimate in the eyes of a strategic audience, its rational argument needs to find resonance with the identity of that audience in human, emotional terms; emotional interpretation legitimizes the rational

²³ Jeremy Clarkson, *The Grand Tour* (Amazon Original TV Series), 2016.

narrative.”²⁴ Lastly, during COIN or foreign internal defense operations in the information age, comprehension and operationalizing of narrative competition should be developed down to the tactical level.

At the theater level, the “surge of ideas” and charge to “be first with the truth,” while attempting to harmonize words and deeds were as critical to the success of the “surge” strategy in OIF as the extra 30,000 soldiers were, as they pushed out in company and platoon sized combat outposts to live among and secure the populace.²⁵ More recently, consider the rise of Daesh (the abbreviation of the Arabic title for the Islamic State in Iraq and al Sham – ISIS). Daesh’s rapid succession of battlefield victories in 2013 and 2014 were as much the result of a clever cultivation of a narrative of invincibility within the region through messaging and social media use, as it was of their tactical acumen or battlefield prowess. Daesh’s subsequent reversal of fortunes also highlights the limits of narratives when not supported by commensurate hard power capabilities.

Simultaneous to local narrative battles, the perceptions of the domestic populations of the US and other coalition nations with deployed forces will heavily influence whether said nations sustain the political will necessary to see relevant political and military objectives through to completion. This phenomenon was evident in the Dien Bien Phu, Vietnam War, and Afghanistan case studies.

Lastly, the dominant narratives within the populations and/or leadership of international stakeholders relevant to national policies can either support or hinder mission accomplishment. The ability to project US airpower from foreign forward bases, or directly operate bases with the permission of other nations, may be contingent upon the narrative battle over what, why, and how the US operates in general, or is planning to for specific mission. There are numerous recent examples, including Turkish denial of its territory to launch a northern land invasion of Iraq in 2003, the Kyrgyz raising the fiscal and political costs to the US to operation Manas AB to the point where it was unfavorable, or the continuing controversy surrounding US military basing on Okinawa.

²⁴ Simpson, Emile. *War from the Ground Up: Twenty-First-Century Combat as Politics* (New York: Oxford Univ. Press, 2012), 207.

²⁵ Petraeus, David H. “The Surge of Ideas: COINdinitas and Change in the U.S. Army in 2006.”

These examples are all related to domestic political forces within the countries in question or international pressure from third parties. Messaging and narratives feature prominently in each phenomenon. All of these narratives can be affected by, or affect, the effectiveness of an expeditionary air base defense effort.

We can better set up future commanders for success by improving joint and service doctrine as well as the organization, training, and equipment of deployable base defense forces to increase the likelihood of sound risk management and coherent, tactically effective base defenses around our power projection platforms in theater. Our responsibility to current and future Soldiers, Sailors, Airmen and Marines demands no less.



BIBLIOGRAPHY

Articles

- Amir, Shah, Rahim Faiez, Heidi Vogt, and Anne Flaherty. *Taliban attack key US base in Afghanistan*, Associated Press, 18 May 2010, <http://www.foxnews.com/world/2010/05/18/insurgents-launch-complex-attack-bagram-air-field.html>
- Boylan, Kevin D. "No Technical Knockout: Giap's Artillery at Dien Bien Phu." *The Journal of Military History* 78, no. three-four, (October 2014), 1349-1383.
- Boyne, Walter J. *Airpower at Khe Sanh*, Air Force Magazine, August 1998, <http://www.airforcemag.com/MagazineArchive/Pages/1998/August%201998/0898vietnam.aspx>.
- Dammeier, David et al., *Overcoming a power projection problem*. USAF Civil Engineer Center, CE Online, Spring 2016, <http://www.afcec.af.mil/News/CE-Online/Article-Display/Article/1004470/overcoming-a-power-projection-problem>.
- Dillitte, Candice. *PACAF Commander Describes Command's Focus at AFA Symposium*, Headquarters Pacific Air Forces Public Affairs, March 06, 2017), <http://www.pacaf.af.mil/News/Article-Display/Article/1104315/pacaf-commander-describes-commands-focus-at-afa-symposium/>.
- Eisler, David. *C-IED Strategy in Modern War*, Military Review, January-February 2012, http://usacac.army.mil/CAC2/MilitaryReview/Archives/English/MilitaryReview_20120229_art006.pdf
- Grant, Rebecca. "Khobar Towers." *Air Force Magazine*, (June 1998), <http://www.airforcemag.com/MagazineArchive/Pages/1998/June%201998/0698khobar.aspx>.
- Grant, Rebecca. "The Security Forces Re-write." *Air Force Magazine*, (January 2006), <http://www.airforcemag.com/MagazineArchive/Pages/2006/January%202006/0106security.aspx>.
- Gresham, John. *Attack on Camp Bastion: The Destruction of VMA-211* (Defense Media Network, 20 September 2012), <http://www.defensemedianetwork.com/stories/attack-on-camp-bastion-the-destruction-of-vma-211/>.
- Holmes, Robert H., et al. *The Air Force's New Ground War: Ensuring Projection of Air and Space Power Through Expeditionary Security Operations* (Air & Space Power Journal, Fall 2006).
- Keleher, Katherine. *Task Force Belleau Wood Celebrate Corps' 236th Birthday*, 12 November 2011, <http://www.iimef.marines.mil/News/NewsArticle/tabid/472/Article/528985/task-force-belleau-wood-marines-partners-celebrate-corps-236th-birthday.aspx>.
- Komatsu, Matthew. *Responding to an Insurgent Attack on an Afghan Base*. 29 Oct 2013, New York Times online, <http://atwar.blogs.nytimes.com/2013/10/29/responding-to-an-insurgent-attack-on->

- an-afghan-base/?_r=two].
- Petren, Nicholas J. "Improving Joint Doctrine for Security in Theater: Lessons from the Bastion-Leatherneck-Shorabak Attack," *Joint Force Quarterly* 85, (one April 2017), 88-93, <http://ndupress.ndu.edu/JFQ/Joint-Force-Quarterly-85/Article/1130682/improving-joint-doctrine-for-security-in-theater-lessons-from-the-bastion-leath/>.
- Pribbenow II, Merle L. *General VJ Nguyễn Giáp and the Mysterious Evolution of the Plan for the 1968 Tet Offensive* (Berkeley CA: Journal of Vietnamese Studies, Volume three, Issue threemmer 2008).
- Shah, Amir, Rahim Faiez, Heidi Vogt, and Anne Flaherty. *Taliban attack key US base in Afghanistan* (Associated Press, 18 May 2010).
- Votel, Joseph L. and Charles T. Cleveland, Charles T. Connett, and Will Irwin, "Unconventional Warfare in the Gray Zone." *Joint Force Quarterly* 80, (January 2016), <http://ndupress.ndu.edu/JFQ/Joint-Force-Quarterly-80/Article/643108/unconventional-warfare-in-the-gray-zone/>.
- Warrick, Joby. *Use of Weaponized Drones by ISIS Spurs Terrorism Fears*, Washington Post Online, 21 February 2017, https://www.washingtonpost.com/world/national-security/use-of-weaponized-drones-by-isis-spurs-terrorism-fears/2017/02/21/9d83d51e-f382-11e6-8d72-263470bf0401_story.html?utm_term=.da4a8a4828be.
- Willis, Christopher J. *Bagram Security Forces Group Stands Up*, Defense Video and Imagery Distribution System. one January 2013, <https://www.dvidshub.net/news/104996/bagram-security-forces-group-stands-up>.

Academic Papers

- Bean, Michael D. *United States Air Force Security Forces in an Era of Terrorist Threats*, Maxwell AFB, AL: School of Advanced Air and Space Studies, 1999.
- Christensen, Glen E. *Air Base Defense in the Twenty-First Century*. Fort Leavenworth, KS: School of Advanced Military Studies, 2007.
- Dwyer, Richard E. *Who's the BOS-I? Base Operating Support Integrator and Senior Airfield Authorities at Deployed Airbases*. Maxwell AFB, AL: Air Command and Staff College, 2009.
- Karl Hoover, *Air Base Ground Defense, the Training Controversy*. Research Report, Randolph Air Force Base, TX: History and Research Office, Air Training Command, 1991.
- Purser, Wayne. *Air Base Ground Defense: An Historical Perspective and Vision for the 1990s*. Maxwell AFB, AL: Air War College, Air University, 1989.
- Westermann, Edward B. *The Limits of Soviet Airpower: The Bear Versus the Mujahideen in Afghanistan, 1979-1989*. Maxwell AFB, AL: SAASS, Air University, 1997.

Books

- Clausewitz, Carl von. *On War*. Edited and translated by Michael Howard and Peter Paret. Princeton, NJ: Princeton University Press, 1989.

- Crane, Conrad C. *American Airpower Strategy in Korea, 1950–1953*. Lawrence, KS: University Press of Kansas, 2000.
- Davidson, Phillip B. *Vietnam at War: The History, 1946-1975*. Novato, CA: Oxford University Press, 1988
- Douhet, Giulio, Dino Ferrari, Joseph Patrick Harahan, and Richard H Kohn. *The Command of the Air*. Tuscaloosa, AL: The University of Alabama Press, 2010.
- Drez, Ronald J. and Douglas Brinkley. *Voices of Courage: The Battle for Khe Sanh, Vietnam*. New York, NY: Bullfinch Press, 2005.
- Giap, Vo Nguyen. *The Military Art of People's War*. New York, New York: The Monthly Reader Press, 1970.
- Kahneman, Daniel. *Thinking, Fast and Slow*. New York, NY: Farrar, Straus and Giroux, 2013.
- Kaplan, Edward. *To Kill Nations: American Strategy in the Air-Atomic Age and the Rise of Mutually Assured Destruction*, Ithaca, NY: Cornell University Press, 2015.
- Kilcullen, David. *Out of the Mountains: The Coming Age of the Urban Guerrilla*. New York, NY: Oxford University Press, USA, 2015.
- Fall, Bernard. *Hell in a Very Small Place: The Siege of Dien Bien Phu*. Cambridge, MA: Da Capo Press, 1966.
- Ewing, Michael, *Khe Sanh*. New York, New York: Bantam Books, 1987.
- Jones, Gregg. *Last Stand at Khe Sanh: The US Marines' Finest Hour in Vietnam*, Philadelphia, PA: Da Capo Press, 2014.
- Lambeth, Benjamin S. *Air Power Against Terror: America's Conduct of Operation Enduring Freedom*. Santa Monica, CA: RAND Corporation, 1999.
- Roy, Jules. *The Battle of Dien Bien Phu*, tr. by Robert Baldick, New York, NY: Harper and Row, 1965.
- Vick, Alan J. *Snakes in the Eagles Nest: A History of Ground Attacks on Air Bases*, Santa Monica, CA: RAND Corporation, 1995.
- Simpson, Emile. *War from the Ground Up: Twenty- First-Century Combat as Politics*. New York, NY: Oxford University Press, 2012.
- Staniland, Paul. *Networks of Rebellion: Explaining Insurgent Cohesion and Collapse*, Grand Rapids, MI, United States: Cornell University Press, 2014.
- Windrow, Martin. *The Last Valley: Dien Bien Phu and the French Defeat in Vietnam*, Cambridge, MA: Da Capo Press, 2006.

Government Documents

- Air Force Manual 31-201, Volume one. *Security Forces History*. Certified current 1 June 2015.
- CENTCOM Army Regulation (AR) 15-six Investigation of the 14-15 September 2012 Attack on the Camp Bastion, Leatherneck, and Shorabak (BLS) Complex, Helmand Province, Afghanistan, 2013.
- Carter, Billy J. *Briefing on the Attack on Tan Son Hut Air Base, 31 January 1968*, Personal papers of Colonel Carter (Air Force Historical Research Agency, Reel 41209).

- Carter, Billy J. *Combat After Action Report, Attack on Tan Son Hut Air Base, 31 January 1968* (Department of the Air Force, Headquarters 377th Combat Support Group, APO San Francisco 96307), <http://www.tsna.org/afteraction/jan311968.html>.
- Dennison, John W. and Melvin F. Porter. *Project CHECO Southeast Asia Report: Local Base Defense in the Republic of Vietnam, Jan 68 – Jun 71*, Hickam Air Force Base, Hawaii: Headquarters Pacific Air Forces, 14 September 1971.
- Fox, Roger P. *Air Base Defense in the Republic of Vietnam, 1961-1973*, Washington, D.C., United States: Office of Air Force History, 1979.
- Joint Publication three-10, *Joint Security Operations in Theater*, 13 November 2014.
- Joint Publication four-0, *Joint Logistics*, 16 October 2013.
- Johnson, Edward E., Colonel, USAF, *End of Tour Report, June 1979 – August 1981*, Hickam AFB, HI: Headquarters PACAF, five August 1981.
- Lee, Richard R. *Project CHECO Southeast Asia Report: 7AF Local Base Defense Operations, July 1965–December 1968* Hickam Air Force Base, Hawaii: Headquarters PACAF, one July 1969.
- Shumlison, Jack, LtCol Leanord A. Blaisol, USMC, Charles R. Smith, and Capt David A. Dawson, USMC. *U.S. Marines in Vietnam, The Defining Year 1968*, Washington D.C.: Department of the Navy, USMC, History and Museums Division, HQ, USMC, 1997.
- UK House of Commons, Defence Committee Report: *Afghanistan—Camp Bastion Attack*, 16 April 2014.
- US Department of Defense, *Joint Operating Environment, 2035: The Joint Force in a Contested and Disordered World*, 14 July 2016, http://www.dtic.mil/doctrine/concepts/joe/joe_2035_july16.pdf

Research Reports

- Conrad, James Lee and Jerry M. Bullock. *Defenders of the Force: The History of the United States Air Force Security Forces, 1947-2006*, Draft Research Report, 2009.
- Lane, Lawrence R., and Albert F. Riggle. *Airfield Defense for Global Reach/Global Power*. Military Studies Project Report. Carlisle Barracks, PA: US Army War College, 1993.
- Ochmanek, David. *Sustaining U.S. Leadership in the Asia-Pacific Region: Why a Strategy of Direct Defense Against Anti-access and Area Denial Threats Is Desirable and Feasible*. Santa Monica, CA: RAND Corporation, 2014.
- Schlight, John. *A War Too Long: The USAF in Southeast Asia, 1961-1975*. Air Force History and Museums Program 1996, https://web.archive.org/web/20070705113957/https://www.airforcehistory.hq.af.mil/Publications/fulltext/a_war_too_long.pdf.
- Vick, Alan J. *Air Base Attacks and Defense Counters: Historical Lessons and Future Challenges*. Santa Monica, CA, United States: RAND Corporation, 2015.