Air Operations in the Delta

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**TABLE OF CONTENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREWORD</td>
<td>vi</td>
</tr>
<tr>
<td>CHAPTER I - ENVIRONMENT</td>
<td>1</td>
</tr>
<tr>
<td>Energy Forces</td>
<td>3</td>
</tr>
<tr>
<td>VC-Tactics</td>
<td>3</td>
</tr>
<tr>
<td>Infiltration Problems</td>
<td>3</td>
</tr>
<tr>
<td>CHAPTER II - THE STRIKE EFFORT</td>
<td>5</td>
</tr>
<tr>
<td>Early Tactical Air Operations</td>
<td>5</td>
</tr>
<tr>
<td>Tactical Air Strikes 1965 - 1967</td>
<td>7</td>
</tr>
<tr>
<td>VNAF Operations</td>
<td>10</td>
</tr>
<tr>
<td>USAF, USN and VNAF Statistics (Jan 65 - Jun 67)</td>
<td>11</td>
</tr>
<tr>
<td>ARC LIGHT</td>
<td>12</td>
</tr>
<tr>
<td>AC-47 Operations</td>
<td>14</td>
</tr>
<tr>
<td>CHAPTER III - DEFOILIATION</td>
<td>16</td>
</tr>
<tr>
<td>CHAPTER IV - SUPPORT AIR OPERATIONS</td>
<td>25</td>
</tr>
<tr>
<td>Airlift Operations</td>
<td>25</td>
</tr>
<tr>
<td>Psychological Warfare Operations</td>
<td>26</td>
</tr>
<tr>
<td>Reconnaissance Operations</td>
<td>27</td>
</tr>
<tr>
<td>Theatre Indocinination School</td>
<td>28</td>
</tr>
<tr>
<td>CHAPTER V - SUPPORT OF U.S. FORCES</td>
<td>31</td>
</tr>
<tr>
<td>Special Forces Defense</td>
<td>31</td>
</tr>
<tr>
<td>Operation DECKHOUSE V</td>
<td>31</td>
</tr>
<tr>
<td>Mobile Riverine Force</td>
<td>33</td>
</tr>
<tr>
<td>Operation PALM BEACH</td>
<td>34</td>
</tr>
<tr>
<td>Operation COPONADO</td>
<td>38</td>
</tr>
<tr>
<td>Operation ENTERPRISE</td>
<td>39</td>
</tr>
<tr>
<td>CHAPTER VI - ASSESSMENT OF EFFORT</td>
<td>43</td>
</tr>
<tr>
<td>Enemy Activity</td>
<td>43</td>
</tr>
</tbody>
</table>

**FOOTNOTES**

- Chapter I ........................................ 45
- Chapter II ....................................... 45
- Chapter III...................................... 46
- Chapter IV ....................................... 46
- Chapter V ........................................ 47
- Chapter VI ....................................... 48

**GLOSSARY** ........................................ 49
FIGURES

1. IV CTZ - Air Support in the Delta .................. 2
2. F-100 Strike in Delta ................................ 8
3. VNAF A-1H Strike .................................. 10
4. Navy Monitor Ship, 91-2 ............................. 34
5. USS BEVEWAH (APB-35) Barracks Ship ............... 36
6. Armored Troop Carriers ............................. 38
"Air Operations in the Delta" explains how airpower became the primary U.S. force against the enemy in this locale. Economically interested in the Mekong Delta area, in which IV Corps Tactical Zone (CTZ) is situated, the Viet Cong emphasized strategic goals for retention of their material and manpower resources.

To prevent Viet Cong infiltration of personnel and munitions into the IV Corps area, tactical air operations were planned and executed, including ARC LIGHT missions, interdiction, air defense, airlift support, and reconnaissance. This was a period of rapid Free World Force buildup, in which the 74th VNAF Wing became an aggressive air arm in IV CTZ.

In coordinated use of tactical airpower in major operations of Army troops, including airmobile search-and-destroy activities, a battalion commander acknowledged superiority of air: "...it is absolutely essential to our success on the battlefield. It has a shock action greater than you can get out of artillery or any other type of firepower."
CHAPTER I
ENVIRONMENT

Encompassing the low-lying alluvial plain, formed by the Mekong River system in the Republic of Vietnam (RVN), is "The Delta", IV Corps Tactical Zone. This area is characterized by low, flat lands cut by numerous rivers, streams, and canals. A few isolated conical mountains and hills rising to more than 2,000 feet are found in western Chau Doc Province. The region's fertile soil is intensively cultivated, with rice being the chief crop. The estimated population of IV CTZ is nearly 5.5 million.

Broadleaf evergreen swamp forests cover most of An Xuyen and Kien Giang Provinces, dominate western Chuong Thein, and are found in western An Giang and along the South China Sea Coast. A large, continuous fresh water marsh, known as the Plain of Reeds, covers a large portion of Kien Tuong Province. Large areas of marsh are also found in central and northern An Giang Province. Most of IV CTZ is under wetland rice cultivation. The rice-growing area forms a wedge in the center of the region, with its wide base along the South China Sea narrowing toward the northwest between extensive areas of marsh and swamps. Significant vegetation also is located along the numerous rivers, canals, and streams.

The populous Delta, rich in rice and manpower, appeared to be a prime Viet Cong (VC) objective. One of the VC's strategic goals was reorientation of the economy of the Delta to support their cause, and to isolate Saigon from resources of the area. Likewise, leading the list of areas of prime strategic interest designated by CINCPAC was the Saigon area and the Mekong Delta.
For centuries the Mekong Delta had a history of opposition to centralized authority. In some parts of the area, outlaws and some political-religious factions practiced banditry, piracy, and extortion with relative impunity. It is probable that no more than about 30 percent of the population of the zone genuinely adhered to one of the established religions of Vietnam. A significant number of those adherents, notably the Hoa Hao, were strongly anti-VC, if not strongly anti-communist. The majority of the people tended to cooperate with the strongest contender for authority.

The VC exploited the traditional opposition to centralized government, and presented the Saigon government as a "foreign" authority. When they found it necessary, the VC employed force and terrorism to obtain allegiance of the people. Hence, the VC could count on a degree of support from the inhabitants of all areas except those under firm GVN control and protection, or where opposition stemmed from religious convictions. The VC were very successful in their recruitment efforts chiefly through a combination of appeal to the anarchistic tendencies of the people and terror tactics. These tactics plus the VC's resorting to exorbitant taxation and enforcing a military draft, began to disenchant the people to the point that the VC lost much of the favor they once enjoyed. In areas long under VC control, the population was expected to support the VC out of necessity; in areas of predominantly religious sects, the people were expected to assist friendly forces against the VC. The majority, however, were expected to remain neutral.
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IV CORPS TACTICAL ZONE
AIR SUPPORT IN THE DELTA

LEGEND
- CAPITAL
- IV CTZ ABDC
- DEPOLITIZED AREAS
- IMPORTANT CITIES
- AIR BASE

SECRET

FIGURE 1
Enemy Forces

Confirmed enemy forces located in IV CTZ as of June 1967, were two main force regiments, 22 battalions, 75 separate companies, and 11 separate platoons--a total combat unit strength of 19,170. Personnel strength of other categories showed 50,765 irregulars, 11,220 Political Cadre, and 1,404 administrative type, totaling 82,895 for all categories.

VC-Tactics

The VC conducted nearly all their movements and activities at night. Normally they separated the companies within their battalions and conducted company and platoon-size operations. They concentrated in battalion and multi-battalion strength to launch attacks against critical installations, however, when extensive reconnaissance showed that they had an excellent chance for success. Generally, main force units would operate with elements of provincial forces and local district units. The VC were able to replace their losses from recruitment, and in earlier years, they recruited large numbers of personnel to send to the III CTZ. The majority of all VC-initiated activities were harassments of the many outposts and watchtowers within IV CTZ. Other incidents were AA fire, roadblocks and minings, propaganda, terrorism, and sabotage. The majority of attacks and ambushes were company and platoon size.

Infiltration Problems

The VC infiltrated large amounts of weapons and ammunition into IV CTZ during the years up to early 1965. Since then infiltration by sea has decreased, the problems being compounded by Market Time and Game Warden patrols.
However, there were few indications of any shortage of weapons and ammunition by mid-1967.

Evidence of large-scale maritime infiltration into the Delta was confirmed on 31 December 1965, when a steel-hulled trawler approximately 100 feet in length was detected about 30 miles off the Ca Mau Peninsula in IV CTZ. This trawler altered course when detected, headed seaward, and was subsequently tracked into the territorial waters of Communist China. On 10 May 1966, another of the 100-foot steel-hulled trawlers was discovered adjacent to the Ca Mau Peninsula off the eastern coast of An Xuyen Province, near the Bu De River. A United States Coast Guard craft, aided by a Vietnamese Navy craft, forced the trawler aground. To insure that the cargo did not fall into the hands of the VC, tactical airstrikes were called in to destroy the trawler. Subsequent salvage operations recovered small arms, mortars, recoilless rifles, and various types of ammunition and demolitions originating in Communist China.

The next large scale enemy infiltration attempt was intercepted on 20 June 1966, on the coast of Vinh Binh Province in IV CTZ. A trawler was captured intact with approximately 250 tons of predominantly Chinese Communist-made weapons and ammunition. This shipment was apparently intended for the Thanh Phong VC base area in Kien Hoa Province.
CHAPTER II
THE STRIKE EFFORT

Early Tactical Air Operations

In the early years of the war in South Vietnam, fighting was extensive in the Delta area south of Saigon. When the first large-scale USAF operations began in early 1962, practically all tactical air activities were directed to this southern region. These operations were conducted by USAF Farmgate T-28s and B-26s at Bien Hoa and a Deployed Air Strike Team (DAST) of T-28s at Soc Trang, until the phase out of these aircraft beginning in February 1964. Operations continued with the use of A-1 aircraft supplied to replace the aging T-28s and B-26s.

Gradually improved airfield facilities in the Mekong Delta increased flexibility of airpower and prepared it for expanded operations. In the period of 1 January through 30 June 1963, a number of changes and improvements in the operational capabilities of airpower in IV CTZ were made. Recognizing that the heaviest fighting, with a subsequent demand for airpower, was in the Mekong Delta region, officials established the IV Corps Air Support Operations Center (ASOC) at Can Tho for the Southern Delta on 1 February 1963. Security of the Ca Mau Peninsula, with both aircraft and communications coverage, was immediately improved. Total sorties exceeded 200 per month in early 1963, with the majority of the strikes executed by Farmgate aircraft.

One of the problems encountered in early 1963 was lack of knowledge of
the Air Request System on the part of ARVN personnel and U.S. advisors. No effort had been made by U.S. Army advisors to train ARVN personnel on use of the net. A good portion of the ALO effort in the first quarter of 1963 throughout IV Corps was devoted to briefing ARVN and U.S. advisors on operations of the Air Request System.

Problems were also encountered on obtaining political clearance for interdiction type targets in early 1963. It was reported in the IV Corp ALO Monthly Report, 1-28 February 1963, that interdiction bombing was practically out of the question. The Corps commander would not approve an interdiction mission, even on known and confirmed VC installations, because political repercussions might result from the killing of noncombatant personnel. These problems were resolved and airstrikes against interdiction type targets have yielded significant results on many occasions. Every effort was made to insure the safety of noncombatants in the densely populated Delta. In some cases, smoke grenades were dropped into the selected target area prior to airstrikes to warn friendly inhabitants when one was impending. Warnings from psywar aircraft were made in other cases.

With airpower being the primary U.S. force in the Delta, some notable and highly successful strikes occurred. In one day's action on 11 December 1964, near the district capital of Long My, some 110 miles south of Saigon, 400 guerrillas were reported killed by airstrikes made by 18 USAF and VNAF A-1s against 1,500 well-equipped enemy troops.

In a classic case of air support on 27 December, Skyraiders teamed with
Army helicopters some 10 miles north of Soc Trang in attacks on a VC battalion. Close air support allowed the government Ranger battalion to attack the enemy in the open where the fixed-wing aircraft could pinpoint him. Most of the 82 enemy killed in this battle were credited to air.

In late 1964, the main enemy activity shifted from the Delta regions to the mountainous regions of Central Vietnam. Whereas enemy tactics switched to Phase III of guerrilla operations with large units in these areas, VC operations in IV Corps remained in Phase I and II of guerrilla warfare. With increased ground commitment in the northern corps areas, airpower was still the mainstay of the U.S. effort in the Delta.

The majority of tactical airstrikes in the Delta since the introduction of jet aircraft in 1965, were supplied by USAF Tactical Fighter Wings at Bien Hoa, Phan Rang, and Cam Ranh Bay. Immediate and preplanned airstrikes occurred on a daily basis in support of the three ARVN divisions in IV CTZ and against interdiction type targets. The radius of action of F-100 aircraft at Bien Hoa AB allowed coverage to the most southern tip of the Ca Mau Peninsula. The extreme distances, however, created extended reaction times, due to approximately 25 minutes of flying time en route to the more distant targets. Binh Thuy AB served as an alternate recovery field when circumstances dictated that a strike force remain over the target for a longer-than-intended time.

Tactical Air Strikes 1965-1967

Typical examples of air support provided by USAF and VNAF tactical
fighters, since the introduction of jet aircraft are included in these extracts:

"...The effectiveness of tactical air power in IV CTZ was directly responsible in preventing massed-unit attacks by Viet Cong forces against friendly positions. On the single occasion during the last half of 1965 when Viet Cong forces massed in multi-battalion strength for an attack, they struck Tan Hiep airfield in Dinh Tuong Province destroying four 0-10s and a training center. The attack, which occurred on 18 November at 0300, was followed at daylight by a 7th ARVN Division reinaction operation which employed a total of 31 sorties of tactical air support for the four friendly battalions involved. Tactical air was used on this operation in strikes along the Viet Cong withdrawal routes, pre-strikes for heliborne troop landings, and close air support within 200 meters of advancing friendly forces. Air strikes were credited with 75 persons of the 208 VC bodies counted and U.S. advisors on the ground estimated an additional 100 KBA/WBA carried away.

"Several significant air actions against Viet Cong forces were accomplished in IV CTZ during the period of 1 July 1965 to 31 December 1965, which were both independent and in support of ground forces. Among the independent actions was the largest tactical air strike yet conducted in the IV CTZ which was made on 4 September 1965 in the southern portion of the U Minh Forest, an established Viet Cong base area in An Xuyen Province. A total of 144 sorties were flown, resulting in agent reports of 170 Viet Cong killed by air, two large secondary explosions, destruction of three ammo dumps, two weapons warehouses with over 3000 assorted weapons, and a military clothing warehouse.

"...Another highly successful independent air operation was an attack on a secret Viet Cong Provincial Committee meeting in Khanh Hoa Province that commenced on 18 November 1965 at 2030 hours. Because of the excellent coordination among all the participating elements of the tactical control system the strike was an unprecedented success. The twelve F-100s directed on the target by a USAF FAC, were credited by agents with killing 325 Viet Cong and wounding 233. Among the Viet Cong casualties were several high ranking political and military cadre."
"...A significant strike by 16 B-52's on 19 September 1965 against a Viet Cong training center caused agent reported results of 137 Viet Cong cadre killed, 300 recruits killed, and 400 recruits wounded.

"...The total results of independent air actions and actions in support of friendly operations during the last half of 1965 indicate 8,022 Viet Cong killed by air. Only agent reports with a rating of C-3 or higher were considered in the evaluation...'"

Significant tactical air actions continued into 1966. Typical activities were as follows:

"...On 24 January, acting on information that during the 24th secession elements of a VC battalion numbering approximately 800 had infiltrated into the Chuong Thien Sector, a total of 24 sorties were flown. The results were 185 VC KBA. FACs reported heavy ground fire throughout the area.

"...On 23 April, Operation DAN CHI 219, entering its fifth day, established heavy contact with VC. Forty-seven tactical air sorties expended, resulting in 88 VC KBA (FAC body count) and an additional 170 were estimated killed by TAC air. 7/

"...On 26-27 July, approximately 15 miles southwest of My Tho, an estimated battalion-sized force of VC was attacked by a combined force of 12 F-100s, 2 F-4Cs, 8 A-1Hs and 1 AC-130. Results were 108 KBA and 34 WBA (confirmed).

"...On 13 October an estimated VC battalion of 300 was attacked by 16 F-100s, three F-5s and 12 A-1Hs 15 miles south of My Tho. Confirmed results included 67 KBA." 9/

Examples of close air support and interdiction sorties for January-June 1967 included the following:

"...On 4 April, a flight of two F-100s expended upon two companies of VC moving on an infiltration route with supplies. On 11 April agents reported 25 KBA, including one VC province chief. In addition, 162 WBA were reported, including one VC company commander.
On 12 April, Operation DAN CHI 285B was conducted in Phong Dinh Province. Ten flights consisting of nine F-100s and 24 A-1Hs expended in support. FACs estimated 30 KBA, confirmed 11 KBA, and reported 38 structures destroyed. The following day, 27 flights consisting of 11 F-100s, 10 F-4Cs, two B-57s, eight AC-47s and 28 A-1Hs supported the operation. FACs reported 159 KBA estimated and 68 confirmed.

Operation JAN CHI 288A was conducted in Phong Dinh Province on 12-13 June 1967. USAF participation consisted of five preplanned air strikes on 12 June and four pre-planned and one immediate air strike on 13 June. The operation on 13 June began routinely but developed into one of the major battles of the year in the Delta. At 1030, friendly troops made contact with the VC. VNAF began putting strikes in the area and one USAF immediate air strike was requested. Due in large part to support received from USAF and VNAF tactical fighter aircraft, the operation was a success. Final results were 110 VC KIA of which 90 were credited to air.

VNAF Operations

The remainder of tactical air support in the Delta, exclusive of Navy tactical air operations which terminated in August 1966, was supplied by the 74th Tactical Wing (VNAF) at Binh Thuy AB. Activated on 1 April 1965, the mission of the 74th Wing was to perform close air support, interdiction, air defense, limited airlift, reconnaissance, medical evacuation, support friendly forces in the IV Corps area, and perform other special air missions as directed by Headquarters, VNAF. The 520th Fighter Squadron, equipped with A-1H Skyraider aircraft, had the distinction of being the only tactical fighter unit stationed in IV CTZ. The combat effectiveness of this unit was demonstrated in the period 1 July 1966 - 30 June 1967, when 10,701 A-1 sorties were flown and accounted for 1,127 Viet Cong killed by air. USAF tactical fighter sorties for this same period totaled 22,501 in the IV CTZ.
Typical of the esteem earned by the personnel of the 74th Wing is the following assessment by Brig. Gen. William R. Desobray, IV Corps Senior Army Advisor.

"...The 74th VNAF Tactical Wing is equipped and supported in a way common to other like organizations. Leadership and individual and team professionalism, however, are the qualities which have been combined so successfully in this command to set it above other such organizations. The pilots of this command are professionals in the truest sense of this term. It is not uncommon for them to have individually accumulated in excess of 2,000 combat sorties. On countless occasions I have personally witnessed from a command and control helicopter the devastating results inflicted on the enemy forces by these intrepid airmen. As an example, the wing flew 62 tactical air sorties, 12 0-1 sorties, and 21 H-34 medical evacuation missions in support of 'Operation DAN CHI COOD'. During the period of heaviest contact in this operation, air dropped ordnance was delivered to within 50 meters of friendly forces. That such close support was achieved without the loss of one supported soldier while at the same time causing approximately half of the 233 enemy deaths is clear evidence of the professional skill of the pilots. The esprit de corps and professionalism of the members of this fine wing have greatly enhanced the efficiency of the counter-insurgency effort throughout the IV Corps Tactical Zone...."

This unit was recommended for a Presidential Unit Citation for the period of 1 July 66 - 30 June 67, for this type of action, and for establishing a one-year sortie record for in-country VNAF and USAF units.

USAF, USN, and VNAF Statistics (Jan 65 - Jun 67)

The extent of air operations in IV CTZ was clearly indicated by the following statistics compiled between January 1965 and June 1967.
The combined ground and air operations during the period of July 1966 - June 1967 resulted in 11,824 VC KIA. During this same period there were 8,669 Chieu Hoi returnees, accounting for a combined loss of more than 20,000 personnel.

ARC LIGHT

The first employment of SAC B-52s into IV CTZ occurred on 16 September 1965, when a force of Stratofortresses conducted a massive raid against a VC base area in the coastal mangrove swamps of Vinh Binh Province. Twelve sorties expended a total of 459,000 pounds of 750 lb. GP bombs. No significant BDA was noted after this strike. Further ARC LIGHT activities in 1965 brought the totals to 96 sorties expending 1,836 tons of ordnance against 12 targets.

Difficulties encountered in the use of saturation bombing in IV CTZ included target selection and political clearance. VC base areas and installations in Chau Doc Province mountainous areas and coastal mangrove swamp
areas of other provinces have been the primary targets. The B-52 targeting program followed the technique of pattern analysis, and was designed to target enemy manpower and material resources that could be found in sufficient concentrations to warrant saturation bombing. This process involved the analysis of a wide variety of intelligence which included reports from friendly units, interrogation reports, captured enemy documents, special agent reports, infrared, and photography. Political clearance for each strike was granted by the District Chief of the area to be struck. Due to the dense population in IV CTZ, explicit criteria had to be met before a target was cleared. Among these criteria were:

1. No National Monuments, Temples, Pagodas, Shrines, Churches, or other places of worship in or within one kilometer of the target area.

2. Structures in the target area must be either abandoned or controlled by VC.

3. No noncombatants in or within one kilometer of the target area.

4. No friendly troops in or within three kilometers of the target area.

ARC LIGHT strikes continued into 1966 and had reached 102 sorties against 14 targets up to 5 October 1966, when a ground follow-up of strike Dear Bear, Chau Doc Ton, was performed. It was disclosed then that 29 craters were counted outside the bomb safety zone, resulting in seven civilians being wounded and at least three killed. Several buildings were damaged, including a pagoda. A 12-man team organized by the Chau Doc Province Chief and headed by the Tri Ton District Chief supervised the evacuation of the
wounded by U.S. helicopters

A search of caves in the densely wooded mountains of the target area disclosed an aid station as evidenced by used bandages found there. Approximately 100 other caves were estimated in the area but due to rough terrain and enemy action only an estimated 15 caves were searched thoroughly. This search produced no significant results and there was no evidence of enemy casualties. The psychological effect of the strike was reduced by inaccurate bombing. As a result of it, no ARC LIGHT strikes were made in IV CTZ until 11 January 1967.

Upon resumption of ARC LIGHT strikes in 1967, nine strikes were executed through July, with a total of 63 sorties expending 1,272.6 tons of munitions. The most significant results were obtained from a ground follow-up of targets, Kien Hoa 17 and Kien Hoa 18, struck on 17 July. Numerous bunkers were found in the target area and as a result of the follow-up, four VC were KIA, nine VC were captured, and five VC captives were liberated. Three ammunition caches and a VC factory were found in the vicinity of the target areas.

AC-47 Operations

One of the most common tactics employed by VC forces in the Delta was attacks on poorly defended ARVN and RF/PF outposts. These attacks usually occurred under cover of darkness and achieved notable success in the past. AC-47 aircraft, capable of providing firepower and illumination, were instrumental in the protection of these outposts under night attack. Quick
reaction to attacks was achieved by a nightly ground and airborne alert schedule. During the period of January - June 1967, a total of 568 AC-47 sorties expended nearly 20,000 flares and over 7,500,000 rounds of ammunition in IV CTZ. The majority of these sorties were supplied by Flight E, 4th Air Commando Squadron, Dinh Thuy AD.

One of the typical AC-47 operations occurred on the morning of 15 January 1967 when an unknown number of VC attacked Chong Van Outpost, 35 miles south of Nga Tho. Spooky 53 supported this operation with three missions, including a total of 65 flares and 22,000 rounds of ammunition. Agent reports received on 24 January 1967 credited the flareship with 67 KBA (confirmed) and 34 WBA (confirmed). The VC were elements of the 501st VC Local Force Battalion.
Defoliation in the Delta began in February 1962 on a limited basis. Beginning with a task force of three C-123 RANCH HAND aircraft at Tan Son Nhut AB, the primary objective of the early missions was to determine the feasibility and effectiveness of defoliation in Vietnam. The results of this initial testing would determine whether a continuing defoliation program would be established. One of the first targets selected for testing was foliage bordering lines of communication in the sea level, rice-growing areas of the Ca Mau Peninsula in southern IV CTZ.

Suitable test areas were subsequently selected and approved in the Ca Mau Peninsula and around the Saigon area, and the test missions began in February 1962. Although the unit had expected considerable testing to be approved for this series, the actual amount of spraying required was far less than anticipated. The required missions were completed in less than six weeks. Additional defoliation missions were flown on the Ca Mau Peninsula shortly thereafter.

During the entire month of September and the first half of October 1962, defoliation activities were extremely heavy, with missions scheduled and flown on nearly a daily basis. The targets to be sprayed consisted of foliage bordering canals in the sea level area of the Ca Mau Peninsula, all of which were main routes of communication. Being flat, this type of target presented no difficulty to RANCH HAND crews as far as aerial spray techniques
were concerned. Although enemy ground fire was encountered, it was light and ineffective. Because the Viet Cong were inexperienced in antiaircraft firing, the few hits sustained by the aircraft caused no serious damage, and personal injuries were nonexistent.

The dry season in the southern portion of Vietnam lasts from December to May. During this time, most foliage is in the dormant stage. Although the defoliant is effective regardless of the growth stage of the plant life, the time required to destroy it is considerably less during the maximum growth period, than it is during the dormant stage. As the initial and most rapid growing occurs during the rainy season, from June through November in the Ca Mau Peninsula, defoliation missions were discontinued until June 1963.

In May 1963, targets selected and approved for the oncoming spray season were reviewed by the RANCH HAND organization. Defoliation missions were scheduled to resume the following month.

The first project undertaken after resumption of defoliation in IV CTZ, was a canal in the Ca Mau Peninsula, similar to those previously sprayed there. Light enemy ground fire was encountered in this area, but no damage was sustained during the eight sorties required to successfully complete the target.

During October-November 1963, another project was defoliation of a strategic canal south of Ca Mau Peninsula, which required 34 sorties. Exercising a maximum effort, the unit completed this important military target.
Although enemy ground fire presented a constant threat to RANCH HAND crews prior to late 1963, it did not seriously hamper overall mission completion. This was primarily due to three factors: target locations, ground security, and enemy inexperience in antiaircraft firing. Some targets were located in VN government-controlled areas. At such sites, only small numbers of Viet Cong forces were sighted during spray runs. In areas away from villages or hamlets, where VN government control was less effective, Vietnamese Army (ARVN) troops were used to occupy and secure the target area during defoliation missions. Finally, since RANCH HAND was the only USAF unit in Vietnam with a mission which directed continuous low-level flying (150 feet above the terrain), Viet Cong forces had little opportunity to become proficient in antiaircraft firing prior to late 1963. After that time, however, RANCH HAND crews encountered greatly increased resistance during defoliation missions.

Of the areas in Vietnam in which Vietnamese government control was being lost to the Viet Cong forces, the Ca Mau Peninsula experienced the most rapid deterioration. Areas previously considered as secure were becoming more heavily infested with enemy forces. This, in turn, meant that a greater number of ARVN forces would be needed to secure future targets. Because of increasing enemy activity throughout the country, ARVN officials were not only unable to authorize additional troops, they reassigned those already supporting the defoliation mission to other areas of operation. During spray runs after this time, target security and retaliation capability
were provided solely by escort fighter aircraft. Larger concentrations of Viet Cong were encountered on subsequent defoliation missions and as could be expected, their antiaircraft proficiency increased accordingly.

One project requiring 16 defoliation sorties was scheduled and completed during February 1964. The target in this instance was a wide canal located on the southern tip of the Ca Mau Peninsula, feeding directly into the Gulf of Siam. Because of its size and accessibility to sea routes, it was possible to obtain ground security through coordination with the Vietnamese Navy. Small-armed vessels, normally used to patrol the coastline, were used during spray runs to occupy and secure the target area. Only light scattered ground fire was encountered during the 16 sorties, with no serious damage sustained by spray aircraft.

Targets scheduled during March and April 1964 were also located in the Ca Mau Peninsula, but were too far inland to be reached by Navy vessels. Ground security was totally unavailable on any of these targets and increased enemy concentrations and ground fire presented extremely hazardous conditions during this series of spray runs. Although the Viet Cong were normally equipped with nothing larger than .30 caliber small arms, each RANCH HAND aircraft was sustaining an average of four hits per mission. Various hydraulic and electrical systems were occasionally disabled, and on two occasions aircraft landing gears were shot out, necessitating emergency landings.

In mid-April 1964, defoliation of a four-target complex of rivers south of Ca Mau commenced. These rivers were very irregular in shape, and
two were in areas which the Viet Cong had controlled for more than three years. In an effort to reduce vulnerability to Viet Cong ground fire, RANCH HAND crews utilized the recently developed "boor up" tactic. This procedure involved traversing open areas between targets at 20 feet above the terrain, with "pop-ups" to a 150-foot spray altitude over target areas.

As the missions continued, spray aircraft encountered from three to five hits daily until 30 April 1964. For the first time, RANCH HAND crews then met heavy, accurate .50 caliber antiaircraft fire and what appeared to be air-bursting mortar shells. Caught between Viet Cong on both sides of the canal during a spray mission, the lead aircraft sustained 14 hits, ultimately causing more than 40 holes due to shrapnel, as well as wounding of the co-pilot. Because of unreliable readings from disabled instruments, one engine was shut down and the aircraft was landed at Soc Trang, an intermediate field between the target area and Tan Son Nhut. Discontinued for military evaluation, defoliation missions were not restarted until 19 May 1964.

When spraying resumed, the first target scheduled was another canal, which required 12 sorties at a rate of three per day. Located 40 miles southeast of Saigon in what was considered to be a secure area, the target was to be relatively uneventful. Only light ground fire was encountered on the first two days, but its intensity on the third day was sufficient to warrant discontinuing the spray run prior to completion. A prestrike on the target area by fighter aircraft was requested by RANCH HAND, and was flown the following day just before starting the spray run. Most of the prestrike,
however, was of limited value, and consequently, the defoliation aircraft were hit heavily by antiaircraft fire. It disabled one aircraft's spray pump and engine generator, and the lead aircraft's hydraulic system. Landing was made at Tan Son Nhut AB without further incident, and the target was discontinued temporarily.

In conjunction with RANCH HAnd's request, higher headquarters directed that no further spraying be done in the Ca Mau Peninsula unless multiple targets were scheduled. This policy allowed RANCH HAND crews to move from one target to another at their discretion, thereby taking advantage of the Viet Cong's deployment problem. It was believed that, by not spraying the same target more than two days in succession, insufficient time would be available for the Viet Cong forces to mass in the target area.

While future targets were being scheduled in the Ca Mau Peninsula, RANCH HAND moved its operation to Da Nang. The unit returned its operation to Tan Son Nhut in July 1964, and resumed defoliation of previous targets in IV CTZ. Missions were scheduled and flown at uneven intervals in an attempt to confuse enemy forces, but antiaircraft fire continued to increase in intensity. By this time, the Viet Cong had almost complete control of virtually the entire Ca Mau Peninsula area. They possessed newer and more effective weapons than ever before, many of which were American made and captured during conflict with ARVN ground forces. High powered .50-caliber weapons supplied by pro-communist countries, or removed from downed VN fighter aircraft, were reassembled and effectively used as antiaircraft weapons.

Sustaining antiaircraft hits on all remaining missions (14 each on
two aircraft, 16 July 1964), sorties continued to be scheduled and flown until the target complex was completed on 22 July 1964. Defoliation operations continued on line of communications (LOC) type targets during 1964.

RANCH HAND operations in the Delta during 1965 consisted primarily of defoliation of LOC and Safe Havens. The first undertaken was to defoliate selected areas along the main shipping channel from Saigon to the sea. In this III Corps area, known as the Rung Sat Special Zone, sniper activity and attempts to mine the shipping channels were common. Increased aerial surveillance, aided by defoliation of the dense mangrove vegetation, was considered as a solution to this growing problem. Defoliation operations began on 1 March 1965 and were completed on 19 March 1965. In the 42 sorties flown, they dispensed 27,000 gallons of chemicals. The defoliation aircraft were hit twice by hostile ground fire.

One of the largest defoliation projects attempted in South Vietnam was the defoliation of Safe Haven Areas in IV CTZ. Designated coastal areas in Bac Lieu, Ba Xuyen, and Vinh Binh Provinces were to be defoliated, as requested by ARVN IV Corps Commander and the Province Chiefs of the affected provinces. Considerable Viet Cong activity in the Mekong Delta could be attributed to these coastal strongholds, where arms factories and repair shops, hospitals, and training camps operated with almost complete immunity from government attack. Supplies for the Viet Cong were brought into these areas in shallow draft sampans which are easily concealed by the dense mangrove swamp which covers the area. Defoliation on these areas would improve aerial surveillance,
Defoliation operations began on 30 April 1965, with A-1E aircraft from Bien Hoa being used on each sortie to prestrike the area and provide close air support. A Forward Air Controller was utilized to mark suspected automatic weapons installations. These operations continued until 25 May 1965, during which time, 84 sorties were flown. Ground fire was extremely heavy and the defoliation aircraft were hit 124 times. There were 77,600 gallons of chemical dispensed, and five C-123 crewmen were slightly injured by hostile ground fire. Approximately 70 percent of the requested areas had been defoliated when the 2d Air Division ordered a temporary suspension of defoliation operations due to intense ground fire. \(^1\)

Viet Cong reaction to the defoliation program in late 1965 and early 1966 attests to the effectiveness of the RANCH HAND operation. Agent reports indicated that the defoliation program had literally driven the Viet Cong underground in Kien Hoa Province. The Viet Cong, it was reported, could no longer rely on defensive locations in the jungle, because of the increasing exposure of their positions brought about by herbicide application. Party chapters and village military affairs committees ordered carpenters to build roofs for secret underground tunnels. They called for the construction of 50 secret underground tunnels in each hamlet, and 300 to 500 in each village. The Kien Hoa Province Military Affairs committee feared that all jungle areas in the Delta would be defoliated. \(^2\)

Increased RANCH HAND activities in 1966 included defoliation of infiltration routes, canals, and other lines of communication. Area defoliation

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SECRET NOFORN

began on a large scale against VC Safe Havens to uncover staging and storage areas, and hospital facilities in the coastal mangrove areas of Go Cong, Bac Lieu, and An Xuyen Provinces. Cumulative totals for IV CTZ in 1966 were 225 sorties, 211,200 gallons of herbicide dispensed, and 33,860 hectares covered.

The largest area defoliation project in IV CTZ began in August 1966, along the coastal areas of the Ca Mau Peninsula. Vegetation was defoliated in extensive operations conducted near the mouth of the Song Ong Doc and Song Bay Haip Rivers and inland along the Song Cua Lon River and numerous canals and land routes in An Xuyen Province. A 50-kilometer stretch along the southeastern coast, centered astride the mouth of the Song Bo De River, was targeted. Operations on this project were continuing into mid-1967.

The Long Toan District of Vinh Binh Province presented difficult problems in conducting friendly operations, due to swampy terrain and restricted observation caused by dense vegetation. This area had been a VC stronghold for years and was known to contain numerous VC installations and fortifications. Defoliation was started on 22 November 1966 and was completed by 31 March 1967, after an expenditure of 66,800 gallons of herbicide with 79 sorties.
Airlift Operations

Due to an inadequate and insecure road system in the Delta, heavy reliance was placed on the airlift system for logistic operations. It was estimated by the IV CTZ Senior Transportation Advisor (G-4) that 95 percent of resupply was accomplished by air in the first half of 1967. The 536th Troop Carrier Squadron at Vung Tau provided C-7A aircraft on a continuous basis into the Delta for aerial supply. The C-130 and C-123 aircraft from Tan Son Nhut AB also flew supply missions on a daily basis.

Scattered throughout the Delta were isolated and relatively inaccessible Special Forces Detachments. Heavy reliance was placed upon C-123 aircraft for the paradrop of supplies. In addition, C-7As provided resupply support on a continuous basis.

Heavy reliance was also placed upon Army helicopters for resupply in the Delta as approximately 30 percent of aerial supply was provided by them. Fixed-wing operations were limited to an extent because of inadequate runways in the more remote areas. Furthermore, considerable difficulty was encountered in providing an adequate foundation for some of the existing airfields, due to terrain features and water level of the low-lying areas.

By mid-1967, however, the air transport system was supported by 31 airfields open to C-7A aircraft, 20 to C-123s, and 13 to C-130s.

A limited number of airborne assaults had been conducted in the Delta.
with sizable drops occurring in November 1963 and April 1964. The year 1966 closed with the largest airborne assault in the war since 1964. At dawn on 27 December, two waves of C-130s dropped 1,200 RVNAF paratroopers over the fringes of the U Minh Forest in Chuong Thien Province to initiate Operation DAN CHI 270/D. This search-and-destroy operation, into a well-known VC stronghold, terminated on 30 December, after inflicting enemy losses of 124 killed and 12 captured.

Psychological Warfare Operations

Detachment 4, 5th Air Commando Squadron, based on Binh Thuy AB, was serving as the major USAF dissemination branch for psychological warfare material in the Delta in July 1967. Operating out of 15 locations, ranging from 1,500-foot dirt strips to the 6,000-foot concrete runway at Binh Thuy, the unit was credited with 5,937 Hoi Chanhs in the first half of 1967. Statistics compiled by the unit, while flying specially equipped C-47 and U-10B aircraft for the period January - June 1967, were as follows: 1,486 missions, 3,446 flying hours, 743 hours of speaker time, and 346.5 million leaflets dropped. Over this same period of time, unit aircraft received 22 hits from hostile ground fire.

Preparation of the psychological warfare recorded tapes and leaflets disseminated by Detachment 4, 5th ACS, was assigned to the U.S. Army. The 19th Psychological Operations Company at Can Tho provided leaflets, tapes, and target information. Tapes and leaflets, with themes ranging from "Chieu Hoi" to "Don't Pay VC Taxes", were prepared in the Vietnamese and Cambodian
languages, as many communities and sections of IV CTZ were heavily populated with Cambodians. One technique that achieved significant results was utilization of Hoi Chanhs in the preparation of leaflets and recorded tapes for use against the unit they had just left. Advantages credited to this practice were: (1) The Hoi Chanh had a good knowledge of his unit's probable locations, unit personnel, and the problems being encountered; and (2) the Hoi Chanh, after committing himself to making a broadcast, would probably not return to the VC ranks for fear of reprisals.

Reconnaissance Operations

Visual reconnaissance accounted for the largest percentage of reconnaissance missions flown, and provided the largest source of immediate information collected on VC activities in the Delta. From Corps to sector-level, 30 ALO/FACs were dispersed at 15 locations throughout the provinces and districts of IV CTZ as of 31 May 1967. More than 44,000 sorties were flown in O-1 aircraft from July 1963 through June 1967 in support of friendly operations, visual reconnaissance, and other activities. Visual observation provided many lucrative targets for immediate and preplanned airstrikes and many resulted in significant BDA and KBA statistics. A typical example of this occurred on 28 January 1967, when a battalion of VC, 15 kilometers west of My Tho, was struck by three immediate airstrikes consisting of two flights of two F-100s and one flight of two F-5s. Agent reports received on 16 March 1967 credited these fighters with 44 KBA (confirmed) and an estimated 70-100 VC wounded and dead carried away.

In addition to visual observations, permanent record imagery
reconnaissance methods had been employed by the 460th Tactical Reconnaissance Wing at Tan Son Nhut. ARVN units had begun to request and utilize this type of reconnaissance for operational planning purposes. The principal type requested was the split vertical photo with a scale of 1:3000 to 1:5000. Side Looking Airborne Radar (SLAR) and Red Haze were also used in conjunction with this type to substantiate the findings. VC infiltration routes and suspected assembly points along the Cambodian border received special attention in reconnaissance sorties, with oblique photography being employed to detect base camps several kilometers inside Cambodia.

Theater Indoctrination School

Another significant achievement in the Delta was the establishment of an in-country school for training Forward Air Controllers at Binh Thuy AB. Detachment 1, 504th Tactical Air Support Group, Theater Indoctrination School (SEA), was directed to be formed by Lt. Gen. William W. Momyer on 6 August 1966. Operations began on 8 August 1966, with a fleet of six 0-1 aircraft and six instructors. By 8 September 1967, the force had grown to a total of 15 permanently assigned instructors and four instructors on temporary duty. By this same date, the unit was equipped with seven 0-1 aircraft and ten 0-2 aircraft. The first 0-2 arrived 12 June 1967.

Binh Thuy AB in IV CTZ was selected as the site of the operation for several reasons. Among these were availability of uncongested facilities, excellent flying weather most of the time, and a variety of terrain covering almost all types found in other areas of Southeast Asia.
Believed to be the only school of its kind operating in a combat environment, its purpose was to prepare the new FACs to reach a peak of efficiency and combat readiness in the shortest possible time. The realistic training obtained in a combat environment, while being instructed by experienced FACs, served additionally to increase longevity of pilots and aircraft by: (1) standardization of procedures; (2) infusion of safety as it applies to the combat situation, and (3) evaluating and recommending changes to tactics as required. By 8 September 1967, there had been 934 graduates of the various courses of instruction offered. (Less than 934 individuals attended but some had returned for Instructor Pilot upgrading and 0-2 aircraft checkout.)

Used to train Korean, Australian, and Vietnamese FACs in addition to U.S. personnel, the school offered a varied curriculum of flying and academic courses, with seven separate programs of instruction offered. These were:

1. **Academics-Classroom instruction only on subjects ranging from aircraft system to survival.** The length of the academic course ranged from 7 1/2 to 22 hours.

2. **0-1 Long Course** - This course, consisting of 22:00 flying hours, was designed to train fighter pilots received in the FAC/Fighter Pilot exchange program.

3. **0-1 Short Course** - An in-country checkout, consisting of 7 1/2 flying hours, for graduates of the FAC school at Hurlburt AFB, Florida.

4. **0-1 Instructor Pilot Upgrading** - 5 1/2 flying hours.

5. **0-2 Long Course** - A training program for new FACs. It consisted of 18 flying hours, plus academics.
6. **O-2 Short Course** - An aircraft transition course, consisting of 18 flying hours and aircraft engineering ground school.

7. **O-2 Instructor Pilot Upgrading** - 6 flying hours, for upgrading qualified O-2 FACs to instructor-status.
CHAPTER V
SUPPORT OF U.S. FORCES

Special Forces Defense

Early involvement of U.S. ground forces in IV CTZ was limited to Special Forces activity and Army Advisors to ARVN units. With U.S. forces assuming a more active combat role in other Corps areas in 1965, ground activities were limited to the advisory role and Special Forces activities. By early 1967, there were 22 USSF Detachments located throughout IV CTZ. These Special Forces Camps were located in areas of political, tactical, or strategic interest. Though heavily fortified and well manned with USSF and CIDG personnel, Special Forces Camps were, because of their isolation, vulnerable to enemy attack. Under normal weather conditions, tactical air resources were capable of providing the airlift and close air support required to insure camp survival. To insure that this protection was extended through periods of inclement weather, plans were drawn up by the Seventh Air Force to provide Combat Skyspot coverage to besieged IV Corps Special Forces Detachments. Under this plan, all strikes within a 200-NM radius of the Combat Skyspot (MSQ-77) Bomb Directing Central Radar Sites, located at Bien Hoa and Binh Thuy, could be controlled under all weather conditions.

Operation DECKHOUSE V

Marking a significant milestone in the Delta war, Operation DECKHOUSE V, conducted during 6-15 January 1967 in Kien Hoa Province, introduced U.S. ground forces into IV CTZ, in other than an advisory role. This search-and-
destroy operation was conducted with no major problems and only light contact was established with the enemy. The forces included one U.S. Marine Battalion Landing Team and two Vietnamese Marine Battalions supported by 36 air-strikes, consisting of 50 F-100s, 24 B-57s, six F-5s, two F-4s, and five A-1Hs. Results reported included five friendly killed and seven wounded in action, while the enemy had 13 killed and 11 captured. Tactical air was credited with 102 structures destroyed and 108 damaged; there were 47 sampans destroyed and 35 damaged.

Though this operation produced no spectacular results, it ushered in a period of ever-increasing ground involvement in IV CTZ and the northern section of the Delta in III CTZ, south of Saigon. This area was judged of vital importance, because all major lines of communication connecting Saigon and the lower Delta transit the region. Furthermore, vast quantities of rice, destined for the Saigon market, were transported over these routes. Pacification and subsequent government control of this area were also judged vital in the campaign to provide security for the capital city of Saigon. This upper Delta region contained many VC supply caches, training, and rest areas, and was of vital economic, strategic, and political interest to the enemy.

Plans were drawn up for the deployment of U.S. ground forces into IV CTZ during late 1966 or early 1967. The 9th Infantry Division was activated, trained and equipped for warfare in the water-logged terrain of the Delta. A joint Army-Navy mobile strike force, capable of conducting wide range offensive operations, was established at the Dong Tam Base, which
was being constructed eight kilometers west of My Tho, on the Mekong River. This Mobile Riverine Force (MRF), known as River Flotilla I, an array of watercraft capable of housing, transporting, and providing supporting firepower for combat units on search-and-destroy operations, was considered as the key to successful operations in the maze of inland waterways of the Delta.

To insure adequate tactical air support and coordination for this mobile force, the 2d Brigade ALO of the 9th Infantry Division was placed aboard ship with the Tactical Operations Center. Thus all planning and coordination could be done with commanders of all units directly involved.

Mobile Riverine Force

The Mobile Riverine Force (MRF) was a combined Army-Navy strike force, unique in its concept of operation. It was the first U.S. operation of its kind since the Civil War. Full-scale operations began in the Mekong Delta in June 1967.

The primary combat unit of the MRF was the 2d Brigade of the U.S. 9th Infantry Division. Two battalions from this brigade were supported by the River Assault Boats of the Navy's Task Force 117 and by three batteries of barge-mounted artillery from the 9th Division. The Army troops were transported by the Armored Troop Carrier (ATC). Heavy gunfire support came from the Monitor. Control was provided by the Command Communication Boat (CCB) that served the Army and Navy as an afloat forward Command Post.

A workhorse among the boats, the ATC, was capable of carrying one
platoon of fully equipped infantry soldiers into almost any canal, creek, or stream in the Delta. Protected against recoilless rifle fire by a bar-trigger shield and special hardnose steel, the ATC carried a small arsenal of short-range weapons that made her offensive capabilities formidable. The Monitor, bearing the same protective devices as the ATC, provided greater firepower with longer range for the assault boats, making her the flotilla "battleship". The CCB allowed the Army and Navy units on an operation to coordinate their water and land tactics.

Each of the strikes conducted by the MRF was staged from the Mobile Riverine Base (MRB). Unique to this force, the MRB could move in any of the major waterways in the Delta. Composed of five ships--three for berthing and reeding of troops, one for repair, and one for supplies--the MRB completely supported the MRF. Another ship served as the logistics pipeline with weekly supply runs from a supply point to the MRB.

Operation PALM BEACH

The first major operation initiated by 9th Infantry Division troops upon their arrival in IV CTZ was Operation PALM BEACH. This operation, initiated on 28 January 1967 by the 3d Brigade, was designed to secure the Dong Tam Base area, which was under construction. From this base area, search-and-destroy operations were conducted to extend GVN influence in Di.K Tuong Province and the surrounding Delta. Initial activities were limited to base security, but offensive operations on a limited scale were begun in February. On 10 March 1967, the 2d Brigade replaced the 3d Brigade at Dong Tam. Search-and-destroy operations were begun that included
elements of ARVN and RF/PF units. Government influence in the province was strengthened by the close working relationship exercised between U.S. and RVN during these operations. Working closely with the U.S. Navy forces of River Flotilla I, the 2d Brigade continued to refine its tactics and techniques by conducting frequent Riverine operations.

In response to intelligence of an enemy buildup in the Ap Bac Secret Zone, the 2d Brigade, on 2 and 3 May 1967, conducted its most successful engagement in the Mekong Delta to date. This area, about 50 miles southwest of Saigon, was important as a Viet Cong stronghold, sheltering regional, political, and military cadres, and providing a haven for Viet Cong moving into the Plain of Reeds, west of Saigon. The 2d Brigade, composed of two battalions supported by artillery and tactical air, initiated a search-and-destroy operation on 2 May, and about noon, encountered units of the Viet Cong's 514th Local Force Battalion. One company was hit hard, taking most of the casualties suffered by the brigade. The Viet Cong were in camouflaged bunkers along tree lines and canals bordering the rice fields; they fought with mortars, recoilless rifles, automatic weapons, and small arms. Employing all available resources, including 17 preplanned and 6 immediate tactical air sorties, 13 O-1E sorties, plus 3 AC-47 sorties, the 2d Brigade maintained contact through the morning of 3 May and inflicted losses of 212 VC KIA. Twenty-seven of the killed were subsequently credited to tactical air.

Lt. Col. Edwin W. Chamberlain, commander of the 3d Battalion 60th Infantry describes the air action of the encounter:

SECRET NOFORN
The operation started out as a Brigade Operation to check out the AP Bac Secret Zone. We had scheduled a number of preplanned air strikes to support helicopter landing zones and had put some in to the north with the hope that the bombing would drive the Viet Cong down to where we were. About 12 o'clock noon I would judge, the 3/47th, which was to our east, got into contact. At first it was just scattered sniper fire type of contact, but later on they got into a real firefight. They had come into an enemy force, which was later estimated to be at least two reinforced companies, possibly two companies, from the 514th V.C. Battalion. They were well dug in and liberally supplied with automatic weapons. As soon as this occurred, the Battalion Commander immediately started to call for artillery and air strikes into the area on an immediate basis. The air was brought in very accurately on the positions which he called for, but it was difficult, due to problems of communications, to exactly pinpoint where the enemy was. So we put most of the air into the center area where we thought the enemy was. It subsequently proved that the ordinance probably landed around where the CP was, but not around where the main defensive lines were. One bomb looked as if it hit that area. However, the confusing thing was that they did another story. The strafing covered the entire area and we are certain that it inflicted a number of casualities, although it is difficult to say how many.

About the only unfortunate incident is when the aircraft were making their last strike. They were firing 20mm and one of the ships, the last one coming down, looked like he took fire or something because he wobbled. When he wobbled he sprayed my track line, resulting in one U.S. KIA and three wounded. None of the wounded were serious however. This created a tremendous amount of confusion in the company at the time, because they were getting ready to make the final assault. Fortunately they recovered quickly and were able to initiate the assault about five minutes later. I would point out that our reaction to the shooting incident was that it was just one of those things that happen sometimes. Our experience with the Air Force has been that they have been a real fine professional bunch of people. They put the stuff right where they want it. I have never seen any of the air strikes, that weren't right on the old business. So these things happen, just like short rounds of artillery. It can't be avoided.
"I feel the fact that we were able to close and that the enemy was pinned there and couldn't get away, was due in a very large part to the air strikes that were put on them. The guy was unquestionably afraid to get out of his position and try to 'make it' because of all the air and the artillery, particularly air.

"My personal view of air is, first of all it is absolutely essential to our success on the battlefield. It had a shock action greater than you can get out of artillery or any other type of firepower. The accuracy is great. We simply had no problem in getting (1) the amount of air support we need and (2) the people to control it and support it...."

In action related to this engagement, the 12th Regiment, 7th ARVN Division conducted an airmobile search-and-destroy operation in Dinh Tuong Sector on 3 and 4 May. On 4 May, contact was made with an unknown number of enemy from the 514th Local Force Battalion, which had been badly mauled by the 2d Brigade, 9th Infantry Division (U.S.) the day before. Results of this operation were: Friendly - 4 KIA and 26 WIA; Enemy - 78 KIA. Twelve sorties of tactical air were flown in support of this operation.

During May, the Riverine Assault Force approached a state of full readiness to conduct Riverine assault operations from a Mobile Riverine Base. On 15-16 May, a joint force from the 2d Brigade, 9th Division (U.S.) and 12th Regiment, 7th Division (ARVN), utilizing 22 ATCs, two Monitors and two CCBs, conducted a sweep of the Cam Son Secret Zone in Dinh Tuong Province. This area, about 15 miles west of My Tho, contained known VC bases from which enemy forces could exercise some degree of control over the waterways of the Mekong River system and the population of the district. The area was also known to be a resupply and retraining area for local and main force VC units.
The operation was planned as a beach landing by two U.S. battalions, followed by a sweep northward toward the ARVN forces serving as a blocking force along Highway 212. Armed Navy craft provided blocking action along the rivers to the east and west. Several preplanned airstrikes were conducted at the proposed beach landing sites to the south and against heavy automatic weapons positions encountered throughout the engagement. Final results of the sweep were 125 enemy KIA as compared to friendly losses of 1 KIA (U.S.), and 26 WIA (25 U.S.). According to a detainee, the enemy unit engaged was the 514th LF Battalion, which had withdrawn to that area to replace losses and retrain as a result of the 3-5 May contact in the AP Bac Secret Zone. Eighteen D-1E missions and 32 tactical air sorties were flown in support of the operation, resulting in 23 KBA. According to Maj. John Fender, 2d Bde FAC, tactical airpower was instrumental in destroying several automatic weapons positions and in denying the enemy forces an easy escape route out of the battle area. Visual reconnaissance located escaping groups of VC and immediate airstrike sorties expended ordnance upon the fleeing enemy with significant results.

Operation PALM BEACH continued through 31 May 1967, with these cumulative results for the six-month period: Friendly - 51 KIA, 321 WIA; Enemy - 670 KIA, 97 DET. Tactical air sorties totaled 189.

**Operation CORONADO**

Upon termination of Operation PALM BEACH, the 2d Bde, 9th Infantry Division, launched a series of Mobile Riverine operations under the code name of CORONADO in Long An and Dinh Tuong Provinces. A phase of Riverine
operations, beginning on 19 June, marked the first major action involving the entire assets of the Mobile Riverine Force.

Initial operations were very successful in locating and defeating Main Force VC and guerrilla units through coordinated use of tactical airpower. Cumulative results through June 1967 showed 281 VC KIA as compared to friendly losses of 29 KIA and 119 WIA. In carrying out its concept of operations, the 2d Brigade, supported by USA, USN, USAF, and RVN units conducted operations to seek out and destroy MF/VC personnel, installations, equipment, and infrastructure within the areas of operation. Brigade elements were inserted into areas of operation by ATCs supported by Monitor gunboats utilizing existing rivers and canals within the area as natural avenues of approach. Prior to innovation of the Mobile Riverine Force, these same rivers and canals served as obstacles to movement of conventional forces.

Army aviation airmobile units were also utilized to effect troop insertions. In most instances, blocking positions were established to prevent enemy exfiltration from the area. Preplanned airstrikes, immediate airstrikes and artillery were used concurrently with troop insertions and maneuvers. The Mobile Riverine Force promised to revolutionize Mekong Delta warfare with its ability to strike at will against Viet Cong sanctuaries along waterways which were previously untouched.

**Operation ENTERPRISE**

The 9th Infantry Division initiated Operation ENTERPRISE on 13 February 1967 when the 3-39th Infantry relieved the 2-14th Infantry, 25th Infantry Division, at Rach Klein in Long An Province, RVN. The long-term operation...
was designed to destroy the VC/NVA forces in the province, to destroy the VC infrastructure, to bring under control that portion of the population currently dominated by the VC, and to extend GVN control through support of Revolutionary Development. Cumulative enemy losses for the period ending 30 June 1967 were 1,067 KIA as compared to friendly losses of 142 KIA and 552 WIA. Tactical airpower delivered 841.8 tons of ordnance with 540 sorties, and reconnaissance sorties totaled 33 for the period.

The early months of Operation ENTERPRISE were characterized by preplanned search-and-destroy missions of short duration by units of the 3d Brigade, 9th Infantry Division, and ARVN units. The first battle of major significance occurred on 9 and 10 April 1967, approximately five kilometers west of Rach Kien, along the D0i Ma Creek. The battle occurred as a result of two preplanned airstrikes the morning of 9 April, in an area known to be a haven used periodically by the VC.

A FAC was airborne over the target area at 0715 hours and observed four small groups of VC in the target vicinity. While directing the first airstrike into the area, the FAC observed a large number of enemy trying to avoid the brunt of the attack. This strike resulted in eight VC KIA. The second airstrike was directed against another VC target two kilometers farther east.

Two immediate airstrikes were called for in the vicinity of the first target. These strikes resulted in ten VC KIA, three secondary explosions, eight structures destroyed and ten damaged.
The first immediate airstrike was described by Capt. Edmund Crandall, 3d Bde Assistant ALO, as follows:

"...The ground commander was quite excited about the spotting of VC; he requested an immediate air strike. I became airborne in the second aircraft to control that strike.

"I got the fighters in, F-100s and these particular fighters were extremely accurate with their ordnance. When I rolled in to mark the target, Charlie just swarmed out of the houses. We put ordnance right on top of them before they could make it to the hardened bunkers. They ran into the napalm between their houses and the river and we followed up the bombs with napalm and 80mm...."

Since it was obvious that a sizable enemy force had been located, plans were immediately made to attempt an encirclement of the enemy with a series of air mobile assaults into the battle area. The ensuing battle continued through the early afternoon of 11 April. Final results of the three-day operation were 247 VC KIA (BC) and one POW. Total friendly losses were five KIA, one Died of Wounds (DOW), and 31 WIA.

Thirty-seven tactical air sorties were flown in support of the operation, dropping more than 57,000 pounds of explosives, 12,000 pounds of napalm, firing 24 pods of air-to-ground rockets plus the expenditure of 20-mm and .50 caliber ammunition. In addition, three AC-47 flareship sorties were flown. This combined air action resulted in 22 structures destroyed, 50 structures damaged, six sampans damaged, three secondary explosions, and 75 KBA (BC).

This operation, the most successful conducted by units of the 9th
Infantry Division since their arrival in the Delta, was a prime example of the critical role played by tactical airpower in close air support. Not only was air responsible for the initiation of the operation, but air was instrumental in obtaining a favorable kill ratio of more than 40 to one. The ground forces' opinion about airpower is well summed up in a statement by Maj. Richard O. Brunkow, S-3, 3-39th. "I'm sold on them and wouldn't go anywhere without them."
CHAPTER VI
ASSESSMENT OF EFFORT

Enemy Activity

The enemy pattern of activity in the Delta has remained homogeneous throughout all sections. His actions during the past six months consisted of attacks on isolated outposts, terrorism, sabotage, and general harassment in areas not under his control. Revolutionary Development Teams and lines of communication were the principal targets.

Enemy strength in the first half of 1967 dropped from 19 to 13 combat-effective maneuver battalions. The main and local force battalions each had an overall average strength of about 50 men less than in January 1967. The enemy retained the capability of attacking in up to regimental strength in Chuong Thien and Dinh Tuong Provinces and in reinforced battalion strength anywhere in the CTZ. Losses proved difficult to replace despite a recruiting average of 1,250 men per month since January 1967. Current trends indicated that main and local forces would continue to decline and the nature of the war would remain of the guerrilla/underground type with standoff attacks, terror, and sabotage.

In the assessment of effort in the Delta, the success of operations hinged on the problem of mobility. The number of friendly units in the offensive role almost exactly matched those of the enemy. This apparent equality of force, however, did not consider the sizable strength of enemy irregulars. This total force became increasingly significant when balanced
against the character of operations in the area. Additionally, the U.S. forces did not hold their decided advantage in firepower unless gained through mobility.

Pacification and security remained high on the list of accomplishments desired in the Delta. The VC proved comparatively successful in controlling the populace and resources in the IV CTZ and these successes had to be overcome. Although RVNAF had 19 battalions committed to this role, they did not experience rapid success. Mobility was considered the central issue in the pacification/security efforts. The final assessment of effort indicated that forces are needed in the Delta for both roles, strike and pacification, and these forces must be mobile.
FOOTNOTES

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3. (C) Msg, COMUSMACV to State Dept, 27 Jun 67.
4. (C) Intelligence Estimate of the Situation-IV CTZ.

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2. Ibid.
3. (U) Release, Hq MACV, MACOI, Jan 65.
6. (C) History, IV DASC, Jul - Dec 65, Doc. 2.
7. (C) History, IV DASC, Jan - Jun 66, 6 Aug 66, Doc. 2.
8. (C) History, IV DASC, Jul - Dec 66, 28 Jan 67, Doc. 2.
9. (C) History, IV DASC, Jan - Jun 67, Doc. 2.
10. (S) Summary of Recommendation for Presidential Unit Citation by AFAT-7, 8 Sep 67, Doc. 3.
11. (C) History, IV ASOC, Jan - Jun 65; History, IV DASC, Jul 65 - Jun 67, Doc. 2.
12. (C) USMACV Perintrep, Figure A-10, VC/NVA KIA by CTZ (Aug 66-Jul 67). Doc. 4.
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1. (S) Hist Rpt, Special Aerial Spray Flight, 1961 - 1965, by Capt George T. Adams (Filed: 12th ACS (DEF), Bien Hoa AB).
2. (SNF) Extract, WAIS, 7AF, 4 Feb 66, Doc. 8.
3. (S) Current Target Folders (Filed: 12th ACS (DEF)).

CHAPTER IV

1. (C) Interview, Lt Col Robert L. Byers, IV CTS, Tactical ALO, 9 Sep 67, Doc. 9.
4. (U) Interview, Maj Ralph W. Scholwalter, Cdr, Det 4, 5th ACS, 8 Sep 67, Doc. 10.
5. (C) ALO/FAC Rpt, 22 TASS to 7AF, 31 May 67, Doc. 11.
7. (C) History, IV DASC, Jan - Jun 67, Doc. 12.
UNCLASSIFIED

9. (U) Interview, Maj James E. Rose, Jr., Cdr, Det 1, 504th TASSG, Theater Indoctrination School (SEA), 8 Sep 67, Doc. 13.

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1. (SNF) OPLAN, 7AF, Nr 443-67, Doc. 14.
2. (S) Monthly Evaluation, MACJ341, Jan 67, Doc. 15.
3. (C) History, IV DASC, Jan - Jun 67, Doc. 2.
7. (C) Significant Operations Rpt, 2d Bde, 9th Inf Div, May 67, Doc. 18.
8. (S) Interview, Lt Col E. W. Chamberlain, Cdr, 3/60th Inf, 9th Inf Div, 7 Jun 67, Doc. 19.
10. Ibid.
11. Ibid.
15. (S) Monthly Evaluation Rpt, Pg C-2, MACV, Jun 67, Doc. 23.
18. (S) Operations Order, 9th Inf Div, ENTERPRISE, Nr 27-67, Doc. 25.

UNCLASSIFIED

20. (C) Interview, Capt Edmund H. Crandall, FAC, 3d Bde, 9th Inf Div, 9 May 67, Doc. 27.

21. (C) After Action Rpt, Ho 3d Bde, 9th Inf Div, Battle of Doi Ma Creek, 21 Apr 67, Doc. 28.

22. (C) 19th Military History Detachment Rpt, Tab-D, Fire Support, Apr 67, Doc. 29.

23. (C) Interview, Maj Richard O. Brunkow, S-3, 3/39th, 9th Inf Div, 10 May 67, Doc. 30.

CHAPTER VI

1. (S) Strategic Study, Hq, MACV, 4 pgs, 18 Sep 67, Doc. 31.
## GLOSSARY

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AA</td>
<td>Antiaircraft</td>
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<tr>
<td>ACS</td>
<td>Air Commando Squadron</td>
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<tr>
<td>ALO</td>
<td>Air Liaison Officer</td>
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<tr>
<td>ARVN</td>
<td>Army of the Republic of Vietnam</td>
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<tr>
<td>ASOC</td>
<td>Air Support Operations Center</td>
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<tr>
<td>ATC</td>
<td>Armored Troop Carrier</td>
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<tr>
<td>BC</td>
<td>Body Count</td>
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<td>CCB</td>
<td>Command Communication Boat</td>
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<tr>
<td>CIDG</td>
<td>Civilian Irregular Defense Group</td>
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<tr>
<td>CTZ</td>
<td>Corps Tactical Zone</td>
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<tr>
<td>DAST</td>
<td>Deployed Air Strike Team</td>
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<tr>
<td>DOW</td>
<td>Died of Wounds</td>
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<td>FAC</td>
<td>Forward Air Controller</td>
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<td>GP</td>
<td>General Purpose</td>
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<td>GVN</td>
<td>Government of Vietnam</td>
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<tr>
<td>KBA</td>
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<td>KIA</td>
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<td>Mobile Riverine Base</td>
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<td>Mobile Riverine Force</td>
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<td>NVA</td>
<td>North Vietnamese</td>
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<td>POW</td>
<td>Prisoner of War</td>
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<td>Psywar</td>
<td>Psychological Warfare</td>
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<td>RF/PF</td>
<td>Regional Force/Popular Force</td>
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<tr>
<td>SLAR</td>
<td>Side Looking Airborne Radar</td>
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<tr>
<td>USA</td>
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<tr>
<td>USSF</td>
<td>United States Special Forces</td>
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<td>VC</td>
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<td>VNAF</td>
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