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3 Jun 1980  
Aly

## VIETNAM STUDIES

304 pages

# AIRMOBILITY

1961-1971



DEPARTMENT OF THE ARMY

*VIETNAM STUDIES*

**AIRMOBILITY**

1961-1971

*by*

*Lieutenant General John J. Tolson*

304  
~~200~~ pages.

*DEPARTMENT OF THE ARMY*

*WASHINGTON, D.C., 1973*

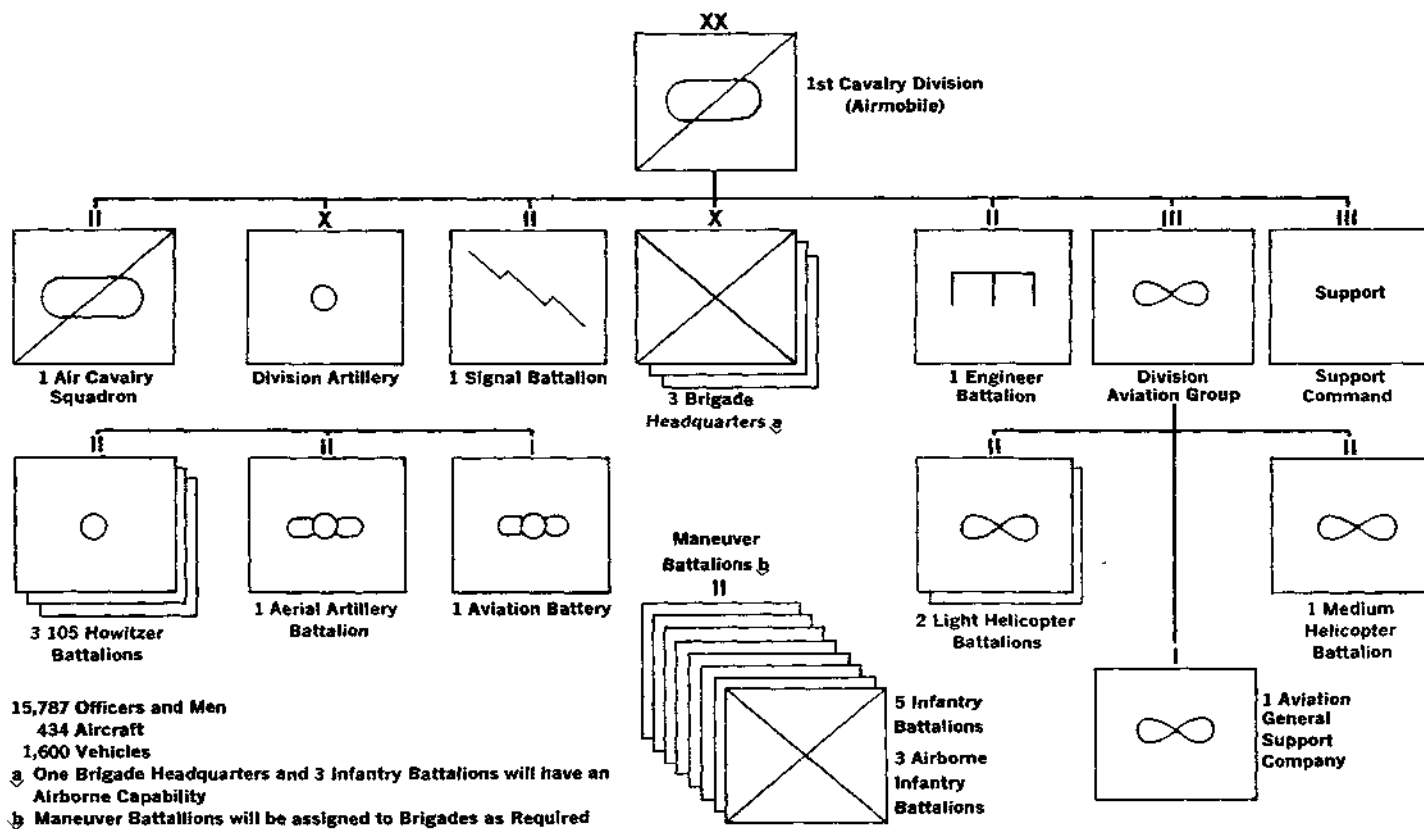
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CHART 1—1ST CAVALRY DIVISION (AIRMOBILE) ORGANIZATION



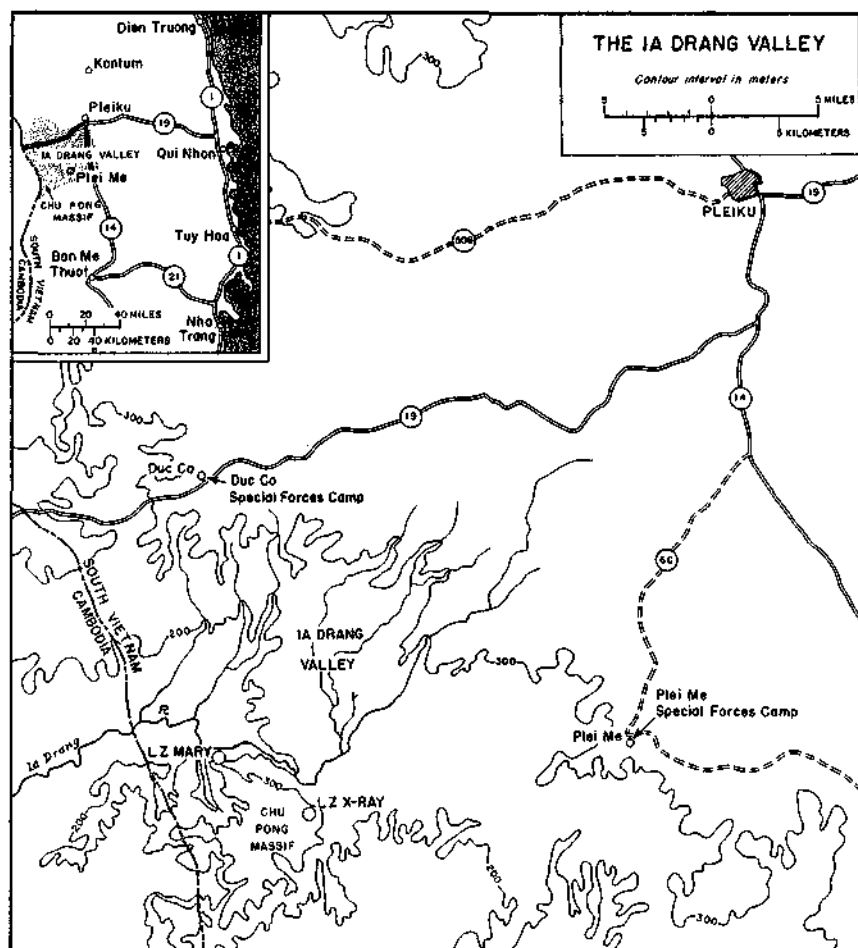
# ADMINISTRATIVE DIVISIONS SOUTH VIETNAM

Da Lat AUTONOMOUS MUNICIPALITY

0 25 50 75 100 MILES

0 25 50 75 100 KILOMETERS



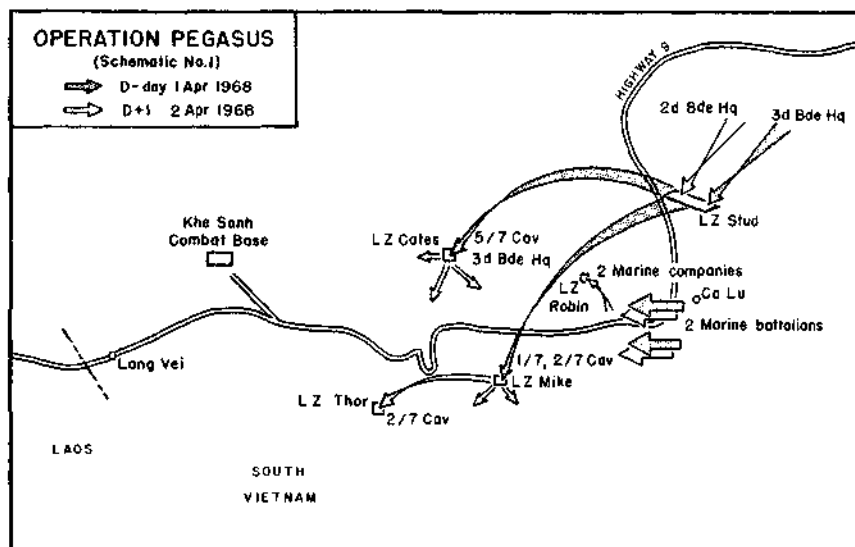


MAP 2

X-RAY (Map 2) out of the possible landing zones as the best potential position for the initial air assault. The cavalry section had confirmed that landing zone X-RAY could take eight to ten UH-1D's at one time. No signs of enemy activity were detected. Two artillery batteries were in position to support the landing.

Preparatory fire began at 1017 hours precisely where required and was timed with the lead elements of the assault company. The aerial artillery came on the heels of the tube artillery fire and worked over the area for 30 seconds expending half their load, then went into a orbit nearby to be on call. The lift battalion gunships took up the fire and were immediately ahead of the troop trans-



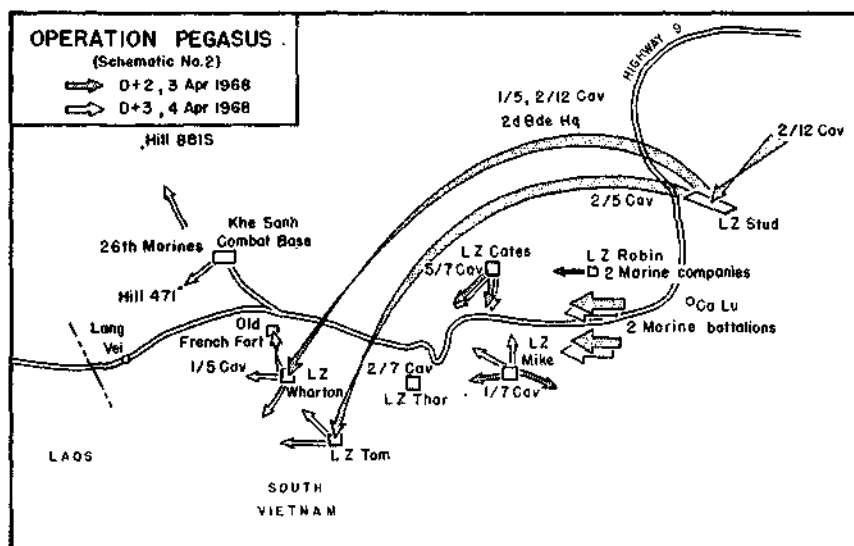


MAP 4

border. Also, there would be a major diversionary attack in the vicinity of the DMZ on D-1. The initiative was ours.

At 0700 on 1 April 1968 the attack phase of Operation PEGASUS commenced as two battalions of the 1st Marine Regiment under Colonel Stanley S. Hughes attacked west from Ca Lu along Highway Nine. (Map 4) The 11th Marine Engineers followed right on their heels. At the same time, the 3d Brigade of the 1st Cavalry under Colonel Hubert (Bill) S. Campbell was airlifted by Chinooks and Hueys into landing zone STUD in preparation for an air assault into two objective areas further west. Weather delayed the attack until 1300, when the 1st Battalion, 7th Cavalry, commanded by Lieutenant Colonel Joseph E. Wasiak, air assaulted into landing zone MIKE located on prominent ground south of Highway Nine and well forward of the Marine attack. Lieutenant Colonel Roscoe Robinson, Jr., led the 2nd Battalion, 7th Cavalry into the same landing zone to expand and develop the position. The 5th Battalion, 7th Cavalry, commanded by Lieutenant Colonel James B. Vaught, air assaulted into an area north of Highway Nine approximately opposite landing zone MIKE.

These two objectives had been chosen after careful reconnaissance by the Cavalry Squadron indicated no major enemy defenses. Though almost halfway to Khe Sanh, they were within range of

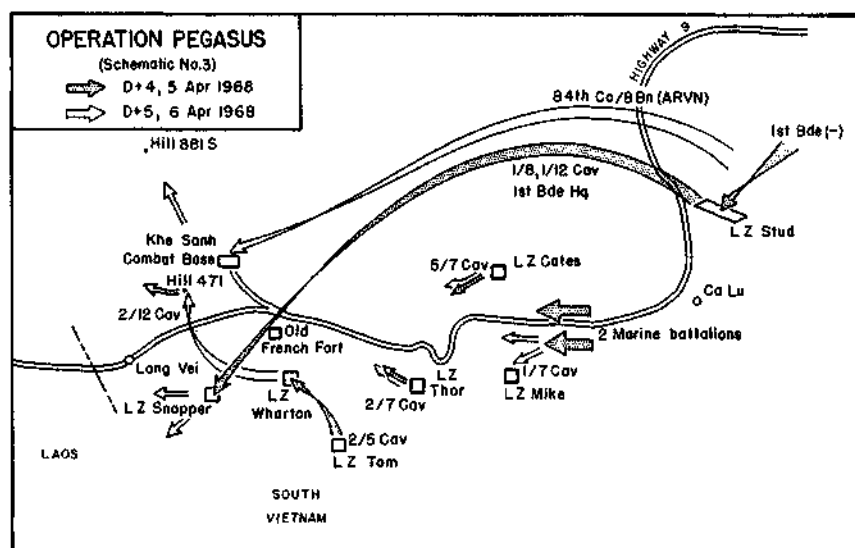


MAP 5

(Map 5) They received enemy artillery during the assaults, but secured their objectives without serious difficulty. We now had six air cavalry battalions and supporting artillery deep in enemy territory.

I was anxious to get the 26th Marine Regiment out of their static defense position as soon as feasible; so, on D+3, I ordered Colonel Lownds to make a battalion-size attack south from Khe Sanh to seize Hill 471, a strategic piece of terrain affording a commanding view of the base. Following a heavy artillery preparation, the Marines successfully seized the hill killing thirty of the enemy. On the same day, the 2d Brigade of the Cavalry Division assaulted one battalion into an old French fort south of Khe Sanh. Initial contact resulted in four enemy killed. The remaining uncommitted brigade was moved into marshalling areas.

On D+4 (5 April), the 2d Brigade continued its attack on the old French fort meeting heavy enemy resistance. Enemy troops attacked the Marines on Hill 471 but were gallantly repulsed with 122 of the enemy left dead on the battlefield. The tempo of this battle was one of the heaviest during the operation. The 3d Airborne Task Force, Army of the Republic of Vietnam, was alerted to prepare to airlift one rifle company from Quang Tri to effect linkup with the 37th Army of the Republic of Vietnam Ranger Battalion located at Khe Sanh. Units of the 1st Brigade under



MAP 6

Colonel Stannard entered the operation with the 1st Battalion, 8th Cavalry, commanded by Lieutenant Colonel Christian F. Dubia, air assaulting into landing zone SNAPPER, due south of Khe Sanh and overlooking Highway Nine. The circle began to close around the enemy. (Map 6)

On D+5 (6 April), the 1st Marine Regiment continued its operations on the high ground north and south of Highway Nine, moving to the west toward Khe Sanh. The heaviest contact on that date occurred in the 3d Brigade's area of operation as the 2d Battalion, 7th Cavalry under the inspired leadership of Colonel Robinson continued its drive west on Highway Nine. Enemy blocking along the highway offered stubborn resistance. In a day-long battle which ended when the enemy summarily abandoned his position and fled, the battalion had accounted for 83 enemy killed, one prisoner of war captured, and 121 individual and ten crew-served weapons captured. The troops of the 1st Cavalry Division were airlifted to Hill 471 relieving the Marines at this position. This was the first relief of the defenders of Khe Sanh. Two companies of troopers remained on the hill while two other companies initiated an attack to the south toward the Khe Sanh Hamlet.

We had plotted heavy enemy artillery that had been dug deeply into the rocks of the Co Roc Mountains in Laos just west of Lang Vei. As we neared Khe Sanh I was concerned that these 152-mm

able. There was an astonishing improvement in the combat effectiveness of the 9th Infantry Division when it was supported by airmobile and air cavalry assets. The last paragraph of the analysis bears repeating:

It is possible that not all divisions in Vietnam would generate statistical results similar to those of the 9th Division. The inundated flatlands of the Mekong Delta have a double impact on the spread of effectiveness between foot and airmobile operations. Marshy swamps and flooded rice paddies severely penalize ground troops. Units frequently are able to move no more than 500 meters per hour or less. On the other hand, the broad stretches of virtually flat Delta country provide an ideal environment for the unrestricted employment of Army aviation. Presumably such would not be the case in other areas of Vietnam. Statistics for other divisions might be expected to show improvements in combat effectiveness with air assets on the order of two or three to one, depending upon the circumstances. From the standpoint of II Field Force Vietnam, until analyses are made for the other divisions, it would appear worthwhile to allocate an additional assault helicopter company and an air cavalry troop to the 9th Infantry Division.

### *The A Shau Valley*

On 10 April 1968 at landing zone STUD, General Rosson, the commander of Provisional Corps Vietnam, told me to plan immediate movement of the 1st Cavalry into the A Shau Valley. Though tentative plans had been made for operations against this enemy redoubt sometime before, I had no warning that the 1st Cavalry Division would be committed so quickly on the heels of our operations at Khe Sanh. The following day, we began extracting troops from Operation PEGASUS back into our base areas at Quang Tri City and Camp Evans.

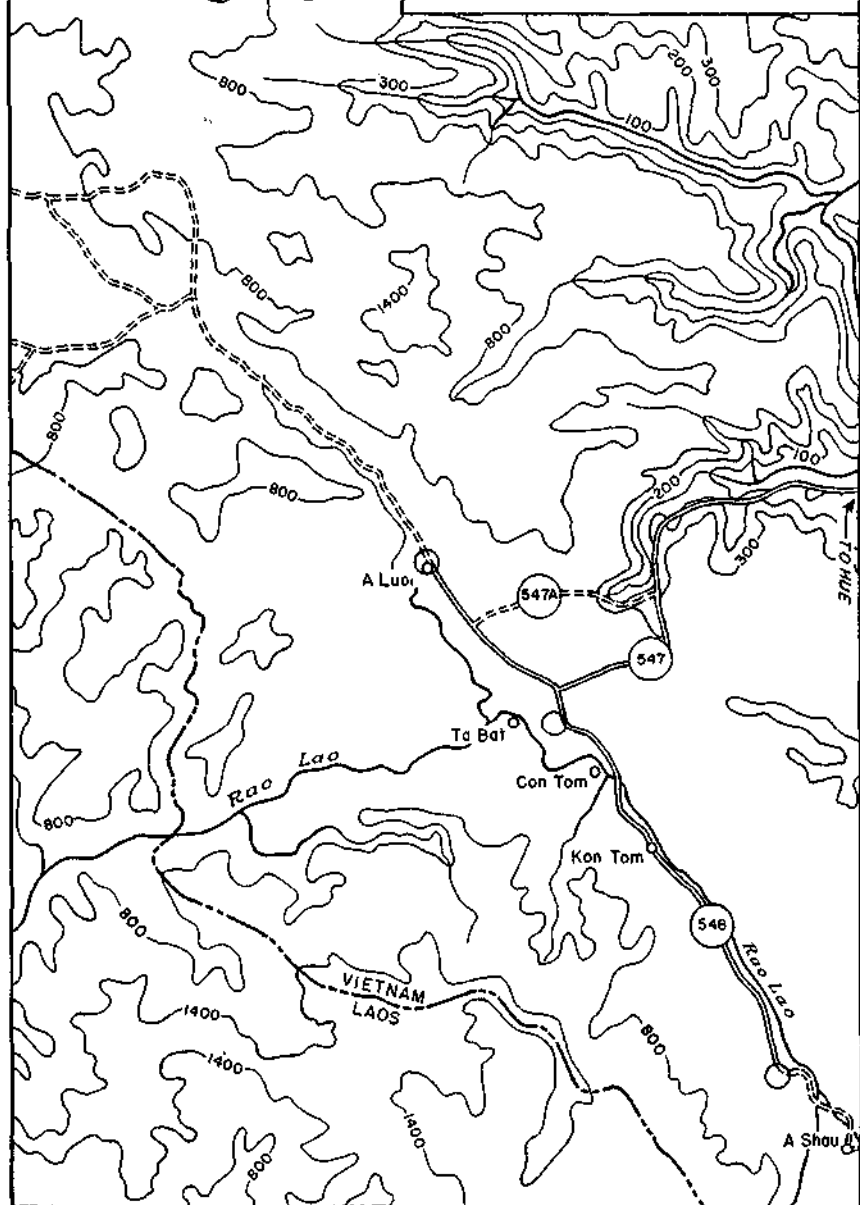
The A Shau Valley lies between two high mountain ranges on the western edge of the Republic of Vietnam. On both sides of the valley the mountains climb to over 1,000 meters with the angle of slope varying from 20 to 45 degrees. The Laotian border is less than ten kilometers away. Three abandoned airfields were spread along the valley floor which runs northwest to southeast. The North Vietnamese forces had been in control of the valley since March 1966 when they overran the Special Forces camp in the southern end. Since that time they had built a major base for the infiltration of personnel and supplies from North Vietnam through Laos along Route 547 into Thua Thien Province and the northern I Corps Tactical Zone. (*Map 7*)

Final preparations for Operation DELAWARE-LAM SON 216 were conducted during the last days of Operation PEGASUS. The 1st

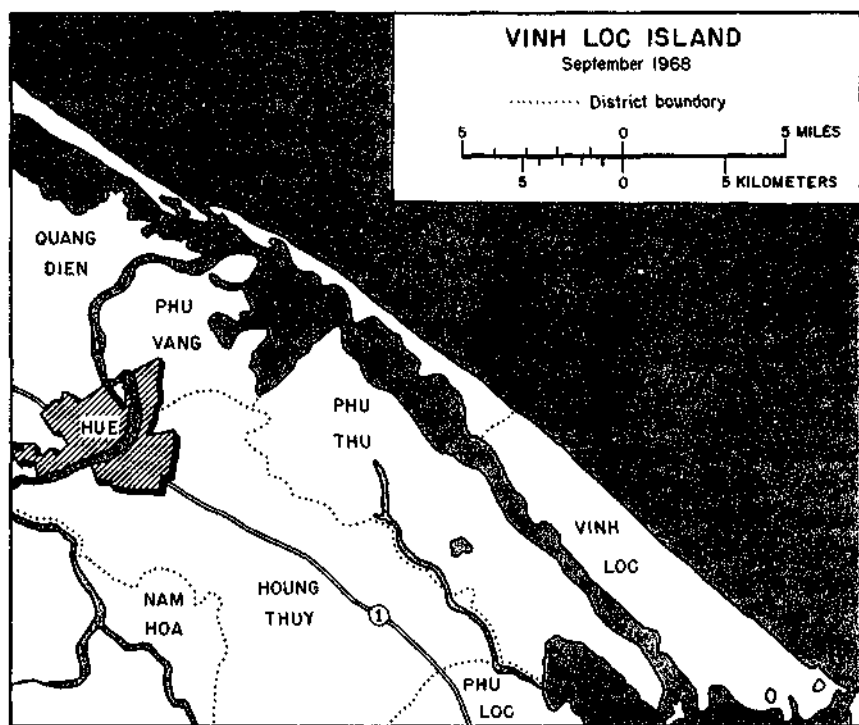
# A SHAU VALLEY

○ Abandoned airstrip  
Contour interval in meters

3 0 3 MILES  
3 0 3 KILOMETERS



MAP 7



MAP 8

### *An Example of Cordon Operations*

Airmobile forces often can be best employed with other forces to achieve unique capabilities when a special opportunity presents itself. I have previously described airmobile operations with armor in Binh Dinh Province. The following operation, in which the 101st Airborne Division participated in a combined air-sea-land maneuver, demonstrates again the imaginative use of all Free World capabilities. Helicopters, air-cushion vehicles, swift boats, and armored personnel vehicles were effectively employed in an integrated force.<sup>3</sup> But Operation VINH LOC was not a mere demon-

<sup>3</sup> The air-cushion vehicles used their unique capability of operating in swampy or very shallow water to patrol otherwise inaccessible areas. Most of these machines saw duty in the Mekong Delta region where they had done a magnificent job. I have not treated them extensively in this study, since they are not really an extension of airmobile operations so much as riverine operations. During the 1950's, the Army experimented with a variety of so-called "ground effects machines." They were more noted for their instability and huge "signature," than their practicality.

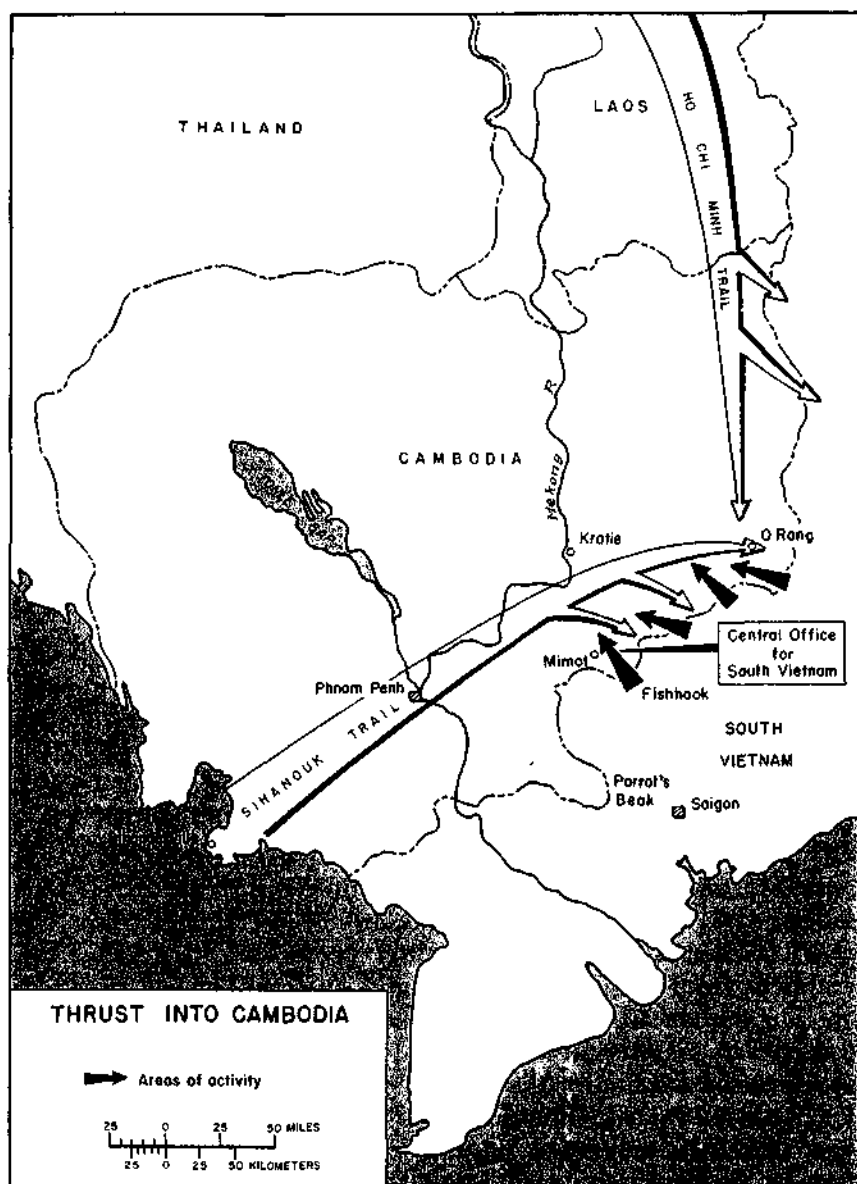
that we lost none of the flexibility that is necessary in shuttling aviation assets about the battlefield to meet tactical needs.

### *The Cavalry's Cambodian Campaign*

Probably no single operation better demonstrated the airmobile concept than the 1st Cavalry Division's Cambodian campaign. Complete documentation of this important battle, to include the major Army of the Republic of Vietnam operation in the "Parrot's Beak," is an appropriate subject for a separate monograph. Here we will only be able to highlight this operation to bring out those salient points of the airmobility concept not touched upon in earlier chapters. This was the first example of a large-scale U. S. airmobile force in operation outside the borders of South Vietnam. It was the first time our commanders were allowed to cross the frustratingly close borders into the heart of the enemy sanctuary.

Beginning in the fall of 1968 the 1st Cavalry Division had straddled the enemy trails leading southward from the Cambodian border toward Saigon. The Viet Cong and North Vietnamese Army made desperate attempts to reestablish their logistical net in this area, with an obvious aim of repeating the attacks of *Tet* 1968. Beginning early in 1969 the 1st Cavalry fought a series of heavy skirmishes along these trails as three separate North Vietnamese Army divisions attempted to gain positions closer to the capital. The enemy effort was not successful. The 1st Cavalry's interdiction of the planned enemy operations for *Tet* 1969 is an untold story that merits much further study; although the enemy force was equally strong as it had been a year earlier during the infamous *Tet* attacks, the North Vietnamese Army plans were frustrated by the wide-ranging air cavalry surveillance and the superior mobility of the 1st Cavalry.

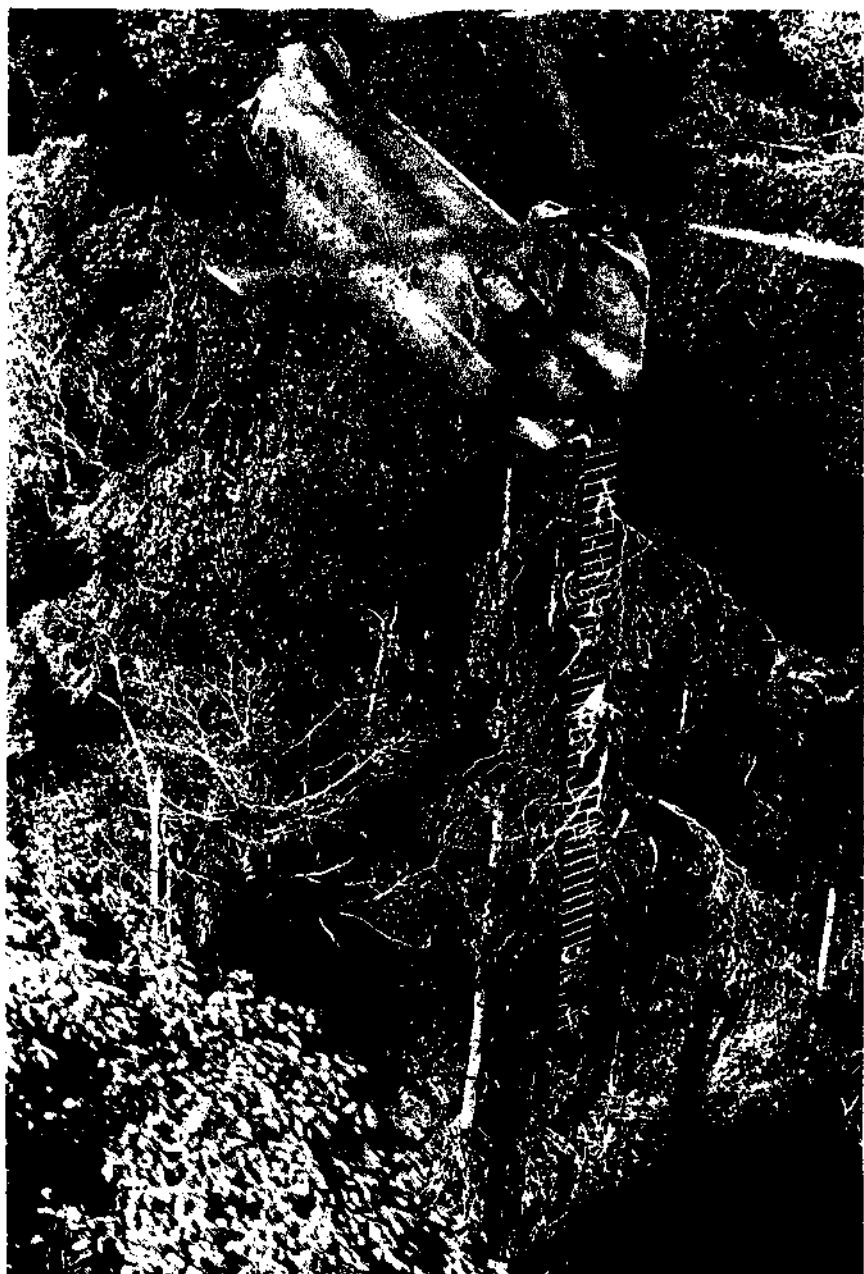
The enemy attempt during the early months of 1970 was weaker than the previous year. Nevertheless, several battalions did try to operate in force along the trail systems. At this time the 1st Cavalry area of operation covered 14,000 square kilometers. Airmobile troops kept a careful eye on five major north-to-south trails stretching from Tay Ninh Province across Binh Long and into the western two-thirds of Phuoc Long. There were several instances in which the cavalrymen uncovered base camps and fair-sized caches; however, it was evident that there was more to be found. Logistical trails of this size had to be supplied by warehouse type cache sites far more extensive than anything yet discovered.



MAP 9

Although very little intelligence information was available concerning enemy operations in Cambodia, it was quite clear that a major enemy logistics effort was going on there. The staff of the 1st Cavalry felt that with the trails cut off the Division was causing





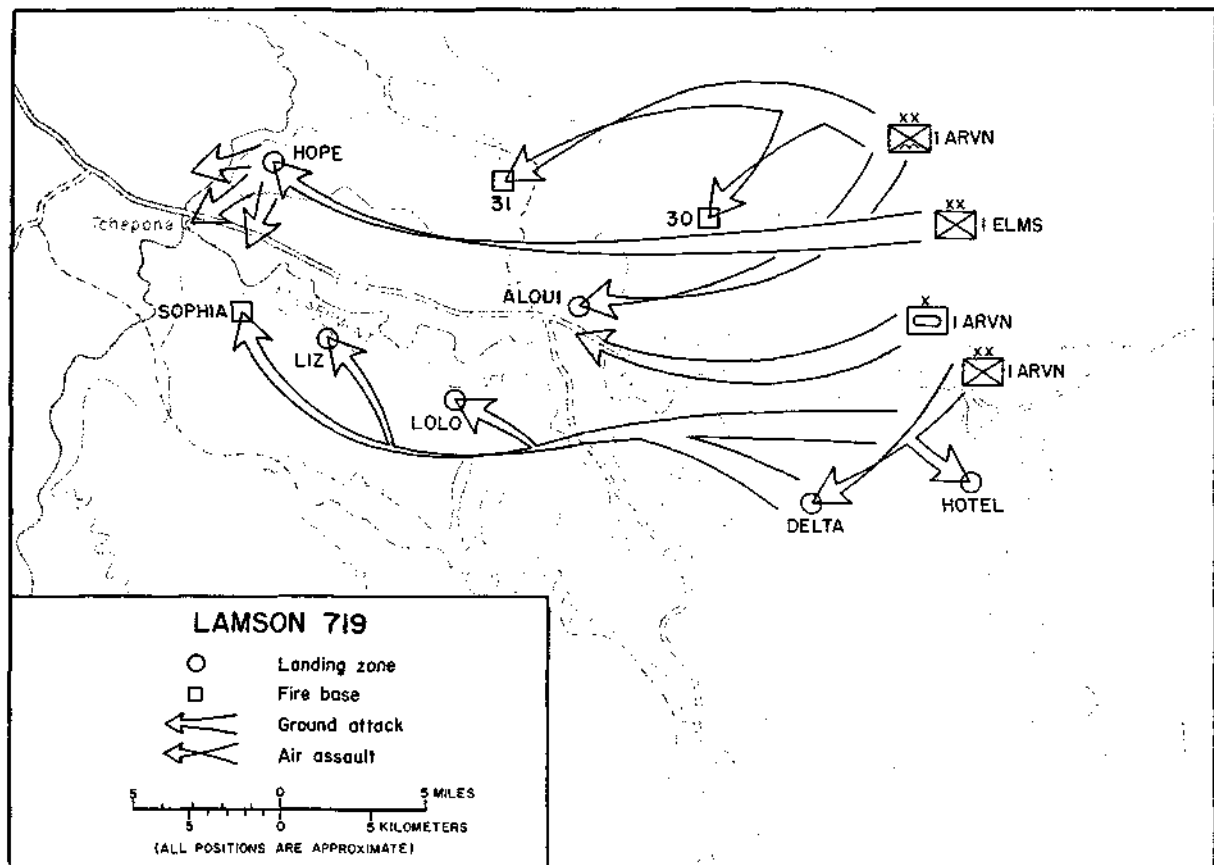
TROOPS DESCENDING AN AERIAL LADDER INTO TRIPLE CANOPIED JUNGLE

tactical air, threw back the first and second waves of the enemy attack; but, on the third wave, three Soviet-made T-34 tanks made it to the top of the Base and forced the withdrawal of the defenders. This was to be the first and last success of enemy tanks during LAMSON 719 and the only friendly fire base to be completely overrun in Laos.

Three Army of the Republic of Vietnam armored cavalry squadrons and four infantry battalions had not proved sufficient to provide ground security for the 20 kilometers of road in Laos. Consequently, General Lam had reassessed his plan of attack after the disappointing results of friendly armor in keeping open Highway Nine. Obviously he could no longer plan to use this as a secure main supply route. Capitalizing on his airmobile support, he decided to attack the main objective of Tchepone with a series of rapid air assaults along the high escarpment to the south of the river using the 1st Infantry Division.

From 3 to 6 March, the 1st Army of the Republic of Vietnam Division had accomplished a series of airmobile assaults to the west along the escarpment overlooking Route Nine. The first Army of the Republic of Vietnam units air assaulted successfully into landing zones LOLO, LIZ, and Fire Base SOPHIA WEST. After a very effective preparation of the area by B-52's, on 6 March two infantry battalions were lifted by 120 Hueys for 65 kilometers to air assault into landing zone HOPE north of Tchepone. *This large combat assault was carried out in what was considered to be the most hostile air defense environment ever encountered in the entire war, yet only one Huey was hit and it made a safe landing in the objective area.* The Army of the Republic of Vietnam units attacked south and west controlling the town. (Map 12) Tchepone was the objective of the allied drive to the west and was the natural communications hub of the enemy's logistics system in Laos. The enemy immediately increased his pressure in the Tchepone area and attacked the Army of the Republic of Vietnam fire bases on the escarpment viciously.

The I Corps Commander decided that most of the objectives of LAMSON 719 had been accomplished and ordered a timed withdrawal from Laos before weather worsened. During the extraction to the east from the Tchepone area, new enemy forces brought heavy pressure to bear on the Army of the Republic of Vietnam all along Route Nine. Extremely heavy antiaircraft fires were encountered along routes to or from the Army of the Republic of Vietnam fire bases. Enemy pressure was also felt at the primary U. S. Forward Support Area at Khe Sanh which received heavy



MAP 12



### UH-1A IROQUOIS

Nickname: Huey

Mission: transport of personnel, equipment, supplies, training aircraft

First delivery: 1959

Rotor diameter: 43'9"

Length: 52'10"

Basic weight: 4,020 lbs.

Payload: 2,175 lbs.

External cargo: 3,000 lbs.

Crew: 2                      Passengers: 6

Cruise airspeed: 80k

Maximum airspeed: 120k

54 currently in Army inventory



### UH-1B IROQUOIS

Nickname: Huey

Mission: transport of personnel, equipment, supplies, and to serve as an aerial weapons platform

First delivery: 1961.

Rotor diameter: 44'

Length: 52'11"

Basic weight: 4,600 lbs.

Payload: 2,704 lbs.

External cargo: 4,000 lbs.

Crew: 2-4                      Passengers: 8

Cruise airspeed: 90k                      Maximum airspeed: 120k

Armament: 40-mm grenade launcher, 7.62-mm machine gun, 2.75" rockets, M22 guided missile

456 currently in Army inventory



### UH-1D IROQUOIS

Nickname: Huey

Mission: transportation of personnel, equipment, and supplies, medical evacuation, delivery of protective fire by attachment of appropriate weapons, and instrument training

First delivery: 1963.

External cargo: 4,000 lbs.

Rotor diameter: 48'3"

Crew: 2-4

Length: 57'1"

Passengers: 11

Basic weight: 4,900 lbs.

Cruise airspeed: 100k

Payload: 3,116 lbs.

Maximum airspeed: 120k

Armament: 7.62-mm door-mounted machine guns

1,010 currently in Army inventory

### UH-1H IROQUOIS

Same as UH-1D, but with more powerful engine

2,399 currently in Army inventory



### UH-1C IROQUOIS

Nickname: Huey

Mission: transporting personnel, special teams or crews, equipment, and supplies; medical evacuation; ambulance service; reconnaissance and security; point target and area fire by attachment of appropriate weapons; and instrument trainer

First delivery: 1965

Rotor diameter: 44'

Length: 53'

Basic weight: 4,830 lbs.

Payload: 4,500 lbs.

External cargo: 4,000 lbs.

Crew: 2-4

Passengers: 6

Cruise airspeed: 100k

Maximum airspeed: 140k

Armament: 40-mm grenade launcher, 2.75" rockets, minigun

290 currently in Army inventory

# Glossary

ACR	Air Cavalry Regiment
AIR ASSAULT II	The major and final Army test of the 11th Air Assault division in the Carolinas.
AKA	Attack Cargo Ship
AO	Area of Operations
ARA	Aerial Rocket Artillery
ARVN	Army of the Republic of Vietnam
ASOC	Air Support Operations Center
ATTLEBORO	A battle focused around the Special Forces camp at Sui Da, 19 October–24 November 1966.
Bde	Brigade
BLACKHAWK	A task force made up of the 7th Battalion, 1st Cavalry in support of the 44th Special Tactical Zone.
Bn	Battalion
BYRD	A battalion size microcosm of the 1st Cavalry Division's operations in Binh Dinh province.
Cav	Cavalry
CC	Command and Control
CHOPPER	The first airmobile combat action in Vietnam, commencing in December 1961.
Co	Company
COUGAR	A task force made up of the 214th Aviation Battalion in support of the 9th and 7th Army of the Republic of Vietnam Divisions.
CRAZY HORSE	An operation in defense of the Vinh Thanh Civilian Irregular Defense Group Camp in Binh Dinh province.
CRID	Capitol Republic of Korea Infantry Division



CRIMP	A 173d Airborne drive through the Ho Bo Woods region of Binh Duong Province in an attempt to destroy the politico-military headquarters of the Viet Cong Military Region 4.
CTZ	Corps Tactical Zone
DAN CHI 157	An engagement with the Tay Do Battalion in Can Tho Province in the Delta during which the 13th Aviation Battalion won the Presidential Unit Citation.
DASC	Direct Air Support Center
DAVY CROCKETT	A 3d Brigade operation covering the northeast portion of Binh Dinh Province, 4-16 May 1966.
DELAWARE-LAM SON 216	The 1968 operation in the A Chau Valley.
DMZ	Demilitarized Zone
EAGLE THRUST	Deployment of the balance of the 101st Air Cavalry Division, 8-18 December 1967; the largest and longest military airlift ever attempted into a combat zone.
FAC	Forward Air Controllers
G-1	Division Assistant Chief of Staff for Personnel
G-2	Division Assistant Chief of Staff for Military Intelligence
G-3	Division Assistant Chief of Staff for Operations
G-4	Division Assistant Chief of Staff for Logistics
G-5	Division Assistant Chief of Staff for Civil Affairs
GOLD FIRE I	A Strike Command sponsored joint test and evaluation exercise conducted in Missouri in 1964.
GUARDIAN	A task force made up of the 13th Aviation Battalion in support of the 21st Army of the Republic of Vietnam Division.

HAWTHORNE HIGHLAND	An operation in Kontum Province. Movement of the 1st Brigade, 101st Air- borne Division to secure An Khe, 22 August-2 October 1965.
Hq	Headquarters
IRVING	A 1st Cavalry Division operation in Binh Dinh province in 1966.
JEB STUART	1st Cavalry operation in I Corps, includ- ing the move north, the <i>Tet</i> offensive, securing base areas, and preparation for PEGASUS.
JP-4 JUNCTION CITY	Kerosene-based fuel for turbine engines A major operation north of Tay Ninh City in 1966.
JUNCTION CITY ALTERNATE	An operation begun on 22 February 1967 with the only parachute assault in Vietnam.
KBA	Killed By Action
KIA	Killed In Action
LAM SON 719	A combined operation in Laos from 8 February to 6 April 1971.
LCM	Landing Craft, Mechanized
LEJEUNE	A 1st Cavalry Division operation to re- lieve the Marines in Quang Ngai Prov- ince, 7-22 April 1967.
LIBERTY CANYON	The move of the 1st Cavalry Division from I Corps to III Corps in the fall of 1968.
LPD	Amphibious Transport Dock
LSD	Landing Ship, Dock
LST	Landing Ship, Tank
LZ	Landing Zone
MACV	Military Assistance Command, Vietnam
MARAUDER	An operation conducted in the Plain of Reeds of the Delta by the 173d Air- borne Brigade, 1-8 January 1966.
MARKET TIME	U.S. Navy operations offshore of Vietnam under Task Force 115.

## AIRMOBILITY

The first phase of the initial major operation of the 1st Cavalry in Binh Dinh Province, 1966.

An operation to find and destroy the enemy in Pleiku and Kontum Provinces, conducted during the first half of January 1966 by the 1st Brigade of the 1st Cavalry Division.

An operation in Phu Yen Province.

New Equipment Training

A 101st Air Cavalry Division operation, a large rice-denial effort, in the plains south of Hue.

National Police Field Force

North Vietnam Army

Operational Control

Office of the Secretary of Defense

An operation in Pleiku Province.

An operation near the Cambodian border in Pleiku Province.

The operation to relieve Khe Sanh, 1-15 April 1968.

A 1st Cavalry Division year-long operation in Binh Dinh Province in 1967, terminating 21 January 1968.

Reorganization Objectives Army Divisions

Republic of Vietnam

Republic of Vietnam Armed Forces

Officer in charge of the operations and training section of a brigade or smaller unit.

Search and Rescue

Special Air Warfare

Standing Operating Procedure

Tactical Air Command

Tactical Area of Responsibility

THAYER I

THAYER II

TOAN THANG 43, 45,  
and 46

TOC

TOW

TRUONG CONG DINH

VC

VINH LOC

VTOL

WALLOWA

WHITE WING

THAYER I	A 1st Cavalry Division operation in Binh Dinh Province, 15-30 September 1966.
THAYER II	A 1st Cavalry Division operation in Binh Dinh Province in 1966.
TOAN THANG 43, 45, and 46	Operation in the "Fishhook" of Cambodia
TOC	Tactical Operations Center
TOW	An anti-tank wire-guided missile
TRUONG CONG DINH	A 9th Infantry Division operation in Dinh Tuong and Kien Tuong Provinces in the IV Corps.
VC	Viet Cong
VINH LOC	A combined operation of elements of the 101st Airborne Division, the U.S. Navy, and Republic of Vietnam forces conducted in Thua Thien Province, 10-20 September 1968.
VTOL	Vertical Take-off and Landing
WALLOWA	A 1st Cavalry Division operation between Chu Lai and Da Nang in I Corps beginning 4 October 1967.
WHITE WING	The second, third, and fourth phases of the initial major operation of the 1st Cavalry in Binh Dinh Province, concluded 17 February 1966.