"AVIATION COMBAT LOGISTICS MANAGEMENT
LAM SON 719
January, February, March 1971"

Quang Tri, Republic of Vietnam
Military Region #1

By

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For

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PREFACE

This extract of comments made by BG Samuel G. Cockerham, USA (Retired) was selected from the Oral History Series to answer, at least in part, the question that has shadowed me through three decades of aircraft repair assignments: "How many aircraft will be mission-capable tomorrow?" There is, of course, no general answer to this very specific question.

As you read this article, it will become apparent that without a synchronized plan for logistics support, under one leader, efficient execution of the current operations plan may not be possible. During Lam Son 719, BG Cockerham was responsible for all aviation support in Vietnam, except for the 1st Air Cavalry Division. This allowed the XXIVth Corps commander the flexibility to concentrate on the Army/Marines of the Republic of Vietnam.

Another reason for offering this extract is to provide a broader logistics picture of the past and future for study.

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Colonel, Aviation

This is the Army Transportation Oral History interview of BG (Ret) Samuel G. Cockerham on 8 July 1985 by CPT Michael E. Mack at BG Cockerham's home in Alexandria, Virginia.

CPT Mack: Sir, could you describe the maintenance and logistics effort required to keep 600+ aircraft in the air during Lam Son 719.

BG Cockerham: Let me begin by providing some background information about Lam Son 719. After the invasion of Cambodia in 1970 a dramatic increase of activity along the Ho Chi Minh Trail alarmed the South Vietnamese and American authorities.

Intelligence reports indicated that the North Vietnamese were planning offensives against Cambodia and several provinces of South Vietnam at the end of the dry season. A preemptive strike was tempting and the risk worth taking. The South Vietnamese and Americans had turned the war around and were on the offensive. In December 1970 the U.S. proposed an offensive which was quickly approved by the South Vietnamese. Joint planning for Lam Son 719 began in January 1971 with barely a month to work out operations plans and to prepare units.

The principal objectives of Lam Son 719 were to interdict and disrupt the flow of enemy troops and supplies into South Vietnam along the Ho Chi Minh Trail in Laos. We hoped to cripple North Vietnam's ability to launch any offensives and simultaneously to buy more time and safety for the continued withdrawal of U.S. troops. No American ground combat troops or advisors were to accompany the Army of the Republic of Vietnam (ARVN) in the attack. The operations plan proposed four phases:

- Phase I ("Dewey Canyon II")--a U.S. operation to reopen the base at Khe Sanh and to clear Route 9 as far as the Laotian border.

- Phase II--an ARVN infantry and armor attack down Route 9 with northern and southern attacks to establish FSB protection on the flanks. Phase II had as its operational area a strip 10 to 20 miles wide (from north to south) that closed in on its objective, Tchepone (a town 40 kilometers west into Laos).

- Phase III-an ARVN search and destroy operation against enemy troops and bases.

- Phase IV--the orderly withdrawal of ARVN troops from Laos.

The operation was to last up to 90 days or until the onset of the rainy season. The 101st Airborne Division (Airmobile) commanded all U.S. Army aviation units in direct support of the Lam Son 719 operation [Figure 1].

I was the U.S. Army, Vietnam (USARV) aviation officer. As the former 34th General Support Group commander and the 1st Aviation Brigade deputy commander, I knew how to get things done to support the greatest test of airmobile operations. One of the first things I did was reposition the 1st Transportation Battalion (Aircraft Maintenance Depot, Seaborne) to Da Nang to provide a backup maintenance capability. We received authorization on a scheduled basis for a special-mission C-130 aircraft. We used it to transfer aircraft parts from the depots at Qui Nhon and Tan Son Nhut to support the

operation. Sometimes there were direct flights from the United States to Da Nang. In essence, we had a closed-loop operation that reached from Qui Nhon to the Aviation Systems Command (AVSCOM) in St. Louis, Missouri. With inter- and intra-theater air transportation at my disposal, we were resourced to provide maximum support.

We entered Phase II as shown at Figure 2, which required unit-level cannibalization to meet each day's requirements. Cannibalization focused on aircraft in maintenance that lacked only one or two items (of the kind that could be transferred quickly from one aircraft to another) to be flyable. We also merged flyable aircraft from many units into the task organization. After reviewing the status of each aircraft by tail number, I determined which units would comprise the core and which aircraft would be moved from one unit to another (I moved aircraft from Company A to Company B, etc., to build a viable unit). My job was twofold:

(1) maintenance and supply
(2) training, personnel, aircrews

Our flying hour program produced a staggering number of periodic inspections (PEs) every month. We allowed four days to get each aircraft in and out and flew each aircraft an average of 75 hours per month. Combat damage and loss statistics fluctuated constantly. [Figure 3 details number of damaged aircraft repaired through unscheduled maintenance as well as number of destroyed aircraft.] Lam Son 719 was carried out in a mid-intensity combat environment--by definition, a 50-caliber or larger threat. The North Vietnamese Army (NVA) was using 12.7mm and 14.5mm heavy machine guns to fire at us. My records show that 18 of the aircraft were never hit, 80% were combat-damaged and repaired at unit level, 15% were destroyed, and 4.9% were evacuated to depot.[1] During the period 5 February to 12 March (35 days) we flew 145,842 sorties in 57,796 flight hours, or a daily average of 4,167 sorties, 1,640 flight hours.

CPT Mack: I have another question on maintenance operations. When the combat aviation battalions deployed to move the ARVN in Laos, did you deploy your maintenance people as contact teams? I'm not talking just about the engine types but about the general mechanics. Did you deploy them as a team with the unit, or were they in a status where they were called up when needed to go out and repair an aircraft?

BG Cockerham: That's a good question. The commander is confronted with solving the little nagging problems of engines, fuel, and maintenance that keep aircraft on the ground. In Lam Son 719 the principal logistics management headquarters was at Quang Tri Base, the command post for the XXIVth Corps, where I was located with the 1st Aviation Brigade and the 34th General Support Group Tactical Command Post-North. The 101st operated from its field at Hue Phu Bai and was supported by the 5th Transportation Battalion. I concentrated my effort at Khe Sanh because that was my staging point. Besides elements of each aviation company operating in and out of the staging point, we also had a

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[1] Three hundred ninety-four aircraft had bullet strikes: 89% had taken single hits, 7% had taken two hits, 1.5% had taken three hits, 1% had taken four hits, 1.5% had five or more hits.

forward area rearm/refuel point (FARP) with CH-47 support to replenish it. The forward elements were responsible for the departure, return, and recovery of aircraft on a quick-reaction basis. I could form a team and have it functioning in a lot less time than the time required to get from Saigon to Khe Sanh.

CPT Mack: You talked about the maintenance management pipeline. What kind of problems did you experience with this pipeline?

BG Cockerham: When I commanded the 34th General Support Group, we had two IBM 360-65s with 400,000 bits of usable memory. I thought I had really hot stuff--I had a 35-man platoon for software redesign and I could do all sorts of things because nobody in the whole U.S. Army had an IBM 360-65 at his control to do all this work, except AVSCOM in St. Louis. With that computer and software I knew on a daily basis what the most demanded item in theater was. It took 55,000 line items to support all those aircraft flying almost 3 1/2 million hours a year. I knew the most demanded items, the highest dollar item, the item with the most money invested in it, and I could tell you which item was always at a zero balance. I could tell you the ten most wanted items, forecast the requisitioning time and my order ship time. I could tell you the number of items which I did not have demand data on within one year.

I could also tell the Modification Work Order (MWO) status for each aircraft by tail number. I could tell the ones that were outstanding by company, by tail number. I could take this data, fly north, and go into one of the aviation companies of the 1st Aviation Brigade. I could go right into technical supply, open the visible card file, and check my federal stock number against theirs. I could see whether they were correct or not based on their requisition because I received the requisitions for all units coming into theater. I had about 150 technical representatives and 2,300 contract civilians when I commanded the Aviation Materiel Management Center (AMMC). These technical representatives and contract civilians were to do the "high time" periodic inspection (PE) on CH-47s at Air Vietnam. With a one-year turnover of personnel, we never did get soldiers trained well enough to do these inspections. A "high time" PE was a 1,200-hour inspection on the CH-47, and we had to depend on PE teams made up of about ten contract civilians to do these jobs. As a footnote, this is something for you maintenance people to pay attention to in the next combat situation. Are you going to have the skill levels? If not, where are you going to get them? I predict you're going to use civilians. I think that you're going to have civilian contract teams of all sorts, including supply, as I had, to be able to supply and support aircraft.

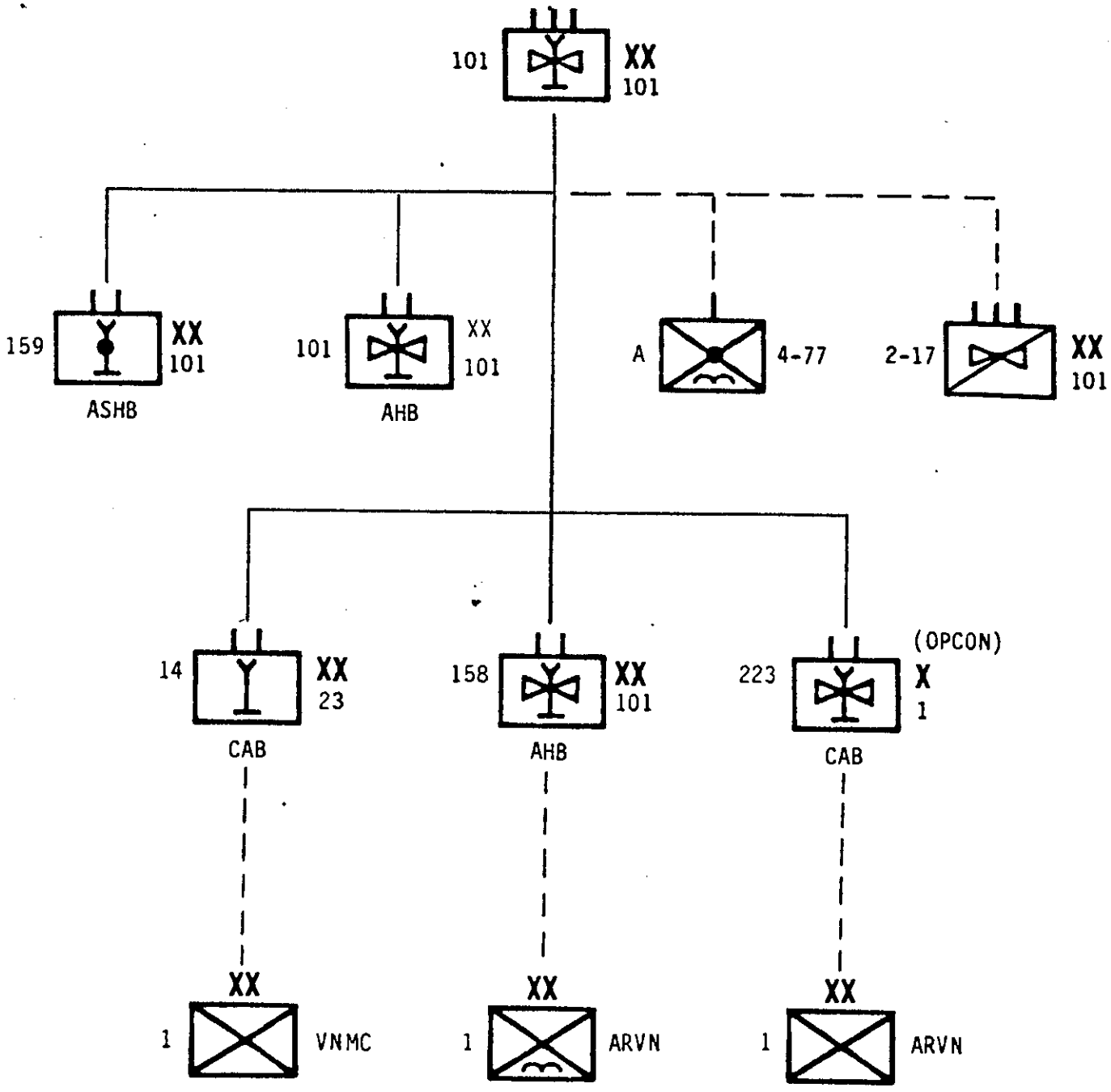

Figure 1. Lam Son 719

US Army Aviation Task Organization

AHB = Assault Helicopter Battalion
ARVN = Army of the Republic of Vietnam
ASHB = Assault Support Helicopter Battalion
CAB = Combat Aviation Battalion
OPCON = Operational Control
VNMC = Vietnam Marine Corps

TYPE	ASG	OR[1]	NORS[2]	NORM[3]	HQDA[4] AVG	XXIV Corps OR RATE
AH-1G	151	112	12	27	75	74
CH-47A	78	58	7	13	70	74
OH-6A	116	98	5	13	75	84
OH-58A	18	14	1	3	75	78
UH-1C	42	23	5	14	70	55
UH-1H	319	248	11	60	78	78
TOTAL	724	553	41	130		

1. Operational ready (OR).

2. Nonoperational ready supply (NORS).

3. Nonoperational ready maintenance (NORM).

4. This is an historical average developed by the Aviation Systems Command (AVSCOM).

Figure 2. Aircraft Status as of 182400 March 1971 - US XXIV Corps Task Organization for Lam Son 719

MDS	DAMAGED*	DESTROYED			GRAND TOTAL
		IN LAOS	IN SOUTH VIETNAM	TOTAL	
AH-1G	158	20	6	26	184
CH-47A	26	3		3	29
OH-6A	25	4	6	10	35
OH-58A	15	4	2	6	21
UH-1C	63	7	1	8	71
UH-1H	316	43	10	53	369
TOTAL	603	81	25	106	709

*Aircraft combat-damaged by small arms fire repairable in theater.

Figure 3. Combat Damage and Loss--
Unscheduled Maintenance

MDS = Mission-Design-Series