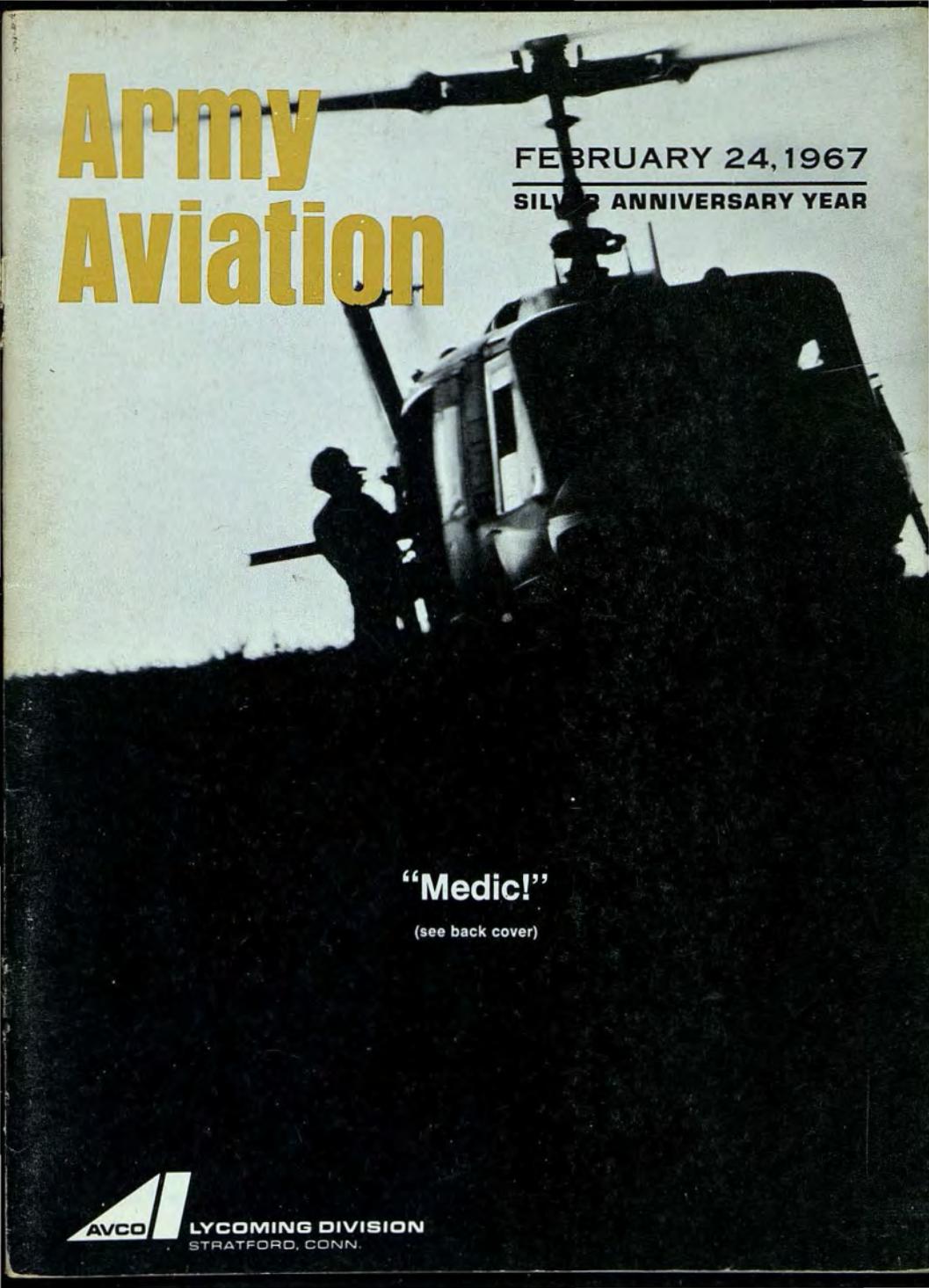


Army Aviation



FEBRUARY 24, 1967

SILVER ANNIVERSARY YEAR

“Medic!”

(see back cover)



LYCOMING DIVISION
STRATFORD, CONN.



On the spot response: Boeing style.

This make-shift tent stands in a small, remote jungle clearing. But it's as effective an operation as you're likely to run in to. It's part of a Boeing commitment: we build superior helicopters and we provide the support to keep them that way—anywhere, any time.

Boeing builds helicopters to last, to reach a high level of efficiency and to stay at that level. Our reps in remote places see that the full resources of Boeing are used to maintain this efficiency. They study, evaluate, observe, recommend.

Unpredictable problems created

by environmental conditions, for example, are handled on the spot by our field service reps. They report the problem back home, where a customer support team immediately swings into action to work on solutions.

In-the-field reps are just one part of Boeing's completely integrated support capability. Training, technical publications, ground support equipment, continuous maintenance engineering, field data analysis and spares is still another part of our response to customer requirements.

In short, Boeing means response—any time, anywhere.

The Boeing Company, Vertol Division, Morton, Pennsylvania 19070.



BOEING
Helicopters

Army Aviation

JAN.-FEB. PHOTOS



FT. LEWIS (★Exclusive) — LTC Richard Bergstrom (left), president of the Mt. Rainier Chapter of AAAA, presents the Association's new Chapter Honorary Membership Certificate to Chris Noel, popular AFRTS disc jockey, during her recent visit. Major General Donald R. Pierce, CG of Fort Lewis and the Army Training Center, who welcomed the Hollywood starlet, looks on from the right. (Photo by PFC Isiah Fulton.)



FORT WOLTERS (Delayed) — The Honorable David E. McGiffert, Under Secretary of the Army, was the principal speaker at ribbon-cutting ceremonies marking the opening of a Warrant Officer Candidate Hall of Fame. Renovation and beautification of the building that opened on January 3 was handled entirely by the candidates with the expenses incurred being covered by funds raised by the candidates through various projects. Located in the Troop Command area at Ft. Wolters, the Hall of Fame is to serve as a memorial to the "flying warrants." (USA photo)



OXNARD, CALIF. — Flying on its back with the rotor blades spinning beneath the fuselage, a Lockheed rigid-rotor helicopter maneuvers with the agility of a fixed-wing fighter plane. Called the Lockheed Model 286, the demonstrator is believed to be the world's only helicopter to perform a series of loops, barrel rolls, vertical climbs, and dives on a single flight. The rigid-rotor system on the four blade Model 286 is similar to that on the Army's AH-56A combat rotorcraft now being developed by the Lockheed-California Co.

FT. RUCKER (★Exclusive) — In early December, the U.S. Army Aviation Test Board began a logistical evaluation of the new, more powerful T53-L-13 turbine powered engine (above) for use in the Huey series. Operating four engines for a total of 4,800 hours in C's and D's, Test Board personnel are expected to derive maintenance data for four years of operation in 18 months. Pictured, left to right, are Mr. Haskins, SP4 Rogers, SP5 Smith, SP4 Harris, and SP5 Allison. (USA photo)

Vietnam Report



General Earle G. Wheeler, Chairman of the Joint Chiefs of Staff, goes beyond matters of troop deployment and logistics in giving an insight on the caliber of American fighting men and what their efforts mean to the aspirations of the South Vietnamese

FIVE days ago, I returned from Vietnam. There, for the eighth time in the past four years, I visited those men and women of our armed forces who are most dangerously involved with the protection of freedom and the security interests of the United States. As always, I returned with deep respect for them, and renewed conviction that they fight in a high cause. And more than ever before, I came home with profound pride in what these brave men and women have achieved. I might add that I was also impressed with the energy and courage of the newsmen in Vietnam. Some 500 of them are making this the

best covered war in history. With these impressions fresh in mind, I propose to talk tonight about Vietnam.

It is clear to me why we are in Vietnam, and why we should be there. Therefore, rather than entering the lists of policy debate, I propose to report on an aspect of Vietnam which is less well-known and appreciated — what we have achieved there.

In speaking of achievements, I do so as a military man, reporting mainly on military matters. Nevertheless, I am fully aware of the importance and difficulty of the political, economic, and social problems which must

be mastered if we are to achieve success in Vietnam. I have no illusions that I can follow the injunction of Tennyson to "Charm us, orator, till the lion look no larger than the cat." I would not wish to. Rather, I hope to take the advice of Joseph Pulitzer when he said: "Put it before them briefly so they will read it, clearly so they will appreciate it, picturesquely so they will remember it, and, above all, accurately so they will be guided by its light."

In discussing our military accomplishments, both accuracy and comprehension depend upon proper context. With this in mind, I should like to emphasize these facts: less than two years have passed since our first, retaliatory air strike in North Vietnam; only 1½ years have gone by since we began to deploy major combat forces in South Vietnam; and little more than a year has transpired since our first major ground battle in the Ia Drang Valley. As wars go, these are short periods of time. It is within this context of time that we Americans should judge what we have achieved.

Theses of Doom

As a backdrop, it is also instructive to remember what the critics of our policy had to say, just yesterday, about military operations in Asia. Do you recall these Cassandra-like pronouncements? . . .

... *The American soldier can't stand the rigors of jungle combat.*

... *American units are too large, cumbersome and road-bound to do battle in underdeveloped areas.*

... *U.S. materiel — the B-52, jet fighters, artillery, ships, and electronic equipment — is too sophisticated to be useful.*

... *Supply lines to Asia are too long, and we lack the logistic bases from which to operate.*

... *Guerilla warfare is alien to American Armed Forces. We can't understand the people, speak their language, or gain their confidence; we aren't trained in counter-guerilla tactics; we lack the patience; and we can't find the enemy or come to grips with him.*

... *It is suicidal optimism to think that we can fight on the mainland of Asia.*

An address made by General Earle G. Wheeler, USA, Chairman, Joint Chiefs of Staff, before the Washington Professional Chapter of Sigma Delta Chi at the Washington National Press Club, Washington, D.C., January 17, 1967.

And massive Chinese Communist intervention is certain.

These prophets — some still active, and propounding new theses of doom — sold short the courage, decency, ingenuity, energy, knowledge, and judgment of their fellow Americans. They were wrong on every count, and the record bears this out. Let me cite you examples, not to say that the lion looks "no larger than the cat" . . . not to glory in the statistics of combat . . . not to forget the sorrow and hell which is war . . . but simply to tell you of a hard-but-necessary task, well done.

Just Two Years Ago . . .

You will recall where we stood two years ago. Our mission in Vietnam was the same as now, but we were trying to accomplish it through aid, advice, and logistic help alone. In February of 1965, in retaliation for communist attacks against U.S. forces, we launched our first, limited air strikes against North Vietnam. By the late spring of that year, due to a combination of causes, the Viet Cong/North Vietnamese Army was threatening to overwhelm the armed forces of South Vietnam. That summer, at the request of the South Vietnamese, the United States made the decision to commit major forces to halt aggression. I doubt that any decision, by any President, has been more difficult or more honorable.

What was needed, without delay, was a transfusion of spirit and power and materiel which would give heart to our Vietnamese allies and put up the first, clear stop light to aggression. Almost incredibly, the United States moved nearly 200,000 men and almost 2½ million tons of supplies over thousands of miles to Southeast Asia between July and October 1965. This alone, in my judgment, was a magnificent feat of arms. No other nation could have achieved it. And I doubt

(Continued on Page 26)



BEECH "IMAGINITY" IN MANNED AIRCRAFT...
 This pressurized TURBOPROP member of the Beechcraft U-8 family of mission support aircraft offers high performance at low cost. High altitude over-the-weather capability means on-time operations in support of vital Vietnam assignments.

Off-the-shelf answer for today's urgent

No delays in delivery. In steady daily production now, the pressurized Beechcraft TURBOPROP U-8 offers a combination of features that match the broad range of growing mission support requirements:

1. Specifically designed to fit the mission profile of 80% of today's mission support trips. (1000 miles or less with 5 or 6 passengers.)

2. Turboprop speed, efficiency, versatility, quietness.

3. Can operate from shortest, roughest strips—new reversible propellers for even better short field capability.

4. Conference-room seating for 5 or 6, plus separate flight deck. Quickly convertible to high-density seating for as many as 10, or for cargo or aerial ambulance use.

5. Nonstop ranges to 1,565 miles.

6. Pressurized for "over-the-weather" comfort.

7. Easily operated by one pilot—even under the most difficult trip conditions. Big plane "positive feel."

8. Built for rugged duty and tested far in excess of required load factors.

9. Most thoroughly proven airplane of its class in the world.

mission support needs! Here's why:

10. Saves its cost over and over again when used instead of a larger aircraft.

11. Same type instrumentation and similar power controls as a pure jet, it can help jet-rated pilots maintain jet proficiency—at low cost.

12. Worldwide Beechcraft service organization assures you of parts and expert service—eliminates need for expensive logistic support program.

For "off-the-shelf" mission support...

Look to Beech capabilities!

Write now for complete facts on the Beechcraft TURBOPROP U-8, or the other two "off-the-shelf" Beechcraft U-8s. Address Beech Aerospace Division, Beech Aircraft Corporation, Wichita, Kansas 67201, U. S. A.

Beech Aerospace Division
 BEECH AIRCRAFT CORPORATION • WICHITA, KANSAS 67201

ARMY AVIATION

FEBRUARY 24, 1967

Endorsed by the Army Aviation Ass'n of America

CONTENTS

Vietnam Report

by General Earle G. Wheeler
Chairman, Joint Chiefs of Staff 4

The CV-2 Transfer

by Brigadier General Robert R. Williams
Director of Army Aviation, OACSFOR 12

The Mohawk in Vietnam

by Colonel Edward L. Nielsen
Headquarters, Army Materiel Command 18

Operations Analysis — South Vietnam

by LTC William L. Denend
USARV Aviation Office 20

Attleboro!

by LTC Samuel P. Kalagian
12th Combat Aviation Group, USARV 32

Gemini Mission Support

by Major Eugene S. Emmer
Headquarters, 10th Aviation Group 34

PCS — Changes of Address

..... 37

Obituaries

..... 39

ADVERTISERS

Avco Lycoming Division 1
Beech Aircraft Corporation 6-7
Bell Helicopter Company 10-11
Bendix Radio Avionics 29
Boeing Vertol Division 2
Collins Radio Company 8
De Havilland Aircraft of Canada 23
Kaman Aircraft Corporation 15
LSI Service Corporation 17
Solar Division 47
Sperry Phoenix Company Centerfold

ARMY AVIATION is published monthly by Army Aviation Publications, Inc., with Editorial and Business Offices at 1 Crestwood Road, Westport, Conn. 06880. Phone (203) 227-8266. Second class postage paid at Westport, Conn. Subscription rates for non-AAA members: 1 year \$3.50, 2 years \$6.00 to CONUS and APO addresses only; add \$7.00 per year for all other addresses. The views and opinions expressed in the publication are not necessarily those of the Department of the Army. Publisher, Arthur H. Kesten; Managing Editor, Dorothy Kesten; Associate Editor, C. W. May; Subscription Fulfillment, Beryl Beaumont. Exclusive articles pertinent to any Army aviation subject, except industry, AAAA, unit, or major command articles, are reimbursable, at the rate of three to five cents per word for the first 2,000 words published.

**Omnibus HF**

Thousands of Collins 618T SSB Transceivers are used today in hundreds of different HF applications throughout the world.

In its many system configurations, the 618T is relied upon extensively by military forces for critical HF communications in strategic and tactical operations. The transceiver is used in fixed station, transportable, mobile, marine, and airborne installations. Its versatility and performance are unequalled.

A typical application of the 618T is its use in tactical helicopters. Collins systems in these aircraft include the 618T, a 490T Antenna Coupler, and an automatically tuned 437R-1 Helical Monopole Antenna.

For technical information or assistance in HF system design, contact Collins.

COMMUNICATION/COMPUTATION/CONTROL

**COLLINS RADIO COMPANY**

DALLAS, TEXAS • NEWPORT BEACH, CALIF.
CEDAR RAPIDS, IOWA • TORONTO, ONT.

AA in Photos



FT. BENNING (★Exclusive) — Shown during a briefing of GEN Harold K. Johnson, Army Chief of Staff, in the War Room of the 10th Aviation Group are, left to right, MAJ Richard D. Baker, S1; MAJ William M. Jenkins, S3 (at lectern); COL J. Elmore Swenson, standing, CO, 10th Aviation Group; SP4 Allen Skirk (at map); GEN Johnson; GEN Louis W. Truman, CG, Third U.S. Army hidden in picture at right by USAIC Chief of Staff, COL H. S. Cunningham. GEN Johnson was briefed on the mission, operations, and accomplishments of the 10th during a January 20 visit.

(USA photo)



FT. WOLTERS — BG Frank Meszar (center), CG of the Army's new aviation complex at Ft. Stewart, Ga., and Hunter Army Airfield, Ga., is briefed by COL E. Pearce Fleming, Jr. (left), USAPHC commander, on activities within the Training Support Operations Center during his Jan. 24 visit to Ft. Wolters. COL Robert O. Lambert, Deputy Commander of USAPHC, is shown at the right while MAJs William E. Beaty and James W. Johnston of TSOC, are in the foreground. (USA photo)

FT. BENNING (★Exclusive) — Briefed on the mission and operations of the 10th Aviation Group, GEN Harold K. Johnson, Army Chief of Staff, addresses the troops of the 10th during his late January visit to Ft. Benning. COL J. Elmore Swenson, CO of the Group, is shown to the immediate right of GEN Johnson. Having just completed the transitional training of USAF pilots in CV-2 aircraft, the 10th has been directed to train 72 Navy pilots in the Huey, to include gunnery training.



FT. HOOD — Now undergoing two-phase airworthiness qualification testing, two AH-1G HueyCobras prepare to dive during first phase jettison tests of rocket and machine gun pods carried under the stub wings. Some 300 pods of various configurations are being dropped over a five-week period to aid in assuring safe separation characteristics when a pilot jettisons pods in an emergency. Armament firing testing will constitute the second phase with Bell Company pilots handling the test aircraft throughout both phases. The tests are being conducted by Bell under contract to the Army Aviation Materiel Command.



WASHINGTON, D. C. — Colonel Joseph L. Gude (left), the current LOH Project Manager, Hqs, AMC, and a member of the National Executive Board of the AAAA, is to assume command of the 1st Cav Division's 11th Aviation Group.



BELL'S *JetRanger* AN OFF-THE-SHELF



Latest in the Bell line, the JetRanger has made an impact on the helicopter industry seldom experienced before. Now being delivered in quantity to fulfill current orders, the JetRanger offers many features as an off-the-shelf military light turbine trainer and utility helicopter.

- FORGIVING — Uses full power of the T63 . . . high inertial rotor keeps students out of trouble . . . easy to autorotate.
- SAFE, RUGGED — Honeycomb construction . . . structural bulkhead.
- RELIABLE — Simple design . . . easy to maintain . . . high availability.
- SUPPORT — Bell leads the industry in timely logistics support.

• ON SCHEDULE DELIVERIES — Bell has delivered over 3,000 UH-1's on schedule over the past 10 years.

• PROVEN TRAINER — Navy TH-13M's at Ellington Field have accumulated nearly 5,000 hours each, over 10 years and still going! More than 2,000 H-13's, including many trainers, have been delivered to all services for two decades.



BELL
HELICOPTER

FORT WORTH, TEXAS 76101

A **textron** COMPANY

TURBINE TRAINER





THE CV-2 TRANSFER

After a remarkably unruffled period of joint planning and preparation, transfer of the Army CV-2 fleet was effected on 31 December 1966. As you will recall, the Chiefs of Staff of the Army and the Air Force agreed last April to the transfer of the Army's CV-2/7 mission and resources to the Air Force.

Through joint coordination, a target date of 31 December was agreed to for the transfer. Certain backup logistical support functions were excepted in

By
BRIGADIER GENERAL
ROBERT R. WILLIAMS
Director of Army Aviation
OACSFOR, D/A

order to allow the Air Force sufficient time to establish its logistical support structure. This residual responsibility is being phased over as the Air Force acquires the capability to absorb individual backup support functions. Except for interservice agreements of a continuing nature, the entire logistical support responsibility will be the Air Force's, effective 30 June 1967.

A word of caution is in order concerning the total effect of the CV-2/7 agreement. The mission involved is that of fixed wing **tactical** airlift. The Army has relinquished all claim to fixed wing aircraft for this specific purpose.

Accordingly, no replacement for the CV-2 will be purchased for the Army aircraft inventory. I bring this out because there have been numerous ques-

tions concerning what will replace the **CV-2** in the Army. The answer is, in consonance with the spirit of the agreement between the Chiefs of Staff, an unequivocal "nothing." The Air Force has the job now and we are looking for them to continue in the same responsive and effective manner characterized by the Army's past execution of the mission.

Promotions to Colonel

Once again aviators have fared well on promotions. This time, it's the selection list for colonel, published in **DA Circular 624-26**, dated 9 December 1966. This is the way the Army list breaks out overall.

Army List

Non-Aviators	Aviators
2,996	Total Considered 66
846	Number Selected 29
28.2	Percent Selected 43.9

The breakout between the branches appears in the box below.

BRANCH	Considered	Selected Number	Percent Selected
ARMOR	3	2	66.7
ARTY	24	8	33.3
CE	5	3	60.0
INF	20	10	50.0
MSC	1	0	—
SC	0	0	—
TC	13	6	46.2

Even among officers previously considered but not selected, the selection rate was significantly higher among aviators.

Previously Considered

Non-Aviators	Aviators
1,542	Total Considered 13
192	Number Selected 4
12.5	Percent Selected 30.8

Only in the secondary zone selections did aviators fail to make a showing. None were selected. I know this particular element of the list always presents problems for selections boards. The number which can be selected is always so small in comparison to the number eligible that it almost defies solution. Accordingly, I don't feel that failure to score in the secondary zone can be regarded as a deficiency in any way, particularly in light of the overall record.

Instrument Qualification

I have periodically stressed the need to maintain a high degree of proficiency in instrument flying. My latest trip to Vietnam brought another reminder of the importance of instrument flying.

All Army aircraft now being procured, including the **OH-6**, have an instrument capability. Instrument flight operations and night operations are increasing in Vietnam. This is brought about by a steadily increasing demand by tactical commanders for employment of Army aviation under a wider spectrum of weather and visibility conditions.

For aviators, this demand equates to a hard core requirement to acquire and maintain peak proficiency in instrument flying. While the individual's responsibility in this area is clear, the level of both individual and overall instrument proficiency within units is also a command responsibility.

The direction in which Army aviation is progressing has carried us to the point where a perfunctory approach to instrument qualification can no longer be tolerated. It is not enough to go through a brief cram refresher on "the gages" the week before your instrument ticket expires, followed by a sweaty and half-panicked check ride which barely satisfies the examiner.

Instrument capability cannot be a some-

CV-2 TRANSFER

(Continued from Page 13)

time thing. It is now a fulltime, top quality, ready-to-go necessity for all of us. Instrument training in the transition courses and in the helicopter qualification courses is being expanded. At this time every Army Aviator must on his own take and make every opportunity to practice instrument procedures and to get actual experience in weather.

Logging Flight Time

Several cases of improper recording of duties performed in flight have come to my attention. The purpose of the flight record (**DA Form 2408-12**) is to show what specific duties each crew member actually accomplishes in flight and to be the source of information for the pilot's flight record (**DA Form 759**), indicating his flight experience.

I will illustrate my point with a hypothetical case. Three pilots are on board for a day VFR flight in a **U-8F**. The pilot in the left seat is a Master Army Aviator with over 500 hours in **U-8** type aircraft and is a **U-8** instructor pilot. The pilot in the right seat is a more junior officer in both rank and experience but is also an instructor pilot on **U-8's**. The third pilot is riding in the rear of the aircraft.

The records for the flight show the man in the left seat as pilot, the man in the right seat as instructor pilot, and the man in the back as co-pilot. However, the man in the right seat in fact carries out only the duties of co-pilot and the man in the back at no time performs any duty as a crew member.

The U.S. Army Aviation Material Command announced the modification of a contract for the Army's LOH under which the Hughes Tool Company Aircraft Division is authorized to produce 229 additional units at a contract cost of \$4,760,399. The purchase was made by exercising an original contract option.

The ethics of this arrangement are highly questionable in themselves but to complicate things a little further, now suppose an accident occurs. Who is responsible for making the decisions in flight? Who should be at the controls when the critical situation arises that results in the crash? The answer is the man who is actually in the left seat, based on his qualifications and experience.

I'm sure this is the situation that would actually exist at the time of the accident but the records would indicate that the man in the right seat was at the controls since he was logging time as instructor pilot. If all are killed in the accident, picture the dilemma of the accident investigators.

Moral: Log your time based on the duties actually performed.

Maintenance Supervision

Several recent accidents have resulted from mistakes made by inexperienced mechanics. Mistakes by inexperienced people are to be expected. So are mistakes by experienced people. In the aviation field, because of the potential seriousness of the results, we have always taken extraordinary measures to detect maintenance errors. These measures are primarily supervisory. In the case of inexperienced mechanics, it is vital that maintenance supervisors, technical inspectors, crew chiefs, and test pilots exercise **maximum** care.

The responsibility for the proper performance of this supervisory function is clearly one of command. I realize that the dramatic expansion of Army aviation in the last two years has had an adverse side effect in terms of overcrowding and inexperience. However, I am convinced that command emphasis on strict adherence to established, safe practices and rigid inspection procedures **can** prevent maintenance-caused accidents. We can afford no less.

Big Brother... American Style



1984 isn't as far off as we thought it was, and there are forces in the world who can't wait for its arrival. The Big Brothers north of Vietnam however have had their time tables disrupted by a relatively small bunch of Americans like this Navy Doctor who persist in spending their own time and money to patch

up and cheer up the pitiful people for whom Big Brother has such great plans. In time, perhaps, these oppressed people will come to realize who are their real brothers. Kaman Aircraft Corp., Bloomfield, Conn., suppliers of Search and Rescue Helicopters to the Armed Forces.

Army Aviation

JAN.-FEB. PHOTOS



WASHINGTON, D.C. (★Exclusive) — LTG William B. Bunker (right), Deputy CG of Army Materiel Command, straightens the Army Commendation Medal he presented to LTC Donald F. Luce as Mrs. Ruth Luce looks on. The medal was presented to Luce for his outstanding performance of duty while serving on a special classified mission in Thailand. The Director of Maintenance at ARAD-MAC, Corpus Christi, Tex., Luce is a Chapter Member-at-Large on AAAA's National Executive Board.



BRIDGEPORT, CONN. — A Sikorsky S-64 Flying Crane helicopter ignored winds gusting up to 55 mph in L.I. Sound recently to unload containers up to 10 tons from an American Export Isbrandtsen vessel. Watched by DOD officials, the demonstration saw the S-64 unload a total of 462,315 lbs. in five and a half hours. The combination of a helicopter-containership is being considered for delivery of goods in crowded Vietnam harbors.



FT. WOLTERS — Cartoonist George R. Snead, whose "Army Times" cartoons are known to many, has temporarily laid aside the pen — professionally — to vie for Army Aviator's wings. Now a WOC at US-APHS, Snead keeps his hand in by cartooning weekly for "The Ft. Wolters Trumpet." A decorated 12-year Army veteran, he's been sketching since 1950.

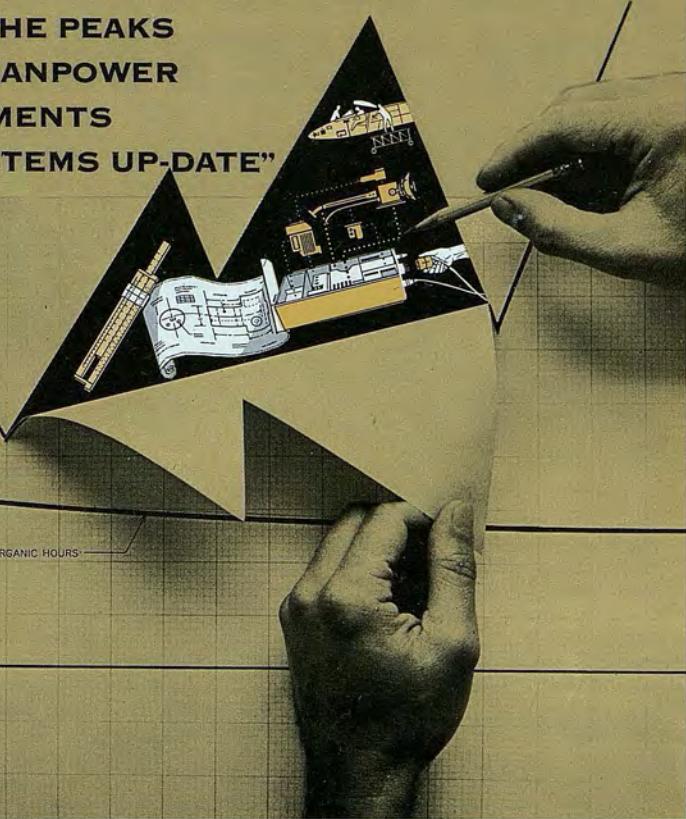


FT. RUCKER — Backbone of multi-engine and instrument qualification training at USAAVNS is the T-42A, military counterpart of the Beechcraft Baron. Since delivery of five T-42As to USAAVNS in September, 1965, more than 300 students have completed pilot training in the twins. The T-42As are now being used in three separate training courses at Ft. Rucker, the programs being shifted from other aircraft last year when the first Army Beechcrafts were delivered. The last planes arrived in October, 1966.

LSI SERVICE AUGMENTATION SERVICES:

FILLING THE PEAKS IN ARMY MANPOWER REQUIREMENTS FOR "SYSTEMS UP-DATE"

AVAILABLE ORGANIC HOURS



Along with new systems and hardware, Army Aviation's requirements include specialized capabilities to up-date, modernize and adapt improvements in current inventory.

- □ LSI Service Corporation is actively engaged in numerous programs of an "up-date" nature for Army Aviation, other DOD agencies, and prime systems manufacturers, including accessory equipments and complete aircraft/helicopter systems. The capabilities of LSI Service are being applied from design and engineering, through prototyping and production to retrofit installations, including complete maintenance.
- □ This combined and coordinated capability from concept to check out, offers the advantage of single source planning for complete "up-date" requirements and represents another way in which LSI Service provides augmentation of organic capabilities.

LEAR SIEGLER SERVICE, INC.

A Subsidiary of Lear-Siegle, Inc.



3171 SOUTH BUNDY DRIVE, SANTA MONICA, CALIFORNIA

THE MOHAWK IN VIETNAM



THE story of the *Mohawk Surveillance System* in Vietnam has been untold, primarily because of the sensitive and classified nature of its mission. However, within the bounds of security I would like to tell as much about the system as can be released.

Mohawks were first introduced into Vietnam during the summer of 1962 with the 23rd Special Warfare Aviation Detachment (SWAD) under the command of LTC William J. Morris (then MAJ), of the Combat Surveillance School at Ft. Huachuca, Ariz. The first aircraft deployed were designated *JOV-1C*'s, which were *OV-1C* aircraft without the infrared gear installed but with an armament capability added. The aircraft began immediate operations in direct support of South Vietnamese Army units, performing such diverse missions as railroad surveillance, convoy observation, artillery adjustment, night illumination, and general visual and photographic surveillance.

The 23rd (SWAD) based at Nha Trang regularly operated throughout the country

from small strips in support of Vietnamese units. An *Army Concept Team in Vietnam* (ACTIV) evaluation conducted on the unit found the *Mohawk* particularly effective in the support of counter insurgency operations citing capabilities of the aircraft such as speed, low noise level, visibility, maneuverability, endurance, and survivability, as contributing factors.

After the rotation of Major Morris in the next two years, command of the 23rd passed first to Major Arthur Liebl, and then to Major David King. Throughout the period, the *Mohawk* unit continued to perform its effective but unsung role using first the *JOV-1C* aircraft and later the *OV-1A*'s. The *OV-1A*'s can carry armament and/or fuel up to 4,000 lbs on the wing stations.

Three Versions

There have been three basic versions of the *Mohawk* built to date: the *OV-1A*, a visual, photographic version; the *OV-1B* with visual, photographic and side looking airborne radar; and the *OV-1C*, a visual, photographic, and infra red version.

During the summer of 1964, a new *Mohawk* unit, the 4th Aerial Surveillance and Target Acquisition Platoon, was formed at Fort Bragg and upon completion of its training program was deployed to South Vietnam.

By

COLONEL EDWARD L. NIELSEN
Mohawk Project Manager
Headquarters, USAMC

The 4th ASTA, equipped with *OV-1B* (side looking radar) and *OV-1C* (infra red) aircraft, joined the 23rd, and the combined units were then designated the 73rd Aviation Company.

With the introduction of the SLAR and IR aircraft, a new dimension was added to the *Mohawk* capability in Vietnam. The *B*'s primary sensor is an AN/APS-94 side looking airborne radar which provides the capability to scan quickly large areas for the detection of vehicular movements. The SLAR is normally equipped with a rapid film processor/viewer which enables the aircraft observer to view processed imagery moments after it is exposed. A data transmission is available which permits the SLAR data to be transmitted simultaneously to a ground station many miles away.

The IR (*OV-1C*) aircraft's primary sensor is an AN/AAS-14 infra red detection set which provides the capability to "see" through darkness, haze, smoke, and certain types of precipitation. Like the SLAR, the infra red equipment is provided with a rapid readout capability. A data transmission system is also provided with the infra red equipment, the complete system designated as the AN/UAS-4.

The *OV-1B* and *OV-1C* operations have been conducted primarily at night because of their ability to "see in the dark." The precise capabilities of the SLAR and TR are classified. However, suffice it to say that their value has been demonstrated.

Organic ASTA Aircraft

The First Cavalry Division (Air Mobile) and the First Infantry Division were both deployed to Vietnam with their organic, *Mohawk*-equipped Aerial Surveillance and Target Acquisition (ASTA) platoons. Unlike the 73rd, the 1st Cav and 1st Infantry platoons' primary mission is the support of their respective division operations.

In the fall of 1965, a second independent unit, the 20th ASTA platoon, began operations in South Vietnam. Now designated as the 131st Aviation Company, this unit has conducted extensive operations in support of the Air Force and Navy.

At this writing the 131st Aviation Com-

pany is presently commanded by LTC William Ackerman, the 73rd Aviation Company by MAJ Joseph R. Knudsen, the 1st Cav platoon by MAJ Loren Webb, and the 1st Infantry platoon by MAJ Cecil O. Carlile.

The *Mohawk* Surveillance System was developed by the Army to provide its field commanders with an around-the-clock highly responsive intelligence gathering capability under the ground commander's direct control. The timeliness of the information provided by the equipment was considered to be of paramount importance. This dictated the requirement for a real time readout for both the SLAR and IR sensors — both in the aircraft and in the Data Transmission System Ground Station. It is this "real time" capability which has proven so useful in Vietnam.

The success of the *Mohawk* in Vietnam has resulted in DOD approval for further procurement of the aircraft and its ancillary equipments starting in FY 1966. The new production aircraft will incorporate numerous improvements both in the aircraft and its electronics systems. Present indications are that the *Mohawk* will be with us for a long time and we in AMC intend to make certain that the optimum capability is provided to the field within the constraints of time, funding, and the state-of-the-art.



HUE PHU BAI — Jim Peters (left), Mohawk project pilot at Grumman Aircraft, is shown talking with MAJ William Ackerman, Commander of the 131st Aviation Company. (Grumman)



"Firefly"

OPERATIONS ANALYSIS

— SOUTH VIETNAM

moved was over 39,000 tons (short tons for the logisticians).

The Accomplishments

In order to amass these statistics Army Aviators showed their true professionalism. They provided the type of support requested by the supported units, flying many hours both day and night. Some of the major accomplishments of aviation units are cited here . . .

Early in the month the 11th **Combat Aviation Battalion Red Dogs** conducted a combat assault in support of a 1st **Infantry Division** seal and search mission. The **Vultures** and the **Robin Hoods**, reinforced by the **Top Tigers** from the **Adapt Battalion** and **Company A** of the **1st Aviation Battalion**, were formed into a task force.

The mission was to seal off the northern half of a village completely while heliborne troops sealed off the southern half. A helper force was landed in the village to conduct pacification programs. Three landing zones were used. Close timing brought the helicopters into the two LZ's simultaneously permitting the use of surprise. Although no enemy were encountered this time, the complete planning, close coordination, and professional execution made this operation commendable of report.

A Costly Lesson

The nightly event of "Firefly" in Vietnam is paying off. Units conducting these missions are finding it more and more difficult to find targets. Old Charley is learning a costly lesson. In November, the gunners of the "Firefly" mis-

By

LTC WILLIAM L. DENEND
Analysis and Management Division
USARV Aviation Section

sion damaged over 30 sampans and destroyed over 400. This makes a new arrival wonder where they get all of the teakwood to build those junks. The units most often mentioned in connection with these missions are the **Sabers**' platoons, the **Playboys**, **Raiders**, **Dragons**, and the **Gang Busters**, as well as the **Cobras**, **Vikings**, and **Mavericks**.

The Hornets of the 11th Combat Aviation Battalion exercised their stingers while extracting a combat patrol, intense automatic fire being encountered during the extraction. One **Huey** was hit in the tail rotor without impairing

LARGEST NIGHT COMBAT ASSAULT

KONTUM, Vietnam — On December 27, the 10th Combat Aviation Battalion completed what is believed to be the largest non-illuminated night combat assault yet held in Vietnam.

Lifting over 1,100 men and 6,000 pounds of cargo into three landing zones some 30 kilometers north of Kontum as a part of *Operation Pickett*, the entire mission was conducted without incidents or accidents marring the record of the multi-company helicopter force.

Twenty-six troop lift *Hueys* and six gunship *Hueys* of the 117th and 129th Assault Helicopter Companies were assisted by four *Chinooks* of the 179th and 180th ASH Companies in completing the daring operation.

Brigadier General Willard Pearson, CG of the 1st Brigade, 101st Airborne, congratulated the 10th Battalion on its fine performance that night despite the mountainous terrain, gusting winds, and hazardous landing zones the unit faced.

In a one month period — December 9th through January 7 — the 10th Aviation Battalion has lifted over 18,000 troops and 1,600 tons of cargo in support of *Operation Pickett*.

USAF O-2A



WICHITA, KANSAS — The first illustration of the U.S. Air Force's version of its newly purchased O-2A have been released by Cessna Aircraft. The USAF will purchase 176 of the aircraft under a \$11.7 million contract. The O-2A will be utilized as a forward air controller replacing the O-1 Bird Dog, and will be equipped with four wing pylons for the transport of rockets, flares, and other light conventional ordnance. ■

its capability to make it home. The **Hornet** door gunners' suppressive fire killed 2 VC by body count. Another extraction of a patrol later that day also encountered small arms fire. A light fire team of the **Stingers** was credited with an estimated 20 VC KIA.

The Delta Combat Aviation Battalion was well in the show this month. While supporting the 7th Division (ARVN) in a search and destroy mission in December, the unit demonstrated the flexibility for which Army aviation is noted. Fourteen aircraft from the **Knights**, the **Outlaws**, and the **82d Medical Detachment** were committed in this operation. During the operation several Navy PBR's ran into a fire fight, and two aircraft from the **Outlaws** and the **Warriors** were scrambled and diverted to help our Navy friends. The ground troops reported 15 VC KIA and 28 sampans destroyed.

OPERATIONS ANALYSIS

(Continued from Page 21)

Later in the month the Delta Battalion ran into a real live one. They had ships from the **Warriors**, **Tigers**, and **Outlaws** (plus the **82d Med Det**) committed in support of the **21st Division**. En route from the pickup zones to the landing zones the armed ships made heavy contact. Results of going in on the targets: 36 VC KBAA and 50 VC WBAA. Some 1,653 troops were landed between 0800 and 1200 hours that day with no reported casualties among the ARVN's.

Submission of Op Reps

The **1st Cavalry Division** kept their black and yellow patch well in the picture during December. They participated in **Operations Thayer II**, **Paul Revere IV** and **Byrd**, flying over 1,500 sorties. A review of the daily Op Rep 5 reports indicated that each unit has its

On Nov. 5, Manhattan got its first airfields.



East River Park

Nobody thought of them as airfields before. But we found it is possible to land planes there. If you have the right kind of planes. That's our Buffalo landing in East River Park (1000 ft. long).

That's our Turbo-Beaver landing on South St. (1215 ft. long).

That's our Twin Otter landing on Pier 26

(940 ft. long with water on both sides).

They were taking part in a Civil Defence exercise (called Metro Air Support '66) to see if it was possible to airlift emergency medical supplies, people, and equipment right into the heart of a crippled city.

Manhattan has no regular airfields.

That's why our Buffalo, Turbo-Beaver,



South St.

and Twin Otter were used. They're STOL planes. And they can carry a lot.

Full load for the Buffalo is 6 tons or 47 people. (It was the biggest plane in the exercise.) Full load for the Twin Otter is a little over 2 tons or 19 people. And for the Turbo-Beaver, 1 ton or 10 people.

Our planes found the test fairly easy.



Pier 26

And the exercise was a success. It showed that STOL planes could be used for this kind of emergency.

And it pointed to other uses.

For instance, as air-taxis to bring commuters from the suburbs right into the heart of the city. Without any stoplights, crowded streets, or honking horns.

Or as short-range transports flying between city centres. Without getting held up in the congested airspace at big airports.

Not only would this kind of service be convenient, but the cost would be low.

And because our planes are quiet, the neighbours living near the new airfields wouldn't be bothered by noise.

As a matter of fact, airfields like these introduce such a whole new style of air service that they've been given a special name. Stolports.

A Stolport is anywhere a STOL plane can land.

A pier. A street. A park. A field. Maybe even your own backyard.

ONE-DAY RECORD

During Operation Cedar Falls, Army CH-47 Chinook Helicopters of the 178th Assault Helicopter Company airlifted 377.5 tons of cargo setting a one-day record for the company and, according to the USARV Aviation Office, a possible record for all Chinook units in the Army. The 178th and other units of the 11th Combat Aviation Battalion provided instant mobility to combat units in the multi-division search and destroy operation in January.

own peculiar way of submitting information.

The **Adapts** don't submit the number of sorties, but they are fairly complete in their report otherwise . . . The **Delta Battalion** provides a good review of their actions, but their statistics are hard to dig out and relate to each company . . . The **1st Cav Division** reports only sorties, except for **1/9 Cav** which reports passengers and cargo moved . . . The **Red Dogs** submit a good re-

port, but don't include sorties or hours flown and so on.

While each is complying fully with the regulation as written, trying to dig out the highlights for each unit is very difficult and in some cases impossible. The **Rebels** and the **Griffins** do not submit any daily Op Rep 5's, and the assumption is that they must not be experiencing any highlights worthy of report.

December "Highs"

From the reports available, it appears that the **Top Tigers** were high for December in troops carried. They reported transporting over 10,500 troops and passengers and over 100 tons of cargo, flying over 1,500 in doing this. The **Tomahawks**, **Vultures**, **Robin Hoods**, and the **Hornets** each carried over 8,000 troops and passengers. The **Beach Bums** moved over 2,000 tons of vehicles, ammunition, guns, and supplies with the **Boxcars** and **Alligators** close behind.

The Vagabonds were busy this month. While supporting **Operations Gerome**, **Paul Revere IV**, **Pickett**, **Adams**, and the **5th Special Forces**, they carried over 77,000 troops and passengers and 9,000 tons of cargo, while flying 47,500 sorties and over 10,000 hours. It was not possible to break down the figures for the individual companies, although we did find the **Beach Bums** being mentioned for certain missions. The 2,000+ tons for which they received credit is probably way under the actual amount of tonnage they moved.

Gains and Losses

Again, I'm happy to be here, and I hope that I can report your activities and statistics as well as **Major McKelips** did. The Division lost him and **MAJ Bill Ray** on rotation, with **MAJ Jack Miller** to leave 1 Feb. However, **LTC Floyd Gober**, **MAJ Bob Allan**, **MAJ Bob Broughton**, and I will try to keep the statistics straight for you in the coming year.

The STOL Aircraft
from The de Havilland Aircraft of Canada Limited



No more Lost Battalions...

or patrols either for that matter. With the new lightweight Sperry Phoenix Company locator beacon any ground unit can furnish its support aircraft with a continuous indication of its position, even when operating in dense jungles, at night, or under heavy cloud cover. A DME capability allows the aircraft to pinpoint the position of

the beacon at any time without the necessity of remaining directly overhead. In addition, the beacon provides a voice communications capability and a glidepath capability which turns almost any clearing into an all-weather airfield. For more information about the Sperry Phoenix Company tactical beacon, write or call

SPERRY

DIVISION OF
SPERRY RAND
CORPORATION

SPERRY PHOENIX COMPANY, Phoenix, Arizona

VIETNAM REPORT

(Continued from Page 5)

that any other nation would have committed itself so strongly to a principle.

But this massive infusion would not suffice. We were at grips with a stubborn and bitter enemy. We had to sustain the morale of the South Vietnamese, hunt down the enemy's regular forces, guard against his guerrillas, strike at the military sources of his aggression, and, all the while, help with the political and economic development of South Vietnam.

Reviewing the Record

In the face of such problems, what have we accomplished since that short time ago? In brief, much. Let me cite a part of the record.

On the 1st of July 1965, only some 60,000 men of all Services were deployed ashore in Vietnam. Relatively few of these were in combat units. By the first week of January 1967, 395,000 were ashore, with a very great increase in fighting power and combat support. For example: Army and Marine Corps strengths alone had increased by some 266,000 men; combat maneuver elements had gone up more than 400 per cent; helicopter maneuver capability had increased at least four-fold; ground fire support was up by 600 per cent; air striking power had doubled; and military engineer support had quadrupled.

The total numerical increase is impressive in itself — nearly 330,000 — but much more so when you recall that these are highly trained men, fully prepared for their hard and unique tasks. Many of them were civilians a year and a half ago. Beyond this, many of their units — including major ones — did not exist in 1965, but are now fighting in South Vietnam.

To give an idea of what is involved in putting such numbers of skilled and dedicated men into Vietnam, consider the following: the total Armed Forces have increased in strength by more than 650,000 men in the past 18 months to support Vietnam and our other commitments as well; the training base in the United States — and this includes ma-

ior facilities and the men to operate them — has been greatly expanded; in addition to giving all men basic and specialist training, creating some units, and bringing all units to a high state of readiness, nearly one million U.S. military personnel have received instruction in counter-insurgency, and *thousands* study the Vietnamese language each year. Remember, too, that when our men arrive in Vietnam, they are not only trained and physically hardened, but they are also specially supplied and equipped to cope with the enemy they will face, and the environment in which they will work or fight.

The Logistic Challenge

Difficult as it was to raise, train, equip, and organize these forces, perhaps even harder tasks were involved in moving them and in preparing logically for their employment. It was as if one were to move a major American city some 10,000 miles, place it in a radically new environment, and expect that every aspect of its existence — public and private — would be provided for without delay or confusion, and in the face of dangers and difficulties such as its citizens had never confronted before.

In the time frame I have cited, to move more than 300,000 people over such a distance, somewhat more than half by sea and the rest by air, involved major feats of planning, organization and operation. We have quite literally operated continual air and sea trains from the United States for this purpose and for resupply. Requirements have been large. For example, passenger sealift in support of Vietnam has increased 15-fold, and commercial airlift to augment our military means has expanded 4-fold over the same brief period.

In terms of military cargo, the effort is equally impressive. Extrapolating from the records we now have for the first 10 months of 1966, in that year alone we airlifted some 200,000 short tons of supplies into Vietnam, and transported well over 8 million measurement tons by sea. The sealift, from January to October 1966 alone, amounted to over 1,000 shiploads, exceeding the cargo shipped to Korea in 1951 during the height of that war.

Despite these major successes, however, perhaps the greatest logistic challenges of all lay within Vietnam. From ports to airfields, from depots to maintenance facilities, and from headquarters to troop cantonment areas, virtually all of the modern structures needed to support an operation of this magnitude had to be constructed from near-scratch. The achievements in this field will be the subject of future books. Let me sketch just some of the outlines.

Major Construction

In the beginning there was essentially but one port, Saigon. This, as you know, posed serious problems for us. As someone said, in the early days we proved conclusively that ten ports in the United States can load ships faster than one port can unload them in Vietnam. By now, however, we have ten ports of various sizes, in various stages of development, from Hue in the north to Can Tho in the south. Saigon now handles only 31% of our cargo, while Da Nang and Cam Ranh Bay, for example, handle 22% and 19% respectively.

Along with ports, a great need existed for tactical and logistic air bases. At this time, important air bases are being constructed or improved at 24 locations, and the work on air facilities to handle anything from helicopters up to jet transports has been prodigious over the past year and a half.

Cam Ranh Bay

The project at Cam Ranh Bay, with which I am sure you are familiar, is representative of the magnitude of effort. From a tiny coastal port for primitive craft has now evolved the largest logistic complex in Vietnam, already including a major deep water port, large supply and maintenance facilities, troop cantonments, and an airfield with a 10,000 foot permanent runway. Additionally, three other associated tactical air bases — jet capable — have been put in operation, and much other construction goes forward.

As one other, particularly graphic case in point, a rice paddy two miles north of Saigon was selected as a prospective deep-draft port. Operational use began last October; this month the first of the deep-draft berths



should be operational; and by August of this year, the last of the four berths should be completed.

Across the land, a vast variety of other critical facilities have been completed or are well advanced. Primary logistic depots are underway at Da Nang, Qui Nhon, Cam Ranh and Saigon. Brigade or equivalent cantonments are being provided at 40 different locations. These works — all together — now make it possible for us to support our troops on a scope, and with an efficiency and dispatch, hardly conceivable for one who saw Vietnam in early days.

This logistic support can be measured in many ways:

... There is the equipment which our men use — largely new, unexcelled, in ample supply with rare and temporary exception, and fitted to the task at hand. (This is, I might observe, the first war in my ken in which the fruits of modern research and development have appeared on the battlefield of the current, rather than a future, conflict).

... There is the modern-day *"Red Ball Express,"* a special Air Force lift of priority items to Southeast Asia, which flew some 9,400 critically needed tons in its first year of operation.

... There is the life saving air evacuation of medical patients from South Vietnam — over 25,000 in 1966.

... There are the millions of tons which processed through the ports I have mentioned, 97% of all the supplies and equipment sent to Vietnam.

... But perhaps most graphically of all, there is the weight of firepower which we have been able to employ to save American and Allied lives. For example, General Dayan, former Israeli Army Chief of Staff, observed

VIETNAM REPORT

(Continued from Page 27)

one small and brief battle in which a Viet Cong regiment attacked a South Korean company of 130 men. To protect that unit until help could arrive, American fire-support units laid down 21,000 shells along a 200-yard-wide strip between jungle and wire. "That was," as General Dayan pointed out, "more than the total volume of artillery fire expended by the Israeli Army during the Sinai campaign and the War of Independence together."

The Young Americans

I have talked at length of logistic achievements because it is these which seem to be least well-known. But mention of fire-support brings up the subject of combat operations. Young Americans, the much maligned products of our affluent society, have proved their dedication, toughness, remarkable valor, great good humor, and deep compassion under the harshest, most complex circumstances. And the American Army, Navy, Air Force, and Marine Corps — and let's not forget the Coast Guard — have demonstrated a collective, professional skill which is perhaps without parallel in the history of warfare.

These operations have exacted a toll: over 6,700 Americans have died in battle in Vietnam, and more than 38,000 have been wounded in action. By the standards of other wars, these are not heavy casualties. But in terms of individual sacrifice, and by any gauge of human compassion, these are figures of sorrow, heavily underlining the debt which many men, in many lands, owe to the young and the few of America.

At the same time, I would remind you that people in other free nations — the Republic of Korea, the Philippines, Australia, and New Zealand, for example — also have cause for personal grief. And above all, there are the sacrifices made by the South Vietnamese in the defense of their homeland. Since January 1961, their military alone have lost more men in action, in equivalent population terms, than the total of American battle deaths from the Revolutionary War to the present day.

Like their allies, our men have fought with great bravery. From July 1962 until mid-December 1966, some 29,000 of them had received awards for valor in Vietnam, and more than 40,000 had received the Purple Heart. Included among the highest decorations were 11 Medals of Honor, and 201 awards of the Distinguished Service Cross, Navy Cross, and Air Force Cross.

While these men fought, many more were engaged in the onerous, unsung jobs of support — supply, transportation, maintenance, construction, communication, and so on. Others engaged officially, or on their own time, in the manifold tasks of advising the Vietnamese and helping them with military and civilian problems alike. As Chet Huntley noted in a recent broadcast: *"The American soldier in Vietnam spends only a small portion of his time in combat; many are never in combat; but the major portion of his time is spent in rescuing people, patching up people, picking up kids, building irrigation systems, schools, dispensaries, roads, houses and whole villages. The American soldier in Vietnam is a builder."*

An End to Pessimism

What has all this effort, sacrifice, bravery and dedication achieved? . . . Not a final victory, even on the battlefield, but a turnaround of pessimism, an end to unimpeded invasion, and a long forward step. These gains are reflected in many ways.

One of our primary needs was to improve our intelligence, our knowledge of who and where the enemy was. Sun Tze observed long ago, *"Know your enemy . . . and you can fight a hundred battles without disaster."* Since 1965, there has been a dramatic improvement in the quality and quantity of our intelligence. Actions extending from long-range infantry patrols, to vastly expanded aerial surveillance, to the use of new scientific devices, and on to the institution of a centralized automatic data processing system have enabled us to find the enemy, anticipate his actions, and make full use of our mobility and firepower.

Our forces — increasingly strong, mobile, well supplied, and armed with better intelligence — have hunted down the enemy's

Should you take your light twin through it, around it or turn back?



The Bendix AN/APS-113 Weather Avoidance Radar is fundamentally superior because it's fundamentally different. Start with the fact that the AN/APS-113 is not a rehash of airline radar—it is specifically designed to make the most of the limitations posed by smaller aircraft.

That's why only the Bendix® AN/APS-113 gives you 40% greater range than competitive units with the same size antenna. Not only that, but the AN/APS-113 produces a stronger image of less-dense weather targets. While these smaller storms might not interest airliners, it's exactly what the pilot of a light aircraft must look for—information on marginal situations that show him how to skirt around a storm.

This ability to see "inside of storms" as far away as

80 miles is what sets the AN/APS-113 apart. That, plus its ability to see the storm behind the storm—and the storm behind that—even when close-in weather makes strong radar echoes.

And the complete system weighs just 16½ pounds, requires only 60VA of AC power and 1½ amps DC. All this adds up to greater flying safety for you and greater usefulness of your aircraft.

Helicopters? The AN/APS-113 is ideally suited for them because of its inherent high resolution coupled with the ability to modify it for short range (8 and 40 miles.) Installations have been made in the Sikorsky S-62 and Bell HU-1B. Their pilots report the AN/APS-113 has demonstrated outstanding detection and resolution in both weather and terrain-mapping modes.

Whatever the aircraft, you'll fly more often, to more places, and in greater safety with the AN/APS-113 aboard.

More information? Contact Radio Division, Avionics, Baltimore, Maryland 21204.

Only a Bendix AN/APS-113 tells you at 80 miles.



Bendix Electronics

VIETNAM REPORT

(Continued from Page 28)

main units and fought "*a hundred battles without disaster*." I have mentioned the early battle in the Ia Drang Valley in which the newly-arrived 1st Cavalry Division fought the first major North Vietnamese units to enter combat. Those young, untested troopers inflicted more than 1,500 fatalities on the enemy and drove him out of Vietnam for the time.

Since then, all of our ground units have pursued the aggressors, giving them no haven, no rest, and no chance to mount a single major attack. As an example of many actions, the Marines last year, in *Operations Hastings* and *Prairie* alone, inflicted over 2,000 confirmed fatalities on the North Vietnamese Army. And last fall, in the former sanctuary of Tay Ninh Province, the largest ground operation of the war, *Attleboro*, took place. The 1st Infantry Division, elements of the 25th Division, and the 196th Brigade badly defeated three regiments of tough Viet Cong. Over 1,100 enemy were killed or captured, and vast quantities of enemy foodstuffs and war materiel were destroyed.

In the air in South Vietnam, Air Force, Marine and Navy pilots gave the ground soldier the greatest, most responsive, and most effective air support in history. Everything from the B-52 bomber to the single-engine, 0-1 observation plane has literally been integrated with the actions of platoons, companies and battalions on the ground.

In the air over North Vietnam, gallant airmen, attacking with great restraint and precision in the face of intense anti-aircraft fire, have struck at the military facilities supporting aggression.

And on the rivers and seas, naval ships and craft have contributed their airpower and gun-power, and greatly reduced the enemy's ability to move, reinforce, or resupply.

An Assessment

How do we assess what these and many other operations have achieved? ... Here are some of the ways:

... Since the fall of 1965, enemy attacks have fallen off in size, frequency, and dura-

tion. Where regimental attacks were once common, and division attacks clearly pended, we now find ourselves fighting mostly companies and battalions. We estimate that their battalions are now averaging only one day's fighting per month. And where once the enemy could sustain combat for a month at a time, as in the Ia Drang, he now hits and runs to avoid disaster.

... In the past year, in hundreds of engagements, the enemy won no single major battle.

... Enemy captured on the battlefield rose from 6,000 in 1965 to more than 9,000 in 1966.

... Enemy killed in action — confirmed fatalities — increased a minimum of 35% in 1966.

... Enemy defectors under the Chieu Hoi amnesty program increased in 1966 by 82% over the preceding year.

... Weapons captured on the battlefield increased some 35% in 1966.

... Enemy supplies were captured or destroyed in large quantities. For example, in 1966, enough rice to support nearly 80,000 men for a year.

... For the first time, farmers in the I and II Corps Areas were able to harvest and keep most of their crops.

... Thousands of enemy trucks, railroad cars, and vessels have been destroyed from the air and sea. Much of his POL has gone up in flames. Approximately 20% of his total military forces are engaged in defensive programs. Some 300,000 of his men are engaged in repair, reconstruction, and relocation. The effectiveness of our air campaign is made increasingly clear by enemy propaganda complaints. And now, to escape it, and to seek more propaganda fuel, he is apparently turning his own population into hostages by placing military materiel and installations in the midst of heavily peopled towns and areas.

... Even "*revolutionary development*" — pacification — that program whose success is crucial to enduring security and progress for the Vietnamese, has taken forward steps. First of all, there is the relatively recent military protection which we have been able to give to this effort. Secondly, a major Vietnamese cadre training program is in full

swing, and 457 cadre teams of 59 men each are already at work. Thirdly, elements of the Vietnamese Army are being trained to complement the cadre teams and provide a shield behind which they can function. And finally, the enemy tide is beginning to recede.

In this later regard, recall the situation in 1965 when major U.S. units were first introduced. In the I Corps area, the Viet Cong had moved into the coastal lowlands and were beginning to isolate Da Nang and Hue. In the II Corps region, the Viet Cong and North Vietnamese units moved with total freedom and were on the verge of overrunning several provincial capitols. In III and IV Corps, the Viet Cong were moving unimpeded between War Zones C and D — then sanctuaries — and the critical Delta areas. In each of these areas now, the tide is running out on the enemy and the people are beginning, tentatively, to sense and respond to some degree of security.

The Achievements

This has been a long recitation of success. For each unit or effort I have mentioned, I could have cited others equally important and praiseworthy. On the other hand, I could have detailed the problems unsolved, some discouragements, and some failures. But there has been more than enough of pessimism and I wanted to balance the ledger.

What does it all mean, in sum?

First of all, it does not mean that we have won in Vietnam, or even that victory is close at hand. The enemy is bitterly determined, and supported by major outside powers. And military success is only one ingredient of ultimate victory.

In other, non-military spheres there have been achievements, too. The Government itself has shown energy and relative stability after surviving the stress of political turmoil in the spring of 1966. The free election, and the subsequent deliberations of the Constituent Assembly are hopeful omens. The Manila Conference brought a new measure of unity, resolve, and purpose to free Asia. But major barriers, internal and external, still stand in the way of prosperous peace for the Vietnamese.

VIETNAM REPORT

(Continued from Page 30)

To me, our military achievements mean these things:

... The enemy's chance for military victory is gone.

... The enemy's freedom to steal, bully, and terrorize has been reduced.

... The North Vietnamese have now learned that there is an increasing toll to pay for aggression.

... The South Vietnamese now know that security is more than a dream, and tangible opportunities for a promising future have come into view.

... Americans have committed themselves to a principle in Vietnam. They have worked with success, and fought with honor to sustain it. In a brief span of time, they have achieved much militarily — the first task — and the door is now open to success in other fields. In an editorial last fall, *The Economist* discussed the influence which America was successfully exerting against the communists in Asia, particularly in Vietnam. That distinguished British journal observed: "Five years ago a stable south-east Asia looked like a pipe dream. Now there may be a chance of bringing peace to that shattered region." *The Economist* added that "...the greatest contribution has been made by the American deployment in Vietnam." I think there is this chance for stability and peace, and I agree that this is largely the achievement of our men in Vietnam.

The need, now and in the future, is for persistence and determination. There is a bit of old Arabic philosophy which is pertinent:

"Nothing in the world can take the place of persistence. Talent will not; nothing is more common than unsuccessful men with talent. Genius will not; unrewarded genius is almost a proverb. Education will not; the world is full of educated derelicts. Persistence and determination are omnipotent."

What we have done in Vietnam, especially in the past year-and-a-half, is to make it possible for freedom to triumph. If we determine to persist, the recent past can be prologue to victory.

DURING the memorable 21 days of *Operation Attleboro*, the commanders, pilots, and air crews of the 12th Combat Aviation Group commanded by COL Potter Campbell flew day and night, in all weather, running up the fantastic total of 37,425 sorties in 15,658 flying hours. This meant catching only intermittent sleep between sorties beside their aircraft at forward bases during these weeks.

The three aviation battalions of the 12th Group which achieved this record were the 11th commanded by LTC Joseph B. Starker, the 145th commanded by LTC Walter F. Jones, and the 222nd commanded by LTC Athol M. Smith.

Fifty Battalions!

Over 46,000 troops and 6,404 tons of combat-essential cargo were flown into battle from the forward air strips. This amounts to moving the equivalent of 50 Infantry battalions, plus many battalions of Artillery, from point to point on the battlefield! Most of the supplying was done in the first key 13

days of the action. By far the largest part of this troop displacement was done using UH-1D helicopters which can carry only eight troops.

High Survivability

Eight aircraft were hit by enemy fire, of which three helicopters were forced to make emergency landings. Due to the extraordinary survivability of the helicopter, however, and the ability of the Army pilots to auto-rotate to safety even when the aircraft is badly hurt, no further casualties were sustained in these forced landings.

Aircrews averaged 127 hours per man during the 21-day period. Over 30% of the crews flew more than 140 hours with one pilot recording a high of 183 hours. About 25% of the flight time for all aircrews was flown at night in and out of tactical landing zones as well as in to various staging areas and pickup zones. Although the weather factor sometimes caused slight delays, the instrument training program developed with-

ATTLEBORO!

by LTC Samuel P. Kalagian, 12th Combat Aviation Gp.



in the group paid rich dividends. In spite of the lack of navigational aids and golf-course type landing zones, the notorious War Zone C jungle area became the private hunting preserve for the armed helicopter teams as well as the gunners on the "slicks". Enemy troops, structures, and sampans were destroyed in record numbers.

Field Decorations

The heroic performances of the aircrews of the 12th Combat Aviation Group as well as those from the supporting companies from the 17th Combat Aviation Group, the 170th Aviation company, were recognized by BG Seneff, Commanding General, 1st Aviation Brigade who personally awarded 130 deco-



HIGH MAN
Captain Paul L. Joplin, Artillery, who flew 183 hours during a 21-day period in Vietnam. His unit, the 173rd Assault Helicopter Company, a part of the 12th Aviation Group, flew in support of Operation Attleboro. The Army Aviator had flown 615 hours since entering the country on September 15, 1966.
(*Exclusive)

rations in the field during various phases of the operation. The CG, 1st Infantry Division as well as the South Vietnamese government also presented the various aircrews with a number of combat decorations in appreciation of the outstanding combat aviation support rendered to their units. For the first time, maintenance personnel from every unit were singled out for awards for their devotion to duty in maintaining over 70% of their aircraft flyable and available even though the flying hours programmed was exceeded 100%.

Without question, *Operation Attleboro* was recognized throughout II FFV as a major triumph of Army air mobility over a determined enemy fighting on his own home ground. Training, professionalism, and utter devotion to duty gave Army aviation one of its finest hours.



COL Raymond P. Campbell (left), CO, 12th Combat Avn Gp, admires MAJ John C. Bahnsen, after awarding him the Bronze Star, Air Medal (12th thru 16th OLC), Purple Heart, and the Vietnamese Cross of Gallantry. The Army Aviator also holds the Silver Star and the DFC for Vietnam actions.



A newly established Aerial Observer School at the 3rd Brigade Task Force, 25th Infantry Division (Pleiku) trains students to direct artillery and recon missions from the air. Here students receive a briefing on the OH-23 helicopter, one of two aircraft they'll employ.
(*Exclusive)



Assuming command of the 222nd Aviation Battalion, LTC Thomas E. Thompson (center) is presented with the epaulets of command by BG G. P. Seneff, Jr. (left), 1st Avn Bde Comdr, and COL Raymond P. Campbell, 12th Avn Gp Comdr. The January 5 Change of Command Ceremony took place at Vung Tau.
(*Exclusive)

As the world's attention was focused on Cape Kennedy, Houston, and the astronauts circled the globe in a Gemini capsule, a small group of Army aviation personnel at Fort Benning, Georgia, did their part to insure the success of the mission.

The mission of the Army personnel was to assist in the recovery of the Gemini astronauts, a joint operation with the U.S. Air Force in which UH-1D helicopters were used to reach areas inaccessible to fixed wing airplanes. The recovery team's sphere of operations encompassed most of the African continent and surrounding land masses, or any other area, into which Rescue Control ordered them to deploy.

Personnel for Gemini 8, 9, 10, and 11 missions were provided by the 44th Aviation Battalion of the 10th Aviation Group at Fort Benning, Georgia. Most of the aviators, crew chiefs, mechanics, and UH-1D helicopters were supplied by the 181st Aviation Company of the 44th Aviation Battalion.

Crew Selection

The support for a Gemini mission generally began with a warning order received by the 10th Aviation Group. Immediately, a crew was selected for the long trip. Basic requirements called for experienced aviators and well trained, skilled enlisted men. Although Gemini 8 called for three aviators (one to be a backup) and two crew chiefs per helicopter deployed, later support mis-

sions were revised to delete the back-up aviator and add another crew chief.

Following crew selection, all the required equipment was brought together from resources within the 10th Aviation Group and Fort Benning. Although most of supplies were within Army inventory, one item, 48 board feet of mahogany, was purchased in Nigeria on Gemini 8 to assist in off-loading. It was used again and again on subsequent missions.

The heaviest and bulkiest item to be prepared was an air-droppable package of four 55-gallon fuel drums, with cargo parachute, to be used to extend the range of the UH-1D.

Due to the mobile nature of the mission, the Army aviation personnel were required to receive a long list of immunizations, which protected them from almost anything. The men felt like pin cushions by the time the Post Dispensary got through with them.

Stowage Preparations

Two days prior to arrival of a USAF C-130 at Fort Benning, preparation of the UH-1D helicopter began. It was necessary to take off the main rotor, and all elements of the mast which protruded above the air intake. In addition, the elevators, the trailing tail rotor blade, and all antennas were removed. An accurate tally was kept of all parts because the crew knew well there would be no parts bin to dip into in the middle of the African desert. Needless to say, the helicopters were in tiptop shape prior to being dismantled.

GEMINI MISSION SUPPORT

By MAJOR EUGENE S. EMMER
10th Aviation Group

The only special "mission support" addition to the helicopters was the addition of two 150-gallon internal fuel tanks normally used for ferry missions. This increased the fuel range to about five and one-half hours, plus a reserve.

Tight Fit

When the C-130's arrived at Fort Benning's Lawson Army Airfield, the aircraft were loaded aboard without delay. However, it was an extremely tight fit to put a UH-1D into a C-130, and only practice and experimentation whittled down the loading time to about one and one half hours per helicopter. This included the time to tie down and secure not only the helicopter, but all the associated gear, such as the 55-gallon drums and the rotor blade boxes. The majority of the dismantled aircraft parts were put inside the Huey's cabin.

The mission for the Army crews actually began after arrival at Wheelus AFB in Libya. Here they received their first detailed briefing on rescue procedures from USAF Search and Rescue personnel. The next day the C-130's, each with its UH-1D and personnel, deployed to the selected standby point in Africa.

Rescue Concept

The concept of the rescue, as it concerned the Army, was for the helicopters to be used only in the event the Gemini capsule made an unscheduled landing on the African continent. In that event, and in coordination with African governments, the C-130 would land as close as possible to the astronauts. Then the UH-1D would be unloaded, assembled, and flown out to the capsule's location to make the actual pickup. When the astronauts were safe and secure, an attempt would be made to recover the Gemini capsule, also.

If the radius of action from the C-130 staging area to the downed capsule exceeded the Huey's capability, then drummed fuel would be air-dropped to the UH-1D along its flight route.

At the completion of the helicopter's mission it would be flown back to the C-130, again, taken apart, and loaded aboard to begin the long journey back to Fort Benning.



Michiko Takahara, a Ryukyuan employee at the 2d Logistical Command's spectrometric oil analysis lab in Okinawa, opens mailbag containing oil sample from aviation companies in Vietnam. The lab analysis monitors the metal particles in the oil to detect engine trouble in advance. (★Exclusive)



MAJ William D. Ray (right) is congratulated by COL Wallace R. Buelow, Dep Avn Off, Hqs, USARV, on receiving the Legion of Merit at January 9 ceremonies. Since rotated, Ray was cited for his combined service as Deputy Airfield Comdr at Vinh Long and staff duties at Hqs, USARV. (★Exclusive)



Huge stacks of rice and other personal belongings await loading aboard an Army Chinook during the complete evacuation of the VC-dominated village of Ben Suc during Operation Cedar Falls. Choppers of the 147th and 178th ASH Companies assisted the 1st Inf Div in the evac mission that began Jan. 11.

Clips!

Tourists: People who travel thousands of miles to take a picture of themselves in front of their car.

Self-Control: Leaving the supermarket with only the items on the shopping list.

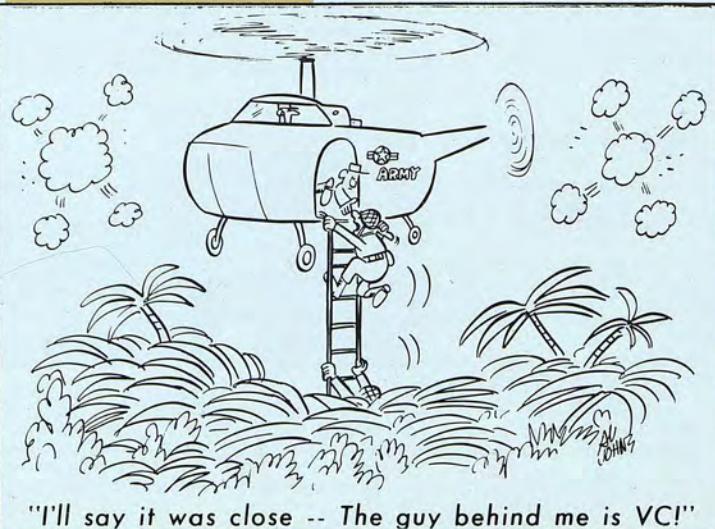
Economist: An expert who knows more about money than the people who have it now.

Tact: The ability to give the other fellow a shot in the arm without letting him feel the needle.

AIR FORCE REVIEW



*"Are you sure this was
an Army tradition?"*



"I'll say it was close -- The guy behind me is VCI!"

CHANGES OF ADDRESS

PCS



COLONEL

BARFOOT, Van T.

BONASSO, Russell P.

LYONS, Thomas L.

PARHAM, Douglas F.

PEYER, Gustave A.

RICHEY, Thomas B.

SAVILLA, Roland

TOWNSEND, James O.

LTC

ASBURY, Harold D.

ATHHEY, Clifford S.

BELL, John E.

BOWMAN, James E.

BURRUS, Robert H.

CLARKE, Arthur M.

COOK, Morris G.

CROOKS, Eugene F.

DALY, Thomas B.

DUNN, Thomas M. Jr.

DYER, Robert A. J. Jr.

LTC

GOULDING, Melvin K.

HARRIS, Brady R.

HYMAN, Robert D.

JARDEN, Alfred B.

JENSEN, Frank L. Jr.

JOHNSON, Clifford E.

JOHNSON, Lawrence H.

KEENAN, Daniel R.

KING, Edward J. Jr.

KING, Garland B.

KNOWLES, Robert B.

KOMAR, George

LABRODE, Richard E.

MCDANIEL, Harry T.

MIERSWA, Myles H.

MOORE, Francis D.

MUKAEDA, Richard K.

MULLIGAN, Donald E.

NEWPORT, Elswick

NUTTALL, Richard W.

BONASSO

LTC

PERKINS, Thomas F.

PONDER, William R.

PRATER, Robert M.

RAWLINGS, Harry E.

REINHARDT, John A.

SANDERS, Neal W.

SMALL, Thomas H.

SMITH, Carroll W.

SMITH, Charles L.

SMITH, Howard C.

STEARNS, Robert D.

TEAGUE, Jerry L.

THOMPSON, Jack H.

ULERY, Vincent L.

WATERBURY, Joseph W.

WILKINS, Thomas C. Jr.

WILLEY, Donald E.

MAJOR

ALTON, Gary O.

ANTROSS, Richard C.

PEYER

MAJOR

ARNOLD, Robert W.

AYERS, Robert C.

BAGLEY, Robert T.

BAKKEN, Clarence O.

BALL, Donald A.

BASOM, Darrel W.

BEAM, James D.

BEATTY, James W.

BELL, Lawrence A.

BENJAMIN, William J.

BEZREH, Anthony A.

BILLMAN, Ervin L.

BISHOP, James

BLAKE, Kenneth N. Jr.

BOGARD, Bobby E.

BRANDON, William D.

BRINKLEY, Edwin T.

BRIONES, Ronald S.

BROMAN, Ralph W.

CHANGES OF ADDRESS-PCS	MAJOR	MAJOR	MAJOR
BROPHY, Edward R.	FOWLER, Robert M.	JUNKO, Allen L.	MORAN, John F. Jr.
BROUGHTON, Robert L.	FRANCE, Paul W.	JUNOT, Arthur J.	MORRILL, George H.
BUCHANAN, Paul J.	FROELICH, James W.	JUTZ, Donald G.	MOTES, Clyde L.
BURNISON, George E.	GAFFNEY, James J.	KAHALEKULU, Benj. I.	MUNROE, Gary W. Sr.
BYRD, Roger D.	GALLA, Donald S.	KENDALL, Howard A.	MURPHY, John A.
CALDWELL, Richard D.	GALLIHER, Kay D.	KINCAID, Jack D.	NEU, George T.
CARTER, Harold M.	GLOVER, Leo M.	KING, Dewey M.	NORTHRIDGE, Henry R.
CARTER, William C.	GOFF, Richard D.	KUHN, Robert J.	OAKES, Keith W.
CHAMBERS, Harry W.	GRAHAM, Robert L.	LANG, William F. Jr.	OAKLEY, Eldon B.
CHOAT, B. J.	HAND, Lee M.	LAUTZENHEISER, R. D.	PACE, Daun A.
CLEMENTS, John K.	HATHCOCK, Austin W.	LEACH, Bertram G.	PARLAS, Joseph L. Jr.
CONNELL, Thomas E.	HEIKKINEN, Kenneth L.	LILIKER, Thomas W.	PASSANO, John D.
CORLISS, Reginald H.	HENDERSON, James A.	LUNDIN, Keith E.	PATNODE, Clarence A.
COTTER, Paul L.	HENDRICKSON, Donald E.	LUSTER, Albert B.	PAULK, Charles M.
CUMMINS, Clark H.	HERBERT, Bentley J.	MACHEN, Bobby	PEACHEY, William N.
DeDAVIESS, Osceola	HERTZOG, James E.	MARVIN, Harold A.	PETERSEN, Darwin A.
DICKINSON, Roy B.	HILL, Jack D.	MCALL, Leroy W.	PETERSEN, Gerald L.
DIMSDLE, Arthur	HOEFENER, James R.	MCDONALD, James A.	PHILLIPS, Jack R.
DOTSON, Larry D.	HOFFMAN, Glenn F.	McFADDEN, Louis P.	PLAMONDON, Robert P.
DYER, Gerald D.	HOLASEK, Ronald S.	MCKENNEY, Hubert F. Jr.	POPE, John B.
FLEMING, Hewell D.	JAMBON, Ted R.	MILLER, Billy G.	PROVENCHER, Conrad J.
FLINT, Robert W.	JOINER, Jack D.	MILLER, Frank H.	REDDELL, Eugene B.
	JONES, Clynne T.	MITCHELL, James L. Jr.	RHEIN, John H.
	JUDY, Jerry E.	MIYAMOTO, A. A.	RICE, Donis E.

EDWIN S. BRAGUE, JR.

First Lieutenant Edwin Steven Brague, Jr., an Army Aviator assigned to the 17th Aviation Group, died during hostile action in Vietnam on January 7, 1967. He is survived by his widow, Mrs. Barbara Ann Brague, [REDACTED]

AARON L. BRAM

Captain Aaron L. Bram, an Army Aviator on assignment to the 452nd Signal Detachment, died as a result of injuries received in the crash of a UH-1D helicopter in Vietnam on December 17, 1966. He is survived by his widow, Mrs. Brenda J. Bram, [REDACTED]

LARRY F. CASTLE

Warrant Officer Larry F. Castle, on assignment with the 116th Aviation Company, died as a result of injuries received in the crash of his UH-1B helicopter. The accident occurred in Vietnam on November 28, 1966. He is survived by his widow, Mrs. Nell R. Castle, [REDACTED]

THOMAS B. CAWTHRAY

Warrant Officer Candidate Thomas B. Cawthray, a student pilot, assigned to the 1st Warrant Officer Candidate Company, Fort Wolters, Texas, sustained fatal injuries in the crash of a helicopter. The accident took place near Mineral Wells, Texas, on November 29, 1966. He is survived by his parents, Mr. and Mrs. William N. Cawthray, Fullerton, Pennsylvania.

LINUS G. K. CHOCK

Captain Linus G. K. Chock, an Army Aviator on assignment to the 183rd Aviation Company, died during hostile action in Vietnam on November 29, 1966. He is survived by his widow, Mrs. Jung Kang Chock, [REDACTED]

ROGER H. COYE

Lieutenant Colonel Roger H. Coye, died as a result of injuries received in Vietnam. At the time of his death, December 7, 1966, he was a patient at Brooke Medical Center, Fort Sam Houston, Texas. He is survived by his widow, Mrs. Barbara A. Coye, Morris Street, Norfolk, New York.

CARL J. CROW

Chief Warrant Officer Carl Junior Crow, on assignment with the USAAVNS Regiment, Fort Rucker, Alabama, died as a result of injuries received in the crash of a UH-1A helicopter. The

OBITUARIES

accident occurred at Fort Rucker on December 20, 1966. He is survived by his widow, Mrs. Betty J. Crow, [REDACTED]

ROBERT C. FERRIS

Warrant Officer Robert Clark Ferris, an Army Aviator assigned to the 1st Infantry Division, sustained fatal injuries in the crash of an Army aircraft. The fatal accident took place in Vietnam on January 14, 1967. He is survived by his parents, Mr. and Mrs. Earl C. Ferris, [REDACTED]

DONALD HARRISON

Warrant Officer Donald Harrison, an Army Aviator on assignment to the 17th Aviation Group, died during hostile action in Vietnam on December 2, 1966. He is survived by his father, Mr. James Harrison, Sr., 99-19 [REDACTED]

JAMES M. JOHNSTONE

Captain James Montgomery Johnstone, an Army Aviator assigned to the 131st Aviation Company, originally reported missing in action, died during hostile action on November 19, 1966, in Vietnam. He is survived by his widow, Mrs. Jan L. Johnstone, [REDACTED]

WALLACE A. KELL

Captain Wallace Akin Kell, an Army Aviator on assignment with USAAVNS Regiment, Fort Rucker, Alabama, died as a result of injuries received in the crash of a UH-1A helicopter. The accident occurred at Fort Rucker on December 20, 1966. He is survived by his widow, Mrs. Annette J. Kell, [REDACTED]

ARTHUR R. LeGROW, JR.

First Lieutenant Arthur Russell LeGrow, Jr., an Army Aviator assigned to the 1st Infantry Division, sustained fatal injuries in the crash of an Army aircraft. The fatal accident took place in Vietnam on January 14, 1967. He is survived by his widow, Mrs. Jane LeGrow, c/o Coffey, [REDACTED]

ALBERT J. McAULIFFE

First Lieutenant Albert Joseph McAuliffe, an Army Aviator on assignment to the 1st Cavalry Division (Airmobile), died as a result of injuries received in the crash of a UH-1D helicopter in

Vietnam on December 18, 1966. He is survived by his widow, Mrs. Wendy Jane McAuliffe, [REDACTED]

JOEL W. McDONNELL

Warrant Officer Joel William McDonnell, an Army Aviator assigned to the 9th Cavalry, 1st Cavalry Division (Airmobile), sustained fatal injuries when his UH-1D helicopter crashed in Vietnam on December 18, 1966. He is survived by his widow, Mrs. Darlene F. McDonnell, 1717 [REDACTED]

JESSE D. PHELPS

Chief Warrant Officer Jesse Donald Phelps, on assignment with the 1st Cavalry Division (Airmobile), reported missing in action on December 28, 1966, is presumed to have died December 29, 1966 in Vietnam. He is survived by Mrs. Dolores A. Phelps, [REDACTED]

EDGAR J. SAFFLE

Captain Edgar Joe Saffle, an Army Aviator assigned to the 145th Aviation Battalion, sustained fatal injuries in the crash of a UH-1D helicopter. The fatal accident took place in Vietnam on January 17, 1967. He is survived by his widow, Mrs. Janet K. Saffle, 833 East Elm Street, Springfield, Missouri.

JOHN W. SCOTT

Warrant Officer Candidate John W. Scott, on assignment to the Warrant Officer Candidate Battalion, USAAVNC Troop Brigade (Provisional), died as a result of injuries received in the crash of a helicopter at Fort Rucker, Alabama in November, 1966. He is survived by his widow, Mrs. Ingeborg M. Scott, [REDACTED]

KENNETH L. STANCIL

Chief Warrant Officer Kenneth Leon Stancil, assigned to the 1st Cavalry Division (Airmobile), reported missing in action December 28, 1966, is presumed to have died December 29, 1966 in Vietnam. He is survived by his parents, Mr. and Mrs. Claude E. Stancil, [REDACTED]

ROBERT G. STRANGE

Chief Warrant Officer Robert Greer Strange, on assignment with the 147th Aviation Company, died as a result of injuries received in the crash of an Army aircraft. The accident occurred in Vietnam January 15, 1967. He is survived by Mrs. Hilda F. Strange, [REDACTED]

DANIEL A. SULANDER

Warrant Officer Daniel Arthur Sulander, an Army Aviator assigned to the 17th Aviation Group, died during hostile action in Vietnam, in December 1966. He is survived by his grandmother, Mrs. Ella Bookler, [REDACTED]

JERRY R. TAYLOR

First Lieutenant Jerry R. Taylor, Headquarters, XVIII Airborne Corps, Fort Bragg, North Carolina, on temporary duty at the U.S. Army Aviation School, Fort Rucker, Alabama, sustained fatal injuries in the crash of a UH-1B helicopter on November 25, 1966. He is survived by his parents, Mr. and Mrs. Amond Taylor, [REDACTED]

RICHARD A. VEON

First Lieutenant Richard A. Veon, 155th Aviation Company, an Army Aviator on temporary duty at the U.S. Army Aviation School, Fort Rucker, Alabama, died as a result of injuries in the crash of a UH-1 helicopter on November 25, 1966. He is survived by his widow, Mrs. Susan L. Veon, [REDACTED]

BILLY L. WEST

Warrant Officer Candidate Billy L. West, assigned to the Warrant Officer Candidate Battalion, USAAVNC Troop Brigade (Provisional), sustained fatal injuries when his helicopter crashed at Fort Rucker, Alabama, in November 1966. He is survived by his widow, Mrs. Olga Y. West, c/o Mrs. Orville Martin, [REDACTED]

CHARLES WHITE

Mr. Charles White, a civilian instructor for Southern Airways of Texas, Inc., at the U.S. Army Primary Helicopter School, Fort Wolters, Texas, died as a result of injuries received in the crash of a helicopter. The accident occurred near Mineral Wells, Texas, on November 29, 1966. He is survived by his widow, Mrs. Charles White, [REDACTED]

THADDEUS E. WILLIAMS, JR.

Captain Thaddeus E. Williams, Jr., an Army Aviator assigned to the 20th Aviation Detachment (ASTA), reported missing in action on January 9, 1967, is presumed to have died January 10, 1967. He is survived by his father, Mr. Thaddeus E. Williams, Sr., [REDACTED]

CHANGES OF ADDRESS-PCS	MAJOR	CAPTAIN	CAPTAIN
SANDS, Thomas A.	WHITED, James L.	BURT, John E.	FISCHER, John C.
SAWVELL, Vernon L.	WHITTEN, Millard	CARROLL, William F.	FOURNIER, Albert L.
SHAW, Samuel M.	WILLIAMS, Billie G.	CARTER, Norman D.	FOURSON, George R.
SLOAN, Charles W.	WILLIAMS, William H.	CATRON, George R.	FUKS, Joseph A.
SPENCER, Charles A.	WINCE, Sherman F.	CHAPLIN, Robert D. III	FUNK, David L.
STAMPER, James M.	YANAMURA, Kenneth K.	CLARK, Charles F.	GAETJE, Frank C.
STARKEY, James E.	ZELLMER, Harry J.	CLINTON, James E. III	GENTLE, Howard B. Jr.
STERNAT, Robert F.	ZUGSCHWERT, John Fred	CLUBB, Edwin R.	GEORGE, Robert C.
	CAPTAIN	COATES, Thomas E.	GREENWOOD, Roger H.
STEVENS, Ronald J.	ADDY, B. W. Jr.	CRAMER, Carl L.	GRUSHETSKY, Philip J.
STEVENSON, Carl B.	AMIDON, Bert C.	CUNNINGHAM, David E.	HARO, Alfonso A. Jr.
STEWART, Donald B.	ANDERSON, Richard K.	DAVID, Ronald C.	HARRIS, Lyman B. Jr.
STONE, Howard F.	ARMSTRONG, John E.	DEAN, Edwin B.	HATCHER, John W.
STOUTAMIRE, David F.	BAKER, Ronald B.	DENNISON, John C.	HATTORI, Masaki
THIRING, Florian A.	BALBERDE, Alexander	DOUBRAVA, Roy G.	HEATH, Roderick C.
VEDITZ, Raymond P.	BARATI, Stephen G.	DRUYOR, Frank A.	HIBBS, William N.
VOELKEL, Eugene	BARKER, Jack L.	DUNN, Carle E.	HOEFLER, Leroy H.
WALKER, Milton H.	BARRY, John W.	DUNNINGTON, Warren H.	HOGAN, James H.
WALL, James A.	BERRY, Franklin W.	EBERT, Marlin J.	HOLMBERG, Richard J.
WEAVER, John M.	BOLAN, James P.	ELLINGTON, Roy G.	INGLETT, Robert A.
WEBER, Victor A.	BRANDT, Robert J.	ERKINS, Moses	IRONS, Richard L.
WEBSTER, John J.	BUDIG, Sherwood R.	EVANS, Robert D.	JACKSON, Thomas C.
WELCH, Larry L.	BURKE, James A.	FASCHING, George H.	JAMES, Robert B.
WEST, Vaughn R.	BURNETT, Bobby R.	FEIT, John E.	

**CHANGES OF
ADDRESS-PCS**

JENKS, Allen R.

JONES, Alvin T.

KALER, William R.

KAMMER, Karl P. Jr.

KEEFER, Gary L.

KELLEY, Robert D.

KELLIM, Ronald R.

KINGMAN, Dan C. Jr.

KIRSCH, Francis J.

KLIPPEL, Philip B.

KOPECKY, Robert J.

LAMBERT, Alexander L.

LANE, John H.

LATIMER, David M.

LAZDOWSKI, Walter P.

LEYVA, Ramon D.

LINDSEY, David H.

LINEBERRY, James W.

MADIGAN, John E.

MAFFETT, Fletcher H.

MANN, Douglas J.

MARK, James C.

CAPTAIN

MARSHALL, Walter D.

MCBRIDE, Fitz R. B.

McCULLOUGH, Johnny L.

McKINNEY, Boyce C.

McNUTT, Joseph K.

MEISSNER, Kenneth E.

MEYER, Thomas A.

MILLER, Gary A.

MILNER, Thomas W. III

MOORE, Charles L.

MOUW, James W.

MURPHY, Galen A.

MURRAY, David B.

NEUBAUER, Jacob D. III

OAKES, William E.

OVERCASH, James R. Jr.

PATLA, Norman I.

PETERSON, Frank W.

PIERCE, Dale W.

RAINEY, John A.

RASCHKE, Phillip E.

RETZLAFF, Donald H.

ROACH, Myrtis Jr.

ROBERTS, Forrest E. Jr.

CAPTAIN

RODDY, Francis J. Jr.

ROEDER, Helmut A.

ROWLAND, Jerry D.

SANDERS, Bobby J.

SASS, Fred W.

SCHMITZ, Leo E.

SERRATT, Jerry W.

SHUNK, William A.

SMITH, Billy V.

SMITH, Danny R.

SMITH, Duane N.

SMITH, Horace M.

SMITH, Lee C. Jr.

SMITH, Peter T.

SPANJERS, Leonard J.

SPENCER, David G.

SPISAK, John J.

STANFORD, Harold D.

STANLEY, Norman L.

STEWART, Walter B.

STOKES, John H. III

STUMPFF, Steven O.

TAYLOR, James M.

TEAGUE, Gene A.

CAPTAIN

TERRY, Frederick G.

TERWILLIGER, Wm. B.

THOMAS, Edward M.

THURMOND, George H.

TIGGES, Kenneth D.

TUCKER, Jackie L.

VINSON, Billy R.

WADDELL, Roger W.

WAGNER, Ronald E.

WEAVER, John W.

WEST, Carl L.

WILDE, William A.

WILLMORE, George A.

WILLMART, Gerald K.

WOOD, Douglas J.

WOODS, Eugene R.

WOSICKI, Walter J.

WRIGHT, Wayne W.

LIEUTENANT

BECKLEY, James W.

BOGLE, Charles S.

BUCKINGHAM, Robert L.

DAVIS, Walter W. Jr.

GARRISON, William E.

LIEUTENANT

HARRELL, Gary W.

HEINS, Walter D.

HOLLOWELL, Paul C. II

HONAMAN, J. Craig

JONES, Warren B.

KELLY, Douglas J.

LAWSON, Clifford T. Jr.

MARTIN, Larry D.

MORTENSON, John E.

OVERSTREET, Larry M.

ROBERSON, Hugh B.

SODAITS, George F.

STONE, Haskel P. Jr.

STURDEVANT, Joseph L.

TANNER, Warren M.

CW2 - CW4

AKERS, Robert E.

BOYER, James A.

BROWN, Charles E. Jr.

BRUCE, Bobby G.

BURGESS, William C.

CALLOWAY, Francis S.

COKER, Clayton L.

COWAN, Sidney C.

CW2 - CW4

CRUZ, Tomas Q.

D'AGOSTINO, Robert L.

DAVIS, David P.

FERRANTI, Delfo J. Jr.

FOSTER, Marshall P.

GIBBS, William J.

GILSDORF, Ronald B.

GOWAN, Paul E.

HAGEN, Duane L.

HAMPTON, Valentine

HEATH, Leonard P.

HIERHOLZER, Anthony G.

HILDRETH, Donald P.

HITT, Billy G.

IVEY, William D.

KEEVEN, Louis F.

KING, Thomas J.

KRIENKE, Albert F.

KRIVENSKY, George R.

LEONARD, James C.

LEONETTI, Gerald R.

LORETT, Robert M.

LUDWIG, Dean R.

MARSH, James W.

CW2 - CW4

MCCARTT, J. V.

MCNAIR, Charles T.

McTIER, Lindy D.

MURRAY, James T.

NYSEWANDER, Frank T.

O'DONNELL, William J.

PIETY, Richard L.

PINARD, Joseph L. R.

PUFFAFF, Clifton A.

RAGSDALE, Robert M.

RANSOM, Arthur H.

RODRIQUEZ, Mike

SCHOMMER, John G.

SCHOMP, Donald D.

SCHUG, Verdell K.

SMITH, Charles H. Jr.

SNYDER, Robert F.

VERBEEK, Gerald D.

VLECK, Burton J.

WAGGENER, Thomas E.

WALSH, John A.

WALTON, Bill C.

WELCH, Raymond W.

WHITE, Ronald L.

**CHANGES OF
ADDRESS - PCS**

WILLIAMS, Robert L.

WILSON, H. D.

WO1

ANGLIN, Charles L. III

BARTLETT, Paul E.

BOYD, Gerald D.

BROWN, Robert L.

CALDWELL, Robert B.

CAUFMAN, James L.

CLARK, James E.

CRUMPLER, Leland L.

DAY, James F.

DEVRIES, Richard W.

DOHRING, Max D.

DYER, Orrin L. Jr.

FENSTENAKER, David M.

FERGUSON, Frederick E.

FISCHER, Robert E.

FULP, Herman G. Jr.

GRAYBILL, Raymond N.

GREENWALT, Alvin E.

HALL, Jerry W.

**CHANGES OF
ADDRESS - PCS**

HAM, Lance H.
[REDACTED]
HARRIS, Dennis P.
[REDACTED]
HELTON, David E.
[REDACTED]
HOW, Mark H.
[REDACTED]
IDELL, William D.
[REDACTED]
JOHN, Richard L.
[REDACTED]
JOHNSON, John K.
[REDACTED]
JONES, George H.
[REDACTED]
KAPPES, John J.
[REDACTED]
KAVANAUGH, John W. Jr.
[REDACTED]

WO1

ROBBINS, Timothy P.
[REDACTED]
SCHMIDT, John L. III
[REDACTED]
SCHOEFER, Alwin Jr.
[REDACTED]
SMITH, Charles W.
[REDACTED]
SMITH, Richard K.
[REDACTED]
STEVENS, Grady E.
[REDACTED]
TEMPLETON, H. R. Jr.
[REDACTED]
THOMPSON, Donald T.
[REDACTED]
TIFFANY, William A.
[REDACTED]
WINSTANLEY, William R.
[REDACTED]

WOC

CHAPMAN, Raymond C. Jr.
[REDACTED]
DeCURTIS, Joseph A.
[REDACTED]
DICKSON, Bill R.
[REDACTED]
ENYEART, Robert D.
[REDACTED]
FRYE, Donald L.
[REDACTED]
GRANT, Gregory A.
[REDACTED]
GREEN, Kenneth D.
[REDACTED]
HENRY, Joseph C.
[REDACTED]
HERNDON, Carlton E.
[REDACTED]
HOLLIDAY, Donald B.
[REDACTED]
MacNEIL, Gregory B.
[REDACTED]
MUSICK, Conley C.
[REDACTED]
OGLE, William C.
[REDACTED]

WOC

ORTON, Rodney L.
[REDACTED]
PARR, Bernard A.
[REDACTED]
PEARCY, Thomas Love
[REDACTED]
SABAKA, Alan D.
[REDACTED]
SLAYDEN, Dan J.
[REDACTED]
SMITH, Donald L.
[REDACTED]
SPARKS, Edward N. Jr.
[REDACTED]
STUNDA, Thomas R.
[REDACTED]
WEISBERG, Stuart E.
[REDACTED]
MSG
HESSE, Walter L.
[REDACTED]
SSG
LOMAS, Hugh D.
[REDACTED]
WOOD, Kenneth R.
[REDACTED]
SP6
MRUCZKOWSKI, Leon Jr.
[REDACTED]
64
WAY, Bernard J.
[REDACTED]
SPS
BARNUM, Arthur W.
[REDACTED]
ASSOCIATE
BIGELOW, Miss Ann M.
[REDACTED]
BRINTNALL, Ora D.
[REDACTED]
CRAWFORD, Chas. C. Jr.
[REDACTED]
DICKINSON, John R.
[REDACTED]

ASSOCIATE

DONAHUE, Joseph D.
[REDACTED]
DOSS, Wallace M.
[REDACTED]
LITTLE, R. C.
[REDACTED]
MATTSON, Walter
[REDACTED]
McGREGOR, Roy H.
[REDACTED]
MULLEN, Thomas H.
[REDACTED]
040
NETTLETON, J. G. Jr.
[REDACTED]
SCHETTINO, John C.
[REDACTED]
6206
SCHUCK, Howard A.
[REDACTED]
SCOTT, Charles M. Jr.
[REDACTED]
SEELEY, John S.
[REDACTED]
SOKELAND, Mrs. Helen M.
[REDACTED]
WALLACE, Henry B.
[REDACTED]
WATTS, Wayne O.
[REDACTED]
WELLING, Charles H. Jr.
[REDACTED]
RETIRING
EVERS, Raymond R., COL
[REDACTED]
EWING, Paul R., MAJ
[REDACTED]
JOHNSTON, Jas. R., LTC
[REDACTED]
KAMARAS, John G., LTC
[REDACTED]
REYNOLDS, H. E., LTC
[REDACTED]
REYNOLDS, Robt. H., LTC
[REDACTED]
SABEY, Walter D., CW3
[REDACTED]
WANN, Henry S., LTC
[REDACTED]



DENHART



LOWE

Three AVCOM Personnel Killed in Plane Crash

Two veteran Army aviators and the pilot were killed in the crash of a leased aircraft near Armonk, N.Y., on January 25, while en route from St. Louis, Mo., to Bridgeport, Conn.

The fatalities included Lieutenant Colonel John F. Denhart, 49, CH-54A Flying Crane Project Manager at AVCOM; Lieutenant Colonel James V. Lowe, 47, his logistics officer; and Melvin H. Rorick, 44, a pilot assigned to AVCOM's Flight Operations Division.

The three men were headed for a CH-54A conference at the Stratford, Conn., plant of the Sikorsky Aircraft Division. The aircraft crashed within two miles of Westchester County Airport, N.Y., after being diverted from its intended landing at Bridgeport, Conn., because of heavy fog.

Denhart had served as CH-54 Project Manager since August 30, 1965, following earlier assignments with OCT and AMC. A Master Aviator, he'd completed a tour in Vietnam. Lowe was also a veteran of WW II and the Korean War, and held a Master Army Aviator rating.

Colonel Denhart is survived by his widow, Tina, of 217 Calverton Road, St. Louis, Mo.; a son, John Grant; and a daughter, Marta Ann. Colonel Lowe resided at 6630 Foxshire Drive, Florissant, Mo., and is survived by his widow, Florence, a daughter, Bonnie Rae; and a son, Thomas James. Rorick, a former chief warrant officer in Army aviation, is survived by his widow, Lorraine, of 3005 Kingsley Drive, Florissant, Mo.; a son, Terence; and three daughters, Mary, Erin, and Kelly.

A confidential, low-cost personnel service listing today's guaranteed job opportunities within the international aviation industry...

AIRCREW

AVIATION LISTING SERVICE

1 CRESTWOOD ROAD, WESTPORT, CONN. 06880 • (203) 226-0487

■ 129. SALESMAN-PILOT. Established coml hcptr operng co desires experd aggressive salesman to sell hcptr charter svc to indu concerns in eastern US w/emphasis on larger machines for construction application. Must be familiar w/hcptrs and their capabilities. Excell oppy for advancmnt to sales mgr or company officer. Moderate travel necessary. Some flyg desirable but not mandatory.

■ 115. AIRCRAFT SALESMAN. Major S.E. U.S. firm operng Piper distributorship and dealership seeks successful applicant to represent firm on sale of new & used Piper aircraft throughout asgd territory. Training period to be one year at modest salary, afer which applicant would be placed on drawing account plus commission.

■ 114. OPERATIONS MANAGER. Middle Atlantic R/W operator seeks experienced man for proposed scheduled helicopter airline utilizing twin-engine turbine equipment. State date of availability and desired salary.

■ 110. HELICOPTER MECHANIC. Tremendous oppy w/10-yr established Bell coml operator. 40-hr wk, non-union shop, company furnishes uniforms, 2-wks pd vac, life & hospitalz insurance. Min Reqs: A&P, hcptr exper, full tools, references. Right man may hold for own shop planned for large midwestn city. Immed hiring, salary w/incentive raises as ability grows.

■ Detailed information regarding the above job openings may be obtained by citing the job number and writing directly to AIRCREW.

■ ■ ■ ■ ■

As a job applicant, I wish to place a listing in the next AIRCREW Bulletin that will be mailed to over 1,600 aviation-oriented employers, and I've enclosed a \$5 check made payable to AIRCREW to cover the cost of this listing.

Please forward the AIRCREW Resume Form.

Name (Print) _____

Company _____

Address _____

City, State, Zip _____



AAAA CALENDAR

JANUARY, 1967

Lindbergh Chapter (St. Louis, Mo.). Professional dinner meeting with **COL E. P. Fleming, Jr.**, Commandant of USAPHS, Ft. Wolters, Tex., as Guest Speaker. Ruggeri's Restaurant. January 18.

Illesheim Chapter (Germany). Professional dinner meeting with film presentation. Illesheim EM Club. January 26.

Keystone Chapter (New Cumberland, Pa.). Professional-business meeting. Film presentation (AAAA Reel 67-3). New Cumberland Army Depot Officers Club. January 26.

Hanau Chapter (Germany). Combined business-social meeting; Chapter elections. Hanau Officers' Club. January 28.

Monmouth Chapter (Ft. Monmouth, N.J.). Professional meeting and dinner-dance with **LTC Frank L. Jensen, Jr.**, as Guest Speaker. Gibbs Hall, Ft. Monmouth, N.J. January 28.

FEBRUARY, 1967

Mount Rainier Chapter. Combined business-social meeting and dinner dance. Fort Lewis Officers' Open Mess. February 3.

Lindbergh Chapter (St. Louis). Professional dinner meeting with **Warren E. Necker** and **MAJ C. E. Nickolls** as Guest Speakers. Film presentation. Louis IX Room, Union Station. February 16.

Fort Bragg Chapter. Professional meeting and dinner-dance with **LTC Garald L. Waldron, OPO, D/A**, as Guest Speaker. Hodge Room, FBOOM. February 18.

Rhine Valley Chapter (Germany). Combined business-social meeting. Chapter elections. Dinner-dance. Military Room, Heidelberg Officers and Civilians Open Mess. February 24.

Mainz Chapter (Germany). Combined business-social

meeting. Franklin House, Mainz Officers' Club. February 24.

Richard H. Bitter Chapter (Corpus Christi, Tex.). Professional dinner meeting with **BG John L. Klingenhagen, ODCSLOG, D/A**, as Guest Speaker. Petroleum Club, Corpus Christi. February 24.

Sharpe Army Depot Chapter (Lathrop, Calif.). General membership business meeting. Chapter elections. Refreshments OTH. Sharpe Army Depot Officers Club. February 24.

MARCH, 1967

Army Aviation Center Chapter. Combined professional dinner meeting with **AUSA MG Delk M. Oden**, new CG of the U.S. Army Aviation Center, as Guest Speaker. NCO Club. 1830 hours. March 2.

Stuttgart Chapter (Germany). Combined business-social meeting. Chapter elections, Garmisch planning. Beer & bratwurst OTH. Boeblingen Officers' Club. 1930 hours. March 3.

National Awards Committee. Selection of 1967 AAAA Scholarship Recipients. Jefferson Room, Hospitality House, 0930 hours. March 3.

1967 AAAA Annual Meeting Committee. Second planning conference. Jefferson Room, Hospitality House, 1500 hours. March 3.

National Executive Board. Quarterly business meeting. Lee Room, Hospitality House, Arlington, Va. 0930 hours. March 4.

Fulda Chapter (Germany). General membership cocktail party to be held in Patton Hotel, Garmisch, Germany. 1830 hours. March 10.

SCIENCE FAIR SUPPORT

During February through May, 1967, the Army Aviation Association will support 187 state, regional, and area Science Fairs by providing a hand-lettered Certificate of Achievement to the youngster designated as having the most outstanding exhibit in aerodynamics, propulsion, or ground support techniques at a particular fair. In many instances, AAAA Chapter members will serve as voluntary judges and assist the local officials in the selection of an AAAA winner.



They know she'll crank up in seconds
without ground support of any kind!

Success of the airmobile concept in Viet Nam is due largely to the ability of helicopters to land and take off in remote areas without ground support.

In the Boeing-Vertol CH-47A *Chinook*, CH/UH-46A *Sea Knight*, and the Sikorsky CH-3C, CH-53A, and CH-54A *Flying Crane*, the rugged, compact Solar *Titan*® gas turbine engine is used as the auxiliary power unit. The *Titan* turbine APU provides power to start main engines and operate all hydraulic and electrical systems independent of ground support equipment.

For further information on Solar gas turbines, write: Solar, Department P-120, San Diego, California 92112.



*Titan APU—weight 70 lbs,
over-all length 26 inches*



SOLAR

A DIVISION OF INTERNATIONAL HARVESTER COMPANY

ARMY AVIATION

EDITORIAL AND BUSINESS OFFICES: 1 CRESTWOOD ROAD, WESTPORT, CONN. 06880

675

POSTMASTER: If this magazine is addressed to a member of the United States Military Service, whose address has been changed by official orders, it should be forwarded — except to overseas APO's — without additional postage. See section 157.4 of the postal manual.

"RETURN REQUESTED" applies in those instances wherein forwarding is not permissible. The publisher requests the return of the entire issue under the "RETURN REQUEST" provisions of the postal manual.



"Medic!"

The plea goes out, too often, in every war.

But now, the response has improved as brilliantly as the medical care which follows it.

Helicopter medical aid has reduced fatalities among the Vietnam wounded to less than one percent. Compared to above ten percent in Korea, where the helicopter was still something of a novelty.

The helicopter has won its spurs in Vietnam. It has become ubiquitous—ambulance, troop carrier, weapons system. Rugged and reliable.

With rugged and reliable engines. Eight out of ten helicopters in Vietnam are powered by Avco Lycoming gas turbines. These veterans have over 3,500,000 operational hours under their blades. Many of them in quick response to urgent pleas.

That's not the only reason we make our engines reliable. But it's a good one.

AVCO  **LYCOMING DIVISION**
STRATFORD, CONN.