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U. S. ARMY CONCEPT TEAM IN VIETNAM  
APO 143, San Francisco, California

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ACTIV-AM

31 December 1962

343700

- ⑦ Employment of OV-1 (Hawk) aircraft  
in Support of Counter-Insurgency Operations (C).

Short Title: ⑧ EWSCO [11]

- ⑨ MONTHLY REPORT NUMBER 2,

16 November - 15 December

1962.

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Monthly Test Report Number 2 -- Mohawk (C)

LIST OF ANNEXES (U)

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10. ANNEX J -- Photographs of Viet Cong (VC) activity.
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14. ANNEX N -- Precis of logistical information (Full information in supplement).
15. ANNEX O -- Distribution of report.

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SUBJECT: Monthly Test Report Number 2 - Employment of OV-1 (Mohawk) Aircraft in Counter-Insurgency Operations (16 November - 15 December 1962)(C)

TO: Sec Annex O

1. (C) General.

a. References:

(1) USMACV letter of 29 September 1962, Subject: "Test Plan, AO-1 (Mohawk) Aircraft for Province/Sector Surveillance in Support of Counter-Insurgency Operations (C)."

(2) USMACV message, J3 4213, subject: "Operational Employment of the 23d Special Warfare Aviation Detachment (Surveillance)".

(3) DA letter of 6 November 1962, AGM-P(H) 381 (31 Oct 62) DCSOPS, Subject: "Army Troop Test Program in Vietnam (U)."

(4) Monthly Test Report Number 1, Army Concept Team in Vietnam, Subject: "Employment of OV-1 (Mohawk) Aircraft in Support of Counter-Insurgency Operations", dated 30 November 1962.

b. Purpose of the test:

To test and evaluate the 23d Special Warfare Aviation Detachment (Surveillance) (23d SWAD) under field combat conditions to determine the adequacy and suitability of organization, equipment, missions, doctrine, tactics, procedures, and techniques for conducting counter-insurgency operations.

c. Test concept:

(1) Field tests are being conducted in South Vietnam (SVN) to support actual counter-insurgency operations as specified by COMUSMACV. During the entire test period the test unit has been in support of II RVN (Army of Vietnam) Corps. II Corps has requested the test unit to provide direct support to the following units, in the priority listed:

(a) 9th Division, Qui Nhon

(b) 47th Regiment, Tuy Hoa

(c) Railway Security Agency, II Zone

(2) The test unit performs missions in response to daily mission requests submitted by the supported units. The test Project Officer renders opinions on the type missions flown in support of RVN units to insure widest possible coverage of test objectives. Test requirements are subordinated to current operational needs.

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(3) Within the limitations imposed by its Rules of Employment (see reference 1a(4)), the test unit's activities reflect accurately the day-to-day observation and surveillance missions deemed most important by the supported units.

2. (C) Test Progress.

a. The test is considered to be approximately 40% complete. Several months will be required to verify and validate data obtained to date and to pursue developmental testing.

b. A summary of significant statistical data follows:

	<u>16-31 Oct</u>	<u>1-15 Nov</u>	<u>16-30 Nov</u>	<u>1-15 Dec</u>	<u>Total</u>
Number of combat support missions	21	66	67	95	249
Photo	13	31	11	17	72
Observation	3	7	28	34	72
Railroad reconnaissance	5	26	19	25	75
Night illumination	0	2	0	3	5
Leaflet drop	0	0	2	3	5
Convoy observation	0	0	6	1	7
Helicopter observation	0	0	9	12	21
Number of photographic prints delivered	1200	4500	1430	1700	8830
Number of times artillery adjusted	0	3	0	7	10
Number of aircraft hit by ground fire	0	1	0	1	2
Number of hits	0	2	0	2	4
Number of times hostile ground fire directed at aircraft observed by crew	0	3	2	2	7
Number of times hostile fire on aircraft reported by ground units in addition to above	0	2	0	0	2

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	<u>16-31 Oct</u>	<u>1-15 Nov</u>	<u>16-30 Nov</u>	<u>1-15 Dec</u>	<u>Total</u>
Number of times defensive fire delivered	0	3	2	2	7
Average number aircraft in working fleet (assigned minus EDP&crash)	5.5	5	5	5	
Average number of aircraft available daily	3.2	4.1	4.6	4.6	
Percent of working fleet available	58%	82%	92%	92%	
Total flight hours during period	115	222	161	222	720
Average daily flight hours by unit	7.2	14.8	10.8	14.8	
Hours per aircraft in working fleet (monthly rate)	42	88	64	88	

3. (U) Content and format of report.

a. Content: Much material published in Monthly Report Number 1 (reference 1a(3)) will not be repeated here. These monthly reports are intended to indicate progress and to provide for an orderly collection of data to be included in the final test report. Both monthly reports should be consulted for full knowledge of test activities to date.

b. Format: Annexes A through G cover the seven test objectives. Annex H contains II Corps advisor's evaluation reports. Annexes I and J contain maps and photographs. Annexes K through N give an indication of material covered at length in a supplement to this report. Addressees having an interest in further details will be furnished copies of the supplement on request.

*E. L. Rowny*  
E. L. ROWNY  
Major General, USA  
Chief

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DISTRIBUTION:  
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Monthly Test Report Number 2 -- Mohawk

## ANNEX A -- Objective 1 (Area surveillance)

### 1. (C) Objective.

"To determine the results obtained by providing continuous surveillance to a limited area; i.e., reduction in VC incidents, restrictions to VC movement, increase of RVNAF (Republic of Vietnam Armed Forces) response and effectiveness."

### 2. (C) Discussion.

Two test areas are being used in developing data relevant to the objective. These are:

a. Area A -- Binh Dinh Province. The first-priority task assignment of the 23d SWAD has been to support the 9th Division. The tactical boundaries of this division coincide with the boundaries of Binh Dinh Province. From 16 October to 23 November, observation and surveillance support for the 9th Division were furnished by Mohawks operating from the unit's base at Mha Trang. To increase responsiveness to the province surveillance requirement, a flight team of two aircraft and 16 personnel has been stationed since 23 November with the 9th Division command post at Qui Nhon.

b. Area B -- Trang-Vietnam Railway, II Zone. Since 30 November, a minimum of two Mohawks has been scheduled daily to make low-level (50-300 feet) reconnaissance flights over the coastal railway track in the II Zone. These flights are varied with respect to time and direction so as to present an irregular pattern to VC observation. Their purpose is to examine the condition of the tracks (for obstructions, loose or removed rails, and other acts of sabotage), to detect VC units or individuals close to the tracks, and to reduce the frequency and scale of VC incidents..

### 3. (S) Findings.

a. One-hundred and forty-five suspected VC targets have been located in Binh Dinh Province by interpretation of photography taken from Mohawk aircraft. (Annex H, Letter H-2)

b. Visual reconnaissance has been effective in sighting new units; locating and confirming suspected units; locating personnel, animals, obstacles, structures, and cultivated areas; and detecting changes in patterns of VC activity. (Annex H, Letter H-1 Annex L)

c. Helicopters and ground vehicles are not likely to be fired upon when observation of ground or air columns is provided by Mohawk aircraft. (Annex H, Letter H-1)

d. The tactical effectiveness of the Mohawk would be greatly increased if restrictions on the employment of weapons were removed. (Annex H, Letter H-1)

ANNEX A

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ANNEX A

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Monthly Test Report Number 2 -- Mohawk

ANNEX A (continued)

e. Repetitive surveillance of an area by the same Mohawk develops crew familiarity with locations of RVN/F and civil communities; this knowledge enables the crew to locate and reestablish communications with units that are out of contact with their parent headquarters and to recognize changes in terrain and in patterns of civilian activity. (Annex H, Letter H-1)

f. Daily low-level railroad reconnaissance flights by Mohawks have contributed to a decrease in the magnitude of railway incidents in relation to vulnerability of passengers and freight. Enemy activity against the railway has virtually ceased since the Mohawks began railroad reconnaissance flights in mid October. (Annex K)

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Annex A

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Annex A

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Monthly Test Report Number 2 -- Mohawk

ANNEX B -- Objective 2 (Suitability of Mohawk for Surveillance)

1. (C) Objective.

"To determine the suitability and feasibility of OV-1 aircraft for tactical area surveillance."

2. (C) Discussion.

Monthly Test Report Number 1 included a listing of major characteristics of the aircraft which particularly suit it to observation and surveillance missions in support of counter-insurgency operations; no other aircraft now operating in SVN incorporates so many desirable characteristics.

3. (C) Findings.

a. Missions of the following types have been executed successfully thus far: (1) visual surveillance; (2) visual reconnaissance of landing zones; (3) route reconnaissance; (4) day photography; (5) night photography; (6) night illumination by flare drop; (7) visual and photographic damage assessment; (8) railroad reconnaissance; (9) observation for ground convoys; (10) observation for helicopter operations; (11) radio relay; (12) weather reconnaissance; (13) adjustment of artillery fire; (14) leaflet drop; (15) delivery of defensive fires

b. The capability of the unit to achieve surprise has received specific comment. (Annex H, Letter H-1)

c. The full capability of the Mohawk as an armed surveillance system is not being used. (Annex H, Letter H-1)

ANNEX B

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Monthly Test Report Number 2 -- Mohawk

ANNEX C -- Objective 3 (Activities detected visually and by photographs)

1. (C) Objective.

"To determine the nature of insurgent activities which can be detected by visual and photographic means."

2. (C) Discussion.

Visual reconnaissance and reporting of results is accomplished largely by ARVN observers assigned to Mohawks. The language difficulty precludes full collection, in English, of data transmitted in Vietnamese by these observers. Debriefing forms prepared by US aviators provide a limited amount of data on visual reconnaissance.

3. (C) Findings.

a. A wide variety of insurgent activities can be detected by photographic means. (Annex H, Letter H-2; Annex J)

b. Many types of insurgent activity can be detected visually. (Underlined portions of Annexes L and M)

ANNEX C

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Monthly Test Report Number 2 -- Mohawk

ANNEX D -- Objective 4 (Doctrine, procedures, tactics and techniques)

## 1. (C) Objective.

"To determine the adequacy and validity of current US Army doctrine, procedures, tactics, and techniques for employment of OV-1 type aircraft in a tactical area surveillance role and to further develop doctrine, procedure, tactics, and techniques for counter-insurgency type operations."

## 2. (C) Discussion.

a. Army doctrine pertaining to command and control procedures for Army aviation follows:

(1) Army aviation units are commanded and controlled through a normal chain of command.

(2) Aircraft are assigned to the lowest level at which they habitually are required.

(3) The commander of each Army tactical unit, (company, battalion, brigade, division, corps, or field army) is responsible for coordination of maneuver and support elements -- these include fire support by artillery, support by USAF, and support by Army aviation. This coordinating responsibility is exercised through a tactical operations element or a fire support coordination element, depending upon the size and structure of the unit.

b. Application of Army doctrine to the test situation:

(1) As the priority task of the 23d SWAD is to support the 9th Division at Qui Nhon, a flight team consisting of two Mohawks and sixteen personnel has operated from Qui Nhon since 23 November 1962. The purpose of this team is to provide increased responsiveness to observation and surveillance requirements in Binh Dinh Province, to establish rapport with the supported unit, and to eliminate much ferry-type flying between Nha Trang and Qui Nhon.

(2) Mission requests are coordinated by the 9th Division FSCC and given directly to the flight team leader for execution. Briefing of ARVN observers, when required, is conducted by ARVN personnel in the 9th Division headquarters. US aviators usually are briefed by US Advisors.

c. Analysis of the operation of the detached team:

(1) Responsiveness is determined by the speed and accuracy of mission performance. Reaction time of the 23d SWAD is minimized for the following reasons:

(a) The request channel is direct -- one telephone call between the FSCC and the Mohawk team triggers the action.

ANNEX D

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Monthly Test Report Number 2 -- Mohawk

ANNEX D (Continued)

(b) Mission briefings are concise because the flight team aviators live with the tactical situation on a day-to-day basis, and as combat-arms officers, are familiar with the requirements and terminology of ground combat.

(c) With a dash speed of 250 knots, the Mohawk can proceed quickly to the target area. The aviators have detailed knowledge of terrain and associated place names; frequently they can dispense with time-consuming reference to map coordinates.

(2) Detailed knowledge of terrain, resulting from constant operations in the same area, gives Mohawk aviators the ability to locate targets accurately with minimum difficulty.

3. (C) Finding.

Location of a Mohawk flight team at Qui Nhon is in accordance with Army doctrine and has resulted in minimum response time and maximum effectiveness. (Annex H, Letter H-1)

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Monthly Test Report Number 2 -- Mohnawk

ANNEX E -- Objective 5 (Adequacy of equipment and personnel)

## 1. (C) Objective.

"To determine the adequacy of equipment and personnel to support tactical area surveillance operations."

## 2. (C) Discussion.

a. The photo processing capability of the unit is inadequate. Contributing factors are:

(1) The division of the unit into widely separated elements. Each element needs a photo processing capability.

(2) The volume of photo requests received.

(3) The demand for faster production of photo prints, in multiple copies, to meet intelligence requirements. High-speed photo printers are needed. A personnel augmentation will be required when additional photo processing equipment is authorized for the unit.

b. Four additional aircraft could be operated by the aviators now authorized; an ARVN observer, rather than a US aviator, occupies the co-pilot's seat in each aircraft. Eighteen additional enlisted men would be required to support these four aircraft. (The additional aircraft and personnel have been requested by COMUSMACV.)

## 3. (C) Findings.

a. A photo processing van and necessary photo specialties are required by each flight team to expedite service when the flight teams are separated from the parent unit.

b. With the number of aviators now authorized, the 23d SMD can operate four additional aircraft, provided 18 additional enlisted maintenance personnel are made available.

ANNEX E

ANNEX E

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Monthly Test Report Number 2 -- Mohawk

ANNEX F -- Objective 6 (Changes in technical and training literature)

1. (C) Objective.

"To recommend necessary changes to the TOE (Modified), training and technical literature released on the results of the operational evaluation."

2. (C) Discussion.

a. Recommended TOE changes, as appropriate, will be based upon final findings developed in connection with Objective 5 (Annex E).

b. If testing conducted in connection with Objective 4 (Annex D) reveals requirements for changes in training and technical literature, appropriate recommendations will be made.

3. (C) Findings.

None at this time.

ANNEX F

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Monthly Test Report Number 2 — Mohawk

ANNEX G — Objective 7 (Logistical problems)

1. (C) Objective.

"To determine logistical problems."

2. (C) Discussion.

a. Graphs of daily aircraft availability and daily flight hours are at Annex N (Graphs N-3 and N-4). During the past 30 days, only five aircraft have been in the unit's working fleet. A crash-damaged Mohawk (see Annex N, Report N-2) has not yet been repaired, and prior to the crash one aircraft had been EDP for four weeks. During the reporting period the average daily availability has been 4.6 aircraft — 92% of the working fleet. A total of 383 flight hours was amassed during the same period.

b. Parts usage for the 889.5 flight hours flown since the unit arrived in SVN is shown at Annex N, Report N-1.

c. Repair parts resupply through the theater pipeline is not responsive to requirements. Although the aircraft were kept flying, many parts requisitioned in October had not yet been received by early December. Two factors contributed to the maintenance of a high aircraft availability rate:

(1) Service representatives of the Grumman and Lycoming companies received a number of EDP and AEDP parts direct from the manufacturers.

(2) Several parts which normally are used only once, in accordance with good maintenance practice, were re-used.

d. Machine guns have malfunctioned approximately 30% of the time. The break-out of armament malfunctions at Report N-5, Annex N, shows the reliability problems associated with .50-caliber machine guns. Although some of these malfunctions are attributable to training deficiencies and shortage of tools and repair parts, the high machine gun malfunction rate indicates that this weapon is less reliable than the Mohawk rocket system.

3. (C) Findings.

a. The Mohawk is relatively easy to maintain under field conditions.

b. The present system for supply of Mohawk spare parts is not sufficiently responsive.

c. The Mohawk machine gun system has a high malfunction rate.

ANNEX G

ANNEX G

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Monthly Test Report Number 2 -- Mohawk

ANNEX H -- Mohawk evaluation reports by II Corps US Advisory Personnel

ATTACHMENTS:

Letter H-1 . . . . . First indorsement of 10 December 1962 from Senior Advisor, II Corps, and memorandum of 8 December from Senior Advisor, 9th Division.

Letter H-2 . . . . . Letter of 17 December 1962 from Senior Advisor, 9th Division.

Report H-3 . . . . . Report of missions performed in support of the 47th Regiment.

Report H-4 . . . . . Extracts from II Corps reports covering Mohawk operations.

ANNEX H

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ANNEX H

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**MACV-III**

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**SUBJECT: Employment of OV-10 (Mohawk) Aircraft in 9th DTE (C)**

**UNITED STATES ARMY MILITARY ASSISTANCE ADVISORY GROUP, VIETNAM, II VN CORPS  
DETACHMENT, VIETNAM, 10 December 1962**

**TO: Commander, U. S. Military Assistance Command, Vietnam, ATTN: J3, Saigon,  
Vietnam**

1. (C) Attention is invited to the attached memorandum of Colonel V. H. Wallace, Senior Advisor, 9th Infantry Division, subject: "Employment of OV-10 (Mohawk) Aircraft in 9th DTE". This memorandum has particular validity at this time because the Mohawk aircraft, currently in support of II Corps operations, are supporting Operation DONG TIEN in Binh Dinh province and Operation HAI YEN in Phu Yen Province on a priority basis. The comments of Colonel Wallace are timely in view of the fact that he has been constantly connected with the employment of these aircraft since their arrival in Vietnam. Colonel Wallace is returning to the United States in December for reassignment. I fully concur with the conclusions and recommendations of Colonel Wallace as contained in the attached memorandum. II Corps has agreed to place on temporary duty four additional Vietnamese observers which will rectify the deficiency as noted by Colonel Wallace in his third recommendation.

2. (C) Analysis of OV-10 (Mohawk) aircraft operations in II Corps Tactical Zone since 15 October 1962 clearly indicates the overall effectiveness of this aircraft. Its demonstrated performance has been particularly impressive, in a manner which particularly suits the aircraft to support of counter-insurgency operations. The aircraft engine is relatively quiet, excellent observation is possible because of its fuselage construction and configuration, and no second aircraft (L-19) is necessary to spot or confirm targets. These factors have enabled the Mohawk to develop an unusually high "surprise" capability in comparison to other close air support aircraft now in use in Vietnam. Frequent instances have been reported by low flying Mohawks of Viet Cong sightings which probably would not have been possible if any one of these capabilities had not been inherent to the aircraft. Further, the aircraft and its supporting organization are capable of decentralizing their operations to several key areas of II Corps Tactical Zone which permits either constant daylight surveillance of these areas or extremely rapid response times.

3. (C) The inherent surprise capability and responsiveness of the aircraft would permit considerable additional employment and significant resulting loss to the Viet Cong if current firing restrictions were removed. Mohawk aircraft could attack targets not previously exposed to other weapons systems which do not possess similar characteristics. Furthermore, Viet Cong would become more aware of the strike capability of the aircraft and would necessarily become acutely aware of the short period of time available to them to launch their own attacks. The number of Mohawk aircraft available could not permit this suppressive effect on Viet Cong activity to extend over the entire II Corps Zone, but it certainly could reinforce RVNAF activity in such key areas as Binh Dinh and Phu Yen Provinces. In these two provinces, Viet Cong could not afford to expose themselves for any extended periods of time and their offensive capabilities

**H-1 (ANNEX H)**

**H-1 (ANNEX H)**

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10 Dec 62

SUBJECT: Employment of OV-10 (Mohawk) Aircraft in 9th DTZ

would be materially reduced. It is felt that incidents along the Trans-Vietnam Railroad have been materially reduced through Mohawk aircraft surveillance, and that they could be further reduced if Mohawks could employ their firing capability without artificial restriction.

3. (C) Conclusions:

a. Mohawk aircraft have demonstrated high suitability for support of counter-insurgency operations.

b. If permitted to be utilized to their full capability, Mohawk aircraft could materially increase their assistance to RVN&F operations by destroying Viet Cong and suppressing Viet Cong efforts.

4. (C) Recommendations:

Aircraft should be fully armed and pilots should be permitted to employ this armament once targets have been properly identified.

WILBUR WILSON  
Colonel, Inf  
Senior Advisor

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HEADQUARTERS  
9TH INFANTRY DIVISION ADVISORY DETACHMENT  
U.S. Army Military Assistance Advisory Group  
Qui Nhon, Vietnam

MAGTN-QN

8 December 1962

MEMORANDUM FOR: Senior Advisor  
II Corps  
Pleiku, Vietnam

SUBJECT: Employment of OV-10 (Mohawk) Aircraft in 9th DTZ (C)

On 15 October 1962 the 23d SPWR Avn Det (SUR) became operational and placed a liaison officer on TDY with the 9th ARVN Division HHC detachment. Requirements for air support were scheduled by him after requests had been processed through Division FSCC, with the concurrence of advisory personnel. The liaison officer then immediately, either by telephone to his operations in Nha Trang or by radio contact with aircraft airborne in the 9th DTZ, placed the requirements on the 23d SPWR Avn Det.

This method worked extremely well when aircraft were airborne on missions in 9th DTZ and within radio range (about 40 NM with the employment of ANNC-292 antenna) and was effective approximately 50% of the time. However, for other requirements there existed a 45 minute delay in aircraft arriving on target from their base in Nha Trang.

It was pointed out by the C.O. of the 23d that this 45 minute delay could be reduced by basing a flight team of two aircraft, 4 pilots and 2 ARVN observers with 9th Division at Qui Nhon. This would reduce time-over-target by at least 30 minutes, and in many cases there would be no delay as the aircraft would already be in the target area on other missions.

On 23 November 1962 a flight team arrived in Qui Nhon and remains in direct support of 9th ARVN Division. Missions presently originate within ARVN units; are passed to Division FSCC and then on the 23d through the Flight Team Leader. The aircraft have been operating around-the-clock and are immediately responsive to mission requirements placed upon them.

Mission requirements placed upon the aircraft are numerous and of varied types. It has been discovered that the only limitations in employing this aircraft is the imagination and initiative of the originator, coupled with the operational limitation placed on the 23d; of not firing upon enemy targets unless fired upon.

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MAOTM-QN

8 December 1962

SUBJECT: Employment of OV-10 (Hohawk) Aircraft in 9th DTZ

Since that time 290 missions have been completed in direct support of the 9th ARVN Division. This amounts to approximately 187 sorties flown. This does not take into consideration the missions or sorties performed by diverting airborne aircraft to other targets while in or near the target area.

Missions requirements are generally:

- a. Photo Recon.
- b. Artillery Adjustment.
- c. Visual Recon.
- d. Damage Assessment Photo.
- e. Continuous Observation (Specified Area).
- f. Radio Relay and Unit Coordination.
- g. Railroad Recon.
- h. Convoy Escort.
- i. Helicopter Escort
- j. Illumination
- k. Defensive Fires (within specific limitations imposed).

Photographs received were of the desired area, quality was excellent, and they arrived the same day requested. In several instances, where the requirement existed, they were delivered within 3 hours after the request was initiated.

Artillery adjustment missions were conducted without incident. Little difficulty was encountered in establishing radio contact with the Artillery unit, as the aircraft had an English-Vietnamese speaking ARVN Observer on board. Indications are that this will increase effectiveness of the ARVN Artillery.

Visual reconnaissance has advanced the over-all intelligence gathering effort. For example: sighting of new Viet Cong units; locating and confirming suspected units; sighting and reporting Viet Cong preparations for ambushes on trains and convoys.

Aircraft arrived quickly over hamlets that had been attacked. At night this is especially important because the illumination assisted in driving off the attack, and could have permitted landing of helicopters.

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MAGTN-QN

8 December 1962

SUBJECT: Employment of OV-1C (Mohawk) Aircraft in 9th DTZ

There have been many cases where units have lost radio contact. The Mohawk has been successful in locating these units and reestablishing radio communications with the parent unit.

Experience has established that helicopters and vehicles will not be fired upon when escorted by these aircraft.

Defensive fires were delivered on two occasions, both resulting in casualties to the Viet Cong. If full armament had been employed a Viet Cong Company could have easily been annihilated.

Sighting of the aircraft overhead encourages ARVN troops; with just the opposite effect on the Viet Cong. This is particularly important at night with the immediate response capability of the Mohawks to illuminate the target.

Primary limitations at this time appear to be the lack of complete freedom of operations, along with the aircraft not fully armed to maximum capability. There are occasions when the aircraft and pilot were ready to perform a necessary mission, but the observer was sick or had already flown 8 hours that day. This can be easily eliminated by assigning additional observers. Also, a great benefit would be derived if advisory personnel were equipped with PRC-10/9 radios to clarify missions being given from ground units.

**CONCLUSIONS:**

- (1) OV-1C Mohawk aircraft have been invaluable in assisting the 9th ARVN Division in achieving objectives sought in spite of the fact they could not shoot.
- (2) Reaction time was immediate. Aircraft were over the target within 15 to 20 minutes after request on immediate missions, with routine requests interspersed between.
- (3) That operational restrictions should be removed.
- (4) Unit is unable to operate to its maximum effectiveness without around-the-clock Vietnamese-English speaking observers, and communications with unit advisory personnel.

**RECOMMENDATIONS:**

- (1) All operational restrictions be removed.
- (2) Aircraft be fully armed to include rockets.
- (3) Additional observers be assigned to the 23d SPAR Avn Det (SUR), APO 40, U.S. Forces.
- (4) Unit advisory personnel be issued necessary communications equipment (PRC-10/9) to contact this aircraft.

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MEMO-ON

8 December 1962

SUBJECT: Employment of OV-10 (Mohawk) aircraft in 9th DTZ

(5) The Commanding Officer, 23 SPALR Avn Det (JUR) should be permitted maximum latitude in employment of these aircraft.

V. N. WALLACE  
Colonel, Infantry  
Senior Advisor

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UNITED STATES ARMY  
MILITARY ASSISTANCE ADVISORY GROUP, VIETNAM  
Qui Nhon, Vietnam

MAOTN-QN

17 December 1962

SUBJECT: Evaluation Report

TO: Senior Advisor  
II Corps  
Pleiku, Vietnam

INFO: Commanding Officer  
23rd Special Warfare Aviation Detachment  
Nha Trang, Vietnam

1. Discussion

a. The first request submitted to 23rd Special Warfare Aviation Detachment on 16 October 1962, consisted of a list of 145 target areas for air photographs. This request was submitted by the Intelligence Center of Binh Dinh Province directly to Liaison Officer of 23rd. Twenty-two (22) target areas of the submitted list have been completed and the remainder were cancelled on 28 November 1962. The photographs received were of exceptional quality and many details were determined from them. This list was submitted, primarily, to give the 23rd missions which would enable the 9th Infantry Division to eliminate a backlog of photo requirements. There was some delay in receiving photos initially due to improper use of photo request forms.

b. On 170900 October 1962, the first immediate photo request was submitted for spot photos of three different areas. The Intelligence Center received the photos on 181015 October 1962. This request was complete and the scale of the photos received was such that suspected Viet Cong constructions and rice fields were readily detected.

c. An unusual request for night observation was submitted on 20 October 1962. The observation was to be flown from 2200 hours to 0500 hours nightly. This request was delayed due to higher priority missions and was resubmitted on 24 October. After studying the night observation request, it was determined that this mission was impracticable; therefore, it was cancelled.

H-2 (ANNEX B)

H-2 (ANNEX B)

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**Evaluation Report Cont'd.**

d. Mission number 10 was an immediate request, and was submitted on 241000 October 1962. The mission was flown on 24 October, but the photographs were not taken due to the severe weather conditions. The request was re-submitted on 251500 October and flown as mission number 11. It was requested that the photographs be made available to the Intelligence Center by 26 October 1962. The time on target was 271000 October, with the Intelligence Center receiving the photographs on 29 October 1962. The reason for delay was not determined. The purpose of the photographs was for terrain analysis. The photographs revealed a road, which was to be used on operation, unusable due to weather conditions.

e. Mission number 15 was an immediate request, submitted on 28 October 1962, by the Division Artillery and the Intelligence Center. The TOT requested was 291200 October and the actual TOT was 291133 October, with photos being delivered the same day. After analysis, the photos revealed 6 to 8 VC carrying supplies at BS 809198. What appeared to be VC on sampans at BS 923125 could not be confirmed by aerial photos. It is felt this emphasized the importance of positive identification.

f. On 16 November 1962, an immediate request was submitted to be flown on 170800 November 1962. Mission number 62-11-72 was flown on 17 November and photos revealed six (6) suspected VC warehouses at BS 654053 and BS 706103 plus a number of smaller structures suspected as VC, also at BS 697963 and BS 703072 where suspected VC trails lead to two houses, also suspected to Viet Cong.

g. During the period of this report, other photo missions were flown, which were requested through TOC. Mission number 3 was requested by G3. This mission revealed suspected VC houses and fields at BS 6921; 7121; 7421 and 8619. TOC requested an observation and photo mission 010730 November. This mission was flown on 010815 November with photos being delivered on 2 November 1962. These photos revealed one structure 19 meters long at BR 626841 with ten smaller structures hidden in the trees, and at BR 595871, one larger and seven small houses were photographed all of which are suspected as Viet Cong houses.

h. On 28 October an immediate photo request was submitted to FSCC for approval and pass on to Mohawk. The desired TOT was 290800 November, with the actual TOT being 011600 December. The Intelligence Center received the photos on 5 December and determined 10 houses at BR 675113; 674118; 676120 and 724114, suspected as VC.

i. Along with flying photo missions for the operation in Binh Dinh Province, the 23rd also flew photo reconnaissance missions for the 8th Transportation Company also located in Qui Nhon. These photos revealed landing zones and landing approaches for helicopter operations which proved very beneficial during operations.

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Evaluation Report Cont'd.

j. A number of suspected and confirmed VC locations not included in the above are attached as inclosures 1, 2 and 3. These were extracted from messages sent by ARVN which stated all locations were determined from photos taken by the 23rd.

2. Conclusions: The services rendered this headquarters have been outstanding. Photographs are of superior quality, with the reaction time of receiving photos cut to within 12-24 hours and in some cases less. The photos received at this station have helped locate VC construction, VC routes, landing zones for helicopters, and have materially assisted the 9th Infantry Division in numerous operations. The spirit and enthusiasm displayed by all members of the 23rd have been commendable.

3 Incl.  
CS

VICTOR M. ANIDO, JR  
Col, Inf  
Senior Advisor

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H-2 (ANNEX H)

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H-2 (ANNEX H)

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**Suspected VC Targets taken from aerial photographs**

1. BR514350 - 10 houses
2. BR525346 - 4 houses built under trees
3. BR515310 - Many houses scattered in rice fields along a stream
4. BR400240 - Many houses scattered in rice fields along a stream
5. BR487326 - 15 houses built under trees
6. BR395217 - 30 houses built under trees
7. BR416221 - 20 houses built among trees
8. BR408219 - 20 houses built among bushes
9. BR418247 - 1 house (4m X 10m) among trees
10. BR428417 - 1 house
11. BR285280 - Many houses scattered in rice fields
12. BR303283 - Many houses scattered in rice fields
13. BR303283 - 5 new houses scattered under trees
14. BR401284 - 5 houses built under trees near a stream
15. BR440312 - 15 new houses

Incl 1  
H-2 (ANNEX H)

Incl 1  
H-2 (ANNEX H)

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Suspected VC Targets taken from aerial photographs

1. BR912142 - 19 individual houses occupying a 900m radius. (Some are under trees.
2. BR918130 - 1 watch tower built on a pass.
3. BR913112 - 3 small individual houses built on both sides of a spring.
4. BR910095 - 1 small house appearing on open land.
5. CR040160 - 10 individual watch towers built on mountains within a 100m radius.
6. CR045105 - 7 individual houses and watch towers scattered among rice fields along side mountains.
7. CR011105 - 2 small tents appearing on farm land.
8. BR332560 - 5 individual houses (approx 4m X 9m) appearing in the open among trees. These are suspected VC finance/economic installations.
9. BR332570 - 1 house (approx 6m X 15m) partially under trees. Suspected VC warehouse.
10. BR333635 - 6 individual houses built partially under trees near a small rice field. Suspected VC warehouses.
11. BR333605 - 1 house (5m X 9m) and (3m X 5m) appearing near a small rice field. A suspected VC warehouse.
12. BR633301 - Many individual houses appearing among trees near a small rice field. Suspected VC warehouses or economic offices.
13. BR402301 - 4 individual houses built in a valley near a spring. Suspected VC financial/economic installations.
14. Numerous houses appearing on top of a hill, partially under trees. (BR410309)
15. BR436321 - 10 individual houses scattered among trees.
16. BR452325 - 11 individual houses appearing on old rice fields with trails leading to a spring.
17. BR309510 - 16 large houses and 10 small houses massed near river. Some houses appear unoccupied. Suspected finance/economic installations.
18. BR365518 - 1 big house and 10 small houses built on side of river. Suspected VC finance/economic installations.
19. BR365525 - 14 individual new houses built in spiral shape.

Incl 2  
H-2 (ANNEX H)

Incl 2  
H-2 (ANNEX H)

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**Suspected VC Targets taken from aerial photographs**

1. BS584134 - 10 houses built near a spring. Suspected VC barracks.
2. BS524095 - 2 big houses (14m X 16m - 5m X 8m) built under trees. Suspected VC warehouses.
3. BS577097 - 5 houses. Suspected VC barracks.
4. BS499056 - 5 houses built near a spring. Suspected VC barracks.
5. BS516050 - 4 houses built near a spring. Suspected VC barracks.
6. BS555066 - 2 houses built in a clearance of the forest. (7m X 9m - 4m X 5m) Suspected VC warehouses.
7. BS665127 - 1 house (4m X 7m) built at the base of a hill. Suspected VC installation.
8. BS672125 - 2 houses (12m X 16m) and 1 tower.
9. BS670087 - 25 houses built in a 700m radius. Suspected VC rice storage warehouse.
10. BS632083 - 5 houses built under trees.
11. BS670075 - 1 big house (7m X 25m) and several small ones built under trees.
12. BS663067 - 4 houses built under trees.
13. BS633070 - 2 houses (4m X 9m) and many small one built on hill side.
14. BS625078 - 6 houses built at base of a hill.
15. BS753169 - 1 big house (3m X 7m) built in middle of forest. Suspected VC warehouse.
16. 773160BS - 6 destroyed houses built on side of hill. Suspected VC finance/economic installations.
17. BS783211 - 2 houses built in the middle of forest. Suspected VC liaison stations.
18. BS787209 - 1 destroyed house.
19. BS774153 - 2 houses (4m X 5m) built at the foot of a hill and in a valley.
20. BR527865 - 3 houses. Suspected VC barracks.
21. BR534872 - 12 houses built in the middle of the forest. Suspected rice storage warehouse.
22. BR493873 - 6 houses. Suspected VC barracks.
23. BR527874 - 10 houses built close together in forest. Suspect VC barracks.
24. BR499885 - 15 houses built in forest. Suspected barracks.
25. BR524890 - 4 houses built close together in the forest.
26. BR528890 - 5 houses built under trees.
27. BR536870 - 15 houses and some canvas tents near a spring.
28. BR539888 - 10 houses built close together under trees.
29. BR542883 - 10 houses built close together and 3 others far apart.
30. BR545870 - 7 houses built far apart.
31. BR546858 - 40 houses built in an area of 2 km long and 800m wide.
32. BR511868 - 4 houses built far apart.
33. BR583870 - 5 houses built close together under trees.
34. BR582880 - 5 houses built close together.
35. BR585886 - 8 houses near a spring. Suspected rice warehouse.
36. BR595896 - 5 houses built near a hillside. Suspected warehouse.
37. BR596874 - Many houses built close together under trees.
38. BR634856 - Many houses built close together and near a spring.
39. BR610885 - Many houses built close together.
40. BR540964 - 40 houses built close together in a forest.
41. BR536853 - 6 houses divided into 3 groups.

Incl 3  
H-2 (Annex H)

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Incl 3  
H-2 (Annex H)



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**Suspected VC Targets Cont'd.**

- 42. BR528850 - 4 houses built close together and one house separate in a forest.
- 43. BR525852 - 5 houses built close together.
- 44. BR526857 -10 houses built separately in an area 400m long and 200m wide. Suspected rice warehouse.
- 45. BR715858 - 4 houses built in a forest.
- 46. BR514854 - 3 houses built close together and 3 other separately.
- 47. BR501839 - 5 houses and many canvas tents built under trees.
- 48. BR543840 -20 houses built separately under trees.
- 49. BR550834 - 5 individual houses built under trees.
- 50. BR560837 - Many houses built under trees and near a stream.
- 51. BR530847 - 6 houses in a forest.
- 52. BR620833 -10 houses built in a forest. Suspected rice warehouse.
- 53. BR622779 -10 small houses built in a forest. Suspected warehouse and economical installations.
- 54. BR622743 - 3 houses built in a forest and near a hill side.
- 55. BR626700 -10 houses built along a spring. Suspected financial/economic installations.
- 56. BR590791 -50 small houses built in a forest in a 500m X 200m radius. Suspected VC barracks.
- 57. BR564743 - 2 small and one large house (8m X 8m) built in a valley. Suspected VC warehouse. 800m toward the west there are 16 small houses built under trees in a 600m radius. Suspected VC barracks.
- 58. BR548723 - 3 houses (10X7m) built close together and several individual ones built in a forest. Suspected finance/economic offices.
- 59. BR693517 - 2 houses built in a forest.
- 60. BR588727 -30 houses built close together.
- 61. BR568802 - 3 houses built close together in a forest.
- 62. BR550758 -10 houses built close together in an arch shape and approx 12 other ones built in a forest.
- 63. BR5511756- 5 bungalow type houses built close together in a forest. Suspected VC warehouses.
- 64. BR562750 -10 small houses and 1 large house.
- 65. BR396672 - 3 houses built in a forest near a spring.
- 66. BR313840 - 3 watch towers built near a dry spring.
- 67. BR372770 - 3 individual houses built under trees near a clear area.
- 68. BR366637 - 8 houses built under trees.
- 69. BR373682 - 4 small houses built under trees.
- 70. BR516835 - 3 houses built under trees.
- 71. BR505842 - 6 houses divided into 2 groups built under trees.
- 72. BR499832 - 3 houses built under trees.
- 73. BR463873 - 2 houses built under trees.
- 74. BR492826 -10 houses built close together under trees.
- 75. BR502921 -10 houses divided into 2 groups built under trees.
- 76. BR510848 - 5 houses built under trees.
- 77. BR532962 - 1 big house built under trees with communicating trails.
- 78. BR475595 - 6 small houses built close together under trees.
- 79. BR472949 -15 canvas tents. Suspected VC barracks.
- 80. BR465957 - 4 small houses built close together under trees.

Incl 3  
H-2 (Annex H)

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Incl 3  
H-2 (Annex H)

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**Suspected VC Targets Cont'd.**

81. BS455150 - 1 house built under trees.
82. BS478157 - 4 individual houses. Suspected VC barracks.
83. BR448844 - 3 large and many small houses built under trees.
84. BR457837 - 3 houses built in a forest.
85. BR474840 - 4 houses built in a cleared piece of land in a forest.
86. BR483844 - 6 houses built in a cleared place.
87. BR622779 - 10 individual houses built in forest.
88. BR364932 - 1 house and perhaps many watch towers built under trees and along a stream. Suspected VC contracting point.
89. BR376925 - 1 house built on an old cleared piece of land. 2 others built under trees and 2 others built along a stream.
90. BR531118 - 2 houses built on a cleared piece of land in a forest.
91. BR364905 - 5 houses built on a cleared piece of land.
92. BR353914 - 2 houses and approx 12 watch towers built under the trees. 4 individual small houses built on a cleared piece of land.
93. BR355997 - 3 houses built near a piece of farming land.
94. BS305101 -  
BS312003 - 50 houses, some built on a cleared land, some built under trees, and 18 of them built close together in a forest.
95. BR328940 - 5 houses divided into 2 groups built under trees.
96. BR330929 - 12 houses divided into 3 groups built on cleared piece of land.
97. BR180993 - 2 houses built in a forest - 2 others built along a spring.
98. BS193034 - 10 small houses built close together in a forest and approx 40 others separately built under trees in a radius of 1 km.
99. BS186043 - 10 houses built close together along montagnard rice fields and more than 40 others built in forest in a 5km radius.
100. BS170025 - 3 houses built on a cleared piece of land and 3 others in a forest.
101. BR172034 - 5 houses built close together and 8 individual ones. There are communication trails.
102. BR165983 - 6 houses built close together in a thick forest.
103. BR191906 - 4 towers built on a cleared piece of land in a forest.
104. BR239973 - 8 houses built in a forest.
105. BR226930 - 18 individual houses built under trees.
106. BR270993 - 2 houses built in a forest.
107. BR240971 - 5 houses built in a forest.
108. BR246965 - 4 houses built in a forest.
109. BR245934 - 1 house built under trees near a spring.
110. BR251932 - 9 houses built under trees near a spring.
111. BR237915 - 2 houses built under trees. Suspected VC communication sta.

Incl 3  
H-2 (Annex H)

Incl 3  
H-2 (Annex H)

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## Report H-3, ANNEX H

The second priority mission assignment of the 23d SWAD is to provide direct support to the 47th Regiment at Tuy Hoa. The following extracts from records maintained by the US advisors with the regiment summarize the mission requests and results.

Mission Nr 1. 25 Oct 62

Mission - Day photography and leaflet drop.

Results - Photos delivered 260900 Oct. Coverage was as requested. Leaflets were not dropped since unit did not have this capability. (Editor's note: The unit had not yet developed a technique for successful leaflet drop.)

Mission Nr 2. 26 Oct 62

Mission - Day photography.

Results - Mission not flown because of weather.

Mission Nr 3. 27 Oct 62

Mission - Day photography.

Results - Not flown; aircraft not available.

Mission Nr 4. 29 Oct 62

Mission - Observation and day photography for helicopter landing operation.

Results - Photographs delivered 300830 Oct. Coverage was as requested.

Mission Nr 5. 30 Oct 62

Mission - Observation, day photography, and to establish radio contact with an artillery unit and adjust fire if required.

Results - Photographs delivered on 31 Oct 62. Coverage was as requested.

Mission Nr 6. 31 Oct 62

Mission - Day photography

Results - Photographs delivered 1 Nov 62. Coverage was as requested.

Mission Nr 7. 1 Nov 62

Mission - Day photography

Results - Records not available

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Mission Nr 8.

Mission - Dry photography

Results - Records not available

Mission Nr 9. 7 Nov 62

Mission - To provide observation for two recon aircraft going into strongly controlled Viet Cong area.

Results - Mission accomplished. Request sent at 1305 hrs to Nha Trang. Aircraft on target 1335 hrs.

Mission Nr 10. 8 Nov 62

Mission - To photograph three areas for future helio-operation.

Results - Mission accomplished. Coverage good. Request sent at 071800 hrs. Mission finished at 080930 hrs.

Mission Nr 11. 13 Nov 62

Mission - To photograph two areas for future helio-operation.

Results - Malfunction with cameras. Request at 130800 hrs. Reply and mission at 131100 hrs.

Mission Nr 12. 15 Nov 62

Mission - Fly recon of Phu Duc district for future helio-operation.

Results - Two hour recon conducted. Pilot landed and gave briefing on what was found in the area.

Mission Nr 13. 19 Nov 62

Mission - To retake photos taken 13 Nov due to malfunction.

Results - Mission accomplished. Photocoverage good.

Mission Nr 14. 19 Nov 62

Mission - Request for immediate illumination mission. One company with American advisor surrounded by Viet Cong. (reported)

Results - Mission not accomplished due to cloud cover over target area. Request sent at 192145 hrs - aircraft over target area at 192310 hrs, but above clouds.

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24 Nov 62

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Mission - To provide air observation for helio-operation. Two aircraft requested.

Results - Mission confirmed. Helio-operation cancelled due to inclement weather.

Mission Nr 16. 25 Nov 62

Mission - To provide air observation for helio-operation. Two aircraft requested.

Results - Mission confirmed. Helio-operations cancelled due to inclement weather.

Mission Nr 17. 27 Nov 62

Mission - To provide air observation for helio-operation. Two aircraft requested.

Results - Mission accomplished. One aircraft fired upon. Aircraft returned fire at six Viet Cong obtaining results of one Viet Cong killed-one wounded. Excellent job of coverage by the pilots.

Mission Nr 18. 10 Dec 62

Mission - 2 Mohawks requested to provide air observation of heliborne operations.

Results - Aircraft were in area at time requested. Advisor on ground requested observation by hawk. He reported support was excellent.

Mission Nr 19. 11 Dec 62

Mission - 2 Mohawks requested to provide air observation of heliborne operation.

Results - Only one Mohawk reported. There was action in the target area but details not available.

Mission Nr 20. 13 Dec 62

Mission - Day photography of 8 areas for possible helicopter landing area.

Results - Photographs received 24 hours later. Service is outstanding. Observations of pilot contributed worthwhile intelligence.

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Excerpts from II Corps Advisor reports

These excerpts reflect the demands on the Mohawks and the reactions of supported units.

1. Extract from II Corps Advisor's report of 061600Z Nov 62.

AIRWAY OBSERVERS. "Each Division in II CTZ provided 2 aerial observers (total 4) for utilization in the Mohawk program. Observers have completed a 16 hour ground training course and have participated in frequent reconnaissance and photographic missions. A record time of ten hours from flight to delivery of photographs was recorded on 29 Oct 62."

2. Extract from IEMA LNUU, MACVN-IIC, dated 19 Nov 62.

EMPLOYMENT OF ARTILLERY AND MORTARS. "An additional stimulant to artillery utilization was the training and assignment of Artillery officers as observers in OV-10 aircraft. Five (5) of the six (6) ARVN observers, permanently assigned to the 1st Airborne Brigade, are artillery trained. These observers will search for targets of opportunity and subsequently can influence strategic artillery position selection."

3. Extract from OPSUM 250, 221630Z Nov.

"Summary of Mohawk Ops. 17 - 23 Nov. During this period Mohawk aircraft flew a total of 26 sorties consisting of 9 photo, 10 railroad surveillance, 10 observation, 1 illumination, 3 Eng and 3 administrative missions. Photo response time has been highly effective since photos can be delivered within 3 to 4 hours if situation so requires. Normally 12 hours time is sufficient and average delivery times are about 12 hours duration. A delivery time of from 12 to 24 hours often permits use of administrative aircraft rather than Mohawk aircraft to perform the photo delivery portion of this type mission. Mohawk aircraft are currently supporting clear and hold ops in Phu Yen and Binh Dinh Provinces on a priority basis and thus far they have proven to be highly responsive to the needs of commanders responsible for these ops."

4. Extract from OPSUM 281, 131630Z Dec 62.

PLEIKU PROVINCE. "One platoon 155 How from 37 FA Bn was placed under control of LE TRUONG Dist Ch for 3 days off 11 Dec. ASN of the unit is to fire into VC controlled areas. During 11 Dec platoon fired H and I fires via BR162465 and R943588. On 12 Dec MOHAWK A/C was used to direct fire on selected targets and to photograph the area. Photos disclosed several targets hidden in the jungle (IE a hidden village at R943588 from which MOHAWK drew SA fire). Mohawk returned fire and also adjusted fire on 5 targets, destroying approx 40 structures."

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**ACTIV-AM**

**Monthly Test Report Number 2 — Mohawk**

**ANNEX I — Sketch map and description of the Mohawk test area**

**ATTACHMENTS:**

Map I-1 . . . . . Test area.

Report I-2. . . . . Description of area.

**ANNEX I**

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**ANNEX I**

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ACTIV-AM

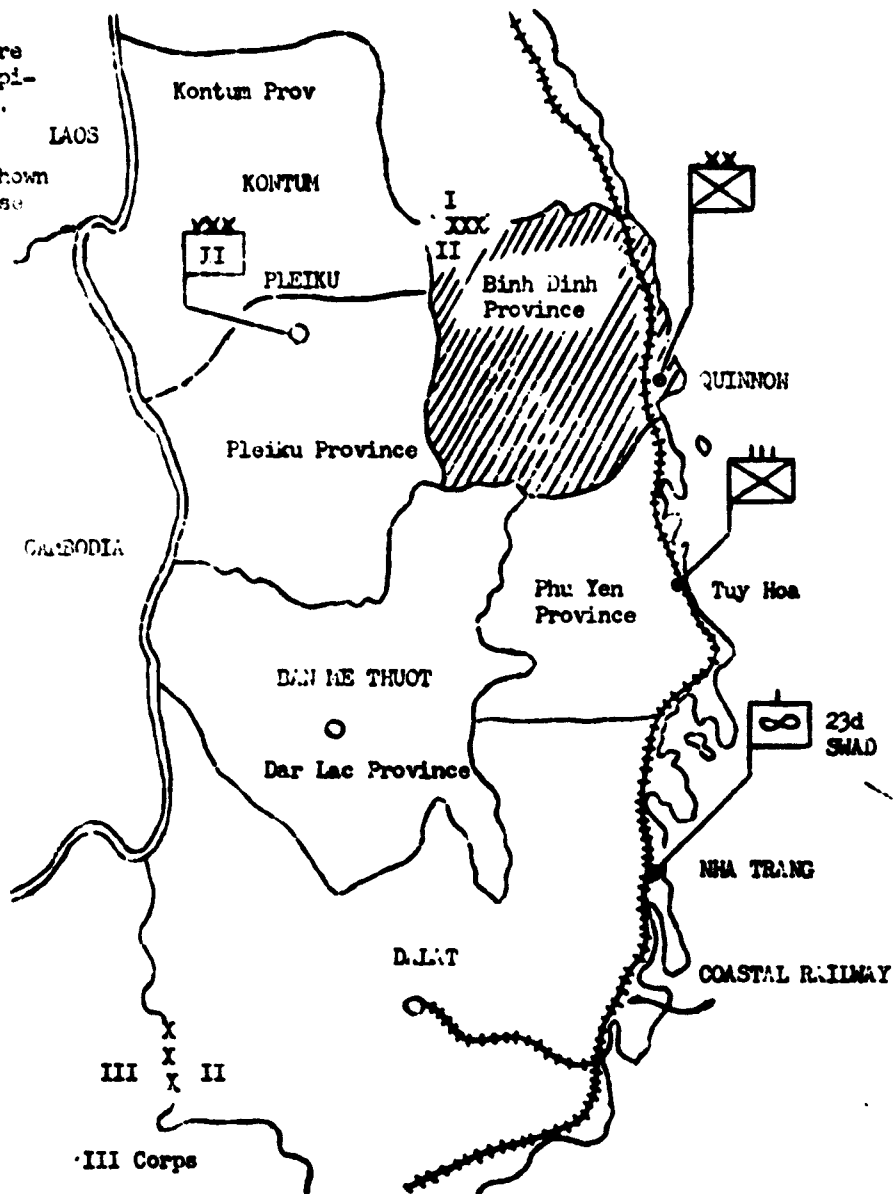
Monthly Report Number 2 -- Mohawk

Map I-1 to accompany ANNEX I

Test area (II Corps Tactical Zone)  
(Scale: One inch = 30 nautical mi.)

PROVINCES are  
shown in capital  
letters.

Towns are shown  
in lower case  
letters.



Map I-1, ANNEX I

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Map I-1, ANNEX I



## Report I-2, ANNEX I

## Description of the area.

The II Corps area is bounded by the South China Sea to the east and by Cambodia and Laos on the west. The I Corps area adjoins on the north, the III Corps on the south.

There is extensive agricultural acreage along the coast; rice is the chief crop. Beginning about a mile inland are mountain ranges paralleling the coast until they bend toward the west at the lower end of the zone. Peaks reach up to 6,000 feet; the mean elevation of the plateau area is about 2,200 feet. The mountain ranges, heavily forested, are inhabited sparsely by Montagnards. The mountains tend to isolate the plateau from the coastal area.

Climate varies with terrain, but each main terrain type -- mountain, plateau, coastal -- has seasonal wet and dry seasons. Only normal expected weather patterns can be predicted with any degree of accuracy. Lack of communications is a major factor limiting accurate weather forecasting. Only Ban Me Thout and Nha Trang have direct teletype lines to the weather station in Saigon. Of the 50 serviceable airfields in the II Corps zone, only Nha Trang, Ban Me Thout, Qui Nhon, and Pleiku maintain airfield towers.

The wet and dry seasons establish definite weather patterns interrupted only by tropical disturbances which develop in the South China Sea. Seasonal wind patterns play an important role. Under conditions of high temperature, high humidity, and strong wind, severe weather conditions can develop within a few hours.

Fog, low ceilings, poor visibility, and extensive cloud formations are common during the wet season -- November through March. Clear skies with unlimited visibility prevail during the dry season.

Most Mohawk operations are conducted in the mountain ranges and valleys of Binh Dinh and Phu Yen provinces. The beginning of the test period coincided with the northeast monsoon (wet) season. Broken cloud cover in the mountain areas is the rule; mountain peaks and high ridges normally are obscured.

Observation and surveillance operations must be conducted under the cloud layers. This condition, together with the turbulence created by low-level winds over the mountains, decreases the efficiency of surveillance to the degree that the aviator must give increased attention to safety considerations.

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ACTIV-AM

Monthly Test Report Number 2 — Mohawk

ANNEX J — Photographs of VC activity

ATTACHMENTS

- Photo J-1 . . . . . Rail sabotage: illustrates a typical VC method of derailing trains.
- Photo J-2 . . . . . Damage assessment photo; used by the ground unit to determine results of artillery fire and follow-up action required.
- Photo J-3 . . . . . VC structures in dense r in forest. It would be difficult to detect these structures except from the air.
- Photo J-4 . . . . . VC on a trail. The people heard the aircraft and took cover immediately after this photo was taken.

ANNEX J

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ANNEX J

*CONFIDENTIAL*

VC RAIL SABOTAGE. DISCOVERED AND REPORTED BY A HOHAWK CREW.

COORD AN925290

J-1 (ANNEX J)

J-1 (ANNEX J)

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DAMAGE ASSESSMENT PHOTO OF VC VILLAGE DESTROYED BY 155mm HOWITZER

FIRE ADJUSTED BY MOHAWK CREW

J-2 (ANNEX J)

J-2 (ANNEX J)

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VC STRUCTURES COORD BR595871

J-3 (ANNEX J)

J-3 (ANNEX J)

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VC ON TRAIL - COORD BS810043

BINH DINH PROVINCE

J-4 (ANNEX J)

J-4 (ANNEX J)

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ACTIV-AM  
Monthly Test Report Number 2 - Mohawk (C)

**ANNEX K - Railway security reports - PRECIS**

This annex in its entirety is published in a supplement to this report. It contains a considerable volume of material under the following sub-headings:

Message K-1 . . . Message from Railway Security Advisor, II Zone, 6 December 1962.  
Message K-2 . . . Message from Railway Security Advisor, 15 November 1962.  
Report K-3 . . . Railway Security Advisor's Monthly Report.  
Report K-4 . . . Railway Security Advisor's report, 7 December 1962.

Material contained in the full annex is summarized here.

Following Viet Cong derailment on an armored patrol train, the Mohawk detachment was airborne within 17 minutes after alert and within one hour had spotted a saboteur trying to separate rails and had radioed a warning to another train in time to avoid a second derailment. A Mohawk detachment, alerted to a delay of a train by a VC-constructed obstacle on the tracks, took up surveillance within 12 minutes and escorted the train to its destination with flare drops.

A railway advisor's reports for a five-month period listed the number of cases of damage, theft, and casualties suffered by the Vietnamese Railway system and indicated that:

a. the number of such incidents decreased from a high point in July of twenty-six to a low of nine during November, the month following initiation of operations by the Mohawk detachment;

b. daily air reconnaissance by Mohawk aircraft was a "constant threat to any person attempting an act of sabotage," and Mohawk operations considerably reduced the possibility of Viet Cong concentrations in large numbers without detection;

c. "aerial photos of VC sabotage now make it possible... to have first-hand knowledge of VC types of sabotage;" and

d. it would be desirable to initiate a MOHAWK leafletdropping operation to assist the railway propaganda program.

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ACTIV-AM

Monthly Test Report Number 2 — Mohawk (C)

ANNEX L — Qui Nhon flight team — PRECIS

This annex in its entirety is published in a supplement to this report. It contains a considerable volume of material under the following sub-headings:

Inlosure L-1 . . . . . Team composition.  
Report L-2 . . . . . Activities report, Flight Team #3.  
Report L-3 . . . . . Activities report, Flight Team #2.

Material contained in the full annex is summarized here.

From 23 November to 15 December, invaluable experience and data were gained from experimental detachments of Mohawk flight teams sent to Qui Nhon to operate in direct support of the 9th ARVN Division. Operations of two such teams brought out a variety of operational, administrative, and logistical problems. Operational missions included railway reconnaissance, artillery adjustment, leaflet drop, day and night photography, flare drop, emergency night escort of medical evacuation by helicopter, ground convoy observation and reconnaissance, and target acquisition for ground troops.

Weather conditions were variable throughout the period. This permitted recording of a wide spectrum aircraft performance observations. Weather included winds of near typhoon speed.

Each team consisted of 13 U.S. military personnel: Pilots, mechanics, ordnance specialists, a FOF specialist, and a driver-radio operator. Accompanying each team were three officer-observers from the Vietnamese Army. Equipment consisted of two Mohawk aircraft, a weapons carrier and a jeep (both with radios), a 1200-gallon FOL truck, ammunition, flares, bomb carts, and machine gun pods.

Team #3 operated from 23 November to 3 December; Team #2 assumed the mission on 3 December and continued through 15 December.

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**ACTIV-AN**

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**ANNEX M — Mission Summaries — PRECIS**

This annex in its entirety is published in a supplement to this report. It contains a considerable volume of material under the following sub-headings:

- Report M-1 . . Reports of the seven missions during which Mohawks delivered defensive fires.
- Report M-2 . . Report of mission 62-12-139, visual observation.
- Report M-3 . . Report of mission 62-12-162, railroad reconnaissance.
- Report M-4 . . Report of mission 62-12-156, railroad reconnaissance.

Material contained in the full annex is summarized here.

Summaries of other than routine missions flown by Mohawk aircraft during the period 1 November through 6 December reveal that, in seven of ten missions reported upon, defensive fires from the aircraft's .50 caliber machine gun were required against Viet Cong ground fire. Although considerable jamming of the machine guns was experienced, the defensive fires were effective; nine VC were confirmed killed and one wounded. One ARVN observer in a Mohawk was slightly wounded by ground fire.

During the return flight from a railroad reconnaissance mission on 4 December, the Mohawk capability for detailed ground observation was clearly demonstrated when the pilot was able to identify, count, and differentiate as to sex, a concentration of Viet Cong at a headquarters camp. Also identified were water storage holes, even, vegetables by types under cultivation, the presence of shoulder arms and individual human activities such as walking, working, sleeping, etc.

On 6 December, a Mohawk crew was successful in preventing the derailment of a passenger train by reporting the presence of broken rails on the track. The crew was also able to spot the saboteur at work.

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**ANNEX N -- Logistical information -- PRECIS**

This annex in its entirety is published in a supplement to this report. It contains a considerable volume of material under the following sub-headings:

Report N-1 . . . . .	Repair parts usage.
Report N-2 . . . . .	Accident board proceedings.
Graph N-3 . . . . .	Aircraft availability.
Graph N-4 . . . . .	Daily Flight hours.
Report N-5 . . . . .	Armament experience data.
Report N-6 . . . . .	Description of damage from small arms hits.

Material contained in the full annex is summarized here.

During a total of approximately 390 flying hours, Mohawk aircraft in South Vietnam have had a relatively high usage of spare parts. Notable items included 180 brake linings, 20 main tires, seven nose tires, 50 fuel control filters and seals, 40 oil control filters, 50 oil filters and seals, 22 prop dome seals, five engines, three speedbrake selector valves, three fuel controls, and two main landing gear cylinders.

One Mohawk aircraft was severely damaged in a landing accident at Kontum airstrip. The accident was attributed to the puncture of the nose tire coupled with the sharply increased pressure on the nose landing gear resulting from routine propeller reversal on landing. Disintegration of the nose landing gear occurred, causing the nose and propellers of the aircraft to scrape the runway.

Of the six Mohawks in South Vietnam during the period 16 October-15 December, four were available approximately 90% of the time. All aircraft were declined for engine inspection 20-22 October. Aircraft 2708 was damaged beyond local repair in the accident described above. One aircraft was EDP from 24 October to 19 November.

Daily Mohawk flight hours increased on a fluctuating scale from 10 on 16 October to 27.6 at the end of the period on 15 December.

Throughout the period, Mohawks were plagued with malfunctioning machine guns. Out of 86 training fire missions and seven actual defensive fire missions, there were 26 malfunctions of the guns. Incorrect head space, failure to feed, and out-of-time chargers accounted for half the malfunctions.

Rocket functioning, on the other hand, was satisfactory; only three malfunctions occurred in 67 training fire missions.

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**ANNEX O -- Distribution of report**

<u>Addresses</u>	<u>Nr. of copies</u>
Commander, US Military Assistance Command, Vietnam (Attention JOBG-V)	15
Commander-in-Chief, US Army Pacific	5
Commanding General, US Army Combat Developments Command	50
Commanding General, US Army Materiel Command	5
Commanding General, US Army Support Group, Vietnam	10
Chief, Military Assistance Advisory Group, Vietnam (Attention Chief, Army Section)	10
Deputy Chief of Staff for Military Operations, DA	5
Deputy Chief of Staff for Logistics, DA	5
Deputy Chief of Staff for Personnel, DA	5
Chief of Research and Development, DA	5
ACTIV Liaison Officer, GCSB-P, DA	25

**ANNEX O**

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