

MARINE MEDIUM HELICOPTER SQUADRON 164  
Marine Aircraft Group 16  
1st Marine Aircraft Wing, FMFPac  
FPO San Francisco, California 96602

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From: Commanding Officer  
To: Commanding Officer, Marine Aircraft Group 16 (Attn: S-3)

Subj: Command Chronology; 1 July - 31 July 1966 (u)

Ref: (a) WgO 5750.1B  
(b) GruO 5750.1B

Encl: (1) Marine Medium Helicopter Squadron 164 Command  
Chronology for July 1966

1. In accordance with references (a) and (b), the subject report is submitted as enclosure (1).
2. Upon removal of enclosure (1), downgrade to Unclassified.

*Warren C. Watson*  
WARREN C. WATSON

MAR-12-1966  
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MARINE MEDIUM HELICOPTER SQUADRON 164  
Marble Mountain Air Facility  
Republic of South Viet Nam  
1 July 1966 - 31 July 1966

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## Organizational Data

1. (c) CO LtCol WARREN C. WATSON 5 June 1965 -  
 XO Major OLIVER G. McDONALD 19 May 1966 -  
 S-1 Major THOMAS S. REAP 20 May 1966 -  
 S-2 Capt MICHEAL V. SULLIVAN 20 May 1966 -  
 S-3 Major EDWARD C. HERTBERG 20 May 1966 -  
 S-4 Capt DAVID J. LEIGHTON 20 May 1966 -  
 MAINT Major MARTIN J. WILLIAMS 13 September 1965-

2. (c) HMM-164, Marble Mountain Air Facility, Republic of South Viet Nam 1-31 July.

3. (c) Average monthly strength:

Officer	46 NA	5 GRND	1 USN(MC)
Enlisted	180		3 USN

4. (u) Important visitors to the command:

2 July - BrigGen H. M. ELWOOD flew with squadron on Operation Holt in Hue Phu Bai area.

13 July - BrigGen L. E. ENGLISH was transported from Da Nang to Dong Ha. Recon of Dong Ha area was also flown.

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~~SECRET~~Part II Chronological Summary of Month's Activities

1 July (c) LtCol W. C. WATSON with 10 aircraft in support of III MAF in the Ky Ha area transported 498 U.S. Marines from (BS765540) and (BS749603) direct to landing zone Goose (BT503038). The 10 aircraft were aiding MAG-36 in the backloading of troops from Operation Oakland. The flight went without incident or enemy contact. (41.1 hours)

2 July (c) LtCol W. C. WATSON with 14 aircraft in support of Operation Holt transported 555 troops from the 3Bn/4Mar to the landing zone at (YD571180). The first wave of helicopters into the zone received small arms fire, with negative hits. Pickup zone for the troops was PK-17 (YD675599). The assault phase of the operation was completed in approximately 80 minutes and was considered very successful. (30.9 hours)

(c) LtCol W. C. WATSON with 14 aircraft in support of Operation Jay transported 521 Marines from 2Bn/4Mar from (YD572424) to (YD525363). This was generally an administrative lift backloading troops from the operating area. (23.3 hours)

3 July Normal operations (see Part IV Appendix I)

4 July (c) LtCol W. C. WATSON with 8 aircraft on a supply mission in support of I Corps transported 107 passengers and 99,100 lbs of equipment from Hoi An to Thong Duc (ZC144534). No fire was received during the flight. (41.0 hours)

(s) Maj M. J. WILLIAMS and section while on standby for Sparrow Hawk were launched to evacuate U.S. wounded from the Third Marines. The aircraft proceeded to the An Hoa area and were informed the landing zone was too hot for landing. The aircraft diverted to An Hoa for pickup of 5 replacement personnel and 4000 lbs of ammo to be delivered to units under attack. Both aircraft proceeded to landing zone (AT916507), landed under intensive small arms fire, and debarked passengers and cargo. Both aircraft received numerous hits while in the zone without serious damage inflicted. Two Marines were wounded while unloading the aircraft. The flight then proceeded to (AT909503) to pickup the Med Evacs. Nightfall had set in making the approach to the small landing zone difficult and hazardous. The aircraft landed after several attempts, once again under heavy small arms and mortar fire, and picked up 23 wounded Marines who were transported to An Hoa. (8.4 hours)

As a result of this action Maj M. J. WILLIAMS and 1stLt B. L. NALE were recommended for the Distinguished Flying Cross, 1stLt J. T. DANDREA and 1stLt P. W. DEWSNUP were recommended for the Air Medal, and Sgt D. W. BOWDEN, Cpl S. D.

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LANIER, LCpl D.E. ROARK and LCpl J. R. MOIST were recommended for Navy Commendation Medals.

5 July Normal Operations (See Part IV appendix I)

6 July (c) LtCol W. C. WATSON with 8 aircraft in support of Operation Macon transported 223 troops from the 1Bn/3Mar from loading zone Turkey (AT941785) to (BT008533). In addition 125 troops from 3Bn/3Mar were transported from Hill 22 (BT954667) to (BT976506). Aircraft received fire in the first zone with no hits recorded. HMM-265 also had 12 aircraft in the lift. A total of 767 Marines were carried to the operations area by both squadrons with early results of 44 VC KIA, 12 captured and 153 probable KIA. (17.2 hours)

6-8 July (c) On three successive days the squadron had 4 aircraft in support of Special Forces at Kham Duc (ZC006092). The mission was to recover bodies from an ARVN UH-34D crash site on a 4200 ft hill top at (ZC180875). An initial 27 man party walked into the site and cleared a small landing zone. On 6 July 2 bodies were extracted along with the 27 man rescue party. A second 24 man work party was placed in the zone to continue the search. On July 7 an additional 4 U.S. Army personnel were placed in the zone to help with the work. On July 8, 4 bodies and the 28 men in the zone were extracted to complete the operation. The landing zone was extremely small and rough, surrounded by 50 to 60 ft trees requiring pilots to hover and hoist personnel and gear inside the aircraft. The operation went without mishap. (37.6 hours)

6-13 July (c) The squadron had 2 to 4 aircraft in support of Operation Hastings and the 2Bn/1Mar in the Dong Ha area. The mission was to support Force Recon units by inserting and retracting recon platoons and teams in the area just south of the DMZ. Aircraft were also in standby condition with the fast reaction (Sparrow Hawk) force. Squadron aircraft provided supply support for Marine security forces throughout the area as well as flying many recon missions. On 8 July while performing a recon insertion at (YD072468) the aircraft came under heavy ground fire as the first aircraft was about to touchdown in the zone. Both aircraft in the flight initiated a wave off. The second aircraft piloted by 1stLt B. L. NALE lost an engine (probably due to ground fire) upon commencement of the wave off. Single engine capability did not exist and the aircraft crashed approximately 200 yards from the zone, burning on impact. All crewmembers and 9 recon personnel escaped with minor injuries. One Force Recon man was lost in the mishap. The aircraft was completely destroyed by friendly air and mortar fire after all

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personnel were evacuated from the zone. The crewchief (SSgt E. D. LANE) and gunner (PFC B. L. HOFFMAN) along with the injured recon personnel were taken to A Med at Hue Phu Bai. The crewchief and gunner were later transferred to C Med at Da Nang suffering from minor back injuries. (See Part IV Appendix II)

Numerous ground fire incidents were reported throughout the area. During this period of operation 635 troops were transported and 151 sorties and 73.9 hours were flown.

14 July Normal operations (See Part IV Appendix I)

15 July (c) At 0800H Operation Hastings entered the assault phase when LtCol W. C. WATSON with 27 CH-46A's from HMM-164 and HMM-265, 4 CH-37's from the MAG-16 CH-37 Detachment and 10 UH-1E's from VM0-2 transported approximately 550 troops from 3Bn/4Mar into the landing zone at (YD038649) and approximately the same number of troops from 2Bn/4Mar into (YD085655). Small arms fire was received in both zones during the troop buildup phase with one aircraft taking two hits, one in cabin section (which caused a fatal injury to a marine) and one in the aft pylon which caused sufficient damage to require the aircraft to return to Dong Ha. Just prior to the lift of the 2Bn into the second landing zone (YD085655), three aircraft from HMM-164 led by Capt W. B. JOHNSON launched on an emergency retraction of 35 recon personnel from (YD085486). No problems were encountered on the retraction.

The approach into the first zone (YD 038649) proved to be hazardous due to the tactical situation, downwind approach and small landing zone. On the initial wave one HMM-265 aircraft overshot the landing point and hit a tree line causing strike damage to the aircraft and very minor injuries to the crew and passengers. Also on the initial wave two HMM-164 aircraft slightly overshot the zone, landed in close proximity to one another, intermeshed aft rotor blades and suffered strike damage. Two marines being debarked by these aircraft suffered fatal injuries when hit by rotor blades and two other marines were injured, one seriously. (See Part IV Appendix III)

At 1130H Capt J. L. JAMES and a section of HMM-164 aircraft returned to the initial landing zone to assess damage to the three downed aircraft. Upon departing the zone the aircraft were taken under automatic weapons fire with both aircraft being hit. The wingman, Capt R. E. JOHNSON, sustained hits in the transmission oil cooler necessitating an immediate landing at (YD097635). The landing was slightly hard causing the port main landing gear strut to shear. Personnel in the aircraft exited, were picked up by the lead aircraft and returned to Dong Ha. (See Part IV Appendix IV)

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A security force was placed in the downed aircraft zone along with a maintenance crew which repaired the aircraft sufficiently well to allow it to be flown to Dong Ha 4 hours later by Capt J. L. JAMES. As the aircraft departed the zone the security force and maintenance personnel came under small arms fire which delayed their retrograde approximately 1 hour until the VMO-2 UH-1E's and HMM-164 CH-46's could suppress the fire and make the pickup.

At 1400H approximately 1250 ARVN troops were transported from Cam Lo (YD133593), and Dong Ha to D-5 (YD094514), an area slightly south of the marine operation area.

Squadron aircraft transported 819 troops, carried 19,600 lbs of cargo and flew 56.7 hours in support of the operation on the 15th of July.

16-20 July (c) Squadron remained in support of Operation Hastings providing maximum aircraft support in the field at Dong Ha. Supply, recon, med evac, and recon insertions and retractions were flown. A total of 315 Marines, two 105 howitzers and 38,500 lbs of cargo were transported within the operations area during the period. (58.2 hours)

On 20 July three squadron aircraft were involved in mishaps.

Capt R. E. JOHNSON lost a number one engine while executing a wave-off. Aircraft made an emergency forced landing in a rice paddy near Cam Lo (YD133593) with no damage to the aircraft or injury to the crew. The aircraft was repaired and flown out the following day. (Part IV Appendix 5)

1stLt R. R. CRITSER while in an orbit at 3000 feet altitude and at a speed of 80 knots was hit by a .50 Cal. round in the yellow blade on the aft rotor head. The aircraft was landed without further incident and the blade changed. (Part IV appendix 6)

Capt D. J. LEIGHTON experienced loss of the number one engine while at approximately 50 feet on a night approach to Dong Ha. Due to aircraft weight and speed, single engine capability was unavailable. Aircraft crashed causing strike damage. Crew escaped without injury. (Part IV appendix 7)

21 July (c) Aircraft grounded due to engine difficulties caused by fuel contamination and sand ingestion. Aircraft to be flown only for heavy lift capability and emergency situations.

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21 July (c) LtCol WATSON with 4 aircraft joined in a troop lift with HH-265 in support of Operation Hastings. Squadron aircraft transported 138 troops in 4.8 hours from the loading zone at (YD 036519) to (LD 976520).

22 July (u) Eleven HH-164 pilots flew with HH-161 and HH-163 to supplement the pilot ranks in those two squadrons.

25-31 July (c) Squadron in support of Operation Hastings with heavy lift aircraft transporting 41 troops and 57,000 lbs of cargo. Cargo included two downed CH-34 aircraft, one downed UH-1E aircraft and numerous 105 howitzers. (17.2 hours)

29-31 July (u) Pilot refresher and test flights were only operations conducted.

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## Part III

## Significant Events

## 1. (c) Personnel

- a. Transferred      5 Officers      4 Enlisted
- b. Joined          2 Officers      3 Enlisted
- c. Four 1stLt's promoted to Capt.  
     One enlisted commissioned as 2ndLt  
     Two enlisted promoted to Sgt  
     One enlisted promoted to S/Sgt  
     One enlisted promoted to Gy/Sgt  
     Two enlisted promoted to M/Sgt

## 2. (u) Administration

## 3. (c) Awards

- a. Sixty-eight Air Medals approved
- b. Eighty-nine Air Medals recommended
- c. Four Purple Hearts approved

## 4. (c) Casualties

- a. PFC B. L. HOFFMAN      2090555      Returned to Sqdn.
- b. S/SGT E. D. LANE      1482118      Returned to Sqdn.
- c. PFC T. G. BAGWELL      2129296      Returned to Sqdn.

## 5. (u) Civic Action

Programs as indicated in the June Command Chronology are still in progress.

## 6. (u) Morale/Welfare Programs

Squadron is publishing a weekly news sheet titled Warrior's Weekly. (Part IV Appendix 8)

## 7. (u) Informational Services

Forty-six home town news releases were prepared by the squadron during the month. Releases were mainly on awards and promotions.

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8. (c) Intelligence/Counter-Intelligence

During July 1966, this squadron reported 36 ground fire incidents involving 87 aircraft. A total of 10 aircraft received 19 hits. A majority of the incidents occurred in grid squares AT 95, YD 04, 05, 06, and AT 99.

<u>A/C fired on</u>	<u>Incidents</u>	<u>A/C hit</u>	<u>Hits</u>	<u>Sorties</u>	<u>Hours</u>
87	36	10	19	2008	831.9

Ratio of aircraft hits to aircraft fired on:	1:4.6
Ratio of aircraft hits to sorties flown:	1:106
Ratio of aircraft hit to sorties flown:	1:201
Ratio of aircraft hit to hours flown:	1:82.9
Ratio of aircraft hit to aircraft fired on:	1:9

A breakdown of fire incidents with respect to altitude is as follows:

<u>Incidents</u>	<u>A/C hit</u>	<u>Altitude</u>
23	8	0-499'
3	0	500-999'
1	0	1000-1499'
9	2	1500+'

9. (c) Air Operations

a. Summary

1. Hours	831.9	
2. Sorties	2008	
3. Passengers	6583	
4. Cargo	307.9 Tons	(615,800 lbs)
5. Evacs	89	
6. POW's	35	

10. (u) Air Control

11. (c) Special Operations

a. 1 July, Operation "Oakland" in the Quang Ngai area was supported by the squadron. A total of 101 sorties were flown carrying 498 troops in 41.4 flight hours.

b. 2 July, Squadron in support of Operation Jay flew 99 transport sorties carrying 521 troops in 23.3 hours.

c. 2 July Squadron in support of Operation Holt transported 555 troops in 30.9 hours.

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d. 6 July Operation Macon commenced with HMM-164 flying 66 troop transport sorties carrying 346 troops in 17.2 hours.

e. 5-13 July. Squadron in support of Operation Washington was mainly in a standby status with 10 sorties, 25 passengers and 5.4 hours flown.

f. 6-31 July. Squadron supported Operation Hastings during all phases of operations. Operations in support consisted of 666 sorties transporting 2536 troops and 210,800 lbs of cargo in 266.3 hours.

12. (u) Ground Defense

13. (u) Command Relationships/Coordination and Control

14. (u) NBC Warfare

15. (u) Training

a. Training flights as required to maintain squadron proficiency and NATOPS checks were flown.

b. Continued training on aircraft systems were presented to pilots in conjunction with NATOPS.

c. Intelligence briefs on Viet Nam situation continue.

16. (u) Logistics

17. (c) Supply

During the month of July, HMM-164's average daily NORS/G rate was considerably higher than usual. This is attributed to an increase in the number of NORS/G demands placed on the MAG-16 Supply Officer's stores. Although the number of NORS/G requisitions submitted each month has steadily increased since our arrival in RVN, the number of NORS/G demands during July was 30% above the average monthly figure.

The Group Supply Officer filled 78.3% of these NORS/G requisitions from his stock. This figure is slightly above the monthly average, and is not considered to be a contributing factor to the increased daily NORS/G rate during July.

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The most apparent contributing factor to the higher NORS/G rate was the increase in the "average lead time" on NORS/G requisitions which were passed by the MAG-16 Supply Officer. This figure was 18.7 days, an increase of 36.5% over the previous monthly average since our arrival in RVN.

The majority of NORS/G material received from CONUS sources is shipped via Air Parcel Post. As all U.S. Mail for RVN goes first to Saigon, this causes two to three days additional lead time on NORS/G material shipped by this method.

We suggest that the possibility of shipping NORS/G material direct to Da Nang vice the present route via Saigon be explored in the interest of minimizing the lead time on NORS/G requisitions passed off station.

The lead time on priority Ø5 requisitions for consumable aeronautical components has been 45 to 60 days. This has caused Squadron aircraft to be in a NORS/G status for consumable items which, normally, would have been on hand at the Squadron level.

18. (u) Motor Transport

19. (c) Engineering

At present squadron is engaged in a modification program to include all aircraft. These modifications are to improve the availability of aircraft and extend engine life. At the present time the modifications to be installed are: an Engine Starter Drain Line, covers for the Gun Ports, Gun Straps, improved Gunners ICS, Full Barrier Filters, Low Pressure Fuel Filter, reinforced cowling over Synchronizing Shaft, and steps around the Full Barrier Filter.

20. (c) Maintenance

a. Average daily availability	12.8
b. Average percent daily availability	53.5%
c. Average utilization (40 hrs/A/C/Mo)	96.5
d. Maintenance hours/flight hours	
1. Scheduled Maintenance	744 .89Hr/1FH
2. Unscheduled Maintenance	1952 2.3Hr/1FH
3. Total	2696 3.2Hr/1FH
e. Not operationall ready-supply	4742 5.7Hr/1FH
f. Average NORS/G rate	18.6
g. Total of 28 engines changed during month.	

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- 21. (u) Avionics
- 22. (u) Base Development/Military
- 23. (u) Communications/Electronics

## MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY1 July 1966

- 0800 - Mission 156, in support of III MAF. Used 10 aircraft to retract 498 troops from 2/7 from BS 765<sup>540</sup> to LZ Goose.
- 1300 - Mission 118, Sparrow Hawk North. 2 aircraft stood by all morning, did not launch.
- 1317 - Mission 170 in support of III MAF. One (1) aircraft took parts and repair crew to KY HA.
- 1700 - Mission 163 in support of III MAF. 2 aircraft went to AT9355<sup>45</sup> and picked up downed Army OE. OE began to oscillate violently and had to ~~be~~ pickled.
- 1845 - 30 June Mission 2255 in support of III MAF. 5 aircraft went to PHU BAI and RON for dispersal.

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APPENDIX 1

MARINE MEDIUM HELICOPTER SQUADRON 164

## MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY2 July 1966

1225

1 July 1966 - MISSION 118, SPARROW HAWK NORTH 2 A/C STOOD BY AT PHU BAI. DID NOT LAUNCH ~~AND~~RON AT PHU BAI FOR DISPERSAL.

2200

1 July 1966 - MISSION 115, HILL 55 COURIER. 2 A/C TO HILL 55 WITH COURIER AND RETURN.

1900

1 July 1966 - MISSION 332, 3 A/C FLEW TO PHU BAI AND RON FOR DISPERSAL.

0100

MISSION 117, DELIVERED SITREP REPORTS TO WING PAD.

0620

MISSION 194, (OPERATION HOLD) A TOTAL OF 14 A/C LIETED 555 TROOPS OF 3/4 FROM PK-17 TO LZ YD571180. LIGHT SMALL ARMS FIRE RECEIVED BY FIRST DIVISION ON FIRST LIFT.

1237

MISSION 301, 14 AIRCRAFT RETRACTED 2/4, 521 TROOPS, FROM LZ YD572424 TO LSA YD525363

ALL MISSIONS WERE FLOWN IN SUPPORT OF III MAF.

APPENDIX J



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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY3 July 1966

1833 2 July Mission 739, 5 aircraft dispersed to Phu Bai returned in morning.

0600 MISSION 367 IN SUPPORT OF 2ND AIR DIV. 2 ACFT STOOD BY AT KHE SANH FOR SAR NORTH AND DID NOT LAUNCH

0610 MISSION 377 IN SUPPORT OF III MAF, 2 ACFT PICKED UP RECON TEAM AT AT847686 AND CARRIED BACK TO LZ FINCH

0641 MISSION 377A. 2 ACFT PICKED UP RECON TEAM FROM LZ FINCH AND INSERTED AT AT872627.

0700 MISSION 371 SPARROW HAWK NORTH. 2 ACFT LAUNCH TO PHU BAI DID NOT LAUNCH.

0751 MISSION 383, 4 ACFT CARRIED 239 PAX AND 24050 LBS CARGO FROM YD914893 TO 2ND 039122. MISSION WAS IN SUPPORT OF I CORPS.

0950 MISSION 381 IN SUPPORT OF III MAF MADE PARADROPS AT LITTLE SANDY 15 PAX.

1202 MISSION 384 IN SUPPORT OF I CORPS 2 ACFT LAUNCHED TO DONG HA. NO TROOPS OR CARGO AVAILABLE RETURN TO MMAF.

1626 MISSION 378 IN SUPPORT OF III MAF 2 ACFT INSERTED RECON TEAM AT 842721.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY4 JULY 1966

- 1207     3 JULY - MISSION 371 IN SUPPORT OF III MAF. 2 A/C LAUNCHED TO PHU BAI FOR SPARROW HAWK STANDBY. DID NOT LAUNCH AND RON FOR ~~PURPOSE~~ OF A/C DISPERSAL. RETURNED 0630 4 JULY.
- 1842     3 JULY     MISSION 384 IN SUPPORT OF III MAF. 3 A/C FLEW TO PHU BAI AND RON FOR DISPERSAL. RETURNED 0630 4 JULY.
- 0715     MISSION 444 IN SUPPORT OF I CORPS. 8 A/C CARRIED 99,000 lbs. OF CARGO AND 109 VN CIVILIANS FROM HOI AN AIRSTRIP TO THOUNG DUC ZC 144534. A TOTAL OF 104 SORTIES WERE FLOWN ACCUMULATING 41 HOURS FLIGHT TIME.

TWO MAINTENANCE TEST HOPS WERE FLOWN.

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APPENDIX 1

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY5 JULY 1966

- 1715 4 JULY - MISSION 423 IN SUPPORT OF III MAF. 2 A/C LAUNCHED TO AN HOA FOR MED EVAC. ZONE WAS TOO HOT TO LAND. A/C PICKED UP AMMO AND REPLACEMENT PERSONNEL AND WENT TO MARBLE MOUNTAIN TO REFUEL. A/C THEN FLEW TO AT916507. UNDER INTENSIVE SMALL ARMS, AUTOMATIC WEAPONS, AND RECOILLESS RIFLE FIRE THE A/C LANDED WITH THE REPLACEMENT PERSONNEL AND AMMO. BOTH A/C WERE HIT AND AFTER DEPARTING THE ZONE PROCEEDED TO AN HOA AND STOOD BY FOR MED EVACS.
- 2100 4 JULY - MISSION 423A. 2 A/C STANDING BY FOR MED EVAC AT AN HOA CARRIED MORTAR AMMUNITION TO AT888501. A/C THEN PROCEEDED TO LZ AT909503. AFTER NUMEROUS ATTEMPTS TO GET INTO LZ UNDER HEAVY SMALL ARMS, AUTOMATIC WEAPONS AND MORTAR FIRE BOTH A/C EVACUATED 23 WOUNDED TO AN HOA AND THEN RETURNED TO MARBLE MOUNTAIN.
- 2210 4 JULY - MISSION 422 IN SUPPORT OF III MAF. 2 A/C FLEW TO HILL 55 AND PICKED UP COURIER. CARRIED COURIER TO WING PAD. SECOND A/C SITREPS TO WING PAD AT 0200 5 JULY.
- 0630 MISSION 501. 2 A/C LAUNCHED TO PHU BAI. STOOD BY FOR SPARROW HAWK. DID NOT LAUNCH.
- 0705 MISSION 508. 2 A/C PICKED UP TROOPS AT LZ FINCH AND DROPPED AT LZ AT885615. PICKED UP ADDITIONAL TROOPS AND RETURNED TO FINCH.
- 0820 MISSION 524. 4 A/C PICKED UP 15 TONS OF AMMO FROM KY HA AND CARRIED TO TIEN PHOUIC BT105142.
- 0915 MISSION 528. 2 A/C PICKED UP 9 PAX FROM KY HA AND FLEW A RECON MISSION FROM KY HA WEST TO LAOS.
- 1300 MISSION 536. 1 A/C CARRIED ROTOR BLADES FROM DA NANG TO MARBLE MOUNTAIN.
- 1315 MISSION 537. 1 A/C CARRIED PHOTOGRAPHER FOR PICTURES OF MM.
- 1508 MISSION 469. 2 A/C PICKED UP TAFDS UNIT AND RADIO JEEP FROM KY HA AND CARRIED TO LZ BT106140.

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APPENDIX 1

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY7 July 1966

- 1235 5 July Mission 501. 2 A/C flew to Phu Bai. Stood by for Sparrow Hawk North and did not launch. Ron at Phu Bai and assumed mission number 561 (Dong Ha standby) along with 3 additional A/C.
- 0645 6 July Mission 561A. Five A/C launched from Phu Bai to Dong Ha. After reaching Dong Ha two A/C launched on recon mission. A/C received fire from YD082472 and returned fire. Results unknown.
- 1620 6 July Mission 561B. 3 A/C departed Dong Ha for recon insertion. Fainted landings at various LZs and inserted at YD052495. Spotted VC at YD020498 and made possible kill with .50 Cal.
- 1300 6 July Mission 561B. 2 A/C took Paymaster from Dong Ha to Cam Lo and then reconed area North of Cam Lo YD135394.
- 1844 6 July 561C. 2 A/C delivered batteries and radio to Cam Lo YD135594 and LZ YD093515, then acted as radio relay for recon mission
- 0510 Pilots of Mission 561 were releived by new crews 0800 7 July and assumed Mission 634.
- 0558 Mission 632 SAR North. 2 A/C stood by at Khe Sanh all day and did not alunch.

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APPENDIX 1

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY6 July 1966

- 0830-MISSION 608. 1 A/C carried 8 pax from Marble Mountain to LZ's Bunker, Blue Bird and Turkey.
- 0915-MISSION 605 (Operation Washington) two four plane divisions picked up 221 troops from 1st Battalion 3rd Marines at LZ Turkey and carried them to LZ's AT941785 and BT008533. The second division received fire during the approach and in the zone. One A/C received one hit. 40 sorties were flown.
- 1030-MISSION 605A (Operation Washington) Two four<sup>Plane</sup> divisions picked up 125 troops from Mike Co. 3rd Battalion 3rd Marines at Hill 22 and carried them to LZ BT976506. 26 sorites were flown and no fire was received.
- 1410-MISSION 597. 4 A/C launched to Cham Duc 006092 and carried rescue personnel from Cham Duc to ZC180875 and back to Cham Duc.
- 1425-MISSION 671. Blue Spring. 2 A/C picked up troops from LZ Eagle for Drone recovery. Returned troops to LZ Eagle after search was completed.
- 1635-MISSION 540 G. Emergency med evac launched 1 A/C from Sparrow Hawk Standby and picked up 3 WIA and 1 KIA from LZ BT 054093 and carried them to C med. Light Small Arms Fire was received going into zone.

Two A/C stood by for Sparrow Hawk and did not launch.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY7 July 1966

- 0620 Mission 631. Sparrow Hawk North. 2 A/C stood by at Phu Bai and did not launch.
- 0845 Mission 669. 2 A/C picked up ARVN civ at FLC and carried to Dien Ban BT065582, Hoi An, and returned to FLC.
- 1155 Mission 746. 1 A/C carried ammunition to Dong Ha for VM0-2 and 1 engine to Phu Bai.
- 1410 Mission 637. 4 A/C went to Kham Duc for the purpose of removing bodies from crash-site. Bodies were not available to be moved out yet and 4 additional special forces personnel were dropped into 4000 foot site at ZC180875.

All missions except SAR North were in support of the III MAF.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY8 July 1966

- 1827 7 July Mission 634B. 1 A/C departed Dong Ha to LA YD 057530 and picked up U.S. and ARVN Med Evacs while under fire. Carried Evacs to Quang Tri and Phu Bai. Returned to Dong Ha.
- 0625 Mission 691. Sparrow Hawk North. 2 A/C flew to Phu Bai and stood by for Sparrow Hawk. Did not launch.
- 1308 Mission 634F. 1 A/C departed Dong Ha stopped at Cam Lo YD124587 returned to Dong Ha. and then returned to MM.
- 1410 Mission 705. 4 A/C Flew to Kham Duc ZC006906. Departed Kham Duc for LZ ZC180875 and picked up 20 Nungs, 8 U.S. Special Forces troops, 13 ARVN bodies, and 2 U.S. bodies and returned to Kham Duc. After dropping off Nungs and Special Forces troops at Kham Duc, the ARVN bodies were carried to the ARVN Hospital at Da Nang and U.S. bodies to G-4 Med.

All hops were flown in support of III MAF.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY9 July 1966

- 7 July 1940 7-634 - One (1) helo of the 4 plane contingent at Dong Ha flew to YD662528, picked up 6 ARVN and 9 U.S. Med Evacs, took ARVN's to Quang Tri (YD342533) U.S. to Dong Ha.
- 2050 7-634 - Two (2) Helos launched from Dong Ha for aerial observation of TPQ-10 radar bombing by Devastate "D".
- 8 July 0650 7-634 - 2 Helo's launched from MMAF to Dong Ha with 12 members of replacement crews for standby on mission 7-634.
- 0850 7-634 - 3 Helo's launched from Dong Ha for Aerial Recon of area West & South with 12 observers aboard.
- 0920 7-634 - 3 Helo's launched from Dong Ha to YD070468 to YD072615 to recover 16 man Recon Team and return to Dong Ha.
- 1100 7-634 - 2 Helo's launched from MMAF to Phu Bai for Sparrow Hawk North. Was launched to Dong Ha at 1900 to assist on mission 7-634. Landed at Dong Ha refueled not needed and returned MMAF.
- 1615 7-634 - 3 Helo's launched from Dong Ha with 32 Recon personnel. Inserted Recon Platoon at YD060495. Platoon received fire & requested to be extracted. Deadlock 18-0, 18-2 preped zone prior to extraction. Lead A/C took fire on climb out. Explosion, flash and large hole in aft rotor blade.
- 1755 7-634 - 3 Helo's launched to attempt another insertion from Dong Ha. Inserted Recon Team at YD072468 received fire. #2 A/C lost #1 engine on wave off and crashed. #1 & #3 A/C landed YD058466 to rescue survivors, took fire in zone rescue was completed. Total of 48 Recon and Reaction troops were carried.
- 2305 7-677 - 2 Helo's launched from MMAF to Hill 55 (AT970720). Hill 55 was receiving small arms fire. Flight orbited to the East while Hill 55 returned fire with mortars. Upon being notified zone was again secure, landed, picked up courier to Wing Pad to MMAF.
- 9 July 7-800 - 2 Ch-46A launched to 15 Aerial Port to C Med to Finch. Reconed area ZC196838 to AT830858 to Finch to C Med to MMAF, carried 20 U.S. pax and had Oxwood H1-1 Flt as cover.

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## MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY9 July 1966

- 9 July 1020 7-634 - 2 CH-46A launched from Dong Ha to return to MMAF via Hue Phu Bai with 4 U.S. pax. Arrived MMAF 1125.
- 1230 7-634 - 1 CH-46A launched from Dong Ha to return to MMAF via Hue Phu Bai with 1 U.S. pax. Arrived MMAF 1330.
- 1600 7-824 - 2 CH-46A launched to Hue Phu Bai with 3 U.S. pax 4500# of ammo for MMO returned MMAF at 1730.
- 1705 7-885 - 1 CH-46A launched to Hill 55 with external H-34 engine and Barrelhouse escort from Hill 55 to An Hoa (AT873467) to MMAF.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY10 July 1966

10 July 0548 7-836 launched 1 CH-46A for Chu Lai courier run. Returned 0740.

0655 7-844 launched 1 CH-46A for Phu Bai courier run returned 0735.

0756 7-833 launched 2 CH-46A for 9th Marine resupply. Carried 10.3 tons and 8 pax completed at 1230.

0745 7-834, 2 CH-46A launched to resupply Marines in TAOR made landings at 8 outlying zones carried 11 U.S. pax, 2 VC suspects and 6000 lbs of cargo.

0958 7-883 3 CH-46A resupplied outpost of Calu YD009542 from LaVang carried 22,850 pounds and 11 pax.

1220 7-880 1 CH-46A carried Ben ENGLISH from Phu Bai to Bunker P.d.

1336 7-891 2 CH-46A alerted by Landshark "C" after completion of MSN 7-883 of emergency resupply of D-5 (LZ YD058544) multi trips made from Dong Ha to LZ. Carried 28,250 pounds and 7 pax.

1449 7-879 Total of 5 CH-46A to make a logistics troop movement from AT990516 to AT926692 and from AT964523 to An Hoa. Two aircraft received hits (AT964523) progress was lost due to multi delivery coordinates. For safety of troops flight leader returned them to An Hoa. Total of 407 U.S. troops were moved along with 1100 pounds of gear.

1545 7-892 2 CH-46A alerted by Landshark "C" at conclusion of MSN 7-891 for emergency troops lift. Pick up point YD058544 to YD128596 carried total of 107 ARVN troops. Doubt use of "Emergency" on frag.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY11 July 1966

- 10 July 0855 7-770 - 1 CH-46A launched to Dong Ha carried 12 pax to Phu Bai enroute.
- 1600 7-770 - 2 CH-46A launched from Dong Ha for Recon Mission carried 6 pax recon area XD985650.
- 11 July 0604 7-922 - 2 CH-46A launched to stand SAR north. Carried 3000 pounds of ammo for VMO to Dong Ha. 2 CH-46A's stood by at Khe San all day did not launch.
- 0700 7-916 - 2 CH-46A stood Sparrow Hawk North until 1300 did not launch.
- 0855 7-930 - One (1) CH-46A launched to Ky Ha briefed with Nailfile. Launched to BT287105 to recover downed H-34's brought (1) H-34 to MMAF.
- 1015 7-770 - 2 CH-46A launched to Cam Lo (YD125588) to recon area YD990518 carried 8 pax.
- 1415 7-965 - 1 CH-46A to Phu Bai to Calu to assist Bonnie Sue in resupply of Calu lost #2 engine forced to return Phu Bai to MMAF.
- 1525 7-770 - 2 CH-46A released from Dong Ha return MMAF.

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## MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY12 July 1966

LATE ENTRY: 9 JULY 1966 MSN 7-770 FOUR (4) CH-46A TO DONG HA WERE FIRED ON ENEMY  
1 1/2 MI EAST OF DONG HA.

1530 TWO (2) CH-46A FROM DONG HA TO CAM LO YD125588 D BROWN AREA 30 MILES  
WEST OF DONG HA, FARTHEST POINT OF BROWN YD085690.

2120 TWO (2) CH-46A COMPLETE PARADROP OVER DONG HA AND RADAR SYSTEMS CHECK  
FOR "WATERBOY".

10 JULY 1966 MSN 1015 THREE (3) CH-46A COMPLETE TROOP LIFT OF 64 U.S.  
TROOPS FROM CAM LO (YD125588) TO DONG HA.

12 JULY 1966 0650 MSN 7-916 TWO (2) CH-46A RETURN FROM THE BAY DAY SECOND  
SPAR ON HANK NORTH DID NOT LAUNCH, 1200 TO 1000 H 11 JULY 1966.

0730 MSN 7-998 TWO (2) CH-46A RETURNED FROM SOUTHERN RETRACTION OF BROWN  
PATROL (AT858790). NO FIRE RECEIVED 15 U.S. DAY RECOVERED.

0852 MSN 7-947 TWO (2) CH-46A RETURNED FROM BOW DONG HA ON 11 JULY 1966  
FLEW BACK FOR BENHAT LINER (2/1) OF AREA NORTH AND WEST OF DONG HA  
16 U.S. FAX.

1026 MSN 7-999 TWO (2) CH-46A D FLO D B065582 D FLO D THE AT STATE D  
FLO D MMAR. CARRIED 35 POW AND 16 U.S. GUARDS TO THE AM.

1140 MSN 7-1002 ONE (1) CH-46A ASSISTED SUPERVISOR 2-1 FLEW TO THE TOP  
CARRIED 7 PAX FROM I CORPS "ON" PAD TO MARINE AIR FIELD.

D = DIRECT

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY12 JULY 1966

1805 MSN 7-993 TWO (2) CH-46A TO KY HA TO BRIEF WITH "MAILFILE-3" IN CON-  
JUNCTION WITH OPERATION WASHINGTON ASSISTED ON MAILFILE MISSION 1033.  
WHILE AT KY HA ASSIGNED MISSION 7-1027 (VIP). CARRIED 4200 POUNDS OF  
CARGO AND TOTAL OF 14 U.S. PAX.  
0800 UNTIL 1900 EIGHT (8) A/C AND CREWS WERE ON 2 HR STANDBY FOR  
OPERATION WASHINGTON.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY13 July 1966

- 0118 - MSN 7-974 COMPLETE. TWO (2) CH-46A MADE HIGH 55 COUNTER  
 RUN. RECEIVED FIRE AT 976685. NO DAMAGE
- 1435 - MSN 7-1063 COMPLETE. FOUR (4) CH-46A TO DONG HA.  
 0745 - LAUNCHED FROM DONG HA ON A TROOP LIFT TO YD118574.  
 CARRIED 164 US PAX.
- 0939 - TWO (2) CH-46A LAUNCHED ON A SPARROW HAWK TROOP  
 REINFORCEMENT FROM DONG HA TO YD058582 DIRECT DONG  
 HA. CARRIED 15 US PAX.
- 1124 - FOUR (4) CH-46A DEPARTED DONG HA DIRECT LZ (YD058583)  
 FOR RECON RETRACTION DIRECT DONG HA. RECOVERED  
 TOTAL OF 53 US PAX
- 1305 - FOUR (4) CH-46A DEPARTED DONG HA DIRECT LZ (YD118574)  
 TO RETRACT TROOPS INSERTED EARLIER SAME DAY. RETURNED  
 TOTAL OF 108 TROOPS TO DONG HA AND CONTINUED TO MMAP.
- 1448 - MSN 7-1105 COMPLETE. TWO (2) CH-46A DEPARTED MMAP DIRECT  
 HOE PHU BAI DIRECT DONG HA DIRECT LZ (YD124587) direct  
 LZ (YD116573). RECON OF AREA AND RETURN MMAP. LIAISON IN  
 SUPPORT OF OPERATION HASTINGS.
- 1845 - MSN 7-1064 COMPLETE. TWO (2) CH-46A TO KY HA TO BRIEF WITH  
 NAILFILE 3 IN SUPPORT OF OPERATION WASHINGTON. LAUNCHED ON  
 NAILFILE MSN 7-1079B, EMERGENCY RECON RETRACTION DIRECT TO  
 BS149911. RECEIVED FIRE IN ZONE. NO DAMAGE. RECOVERED  
 25 US PAX.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY14 July 1966

- 1830 - 12 JULY MISSION 7-1062 IN SUPPORT OF III MAF. 2 A/C FLEW TO PHU BAI FOR DISPERSAL AND ASSUMED SPARROW HAWK STANDBY ON 13 JULY. DID NOT LAUNCH ON SPARROW HAWK. CARRIED 2 RADIO JEEPS TO YD455415 THEN RETURNED TO MARBLE MOUNTAIN.
- 0718 - MISSION 7-1131 IN SUPPORT OF I CORPS. 4 A/C CARRIED PAX AND CARGO FROM LA VANG AND CA LU TO BA LONG. CARRIED 16 TONS AND 65 PAX TOTAL.
- 0737 - MISSION 7-1132 IN SUPPORT OF III MAF. 3 A/C CARRIED 402 TROOPS AND 6200 LBS. OF CARGO FROM LZ BT056550 TO LZ TURKEY.
- 1315 - MISSION 7-1131A IN SUPPORT OF I CORPS. 4 A/C FLEW TO PHU BAI FOR ARVN RESUPPLY. NO CARGO WAS THERE AND A/C RETURNED AFTER MAKING NUMEROUS INQUIRIES INTO WHEREABOUTS OF CARGO.
- 1725 - MISSION 7-1137 IN SUPPORT OF III MAF. 2 A/C PICKED UP RECON TEAM AT AT873606 AND RETURNED THEM TO LZ FINCH. PICKED UP SECOND RECON TEAM AND INSERTED THEM AT AT878675.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY

15 July 1966

0615 - MSN 7-1188 13 CH-46A LAUNCHED TO DONG HA IN SUPPORT  
OF OPERATION HASTINGS. HAD NOT RETURNED AT 2100.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY16 JULY 1966

- 0630 - 15 JULY 1966 THIRTEEN (13) CH-46A LAUNCHED TO DONG HA IN SUPPORT OF OPERATION HASTINGS. UPON REACHING DONG HA 12 A/C WERE COMPLETED TO LIFT 3/4 BATTALIONS TO YD038647. TWO (2) MOREBROOK A/C 12-15 AND 12-16 WERE LOST IN ZONE. CREWS DEPARTED WITHOUT INJURY. CARRIED A TOTAL OF 145 TROOPS. UPON COMPLETION OF THE FIRST LIFT THE REMAINING A/C WERE TO LIFT THE 2/4 BATTALIONS TO YD135645.
- 1010 - 2 CH-46A RECOVERED REMAIN REMA OF 35 U.S. PAX FROM YD009406.
- 1015 - 1 CH-46A RECOVERED FROM YD039648 WITH 4 BATTLE EVACS.
- 1020 - 2 CH-46A EVACUATED A MORTAR PLATOON (YD038697) RECEIVED FIRE IN ZONE RETURNED WITH ONE BATTLE EVAC.
- 1345 - 2 CH-46A TO YD038647 FOR RECOVERY OF SALVAGE FROM TWO DOWN A/C. AND MAKE MAINTENANCE ADJUSTMENT. BOTH A/C RECEIVED FIRE ON DEPARTURE YD053655. NO. 2 MADE A FORCED LANDING AT YD096635. <sup>A/C</sup> LEADMENT IN TO RECOVER CREW FROM FIRE DURING APPROACH, WHILE IN ZONE AND ON DEPARTURE.
- 1405 - 3 CH-46A EVACUATED A SPAN ON NAME CREW OF 42 MEN (YD097635).
- 1600 - 4 CH-46A ASSIST IN MOVING 2 BATTALIONS OF ARVN TROOPS INTO D-5 AREA WEST OF DONG HA. TOTAL OF 254 PAX.
- 1630 - 2 CH-46A CARRY 20 MAINTENANCE AND PERIMETER GUARD TO SECOND DOWNED A/C (YD096635). PAIR ORDER WERE WHEN DAMAGE ADJUSTMENT WAS MADE THEN RETURN TO DONG HA.

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## MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY16 JULY 1966

- 1845 - 1 CH-46A RETURNED FROM DOWNED POSITION (XD096635) A/C WAS FLOWN OUT AND BACK TO DONG HA.
- 1905 - 1 CH-46A ADDED ON A RESUPPLY TO D-5 CARRIED 12,500 POUNDS.
- 1930 - 2 CH-46A LAUNCHED TO RECOVER REMAINING ELEMENTS OF SPARTAN BATTAL FROM XD097635 UNABLE TO GET INTO HOLE DUE TO HEAVY GROUND FIRE ORIGINATED A RETURNED FIRE AS ESCUED BY HT-1E'S WHEN LANDED AND RECOVERED REMAINING 3 U.S. TROOPS.
- 1945 - 2 CH-46A RETURN WITH MAINTENANCE AND GUARD PERSONNEL FROM DOWNED A/C XD097635 RECEIVED FIRE FROM XD098640 AND XD096635.
- 2100 - MSG 7-1180 COMPLETE 9 A/C RETURN TO HAF 2 A/C LOSE AT SOME XD038649. 2 A/C DOWN NEAR. AT DONG HA.
- 1525 - 16 JULY 1966 MSG 7-1310 COMPLETE. 2 CH-46A FROM HAF DIRECT TO DONG HA WITH CREWS AND MAINTENANCE PERSONNEL TO REPAIR HT-1 AND HT-7 AT DONG HA. 18 U.S. PAX AND 500 POUNDS CARGO CARRIED.
- 1625 - MSG 7-1273 COMPLETE. ONE (6) CH-46A LAUNCHED 0519 HAF DIRECT TO DONG HA TO ASSIST IN LIFTING ANOTHER BATTALION OF MARINES FROM DONG HA TO XD063657. TOTAL OF 159 U.S. PAX CARRIED AND LEFT ON GROUND BY AT DONG HA UNTIL 1725.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY12 July 1966

- 2340 - 16 JULY MISSION #1260 2 A/C TO HILL 55. PICKED UP COURIER  
AND CARRIED TO WING PAD, #2 CARRIED SITREPS TO WING PAD AT  
0207.
- 0515 - MISSION #1402 1 A/C FLEW TO DONG HA. CARRIED 2 105MM HOWITZERS  
AND 11,500# OF AMMO FROM YD302728 TO YD117578.
- 0755 - MISSION #1403 IN SUPPORT OF I CORPS. 3 A/C CARRIED 69 PAX  
AND 29,900# OF CARGO FROM BT056755 TO QUE SAN BT045350.  
2 MAINTENANCE TEST HOPS WERE FLOWN.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY~~19 JULY 1966~~

- 1830 - MSN 7-4001A ONE (1) CH-46A FROM NORTHBROOK AND ONE CH-46A FROM BONNY SUE AS WINGMAN STARTED RESUPPLY OF 2/4 MARINES. MADE TRIPS TO YD984565 DIRECT TO YD980565 DIRECT TO YD991577 AND DONG HA. CARRIED 5300# AND 7 U.S. PAX.
- 1855 - MSN 7-1332 COMPLETE, A/C RETURN TO MMAF.
- 1940 - 19 JULY 1966 MSN 7-1475 ONE CH-46A COURIER RUN FROM FLC TO LZ CRAWDAD CARRIED 6 PAX.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY19 JULY 1966

- 1044 - 17 JULY 1966 MSN 7-1332 ONE (1) CH-46A LAUNCHED TO JOIN OTHERS AT DONG HA. CARRIED PAX (3) TO HUE PHU BAI, CARGO (400 POUNDS) TO CAM LO, AND 1300 POUNDS CARGO TO DONG HA.
- 1545 - MSN 7-1332 ONE (1) CH-46A LAUNCHED DIRECT TO DONG HA. CARRIED 2700# OF CARGO FOR ROSEANN "B".
- 1700 - MSN 7-5005 TWO (2) CH-46A CARRIED VEHICLES FROM CAM LO (YD131592) DIRECT TO YD985562.
- 1815 - MSN 7-5077 ONE (1) CH-46A ALERTED BY ROSEANN OF MSN 507 AT COMPLETION OF MSN 5005, LANDED AT CAM LO AND LOADED 9 MAN RECON TEAM. TOGETHER WITH UH-1E GUN SHIP MADE RECON INSERTION AT (YD056663).
- 0610 - 18 JULY 1966 MSN 7-5001 ONE (1) CH-46A WITH ONE UH-1E GUNSHIP CARRIED 14 U.S. PAX TO XD973506 FOR RECON INSERTION.
- 0655 - MSN 7-8001 DAILY ADMIN HOP FOR ROSEANN CARRYING 4 PRESSMEN FROM DONG HA TO CAM LO. ONE (1) CH-46A STOOD BY AT CAM LO UNTIL 0900 THEN RETURNED TO DONG HA.
- 1200 - MSN 7-5002 ONE (1) CH-46A ACCOMPANIED BY ONE (1) UH-1E GUNSHIP RETRACTED A 9 MAN RECON TEAM FROM YD058664.
- 1635 - MSN 7-4001 TWO CH-46A LAUNCHED ON ARVN RESUPPLY OF UNITS "REDHAT 8" AND "REDHAT 6" CARRIED TOTAL OF 6000# AND 6 ARVN PAX TO YD049498 AND YD063491.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY20 July 1966

1730

18 July 1966 - 7-5004 - 3 AIRCRAFT INSERTED 11 TROOPS FROM DONG HA TO XD943542 THEN TO DONG HA. IN SUPPORT OF 1ST RECON BAT.

1800

18 July 1966 - 7-5005 - 3 AIRCRAFT RETRACTED 14 TROOPS FROM XD9654 TO XD9750 & RETURN TO MMAF. IN SUPPORT OF 1ST RECON BAT.

0500

19 July 1966 - 7-1467 - 2 AIRCRAFT CARRIED 29,000 LBS OF CARGO AND 22 TROOPS IN SUPPORT OF 4th MARINES IN OPERATION HASTINGS AREA.

0745

19 July 1966 - 7-7001 - 1 AIRCRAFT FLEW AERIAL RECON OF OPERATION AREA FOR 4th MARINES.

2224

19 July 1966 - 7-1451 - SITREP COURIER TO HILL 55 AND MMAF TO WING PAD IN SUPPORT OF III MAF

0532

20 July 1966 - 7-1518 - BAR MISSION FROM YD0261 \* 1000 LBS CARGO AND 2 PAX TO DONG HA. RECEIVED HIT AT 3000 FT. YD029616. 4th MARINES.

0930

20 July 1966 - 7-4002 - CARRIED 9 PAX AND 400 LBS CARGO FROM CAM LO TO DONG HA - 4th MARINES.

1510

20 July 1966 - 7-1467 - CARRIED 7 PAX FROM CAM LO TO DONG HA AND RETURN THEM TO CAM LO. 4th MARINES.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY21 July 1966 (Cont)

- 1427 - HON 7-1633 GND (1) OH-46A RETURNED FROM DONG HA, HAZARDOUS HOP.
- 1555 - HON 7-4001 COMPLETED - 2.0 (2) OH-46A RETURNED AND AVOIDED COLLISION ON OPERATION HASTINGS. CARRIED 21,400 POUNDS OF CARGO, 54 PAX.
- 1845 - HON 7-7008 COMPLETED \* ONE (1) OH-46A HAZARDOUS HOP RETURNED FROM DONG HA
- 1830 - HON 7-1632 FOUR (4) OH-46A RETURNED FROM DONG HA. CARRIED 12 HON THIS DAY. CARRIED 16 PAX, 6500 POUNDS OF CARGO.
- 2010 HON 7-1518 COMPLETED TWO (2) OH-46A RETURNED FROM DONG HA TO HSTP.
- 2125 - HON 7-1700 COMPLETED RETURNED FROM DONG HA. CARRIED 4 PAX

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY21 July 1966

- 20 JULY 1966 - 1000 - HKT 7-2002 3 AGT (CH-46A LAUNCHED TO MOVE  
A HELICOPTER FROM YD084624 TO CAN 10 YD133593.  
REMOVED OF "HELICOPTER" FROM.
- 1245 -  
1245 - HKT 7-2002 TWO (2) CH-46A LAUNCHED FROM BONG HA  
BRIDGE 3-5 BRIDGE CAN 10 BRIDGE 3-5 BRIDGE  
BONG HA. CARRIED 26 U. S. PAX.
- 1620 HKT 7-2005 THREE (3) CH-46A LAUNCHED TO 80905564  
80991579, 80975565, 80991579. CARRIED 83 U. S. PAX.
- 1707 - HKT 7-2003 FOUR (4) CH-46A LAUNCHED FROM BONG HA  
TO CAN 10 AND PICKED UP 61 U. S. PAX AND CARRIED  
ALL AT 80985563.
- 1725 - HKT 7-1636 ONE (1) CH-46A LAUNCHED ON ADHOC RUN  
TO BONG HA, CAN 10 AND 1040.
- 1930 - HKT 7-1918B ONE (1) CH-46A LAUNCHED TO BONG HA  
TO BRIDGE FOR ORIGINATOR BUILDINGS.
- 1955 - HKT 7-4001 TWO (2) CH-46A LAUNCHED FROM BONG HA  
ON BRIDGE 3-5 BRIDGE AT YD094652. CARRIED  
9000 POUNDS OF AMMO AND PICKED UP 12 U. S. PAX  
AT 80976520.
- 21 JULY 1966 - 0730 - HKT 7-2001 FOUR (4) CH-46A LAUNCHED FROM BONG HA  
BRIDGE YD036519, PICKED UP 130 PAX'S AND CARRIED  
ALL AT 80976520.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY

~~22 JUL 1966~~

10 FIM. ALL CH-46A's GROUNDING UNTIL FURTHER NOTICE

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY

23 JULY 1966

**NO FLY. ALL CH46'S GROUNDED UNTIL FURTHER NOTICE.**

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY

24 July 1966

NO COMMITMENTS; TEST HOPS ONLY.

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MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY25 July 1966

0600 - MSN 7-1825 ONE (1) CH-46A LAUNCHED FROM MMAF TO DONG HA, WHILE AT DONG HA. CARRIED 105 WEAPONS AND AMMO AND OTHER LOGISTIC CARGO FROM D-5 TO YD981562. EXTERNALLY CARRIED ONE (1) DISABLED VMO HELICOPTER TO MMAF, TOTAL CARGO 21,800 POUNDS.

1315 - MSN 7-1825A TWO (2) CH-46A LAUNCHED ON AN EMERGENCY FRAG TO DONG HA. UPON ARRIVAL AT DONG HA WAS NOT NEEDED. RETURNED TO MMAF CARRIED 28 U.S. PAX AND 2200 POUNDS OF CARGO.

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APPENDIX 1

**CONFIDENTIAL**

MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY

26 July 1966

**NO COMMITMENTS - NO FLYING.**

**CONFIDENTIAL**

APPENDIX 1

**CONFIDENTIAL**

MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY

27 July 1966

1545 - 1547 7-2056 GND (1) CH-46A DISPERSED CALLED 151-34  
RESIDUAL AND REMAINING TOTAL WEIGHT 4700 POUNDS.

**CONFIDENTIAL**

APPENDIX 1

**CONFIDENTIAL**

MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY

28 July 1966

NO COMMITMENTS • TEST HOPS ONLY.

**CONFIDENTIAL**  
APPENDIX 1

**CONFIDENTIAL**

MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY29 July 1966

0537 - MSN 7-2058 ONE (1) CH-46A LAUNCHED TO DONG HA. MADE  
NUMEROUS TRIPS FROM YD117578 TO USS PRINCETON. CARRIED  
TOTAL CARGO OF 33,000 POUNDS AND 9 U. S. PAX.  
LAUNCHED FIVE (5) CH-46A FOR STAN CHECKS AND PROFICIENCY  
TIME IN P.M.

**CONFIDENTIAL**  
APPENDIX 1



**CONFIDENTIAL**

MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY30 July 1966

0600 - MSN 7-2100 ONE (1) CH-46A LAUNCHED TO USS PRINCETON, LPH-5,  
TO DONG HA TO STANDBY. WHILE AT DONG HA ALERTED TO  
MSN 7-7034 & 7-7004A, WHILE ON THESE MISERONS A BRASION  
FORCE WAS INSERTED AT YD326716 WHERE A UH-34 WAS DOWN,  
THEY LIFTED THE UH-34 FROM YD326716 TO DONG HA. A TOTAL  
OF 9,100 POUNDS OF CARGO WITH 26 T. G. BAK

**CONFIDENTIAL**

APPENDIX 1

**CONFIDENTIAL**

MARINE MEDIUM HELICOPTER SQUADRON 164

NARRATIVE SUMMARY31 July

0840 - NSN 7-2154 TWO (2) CH-46A LAUNCHED TO PHU BAI TO  
EXTERNAL ONE (1) H-34 BACK TO DA NANG. THE H-34  
WAS STAGED FOR FIXED WING PICK UP. CH-46A CARRIED  
ONLY 1500 POUNDS MISC. CARGO AND 9 U. S. PAX.

**CONFIDENTIAL**  
APPENDIX 1

NAVAL SPEED LETTER

UNCLASSIFIED

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 OPNAVINST P3750.6E

10 July 1966

To: Commander, U. S. Naval Aviation Safety Center

Subj: Report of Aircraft Mishap

A. OPNAVINST P3750.6E

1. CH-46A 151947 HMM-164

2. 8 July 1966 1820H 240° 11 NM Dong Ha Tacan RVN

3. Troop lift 1R5

4. Alpha damage. Number one engine failed. Aircraft struck trees, settled to the ground, rolled onto it's left side and burned.

5. 151947 was the number two aircraft of a three aircraft division. The mission was to insert a reconnaissance patrol into mountainous terrain at approximately 1500 feet MSL. The number one and two aircraft each had eight U. S. troops aboard and the number three aircraft was acting as airborne SAR. The flight had two UH-1E's as armed escort and each CH-46A was armed with .50 caliber machine guns. The flight departed Dong Ha air field at 1755H and proceeded to the landing zone. The number one aircraft made his approach to the zone, landed, started receiving heavy automatic weapons fire and lifted out of the zone with the troops still on board. The pilot of the lead aircraft states that he made a radio transmission that the zone was hot but the pilot of the second aircraft did not hear the transmission.

As the lead aircraft was lifting from the zone the pilot of the number two aircraft called that he was starting his approach. The UH-1E escort pilot acknowledged this and said he was joining up to provide cover. When the pilot called "on final approach" the escort pilot told him to wave off because the zone was too hot. The aircraft was at this time about 300 foot AGL and 80 kts air speed. Just after wave off power had been applied and a right turn initiated, the co-pilot saw the T5 needle increasing to 1000° and the Ng and Hf needles decelerating. The pilot made a radio call that he had lost the number one engine and the SAR pilot told him to dump fuel. The co-pilot moved the engine condition lever to stop and placed both fuel jettison switches to ON. He then turned the fuel boost pump OFF, fuel valve OFF, placed the number one igniter ON and checked the gages. The T5 was decreasing, Hf was zero and Ng approximately 40%. The fuel valve and boost pump was turned ON and a re-start attempt was made. All efforts to get a re-start failed. When the engine condition lever was placed to the crank position, the Hf remained at zero and the Ng was frozen at 40%. The condition lever was moved to the START position and remained there until the aircraft crashed.

APPENDIX 2

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 (PHAVINST #3750.6E)

*Warren C. Watson*

WARREN C. WATSON

Copy to:

CHO

CGC (CODE AAP)

CGHAWAINEAC

COMFAIRWESTPAC

CG FMFLANT

CG FMTRAC

CG 3rdMAW

CG 1stMAW

CG MAG-16

FILE

MARINE MEDIUM HELICOPTER SQUADRON 164  
Marine Aircraft Group 16  
1st Marine Aircraft Wing, FMFAC  
WFO San Francisco, California 96602

APPENDIX 2

MARINE MEDIUM HELICOPTER SQUADRON 164  
Marine Aircraft Group 16  
1st Marine Aircraft Wing, FMFPac  
FPO, San Francisco, California 96602

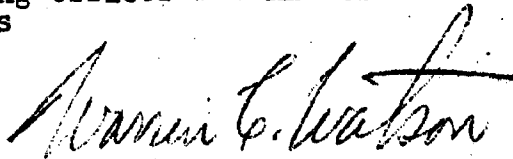
61:ECH:jfl  
3700  
20 July 1966

From: Commanding Officer  
To: Commanding General, 1st Marine Aircraft Wing  
Via: Commanding Officer, Marine Aircraft Group 16  
Subj: Report of Aircraft Mishap

A. OPNAVINST P3750.6E

1. My 2-67A is submitted as follows:

- a. Resume of flight time of Major T. S. REAP
- b. Resume of flight time of Captain W. J. SELLERS
- c. Resume of flight time of First Lieutenant R. D. PARTINGTON
- d. Resume of flight time of First Lieutenant C. D. BROWN
- e. Part V Description of Mishap
- f. Part VI Damage to the Aircraft
- g. Part VII Amplification of Contributing Cause Factors
- h. Part VIII Conclusions and Recommendations
- i. Part IX Commanding Officer's Comments
- j. Part X Enclosures



WARREN C. WATSON

SPECIAL HANDLING  
REQUIRED IN ACCORDANCE  
WITH PARA 66 OPNAVINST  
P3750.6E

APPENDIX 3

## PART V

1. Description of Mishap

a. On 15 July 1966, twenty seven (27) aircraft departed Marble Mountain Air Facility at 0615H for Dong Ha Airfield in conformance with Frag Order 7-1188. Major Thomas S. REAP was flying YT-15, BuNo 151930 as the fifth Division Leader (RoseAnn 1-17). Captain Wiley J. SELLERS was flying YT-18, BuNo 151936 as the number two man in the fifth division. ( RoseAnn 1-18).

b. The flight arrived at Dong Ha at 0715H. All aircraft were shut down and crews disembarked for determination of possible changes and final briefing prior to execution of the strike. Liaison with the Battalion Commander determined that he desired all troops to be landed in one zone located at YD039648. All aircraft were manned awaiting a call from the TACA (RoseAnn Playboy) that the zone was clear and that the fixed wing prep was on schedule. At about 0745H a call from the TACA confirmed the zone was clear and could accept troops at 0800H, L-Hour. The flight leader lifted at 0750H. Each successive division lifted with a two minute interval. The flight climbed on course to 2000 feet and proceeded direct to the landing zone. As the flight approached the landing zone the TACA confirmed that the zone was still clear and marked the LZ with yellow smoke. The flight leader commenced a 180° right descending turn to final approach course and touched down at 0800H. The final approach heading was generally southeast. From the yellow smoke marking the LZ, it appeared that the wind was calm to possibly 2-3 knots from the northwest. The terrain on the final approach was sloping downhill to the zone. The zone itself was a pasture approximately 300'X300' located on the west bank of a stream. On the western edge of the zone was an embankment approximately fifteen feet high with one or two trees located at the edge of the embankment. In the zone itself there was a single tree about 25'-30' tall. The first two divisions landed in the zone without incident. One aircraft of the third division, RoseAnn 1-14 (EP-155, BuNo 151961) was unable to land in the zone. This aircraft came to rest outside the zone and to the right. Subsequent to this mishap the fifth division commenced the approach. At the 90° position, the division leader, Major REAP, felt he was high with an airspeed of 85-90 knots. On final he was still slightly high with airspeed reducing satisfactorily below 80 knots. Over the west end of the zone he still assessed his position as about 20 feet too high and 10 knots too fast. Major REAP felt at this point he would overshoot unless he flared, but he chose not to flare for fear of placing his wingman in an awkward position. He elected instead to continue forward, picking out a clear area approximately 75' east of the designated LZ. The aircraft landed in this alternate area with no damage sustained. Captain SELLERS flying on the left as the number two man approached the landing zone in a slightly high position also and slightly fast indicating he would also overshoot. He elected to flare and at zero

APPENDIX 3

airspeed in a nose level attitude had adequate power to stop settling. He then air-taxiied to the right so as not to land on a small tree. However, he observed troops under the aircraft which prevented a landing. Captain SELLERS then touched down to the left of Major REAP approximately 75' east of the designated LZ. He believed that he had sufficient rotor tip clearance from YT-15 on the right and several bamboo stalks on the left. As he bottomed the collective, the rotor blades of the aft rotor head started to contact the bamboo stalks followed almost immediately by enmeshed aft rotor head blades of YT-15 and YT-18. At this point both aircrews experienced violent vibrations within the airframe, followed by a separation of the aft pylon of both aircraft from the constant cabin at the field splice (Station 410). Both flight crews secured engines, applied rotor brakes and secured the cockpits. The weapons and loose gear were removed from both aircraft and a rapid assessment of damage was made by Captain SELLERS, the squadron Aviation Safety Officer. The weapons and gear were moved back to the landing zone, interrupted several times by the requirement to hit the deck due to sniper fire. Soon thereafter the flight crews were picked up by RoseAnn 1-19 and 1-20, the second section of the original fifth division and returned to Dong Ha Airfield.

SPECIAL HANDLING REQUIRED IN  
ACCORDANCE WITH PARAGRAPH 66  
OPNAVINST P3750.6E

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## PART VI

1. Damage to the Aircraft

a. Alpha damage to both aircraft. Aft pylons of both aircraft separated from the fuselage at the field splice (Station 410). The tactical situation prevented a more detailed damage assessment; both aircraft were subsequently destroyed by friendly fixed wing aircraft.

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ACCORDANCE WITH PARAGRAPH 66  
OPNAVINST P3750.6E

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## PART VII

1. Contributing Cause Factors

It is the opinion of this board that several cause factors contributed to this accident. They are:

a. Downwind Approach

The approach to the landing zone was made on a southeasterly heading. The wind in the landing zone was from the northwest at approximately five (5) knots. This increased ground speed caused by the five (5) knot tailwind component caused the pilots to slightly overshoot their intended point of landing within the landing zone, although indicated airspeed was considered satisfactory for the approach. It is to be noted that a southeasterly approach heading was necessitated by numerous automatic weapons positions located 1200 to 1400 meters northeast of the landing zone (enclosure 10).

b. Downhill Sloping Terrain

The terrain in this area sloped downhill from northwest to southeast. During the approach this downhill gradient gave the pilot the illusion of being at proper altitude when in fact he was slightly high.

c. Failure to Execute a Wave Off

As the approach reached its concluding phase, a wave off should have been executed in order to eliminate a high, fast, overshooting condition precipitated by the two previously mentioned contributing causes. However, the tactical situation was such that the pilots felt a low airspeed, low altitude wave-off which would have been dictated by a heavy gross weight condition was not prudent.

d. Friendly Troops Obstructing Touchdown

After overshooting the landing zone the second aircraft was unable to land at the alternate landing point due to friendly troops within the position. This necessitated a selection of a third landing site which proved to provide insufficient clearance between aircraft.

SPECIAL HANDLING REQUIRED IN  
ACCORDANCE WITH PARAGRAPH 66  
OPNAVINST P3750.6E

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## PART VIII

1. Conclusions and Recommendations

a. Conclusion: That downwind landings in heavy gross weight conditions demand a more precise approach dictated by a higher angle of attack and a slower airspeed. Failure to effect these requirements will result in an overshooting of the intended point of landing.

Recommendation: That precise attention must be given by all flight crews to the techniques and demands required in the conduct of downwind approaches and landings.

b. Conclusion: That an approach over downhill sloping terrain creates the optical illusion of aircraft to ground separation less than the actual aircraft to ground separation.

Recommendation: That an approach over downhill sloping terrain must be recognized by flight crews sufficiently early in the approach so that a proper rate of descent will be established to prevent being high over the intended point of landing.

c. Conclusion: That a wave off was not executed to avoid a high, fast, overshooting approach.

Recommendation: That unless prohibited by tactical situations, wave offs must be effected sufficiently early in the approach to correct a deteriorating flight condition.

Signatures of the Board

E. C. Hertberg  
E. C. HERTBERG, Senior Member

J. L. James  
J. L. JAMES A/C Maint Cont O.

D. B. Gillis  
D. B. GILLIS Flight Surgeon

C. S. Tubbs  
C. S. TUBBS, Asst Ops Officer

G. F. Stephan  
G. F. STEPHAN NATOPS O.

H. R. Fuller  
H. R. FULLER Recorder

SPECIAL HANDLING REQUIRED IN  
ACCORDANCE WITH PARAGRAPH 66  
OPNAVINST P3750.6E

## PART IX

COMMANDING OFFICERS COMMENTS AND RECOMMENDATIONS

1. Forwarded concurring with the conclusions and recommendations of the board.
2. The tactical situation in the combat theater sometimes dictates deviation from the accepted procedures as established by the NATOPS Flight Manual. When such conditions exist emphasis must be placed on mission planning, pilot briefing and aircraft and pilot capabilities in order to provide the maximum probability of mission success. The cause factors of this accident are related to the tactical situation and improper pilot technique.
3. The recommendations of the AAR Board will be implemented.

SPECIAL HANDLING REQUIRED IN  
ACCORDANCE WITH PARAGRAPH 66  
OPNAVINST P3750.6E

*APPENDIX 3*

## PART X

## Enclosures:

- ✓1. Weight and Balance Form
- ✓2. Statement of Major T. S. REAP
- ✓3. Statement of Captain W. J. SELLERS
- ✓4. Statement of First Lieutenant R. D. PARTINGTON
- ✓5. Statement of First Lieutenant C. D. BROWN
- ✓6. Statement of Captain R. O. HARPER
- ✓7. Statement of Lance Corporal G. L. BAILEY
- ✓8. Statement of Private First Class J. A. ENSIGN
- ✓9. Photographic Coverage NIF
- ✓10. Map Coverage NIF

SPECIAL HANDLING REQUIRED IN  
ACCORDANCE WITH PARAGRAPH 66  
OPNAVINST P3750.6E

*APPENDIX 3*

NATOPS  
LOCAL FLIGHT PLAN CH-46A

MODEX 15/18 BUNO \_\_\_\_\_ DATE 15 July 1966  
 PILOT 5-1 Major S. S. REAP CO-PILOT 5-2 Capt W. H. SELWERS  
 SYLLABUS FLIGHT NO. \_\_\_\_\_ ETD 0630 ETR \_\_\_\_\_  
 OPERATION AREA AND DESTINATION (10038649)  
 FLIGHT ROUTE Dong Ha (10038649)

WEIGHT AND BALANCE COMPUTATION

1. TAKE-OFF PRESS ALT 100' TEMP. 32°C WIND - ° VEL - K
  - A. H I G E max gross w/wind cor. (21,400# max. 20,200 lbs
  - B. Operating weight 14,600 lbs  
(Basic weight plus crew, oil, tools, special equip.)
  - C. Useful load (A-B) 6,300 lbs
  - D. Actual load
 

1. Personnel and cargo	<u>3,250</u> lbs	}	<u>4,450</u> lbs (D-1 + D-2)
2. Fuel at take off	<u>1,300</u> lbs		
  - E. Take-off gross weight (B + D) 19,050 lbs
  - F. Torque required H I G E (Chart - 5% Q.) 66 %
  - G. Torque available military power 72 %
2. LANDING PRESS ALT. 200' TEMP 34°C WIND - ° VEL - K
  - A. No wind H O G E max. gross weight 19,000 lbs
  - B. No wind H I G E max. gross minus 500lbs 20,400 lbs
  - C. Estimated landing gross weight
 

1. Take-off gross weight	<u>19,050</u> lbs	}	<u>18,800</u> (B-1 - B-2)
2. Fuel in route	<u>250</u> lbs		

(If C is greater than B, take-off gross weight must be reduced so as not to exceed B)
  - D. Torque required H O G E 70 %  
(Add 3 1/4% torque per 1000 ft. additional altitude to torque required at sea level)
  - E. Torque available, military power 72 %
  - F. Single engine airspeed capability 0 Min. 0 Max.

PILOTS SIGNATURE

*APPENDIX* **Enclosure (1)**

STATEMENT OF Major T. S. REAP 068237 USMC Concerning Accident  
involving CH-46A Bureau Numbers 151930 & 151936 on 15 July 1966

As the lead aircraft of four CH-46A's, the fifth division of a ~~larger~~ strike flight I commenced my approach at approximately 0810. The co-ordinates of the zone were YD038649. It was a right 180° turn to a straight in approach. Prior to commencing the turn I signaled the flight for a free cruise trail by wagging the aft section of my aircraft from left to right as is normal procedure. The approach was to a down hill zone to which we later found out was a down wind landing. As I approached the zone, I was in hover aft and indicating approximately 30 knots. It appeared I was going to land long so rather than making an exaggerated maneuver to stop I elected to land in a smaller field about 30 yards straight forward. It was fairly small so I came to a hover and proceeded to land. The rotor turns began to droop at that point so my landing was hard. We were on the deck approximately six seconds, the ramp was down and some of our troops had already debarked when an immediate violent gyration commenced. I had no idea what was happening so I shut down the engines and rotor blades and vacated the aircraft. Upon debarking I saw the aircraft had broken in two. Both engines had fallen through to the aft ramp. Parked aft and to my left I saw YT-18 in a similiar condition. We evacuated the wounded and the weapons and were picked up by another aircraft. Prior to boarding the rescue aircraft, I did manage to take numerous pictures with my 35mm camera. Upon debarking from the aircraft I also heard fire in the zone which necessitated all to drop to the ground.

*T. S. Reap*  
T. S. REAP

STATEMENT OF Captain W. J. SELLERS 072880 USMC Concerning Accident involving CH-46A Bureau Numbers 151930 & 151936 of 15 July 1966.

I was flying 151936, the number two aircraft in a four plane division. Major T. S. REAP was the division leader flying 151930. 1stLt C. D. BROWN was my co-pilot. We were part of a twenty-four plane strike into a landing zone bearing 288°, 11½ NM from Dong Ha TACAN. We loaded fourteen U. S. troops and departed Dong Ha at 0800 as a flight of four. I had ample power on take-off and climb out. We approached the landing area and could see the other aircraft in the landing zone. Major REAP kicked us into a column at about the 180° position and we started descending. I was flying about four rotor diameters behind the leader and a little stepped-up. Deadlock, the UH-1E TACA aircraft, came up on the radio and said that one of the CH-46's was down in the trees but out of the zone. We continued our approach and started slowing down. The zone was approximately one half mile away when I instructed the co-pilot to switch to "hover aft". The approach was down hill, downwind (approximately 4-6 knots) and when I rolled on final, I was a little high. I further reduced power to loose altitude and I started to flare to slow down. I was about to over fly the leader and I increased the flare to approximately 20° nose up. When I got the airspeed down to almost zero, I was still high and moving abeam the leader. There was a stream to my left with some trees along side so I decided to continue forward. I came to a high hover, began to settle and started losing turns. My rotor RPM drooped to approximately 90%. The generators did not go off the line because I continued to receive radio transmissions. I regained my turns by decreasing collective. I sat the aircraft down near some bamboo standing about 20 feet tall. The down wash from the rotors bent the bamboo over and kept it out of the rotor blades. Just prior to landing, I had to move the tail of the aircraft to the right, towards 151930, to keep from landing on some troops. After touchdown, I lowered the collective and the co-pilot positioned the speed trim control to AUTO.

We had been on the deck approximately four (4) seconds when the aircraft began to shake and vibrate violently. I yelled for the people to "get out of here" and immediately began to shut down the engines. The co-pilot armed the rotor brake and applied the rotor brake. I got out of the seat, helped get the guns and equipment out and made sure all the people were out of the aircraft. I went outside to investigate the damage. Both aircraft had the aft rotor blades gone and both aircraft were broken at the manufacturer's splice, just forward of the aft pylon. I saw fire in the #2 engine of 151936 and I got the fire bottle after finally locating it outside by the ramp and sprayed the CO2 into the engine exhaust. I then gave the bottle to the crew chief and he sprayed the intake. The fire was extinguished so I continued to check the damage. The bamboo had straightened back up and there were

heavy cuts near the tops. Since my crew was out and uninjured, I checked the crew of the other aircraft. They were O K so we began to move the guns and personal gear towards some other aircraft. We loaded aboard and returned to Dong Ha.

This accident could have been prevented by executing a wave off when I saw that it was a marginal approach.

*W J Sellers*  
WILEY J. SELLERS



STATEMENT of 1stLt. R. D. PARTINGTON 091234 USMC Concerning  
Accident involving CH-46A Bureau Numbers 151930 & 151936 on  
15 July 1966.

We had made our approach into the LZ with no problems. Airspeed was well under control and clearance over the trees was good - no large attitude change in the approach. Our landing spot was at the forward position in the zone, leaving plenty of room for the following aircraft. On touchdown, I put the speed trim back to AUTO and lowered the ramp. As I watched the troops debark a violent shaking started. At first I was unable to reach any control. After a few seconds Major REAP secured the Engine Condition Levers, I armed the rotor brake and he put the rotor brake on. After the shutdown was finished I left the aircraft from the co-pilots emergency exit, later returning to the aircraft to remove the .50 caliber and personal gear.

*R D Partington*  
R. D. PARTINGTON

STATEMENT OF 1stLt. C. D. BROWN 090542 USMC Concerning  
Accident involving CH-46A Bureau Numbers 151930 & 151936 on  
15 July 1966.

Just abeam the landing zone, the leader gave us the tail chase signal and we moved in place. The flight then turned on final, estimated our airspeed about 80 to 85 knots when on straight away, Captain SELLERS called for Hover Aft. At that time we were a little high and fast for the approach. We continued and planned to land left of the leader. As we approached the landing spot, our turns were building and Captain SELLERS was trying to control the turns by up collective, this making us a little more high for the landing spot. As we started to settle too close to the trees to our left, Captain SELLERS moved the aircraft to the right where Major REAP in YT-15 had just landed. When we finally landed we were very close to YT-15 and I switched to AUTO on the speed trim and lowered the ramp. At that time Captain SELLERS lowered the collective to the bottom and we started to receive a violent vibration and Captain SELLERS secured both engines. I put the rotor brake on and all rotors stopped. We exited the aircraft. When I got out and looked back, it looked as though our aft rotor had hit YT-15's aft rotor. Both aircraft were damaged to the point we could not have flown either of the two. We got all weapons and personnel out of the aircraft and into another aircraft in the zone just west of the crash site.

*Carl D. Brown Jr.*  
CARL D. BROWN, Jr.

STATEMENT OF Captain RICHARD O. HARPER 071918 USMC Concerning Accident involving CH-46A Bureau Numbers 151930 & 151936 of 15 July 1966.

On 15 July 1966, I was assigned by Marine Medium Helicopter Squadron 265 to fly as a helicopter aircraft commander in the CH-46 helicopter on mission number 1188. My co-pilot was 1stLt G. H. DIACONT, USMC.

This mission was in support of "OPERATION HASTINGS" in the vicinity of Dong Ha, Republic of Vietnam.

Due to the nature of the mission, all CH-46 helicopters were put in one bloc and flight/division leaders assigned from both HMM-164 and HMM-265. My section, consisting of two (2) aircraft, was assigned to Major T. REAP's division (Roseann 1-17) as Roseann 1-19 and Roseann 1-20. Roseann 1-18 was Captain SELLERS who was assigned as the wingman of 1-17.

The briefing for mission number 1188 was conducted at approximately 1730H, 14 July 1966 and rebriefed by the HMM-265 Squadron Commander at 0515, 15 July 1966. Last minute changes were covered just prior to the launch at Dong Ha at approximately 0730H, 15 July 1966 by MAG-16 representatives.

The flight from Marble Mountain Air Facility to Dong Ha took place between 0624H, 15 July 1966 and 0718H, 15 July 1966. This movement into operational position was uneventful.

At Dong Ha the entire flight was briefed as to the conduct of the flight by the CH-46 flight leader (Commanding Officer, HMM-164), the UH-1E gun ship flight leader (Commanding Officer, VMO-2) and the Tactical Air Commander Airborne (Commanding Officer, Marine Aircraft Group 16). The approach and retirement routes, the pick up coordinates (Dong Ha), drop coordinates (YD039649) and condition of the landing zones were covered in the brief.

At approximately 0750H, the first division departed Dong Ha for the landing zone. At 0800H flight 1-17 lifted from Dong Ha with 14 USMC troops on board each of the four (4) helicopters. At approximately 0812H, Roseann 1-17 started his approach to the LZ at YD039649. Three (3) divisions had already landed in the landing zone and as we commenced our approach, the fourth division was touching down in the zone.

The UH-1E gunship on station called on the radio that a CH-46 had crashed in the landing zone but that he was forward and to the right of the landing site. This was Roseann 1-14 of the previous division. I could see the helicopter smoking in the zone and decided to continue my approach based on the information from the UH-1E. 1-17 and 1-18 were also continuing the approach. I elected to take an extra hundred feet of interval between myself and 1-18 to ensure a "single aircraft" approach.

I noticed that 1-17 was going to land long and realized at that time that we must be landing downwind. Although I was indicating less than 40 knots of airspeed, I felt that the ground speed was much faster and made the necessary adjustment. At this point 1-17 touched down at the extreme forward side of the landing zone (East) within feet of heavy vegetation and 20-30' trees. He also appeared to be sitting in tall grass and down

in a wash-out area with the aircraft sitting in an uneven attitude. 1-18 continued his approach and was also overshooting the designated landing area by 60 - 100 meters.

Both aircraft made contact with the ground within 5 seconds of each other. 1-18 appeared to be in an extremely high nose attitude just prior to touch down and was making an approach to the left side and slightly to the rear of 1-17. About 5-10' above the ground and in a high nose attitude, 1-18 seemed to float towards 1-17 and simultaneously contacted a 30-40' tree with his rotor blades and the ground with his right main landing gear. Parts began to fly in all directions and in the next instant both aircraft rotor systems contacted each other, creating a large amount of dust and breaking both fuselages in several places. Both aircraft remained erect throughout these contortions. At this point both my co-pilot and myself were not sure if they had hit each other or if they had landed on mines or received mortar fire.

I was at approximately 200' of altitude, 40-50 knots of indicated airspeed and committed to my approach when the accident occurred. I attempted to wave off and found that due to the nose high attitude required for the downwind approach and approximately 2900 lbs. of troops in the aircraft plus the slow airspeed that wave-off capability was not present. The attempted wave-off was stopped and a normal landing was effected in a clear area aft and to the right of 1-17 about 150 meters. 1-20 was making his approach behind me and had sufficient time and altitude to wave off.

After dropping my troops in the zone, I directed the crew chief to assist the crews of the three (3) crashed aircraft and he made repeated trips to all three aircraft taking stretchers for the wounded and organizing the other crew members to get out all useable guns, ammo and equipment.

1-20 was contacted on FM and requested to land and assist in the evacuation of the crews and equipment.

The two (2) aircraft (1-19 & 1-20) were able to evacuate all three (3) crews and several other wounded personnel plus guns and ammo.

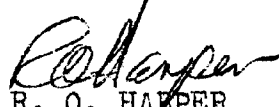
The return to Dong Ha was uneventful and the landing was made at 0850H.

The crews of Roseann 1-19 & 1-20 were as follows:  
Roseann 1-19, EP-160

Pilot: Captain Richard O. HARPER 071918/7335 USMC  
Co-Pilot: 1stLt George DIACONT 090546 USMC  
Crew Chief: 1CPL E. F. DURBIN 1489292/6418 USMC  
Gunner: CPL G. C. DELANOY 266945/6611 USMC

Roseann 1-20, EP-174

Pilot: Captain Leo FARRELL 085103/7335 USMC  
Co-Pilot: 1stLt Jerry LEAR 087582/7335 USMC  
Crew Chief: SGT F. D. RILEY 1341629/6422 USMC  
Gunner: SSGT R. B. KIRKENDAL 1546774/6442 USMC

  
R. O. HARPER

STATEMENT OF LANCE CORPORAL GARY L. BAILEY 2019388 USMC  
Concerning Accident involving CH-46A Bureau Numbers 151930  
& 151936 on 15 July 1966

The mission was a troop lift north of DONG HA. We picked up 14 troops at DONG HA and lifted out for the zone. We approached the zone with a flight of four with YT-15 as lead plane. Approaching the zone we heard that another plane had crashed into the zone. I started looking for the plane to see if he would be in the way of our landing. He was on the far right of the zone and well clear of us. We flared out at the forward end of the zone to make room for planes behind us. We drifted forward over the end of the zone. I saw a ridge directly beneath the plane with troops lying on top of the ridge. I told Major REAP to move the plane forward of the ridge. He pulled power and it took an extreme amount of power to pull out of our flare and move forward. At this time I told Major REAP to set it down as we were clear aft. I heard the engine drooping extremely low. I have never heard engines droop this low before. I don't know how much power or torque we pulled but it was certainly a lot. We didn't have any power left to set down gently and we dropped about 8-10 feet to the ground. We hit hard, the hard landing lights came on. We bounced around a little and settled down. We dropped the ramp and started unloading troops. About 2-3 troops left the plane when the plane went into a wild convulsive fit. Vibrating and shaking violently. My gunner and I were thrown to the floor of the plane. I saw the aft pylon collapse and I told the pilots to shut down and get out of the plane. I started hollering at the troops to get out of the plane. At this time I was worried that some of them would be trapped under the pylon. One man had his foot caught but he jerked it free and got out. Another man had a broken leg and didn't want to be moved without a stretcher. Major REAP came aft and told us to get the guns and ammo out of the plane. We started unloading everything that we could at that time and started carrying it to the plane that was waiting to take us out. When I went around the aft end to the left of the plane I noticed two bodies lying aft and to the left of the plane. They were hit by one of the rotor blades as the pylon dropped. During the brief time that I had, I looked at both planes and the damage to both planes was almost identical. We got all of the gear loaded that we had grabbed and got aboard the rescue planes and took off for DONG HA. None of the crew on YT-15 was hurt. I had a skinned and bruised leg. My gunner had a bruised hip where he landed on the floor. We arrived at DONG HA. We unloaded our gear and went to the Command Post.

GARY L. BAILEY

*Gary L. Bailey*  
1

Enclosure (7)

APPENDIX 3

STATEMENT OF PRIVATE FIRST CLASS JERRY A. ENSIGN 2100520 USMC  
Concerning Accident involving CH-46A Bureau Numbers 151930 &  
151936 on 15 July 1966

I flew as Aerial Gunner on YT-18 on the 15th of July 1966, in support of Operation Hastings. Other members of the crew were; Pilot - Capt W. J. SELLERS; Co-Pilot-1stLt C.D. BROWN; Crew Chief- Cpl H. E. BEECHAM. We launched from DONG HA at approximately 0800 with a load of about 14 troops. The approach to the zone seemed normal until we were approximately 15-20 feet off the ground, when our aft rotor blade started hitting cane and we pulled away and landed. We were on the ground approximately 3-4 seconds when there was a loud noise and the aircraft started violent gyrations. I then looked back and saw the upper aft section of the aircraft break down on the ramp and heard Capt SELLERS on the ICS say "Get out of here". We then dropped the side hatch and got all of the troops out before going out ourselves. We then went back into the Aircraft and took the guns and ammo out. I heard Capt SELLERS yell its on fire and he grabbed the fire extinguisher and ran out of the aircraft and started to fight the fire and then the Crew Chief climbed up on the top of the aircraft to have better access at the fire. I was told to get the fire extinguisher from the other downed aircraft. About halfway between the two aircraft we started receiving sniper fire in the zone and had to get down. After a few seconds I went on to the other aircraft and upon reaching it found that it was impossible to get at their fire extinguisher. When I got back to our aircraft the fire was out. I then ran approximately 60 yards to a HMM-265 aircraft with Capt SELLERS. Upon looking around and not seeing the rest of our people he got up and ran back to the downed aircraft looking for them and I followed him. We didn't see any of them so we ran back to the HMM-265 aircraft and 4 out of the 8 crewmembers on their downed aircraft were there and we made 6. The other two came out on another aircraft. At no time in the zone was there any panic among the crewmembers. Although under sniper fire, I think that most of this can be attributed to Capt SELLERS leadership.

*Jerry A. Ensign*  
JERRY A. ENSIGN

NAVAL SPEED LETTER

UNCLASSIFIED

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 OPNAVINST P3750.6E

DATE 16 JULY 1966

TO COMMANDER, U.S. NAVAL AVIATION SAFETY CENTER

SUBJ: REPORT OF AIRCRAFT MISHAP

A. OPNAVINST P3750.6E

1. CH-46A 151939 HMM-164

2. 15 JULY 1966 1310H 288° 11mm DONG HA TACAN RVN

3. TROOP LIFT 1R5

4. D DAMAGE. RECEIVED ONE BULLET HOLE IN AFT TRANSMISSION OIL COOLER, STATION 265, WATERLINE +71. ONE BULLET HOLE IN GREEN BLADE FORWARD HEAD. BOTH MAIN LANDING GEAR SHEARED OFF.

5. CLIMBING OUT OF THE LANDING ZONE, ALTITUDE 500 FT, AIRSPEED 70 KTS, AIRCRAFT RECEIVED AUTOMATIC WEAPONS FIRE. WHEN THE TRANSMISSION FLUID STARTED RUNNING DOWN ON THE ENGINES, A VERY HEAVY SMOKE STARTED COMING FROM THE ENGINE COMPARTMENT. THE CREW CHIEF TOLD THE PILOT THAT THE ENGINE WAS ON FIRE AND THE PILOT EXAMINED THE ENGINE GAGES FOR AN INDICATION OF FIRE. THERE WERE NO INDICATION OF FIRE, BUT THE PILOT NOTICED THAT THE AFT TRANSMISSION OIL PRESSURE HAD DROPPED TO ZERO. WHEN THE TRANSMISSION OIL TEMPERATURE STARTED RISING, THE PILOT ELECTED TO LAND. ON LANDING, THE LEFT MAIN GEAR SHEARED OFF THE A/C AND THE RIGHT MAIN GEAR WAS TWISTED 90°. THE PILOT SAT THE LEFT SUB WING DOWN ON A DIKE AND SHUT THE AIRCRAFT DOWN. A MAINTENANCE CREW WAS FLOWN IN, THE OIL COOLER CHANGED AND THE AIRCRAFT FLOWN TO DONG HA AND WAS LANDED ON A PILE OF SAND BAGS.

6. PILOT: ROBERT E. JOHNSON CAPT. 083413 USMC NO INJURY

7. REMAINING THREE CREW MEMBERS UNINJURED.

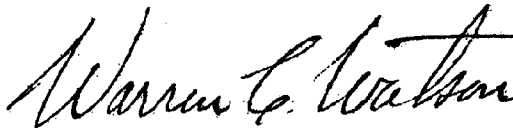
8. N/A

9. N/A

10. DIRECT ENEMY ACTION

11. N/A

12. 6-671



WARREN C. WATSON

COPY TO,  
CNO  
CMC (CODE AAF)  
COMNAVAIRFAC  
COMFAIRWESTPAC  
CG FMFLANT

CG FMFPAC  
CG 3dMAW  
CG FMAW  
CO MAG-16  
FILE

APPENDIX 4

NAVAL SPEED LETTER  
UNCLASSIFIED

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 COMNAVINST P3750.6E

22 July 1966

To: Commander, U. S. Naval Aviation Safety Center

Subj: Report of Aircraft Mishap

- A. COMNAVINST P3750.6E
1. CH-46A 151949 151-164
2. 20 July 1966 0745H 275° 6 NM Dong Ha tacan RVN
3. Troop lift. 175
4. Echo damage. Forced landing. Number one engine failed on wave-off attempt.
5. When on short final to the landing zone, the aircraft was given a wave-off by the ground personnel and another zone indicated. When the pilot applied power, the number one engine stalled. Engine temperature was in excess of 800° for approximately ten seconds. Aircraft landed in a rice paddy with no further damage. After the engine was removed, it was found that the compressor was frozen. DIR requested.
6. Pilot. Robert E. JOHNSON Capt 083413 USMC No injury
7. Remaining three crewmembers uninjured.
8. Not applicable
9. Not applicable
10. Not direct enemy action.
11. Copy to FMFPAC, 1stMAW, MAG-16
12. 9-67I

*Warren C. Watson*  
WARREN C. WATSON

Copy to:

CNO  
CNO (COMAARP)  
COMNAVINST  
COMNAVINST  
COMNAVINST  
COMNAVINST

CG FMFPAC  
CG 3dMAW  
CG 1stMAW  
CG MAG-16  
FILE

MARINE MEDIUM HELICOPTER SQUADRON 164  
Marine Aircraft Group 16  
1st Marine Aircraft Wing, FMFPAC  
APO San Francisco, California 96602

APPENDIX 5





## Resume of Flight Time

- a. Type A/C CH-46A BUNO 151936 Date/Time mishap 15 July 0815H
- b. Pilot's Name/Rank/Serno. SELLERS, Wiley J. Captain 072880
- (1) Total flight hours, all models. 1546.8
  - (2) Total time in country. 4 Months, 1 Week
  - (3) Total R&R times and dates:  
None
  - (4) Total flight hours in country. 126.9
  - (5) Total missions in country. 78
  - (6) Total hours on duty prior to mishap. 3
  - (7) Years designated naval aviator. 5
  - (8) Date last flight prior to mishap (hours and mission).  
14 July 1966 4.7 Ammo Resupply IR9

## Resume of Flight Time

- a. Type A/C CH-46A BUNO 151930 Date/Time mishap 15 July 0815H
- b. Pilot's Name/Rank/Serno. REAP, Thomas S. Major 068237
- (1) Total flight hours, all models. 3327.4
  - (2) Total time in country. 4 months, 1 week
  - (3) Total R&R times and dates:  
One: 28 May - 2 June
  - (4) Total flight hours in country. 158.7
  - (5) Total missions in country. 106
  - (6) Total hours on duty prior to mishap. 3
  - (7) Years designated naval aviator. 11
  - (8) Date last flight prior to mishap (hours and mission).  
13 July 1966 5.3 Troop Lift IR5

## Resume of Flight Time

- a. Type of A/C CH-46A BUNO 151930 Date/Time mishap 15 July 0815H
- b. Pilot's Name/Rank/Serno. PARTINGTON, Roger D. 1stLt 091234
  - (1) Total flight hours, all models. 546.8
  - (2) Total time in country. 4 Months, 1 Week
  - (3) Total R&R times and dates:  
None
  - (4) Total flight hours in country. 146.8
  - (5) Total missions in country. 75
  - (6) Total hours on duty prior to mishap. 3
  - (7) Years designated naval aviator. 1 Year, 4 Months
  - (8) Date last flight prior to mishap (hours and mission).  
13 July 1966 2.8 Troop Lift IR5

## Resume of Flight Time

- a. Type of A/C CH-46A BUNO 151936 Date/Time mishap 15 July 0815H
- b. Pilot's Name/Rank/Serno. BROWN, Carl D. 1stLt 080542
- (1) Total flight hours, all models. 689.3
  - (2) Total time in country. 4 Months, 1 Week
  - (3) Total R&R times and dates:  
None
  - (4) Total flight hours in country. 165.6
  - (5) Total missions in country. 77
  - (6) Total hours on duty prior to mishap. 3
  - (7) Years designated naval aviator. 1 Year, 10 Months
  - (8) Date last flight prior to mishap (hours and missions).  
13 July 1966 3.1 Aerial Recon IR7

NAVAL SPEED LETTER

UNCLASSIFIED

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 OF HAVENSE P3750.6E

22 July 1966

To: Commander, U. S. Naval Aviation Safety Center

Subj: Report of Aircraft Mishap

A. O-HAVENSE P3750.6E

1. CH-46A 151956 HFM-164

2. 20 July 1966 2102H Dong Ha RVN

3. Combat Cargo 1R9

4. Alpha damage. Controlled collision with the ground. The nose strut was driven up through the center console and then buckled aft. The fuselage broke at station 410 with the aft pylon falling down on the ramp. The rotor blades meshed and disintegrated..

5. 151956 was the lead aircraft in a two aircraft flight. The flight was launched at approximately 1957H on an emergency re-supply mission. The flight proceeded to the landing zone, unloaded the cargo and departed the area. The flight back to Dong Ha was uneventful until the lead aircraft began his approach to the helicopter parking area. The first approach was waved off due to condensation on the windshield and a malfunctioning landing (search) light. The pilot landed the aircraft on the lighted runway, cleaned the windshield and attempted to extend the landing light. The light was stuck in the full retracted position and all efforts to extend it failed.

A second approach was commenced to the parking area, this time using only the hover lights. The forward hover lights have red lens but the aft light is white. The landing light was not used because of the reflection on the nose cone plexiglass windows. The approach was made over a number of parked helicopters, trucks and piles of supplies and the pilot was making an obstacle type approach. At approximately fifty feet altitude and ten knots airspeed, the number one engine failed. The rotor RPM began to deteriorate and the aircraft began to settle. There was no visible horizon and the pilot immediately looked at the attitude indicator to insure that the aircraft was in a level attitude. When the rotor RPM decreased to approximately 90%, the pilot made a slight decrease in collective pitch in an effort to maintain rotor RPM. At approximately twenty-five feet altitude the generators went off the line and all the lights went out. There were no reference lights in the parking area and the pilot had no way to judge his altitude. When the pilot estimated that the aircraft was approximately ten feet above the ground, he increased collective pitch to cushion the landing. The rate of decent was almost stopped but the aircraft was still approximately fifteen

APPENDIX 7

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IN ACCORDANCE WITH PARAGRAPH  
66 OF NAVINST P3750.3E

feet in the air. The rotor RPM had decreased to the point that the aircraft settled to the ground and landed very hard. The number two engine continued to run at 100% RPM and the number one engine was running at somewhat less than 100%. The engines were secured by turning the fuel valves off and then pulling the fire handles. The crew exited the aircraft, saw a residual fire in the number two engine, got a CO<sub>2</sub> bottle and extinguished the fire.

One UH-34D rotor blade was damaged by a piece of metal from the CH-46 blades.

Investigation revealed possible fuel contamination. A priority DIR has been requested on the number one engine fuel control.

6. Pilot. David J. LEIGHTON Capt 073663 USMC No injury
7. Remaining three crewmembers uninjured.
8. Not applicable.
9. Not applicable.
10. Not direct enemy action.
11. Copy to FETPAC, 1stMAW, MAG-16
12. 3-67A

*Warren C. Watson*  
WARREN C. WATSON

Copy to:

CHC  
CMC (CODE AAP)  
COMNAVAIRPAC  
COMFAIRWESTPAC  
CG FMPLANT

CG FETPAC  
CG 3rdMAW  
CG 1stMAW  
CO MAG-16  
FILE

MARINE MEDIUM HELICOPTER SQUADRON 164  
Marine Aircraft Group 16  
1st Marine Aircraft Wing, FETPac  
APO San Francisco, California 96602

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 OPNAVINST P3750.6E

MARINE MEDIUM HELICOPTER SQUADRON 164  
Marine Aircraft Group 16  
1st Marine Aircraft Wing, FMFPac  
FPO San Francisco, California 96602

1:JFL:kru  
3750  
29 July 1966

From: Commanding Officer  
To: Commanding General, 1st Marine Aircraft Wing  
Via: Commanding Officer, Marine Aircraft Group 16

Subj: Report of Aircraft Mishap

Ref: (a) WgO 3750.10G

1. In accordance with reference (a), HMW-164 Aircraft Mishap 3-67A  
is submitted as follows:

- a. Resume of flight time of Captain D.J. LEIGHTON.
- b. Resume of flight time of 1st Lieutenant R.J. MARTINEZ Jr.
- c. Part V Description of Mishap.
- d. Part VI Damage to the Aircraft.
- e. Part VII Cause Factors.
- f. Part VIII Conclusions and Recommendations.
- g. Part IX Commanding Officers Comments.
- h. Part X Enclosures.

WARREN C. WATSON

APPENDIX 7



## RESUME OF FLIGHT TIME OF CAPTAIN DAVID J. LEIGHTON

Total flight hours all models	2484.4
Total hours in type	617.4
Total hours Aircraft Commander in type	543.9
Total time in country	4 $\frac{1}{2}$ months
Total flight hours in country	158.7
Hours on duty prior to mishap	14 $\frac{1}{2}$
Date last flight prior to mishap (hours and mission)	
	20 July 1966 1.2 1R5
Years designated Naval Aviator	8

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## RESUME OF FLIGHT TIME OF FIRST LIEUTENANT ROBERT J. MARTINEZ JR.

Total flight hours all models	890.3
Total hours in type	275.8
Total hours Aircraft Commander in type	100.4
Total time in country	3 months
Total flight hours in country	97.4
Hours on duty prior to mishap	14½
Date last flight prior to mishap (hours and mission)	
	20 July 1966 3.0 1R5
Years designated Naval Aviator	2½

APPENDIX 7

PART VDescription of Mishap

At approximately 1957H on 20 July 1966, CH-46A, Bureau Number 151958 departed Dong Ha as the lead aircraft of a two aircraft flight. The mission was a night emergency re-supply. The supplies were delivered to the landing zone and the return trip to Dong Ha accomplished. The lead aircraft waved off the first approach to the unlighted helicopter parking area because of condensation on the windshield and a malfunctioning landing (search) light. The aircraft was landed on a lighted runway, the windshield cleaned and attempts made to extend the landing light. The light was immobile in the retracted position. In this position, projected light is reflected by the nose cone plexi-glas windows making forward vision extremely difficult from the cockpit. For this reason, Captain LEIGHTON elected to not use the landing (search) light and to rely on the landing/hover lights for illumination on his subsequent approach and landing. Due to the heavy volume of C-130/C-123 traffic, it was necessary to park the helicopter away from the runway.

A second approach to the parking area was commenced. An obstacle approach was executed in order to insure adequate clearance from parked helicopters, vehicles and material which had been staged in the area. At approximately fifty (50) feet altitude and ten (10) knots airspeed the number one engine failed suddenly and without warning. The rotor RPM began to deteriorate and the aircraft began to settle. There was no visible horizon so the pilot immediately checked the attitude indicator to insure that the aircraft was in a level attitude. When the rotor RPM decreased to approximately 90%, the pilot made a slight decrease in collective pitch in an effort to maintain rotor RPM. At approximately twenty-five (25) feet altitude, rotor RPM deteriorated below the generator cut-out level of approximately 88% and all aircraft lighting was lost. Without ground reference lighting, the pilot was unable to judge aircraft altitude. When he estimated altitude to have decreased to approximately ten (10) feet above the ground, collective pitch was added to cushion the landing. This action caused the rate of descent to decrease almost to zero, but at approximately fifteen (15) feet above the ground. At this point with almost all rotor lift having been exhausted, the aircraft fell to the ground, hitting in a level attitude. After securing the engines, the crew exited the aircraft. A residual fire was sighted in the number two engine which was extinguished by application of O2 from the aircraft portable fire bottle.

PART VIDamage to the Aircraft

Alpha damage. The nose strut was driven up through the center console and then buckled aft. The fuselage broke at station 410 with the aft pylon falling down on the ramp. The rotor blades meshed and disintegrated.

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IN ACCORDANCE WITH PARAGRAPH  
66 OF NAVINST P3750.6E

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PART VII.Cause Factors

1. The primary cause of this accident was the failure of the number one engine. The exact cause of the engine failure could not be determined at this level. Priority DIR's have been requested on both the engine and the engine fuel control. Initial investigation by intermediate level maintenance personnel and statements of the pilots disclosed the following:

a. Ng Indicator: The number one engine Ng indicator became inoperative approximately five-eight minutes prior to the accident. The Ng tachometer is driven by engine oil pressure and its failure is one indication of a malfunctioning oil pump. When the Ng failure occurred the pilot adhered to NATOPS procedure by making a positive check of the oil pressure gage. The pressure indicated normal and remained so throughout the remainder of the flight. The loss of both Ng and oil pressure is positive evidence of an oil pump failure. The loss of positive reading on either of the two gages is not conclusive evidence of an oil pump failure.

b. Oil Pressure Transmitter: The engine oil pressure transmitter had been changed the morning of the accident to correct a fluctuating oil pressure indication. A functional check at that time indicated that it was operating properly. After the accident the transmitter was given a functional check at H&MS-16 and it was discovered to be faulty. The transmitter could have been damaged at time of impact.

c. Oil Contamination: After the accident, a check was made of the engine oil system. Metal particles were found in the accessory drive gear assembly sump. The sump plugs on the number three and four engine bearings had no evidence of metal contamination. There are no sump plugs on the number one and two bearings, preventing a positive check in these areas at this level of maintenance. There is a possibility that the contamination from the accessory section was transmitted to the number one and two bearings, causing a bearing failure and the compressor to seize. Also there is the possibility that the engine failed as a result of oil starvation caused by failure within the accessory gear box. These theories prompted the request for a Priority DIR on the engine.

d. Frozen compressor: Investigation disclosed that the compressor had shifted forward approximately one-fourth inch. It appears that the compressor was turning at a relatively low RPM when the shift occurred. It has not been determined if the seizure was due to the compressor shifting forward or from damage to the number one or two bearings.

e. Foreign Object Damage: The first five stages of the compressure blades had been damaged by the ingestion of an aluminium bolt or rivet. It appears that the compressor was turning at low RPM when the object entered the engine.

f. Sand Erosion: The engine had logged 287 sand landings. There was evidence of classic sand erosion on the stator vanes and compressor blades. A stall check was performed at 267 landings with a 4% stall margin remaining. The engine is removed for check when the stall margin decreases to 3%.

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IN ACCORDANCE WITH PARAGRAPH  
66 OINAVINST P3750.6F

APPENDIX 7

g. Possible fuel contamination. An inspection of the fuel cells disclosed a large amount of sand and foreign objects. Experience gained by this squadron from operating in a sand environment and evidence of sand in the fuel indicate the possibility of fuel contamination. The fuel filters had been changed two times within the preceeding thirty hours, once a eight hour change and again when it was discovered that the filter "O" ring seal was leaking. The latest change was made approximately two flight hours prior to the accident. There was no evidence of filter by-pass or contamination at this time. This does not guarantee that the fuel control was not contaminated by a previously by-passed filter. A priority DIR has been requested on the fuel control.

2. It is the opinion of this board that there were contributing cause factors to this accident. They are as follows:

a. Landing Area Lighting

Although the runway at Dong Ha is illuminated, the helicopter landing area is completely devoid of reference lighting. This lack of lighting, coupled with the congestion in the landing area, required that aircraft landing lights be utilized to locate the landing spot and to effect a landing.

b. Malfunctioning Landing (Search) Light

The landing (search) light positioning mechanism had malfunctioned with the light in the fully retracted position which precluded its use in locating a spot.

c. Loss of Aircraft Lighting

Subsequent to engine failure, all aircraft lighting was lost.

## PART VIII

### Conclusions and Recommendations

1. Conclusion. That the number one engine failed at an altitude and air-speed at which a hard landing was inevitable.

Recommendation. That pilots be reminded of the inherent danger in a high, steep approach should a power failure occur.

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 OPNAVINST P3750.6B

2. Conclusion. Without aircraft lighting, the pilot was unable to determine actual altitude. Because of the high power setting demanded during the steep approach, rotor RPM deteriorated rapidly when the engine failed. As the RPM dropped below generator cut-in speed all aircraft lighting was lost.

Recommendation. That maximum utilization be made of expeditionary lighting systems to illuminate helicopter landing areas at forward airfields.

Signatures of the Board

O.G. McDonald  
O.G. MCDONALD Senior Member

W.J. Sellers  
W.J. SELLERS ASO

C.S. Tubbs  
C.S. TUBBS AsstOpsO

J.L. James  
J.L. JAMES AsstMaintO

G.F. Stephan  
G.F. STEPHAN NATOPS O

H.R. Fuller  
H.R. FULLER Asst ASO

SPECIAL HANDLING REQUIRED  
IN ACCORDANCE WITH PARAGRAPH  
66 OPNAVINST P3650.6E

APPENDIX 7

## PART IX

COMMANDING OFFICERS COMMENTS AND RECOMMENDATIONS

1. Forwarded concurring with the conclusions and recommendations of the board.
2. The engine failure in itself was not too serious or difficult for the pilot to handle but when coupled with the other contributing cause factors the mishap was inevitable. All pilots of this squadron will be reminded of the pitfalls of several small errors or malfunctions adding up to one big one.

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ACCORDANCE WITH PARAGRAPH 66  
OPNAVINST P3750.6E

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PART X

Enclosures

- ✓1. Statement of Captain David J. LEIGHTON
- ✓2. Statement of First Lieutenant Robert J. MARTINEZ JR
- ✓3. Statement of First Lieutenant David W. McCleerey
- ✓4. Statement of Lance Corporal Thomas J. O'HALLORAN

APPENDIX 7



Statement of Captain David J. LEIGHTON 073663 USMC Concerning the Accident involving CH-46A 151956 on 20 July 1966

While making a night approach to a landing in the paddy area south of the runway at Dong Ha, RVN, I was making a high, slow approach to a landing when I experienced an apparent engine failure, followed by a controlled collision with the ground.

The approach was begun after taking off from runway 07 at Dong Ha where I had stopped after waving off an approach at the parking area due to foggy windshield, coupled with the hindrance of a malfunctioning landing (search) light. The light would not extend. We landed on the runway and cleaned the windshield and attempted to free the light.

We approached at approximately 100 feet AGL and about 15 knots forward ground speed. I asked the co-pilot to select hover aft and I positioned the cyclic forward to compensate for aircraft pitch and started my final approach to a clear area illuminated very slightly by the hover lights. At this time I experienced a power loss with high collective pitch, at an altitude of 50-70 feet (by sight), five (5) knots forward ground speed, the rotor RPM was deteriorating rapidly (passing 90% at first check) but due to my low altitude, to stop the RPM deterioration, collective was lowered only slightly. I leveled the aircraft, paused momentarily until I thought I was about fifteen feet above the ground and I positively added collective pitch in an attempt to cushion the landing. A hard landing followed in a lights out condition with slight forward motion. The nose gear apparently sheared and the aircraft separated at the manufacturer's splice.

The engines and switches were secured and the co-pilot instructed the crew to remain inside until the rotors had stopped turning. It was not possible to apply the rotor brake as the nose gear strut had buckled the center console. All the crew exited the aircraft. The number two engine was still running/torching and so I re-entered the aircraft and secured the engine condition lever and rechecked the fuel valve switches. All power was off the aircraft at the time but the number two engine stopped running.

I know of no way in which a hard landing could have been avoided in this situation of altitude/airspeed and collective pitch setting at the time the power loss was encountered. Had the field been lighted or had it been daylight, the landing might have been accomplished in a manner reducing the extent of the damage.

  
DAVID J. LEIGHTON

Enclosure (1)

APPENDIX 7

STATEMENT OF FIRST LIEUTENANT ROBERT J. MARTINEZ JR, 088595,  
USMC, CONCERNING ACCIDENT INVOLVING OH-46 BUREAU NUMBER 151956

At the time of the accident Capt. LEIGHTON had the controls. We were at eighty feet and ten knots forward airspeed, approximately.

The events leading up to the accident are as follows:

(a) The landing light was inoperative due to it being stuck in the up position.

(b) The number one engine Ng indicator failed approximately ten minutes prior to the accident.

(c) A landing was attempted in the LSA, but was aborted in favor of landing on the duty runway (07) because of a fogged windshield.

(d) Capt. LEIGHTON took off from the duty runway (07) and made a climbing right turn of approximately 180° so as to land in the LSA.

(e) Capt. LEIGHTON was cleared aft by the crewchief and port by me, the co-pilot.

(f) As he commenced an obstacle type approach to a spot between two OH-34's the number one engine fell off the line, the rotor RPM decayed past 88%, the lights went off and the aircraft contacted the ground with a slight amount of forward ground speed. I would say not much more than five knots.

Everyone remained in the aircraft until the rotor blades came to rest.



R. J. MARTINEZ JR

Enclosure (2)

APPENDIX 7

STATEMENT OF FIRST LIEUTENANT DAVID W. McCLELLER, 0887<sup>th</sup> USMC  
CONCERNING ACCIDENT INVOLVING CH-46A 151958 ON 20 JULY 1966

I was sitting by the operations tent at Dong Ha airstrip watching the launch, recovery and repositioning of aircraft in the landing area. YF-23 made a roll-on landing on the airstrip from the west. He rolled down to about mid-field and stopped on the strip for a few minutes then he pulled up into a high hover to clear the dust. The aircraft then turned to the right and proceeded to the south over the parking area maintaining approximately fifty to sixty feet altitude and a slow airspeed. The aircraft appeared to be established over the intended spot of landing in a high hover of about fifty feet. At this time the aircraft had running lights on, anti-collision light on and the hover lights on. The aircraft started to descend and then the rate of descent increased rapidly. The aircraft seemed to disappear from my sight at the moment of impact.

Prior to the aircraft descending, I heard no unusual noise nor noticed any unusual attitude about the aircraft. My vantage point was about three hundred meters from the point of impact.

*David W. McClellan*

DAVID W. McCLELLER

Enclosure (3)

APPENDIX 7

STATEMENT OF LANCE CORPORAL THOMAS J. O'HALLORAN CONCERNING  
ACCIDENT INVOLVING CH-46A BUHO 151958 ON 20 JULY 1966

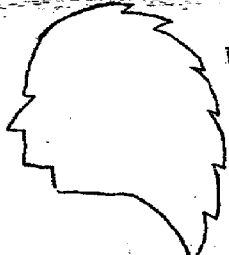
We sat down on the runway prior to the crash due to the failure of the landing light and the fogging up of the windshield. At that time I attempted, in vain, to rectify the light situation. I did clean the windshield and we then proceeded to the area adjacent to the fuel pits for landing. Upon finding a suitable spot, the pilot began descending and I, standing in the hatchway, cleared him aft. Suddenly, there was a noticeable change in the sound of the aircraft, followed by a rapid increase in the rate of descent. I stepped back from the hatch and dropped to a low crouch. We hit the deck level and the rotors immediately intermeshed and began breaking up. The number two engine was burning from the exhaust duct and the intake. We waited until the rotors had stopped and then left the aircraft to combat the fire.

THOMAS J. O'HALLORAN

Enclosure (4)

APPENDIX 7

# THE WARRIOR'S WEEKLY



PUBLISHED WEEKLY BY HMM-164 \* \* 1 AUGUST 1966 \* \* VOLUME VI NUMBER 1

## NINE AIR MEDALS THIS WEEK IN RVN

Watson's Warriors earned nine Air Medals for missions flown in the I Corps area. The number of Air Medals earned is considerably less than usual due to the recent decline in flight time. Those names submitted to the 1st Marine Aircraft Wing for the period ending on 1 August include Major O. G. McDonaly a gold star in lieu of a fourth Air Medal, Captain K.H. White a gold star in lieu of a fourth Air Medal, which is a single mission Air Medal Award, 1/Lt P. A. Ducat a silver star in lieu of a sixth Air Medal, 1/Lt H. R. Fuller a gold star in lieu of a fourth Air Medal, 1/Lt H. L. Kennedy a gold star in lieu of a fifth Air Medal, 1/Lt L.D. Robinson a gold star in lieu of a fifth Air Medal, 1/Lt R.G. Temte a gold star in lieu of a fifth Air Medal, and LCpl J.L. Brey a gold star in lieu of a fifth Air Medal. earned in country now totaling 344.

\*\*DUTY SECTION NUMBER FOUR HAS SUNDAY THE 7th OF AUGUST OFF

## NINE WARRIORS PROMOTED

There'll be a hot time at the club tonite and all of it free thanks to nine Warriors who added another stripe. Our warmest congratulations go to MSgt R.R. Miller, GySgt J.M. Muller, SSgt A.A. Fritz, SSgt N. F. Christopher, SSgt D.L. Bowden, SSgt W.L. Walker & SSgt D.E. Schriener. Sgt's D.E. Carrillo and J. R. McKinley were both promoted Meritoriously.

## REQUEST MAST FROM CMC

The Commandant of the Marine Corps will be in our area soon and during his visit will hear request Masts from any Marine desiring one. A request must be submitted through the HMM 164 S-1 no later than the morning of 3 August along with the problem you have. LtCol Watson will interview first to see if the problem can be solved on a local level.

## REPUTATION AND CHARACTER

The circumstances amid which you live determines your reputation; the truth you believe determines your character.

Reputation is what you are supposed to be; character is what you are.

Reputation is the photograph; character is the face.

Reputation is a manufactured thing, rolled and plated and hammered and brazed and bolted; character is growth.

Reputation comes over one from without; character grows up from within.

Reputation is what you have when you when you come to a new community; character is what you have when you go away.

Your reputation is learned in an hour; your character does not come to light for a year.

Reputation is made in a moment; character is built in a life time.

Reputation grows like the the time

Reputation grows like the mushroom; character lasts like eternity.

A single newspaper report gives you your reputation; a life of toil gives you your character.

If you want to get a position you need a reputation; if you want to keep it you need character.

Reputation makes you rich or makes you poor; character makes you happy or makes you miserable.

Reputation is what men say about you on your tombstone; character is what the angels say about you before the throne of God.

Reputation is the basis of the temporal judgement of men; character is the basis of the eternal judgement of God.

by William H. Davis

\*\*OPPORTUNITY IS OFTEN MISSED BECAUSE WE ARE BROADCASTING WHEN WE SHOULD BE TUNING IN.

selected

## R&amp;R IN HONG KONG

The big Pan American DC8 lifted from the runway at Nang and turned east toward Hong Kong. Soon we were dining on thick, juicy steaks with all the trimmings and relishing in the pampered attention of three very attractive stewardesses. After about two and a half hours of flying time we touched down on the runway at the Hong Kong Airport. A quick lecture by the R&R representative and we were on our way to one of five hotels which are recommended for R&R personnel. Hotel prices are very reasonable, from \$5.50 to \$8.00 US per night, and the air conditioning, hot baths and soft beds quickly makes one forget Vietnam.

Hong Kong is of course a British Crown colony and is a mixing pot for all nationalities. It is the shopper's paradise and since it is a free port and there are no taxes to contend with, the prices on all goods are outstanding. For instance, you can buy a tailor made suit of the best material for less than \$50.00 US. There are bargains of every sort and the persistent merchants make it very easy for a fellow to part with his money. The food is tremendous in variety, quality and price. Here there are restaurants of every nationality serving the best of their native dishes.

Sightseeing treats include the Tiger Balm gardens, the fishing junk village, the floating restaurants, the Peak Tram which gives a wonderful view of Hong Kong and Kowloon, the thieves market, the new territories and a view of the Chinese Communist border. Hong Kong is a contrast of the very rich and the very poor of the world for on the hills above the modern buildings are the shantys of the refugees.

The week passed very rapidly and before we knew it we were once again aboard a Pan American clipper headed back for Vietnam. For all of us Hong Kong held certain special memories and I'm sure that everyone said to himself "someday I've got to come back to this place."

by Capt Segrest

## MARBLE MOUNTAIN MOVIES

Tue 2 Aug - "When the Boys Meet the Girls"  
Wed 3 Aug - "Combat"  
Thu 4 Aug - "Cinderella"  
Fri 5 Aug - "The Monkey Trap"  
Sat 6 Aug - "Mickey One"  
Sun 7 Aug - "To Trap a Spy"  
Mon 8 Aug - "Gunsmoke"

## THE LUCKY CORNER

\*\*A MAN CALLED ON A SURGEON AND TOLD HIM HE HAD BEEN GIVEN A HANDSOME SET OF CUFF LINKS FOR HIS BIRTHDAY, BUT DID NOT OWN A SINGLE SHIRT WITH FRENCH CUFFS. "WHY DID YOU COME TO ME?" ASKED THE STARTLED DOCTOR.

"I'D LIKE TO GET MY WRISTS PIERCED," THE FELLOW REPLIED.

\* \* \*

\*\*A FARMER'S ONLY SON WAS HOME FOR THE SUMMER HOLIDAYS AND A BIG WELCOME HOME DINNER WAS HELD IN HIS HONOR AS HE WAS THE FIRST BOY IN THE COMMUNITY TO EVER GO TO COLLEGE. AFTER THE TYPICAL COUNTRY MEAL WAS OVER THE PROUD FARMER DECIDED TO SHOW HIS SON OFF TO HIS FRIENDS.

"SON, WHAT HAVE YOU BEEN STUDYING AT SCHOOL...WHAT SUBJECTS DID YOU TAKE?"

THE SON OBVIOUSLY EMBARRASSED BY ALL THE ATTENTION SAID SOFTLY, "I'VE BEEN STUDYING ALGEBRA, PA."

"SAY, DID YOU HEAR THAT FOLKS, LEM'S BEEN STUDYIN ALGEBRA", SAID PAPA. "SAY SOMETHIN IN ALGEBRA, SON."

TO SATISFY HIS FATHER, LEM SAID, "PI-R-SQUARED" AND THEN QUICKLY CONTINUED EATING HIS DESSERT.

"BALLS OF FIRE", SAID THE FATHER, "HERE THIS BOY HAS BEEN GOING TO COLLEGE FOR A WHOLE YEAR AND DIDN'T LEARN A THING!" "ANYBODY KNOWS THAT PIE ARE ROUND AND CAKE ARE SQUARE!!!"

\* \* \*

\*\*THE YOUNG COUNTRY BOY WAS DOING HIS BEST, LOADED DOWN WITH A WASH TUB ON HIS BACK, A CHICKEN UNDER HIS ARM, CAME IN HIS HAND AND LEADING A CALF. HIS GIRL HESITATED AS THEY CAME TO THE WOODS, SAYING:

"I'M AFRAID TO WALK WITH YOU IN THERE. YOU MIGHT TRY TO KISS ME."

"HOW COULD I?" HE ASSURED HER.

"LOOK AT ALL I'M CARRYING."

"BUT YOU COULD STICK THAT CANE IN THE GROUND, TIE THE CALF TO IT AND PUT THE CHICKEN UNDER THE WASH TUB."

\* \* \*

\*\*AN INEBRIATED SAILOR VISITING AN AUTOMAT FOR THE FIRST TIME, ASKED FOR TEN DOLLARS WORTH OF NICKELS AND PROCEEDED TO FEED THEM INTO THE VARIOUS SLOTS. WHEN HE HAD ACCUMULATED SEVERAL STACKS OF SANDWICHES, THE MANAGER CAME UP. "DON'T YOU THINK YOU'VE HAD ENOUGH?" HE ASKED. "WHAT?" THE FELLOW REPLIED. "YOU WANT ME TO QUIT IN THE MIDDLE OF A WINNING STREAK?"

## BUY A BOND ??????

President Johnson has asked that there be 75% participation within the services in the Savings Bond Drive now on. If you would like a Bond see Lt Tente.