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20 August 1969

From: Commander Hawaiian Sea Frontier (CTF 130)
To: Department of Defense Manager for Manned Space Flight Support Operations, Patrick Air Force Base, Florida

Subj: TF 130 Participation in Apollo 11 Mission; report of

Ref: (a) Overall Plan, Department of Defense Support for Project Apollo Operations (Second Edition) dtd 29 Dec 1966
(b) DOD Mgr for MSFS Ops OPORD 3-69

Encl: (1) Detailed Report of TF 130 Participation in Apollo 11 Mission
(2) Sequence of Significant Events, Apollo 11 Recovery
(3) Chronological Summary, Apollo 11
(4) Apollo 11 Force Participation

1. In compliance with reference (a), enclosures (1) through (4) are submitted.

2. The location and recovery of Apollo 11 astronauts and command module were successfully accomplished on 24 July 1969 in accordance with references (a) and (b). Recommendations resulting from TF 130 experience in preparing for and executing this mission are contained in paragraph 3, with pertinent parts of enclosure (1) identified in each case.

3. It is recommended that:

a. Recovery force positioning be changed so that all forces are positioned outside of the high probability end-of-mission ellipse (6X10 n.m.). (Subparagraph 5.b.)

b. A highly accurate navigation system be onboard the primary recovery ship to insure reliable positioning of forces. (Subparagraph 5.b.)

c. A method of providing a higher speed option to the NASA winch be developed. (Subparagraph 5.c.)

d. SARAH installation and alignment be performed in CONUS whenever possible. (Subparagraph 5.d.)

e. NASA and DDMS reexamine decontamination procedures to determine if:

(1) The locking device on the decontamination sprayer nozzle should be removed.

(2) A less noxious solution than sodium hypochlorite can be used as a decontaminant.

(3) Sturdier rafts with a valve protection device can be developed for Apollo recoveries.

(4) It is feasible to use non-skid on the flotation collar upper area in the vicinity of the CM hatch and coat the BIG suit soles with felt or non-skid. (Subparagraph 5.e.)

f. DDMS take steps to insure that ARIA operations do not conflict with recovery operations. (Paragraph 8)

g. A policy be adopted whereby all landlines are checked for noise level and signal strength from each station at least once each day. Also, that NASA notify CTF 130 by message of the scheduled time for callup and activation of the PAO Coordination and PAO Release circuits. (Subparagraph 10.b.)

h. Until available satellite communications systems have demonstrated a high degree of reliability, additional communications support such as the USS ARLINGTON (AGMR-2) be provided when recovery is planned for the southern hemisphere. (Subparagraph 10.c.)

i. VOA and press teletype support utilize the commercial satellite system for their broadcasts on future Apollo missions and that the PRS not be required to provide an HF backup circuit. (Subparagraphs 10.d and 10.e)

j. PRS be utilized for further testing of satellite communication systems on a NIB with recovery operations. To insure adequate testing, compatibility and non-interference, equipments being tested must be integrated into the PRS communication organization and patching/switching equipment. (Subparagraphs 10.f. (1-3) and 10.g. (1-6)).

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k. NASA establish realistic timelines for delivery of various samples - lunar and biological - to Houston after recovery. (Paragraph 11)

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Copy to:
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DETAILED REPORT OF TF 130
PARTICIPATION IN APOLLO 11 MISSION

1. General. TF 130 participation in the Apollo 11 mission consisted of planning for and executing the location and retrieval of the astronauts and command module for a landing in the Pacific Command area. The Task Force was ready in all respects to accomplish the mission. Forces assigned included USS HORNET (CVS-12), USS GOLDSBOROUGH (DDG-20), Helicopter Antisubmarine Squadron FOUR with eight SH-3D helicopters, Carrier Airborne Early Warning Squadron 111 Detachment 12 with four E-1B aircraft, two C-1A's from Fleet Tactical Support Squadron THIRTY, personnel from Underwater Demolition Teams ELEVEN and TWELVE, Air Force HC-130's and pararescue teams assigned by 41st Aerospace Rescue and Recovery Wing, two US-2C aircraft from Fleet Composite Squadron ONE, and one WC-121 aircraft from Airborne Early Warning Squadron ONE. HORNET with HS-4, VAW 111 DET 12, VR-30 DET, UDT 11 and 12 DETs, and VC-1 DET A embarked, deployed from Pearl Harbor to abort stations along the mid-Pacific recovery line and then to the end-of-mission target point. GOLDSBOROUGH deployed from Pearl Harbor to station in the mid-Pacific recovery zone and after translunar injection returned to Pearl Harbor. The recovery was executed as planned, terminating with the pick-up of the command module by HORNET at 241955Z July 1969. Splashdown occurred at 13-19N 169-09W at 241649Z July 1969.

2. Presidential Visit Support. CINCPACFLT tasked CTF 130 with operational control of forces assigned to support the President's visit to HORNET. In connection with this task, USS ARLINGTON (AGMR-2), COMDESDIV 112, and USS CARPENTER (DD-825) came under the operational control of CTF 130. In addition, USS GOLDSBOROUGH was extended under operational control of CTF 130 and USS HASSAYAMPA (AO-145) was tasked to provide support. Operations in support of the President's visit went smoothly. Since these operations were not in direct support of the Apollo 11 mission, details concerning them are not included in this report.

3. Force Deployment and Readiness

a. Forces commenced deployment to recovery stations on F-4 day and were ready in all respects for recovery.

b. HORNET, the primary recovery ship, conducted 10 boilerplate retrievals including one SIMEX prior to deployment. Retrievals were practiced using the B and A crane with the NASA winch and the TILLEY (NS-50) crane.

c. GOLDSBOROUGH practiced boilerplate pick-ups working with Air Force pararescuemen. Since the HC-130 crews and pararescuemen were current on their qualifications, deployment from HC-130's was not practiced.

d. Details of force deployment are included in enclosure (3). Enclosure (4) summarizes ship days, aircraft hours and personnel statistics.

4. Recovery. Apollo 11 was launched at 161332Z July 1969. At launch the planned end-of-mission target point was 10-56N 172-24W. After transearth injection and the subsequent mid-course correction burn, this point was refined at 231857Z to 11-01N 172-02W. A forecast of marginal weather for this point resulted in changing the target point at 240406Z to 13-19N 169-10W with a predicted landing time of 241650Z. HORNET was on assigned station at 241400Z. Initial recovery force contact with Apollo 11 was established at 241639Z when HAWAII RESCUE 1 reported visual contact. HAWAII RESCUE 1 and 2 had S-band and recovery beacon contact. RECOVERY, SWIM 1 and SWIM 2 all had recovery beacon contact on SARAH. At 241649Z SWIM 1 observed Apollo 11 splashdown with the command module immediately going to the stable II position. The flotation bags uprighted the command module about 5 minutes later. HORNET had established voice contact with the astronauts at 241646Z. Except for the period the CM was in the stable II position, good voice communications between HORNET and Apollo 11 were maintained throughout the recovery operation. At 241658Z the first swimmer went in the water and the collar was installed and fully inflated by 24[illegible]704Z. At 241720Z the command module hatch was opened to permit the decontamination swimmer to place the astronaut's BIG's (biological isolation garments) inside the command module. At 241728Z the astronauts had donned their BIG's and the hatch was reopened. By 241730Z the astronauts were in the raft and the command module hatch was secured. By 241743Z all three astronauts had been coated with decontaminant. RECOVERY helicopter had all three astronauts aboard at 241752Z and landed aboard HORNET at 241757Z. At 241807Z the astronauts entered the mobile quarantine facility. By 241915Z all decontamination procedures were completed. The auxiliary lifting loop was then lowered by helicopter and installed. At 241932Z HORNET commenced the approach to pick up the command module. The command module was secure aboard the HORNET at 241955Z. By 242050Z all HORNET aircraft were aboard and the ship was underway for Pearl Harbor. Enclosure (2) contains a detailed sequence of events prior to and subsequent to splashdown.

5. Recovery Training, Procedures and Equipment

a. Summary. Recovery training for HORNET and embarked units was conducted in port at Pearl Harbor and in the Hawaiian operating area during the period 2-12 July. GOLDSBOROUGH was trained in the Pearl Harbor area during the period 7-14 July. Deck strengthening, davit crane and boilerplate installation were accomplished prior to 7 July.

b. End-of-Mission Force Positioning. Positioning of forces within the high probability end-of-mission splashdown area, especially during periods of poor visibility and/or cloud cover, created a danger

of collision between the PRS or PRS aircraft and the command module. It is highly desirable to position the PRS in the end-of-mission area some distance from the predicted splashdown point. In order to avoid this hazard a requirement exists for a highly accurate navigation system on the PRS.

c. NASA Winch. The speed of the NASA winch used on HORNET for recovery of the CM is considered too slow for retrieval operations in seas higher than 8 feet. The slow lifting speed exposes the command module to successive waves before it can be brought completely clear of the water, subjecting it and the hoisting equipment to excessive stresses. A slow mode of operation is required, however, for lowering the command module on the dolly.

d. SARAH. SARAH equipment was delivered to HS-4 when they arrived in Hawaii. Four of the seven receivers had to be aligned and other minor installation delays developed. Time for training flights and for resolving installation problems was lost in not having the SARAH equipment installed prior to departure from the west coast.

e. Decontamination. The decontamination swimmer made several comments which warrant further study or action.

(1) The nozzle on the decontamination sprayers often locked in the open position, wasting decontaminant before they could be unlocked.

(2) Swimmers found that the decontaminant, sodium hypochlorite, will produce nausea and eye irritation.

(3) The NASA-supplied rafts are not well suited for recovery work in that they are easily punctured and the valves work open.

(4) The flotation collar is slippery when wet and even more so when covered with decontaminant.

6. Spacecraft Location Aids

a. Unified S-band transmitter. HAWAII RESCUE 1 and 2 both acquired S-band contact.

b. VHF recovery beacon. The beacon activated at main parachute deployment and, with the exception of the period the command module was in stable II position, continued to operate throughout the recovery.

c. Flashing Light. The flashing light operated on the low rate throughout the recovery operation.

d. Florescein sea dye marker. The sea dye marker operated properly.

7. Weather. Weather was good during training and throughout most of the mission. The evening prior to splashdown, however, weather in the end-of-mission area became marginal. Dense cloud cover, thunder storms and frequent rain squalls were forecast. As a result, the target point was moved about 215 miles downrange. At splashdown, seas were running 3-5 feet with easterly winds of 17 knots. There was about six-tenths cloud cover above 1500 feet. Below that visibility was good with no precipitation.

8. ARIA. ARIA aircraft were not required by, nor released to, CTF 130. In coordinating the tubular SPLINTER SHIELD area with the Honolulu Air Route Traffic Control Center, CTF 130 became aware of ARTCC problems in keeping ARIA aircraft separated from the SPLINTER SHIELD. This is the subject of separate correspondence from HONO ARTCC to DDMS which in essence recommends SPLINTER SHIELD familiarization to ARIA control personnel.

9. Public Affairs

a. Press. There were no problems with the press pool during this mission. The fact that Western Union International assumed press traffic handling responsibility greatly reduced the opportunity for DOD problems.

b. Philatelic Mail. Providing for philatelic cachets proved to be a greater problem than usual. Since only one cachet stamp was provided, it was a monumental task to cachet the more than 250,000 pieces of mail delivered for this purpose. Problems with improper addresses and late mailings resulted in an estimated 15,000 requests being received after the deadline.

10. Communications. Communications during the Apollo 11 mission were generally reliable and of good quality. Communications support for the Presidential party was effectively provided by USS ARLINGTON (AGMR-2). One teletype circuit was provided in support of CINCPAC. Although both TACSAT and ATS developed severe problems leading up to recovery day, both performed adequately during recovery. Additional recovery communications backup was provided by USS ARLINGTON through UHF/HF relay.

a. HF Communications. HF communications were of good quality throughout the mission. There were infrequent periods of circuit outage or poor quality due to poor propagation. There was a marked increase of interference this mission due to the position of the EOM landing area, since NAVCOMMSTA Honolulu antennae were pointing towards sources of interfering foreign signals.

b. Landlines. Landlines between MSC Houston and Pacific RCC were generally of very good quality, however, there were instances of low levels. DDMS NET 2 was interrupted several times, the most critical occurring on recovery day due to problems on the mainland. Feedback and echoes on DDMS NET 5 caused the transmitter to remain keyed, precluding the use of the circuit. Several instances of outage were recorded on DDMS NET 6 due to problems east of Wheeler AFB. The PAO COORD CKT underwent line problems on the mainland during initial call-up. This was due to the fact that there was no specified time for activating this circuit.

c. AGMR Relay. USS ARLINGTON was used during Apollo 11 to provide full support for Presidential communications, and to provide backup communications on recovery day. For Presidential support ARLINGTON established two 6 kHz HF radio trunks with NAVCOMMSTA HONO containing three voice and six teletype circuits. Due to the deterioration of TACSAT and the poor performance of ATS, a third HF trunk was established for UHF/HF relay of CTF 130 C/C and NASA PRS COORD voice circuits.

d. Press. Western Union International provided press teletype support for Apollo 11 on a commercial basis. CTF 130 provided a backup circuit until recovery day when it was required for Presidential support.

e. Voice of America. The Voice of America live Russian broadcast covering the Apollo 11 splashdown was provided by Western Union International. The PRS provided an HF backup circuit via ARLINGTON to San Francisco.

f. ATS

(1) Until recovery day the ATS system was limited to a test configuration. The system was planned to provide emergency backup communications for TACSAT and HF communications, and was used for Presidential support during recovery.

(2) The system was available to CTF 130 for testing on a very restricted access time basis and the tests fluctuated between good and bad. The overriding problem was a deep fading of the signals with levels of -112 to -123 DBM being recorded. Increasing the power level improved the signals but the circuit was still marginal. Other problems that degraded the circuit were echoes, noise and radar interference. The echoes were somewhat resolved by replacement of the cable between the hut and the ship's patching facilities, but the noise and radar interference were never eliminated completely.

(3) ATS transmission seriously degraded the flight deck radio system, rendering the system virtually unusable.

g. TACSAT

(1) The TACSAT satellite system using terminals located at Wheeler AFB, Scott AFB, and the PRS was used during the Apollo 11 mission. The system was tasked to provide two voice circuits between the PRS and RCC Pacific.

(2) The NELC representatives arrived in Hawaii late on 6 July and the terminals arrived at Wheeler AFB on the morning of 7 July. Testing of the circuits did not begin until 080100Z July. The performance of the circuits during HORNET's 7-9 July at-sea training was unsatisfactory. Many problems arose as the result of a quick installation and corrective action was required throughout the mission.

(3) It should be noted that problems were not due to equipment incompatibilities between the TACSAT terminal and the patching system or remote stations. The CVS environment did not present any overwhelming problems; the problems which rendered the circuits useless or degraded them for long periods of time were the induction of various HF carriers with MUX or voice modulation and interference from the AN/SPS-43 radar.

(a) In the interest of expediting the TACSAT installation, HORNET had erroneously installed an armored but unshielded cable between the hut and the ship's patching facilities. The NELC personnel were aware of this, however they were not sure that the cable was the cause of the RFI problems until the 19th, at which time they decided to replace the unshielded cable with the shielded cable used during Apollo 9 and 10. Installation was completed on the 21st and the interference previously experienced was materially reduced. The MUX feedover was eliminated and, although the radar interference persisted, it was at low levels and was more annoying than degrading.

(b) There were other numerous instances of RFI that were not continuous although they did interfere heavily until corrected. A several hour disruption occurred in the case of a welding operation being performed on the 06 level. Another instance of severe interference occurred when an HF antenna shorted to the ground while radiating. Fixed wing aircraft warm-up and flight deck service vehicle use near the hut caused some interference. This was resolved by giving the hut wide clearance during later operations. On still another instance, a SARAH beacon disrupted the circuits.

(4) There were various instances of interference from other TACSAT 1 users. Two compatibility tests were conducted. The first FM voice and TATS MODEM was cancelled due to severe interference to

FM voice circuits. The second test concerned in-band teletype in the full duplex voice circuit. Perfect copy was sent in both directions, however the tone level required for TTY degraded the voice circuit. Also, the voice signals mutilated the TTY copy. This test was discontinued and the equipment removed from the NELC terminals.

(5) TACSAT developed severe fading problems on 22 July. The fading increased to the point that on the 23rd the satellite was required to be released for maintenance. Twelve hours before recovery Houston Osborn advised CTF 130 that TACSAT could not be used except in an emergency. During this period of time the LES-6 satellite was made available but the circuits were of poor quality and degraded to the point where only one marginal simplex circuit could be maintained. Two hours prior to recovery, TACSAT was returned providing two simplex circuits. TACSAT was not requested by CTF 130 at this time since, upon being advised that TACSAT could not be used, CTF 130 had established the C/C and NASA PRS COORD circuits via the AGMR to insure that two reliable circuits would be available during recovery. Consequently TACSAT and HF circuits were operational during recovery.

(6) In conclusion, except for the failure of the satellite, most of the problems experienced could have been eliminated by improved management.

11. Deactivation. A problem in meeting rock sample delivery timelines arose when the biological samples could not be delivered as soon as anticipated. In general, however, deactivation and off-loading problems were minimal.

SEQUENCE OF SIGNIFICANT EVENTS
APOLLO 11 RECOVERY

24 JULY 1969

TIME (Z)	EVENT
1539	All HORNET aircraft on station.
1609	All HAWAII RESCUE aircraft on station.
1612	President arrived aboard HORNET.
1634	HORNET on station.
1639	HAWAII RESCUE 1 reported visual contact.
1640	AIR BOSS reported visual contact.
1640	HAWAII RESCUE 1 S-band announcement.
1640	HORNET reported radar contact bearing 230°T, 120 n.m.
1642	HAWAII RESCUE 2 S-band announcement.
1642	HORNET radar contact 65 n.m.
1644	HORNET reported hearing sonic boom.
1646	RELAY reported visual contact. Observed CM riding on three main parachutes and flashing light operating.
1646	HAWAII RESCUE 1 recovery beacon announcement. Bearing 055°T.
1646	HAWAII RESCUE 2 recovery beacon announcement. Bearing 200°T.
1646	HORNET established communications with Apollo 11.
1648	Apollo 11 reported visual contact with HORNET. Computed position 13-18N 169-09W.
1648	SWIM 1, SWIM 2, RECOVERY and HORNET reported recovery beacon contact.
1649	SWIM 1 observed CM splash and reported CM went to stable II.
1649	HORNET established datum. This position was later corrected by a reliable celestial fix to 13-19N 169-09W.

TIME (Z)	EVENT
1652	CM position reported bearing 246°T, 13 n.m. from HORNET.
1657	CM uprighted to stable I by uprighting bags.
1658	SWIM 2 deployed 1st swimmer.
1659	Sea anchor attached.
1701	2nd and 3rd swimmers deployed.
1702	Flotation collar attached.
1704	Collar inflated. SWIM 2 deployed raft #1.
1705	Raft inflated and tethered to CM.
1707	SWIM 2 deployed raft #2.
1708	RECOVERY deployed decontamination swimmer.
1710	RECOVERY deployed BIGs and decontaminant.
1711	BIGs and decontaminant in raft #2.
1716	Decontamination swimmer donned BIG.
1717	Decontamination swimmer and decontaminant transferred to raft #1. Remaining 3 swimmers moved upwind with raft #2.
1720	CM hatch opened and BIGs placed inside.
1720	CM hatch closed.
1721	Decontamination swimmer positioning tanks on collar. CM exterior decontamination commenced. Astronauts donning BIGs.
1728	Astronauts in BIGs. Hatch opened. First astronaut in raft #1.
1729	Second and third astronauts in raft.
1730	CM hatch closed.
1733	Decontamination swimmer completed scrubbing CM with decontaminant.

TIME (Z)	EVENT
1734	CM decontamination completed.
1735	Decontamination swimmer commenced wiping down astronauts with sodium hypochlorite.
1743	All astronauts and decontamination swimmer coated with decontaminant.
1744	RECOVERY lowered recovery net.
1749	First astronaut in helo.
1750	Second astronaut in helo.
1752	Third astronaut in helo.
1755	PHOTO on deck.
1757	RECOVERY on deck.
1801	Elevator #2 lowered to hangar deck.
1807	Astronauts entered MQF.
1837	Decontamination swimmer sank raft.
1838	Life boat closed CM to pick up scuba gear.
1853	President and party on hangar deck for ceremony.
1904	President left hangar deck for flight deck.
1911	President departed HORNET.
1915	SWIM 2 delivered auxiliary lifting loop.
1930	CINCPAC departed HORNET.
1932	HORNET commenced approach to pick up CM. Auxiliary lifting loop installed.
1945	Shot line away.
1947	In-haul line attached.
1948	Sea anchor detached.
1949	Recovery hook attached. CM clear of water.

TIME (Z)	EVENT
1950	CM over elevator.
1955	CM on transport dolly.
2000	All HORNET aircraft on deck.
2023	CM joined to MQF by shipboard transfer tunnel.
2050	HORNET underway for Pearl Harbor.

CHRONOLOGICAL SUMMARY
APOLLO 11

27 June

271500Z	USS HORNET (CVS 12) underway from Long Beach for San Diego.
271630Z	HS-4 (HELANTISUBRON FOUR) with 8 SH-3D helicopters departed NAS Imperial Beach for HORNET.
271745Z	HS-4 arrived aboard HORNET.
271900Z	Davit crane installed aboard USS GOLDSBOROUGH (DDG 20) and deck reinforcement completed.
272000Z	HORNET arrived at San Diego.
272000Z	VAW-111 DET 12 (CARAEWRON 111 Detachment 12) consisting of 4 E-1B aircraft departed North Island for HORNET.
272100Z	VAW-111 DET 12 arrived aboard HORNET.

28 June

280000Z	HORNET with 4 E-1B, 8 SH-3D and 3 C-1A underway for Pearl Harbor. (2 C-1A were from FLETACSUPPRON THIRTY and 1 C-1A from HORNET).

1 July

011900Z	Recovery training equipment loaded aboard GOLDSBOROUGH.
012315Z	Conducted in port recovery training for GOLDSBOROUGH.

2 July

020002Z	HORNET CHOPPED to CTF 130.
022100Z	HORNET arrived at Pearl Harbor.
022100Z	CTF 130 commenced loading recovery and quarantine equipment aboard HORNET.

3 July

031800Z	Eleven swimmers (8 from UDT-11 and 3 from UDT-12) reported aboard HORNET.
031830Z	CTF 130 conducted pre-mission brief for all concerned.
031830Z	FWC Pearl conducted weather observation and reporting training for personnel from HORNET and GOLDSBOROUGH.
032330Z	CTF 130 conducted pre-mission communications brief.

7 July

071000Z	GOLDSBOROUGH CHOPPED to CTF 130.
071315Z	Conducted additional in port recovery training for GOLDSBOROUGH.
071700Z	HORNET underway for at-sea training.
072300Z	HORNET boilerplate pick-up and SWIM 1 day training.
072330Z	CTF 130 conducted SIMEX for HORNET CIC personnel.

8 July

080130Z HORNET boilerplate pick-up and SWIM 2 day training.
080500Z HORNET boilerplate pick-up and SWIM 1 night training.
080800Z HORNET boilerplate pick-up and SWIM 2 night training.
081900Z HORNET boilerplate pick-up using TILLEY crane. SWIM 3 and RECOVERY day training. All aircraft positioned in array for practice. Biological isolation procedures practiced.

9 July

090030Z Conducted two STAR pick-ups from HORNET.
090100Z HORNET practiced boilerplate pick-ups.
090100Z CTF 130 conducted SIMEX for HORNET CIC personnel.
090400Z HORNET boilerplate pick-up and SWIM 3 night training.
091800Z GOLDSBOROUGH underway for at-sea recovery training. GOLDSBOROUGH conducted 7 boilerplate pick-ups and 2 collar installations.
091430Z CTF 130 conducted SIMEX with HORNET. Boilerplate position 20-25N 158-26W. Target point 20-10N 158-26W with splash at 091516Z to simulate lighting conditions at EOM.
091730Z Completed SIMEX.

10 July

100100Z HORNET returned to Pearl Harbor from at-sea training.
100400Z GOLDSBOROUGH returned to Pearl Harbor from at-sea training.
101900Z Practiced off-load of MQF from HORNET.

11 July

111900Z HORNET pre-sail conference.
112200Z WC-121 from AEWRON ONE departed Guam for Hickam AFB.

12 July

121900Z HORNET underway for translunar abort target point at 03-00S 165-00W via SIMEX position, 12-00N 165-00W.

13 July

130001Z CTF 130 reported preliminary readiness to DDMS.
130400Z WC-121 from AEWRON ONE arrived Hickam AFB.
131820Z 2 US-2C aircraft arrived HORNET from NAS Barbers Pt.

14 July

141205Z HORNET arrived at 12-00N 165-00W and deployed boilerplate for SIMEX.
141300Z DDMS conducted F-2 SIMEX for HORNET and CTF 130. SIMEX splash position 11-45N 165-14W. HAWAII RESCUE aircraft were simulated.

14 July (contd)

141645Z	SIMEX completed. HORNET underway for 03-00S 165-00W. ETA 162100Z.
141900Z	GOLDSBOROUGH pre-sail conference.
142200Z	GOLDSBOROUGH underway for 25-30N 148-00W in mid-Pacific recovery zone. ETA 160906Z.

15 July

150438Z	CTG 130.4 reported ready to support mission.
150445Z	AEWRON ONE reported ready to support mission.
150544Z	CTG 130.2 reported ready to support mission.
150924Z	CTG 130.1 reported ready to support mission.
151332Z	CTF 130 CHOPPED to DOD MGR.
151800Z	DDMS conducted SIMEX for CTF 130 and GOLDSBOROUGH.
151914Z	GOLDSBOROUGH arrived at SIMEX splash position 23-49N 152-11W.
151959Z	SIMEX completed. GOLDSBOROUGH underway for 25-30N 148-00W. ETA 160932Z.

16 July

161016Z	GOLDSBOROUGH arrived at 25-30N 148-00W.
161332Z	APOLLO 11 LAUNCH.
161616Z	TLI burn commenced.
161625Z	GOLDSBOROUGH released from mission support.
161630Z	GOLDSBOROUGH departed mid-Pacific recovery zone for Pearl Harbor. ETA 172200Z.
161929Z	HORNET arrived at 03-00S 165-00W and conducted boilerplate exercises.
162300Z	HORNET underway for 03-00N 167-00W. ETA 181400Z.

17 July

171900Z	HORNET conducted boilerplate exercises.
172230Z	GOLDSBOROUGH arrived at Pearl Harbor.

18 July

181400Z	HORNET arrived at 03-00N 167-00W. HORNET conducted recovery SIMEX.
182020Z	HORNET SIMEX completed. HORNET underway for 05-00N 168-00W. ETA 192000Z.

19 July

191809Z	HORNET arrived at 05-00N 168-00W. HORNET conducted recovery SIMEX and practiced boilerplate pick-up with the TILLEY crane.
192330Z	HORNET underway for 07-00N 168-00W. ETA 200900Z.

20 July

200319Z	CTF 130 promulgated Op-Order 335-70 to provide for support of President's visit to HORNET.
200750Z	HORNET changed destination to 07-00N 168-30W. ETA 201200Z.
201200Z	HORNET arrived at 07-00N 168-30W and underway for 11-00N 172-20W. ETA 211400Z.

21 July

210805Z	HORNET changed destination to 10-51N 172-33W. ETA 220410Z.
211430Z	HORNET arrived at 10-51N 172-33W and placed boilerplate in water.
211515Z	HORNET underway for 11-02N 172-22W. ETA 211650Z.
211550Z	DDMS commenced R-3 SIMEX with HORNET and CTF 130. SIMEX splash position was 11-02N 172-22W. ETA 211650Z. Two HAWAII RESCUE aircraft participated in SIMEX.
211600Z	HORNET arrived at 11-02N 172-22W.
211655Z	HORNET underway for 10-49N 172-34W.
211810Z	HORNET arrived at 10-49N 172-34W.
211900Z	HORNET SIMEX completed.

22 July

221100Z	HORNET fuel state 58%.
221800Z	HORNET commenced fueling from HASSAYAMPA.
221800Z	WC-121 from AEWRON ONE departed Hickam AFB for Johnston Island.
221831Z	CTF 130 departed NAS Barbers Point for HORNET via Johnston Island.
222330Z	HORNET completed fueling from HASSAYAMPA.

23 July

230015Z	CTF 130 arrived aboard HORNET.
230405Z	WC-121 arrived Johnston Island.
231930Z	WC-121 departed Johnston Island for weather reconnaissance.

24 July

240400Z	HORNET underway for 13-19N 169-10W.
240406Z	EOM target point changed to 13-19N 169-10W from 11-01N 172-02W.
240513Z	CINCPAC arrived aboard HORNET.
240645Z	WC-121 returned to Johnston Island.
241400Z	HORNET arrived at 13-19N 169-10W.
241600Z	WC-121 departed Johnston Island for weather reconnaissance.
241611Z	President arrived aboard HORNET.
241649Z	APOLLO 11 splashdown.
241757Z	Astronauts aboard HORNET.

24 July (contd)

241911Z	President departed HORNET.
241929Z	CINCPAC departed HORNET.
241955Z	CM aboard HORNET.
242050Z	HORNET underway for Pearl Harbor.
242057Z	STAR pick-up by Air Force HC-130.

25 July

250001Z	WC-121 returned to Johnston Island for fuel.
250300Z	WC-121 departed Johnston Island for Guam.
250530Z	First COD shipment departed HORNET for Johnston Island.
251200Z	Second COD shipment departed HORNET for Hickam AFB.
251610Z	WC-121 arrived Guam.
252310Z	CTF 130 departed HORNET.
252312Z	US-2C aircraft departed HORNET.

26 July

261832Z	HORNET arrived at Pearl Harbor and off-loaded MQF, CM and recovery equipment.
262035Z	MQF arrived at Hickam AFB.
262131Z	C-141 with MQF aboard departed Hickam AFB for Houston.
262300Z	CTF 130 held post-mission debrief.
262345Z	CM arrived at Ford Island. CM deactivation commenced.

27 July

270050Z	All TF 130 forces released to normal operational control.
271900Z	HORNET underway for Long Beach.

29 July

291700Z	CM deactivation completed. CM departed Ford Island.
292000Z	CM arrived at Hickam AFB.
292300Z	CM, spare MQF and remainder of equipment departed Hickam AFB in C-133.

31 July

312100Z	HS-4 and CARAEWRON 111 DET 12 departed HORNET.
312330Z	CARAEWRON 111 DET 12 arrived North Island.
312359Z	HS-4 arrived NAS Imperial Beach.

1 August

012200Z	HORNET arrived Long Beach.

From: CTF 130 Mission Number: APOLLO 11 Type Report: FORCE PARTICIPATION

Mission Location A	Type B	Number C	Ship Days and Aircraft Hours: DEPLOY & RETURN D	Ship Days and Aircraft Hours: SIMEX & MISSION E	Standby Days / A/C HRS F	Personnel: Per Diem G	Personnel: Other H	Personnel: Total I	Remarks J
MIDPAC	CVS	1	19	11	6		1778	1778	
MIDPAC	DDG	1	4	2	6		310	310	
MIDPAC	AO	1	4	1	0		328	328	
MIDPAC	SH-3D	8	28.7	202.3	328.5				Personnel reported with CVS total
	E-1B	4	12.2	117.4	226.0				Personnel reported with CVS total
	C-1A	3	14.5	118.2	131.0				Personnel reported with CVS total
	US-2B	2	6.4	30.0	34.9				Personnel reported with CVS total
HAWAII	HC-130	2	NA	44.6	16.0		190	190	
HAWAII (RCC)	CTF 130						68	68	

Enclosure (4)