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DEPARTMENT OF THE NAVY  
USS DOLPHIN (AGSS 555)  
FLEET POST OFFICE  
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From: Commanding Officer, USS DOLPHIN (AGSS-555)  
To: Director of Navy History (OP-09BH), Washington, DC  
Subj: COMMAND HISTORY OF USS DOLPHIN (AGSS 555) FOR CY89  
Ref: (a) OPNAVINST 5750.12D  
Encl: (1) Command Composition and Organization  
(2) Chronology  
(3) Narrative  
(4) Supporting Documents

1. Per reference (a), enclosures (1) through (4) are forwarded for calendar year 1989.

  
W. PETERSON

## COMMAND COMPOSITION AND ORGANIZATION

1. USS DOLPHIN (AGSS 555) is a unique deep diving research submarine, designed to test advanced submarine structures and systems. She serves as a platform for underwater research at depths greater than previously possible with a vehicle of this type and size.

2. USS DOLPHIN's immediate superior in command is Commander, Submarine Development Group One, San Diego, California. DOLPHIN is commanded by Commander Wayne Peterson who reported from Commander, Submarine Group Nine where he was the Assistant to the Deputy Commander for Training and readiness. USS DOLPHIN is homeported at San Diego, California, and is located at the Naval Ocean Systems Center (NOSC) there. For a complete biography of Commander Peterson see the Welcome Aboard Pamphlet in enclosure (4).

Enclosure (1)

## CHRONOLOGY

- 01 JAN Continued the Ships Force Upkeep until 20 JAN at which time Dolphin conducted Sea Trials and returned to port.
- 27 FEB Began the MINE DETECTION EVALUATION of the OBSTACLE AVOIDANCE SONAR Preliminary testing of the OAS system had been conducted in 1987. Results of the tests were inconclusive and more testing is planned for the future.
- 13 APR DOLPHIN moved to drydock in ARD 30 San Onofre to complete scheduled maintenance. Dolphin departed on 3 Jun to commence a Ships Force Upkeep.
- 06 JUN Commenced a complete removal of the ship's old battery and installation of the new GNB-45 battery. After completion of the battery changeout on June 30 Dolphin conducted Fast Cruise and Sea Trials returning to NOSC pier in preparation for the Wais/Oas testing scheduled for July.
- 11 JUL Dolphin returned to sea to continue the at-sea testing portion of the Obstacle Avoidance and Wide Area Imaging systems.
- 27 SEP Departed San Diego to conduct Scripps Institute of Oceanography (SIO) Gravity experiment. This experiment was unique in that the data collected could possibly change the way the scientific community looks at gravity. Also this at-sea period was a benchmark for dolphin being the longest independent at-sea operation in Dolphin history.
- 14 OCT Arrived in Eureka, California for Dolphin's only port visit of 1989.
- 08 DEC DOLPHIN commenced a SUPPLY MANAGEMENT INSPECTION (SMI) conducted by Commander Submarine Group Five. Dolphin received three outstandings and three excellents.

Enclosure (2)

## NARRATIVE

1. OBSTACLE AVOIDANCE SONAR HIGH FREQUENCY. The testing had as its highest priority the evaluation of performance of the HF system while operating in various configurations for (1) in-volume object detection, (2) detection of objects on or near the bottom and (3) operator and training in typical environments and missions. An overall objective of the tests was the conformation of proper operability and ease of use of controls and indicators by the sonar operator under operational conditions. For more information, see OAS test plan.

2. DOLPHIN WIDE AREA IMAGING SYSTEM. The primary goal of the WAIS at sea testing was to pressure cycle and verify operation and performance of the outboard cabling and connectors. The outboard cabling had undergone major modifications due to failures in earlier tests. For more information, see WAIS sea trial test plan.

3. NEWTON'S INVERSE SQUARE LAW OF GRAVITY. The objective was for Dolphin to provide a stable platform to a depth of 3000 feet to test the strength of the earth's gravity. Recent experiments in both laboratories and mines suggests that the earth's gravitational field may increase with depth. If this can be proven to be true the fundamental law of physics may require modification. For more information, see Operations Summary and "Gravity: A test for fifth force" in enclosure (4).