Rec'd 3/19/91

DEPARTMENT OF THE NAVY
USS DOLPHIN (AGSS 555)
FLEET POST OFFICE
SAN FRANCISCO, CALIFORNIA 96663-3400

5750
Ser AGSS555/ 149
28 February 1991

From: Commanding Officer, USS DOLPHIN (AGSS 555)
To: Director of Navy History (OP-09BH), Washington Navy Yard, Washington, DC 20374-0571

Subj: COMMAND HISTORY OF USS DOLPHIN (AGSS 555) FOR CY-90

Ref: (a) OPNAVINST 5750.12E

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 1990.

C. S. ORMSON

COMMAND COMPOSITION AND ORGANIZATION

1. The USS DOLPHIN (AGSS 555) is the Navy's deep-diving research submarine designed to test advanced submarine structures, sensors, weapons and machinery systems. Purely experimental in nature, she serves as a platform for scientific investigation at unprecedented depths for a fully operational and independent submarine. Utilizing its large payload (over 11 metric tons) and highly versatile instrumentation suite, many civilian, public service and military activities have employed DOLPHIN for testing a multitude of technologically advanced and complex equipments.

2. DOLPHIN operates as a unit of the U.S. Submarine Force, U.S. Pacific Fleet, under Commander, Submarine Development Group ONE. Long-range project planning is performed by the DOLPHIN Advisory Group of the Naval Sea Systems Command in Washington, D.C. Technical project guidance and local scheduling/coordination is handled by the DOLPHIN Project branch of the Naval Ocean Systems Center in San Diego, California, where DOLPHIN is homeported.

3. DOLPHIN is commanded by Lieutenant Commander Charles S. Ormson who reported from USS BLUEBACK (SS 581) where he was the Executive Officer. For a complete biography of Lieutenant Commander Ormson see the Welcome Aboard Pamphlet in enclosure (4).

CHRONOLOGY

09 JAN	Served as a test platform for the Very Low Impedance Antenna (VELOZA) system which processes minute magnetic signals for potential use in communications and contact detection.
10 JAN	DOLPHIN was tasked to search for a burned sunken boat as part of a homicide investigation for the Maricopa County Sheriff's Office of Phoenix, Arizona. The search identified 8 contacts in greater than 1000 feet of water on the side of a mountain that were later identified by Deep Submergence Unit vehicles.
16 JAN	Commenced installation of the Integrated Sensor Information System (ISIS) which is composed of the Target Management System (TMS), the Dolphin Navigation System (DNS), the Correlation Velocity Log (CVL), and DOLPHIN's installed sensors. These advanced interrelated systems provide the ship with vastly improved navigation and target management capabilities.
23 FEB	Held a Commanding Officer Command Inspection and awards ceremony.
16 APR	Began four weeks of ISIS testing which coordinated operational testing and calibration of the CVL, data collection and evaluation for the DNS, and TMS shakedown dives in an area of known contacts on the ocean floor.
17 MAY	Successfully searched for, located and photographed a small piece of U.S. Air Force hardware lost on the ocean bottom.
14 JUN	RM1(SS) [redacted], a member of the ship's company, was re-enlisted at the President Eisenhauer Memorial Museum in Abliene, KS by LCDR Latiolais, the ship's Executive Officer.

Enclosure (2)

18 JUN	Conducted the first of two phases of testing of the Laser Line Scanning System (LLSS), an advanced optical imaging system which generates visual images by scanning submerged objects with a blue-green laser. Clear, high resolution images can be obtained at distances greater than conventional camera and lighting systems.
25 JUN	Commenced two weeks of testing of the Very Low Frequency (VLF) Statistical Noise Analyzer whose objective was to gather a database of information on VLF signal attenuation through the air-sea interface.
23 JUL	Began the second phase of Laser Line Scanning System testing.
13 AUG	Performed the second sea test of the Target Management System.
20 AUG	Served as the mother ship for developmental testing of the XP-21 Remotely Operated Unmanned Underwater Vehicle.
10 SEP	Participated in a special project sponsored by the Chief of Naval Operations.
10 OCT	Conducted advanced testing of the Obstacle Avoidance Sonar (OAS) system.
15 OCT	Commenced a maintenance period which included an IMA Availability ending on 3 November and a ship's force upkeep ending on 21 November.
26 NOV	Performed additional testing of the Obstacle Avoidance Sonar to gather data for its advanced application to the Computer Aided Detection and Remote Profiling equipment. DOLPHIN also commenced a Communications Readiness Evaluation (CRE) conducted by Commander Submarine Development Group One, receiving a top score of excellent in all areas.
12 DEC	Provide services to support high resolution radar measurements being conducted by Naval Ocean System Center.

NARRATIVE

1. During F.Y. 1990, DOLPHIN's special project deployments have been broad-based and far reaching. DOLPHIN has been most successful in its role as dedicated platform for the development and proving of scientific concepts and testing of advanced, "new generation" Sonar and Navigation suites.

2. Additionally during this last year, DOLPHIN's material condition was significantly upgraded. A.C. powered fans have been installed replacing the unreliable and maintenance intensive D.C. units previously in use. Upgrades to the ship's Reverse Osmosis Potable Water Unit were accomplished, raising total output to 1600 gallons per day. The ship's damage control capabilities have been significantly enhanced with the addition of AFFF fire extinguisher and potable water fire fighting capabilities onboard. Separate Emergency Air Breathing manifolds have been installed in the Electronics and Equipment space.

3. DOLPHIN was awarded the 1990 COMSUBPAC Battle Efficiency "E", Medical Excellence "M", Engineering "E", and its third consecutive Deck Seamanship Award.

13 DEC	Participated in the SABLE Sonar System Experiment.

Enclosure (2)