SEALAB Reunion (see page 2)

FACEPLATE

The Official Newsletter for the Divers and Salvors of the United States Navy
Volume 1, No. 3 / Winter 1996

Blackhawk Recovered in the Mediterranean

Navy salvors found a tangled pile of debris when they recovered this U.S. Army Blackhawk helicopter off the coast of Cyprus in August 1995. The operation was successfully conducted by Mobile Diving and Salvage Unit Two Detachment Bravo, a 15-man fly-away dive team deployed to the Mediterranean in USNS Mohawk (T-ATF 170). See page 3 for full story.

In This Issue

SUPSALV Sends

I hope that everyone's holiday was safe and that most of you had time to spend with family and friends. The new year finds the U.S. once again sending troops to overseas commitments and it is a good time to rethink diving safety. Our business is dangerous enough so we must ensure that normal operations do not jeopardize our safety. Take the time to do it right.

I have had the opportunity to visit many of your dive lockers this past year and I continue to be truly impressed with the quality and amount of work being done by our Navy divers. The list of accomplishments is impressive and I would like to share some of these accomplishments through this newsletter. I continue to solicit your input.

We are gearing up for the second Working Divers' Conference to be held in Little Creek in March 1996. I have sent a letter to all the commands requesting input on issues to be discussed and resolved at this conference. Put on your thinking caps and let me know what we can do better. If you do not receive a letter please contact the SUPSALV point of contact, Mr. John Adrian, at (703) 607-2765 or FAX (703) 607-2757 and he will get you a letter. The first WDC was very useful to all the participants and we are working

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SUPSALV Sends

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to ensure that the second one is even better than the first.

We intend on issuing our first CD of our manuals by mid-year. I expect that we will have all six volumes of the Salvage Manual as well as copies of FACEPLATE on this first issue. We intend on updating CDs every six months and more manuals will be added each time. We at SUPSALV will also be coming on-line with our own "Home Page" on the Internet. The Home Page will contain information on SUPSALV services, a list of manuals, TOPSIDE TECHNOTES, FACEPLATE, information on ROVs, and other items. I expect to be on-line by March 1996 and will put out information on how you can access this exciting new means of communication. I would like to hear from you on what would help you on the Home Page.

I think you can see that we are working hard to keep the lines of communication open with you out in the field. I need to hear from you so I can help you improve on your already impressive list of accomplishments. Drop me a line or e-mail and let me know how I can help or how you are doing.

CAPT R. S. McCord
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Supervisor of Salvage and Diving

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FACEPLATE is published by the Supervisor of Salvage and Diving to bring the latest and most informative news available to the Navy diving and salvage community. Discussions or illustrations of commercial products do not imply endorsement by the Supervisor of Salvage and Diving or the U.S. Navy.

Articles, letters, queries and comments should be directed to the Naval Sea Systems Command, 2531 Jefferson Davis Highway, Arlington, VA 22242-5160. (Attn: FACEPLATE)

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Sealab Reunion

1996 marks the 30th anniversary of the Sealab Project. To celebrate the occasion, a Sealab reunion will be held in San Diego, CA, from March 6-8. The agenda is as follows: registration and get-together on Thursday the 6th, a Western barbecue on the evening of Friday the 7th, and a dinner on Saturday the 8th. Other daytime plans including tours, golf, and diving are in process.

This reunion is for all who participated in any of the phases, such as Project Genesis, Sealabs 1, 2, and 3, the Man-in-the-Sea Program, and DSSP 395. This reunion is also for any of the contractor personnel who participated in the fabrication of the habitats and diving equipment or provided surface support activities. This is a wonderful opportunity to meet up with old friends.

The reunion headquarters and all activities will be at the Holiday Inn, San Diego Bayside, 4875 Harbor Drive, San Diego, CA 92106, telephone (619) 224-3629. The hotel will provide special rates for those attending the reunion. Make reservations early.

For further information, please contact the Sealab Reunion committee: Bob Bornholdt at (619) 267-7503, Jack Tomsky (619) 740-9689, or Walt Mazzone (619) 274-9376.

Call for Articles

A reminder to our readers: this newsletter will only survive with your help. We need your stories, both successes and failures, so that we may all benefit from your experience. Some of our most valuable information is the lessons learned from our mistakes. Remember, the person who never made a mistake most likely never made a decision. Please send us your narrative with pictures and captions, and include the byline to be used with your article. (We will return pictures.)

MDSU Two Recovers Blackhawk Near Cyprus

by CWO2 Eldon Jackson

The main body of the Blackhawk rests on the deck of the USNS Mohawk. The Army complimented the dive team and crew of Mohawk for exceptional performance under difficult circumstances.

On the evening of August 15, 1995, a U.S. Army H-60 Blackhawk helicopter crashed off the coast of Limassol, Cyprus. The Blackhawk was returning to the British Air Base at Akrotiri, Cyprus, following a diplomatic mission as part of the Beirut Air Bridge. *USNS Mohawk* (T-ATF 170), underway in the Central Mediterranean, was immediately diverted to Cyprus to conduct search and recovery operations. On board was Mobile Diving and Salvage Unit Two Detachment Bravo, a 15-man fly-away dive team deployed to the Mediterranean Sea.

The ship arrived inport Limassol on the morning of August 18, where divers inspected a similar Blackhawk helicopter for specific structural details that would assist in the salvage operation and for the existence of any hazards, including ordnance.

Upon arrival at the reported crash site later that day, Detachment Bravo began the tedious job of executing search procedures for the missing helicopter. Several suspected crash positions provided by the Army were searched without success, after which all assumed fixes were boxed off in a grid pattern and thoroughly investigated. Two Explosive Ordnance Disposal technicians from EODMU Eight in Sigonella, Sicily were dispatched to augment the MDSU Two team and perform any required ordnance safing procedures. On August 19 luck turned in the divers' favor, when an oil slick was sighted by Army helicopters three miles from the original datum. The divers repositioned and used SCUBA to dive in the vicinity of the slick, where they located the helicopter wreckage in 140 fsw.

The following morning *Mohawk* positioned over the wreckage, utilizing a 3-point moor configuration, and surface-supplied diving operations began. The first priority was to recover the four Army crew members who perished in the crash. Their bodies were located, recovered, and transferred ashore by the afternoon of August 20. Salvage of the aircraft began immediately thereafter, and on August 21 the main body of wreckage was rigged and successfully lifted on board. *Mohawk* departed the crash site that evening after all requirements of the salvage operation had been completed. The wreckage was then transferred to American forces at Akrotiri Air Base, where it underwent initial investigation as to the cause of the accident.

As with most aircraft salvage operations, this job required numerous dives to completely recover all wreckage required for investigative purposes. Estimates of the speed of the Blackhawk on impact were in excess of 120 knots, which resulted in the helicopter being completely demolished; the wreckage was held together only by cables, hydraulic lines, and wires. Consequently, a total of over 14 hours of bottom time at depths to 145 feet were required to complete this mission.

The successful recovery was the result of close coordination and cooperation between the *Mohawk* crew, MDSU Two divers, the U.S. Army, and Cypriot police. Following the operation, Major General

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BLACKHAWK **(from page 2)**

Yates, the senior Army representative on the scene, complimented the dive team and crew of *Mohawk* for exceptional work in a difficult situation. He recognized the high level of cooperation, dedication, and professionalism of all involved.

USNS Mohawk and Mobile Diving and Salvage Unit Two Detachment Bravo, both homeported at the Naval Amphibious Base Little Creek, entered the Mediterranean Sea on May 1, 1995 for a six-month deployment as the Sixth Fleet salvage and rescue platform. This deployment marked the first teaming of a MDSU Two detachment and Military Sealift Command ship for an extended deployment. On August 10, *Mohawk* successfully completed its first aircraft salvage operation of the deployment when it recovered a Coast Guard helicopter from the *USCGC Dallas*, which had ditched off the coast of Sicily. ■

CWO2 Eldon Jackson is Officer in Charge of Mobile Diving and Salvage Unit Two Detachment Bravo.

USS San Diego Surveyed by Navy Divers

by CDR Bob Honey

Seven miles south of Fire Island, New York, lies the only major U.S. Navy warship sunk by enemy action during World War I. On the morning of July 19, 1918, the 15,500-ton armored cruiser *USS San Diego* (ACR 6) was en route to New York City from the Portsmouth Navy Yard in New Hampshire when it struck what is believed to have been a mine laid by the U-156, a German submarine operating off the Eastern seaboard. The mine detonated on the port side, in the vicinity of the engine room, opening a large hole and causing two massive sympathetic boiler explosions. Before the crew could control the progressive flooding, *San Diego* lost all power, began to list heavily, capsized, and within an hour of the explosion, sank in 115 feet of water. Due to effective abandon ship procedures, casualties were surprisingly light; all but six of the 1200-plus crew survived and made it safely to shore.

The Navy mobilized for salvage operations shortly after the incident, but soon determined that the condition of *San Diego* made it impractical to undertake any effort. In August 1918, *San Diego* was stricken from the Naval Vessel Register. *San Diego* lay undisturbed for many years, until discovered in the 1950s by a local fisherman. The discovery proved very timely. SCUBA diving equipment had recently become available to the general public and diving for recreation was becoming popular. *San Diego* soon became one of the most popular sport diving sites on the East Coast.

Over the years, *San Diego* has attracted divers with its size, easily attainable depth, relatively clear water, proximity to a highly populated area, and myriad artifacts. The 504-foot hulk lies keel up on a smooth bottom, and can be easily reached by small boat in a little over an hour from the nearest harbor. Depending upon the sea state and strength of the bottom current, up to 50 feet of visibility can be experienced, exposing the impressive features of the wreck and the numerous varieties of sea life that make it a home.

Unfortunately, because of the inherent danger of wreck diving, and inexperience on the part of some divers in such an environment, diving the *San Diego* can be hazardous.

In 1992, four sport divers were killed while diving on the *San Diego*. Those deaths raised the total to six who have died on the wreck since it was discovered. The high death toll has prompted concern for the future safety of diving on *San Diego*, which is deteriorating under the harsh conditions of the stormy North Atlantic. Reports had also been received that sport divers were recovering ordnance without regard for its potential lethality. (When *San Diego* sank she was carrying a full wartime load of ordnance for her four 8-inch, fourteen 6-inch, and eighteen 3-inch guns.) These concerns for divers' safety were communicated to the Navy, which retains title to the *San Diego* and other U.S. Navy vessels sunk in combat. The Naval Historical Center in Washington, D.C., which is responsible for maintaining the custody of historical Navy property, was tasked to investigate and report on the condition of the *San Diego*. In early 1995, the Center contacted the Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT) with a request to conduct a survey of the *San*

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SAN DIEGO **(from page 4)**

Diego and determine its current condition. CINCLANTFLT tasked Explosive Ordnance Disposal Group Two with coordinating the effort, who in turn assigned Mobile Diving and Salvage Unit Two (MDSU Two) to conduct the operation.

On June 4, 1995, the 74-foot MDSU Two diving support craft NS-85 arrived at Coast Guard Station Fire Island, where other members of the assigned survey team were gathering. MDSU Two salvors, ordnance specialists from EOD Mobile Unit Two Detachment Earle New Jersey, photographers from the Combat Camera Department of Fleet Imaging Command Atlantic, and a representative from the Naval Historical Center would make the Coast Guard station their base of operations for the next 11 days. Coast Guard personnel also provided small boat services and invaluable knowledge of operating in the local waters.

The first dive made on *San Diego* occurred on June 5, when divers conducted an external survey and identified suitable locations on the hull to attach mooring buoys for the NS-85. Survey operations began in earnest the following day. During the next 10 days, although hampered by heavy weather which prevented diving for almost half that time, over 50 internal and external dives were made, accumulating 21 hours of bottom time. Both surface-supplied diving equipment and SCUBA were employed, and the condition of *San Diego* documented using underwater video and television cameras, still photography, and sketches.

Although a comprehensive survey of all internal spaces was not possible in the short time NS-85 was on station, enough information was attained to determine that the *San Diego* is rapidly deteriorating to the point that diving inside the wreck is becoming extremely dangerous. Collapsing interior structures, separating hull platings, and the presence of significant amounts of unexpended ordnance are but a few of the hazards to which divers are exposed. However, with due consideration for the dangers involved with entering a wreck, and by applying common sense and safe diving practices, divers can continue to enjoy the excitement of diving on the *San Diego* for years to come. ■

CDR Bob Honey currently commands MDSU Two.

New UWSH Chapter on Cofferdams

by Mike Dean

A new chapter of the UWSH Manual, Chapter 16: Cofferdams, (S0600-AA-PRO-160) was released to the printers for distribution on February 9, 1996. Flooding incidents in 1994 on an aircraft carrier and a submarine spurred high-level attention toward the use of cofferdams for ship husbandry. As with all UWSH manuals, NAVSEA actively solicited Fleet input for the development of this chapter. Initial Fleet input was obtained at the 1994 UWSH Conference. Fleet operational requirements and NAVSEA engineering requirements were then combined to produce a draft manual. This draft was distributed to Fleet diving activities for comment. Issues from the Fleet review were used as the basis for discussion at the 1995 Working Divers Conference (WDC). Though many issues were resolved at the WDC, consensus was for one final scrub of the document by NAVSEA and Fleet subject matter experts. Both Fleet CINC's selected personnel to attend a November 1995 working group which produced the text for final copy of this chapter. This manual covers the minimum requirements for the safe design and installation of all cofferdams, from plugs to dry chambers, used for the maintenance and repair of Navy ships and submarines. NAVSEA wishes to thank all of you who took the time and effort to review and comment on the draft versions of this manual, and especially those listed below who attended the final working group — a hearty "job well done."

Geoff Healy, NAVSEA 00C54

Robert Lee, Jr., Puget Sound NSY

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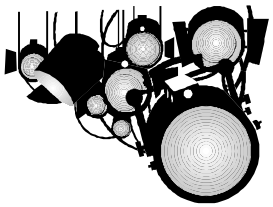
DCC (DV) Mike Bosler, *USS Emory S. Land*

ENC (DV) Todd Rood, CDU

Dan Barrows, Norfolk NSY

Mike Dean heads up the Underwater Ship Husbandry Division (00C5).



COMMAND IN THE SPOTLIGHT:

EOD Mobile Unit Eleven

"Optimo Mandati"

by LT Randall Packer

Situated on Washington's Whidbey Island, Explosive Ordnance Disposal Mobile Unit Eleven serves as one of three active duty EOD mobile units within Explosive Ordnance Disposal Group One. Established on September 6, 1991, EODMU Eleven has 16 officers and 101 enlisted personnel, and is composed of six mobile detachments, three mine countermeasures detachments, and two shore detachments.

The command's mobile detachments support three carrier battle groups. Each battle group deploys with two detachments of one officer/five enlisted each. One is based aboard the carrier while the second is aboard an AE or AOE. In addition to their EOD training, EOD personnel are qualified in SCUBA, surface-supplied diving, and mixed-gas diving, and are routinely the only divers deployed with the battle group. Consequently, they may be called upon to perform hull inspections, minor underwater repairs, and underwater photography services in addition to their normal duties. Other training received includes demolition, helicopter insertion and extraction, and small unit tactics.

Between deployments, mobile detachments routinely participate in numerous U.S. and multinational exercises and are tasked to perform other services as required. On occasion, this includes providing EOD support to the U.S. Secret Service and Department of State for the protection of the President, Vice-President, and various foreign dignitaries. Being based in the Pacific Northwest with exercises and operations in Alaska has enabled development of capabilities for harsh and demanding environmental conditions.

Each of the three mine countermeasures (MCM) detachments consists of one officer and seven enlisted personnel who have additional training in MCM-unique equipment and procedures to locate, identify, neutralize, recover, exploit for intelligence, and dispose of sea mines, torpedoes, and depth charges. Equipped with GPS navigation systems and PQS 2A handheld sonars, they are capable of reacquiring and explosively neutralizing mine contacts located by MCM ships or airborne mine countermeasures helicopters. If needed, they can also recover mines for intelligence exploitation to gain information that will facilitate conduct of the safest, most effective MCM operations.

The MK 16 Underwater Breathing Apparatus is used to enable diving in proximity to the most sensitive magnetically and/or acoustically fired ordnance (see photo). It is a state-of-the-art, semi-closed circuit, backpack breathing system. It has extremely low magnetic and acoustic signatures and uses helium/oxygen (or nitrogen/oxygen) as the breathing medium. It is currently certified to a depth of 200 fsw with efforts underway for a 300 fsw capability.

MCM detachments, like mobile detachments, are able to respond to emergent tasking anywhere in the world on short notice. This capability was highlighted when, upon completion of Exercise RIMPAC 94,

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Diver preparing for extreme cold weather (ECW) dive. Diver has the MK 16 underwater breathing apparatus (UBA) donned with the MK1 MOD 0 Non-Magnetic Dry Suit.

EODMU ELEVEN **(from page 6)**

EODMU Eleven Detachment 51 was redeployed to South Korea with COMCMRON One for an unspecified period of time. What followed was a four-month deployment aboard the *USS Juneau* (LPD 10) where Detachment 51 conducted hydrographic surveys in five major ports and served as an important component of the MCM force.

EODMU Eleven also exercises administrative control of two shore-based EOD detachments, one co-located with EODMU Eleven at NAS Whidbey Island and the other at the Naval Submarine Base, Bangor, WA. Shore detachments support shore activities that require continuous EOD support, including general ordnance handling and disposal, live fire training, range clearance, and underwater ordnance testing.

From the early days of World War II, the mission of Navy EOD has remained constant to eliminate ordnance hazards that jeopardize operations in support of national security and military objectives. The men and women of EODMU Eleven have the expertise, equipment, and commitment to accomplish the mission, and in doing so, live up to the command's motto, "Optimo Mandati" — Commissioned to be the Best. ■

SEABEE Unit Helps Diving Mishap Victims

by JO2 Drew Scharnhorst
Reprinted from
The Rota Coastline

ROTA, SPAIN — Four German divers are in good health today through the combined efforts of several U.S. Navy teams and a little luck.

Members of Naval Underwater Construction Team One aided the victims here Sept. 8 after a potentially fatal diving accident off the coast of Portugal. According to UCT One's SWC (SWC/DV) David Aalders, the Germans were filming a coral reef near the top of a sea mountain for a German television program in about 140 feet of water when they ran into trouble.

"They'd been doing 140-ft. (dives) for 30 to 40 minutes, with decompression stops," Aalders said. "They got stuck in a current on the bottom, and they ran out of air."

The lack of air forced them to abandon the normal diving practice of rising slowly to acclimate their bodies to changes in pressure. "They came straight to the surface, and skipped about 15 minutes of decompression," said UCT's HM1 Daryl Stanga, a Diving Medical Technician. "When you dive, your body's always trying to achieve equilibrium with its environment," he explained.

As a swimmer dives deeper, external pressure increases, and so does the nitrogen in the air the diver breathes. The body tries to absorb the nitrogen from the lungs into the tissues. Coming back up, the process is reversed. Bubbles are formed if the diver comes up faster than his body can get the nitrogen out of his tissues. The bubbles displace nerves, blood vessels, and other tissues, and causes "the bends."

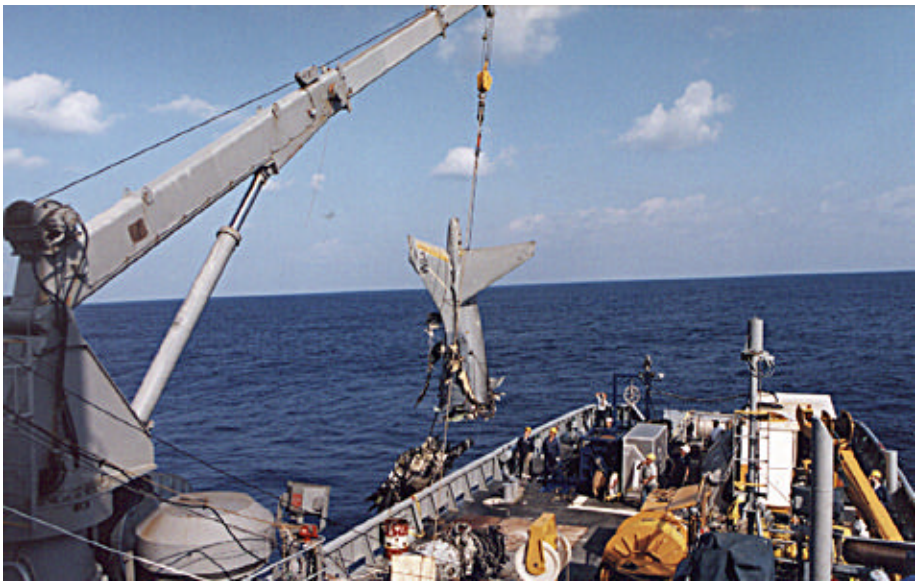
USS Wasp (LHD 1), responding to a distress call from the divers' ship, dispatched a Search-and-Rescue (SAR) helicopter and team. After the four Germans were aboard the helicopter, they were flown to Naval Station Rota, where UCT's decompression chamber was waiting.

The Germans were lucky — UCT One had one of their two decompression chambers here in Spain with them; the other is at their homeport of Little Creek, VA. Had the chamber been unavailable, their trip would have been longer: the nearest decompression facility is in Cádiz.

The four victims — three photojournalists and a doctor — spent nearly five hours in the chamber, Aalders said. The Germans slowly became acclimated to normal pressures, allowing the excess nitrogen in their systems to dissipate.

Because the chamber isn't very large, Stanga said, two of the Germans sat on small benches built into the chamber, and the others lay down on the deck. "I had a little walkway of about two steps in the middle, to go back and forth between them to monitor their progress," he said, while other UCT members watched the gauges and valves outside the chamber.

Stanga said they watched the Germans for about 10 minutes after they exited the chamber. "We were watching for any other recurring symptoms ... like dizziness or numbness. We had to check them out properly before we could let them go." The four divers then spent the night at Naval Hospital Rota for observation. ■



The T-ATF proves itself a worthy platform during this AV-8 (Harrier) recovery.

Fleet Assets Key to Successful Operations

by William P. Healy

Once again, the combination of mobile salvage equipment and a capable platform has proven itself to be an economical and effective solution to recovery needs. On the first of September, an AV-8 (Harrier) experienced engine trouble during a bombing exercise in the East China Sea. The pilot ejected and his plane crashed into the sea 50 miles off the coast of Okinawa, Japan and sank to a depth of 1750 feet. Preliminary investigations did not reveal the exact cause of the mishap and it was decided that the remains of the aircraft, in particular the engine, should be recovered.

NAVSEA 00C began looking at several combinations of equipment, platforms, and schedules, both contracted and government owned, to determine the most cost-effective means of finding and recovering the aircraft. A commercial platform was immediately available but all Navy salvage vessels had commitments until Thanksgiving. It was decided to postpone the operation and use a combination of Navy search equipment, a contracted ROV, and the *USNS Narragansett* (T-ATF 167).

Despite consistently poor weather and heavy seas, this combination of assets performed superbly

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Guardians of the Submarines

by CDR Dale Lueck

Ever wonder where the "black fish" insignia displayed by Submarine Rescue Ships came from? In 1882 a diving school was established at the U.S. Naval Torpedo Station at Newport Rhode Island by retired Chief Gunner's Mate Jacob Anderson. Chief Anderson trained volunteer divers by recovering practice torpedoes fired from the station's tubes. The divers devised and displayed a flag from their boat to signify the recovery of a torpedo. This flag was a black torpedo-like symbol against a white background with a red border. The nickname "fish" was given to the torpedo and eventually the torpedo shape was changed to a fish shape.

For most of this century, when submarines have gone to sea to conduct sea trials, they have been accompanied by a small ship with an important mission. The auxiliary submarine rescue (ASR) ship escorted the submarine, standing by in case of an emergency. The ASR acted as a safety vessel, patrolling the area to warn ships to keep clear of the submarine operating area, and recovered practice torpedoes fired by the submarine. Divers stood ready on board the ASR to perform submarine rescue duties in the event of an accident. Since there was no international flag signal early in the century for this type of operation,

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FLEET ASSETS **(from page 8)**

throughout the operation. The large fantail area of the T-ATF, outfitted with a Baxter bolt pattern, allowed equipment to be mobilized quickly and accurately. Base plates for the installation of contractor equipment were able to be pre-fabricated, saving time and money. Sufficient space existed for all search gear, all recovery gear, and the wreckage, allowing all mobilization to be accomplished simultaneously.

Precision tracking and dynamic positioning is critical to a search and recovery operation. With the help of advanced navigation software, and Precision Lightweight GPS Receivers (PLGR) generously loaned from EOD Group 2, the crew of the *Narragansett* was able to support this challenging requirement despite the severe weather. The vessel's traction winch and crane were also used throughout the mobilization and recovery, reducing the amount of contracted equipment required.

All remains of the aircraft desired by the investigation were recovered as the T-ATF proved once again that it is a flexible and capable platform for aircraft recovery operations. ■

William P. Healy is a Project Engineer for 00C2 (Towing and Salvage). He can be reached at (703) 607-2758.

The fantail of the T-ATF had sufficient space for all search gear, all recovery gear, and the wreckage.

GUARDIANS **(from page 8)**

the black fish insignia was displayed by all ASRs. Thus ASRs took up the role as "guardians of the submarines," and eventually were formally authorized to display the distinctive black fish insignia beside their hull numbers as a tribute to their mission.

Submarine rescue ships have enjoyed a long and proud history in the U.S. Navy. The need for these vessels was driven home early in the century by the tragic loss of the submarines S-51 and S-4 in 1925 and 1927. The exploits of two of the most famous submarine rescue ships serve as a testament to the dedication and bravery of the crews manning the fleet of little ships marked by the distinctive black fish insignia.

In May of 1939 the submarine *Squalus* sank in 243 fsw when its main induction valve failed to close. The submarine rescue ship *Falcon*, a veteran of the salvages of the S-51 and S-4, arrived on scene the following day. Through the extraordinary efforts of crew of the *Falcon*, 33 men were rescued from the *Squalus* using with the submarine rescue chamber and MK-5 Deep Sea Diving Gear. Later in the year, *Falcon* lead the salvage effort to raise the *Squalus*. *Squalus* was subsequently refitted and recommissioned as the *USS Sailfish* and went on to serve proudly in World War II.

Not all submarine rescue efforts have been confined to sunken submarines. On December 10, 1941, three days after Pearl Harbor, Japanese aircraft savagely attacked Cavite Navy Yard in Manila Bay, Philippines. On that day *USS Pigeon* (ASR 6) was moored in a five-ship nest at Cavite Yard. *Pigeon* was then under the command of Commander "Spittin' Dick Hawes" a veteran of the S-51 and S-4 salvage operations, a former Master Diver, and previous

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GUARDIANS **(from page 9)**

CO of *USS Falcon*. The *Pigeon* had been permanently assigned to the Asiatic Fleet since 1923. She was a veteran of the "China Fleet" and the famous Yangtze River Patrols.

In the hail storm of falling bombs and with Cavite Navy Yard already ablaze, *Pigeon* cleared the nest with the minesweeper *Quail* still made up alongside. After maneuvering clear and freeing *Quail*, she then turned back to aid the submarines *Sealion* and *Seadragon*, the *Bittern*, another minesweeper, and a gasoline tender still trapped alongside the pier. *Sealion* already lay with its pressure hull holed, damaged beyond repair. The flames and explosions from the torpedo warhead shop on the pier were showering the trapped vessels in a firestorm of missiles and debris. With paint blistering on her hull, *Pigeon* moved in, passing a tow line to the damaged and powerless *Seadragon*, and hauled her off the pier to safety.

As *Pigeon* worked *Seadragon* into open waters, CDR Hawes dispatched ship's boats to bring *Bittern* and the gasoline tender to safety. *Pigeon*'s work boats were successful in saving them from being engulfed in the inferno. *Pigeon* was awarded the first Presidential Unit Citation ever awarded to a U.S. Navy ship for her actions that day. *Seadragon* was repaired by the submarine tender *Canopus* and was back at sea December 16, 1941, going on the attack and becoming one of the tonnage champions in Pacific Theater during World War II.

As the war progressed the Allied Forces in Philippines were ultimately cut off and overrun. The *Pigeon* stayed behind, along with the submarine tender *Canopus*, and continued her noble defense of the Philippines and Corregidor. *Canopus* was scuttled April 9, 1942 to prevent her from falling into enemy hands. *Pigeon* held out for almost another month, but was finally sunk by a Japanese dive bomber on May 4, 1942. *Pigeon* was awarded a second Presidential Unit Citation and a Battle Star for her determined struggle. The bulk of *Pigeon*'s valiant crew were eventually captured by the Japanese and interned at the infamous prisoner of war camp at Cabanatuan, Philippines.

The last U.S. Navy auxiliary submarine rescue ship, the *USS Ortolan* (ASR 22) was decommissioned in March 1995, thus ending the illustrious era of the auxiliary ships that displayed the distinctive black fish insignia and proudly stood by during most of this century as guardians of the submarines. The mission of submarine rescue is carried on by elements of Commander Submarine Development Group One, including the Deep Submergence Rescue Vehicles (DSRV) *Mystic* and *Avalon* and the U.S. Navy divers manning the fly-away submarine rescue chambers at the Deep Submergence Unit, at North Island Naval Air Station, San Diego CA.

Food for thought: If suddenly faced with a sunken submarine disaster, are you ready to answer that call as a Navy diver? If you are training hard and maintaining your qualifications, the answer is yes; if you're not, get busy! When it happens, you won't have time to prepare for the diving work that may have to be done. ■

CDR Dale Lueck is the U.S. Navy Supervisor of Diving and former crew member of USS Pigeon (ASR 21), the third U.S. Navy ship to bear that name.

Medical Notebook:

The Headache

by John S. Hughes, MD
CAPT (sel) MC, USNR-R

All of the diving students in our work detail looked over toward the diving school buildings to see what the low toned "thump" was. The two diving tenders were straining with a load, invisible to us as the load was down within a training tank about 8 feet deep. Several divers dressed in UDT shorts and blue T-shirts ran toward the tank and the struggling tenders, to what evidently was a diving student in trouble.

By the time we got there, the diver had been bodily lifted over the side of the tank and brought down the ladder to the deck. He was rapidly unhatted, the spun copper MK V helmet easily yielding to a dozen helpful hands that had leapt into action, hands belonging to tenders, diving officers, and the master diver himself, all eager to see the face of the diver. We also noticed that the diver's white canvas rubber suit had burst at the leg and that the jocking strap, a major thick piece of leather, had parted.

"The diver is OK!" exclaimed the master diver, to get control and slow down the eager tenders who were undressing the diver with the vigor of a shark feeding frenzy. Indeed, to us the diver looked OK enough; he just seemed aggravated and worried by all the attention. The tenders soon had him undressed and he stood all wet and drippy at the base of the training tank.

"How do you feel?" the master diver began, and the corpsman began to help the master diver by performing a neurological examina-

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HEADACHE **(from page 10)**

tion. It began with questions that elicited mental status and proceeded to cranial nerve examination, examinations of the diver's sensation, strength, and coordination, and a test of deep tendon reflexes over both upper and lower extremities. The corpsman, an old master chief, was very quick and the exam only took a few minutes. Following the examination the corpsman produced a clipboard with a flow sheet. After he had finished entering his findings, he began the examination again, this time starting with a check of the diver's pulse and blood pressure before proceeding again into the neurological system.

"I have a headache, here on the right side of my head," the diver said. By now the diving medical officer had arrived and was assisting the corpsman with the neurological examination. Everything seemed to be normal, and we helped the divers by finding a dry blanket and some regular folding chairs for the gathering crowd of diving officers, senior enlisted, and other unit personnel.

"Get everyone not involved in this out of here and go get the other chamber medical kit," the master diver barked. "The doc needs the reflex hammer." We took the rest of the students back to the classroom. I got the kit and headed back to where the master diver, diving officer, corpsman, and doctor were having a discussion about what to do.

The corpsman continued to do blood pressure and pulse checks while the doctor assumed the neurological examination duties. Over a half hour passed, and during this time the diver complained that his headache seemed to be getting worse.

(continued on page 12)

The OLD MASTER

by BMCM (MDV) Gary Chancellor

Spitcock open, Dumbbell down and locked, Exhaust valve backed off two and a half turns!

For those of you that remember what those words used to mean, we've come a long way baby.

Today's diving equipment is actually **lightweight** and **highly portable**. This is a fact; it is also a necessity with the current demands of the Fleet's diving requirements and needs. No longer do we have the luxury of various tenders, ARSs, or ASRs deployed throughout the world to render diving services as we did just a few short years ago. So, in order to meet these demands today, we have to have equipment and personnel that can be shipped anywhere at anytime, to accomplish underwater tasks that the tenders and junkboats used to handle.

Mobile Diving and Salvage Units, Underwater Construction Teams, Shore Intermediate Maintenance Activities, and Submarine Repair Facilities do today what the deployed ships used to do for us. These units need equipment designed for this type of work and deployment. Here at NAVSEA 00C3, the office of Supervisor of Diving, it is our task to make sure that these needs get met. No, that doesn't mean if you need a MK III lightweight dive system we'll send you one. What it does mean is that we are responsible for the design, initial acquisition, and delivery of equipment and dive systems that meet these ever changing requirements. Sometimes, we even listen to you people out in the Fleet and (after having lots of testing done) change the parameters of existing equipment and systems to meet new Fleet requirements.

At this time, I would like to discuss some of the new equipment and some of the equipment parameter changes. By late Fall 1996, we hope to have the new Fly Away Dive System (FADS III), and Fly Away Mixed Gas System (FMGS) introduced to the Fleet. The Transportable Recompression Chamber System (TRCS) is now in use at various commands, with more being delivered each month. The MK III LWDS and the MK 20/MOD 0 should be certified to a depth of 190 fsw by the end of April 1996. So, as you can see, not only do we develop new equipment, we also keep improving the equipment we have.

So remember, when you are out there diving and things seem like they are not going exactly the way you would like, that it still beats using a crowsfoot and lufer sponge and the necessity of smoking to check your non-return valve. ■

HEADACHE **(from page 11)**

"Say doc, I think my left leg is weak!" the diver exclaimed.

The master diver immediately got the doctor's attention and the doctor had the diver sit down so that he could do sensory, strength, and reflex testing on the diver's lower extremities. All of us could see that on the left side, the knee jerk reflex was greatly increased over the right. It seemed like even the lightest tap of the reflex hammer would cause the diver's leg to jerk forcefully, not just once but two or three times.

"Master, he has three beat clonus in both the patellar and Achilles tendons over on the left," the doctor said. "I believe he has a cerebral gas embolism over on the right side of his brain that is progressively causing right-sided body weakness," he continued. The diver was led to the chamber while the doctor explained to the diving officer that right-sided brain injury will cause right-sided motor findings along with "release hyperreflexia."

The diver was treated on a treatment table 6 rather than a treatment table 6A. As the doctor explained, the mechanism of progressive brain swelling causing the diver's weakness was better treated with oxygen at 60 feet seawater equivalent pressure than air at 165 feet seawater equivalent. Fortunately for the doctor's career, the diver got better quickly. ■

John S. Hughes, MD, is the Diving Medical Officer of NAVSEA Det 1006 / NAVSEA 00C, based in Crystal City, Virginia.

Tribute

Orlin A. "Moose" Kohl passed on to his greater reward on May 5, 1995. Moose's career led him to the Experimental Diving Unit, the Submarine Rescue Ship *USS Tringa* (ASR 16), and Harbor Clearance Unit One in Vietnam, among other duties. Moose retired in 1971 to set up a civilian diving school, but took on occasional salvage jobs to keep life interesting, including work on the Alaska Pipeline, Scapa Flow, and Bangladesh.

Moose was a very big man — in every sense of the word. He was never bored, never lacked for friends, and was always eager to go when the bell rang.

CAPT W.F. "Bill" Searle, Jr., USN (Ret)
Supervisor of Salvage
(1964-1969)

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