FACEPLATE

The Official Newsletter for the Divers and Salvors of the United States Navy
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USS SALVOR (ARS 52)

FACEPLATE is published by the Supervisor of Salvage and Diving to make 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.

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SUPSALV SENDS

America and the world were shocked on Saturday morning, 1 February this year when we watched the catastrophic disintegration of space shuttle COLUMBIA on TV, recognizing it meant sudden death for COLUMBIA's seven astronauts, and a major setback for our space program. But like seventeen years before, when the CHALLENGER space shuttle explosion occurred, our US Navy Diving and Salvage force was called in to conduct the in-water portion of the recovery. Unlike the CHALLENGER operation, only a small amount of COLUMBIA debris landed in water, but it demanded a unique search and recovery effort in a flooded national forest ranging from 20 to 110 feet in depth. The "bottom report" is best characterized as near zero visibility in a tangled pile of standing and fallen trees, branches, root balls and stumps – dubbed "Texas Coral" by the divers – as well as all the junk that a popular commercial fishing area might collect over 35 years. As I write this from East Texas, we've assembled under a unified 00C command and control the world's foremost search team, using old, new and still developing technology to pry open the reservoir's tomb of secrets. Five towed side scan sonars, two multi-beam imaging bathymetry sonars and two autonomous underwater vehicles (AUVs) are being employed to search the bottom and develop dive "targets". A total of nine (four MDSU2 and five civilian agency) teams dive the targets and determine if each is shuttle or not.

While the COLUMBIA search is in progress…on the opposite side of the world, an 00C/USS SALVOR/MDSU-1 team planned and executed a remarkably successful recovery of nearly 2 million gallons of fuel oil from USS MISSISSINEWA in the middle of Ulithi Atoll in the Federated States of Micronesia. Hot-tapping into dozens of fuel oil tanks 135 feet underwater without incident, these salvors rendered MISSISSINEWA environmentally safe for the fragile atoll ecosystem — two weeks ahead of schedule!

And half-way in between these two major operations, we have an extraordinary team of talented Divers and Salvors responding to our Nation's obligations in Operation Iraqi Freedom…a story that is yet to fully unfold.

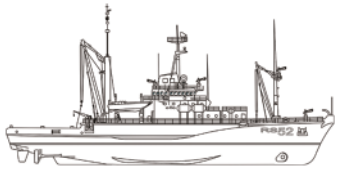
What do these radically different operations have in common? Divers and Salvors! The vast scope of capability, unequalled ingenuity and never-say-quit attitude of our community is both our heritage and our challenge for the future. Why is it a future challenge? Because the entire Navy, including the Diving and Salvage community, is on the brink of radical change – Sea Warrior (previously Task Force Excel (TFE)) – redefining ourselves through a comprehensive overhaul of our Fleet Diver and EOD community structure, career progression and training. Change itself is neither good nor bad, but it offers opportunity for either good or bad results. As we navigate these potential shoal waters to seek the best channel for the future, I'm assigning each of you as look-outs to ensure that our scope of operational capabilities, our ingenuity, and our legendary perseverance under adversity are never at risk. Time is short…let's work together and make our future even brighter!

Captain Jim Wilkins
Director of Ocean Engineering
Supervisor of Salvage and Diving

Editor's Note: *The November 2002 issue of FACEPLATE had an editorial error in the biography of CDR Fink. CDR Fink attended the University of West Florida and not the University of Florida. The Managing Editor regrets this egregiousness.*

In This Issue

SUPSALV Sends 2
USS SALVOR ARS 52 3
NEDU Celebrates 75 Years 4
Command in the Spotlight 6
Royal Navy Clearance Diving Branch 7
Historical Notes 8
00C Welcomes MDV Steve Smith 9
Prime Vendor - Lifesaving 10
PMS Corner 11
Standing By, Ready to Serve 12
00C Website Update 14
Jake's Corner 14
The Old Master 15
From the Supervisor of Diving 16



USS SALVOR (ARS 52)

By: LT Paul Shoning

It was yet another beautiful day in Paradise when the message arrived that an Air Force F-15 had crashed off the coast off Japan and the USS SAFEGUARD was on her way to conduct the recovery. One day later Pearl Harbor based USS SALVOR (ARS 52) was told to make all preparations to deploy for four months to take SAFEGUARD's place in the multinational exercise Cooperation Afloat Readiness and Training (CARAT 2002). Two weeks later SALVOR began the transit to Thailand.

In the hectic two weeks before deployment, SALVOR's divers had no idea what the next four months would bring. Responsible for foreign diving and salvage training, they would be working side by side with over seventy foreign divers from Thailand, Malaysia, Singapore, and the Philippines. Each country would present unique challenges, including the fact that many of these divers spoke little or no English.

Arriving in Thailand, we went straight to work conducting familiarization dives with the Royal Thai Navy Divers. Following some brief pierside dives, we set out to explore the PAK 1 wreck. Getting there proved tougher than expected. The buoy marking the wreck was off by over two nautical miles! In true SALVOR fashion, the divers led by Petty Officer Rob Taylor contacted some local fishermen who used a depth sounder and local knowledge to find the wreck. Following SCUBA dives to attach strawberry buoys to the wreck, we used the 40-ton boom to recover and re-deploy the buoy, marking the wreck location accurately for future survey operations. Petty Officer Ben Moore said that, "It was frustrating not having enough time to explore the wreck, but at least we put their buoy in the right place so next year's divers can go straight to work." Returning to port, there were a few days to enjoy some much deserved liberty in downtown Pattaya before taking in all lines and heading to Kuantan, Malaysia for our next stop on the CARAT tour.

MM3 (DV) Paul Trakimas conducts wreck removal operations with the Royal Malaysian Navy Divers.

Wreck clearance operations in Malaysia gave SALVOR's divers an opportunity to work hand-in-hand with MDSU ONE DET FIVE's divers who were also participating in the CARAT exercise. Over the next ten days, the divers worked around the clock using a variety of underwater cutting techniques and hydraulic tools to remove a Vietnamese fishing vessel which had sunk and was blocking a Royal Malaysian Navy pier. One of SALVOR's best cutters, Petty Officer Charles Parson was excited to start work each morning since, "It's not everyday your dive side is shared with wild monkeys coming out of the jungle." Following ten days of cutting and removal, everyone was ready for the next challenge, working with the Royal Singapore Navy.

After grueling training schedules in Thailand and Malaysia, working with the Singapore divers proved a refreshing mid-cruise break. For once, we were the "trainees," and had the once in a lifetime opportunity to experience the Singapore Navy Dive Center. Especially exciting was the opportunity to use Singapore's first class explosive demolition range. Following a week of training with the Singapore Divers, SALVOR was given the chance to show off her underway operating ability by conducting battle damage assessment and repair on the purpose built target barge, the "Jolly Roger." Led by Petty Of-

(USS SALVOR continued on page 9)

USS SALVOR and Royal Singapore Navy Divers on the SALVOR fantail following the Singapore Phase of CARAT 2002.

NEDU CELEBRATES 75 YEARS

By: LCDR Marc Tranchemotagne

Established in 1927, the Navy Experimental Diving Unit completed 75 years of pioneering diving and hyperbaric research in 2002. Among NEDU's accomplishments over the past three quarters of a century are ground-breaking work developing standard decompression tables for air diving, helium-oxygen diving procedures, recompression treatment tables, surface decompression procedures, saturation diving, early sea-floor habitats, diver thermal protection, and submarine rescue.

Experimental diving began in the Navy in 1912 at the Brooklyn Navy Yard under the direction of Chief Warrant Officer George D. Stillson. His small group developed the first standard Navy diving equipment, tested Dr. John S. Haldane's theories on staged decompression, and extended the maximum diving depth of U.S. Navy divers from 60 to nearly 300 feet.

HT1/SEAL Dan Jakobs (SDVT-2) testing the new KMS-48 mask in conjunction with the MK-25.

Navy diving stagnated immediately after World War I with the closing of the Diving School in Newport, Rhodes Island, but experiments with helium were conducted in cooperation with the Bureau of Mines in the mid-twenties.

The Navy Experimental Diving Unit was formally established in 1927 at the Washington Navy Yard adjacent to the re-established Diving School.

NEDU's early focus was on submarine rescue and experiments with helium diving. In the mid-1930s, Doctors C. W. Schilling, A. R. Behnke, and O. E. Van der Aue, became the first medical staff at NEDU. Their early experiments demonstrated the usefulness of oxygen for treating decompression sickness and proved conclusively that breathing high-pressure air caused physical and mental performance decrements. They also developed surface decompression procedures for submarine rescue.

The first operational use of helium was during the salvage of the USS SQUALUS, which sank in 243 feet of water off the Isle of Shoals near Portsmouth, NH. Equipment and procedures developed at NEDU, including the McCann Rescue Chamber, were essential to the rescue of the 33 crewmen who survived the initial sinking.

During World War II, NEDU began work on early oxygen rebreathers, investigated oxygen toxicity, and tested captured enemy diving equipment. The unit also tested breathing systems and pressure suits for aviators and investigated altitude bends, a new phenomenon observed with the advent of high performance, high altitude aircraft.

In the 1950s, NEDU developed surface decompression tables using oxygen for air diving. In 1956, NEDU developed procedures for air diving that became the basis of the Standard Air Decompression tables, the Surface Decompression Using Air table, and the Repetitive Air Dive tables. These air tables became the standard worldwide.

In the early 1960s, CAPT George Bond, Medical Corps, began the first early experiments in saturation diving, Project Genesis, at the Submarine Medical Research Laboratory in Groton, Connecticut. He and his team of aquanauts conducted their first manned saturation dive, Genesis D, to 100 fsw at NEDU in the spring of 1963.

Saturation diving progressed dramatically through the 1960s and 1970s. New diving records were set and broken, including the first 600 fsw dive in 1964, the first 1,000 fsw dive in 1968 in a joint venture with Duke University, and a 1,600 fsw dive in 1973 at Taylor Diving and Salvage in New Orleans LA, which was then the world's largest hyperbaric facility. In the 1960s, NEDU developed recompression treatments that would become known as

(NEDU continued on page 5)

(NEDU continued from page 4)

Treatment Tables 5 and 6, still in use today.

In 1975, NEDU relocated from the Washington Navy Yard to its present location on the Florida panhandle in Panama City. It was commissioned as a shore command under Naval Sea Systems Command. The new unit included the Ocean Simulation Facility—the largest manned hyperbaric facility in the world—and the Experimental Diving Facility for unmanned testing.

Through the 1970s and 1980s, NEDU tested a great variety of diving equipment and achieved new records for depth and duration in saturation diving. Among the equipment tested was the MK 12 Surface Supplied Diving System (SSDS), which replaced the MK V that George Stillson had tested in the 1920s, and which would be replaced by the MK 21/Superlight 17, also tested at NEDU.

Ocean Simulation Facility, 55,000 gallon wet pot.

During the 1980s and 1990s, NEDU did a large amount of saturation diving to evaluate diving equipment, examine deep saturation diver thermal protection problems, test active and passive diver thermal protection, validate decompression algorithms, test various carbon dioxide absorbents and scrubber systems, develop Treatment Table 7, and conduct mission-specific training for various special projects.

In 1998, the diving biomedical research and development functions from the Naval Medical Research Institute (NMRI) in Bethesda, MD, were consolidated with NEDU.

From 1999 to 2002, NEDU conducted two warm water diving studies to address concerns of the Naval Special Warfare community regarding critical gaps in the Navy's knowledge of warm water diving physiology.

ENCS/DSW Vern Geyman, SM1/DSW Jorge Guillen, DC1/DV Jeremy Mullis, HT1/DV Bart Washburn decompressing during USS MONITOR diving operations.

In 2001 and 2002, NEDU divers made essential contributions to the ex-USS MONITOR salvage project. The mission was a three-year, joint National Oceanographic and Atmospheric Administration and U.S. Navy expedition to recover artifacts from the historic site 16 miles south-southeast of Cape Hatteras Lighthouse off the North Carolina Coast.

In 2002, NEDU completed the final open-water demonstration dives for certification of the MK 16 Mod 1 UBA to 300 feet of seawater (fsw) in the Gulf of Mexico. The 300 foot open-water certification dives completed a four-year product improvement process that included: extending the working limit from 200 to 300 fsw, developing 1.3 atmosphere constant partial pressure of oxygen decompression tables for nitrogen (N_2O_2) and helium (HeO_2) diving, providing an HeO_2 repetitive dive capability for dives shallower than 200 fsw, testing an emergency breathing system (EBS) with integral communications, adding an integral buoyancy compensation device, and adopting an improved full face mask.

Over the past 75 years, NEDU has evolved from a small team of Navy divers to a diverse workforce of over 150 people including military divers from the Fleet, EOD, SEABEE, and SEAL diving communities; PhD scientists and engineers; diving medical officers, physiologists, and research psychologists; and many talented technicians and support personnel. NEDU's mission has evolved from Gunner Stillson's original assignment to evaluate diving equipment and procedures to a much broader mandate that includes a wide range of undersea and hyperbaric biomedical research and development. As NEDU looks towards the immediate future, we foresee research focused on procedures for contaminated water diving, advances in diver thermal protection, furthering our understanding of oxygen toxicity and decompression illnesses, and preserving a Navy capability for saturation diving.

The author wishes to acknowledge that much of the information on NEDU's early history was taken from a 50-year retrospective written by LT R. C. Carter, MSC, USN and published in the Fall 1977 Faceplate, "NEDU celebrates 50th Anniversary 1927-1977," and as NEDU Report 1-77, "Pioneering Inner Space: The Navy Experimental Diving Unit's First 50 Years."

LCDR Marc Tranchemotagne is currently Executive Officer at the Navy Experimental Diving Unit.

Command in the Spotlight

Naval Submarine Support Facility

QMC(DSW/SW) Michael Eighmey

With a land grant from the state of Connecticut, two brick buildings and a T shaped pier on the banks of the Thames river were officially declared a Navy Yard in 1872. Today, the town of Groton, CT is the home of the Naval Submarine Base New London (SUBASE NLON) and its tenant command the Naval Submarine Support Facility (NSSF) which is the Navy's largest nuclear capable Fleet Maintenance Activity (FMA). NSSF provides intermediate level maintenance, ordnance, and supply support to 22 nuclear attack submarines, support vessels, and service craft. A pre-World War II building serves as home for service members stationed at NSSF New London dive locker.

Divers take five during snow storm. Left to right: BM2(SW/DV) Kane, HT2(DV) Levens, GM2(SW/DV) Gilbert, EMFN(DV) Delgado and DC2(SW/DV) Knight.

The dive locker has billets for 31 military divers, but presently fills only 24, and does not currently employ DOD civilian divers. The sole mission is providing Underwater Ship Husbandry (UWSH) to submarines, surface ships, and support craft homeported in or transiting the North Atlantic Region. Outfitted with three diving platforms, the dive locker accomplishes more than 4,500 production hours per month from the following assets: a 50-foot LCM converted to a surface supplied dive boat , a 50-foot workboat with a retrofitted diving system module (DSM), a U.S. Navy MK 3 Light Weight Diving System (LWDS) which has become a permanently deployed overseas asset. NSSF does not have a recompression chamber, relying on the support of the Submarine School Escape Trainer (SUBSCOL) and Naval Submarine Medical Research Laboratory (NSMRL).

The overall make up of the NSSF dive locker is full of youth and enthusiasm. More than three quarters of the personnel are completing their first tour as fleet divers with half of that number being first tour divers on their first enlistment. Youth, when properly harnessed, can be an instrumental factor in success, but lacks experience. This places a huge responsibility on the limited number of senior personnel. On the Job Training (OJT) and in-water time are the only true methods to bridge the experience gap. MDV Al Overbeck , BMC Jim Hatter, ENC Robert McCaulley, HT1 Brad Purple, BM2 Greg Pirtel, and DC2 Aaron Knight bring the necessary fleet diving experience to the waterfront and provide the direct supervision, training, and development of the less seasoned divers. Such training includes everything from general military training to the mechanical elements and logistical requirements to safely complete waterborne repairs.

The everyday work that NSSF accomplishes is no different from that of other intermediate maintenance activities and shore repair facilities. We routinely perform hull inspections, cofferdam and flange installations, SPM repair and replacement, propeller replacement, and repairs associated with sonar and weapon systems on LOS ANGELES and SEAWOLF class submarines. The New England Maintenance Manpower Initiative (NEMMI), (a fancy title meaning less military and more civilian), the decommissioning of OAK RIDGE ARDM 1 and the shifting of ownership of SHIPPINGPORT ARDM 4 to the Electric Boat Corporation (EB) have changed the way maintenance and repair are conducted and accomplished. The NEMMI has brought an influx of contracted civilians, the majority from EB, which has decreased the number of military personnel to a quarter of what it once was. The loss of a dry dock, ARDM 1, has placed more maintenance responsibility on the NSSF dive locker. The necessity for repairs has not decreased, just the number of assets to conduct them. We still maintain the "can do" attitude which has brought many positive outcomes, the challenges of first time in-water repairs, and the accolades for saving the Navy many dollars in dry docking costs.

QMC(DSW/SW) Michael Eighmey is currently on the tail end of back to back tours at NSSF NLON. His previous commands include Naval Special Boat Squadron One, USS ZEPHR (PC 8) and USS FIFE (DD 991).

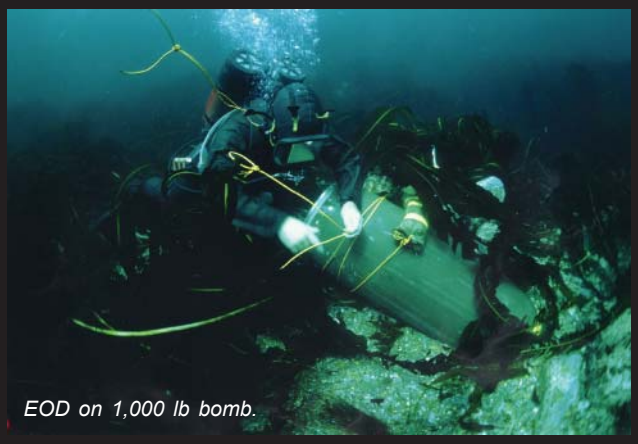
HT1(DSW/SW) Brad Purple inspects the pilgrim nut during propeller removal.

The Royal Navy Clearance Diving Branch *1952-2002*

Golden Jubilee of the RN Clearance Diving Branch

By: LCDR David Ince RN

On 7 March 2002, the Royal Navy Clearance Diving Branch celebrated the 50th Anniversary of its formation, coincident but not connected with Her Royal Highness Queen Elizabeth the Second's 50th year on the throne!



EOD on 1,000 lb bomb.

The Clearance Diving (CD) Branch was officially formed under Admiralty Fleet Order (AFO) on 7 March 1952 although a training nucleus had been set up some 2 years earlier to take advantage of the few remaining men with wartime experience. These officers and ratings had, in the main, qualified as Shallow Water Divers trained to use the Sladden 'Clammy Death' diving dress and oxygen breathing apparatus. Other officers and ratings Qualified in Deep Diving (QDD) joined them. On 25 February 1966, the Minewarfare and Clearance Diving (MCD) Branch was formed for officers. Those officers already qualified as CD and Tactical Anti Submarine (TAS) automatically became MCD Officers while those qualified only as CDOs undertook a conversion course to be trained in Minewarfare, until then, the prerogative of the TAS Branch officers. TAS (UW) and (UC) ratings continued to perform Minewarfare duties until 1975 when the Minewarfare (MW) sub branch of the Operations Branch was formed together with the Diver sub branch. In 1981, the MCD Branch took over responsibility for demolitions training from the Sonar (ex-TAS UC) sub branch of the Operations Branch.

The RN's small CD Branch has been kept very active throughout its existence, initially clearing the huge amounts of ordnance left in the world's oceans, seas and waterways after WWII, but gradually jetsam from other conflicts has taken precedence. During Operation RHEOSTAT in 1974/5, the Fleet Clearance Diving Team worked with RN Minehunters (MHCs) to clear the Suez Canal of ordnance and other military debris following the Arab-Israeli 6 Day War. The final tally included 209 tons of TNT bombs of various sizes, about 800 anti-tank and anti-personnel mines, 6,000 rounds of ammunition, and 70 various missiles. During Operation HEMICARP in 1977, RN CDs co-operated with their US counterparts to clear ex-US and Japanese WW II ordnance from the waters of Tarawa and Tuvalu in the Gilbert and Ellis Islands. On a more peaceful note, 35 RN CDs worked with 18 Egyptian divers in 1977-78 to shift 16,000 tons of mud and 320 blocks of stone during the movement of important ancient Egyptian monuments, submerged by the construction of the Aswan Dam, to a site replicating Philaeon Agilkia Island.

CD teams worked in particularly arduous conditions conducting bomb and mine disposal during Operation CORPORATE in the Falklands in 1982 and in the Red Sea during Operation HARLING in 1984. In 1987, they cleared Iranian mines in the Gulf of Oman and in the Persian Gulf during Operation CIMNEL, the 'Tanker War'. In 1991, they were back in the Persian Gulf during Operation DESERT STORM, this time clearing hundreds of Iraqi mines laid off the shore of Kuwait.

In 2000 CD Elements, continually embarked as an integral part of a MHC's weapons system, were involved in Operation ALLIED HARVEST, the clearance of allied bombs jettisoned in the Adriatic during the Bosnian and Kosovo conflicts, followed by Operation CLEANEX in 2001, the clearance of ex Soviet Union and WWII ordnance in the Northern Baltic Sea. Today, CD Units remain very busy in the United Kingdom and around the world conducting their prime task of explosive ordnance disposal (EOD), whether the munitions be conventional, unconventional or the terrorist's improvised explosive device. Many teams have become highly specialized in their roles and work closely with Army and Royal Marine units. Since the Golden Jubilee celebrations RN Clearance Diver EOD Elements have been involved in EOD operations in Afghanistan and Kenya, and will doubtless be involved in such operations again in the near future! In the meantime as 'Jacks of all Trades', they continue to support the RN Fleet with underwater ship's husbandry, search and salvage operations, experimental diving, and many other tasks.

LCDR David Ince is currently on exchange with USN assigned to NAVSEA 00C5.

RN (specialized) Clearance Divers - Para insertion to DWC site.

Historical Notes

Submitted by Scott Lassiter from the U.S. Navy Historical Center Website

Pearl Harbor Raid, 7 December 1941 - Post-attack Ship Salvage

During the weeks following the Japanese raid, a great deal of repair work was done by the Pearl Harbor Navy Yard, assisted by tenders and ships' crewmen. These efforts, lasting into February 1942, put the battleships PENNSYLVANIA, MARYLAND, and TENNESSEE, cruisers HONOLULU, HELENA, and RALEIGH; destroyers HELM and SHAW, seaplane tender CURTISS, repair ship VESTAL and the floating drydock YFD 2 back into service, or at least got them ready to steam to the mainland for final repairs. The most seriously damaged of these ships, RALEIGH and SHAW, were returned to active duty by mid-1942.

Divers standing in front of a decompression chamber, while they were working to salvage ships sunk in the 7 December 1941 Japanese air raid on Pearl Harbor.

Five more battleships, two destroyers, a target ship and a minelayer were sunk, or so severely damaged as to represent nearly total losses. These required much more extensive work just to get them to a point where repairs could begin. Starting in December 1941 and continuing into February 1942, the Navy Yard stripped the destroyers CASSIN and DOWNES of servicible weapons, machinery and equipment. This materiel was sent to California, where it was installed in new hulls. These two ships came back into the fleet in late 1943 and early 1944.

USS OKLAHOMA (BB 37) *Ship righted to about 30 degrees, on 29 March 1943, while she was under salvage at Pearl Harbor. She had capsized and sunk after receiving massive torpedo damage during the 7 December 1941 Japanese air raid. Ford Island is at right and the Pearl Harbor Navy Yard is in the left distance.*

To work on the remaining seven ships, all of them sunk, a salvage organization was formally established a week after the raid to begin what would clearly be a huge job. Commanded from early January 1942 by Captain Homer N. Wallin, previously a member of the Battle Force Staff, this Salvage Division labored hard and productively for over two years to refloat five ships and remove weapons and equipment from the other two. Among its accomplishments were the refloating of the battleships NEVADA in February 1942, CALIFORNIA in March, and WEST VIRGINIA in June, plus the minelayer OGLALA during April-July 1942. After extensive shipyard repairs, these four ships were placed back in the active fleet in time to help defeat Japan. The Salvage Division also righted and refloated the capsized battleship OKLAHOMA, partially righted the capsized target ship UTAH and recovered materiel from the wreck of the battleship ARIZONA. However, these three ships were not returned to service, and the hulls of the last two remain in Pearl Harbor to this day.

All this represented one of history's greatest salvage jobs. Seeing it to completion required that Navy and civilian divers spend about 20,000 hours underwater in about 5000 dives. Long and exhausting efforts were expended in recovering human remains, documents, ammunition and other items from the oil-fouled interiors of ships that had been under water for months. Uncounted hours went into cleaning the ships and otherwise getting them ready for shipyard repair. Much of this work had to be carried out in gas masks, to guard against the ever-present risk of toxic gasses, and nearly all of it was extremely dirty.

Welcome MDV Smith

I'm Steve Smith and it's a very exciting time to take the helm as Fleet Master Diver. I almost didn't take this job but I am now happy that I did. New developments are on the immediate horizon that will dramatically improve the way we train and advance our personnel. I look forward to working with all of my diving colleagues on these positive changes. I have over 22 years in the world's finest Navy and over 20 have been spent as a Deep Sea Diver. Some of the Commands I have been attached to: USS CONSERVER, NDSTC, Submarine Development Group ONE, NEDU and EODMU 8. As I get out and about I look forward to seeing old friends and to making new ones. I hope to assist you and your Command in any diving need that might arise. In the event that I can't assist you, I will find the person or resource that will help you complete your mission.

I would also like to thank HTCM (MDV) Chuck Young for the awesome job he has done for NAVSEA and our Diving Navy. Chuck is moving on to CIVLANT after serving his country for over 21years. He goes on terminal leave soon. So to my good friend, mentor and saturation dive partner I wish you all the very best as you sail off on your next voyage. Fair winds and following seas, shipmate.

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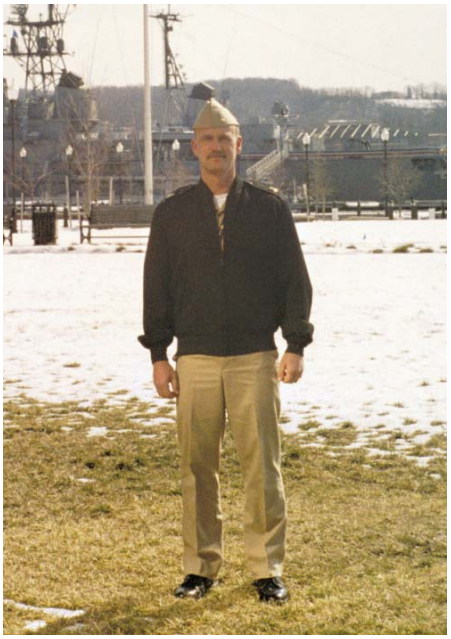
Phone: 202-781-0960



MDV Steve Smith on a cold day at the Washington Navy Yard, DC.

(USS SALVOR continued from page 3)

Starboard side view of the USS SALVOR ARS 52.

ficer Chad Jakel, our divers showed their cutting and patching prowess by repairing the target barge following a live fire exercise.

With the CARAT exercise nearing its close, we had no idea of the challenges that would face us in the last stop in the Philippines. Although the Philippine Navy had no Deep Sea Divers available for the exercise, SALVOR's training presentations on underwater ship husbandry drew a large crowd. After the classroom lessons, we were asked to put our training to the test by welding a steel doubling plate to the leaking hull of the Philippine destroyer RAJAH HUMABON (PF 11). To further complicate matters, most of the welding would be performed in driving rain and 30-knot winds while in a two-point moor in Manila Harbor.

Rising to the occasion, the welders led by Petty Officer Jon Klukas went to work surveying and conducting welding operations. Twice during the repairs, due to high winds and heavy seas SALVOR began slipping in the two-point moor and had to stop work to reset the moor. While transiting to Subic Bay to complete repairs, the divers were able to stop all leaks in the RAJAH HUMABON earning the praise and appreciation of the Philippine Navy.

On the long voyage home, our divers had the chance to enjoy some well earned liberty in Hong Kong and Guam. A few days out of Pearl Harbor, we received the news that we would be deploying in a few short months to the Ulithi Atoll in the Southern Pacific to defuel the Ex USS MISSISSINEWA which was sunk there in 1944 with over 2 million gallons of oil remaining onboard. Just another day for a SALVOR diver!

LT Paul Shoning was commissioned through the US Naval Academy in 1998, and has just completed a tour as the Operations Officer onboard USS SALVOR. This month he is transferring to Eglin AFB to attend EOD school.

EM1 (DSW) Rob Taylor conducts bilateral dive training with the Royal Thai Navy Divers.

PRIME VENDOR - LIFESAVING

By: Ralph Lund

For the past four years, the Defense Supply Center Philadelphia's Marine Lifesaving and Diving Prime Vendor Program has been providing equipment and service to military diving commands and federal activities. It has been our duty and pleasure as a Department of Defense activity to work with such a diverse group of personnel that perform essential and critical missions for the United States of America.

The program is available to all military and federal activities throughout the world. Our program supports mobile diving and salvage, rescue, ships husbandry, special warfare, explosive ordnance disposal, underwater construction, port security and other related missions.

The Prime Vendor program is organized into five regions. To simplify this, if you are located on the East Coast, Gulf Coast, Europe or South America contact Amron, Mar-Vel, or Atlantic Diving. If you are located on the West Coast, Alaska, Hawaii, Guam, Japan or Korea contact Amron, Mar-Vel or Aqua Tech. Here are the points of contact for each prime vendor:

- Amron International Diving Supply, 759 West Fourth Avenue, Escondido CA 92025. (877) 462-6700 www.amronintl.com
- Mar-Vel Underwater Equipment, Inc., 7100 Airport Highway, Pennsauken NY 08109. (800) 325-5711 www.mar-vel.com
- Atlantic Diving Supply Inc., 1439 N Great Neck Rd Suite 202, Virginia Beach VA 23454 (800) 948-9433 www.atlanticdivingsupply.com
- Aqua Tech Dive Center, 1800 Logan Avenue, San Diego CA 92113 (619) 237-1800 www.divecenter.com

How does the program work and what makes DSCP's prime vendor contracts attractive and easy to use? Just contact a prime vendor or DSCP and you will get registered on the program – it's that easy.

Online Ordering / Web Sites

As part of a contractual obligation, all prime vendors must maintain a Web-based online ordering system that is linked to the DOD supply system. The web sites are secure ordering sites and no order shall be charged to a customer if unwarranted. These online ordering sites include an electronic catalog with various search methods, item descriptions and technical data in a user-friendly format. It should be noted that all prime vendors would always accept phone and fax orders.

Brand Name Preferences

The Prime Vendors carry the products of virtually every manufacturer including Aqua Lung, Typhoon, Poseidon, Diving Systems Intl., Vikings, DUI, Dacor, Interspiro, Bauer, Circle Seal, Gates, Whites, Casio, ScubaPro, Mares, and Scott.

24-Hour Customer Support

The Prime Vendors are on call 24-hours a day, 365 days a year. Each Prime Vendor has a call system that will rely messages to assigned personnel during off-business hours.

Rapid Delivery Times

- The contract allows 30 days for routine delivery, 7 days for urgent delivery and 24 hours for emergency delivery.
- DSCP Customer Liaison Specialist Assigned to each Diving Command.
- A Defense Supply Center Philadelphia Customer Liaison Specialist is assigned to each customer.

Conclusion

The Defense Supply Center Philadelphia is a combat support agency with the War Fighter as our main concern. We are actively engaged in understanding your requirements and assisting to ensuring your readiness. For more information, please contact Ralph Lund or Abie Fuller at (215) 737-4154, diving@dscp.dla.mil or http://www.dscp.dla.mil/gi/general/mardiv.htm

Our goal is to provide the Right Item @ the Right Time in the Right Place for the Right Price!

Ralph Lund is the Contracting Officer of the Marine Lifesaving and Diving Prime Vendor Program at the Defense Supply Center Philadelphia. He is a 22-year DOD employee and all service has been in the Acquisition Field. Ralph currently resides outside of Philadelphia in Oreland PA.

PMS Corner

"Service to the Fleet"

TFBR Submission: Submit electronic technical feedback reports using https://www.ftsc.navy.mil and following directions:

- Go to: Command Programs
- Click: PMS
- Scroll down to: Request for Services
- Click: Submit Electronic Technical Feedback Report (ETFBR)
- Fill out form.

MIP Series 5921/5971/H-012 are to be submitted to Fleet Technical Support Center Pacific (FTSCPAC). MIP Series EOD- are to be submitted to Fleet Technical Support Center Atlantic.

Force Revision 1-03: Anticipated receipt is March 03. Review command/Workcenter LOEP against actual configurations and submit TFBR for LOEP deletions for equipment/systems no longer carried.

Luxfer announces trade-in program for 6351-alloy scuba tanks in the United States:
Luxfer Gas Cylinders announced a new scuba tank trade-in program to enable owners of older Luxfer scuba tanks manufactured in the U.S. from 6351 aluminum alloy to trade in their tanks and receive credit toward the purchase of new scuba tanks made from Luxfer's proven, proprietary 6061 alloy. Luxfer will implement the simple four-step program outlined below on January 1, 2003. The program will end on December 31, 2003. *This is a limited one-year offer!*

1. To determine whether your Luxfer scuba tank is made from 6351 aluminum alloy, check the original hydrostatic test date (the earliest date) stamped on the crown. (Look for a month/year combination, such as 3/75.) If the stamped year is 1972 through 1987, the tank is made from 6351 alloy. A limited number of Luxfer scuba tanks were also made from 6351 alloy during the first half of 1988. If you have a 1988 tank with an original hydrostatic test date of 6/88 or earlier, Luxfer will assume that it is a 6351-alloy tank and issue an RG number. Tanks with an original hydrostatic test date of 7/88 or later are made from 6061 alloy and are not eligible for the trade-in program.

2. Call the Luxfer Customer Service Department toll-free (1-800-764-0366) and report the number of 6351-alloy tanks to be exchanged. A Luxfer customer service representative will ask you for the model number, serial number and original hydrostatic test date for each tank, as well as your return mailing information. The representative will then issue you a returned goods (RG) authorization number and tell you how to ship tanks to Luxfer in order to receive a special $50 credit voucher for each tank.

3. Send your 6351-alloy scuba tanks directly to Luxfer's plants in Graham, North Carolina, or Riverside, California (whichever is closer).

4. Luxfer will mail you a $50 voucher for each tank. You may redeem this voucher toward the purchase of new Luxfer 6061-alloy scuba tanks at any participating dive shop or retail store.

Points of contact:
Mr. Kerry Duffy/ISEA 059 Comm: 850-230-3162, DSN 436-3162 or email: duffykp@nedu.navsea.navy.mil.

Steve Smith BMCM(MDV), NAVSEA 00C36, comm: (202) 781-0960, DSN: 326-0960, or email: smithss@navsea.navy.mil

Technical questions, logistics problems, supply requests, personnel issue? Call or contact ANCHOR DESK 1-877-4-1-TOUCH or www.AnchorDesk.navy.mil.

Standing-by, Ready to Serve...Anywhere, Anytime

By: Tim W. Janaitis

Inhale deeply, hold that breath, savor it, then exhale slowly. Notice a feeling of total relaxation? Appreciate it.

If the search and recovery operations tempo for 2003 is a repeat of 2002, the men and women of NAVSEA 00C2, Salvage Operations/Ocean Engineering will have few opportunities for such simple pleasures.

NAVSEA 00C maintains the Navy's and the nation's comprehensive technical capability to search, locate, and recover objects of interest lost in waters ranging in depth from a few feet to 20,000 feet. The diverse inventory of equipment includes three different side scan sonar systems; two towed pinger locator systems, five Remotely Operated Vehicles (ROVs) of various levels of sophistication; assorted underwater recovery tools, surface and sub-sea navigation/positioning systems, satellite communication systems; as well as data processing, management, and presentation capabilities. This search and recovery "kit" is continually maintained in Ready for Issue status in Landover, Maryland, close to multiple modes of international transportation. The equipment is designed to be as self–contained as possible, air transportable, and capable of being quickly deployed aboard vessels of opportunity anywhere in the world.

The Navy's global, rapid response, search and recovery capability was thoroughly tested and, again, successfully demonstrated on eleven different projects in 2002. In the Spring months, the activity was particularly intense with search/recovery teams concurrently mobilized to the Atlantic Ocean, Western Pacific, and Mediterranean Sea. In the Mediterranean, two back-to-back search and recovery operations were successfully performed. Every one of SUPSALV's search and recovery assets as well as two commercial ROVs were used to support operations. The Navy's side scan sonar systems, Centurion, SWISS, and Orion, and pinger locator systems TPL-20 and TPL-30 supported search/location projects while NAVSEA 00C's ROVs VideoRay, MR-2, Deep Drone, Magnum, and CURV III performed object recovery, inspection, and documentation tasks. To provide a cost effective, rapid response, two commercial ROVs, Remora 6000 systems, were also called upon to perform object recoveries when the Navy's equipment was otherwise engaged.

CH-46 SEA KNIGHT being salvaged off of the coast of Norfolk, Virginia, in the spring of 2002.

Last year's projects were as diverse as the equipment suites selectively tailored to perform them. Over the year, three helicopters, four aircraft, one weapon, and one 45-ton anchor with 14 shots of chain attached were found and recovered. NAVSEA ocean assets also assisted in acoustically imaging a sunken fishing vessel in the Gulf of Mexico, and in providing broadcast quality video documentation during the summer's joint Navy/NOAA USS MONITOR turret recovery. In 2002, NAVSEA 00C conducted

(Standing-by.....continued on page 13)

ROV CURV III being loaded over side. CURV III can dive to a depth of 6,000 meters.

(Standing By.....continued from page 12)

F-15 being salvaged in the Gulf of Mexico during the summer of 2002.

projects on behalf of the Army, Air Force, NOAA, and Coast Guard, in addition to Navy air and submarine components.

The equipment needed to find and retrieve items from the deep ocean is diverse and complex, so it is with significant pride that the capability, often and primarily, serves to save lives. 00C's recovery of a F-14B from 10,000 feet of seawater in the Mediterranean Sea this past June is a case in point. The nose wheel of the F-14B aircraft appeared to fail during catapult launch. On-site examination of the subsequently recovered wheel assembly resulted in the immediate grounding of F-14 carrier squadrons until effective remedies could be affected. The speed with which the F-14B was located, recovered, and examined allowed fixes to be quickly recommended and implemented. As a result, the F-14 squadrons expeditiously and safely returned to their carrier flight duties.

The successful and cost effective completion of an emergent search/recovery project relies on 00C2's ability to quickly evaluate search and recovery needs in terms of required expertise, personnel, and equipment. The ultimate project approach is predicated on an accurate assessment of the loss data, and decisions involving an appropriate technical response. The latter task incorporates decisions on the kind, availability, and location of needed expertise and equipment, including that residing with other Navy elements. Cooperation and coordination of personnel and equipment with other Navy components has resulted in cost effective solutions that otherwise could not be realized.

This past year, NAVSEA 00C has taken full advantage of the capabilities and assets of the Navy's Mobile Diving and Salvage Units, the Emergency Ship Salvage Material System, local contractors near the project scene, and those of its prime search and recovery contractor, Phoenix International, Inc. in support of its operations.

With the ability to address emergent requests for search and recovery operations, the NAVSEA 00C2 team stands ready to respond anywhere in the world, at any time, every time. Given this responsibility, when the moment presents itself, 00C2 takes that deep breath.

Tim Janaitis is the Business Development Director at Phoenix International. Phoenix is the contractor responsible for operation and maintenance of the Navy's salvage remote operated vehicles.

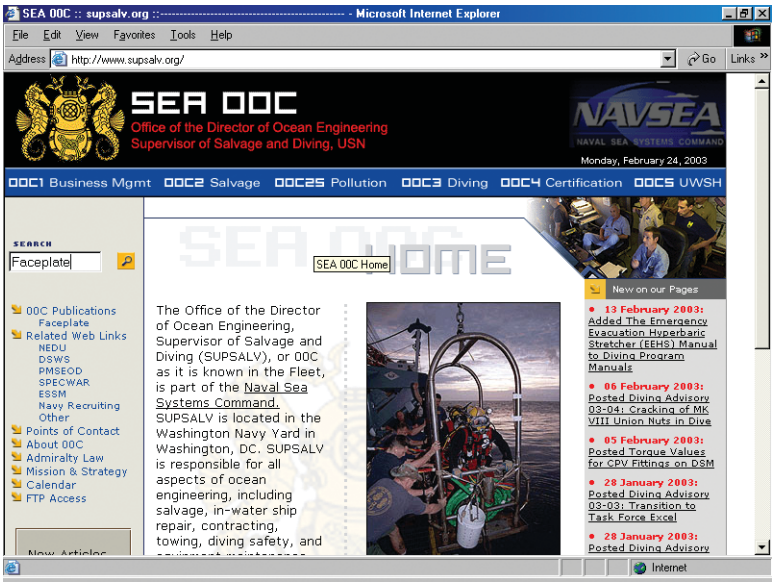
F-14 TOMCAT being salvaged in Medterranian Ocean, spring of 2002.

OOC Website Update

By: Mac Alnakari

The supsalv.org website team has been working diligently to facilitate the online registration process of conferences and events. Users can find out specific details about time and place of events, and register for them, all through the supsalv.org website. In addition, users in some cases have the ability to participate in conferences even before attending. For the upcoming MDV/CWO conference, users have the option to initiate new discussion items and review existing ones on-line.

Aside from conference pages, several other additions and corrections have been made to keep the site up-to-date. Keep an eye on the "What's New" sections of the website for all the latest!



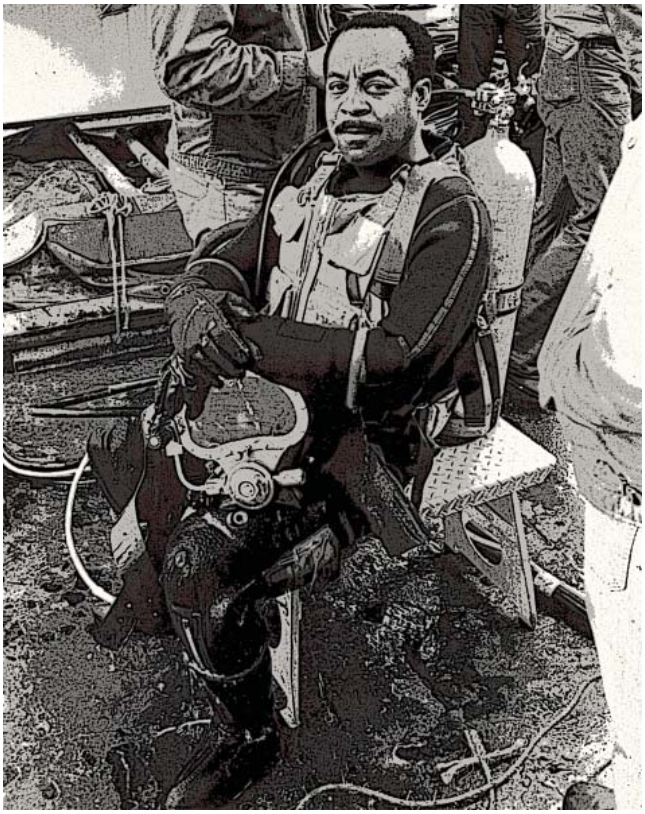
Most recent conferences:
- ED Diver Conference, Dec 11 2002
- Cofferdam Workshop, Jan 28-29 2003

Upcoming conference:
- MDV/CWO conference, May 14-16 2003

JAKE'S CORNER

By: Scott Lassiter

The Old Master



MDV JJ Fenwick (U.S. Navy retired).

I cannot remember how many times I've read The Old Master in *Faceplate*. Never in my wildest dreams did I think that I would one day write it myself. I consider this to be one of my last official duties. As I look back over my 37 years in the diving community, I think of all the changes that have occurred. I remember when the old MK V MOD 0 and MOD 1 (GAS), Jack Brown, and SCUBA were the only shows in town. There was other equipment still in the design mode but at that time we regarded that equipment to be far down the road. The most modern systems that we had were SEALABS I and II and the Advanced Diving System (SDS-450). Our idea of safety was primitive compared to the safety requirements of today. Although safety was never disregarded it was not like today where we are pro-active about it. Fine example are the PMS system, System Certification Surveys, and the Safety Center inspections that are in place. There are memories of the various diving assets available during those times such as the old ARS, ASR, AS, and AD along with various small boats and diving tenders. Those were the days when you walked aboard a new diving command the first thing on your list of things to do was to learn the system. (No two systems were ever alike).

As we progressed into the early 70's, the Navy began to design and build new systems like the FADS I, MK 1 MOD 0 Deep Dive System and the ATS 1 class salvage ships. During that time I participated in the development of the Saturation Diving tables at the Experimental Diving Unit in the Washington Navy Yard. This gave me the opportunity not only to learn first hand about saturation diving but also provided the opportunity to learn about the basic components of a saturation dive system. After spending a number of years on board the USS HOIST (ARS 40), I was fortunate to become a member of the pre-commissioning crew of the USS BEAUFORT (ATS 2). This opened up a whole new world of diving and salvage for me. When I think back about the capabilities of that ship I am still amazed. As my career progressed I was assigned to Harbor Clearance Unit ONE. Being a member of the ACU 1 dive team afforded me the opportunity to put to use all the experience I had acquired over the years. In 1975 I accomplished a dream I had ever since I joined the diving Navy, I became a U. S. Navy Master Diver. During that time I was assigned the task of de-commissioning the SDS 450, which resulted in an abundance of Air System parts. The majority of these parts were Level One in nature. So we requested and received permission to design and build the first Flyaway Mixed Gas Diving System. This experience helped me to really understand the System Certification process.

I often look back at all the changes in the Diving Navy that I have witnessed over the years. Today most of the diving systems that are in use by the Navy are the standard Lightweight Dive System (LWDS), Transportable Recompression Chamber System (TRCS), Fly-away Recompression Chamber (FARCC), Diving System Module (DSM), Fly Away Dive System (FADS III) Air and Mixed Gas, and the Standard Navy Double Lock (SNDL) Recompression Chamber to name a few. Not only are these systems standard in design but, they are supported by the state-of–the-art Operation and Maintenance Manuals which contain not only the proper maintenance instructions but also the operating and emergency procedures to ensure that all systems are being operated the same. The philosophy used today and the equipment that has been developed from that philosophy are leaps and bounds from when I started diving.

In closing, I guess I want to say thank you for all the hard work you have done over the years. This was truly reflected last summer when I stood on deck of the Manson Gulf barge WOTAN off Cape Hatteras, NC during the USS MONITOR Expedition 2002 and watched Navy Saturation Divers working side by side with the Navy Conventional Divers. That was a sight that I never thought I would see. That made me realize just how far we have advanced in the Diving Navy. Keep up the good work and dive safe.

FROM THE SUPERVISOR OF DIVING . . .

As I write this, I am sitting in East Texas with CAPT Wilkins, CWO Riendeau and Mobile Diving and Salvage Unit Two Det Bravo, Master Diver Mallet, Master Diver Smith, MDSU TWO Reservists and more side scan sonars, multibeam echosounders and REMUS's than you can count. We are involved in locating and recovering Columbia Shuttle debris that is in an underwater forest at depths to over 100 feet. I'm not sure if sitting on a limb in a tree and decompressing will require writing a new chapter to the dive manual or not. CWO Riendeau will be writing an article for the next issue of FACEPLATE about the adventurous diving that is occurring.

Captain Chris Murray and MDSU TWO DET BRAVO CWO Riendeau overseeing operations in Toledo Bend Reservoir, Texas. Photo by Donald Fegley of ROH Inc.

EEHS

We now have our first certified Emergency Evacuation Hyperbaric Stretchers. Both units will be employed in the Gulf to enhance safety to the diver. These are to be used to enhance the safety to the diver, but not replace our current dive manual requirements. All requirements for chambers still remain in-place. However, there are times where the dive manual allows you to be diving in a remote location without the benefit of a nearby chamber. The EEHS can fill that void in a situation such as the occurrence of an AGE in shallow water and you need to stabilize the diver immediately.

Security Swims

Some of the most dangerous diving we do is underneath vessels. As we look at homeland security and overseas security, there will most likely be an increase in diving under vessels. We need to be extremely careful and not let complacency set in as we do more and more of these swims. Do not let this become too routine of an evolution.

MDV/CWO Conference

A reminder that the MDV/CWO conference will be held in Panama City at the dive school on 14-16 May. There are a lot of significant issues that need to be addressed. One of the most important issues to effect diving in years is Task Force Excel and what it is going to mean to the diving community. Plan on attending the conference now.

Farewell and Following Seas

MDV Chuck Young.

MDV Chuck Young retired aboard the USS CONSTITUTION on 28 March 2003. MDV Young has been the main brace at NAVSEA 00C3 for almost four years. His vast knowledge and experience as a saturation diver were put to the test in preparing for the USS MONITOR. Due to his drive and determination, we were successful in leasing a civilian saturation diving system and then putting it to work on the USS MONITOR. MDV and I have spent the last couple of summers together in a saturation diving chamber. Without the saturation diving system, the USS MONITOR's engine, turret and cannons would never have been recovered. HOO YAH Chuck. Best of luck in all your future endeavors.

Captain Hank Schwartz, DMO.

CAPT Schwartz retired at the Navy Yard on 21 March 2003 after 25 plus years in the Navy. CAPT Schwartz retires after serving his last tour of duty at NAVSEA 00C as the Program Director, Biomedical Research Program. I'll miss gentleman Hank Schwartz and his professionalism and easygoing disposition. Thanks Hank for all the great years and especially the help and assistance you gave me with the Bio-medical Research Program and as a Saturation Diving Medical Officer on the USS MONITOR. You can visit Hank in his new digs in Hawaii.

MDV/CWO Conference

The MDV/CWO Conference is tentatively scheduled for 14-16 May 2003 and will be hosted by the Naval Diving and Salvage Training Center. The conference provides an opportunity for senior enlisted and Chief Warrant Officer leadership throughout the various diving commands to collectively review and discuss current and future community issues. A diving advisory will be released later this year providing more details. To register or submit point papers go to http://www.supsalv.org, cursor to "00C3 Diving" select "Conferences" under pull-down menu.

MDV Reunion

The MDV Reunion will be held on Saturday, 17 May 2003, at the Coastal Systems Station Marina, Panama City, FL starting at 1000. The point of contact for the reunion is ENCM/MDV(ret) Joe Gray at (850) 230-9217.