FACEPLATE

The Official Newsletter for the Divers and Salvors of the United States Navy

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In This Issue...

FACEPLATE

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Editorial Staff

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Supervisor of Salvage and Diving

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NDCM (MDV) John Coffelt, USN
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In This Issue

Cover

SAT FADS bell going over the side during manned diving operations.

SUPSALV SENDS...CAPT Mark Matthews

As I write this article, the MK V monument is being unveiled in Panama City. My apologies for not attending the ceremony, but I am pleased that the project is complete. Finally, a monument to symbolize the gratitude owed to all of the diving men and women who have served this country. I extend my thanks to all those who supported the herculean effort to bring this vision to reality. Hoo Yah!

This issue, I wanted to extend my thanks to the Divers out there turning wrenches on the ships and submarines in the Fleet. I recently had the opportunity to meet with Divers from the Naval Submarine Support Facility in New London. Many were new two chucks in their first diving tour. I asked how many of them joined the Navy to turn wrenches on submarines in Groton – I don't think a single hand went up. This doesn't surprise me at all; in fact, it was the answer that I expected. But, let me give praise to where praise is due.

Ship repair and underwater ship husbandry is not as glamorous as launching and recovering SEAL delivery vehicles from a dry deck shelter or pulling a stranded fishing vessel out of the mud and muck in the far east (okay, we may have a twisted sense of glamour), but it is a critical aspect of our everyday business. Conducting repairs while the ship is waterborne can deliver between a seven to one and a twenty to one return on our efforts – and this assumes that a drydock is empty and ready to receive the afflicted vessel immediately when the repairs are needed. In 2011, we conducted 49 in-water repairs on submarines, avoiding 32 emergent drydockings. Similarly, for the surface fleet, 59 repairs avoided 41 drydockings. Underwater ship husbandry, while adding to the difficulty of a repair, is both faster and cheaper than docking a ship or submarine to do the work dry. The money saved through your efforts is astounding.

You, the Divers in the repair lockers scattered throughout the globe, are a critical enabler for our Fleet. Your efforts allow our ships and submarines to remain at sea, ready for tasking, and you do so in a very cost-effective manner. Your pride in your work shows. Hoo Yah!

As a separate note, the Saturation Fly Away Diving System (SAT FADS) is nearing system certification. Significant milestones have been achieved since the last Faceplate issue. Under the leadership of retired Master Diver Paul McMurtrie, the SAT FADS team has completed manned testing at sea. In May, ND1 Graves, ND1 Trevallion, NDCS Chase, ND1 Post, HMC Faasen, and NDC Diego opened the hatch and dropped down into the deep blue, exiting the diving bell at 1,000 fsw. This is the first time since the mid-1970s that we have conducted an open ocean saturation dive to that depth! Hats off to the Divers and the team that got them there!

So, the obvious question is, "Now what?" Those of us stuck within the beltway instead of being on the waterfront are heavily engaged in the budgeting process, predicting the requirements of fiscal year 2015 and prioritizing our resources ($$) against them. Determining where to field SAT FADS and how to work saturation diving back into the career progression of Navy Divers is one of the key focuses of my budgeting efforts. More to follow…

Keep diving!

SAT FADS Dive Bell ascending thru the water Column after successful completion of the first 1000 fsw manned dive.

M.V. CECILIA SALVAGE OPERATIONS

By: NDCM(DSW/SW) Jon Klukas

When the decision to transition our ARS 51 class ships to the Military Sealift Command (MSC) was made, I must admit that I was a bit of a skeptic. After serving on USS BEAUFORT (ATS 2) and USS SALVOR (ARS 52), I had a hard time believing that a small crew of Merchant Mariners and a contingent of Divers from one of the Mobile Diving and Salvage Units would be able to do the work that a crew of 100+ could.

After a tour as a Master Diver at MDSU ONE, where I was lucky enough to deploy on both USNS SALVOR and USNS SAFEGUARD, I am now a believer. The salvage triad of MDSU, MSC, and NAVSEA doesn't just work, it works very well. A recent example of the salvage triad in action is the salvage of the Motor Vessel Cecilia in Colonia, Yap. USNS SAFEGUARD and embarked MDSU ONE Company 1-7, coupled with engineering and mechanic support from NAVSEA and ESSM (GPC), teamed up to conduct nine days of salvage operations on the wrecked vessel.

MV Cecilia ran aground in 1997 and was then washed onto the shore adjacent to the commercial pier in Colonia, Yap during a typhoon. The 167-foot vessel had been recently fueled and was suspected of having over 2,000 gallons of diesel fuel on board. The potential environmental impact of the remaining fuel coupled with the fact that the wreck was extremely close to the island's only commercial pier was cause for great concern. Having no local salvage assets and with the owners abandoning the vessel, the Government of The Federated States of Micronesia, Yap State asked the United States for help to remove the abandoned vessel. The process to gain approval to conduct salvage operations took more than four years. In December of 2011, the Task Order from the United States Pacific Command was issued. When the TASKORD made its way through the chain of command to Commander, Task Force 73, USNS SAFEGUARD and MDSU ONE Company 1-7 were chosen to conduct the salvage operations.

SAFEGUARD and Company 1-7 arrived on January 20th and wasted no time going to work. Company 1-7, led by CWO3 Davin Strang and MDV John Stegall, quickly mobilized hydraulic pumping systems, patching materials, a MK III LWDS, and a myriad of other equipment needed to do the job. Given the shallow depth of the water around the M.V. CECILIA, all of the diving was conducted using SAFEGUARD's

35-foot workboat and RHIB. In the first three days of diving operations, Company 1-7 installed 19 patches and 34 plugs or wedges. They also ran operational pumping tests of the two-and four-inch hydraulic pumps.

Additional assistance arrived on Sunday, January 22nd when Vince Jarecki (NAVSEA), Cecil Harris (GPC), and LCDR Chris Williams (SRF Yokosuka) hit the ground. Mr. Jarecki and LCDR Williams provided engineering and POSSE support while Cecil Harris provided his mechanical and salvage expertise to the job. In addition, Captain Edward Dickerson, Chief Engineer Scotty Robinson and the crew of SAFEGUARD played a huge role by providing personnel, equipment, and expertise throughout the mission.

By the end of day seven, the team had installed 94 plugs and 53 patches on the wreck. They also cut off the rudders, propellers, bow ramp, and starboard gunnel. After several test pumps to confirm that all of the cofferdams were holding, the team waited for low tide to commence dewatering the wreck. Pumping operations utilized ESSM's four-inch and two-inch hydraulic pumps as well as the three-inch trash pumps. The wreck was raised evenly and without incident.

After raising the wreck, the fuel tanks were verified to be free of diesel and all patches and plugs were re-checked. The wreck was then transferred to local tugs and relocated in a position which gave local scrap companies working access to cut the wreck apart. While 24 days were allotted for the job, Company 1-7 finished in just nine days. During the nine days Company 1-7 completed 21 dives for a total bottom time of 15.5 hours and logged over 1,624 man-hours on the salvage job.

In addition to the salvage operations, Captain Dickerson and his crew hosted the Governor of Yap, numerous Senators and a myriad of other cabinet ministers throughout their port visit. SAFEGUARD and Company 1-7 also provided tours for over 450 Yapese students. The combination of highly successful salvage operations and the hosting of local officials and students went a long way in furthering U.S. and Federated States of Micronesia relations.

The success of this operation is a testament to the highly effective relationship between MSC, MDSU, and NAVSEA, once again proving that the salvage triad not only works, but works very well. The salvage of MV CECILIA also proves that our new generation of Deep Sea Divers, like all of those before them, still have that Hoo Yah, Can-Do attitude.

MDV Klukas is currently serving at COMLOG WESTPAC, Singapore.

Title cover photo: MDSU-ONE, Co 1-7 installed 94 plugs and 53 patches on the wreck; Top left and center: ND2 Smith cuts the hinges off the bow ramp of Cecelia; Bottom left: CAPT Ed Dickerson, CWO3 Davin Strang, and MDV John Stegall host Yapese. Photos by MDV Klukas

Aquarius Habitat and Navy Diving

By: LT Dustin Cunningham

For the last quarter century, the National Oceanic and Atmospheric Administration (NOAA), in conjunction with the University of North Carolina-Wilmington (UNCW), have operated the Aquarius Undersea Laboratory through the National Undersea Research Program (NURP). The Aquarius Laboratory, the world's only operational submerged habitat, is located 3.5 miles of the coast of Key Largo, FL in the Florida Keys National Marine Sanctuary. Aquarius sits at Conch Reef, in 66 feet of water, and has been the pinnacle of underwater research, allowing scientists to perform marine ecosystem studies and experiments previously impossible under regular diving limits. Undersea equipment testing and coral observations have also been conducted, all benefitting NOAA's research to help assess the longevity of coral reefs and their sustainment of sub ocean ecosystems.

A U.S. Navy Diver with SRDD uses the MK 16 during a saturation excursion. The inclusion of Navy diving with Aquarius operations helped introduce surface supplied diving to the habitat and provide various UBA/rebreather testing. (Photo courtesy of Roger Garcia, UNC-W)

In addition to advancing scientific research, Aquarius has become a major component of training operations for various government agencies, to including the United States Navy and National Aeronautics and Space Administration (NASA). The joint partnership with the U.S. Navy begin in early 2003, when the Supervisor of Salvage and Supervisor of Diving, approached Aquarius staff to explore the possibilities of using the Aquarius to provide in-water saturation diving training; a capability the Navy no longer supported. By the end of 2003, the partnership allowed for the training of one of the U.S. Navy's last saturation diving classes, and set the stage for many years of joint operations. Between 2004 and 2009, Aquarius hosted over 60 Navy Divers on a dozen 4-day saturation missions inside the seafloor habitat, the first since the Navy's Sealab program in the 1960's. In 2006 the Specialized Research Diving Detachment (SRDD) began conducting saturation missions utilizing Underwater Breathing Apparatus (UBA), or rebreathers, to continue saturation analog training and gain valuable Diver experience with emerging technologies.

During these Navy training missions, the integrated use of the Navy's MK 21 diving systems were a first for Aquarius, allowing Divers to leave the habitat's wetporch for excursions simulating saturation bell procedures. This unique training ability has proven to be irreplaceable, leading the way from the now decommissioned Pigeon class submarine rescue vehicles to the Navy's new Saturation Fly-Away Diving System (SAT FADS). "Aquarius served as an important bridge that allowed the Navy to maintain valuable in water saturation experience while we developed and certified the SAT FADS system," says Paul McMurtrie, SAT FADS Program Manager and retired Navy Master Diver. Aside from saturation opportunities, Aquarius has allowed for Divers from Mobile Diving and Salvage Unit (MDSU) 2 to conduct training and perform basic overhaul and construction during numerous Aquarius missions. After Hurricane Rita in 2005, Divers from Underwater Construction Teams (UCT) ONE and TWO, along with divers from MDSU TWO were instrumental in stabilizing Aquarius prior to the arrival of Hurricane Wilma. Furthermore, Navy underwater repair techniques have enabled numerous valves and components to be replaced in-situ and retain American Bureau of Shipping (ABS) certification without being removed from the sea floor.

LT Dustin Cunningham (00C2OA) and Aquarius Operations Director, Saul Rosser conduct Aquarius system alignment prior to NASA's NEEMO 16 training evolution. Photo by LCDR Chris Addington (00C2OB).

The U.S. Navy continues to play an active role in Aquarius missions today, providing Diving Medical Officer (DMO) support during NASA Extreme Environment Mission Operations (NEEMO). The Aquarius and NEEMO cooperation provides NASA with an analog training environment that simulates the International Space Station (ISS) and moon/Mars exploration missions with realism not available in any other training mediums. Astronaut core competencies of space walking, surface exploration, and tool operation/procedures are practiced during these 3-18 day missions.

Unfortunately, the Aquarius is slated to be closed as part of the termination of NOAA's Undersea Research Program in 2013. Efforts are underway to enable the operation to continue under other funding support mechanisms. More information regarding the efforts can be found at **http://aquariusreefbase.org/ http://aquarius.uncw.edu/ http://oceanexplorer.noaa.gov/technology/diving/aquarius/aquarius.html**

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LT Dustin Cunningham is the Assistant for Salvage at NAVSEA 00C

Cooperation Abroad

CEC (SCW/DV) Adam Winters

SEABEES from Underwater Construction Team Two (UCT TWO), based in Port Hueneme, California, deployed to Sattahip, Thailand on May 2nd as part of their 2012 deployment cycle in support of the 18th annual Cooperation Afloat Readiness and Training (CARAT) Exercise. Other participating units included; USS GERMANTOWN (LSD 42), USS LASSEN (DDG 82), USCGC WAESCHE (WMSL-751), USNS WASHINGTON CHAMBERS (T-AKE 11), USNS SAFEGUARD (T-ARS 50), P-3C Orion and SH-60 Seahawk aircraft, Naval Mobile Construction Battalion Forty (NMCB 40), Navy Riverine Squadron One, the U.S. 7th Fleet band, Marines from Company F, 2nd Battalion, 3rd Marine Regiment and III Marine Expeditionary Force. Exercise CARAT is a Commander Task Force 73 sponsored series of bilateral Navy to Navy Exercises focusing on improving interoperability and increasing regional stability in Southeast Asia.

Arriving via Naval Air Liaison with 10 tons of equipment, including: SCUBA diving gear, underwater hydraulic tools, two inflatable zodiac boats, hydrographic equipment, side scan sonar, and multiple pier inspection tools, the 16 members from UCT TWO and Construction Diving Detachment (CDD) Bravo hit the ground running to participate in Exercise CARAT. CDD Bravo was tasked to complete a detailed level I and II inspection of Thong Prong Pier in Sattahip and to train side-by-side with the Royal Thai Navy (RTN) Underwater Construction Divers on side scan sonar, hydrographic survey, and underwater searching techniques to identify navigation hazards during Humanitarian Assistance/Disaster Recovery Subject Matter Expert Exchange (HA/DR SMEE).

During the SMEE, UCT TWO personnel provided training on the setup and operation of the side scan sonar and hydrographic survey equipment. Upon completion of the training, UCT TWO and RTN Divers worked together to collect data for both a side scan and hydrographic survey of Had Yao Beach. The survey was conducted one day prior to an amphibious landing on Had Yao Beach by U.S. and Tai Marine Expeditionary Forces.

CM1 (SCW/DV) James Richardson conducting ultrasonic thickness measurements to establish remaining thickness of steel caissons.

During another element of the SMEE exchange UCT TWO Divers and RTN Divers dove side by side to locate a simulated obstruction for removal in a disaster recovery situation. During the dive, Construction Electrician Chief (SCW / MDV) Terence Juergens conducted a diving casualty drill on the dive team. A Diver simulated being unconscious after surfacing from a dive due to Arterial Gas Embolism (AGE), an extremely dangerous diving related illness. UCT TWO and RTN Divers worked together to recover the casualty into the dive boat and safely transport the diver to shore. "This is the third Mil to Mil exercise we have done this deployment, and each time we work with foreign militaries I'm amazed at how much we can learn from one another.

SW2 (SCW/DV) Metro Sayre and CM2 (SCW/DV) Aaron Heldreth prepare to make a dive with two Royal Thailand Navy Seabee Divers.

During the drill everyone did what they needed to do, it didn't matter if they were UCT or RTN. It is always a great experience working with other countries," said Construction Mechanic First Class (SCW/DV) James Richardson.

UCT TWO's other tasking was the inspection of Thong Prong Pier located in Sattahip, Thailand. The pier is very important to the local infrastructure and is utilized for off-load of ammunition to

HM1 Eric Ketelsen, CM1(SCW) David Wertz, BU2(SCW/DV) Christopher Farmer, CM2(SCW/DV) Ryan Murphy transporting a patient to shore during a diving emergency drill.

SW2 (SCW/DV) Metro Sayre conducting a level one swim by inspection of Throng Prong Pier.

support Cobra Gold as well as other Thai Military operations. Constructed in 1969 this 40+ year old pier has stood the test of time with little or no maintenance. It has been deemed unsafe for offload of ammunition due to severe damage to the fendering system and severe corrosion of steel caissons. The amount of effort involved in the inspection and data collection was immense. Utilizing SCUBA/DP2 and underwater inspection tools, Divers logged over 24 hours of bottom time to complete a full and detailed inspection. UCT TWO SEABEE Divers spent 3 weeks working on the pier. Their work included data collection, hydrographic surveys, side scan sonar data, and soil penetration tests. "The amount of work that we were tasked with in a relatively short amount of time shows how versatile the UCTs are. We came here to get the job done, and get it done right" said Chief Terence Juergens. "These guys are professionals, you couldn't ask for a better group of SEABEES".

With a maximum depth of 45 feet of sea water, Divers inspected 64 steel caissons that were 16 feet in circumference and heavily encased in marine growth. In perfect conditions this is a daunting task. When faced with a tidal range of over 20 feet and, at times, currents of over 3 knots, Divers had to use their time wisely and work at times of slack tide. UCT Divers inspected specific locations on the caissons, recording ultrasonic and Bathycorrometer measurements. This data is used to detect the remaining thickness and corrosion potential of the steel caissons. Builder Second Class (SCW/DV) Christopher Farmer stated, "Overall I thought it was a great experience. This was the first time I've used destructive testing techniques to get inspection results, it was very challenging. I hope we come back to do the repair work."

The detailed underwater inspection of this pier is crucial to better determine the structural integrity and future repair plans that could be implemented by NAVFAC. This pier is unique in the fact that it serves as the only location to offload ammunition in the area. While this is deemed unsafe for use, the Navy will be forced to use commercial ports in northern Thailand that impose logistical constraints that could hinder future operations.

Construction Electrician Chief (SCW/DV) Adam Winters, Assistant Officer In charge of CDD Bravo was grateful for the hospitality of the RTN Divers and hard work by all parties involved, stating "The pier inspection and Mil to Mil training was a great success thanks to unparalleled cooperation by everyone involved. There was a tremendous amount of knowledge transferred between UCT TWO and the RTN Divers. The quality of work presented by the detachment was outstanding and will help to improve the readiness of the Thai Navy, as well as the Pacific Fleet."

BU2 (SCW/DV) Trevor Buckett provides Bathymetric survey training to Royal Thailand Navy Seabee Divers.

UCT-TWO and Royal Thailand Navy Seabee Divers setting up for hydraulic drilling operations on Throng Prong Pier.

BU2 (SCW/DV) Trevor Buckett provides Side Scan Sonar training to Royal Thailand Navy Seabee Divers.

CEC (SCW/DV) Adam Winters Underwater Construction Team Two, Construction Diving Detachment BRAVO's Assistant Officer in Charge.

All photos by: BU2(SCW/DV) Matthew Dawson, UCT-2

UNITED STATES COAST GUARD COLD WATER ICE DIVERS

By: NDCM (MDV) John Coffelt

The U.S. Coast Guard began conducting ice diving in 1957 when military vessels started steaming through the Northwest Passage. It became clear there were occasions when some poor soul had to get in the water for whatever reason. This responsibility fell on the USCG and U.S. Navy Divers that were or might be stationed on the ship or an Auxiliary/Rescue ship, commonly called an Icebreaker. In June and July of 1965 a Revised Memorandum of Agreement, Supplement No. 2 to the Commandant's Bulletin No. 32-65 was signed by Paul H. Nitze (Secretary of the Navy), Joseph W. Barr (acting Secretary of the Treasury), T. F. Connolly (Assistant CNO Fleet Operations and Readiness), and W. W. Childress (Rear Admiral U.S. Coast Guard Chief, Office of Operations) turning the icebreakers and cold water/ice diving operations over to the USCG.

I was invited to attend the Coast Guard Cold Water Ice Diving (CWID) "C" School Course from 23 January to 4 February as an observer. Having done several ice dives in my career while stationed at Mobile Diving and Salvage Unit Two (MDSU TWO) and hearing it was being hosted by the USCG, I was hesitant and curious. Hesitant because, quite frankly, I knew it would be cold; that usually happens while ice diving (at least it was every time I went). I was also curious since the general perception of the USCG's diving proficiency wasn't exactly what you would call stellar. The point being driven home after the August 17, 2006 CGC Healy diving mishap in which, most regrettably, LT Jessica Hill and BM2 Stephen Dubuque lost their lives while conducting a seemingly routine planned cold water SCUBA dive for 20 minutes at 20 fsw off the port bow of CGC Healy, anchored just off the coast of Alaska. USCG divers pay homage to the lost Diver's memorial located in USCG Base Support Unit (BSU) Seattle (photo below).

When there is a tragedy in military diving there are usually many contributing factors. Without going into the specific details that caused this tragedy I will sum it up by saying assumptions were made concerning the Diver's proficiency to conduct a safe training cold water dive. There was a complacency born from ignorance and a general lack of concern in the USCG Diving Program. The mindset was essentially, "You've been trained at school that should be adequate." Prior to the CGC Healy tragedy, USCG divers typically would attend Dive School, get stationed as a Diver for one or two commands then returned to their designated ratings. In the event diving was required they would be thrust arbitrarily into a diving billet or operation with the expectation the diver was highly trained and "good to go". We all know the motto, "if you don't use it, you lose it."

After the CGC Healy tragedy it was obvious drastic changes were needed in the USCG Diving Program. CG Commandant, Admiral Thad Allen and his then Chief of Staff, Admiral Bob Papp (now Commandant) immediately set in motion plans to develop the USCG CWID course into a "C" school and more importantly (in my humble opinion) develop a USCG Diver career path.

Tasked by Admiral Papp; LT Shawn Deweese , CWO4 Ken Anderson, DCC Chris Keplinger, and MKC Ryan McDougald went to work developing the USCG CWID "C" school curriculum. They spent countless hours poring over Army Field Manuals, the Seabee Arctic Survival Manual, NOAA's Ice Diving Manual, the U.S. Navy Diving Manual, numerous tech manuals and the Authorized for Military Use (AMU) list for any and all cold water techniques and diving equipment. This is a tremendous amount of information – so only the most reasonable, practical techniques in getting to the site, developing the site, conducting the ice diving/cold water operation, and proper personal protective dress were gleaned. The administrative side of the "C" school was ready to be tested near the end of 2008. The first practical application test of all their hard work was in early 2009 using only highly proficient USCG divers in Whittier, AK before moving on to Hidden Lake at Cooper Landing, AK. It needed some tweaking, but it was a success.

Picking up where LT Deweese left off, LT Keith Wilkins stationed at the USCG Navy Diving and Salvage Training Center (NDSTC) Liaison Office come into the picture. Bringing past cold water/ice diving experience from diving with the Boston State Police in 2008, he slid right in to the roles of Liaison Officer and Dive Program Technical Manager. LT Wilkins surrounded himself with an competent group of USCG Divers "hell bent" on making their CWID "C" School one of the most "comprehensive and all-encompassing diving programs" to date. MKC Chuck Sowers, MEC (select) Mike

West and MK1 Adam Prater made up the training team. They came together in 2009 testing the ice diving curriculum in Alaska. There were some tweaks made by the team and in 2010 they were ready to go again. As before, using only known competent USCG Divers, they headed back to Alaska. A few more tweaks and LT Wilkins was ready to present his "C" school curriculum to NDCM(MDV) Mark Leet, the NDSTC Command Master Chief and veteran cold water/ice Diver. The goal being to not only receive approval (a Master Diver's perspective) for the course curriculum but being able to incorporate all branches of diving military service in this. MDV Leet liked the curriculum layout but in his own words told LT Wilkins, "Let me see how you guys are doing the business."

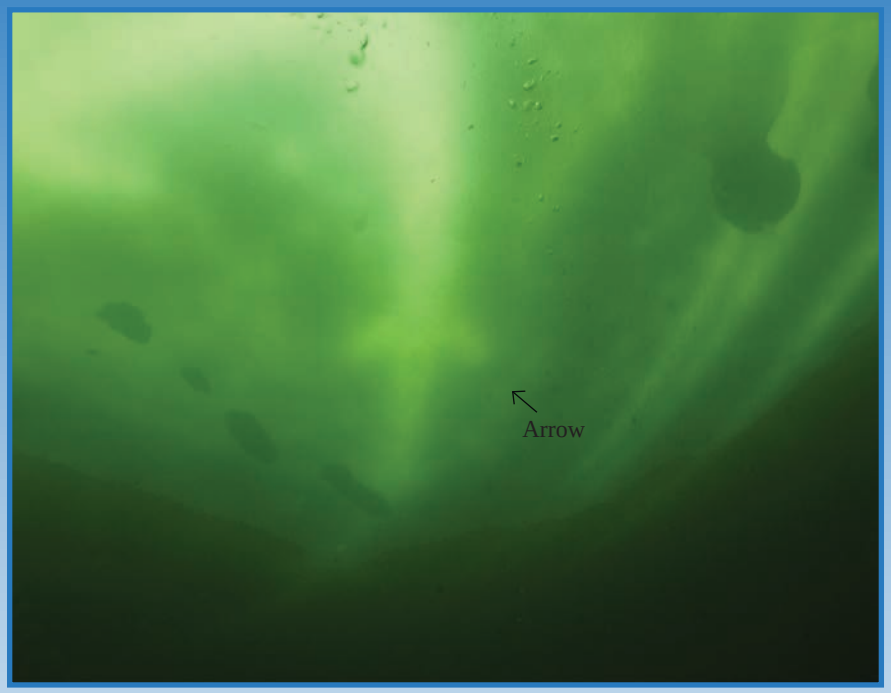
In early 2011, the trained USCG Divers and MDV Leet along with Navy, Army and fleet USCG Divers met in Seattle, WA to initiate the eleven day course. Unfortunately, the USCG Divers had lost their logistics assets at Air Force Base Elmendorf, AK. Upon losing this

the USCG and NOAA generated an MOA allowing the USCG to use the facilities at the NOAA Dive Center Basin in downtown Seattle.This facility provides a 50-foot training water tower, two recompression chambers, a "laydown" room for drying/stowing dive equipment and a classroom. After three days in Seattle conducting CWID introductory curriculum, familiarization and practical application diving, the group headed to Diamond Lake Boy Scout reservation outside of Spokane, WA. They found ice but the thickness and soundness became questionable after a few days, which cut the training short but NDCM(MDV) Leet liked what he saw.

That brings us to 2012. Upon arrival in Seattle, I'm met by LT Wilkins. We head out to meet the group of CWID enrollees. I meet personnel from the Army (SFC(MDV) Weston Cox, SSG Chaise Turner, SSG Paolo Cavenaghi) Coast Guard (LT Keith Wilkins, LT Jason Prairie, LTJG Keith Walton (LT Wilkins' future relief), DCC Christopher Keplinger, MEC (select) Mike West, MK1 Adam Prater, YN1 Lucas Spencer, AET2 Shawn Ketzer, MK2 Manny Severino, BM2 Jeff Esser) and Navy, (NDCM(MDV) Mark Leet, NDC Eric Eberle, NDC Mark Sawyer, ND1 Overton Pierce, ND1 Eric Riggenbach, ND1 Bobbie McClain). Day One takes us to the NOAA Dive Center - Basin downtown Seattle. MEC(select) West teaches the introductory curriculum. It is an all-encompassing, well-rounded, survival and practical course) short and to the point. Day Two brings us back to the same location with MK1 Prater supervising dry-suit familiarization dives (practicing upright-ing yourself if you

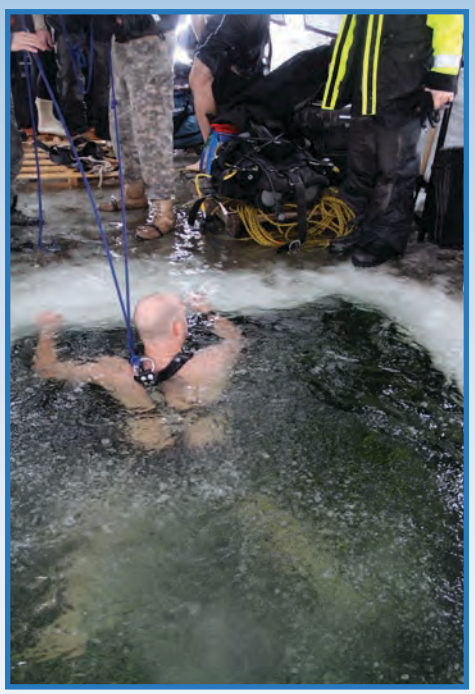
become inverted) as well as ditching the MK 20 and breathing off of the 2nd stage octopus regulator in 38 degree water (*photo left*). In order to conduct these dives a waiver is required for the use of the Ambient Breathing Valve (ABV) (*photo bottom left*). The ABV is a practical idea because the Diver can don the MK-20 hat and not breathe from the regulator reducing the chance of a regulator freeze up. I especially liked the CWID dive rig (*photo above*). It consisted of two independent first-stage APEX regulators on a dual manifold, a MK 20 hat, a TX50 second stage regulator and DIN fittings made the connections. The Buoyancy Compensator (BC) was a HALCYON with a full donut bladder modified with D-rings and DUI weight pouches. With the independent first stage regulators, one post on the manifold was used for inflation of the BC and the MK-20 hat. The other post was used to provide air to the diver's octopus second-stage regulator and the SCUBA console. Communications and tending were provided by OTS COMMROPE. Day Three involves practical application dives at the USCG Base Support Unit (BSU) Seattle; hull surveys, bottom searches and object recoveries. Next phase is to put all of this training to work where it really gets cold.

The following morning we pack up and head for Lac Des Roches (Lake of Rocks) in Lone Butte, Alberta, Canada. It's about 450 miles from Seattle and a long way from a lot of things. The Lac Des Roches resort is named for the perimeter lake it sits next to. It's a 3,705-foot high, thirteen kilometer long, one hundred-sixty foot deep lake (at its deepest) surrounded by splendid tree covered rolling



hills; it is exceptionally beautiful country.

The first phase of this training was for the USCG instructors to demonstrate and lead the enrollees through the lessons taught in the classroom, especially the safety procedures. Day One of training consisted of locating suitable ice for a dive site, getting the primary/emergency holes cut, and setting up the tent. We were blessed with approximately eight inches of nearly blinding snow during this evolution. It was 28 degrees outside without the wind-chill. The water was, and remained 34 degrees with about thirty feet of visibility throughout. The ice was 16 inches thick (*photo top left*); if I would've been paying attention in class I would be able to tell you how much weight that can hold. Once the site was established (*photo bottom left*) we made ten dives with two hours of bottom time at a max depth of thirty feet. The divers reported they could see the wagon wheel that was painstakingly shoveled out by hand (*photo top right*). The wagon wheel is used as a means for lost Divers (detached from the tending line) to find their way back to the hole in the ice they started from. Training was also on emergency evacuation through the secondary hole drilled in the ice and the Divers worked on installing the new and greatly improved ice anchor screws (*photo bottom right*). Day Two started out at 22 degrees. We made four dives for eighty minutes of bottom time at a max depth of thirty feet. The Divers who had not completed the emergency evacuation and ice anchor screw insertion completed those tasks. Once that was complete the enrollees had to break down camp and establish a new site at a totally different location on the lake. Yes, they made the site closer to the dining facility. The tear down and re-establishment of the site was to establish a proof of concept in the training. The training must have paid off because it was completed before it was too dark to work, and the days aren't very long in the winter time up there. Day Three started out at 22 degrees. We completed ten dives with a bottom time of three hours and twelve minutes and a max depth of thirty seven feet. The scenarios for these dives were to locate a submerged object using a circle-search line. The visibility started off at thirty feet and immediately went to zero as soon as the silty bottom was stirred up by the rookies, making the search considerably more difficult. Once the project was located, it was dis-



assembled, sent to the surface, and then re-assembled on the bottom. We did have an actual casualty. We had a buoyancy compensator inflator freeze up due to free flow as soon as the diver surfaced. We fixed the problem; no other issues. Day Four it warmed up to twenty-eight degrees! We conducted six dives with a bottom time of ninety minutes and a max depth of thirty seven feet. We conducted circle-searches and disassembly/assembly of the object again. During that time we had the fortune of a visit from Bridge Lake Elementary School (*photo above*). Some of the children weren't even wearing coats…all I could think was, "they are tougher than me!" The last two dives for the day were diving drills. The first was a rig malfunction and the other was a lost Diver. Both dive supervisors handled them with ease. That concluded the training but before we broke camp, NDC Eberle demonstrated dry-suit appreciation (*photo left*).

Once camp was stowed and ready for tomorrow morning's travel we met in the dining facility and had the customary Moose Milk, which is a concoction that will warm you up on a cold winter's night – trust me. The next morning we were on the road headed down south to Seattle. We took 99 on the way back; this is the most scenic and beautiful country you can imagine with the occasional front-end loader around the bend plowing and clearing snow from the passes as we made our way down through the twisting mountain roads to Vancouver. From there it's basically a hop, skip and a jump to Seattle and that concluded the trip.

There were several lessons learned from this training, the equipment used and the location:

- The nearest chamber was in Vancouver; air rescue was several hours away. There was a discussion with NDCM(MDV) Leet about an ISU-90 design that houses a TRC, overhead-mounted CAOS racks, two or three oxygen "K" bottles, overhead lighting, an air-conditioner/heater, two 110-volt receptacles and a 50-amp RV connection that can all be run with a 3KW generator. As you may know, the bulkheads of the ISU-90 aren't exactly that strong so they were reinforced. This particular portable chamber system would be ideal for an instance like this; highly portable, low profile. Unfortunately, there weren't any available.
- The MK 20 hats being dived were positive-pressure. They should have been demand-mode. Positive-pressure valves on the hats have a tendency to cause the hat to free-flow if bumped, jostled, moved, or even looked at sometimes. In an extremely cold environment that first-stage regulator and hat would be frozen immediately.
- With the dual post manifold design, the inflation hoses for the dry suits could have been a little longer. The lack of length reduced mobility somewhat.
- The weight "quick" dumps on the HALYCON BC were converted to DUI. DUI offered a more versatile and practical dump process.
- There is a product called GLO-TOOB and that should be attached to the Diver.
- The CWID Diver should dive with a double carabiner set called "quick-draw". If the Diver comes off the tending line (lost Diver) and inserts the required ice anchor screw into the ice to secure their position, the quick-draw once clipped in to the ice anchor screw offers the Diver the ability to hang a little more freely rather than being pressed against the ice.
- Apparently there isn't a policy allowing for General Service Administration (GSA) vehicles to enter Canada. If this policy were developed and implemented it would mitigate the expensive costs of rental vehicles, especially ones large enough to carry several personnel, their cold weather gear and dive gear. It would also eliminate the rental agreement requirement of not being able to use the rental vehicle as a towing vehicle without personal liability insurance. In other words, if government vehicles could be used it would save an large amount of money and provide a major assist in logistics.

I talked with Army MDV Westin Cox about his thoughts on the course. He said it was his first time to ice dive. He had been cold water diving in Ketchikan and Vancouver Island with the Canadians in 2007 training in various scenarios. This was his first time to dive this rig. "I like the steel SCUBA cylinders; it reduces the lead weight requirement. I also really like the independent manifold separate posts. It just makes sense from a freeze-up safety aspect. I prefer to dive the MK 20 in the demand mode," said Master Diver Cox. He went on to say he felt the training location was ideal, liked the fact the cabins were close to the lake so the Divers could get re-warmed quickly, and felt the topside training was good. "The

only thing the U.S. Coast Guard needs is higher up involvement (possibly a site visit) to justify cold weather gear purchases, and to keep this program alive." In good old Army fashion, he felt some needed changes would be loading organization and labeled kits. We all know the Army has that down pat.

When talking with MDV Leet, I found out he has approximately fifteen to twenty cold water/ice dives under his belt dating back to the 1980's. MDV Leet said, "In the two years I've seen this CWID course, it is the most comprehensive sanctioned course, cradle to grave. Everyone at any level will get something from this. The location is ideal, the rig is the best set-up to date, and with some already identified refinements it will be almost perfect." He went on to say, "Maintaining proficiency is key in diving and more inherent in ice diving. I hope this course can be sustained and filled with proficient and capable Coast Guard dive instructors. We don't need another accident like the CGC HEALY Divers. Not with the developments we're making right now."

LT Wilkins provided some insight as well. "I've been working this CWID course for three years now. It is the most successful to date. The plan is to expand. I want the Coast Guard to be able to provide this training to all U. S. Military Diving. I feel that I'm in charge of a top-notch team of Divers at the NDSTC Coast Guard Liaison office in MKC Sowers, MEC (select) West and MK1 Prater, but we desperately need more. Unfortunately, there is no consistency in the Coast Guard diving program. A USCG diver will be tasked with one of two tours as a Diver and transferred back to their rating. This undoubtedly leads to a loss of proficiency, safety mindedness and diving related continuity."

My thoughts; it is evident a lot of time and effort was put in to the CWID course by some very knowledgeable operators. LT Wilkins and MDV Leet hit the nail on the head when they said the course is well thought out from cradle to grave. It starts slow in the beginning and builds the Diver's confidence along the way. You will learn something from this course. Does the Coast Guard have a bad reputation when it comes to diving? I will boldly say yes, but more importantly I see that turning around. The USCG is integrating their Divers into the Navy Diving Program as we speak (their first group of Divers are attending class now), with plans to increase the number of dive students as the year moves on. In addition, they've established the CWID "C" school course run by experienced CWID Divers. LT Wilkins, along with LCDR Hare, LT Schreckengost and CWO4 Andersen are focusing on defining a diving career path for Coast Guard Divers which will promote diving proficiency across the board and will greatly reduce the chance of a CGC HEALY incident, or any diving incident from happening again. The other issue I've learned that should be corrected, in my humble opinion, is a single effective, accountable maintenance system established; preferably a web-based program due to the mobility of the USCG units.

In conclusion, this course is a win-win situation that was appreciated by all attendees. Unfortunately, cold-water/ice diving is one of those genres of diving no one wants to think about until the requirement rears its ugly head. Like the old saying goes, "in case of emergency, break glass" and like MDV Leet said, maintaining proficiency in diving is important but even more important when it comes to something as imminently dangerous as ice diving.

For more on USCG and their cold water/ice diving history check this website: **https://cgportal.uscg.mil/delivery/Satellite/CG7212/HOME**

Lac Des Roches Resort
www.lacdesroches.com

NDCM (MDV) John Coffelt is currently serving as Command Master Diver at NAVSEA 00C.

The Dry-Suits Used and Their Characteristics:

Four different manufacturers were used.There were two different versions of WHITES:

- FUSION – Excellent mobility, good thermal protection, but minimal durability.
- KODIAK – Large functional cargo pockets but the drysuit inflator was inconveniently located on the hip. Also, when ordering you must specify to have the hood and gloves integrated. It beats the poly seal method or no seal at all.

There were two different versions of the DUI drysuit:

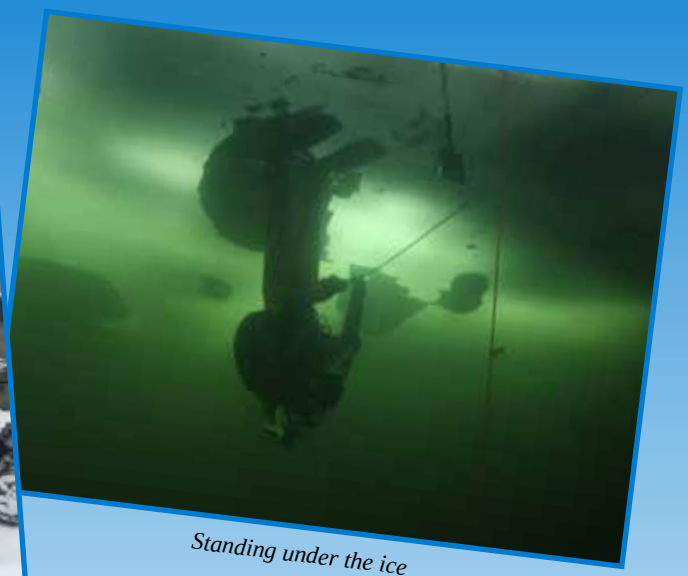
- CLX – Easy integration of the hood and gloves using zipper seals. The suit also offers a convenience flap for bodily waste removal and large functional cargo pockets. However, it offered minimal abrasion resistance.
- TLS350 – Great form fit, mobility and offered some abrasion resistance.

There were two different versions of the VIKING drysuit:

- HDS 1500 – This is a HAZMAT drysuit so it was durable and would be better used for surface-supplied diving than SCUBA. It also seemed to restrict the Diver's legs when finning.
- PRO 1000 – Great durability but shoulder mobility was limited.

USIA drysuits were also used and offered a cross-zip front that makes donning and doffing a lot easier, and it offered some abrasion resistance.

All of the wetsuits seemed to keep the Divers warm, dry, and comfortable. Nothing stood out in regard to thermal loss through conduction.



Standing under the ice

left to right back row – BM2 Esser, YN1 Spencer, MK2 Severino, NDCM(MDV) Leet, LT Wilkins, DCC Keplinger, NDC Sawyer, LTJG Walton, SSG Turner, MK1 Prater, SFC(MDV) Cox Left to right front row – LT Prairie, ND1 Riggenbach, SSG Cavenaghi, ND1 Pierce, MKC(sel.) West, AET2 Ketzer, NDC Eberle, ND1 McClain, NDCM(MDV) Coffelt

Site #2

LT Wilkins

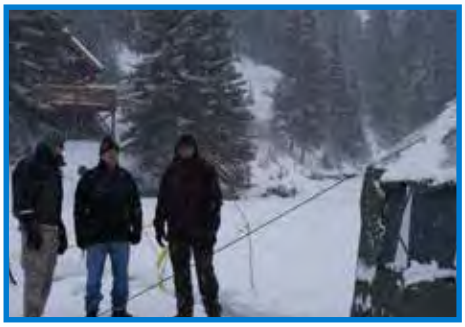
Site #1; Cutting the triangle

Site #2 dive station, rectangle vice triangle

Up and over

Site #1 Dive Station

Emergency escape hole training



left to right: SFC(MDV) Cox, NDCM (MDV) Coffelt, NDCM(MDV) Leet

ND1 McClain practices ditch & don; MKC (sel.) West stands by

U.S. Navy Saturation Diving

By: CWO3 John Theriot, NEDU Command Diving Officer

Are you up for the most challenging tour of duty you will ever experience? If so, contact your detailer. Just ask to become a part of the SAT-FADS Detachment coming in FY-15. Applicants needed with the following prerequisites:

- Diving experience (as much as possible)
- Dedicated to the job
- Able to work long hours with no additional pay (just the reward of knowing you are doing something special)
- Able to work well with others in very confined spaces with no signs of claustrophobia
- Experienced QA worker
- Experienced in all manners of diving support systems and valve maintenance
- Experienced Electricians, Welders, Boatswain Mates, or Machinists desired.

Apply Today!

The summer of 2006 dealt a decided blow to the U.S. Navy saturation diving community. Navy Diver became a rate and the Saturation Diving NEC 5311 went away. What was once taught as a school curriculum became a prerequisite online course before attending First Class Dive School, but no online course can truly replace hands on training conducted by individuals with years of experience doing the job. Where did all of those SAT Divers go? Many have retired, but a small handful remained on active duty with some of them playing a recent and significant role in writing Navy Diving history.

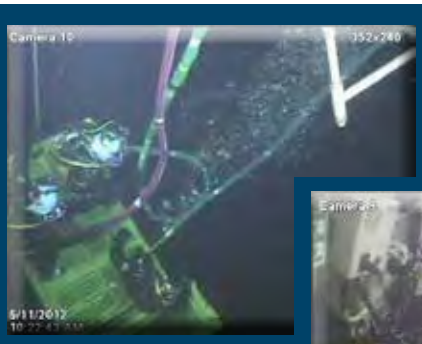
June 2010 helped reverse the course of U.S. Navy saturation diving when the Saturation Fly Away Diving System (SAT FADS) was delivered to Naval Support Activity (NSA) Panama City, and the exciting process of resurrecting the Navy's deep sea diving capabilities became a reality.

The Navy Experimental Diving Unit (NEDU) was tasked with completing the monumental evolution of accomplishing all unmanned and manned testing required to certify SAT FADS for at-sea diving to 1000 feet of seawater (fsw). Thousands of man-hours went into mission planning, training system operators, developing maintenance/operating procedures and grooming the system before actually placing any Divers under pressure. As with all new systems, seemingly simple tasks such as ensuring proper support system cooling water flow or operating the launch and recovery system became complex due to lack of system experience, but were swiftly conquered through team work and dedication to the task at hand. Every individual component that made up SAT FADS had to be mastered and proven before placing Divers at maximum system depth.

NEDU accomplished the pier side phase of testing during the spring of 2011, after completing dozens of unmanned tests, developing countless operational procedures, and confining six Divers during a 12 day, 1000 fsw saturation dive in Panama City, FL. This successful evolution and significant milestone set the stage for the next phase of testing: at-sea diving to full certification depth.

The largest problems that faced the SAT FADS team while preparing for sea based testing were obtaining operational funding, identification of a support Vessel of Opportunity (VOO), planning a workable schedule, and assembling a dive team. A dedicated and committed multi-organizational dive team consisting of 13 personnel from NEDU, 8 from the Specialized Research Diving Detachment (SRDD), 1 Reservist, 5 NAVSEA

SAT Divers at their first Bell Excursion depth



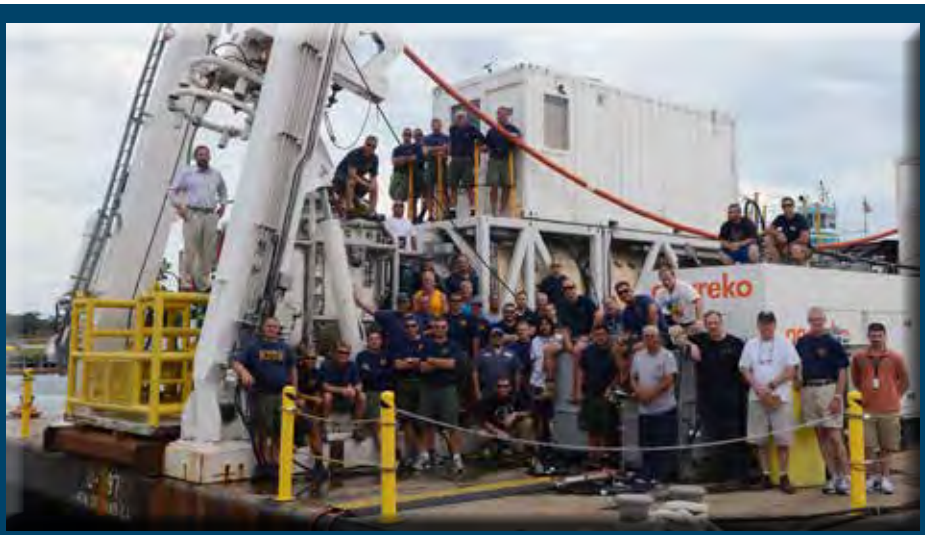
SAT Divers at 1000 fsw

Divers ND1 Jad Graves and HMC Faasen preparing to lock out of the bell at 1000fsw

civilians, and 2 contractors pushed through these challenges to ensure that SAT FADS would cast off all lines as scheduled.

While the SATFADS crew was hard at work, the rest of NEDU felt the pressure of completing their mission with reduced man power and little help from a demanding schedule. For over five months, NEDU conducted manned and unmanned testing with this reduced staffing posture. The increased pressure required precise coordination between every department within the Command, in addition to reaching out for experimental and test Diver support from NDSTC and CEODD. Once again, team work and the Diver "hooyah" attitude allowed NEDU to complete critical unmanned and manned MK 16 testing and push through physiological testing, for the Naval Special Warfare community during this period of high operational tempo.

SAT FADS at-sea phase of testing commenced with pier side training in January of 2012 and continued through March. The team mobilized and tested SAT FADS on a leased barge through -out April and prepared the three additional support vessels that augmented the SAT FADS barge for mooring, towing, and berthing support. On May 2, after all equipment was installed, personnel embarked and the barge was towed approximately 62 miles southwest of Panama City, FL. A single point moor was laid in 1,200 fsw to anchor the SAT FADS barge and around the clock operations started immediately with full operational systems checks, unmanned dive bell runs, and the final phases of proficiency training. Every evolution brought both equipment and operational challenges, but team flexibility and the Can Do spirit of Navy Divers allowed issues to be mitigated and resolved quickly. After the completion of two intermediate dives to 380 and 680 fsw, on May 11 of 2012, six U.S. Navy Divers locked out from the SATFADS dive bell at a depth of 1,000 fsw on two consecutive excursions marking the first time in 37 years that Navy Divers ventured to this depth in the open ocean.



SAT FADS 1000 fsw at sea test team just prior to getting underway

Mission success would not have been possible without the following personnel.

NEDU
CWO3 Theriot
NDCM Johnson
NDCS Dodd
NDC Monroe
HMC Faasen
ND1 Mcmanus
ND1 Delapena
ND1 Weber
ND1 Graves
ND1 Post
ND1 Trevallion
LT Algra
Mr. Chuck Mayberry SRDD
CWO4 Bekeny
NDCM Deflice
NDCS Chase
NDC Buijten
NDC Harlander
NDC Coreil
NDC Diego
ND1 Beaver

NAVSEA
Mr. Paul Mcmurtrie
Mr. Tim Joines
Mr. Wade Bingham
Mr. Steve Smith
Mr. Marty Russell

Contractors
Rob Weaver
Mike Wiser

ESSM
Billy Eubanks

Reservists
CAPT Kowalick
BMCS Curran
HTCS Dejonghe
HTCS Bowers
ND1 Carter
NDC Moreno
ND1 Christofersen
DC1 Martinez

The hard work and perseverance of everyone involved directly resulted in the mission success of these critical evolutions. The Divers and watch standers overcame huge obstacles throughout this certification process and prevailed while revalidating the forgotten truth that Saturation Diving is not a part time job. These successes have paved the way for continued deep sea diving within the U.S. Navy ranks and marked the first step to transition critical knowledge from the old guard Saturation Divers, to the next generation. With that said, chapter one is now written. Who's up for the challenge of writing the rest of the book? The meek and mild need not apply.

USS ABRAHAM LINCOLN
Stave Bearing Waterborne Replacement

By: ND2 (DSW) Adam Coe

Puget Sound Naval Shipyard & (PSNS & DMF), Intermediate Maintenance Facility Detachments Everett, Bremerton, and Bangor, and Phoenix International Divers recently completed waterborne replacement of stave bearings on the USS ABRAHAM LINCOLN (CVN 72), the fifth Nimitz class super carrier. Through a joint leadership effort of military and civilian Divers, both groups came together on November 28, 2011 to begin port and starboard shifts to guarantee the USS LINCOLN was capable of a homeport shift. This intricate and arduous operation was completed on 3 December, 2011, 3 days before the USS LINCOLN was scheduled to begin its worldwide deployment. The successful completion prevented dry docking, which in turn saved the Navy over 10 million dollars in dry docking and contractor fees.

Justin Pollack, a NAVSEA 00C5 engineer, also dove on the project while accommodating the Formal Work Procedure. His experience with waterborne replacement on stave bearings allowed excellent coordination amongst the PSNS, IMF, and PHNX dive teams during the night dives. Day shift was covered by LCDR John Bauer utilizing his technical expertise to ensure quality work in a timely manner.

During a scheduled inspection of number two and three shaft main strut stave bearings on CVN 72, damage was discovered by the IMF dive team. The apparent problem was videoed using a U/W camera system and borescoped to determine the percentage of wear and tear on both stave bearing materials.

Commander Carrier Strike Group Nine decided this complication needed immediate response and began the preparation of materials, tools, and personnel required for the double waterborne replacement procedure, just 10 days prior to the USS LINCOLN'S scheduled departure. The first task for the dive teams was removal of the fairwaters and rope guards followed by successful removal of all four stave bearing shells from number two and three main struts. New parts, bolts, and other equipment required for replacement was delivered by Jeff Lane from Puget Sound Naval Shipyard. PSNS dive team, led by Mr. Rob Miller from Code 760 brought a support barge alongside the USS ABRAHAM LINCOLN, supplying cranes, rigging systems, and a work space for Divers on the project. Alongside the support barge were IMF's dive boats, which allowed two separate dive teams in the water. IMF's dive team leader on day shift was Master Diver Josh Dumke, while on night shift NDCS Christopher Pederson took charge.

Dive Side Work. Photo by: ND2 Ellis

Utilizing NAVSEA heavy rigging gear after the removal of the stave bearing shell retaining rings, both upper stave shells from number two and three were removed in succession. Four 50-ton hydraulic chain falls were rigged into the ship's propeller lifting tunnels allowing a successful and safe lift of number two and number three 35-ton propeller and shaft systems from the main strut barrel housings. This procedure alleviated the lower stave shells and provided the divers a capability to install rigging to rotate the lower staves into the position that once housed the upper stave shells. On the completion of this process, the lower stave shells were removed.

After removal of all four stave shells, new bearings were installed and the course of action turned to replacement of the upper and lower stave shells. On the surface, workers using grinding tools removed any debris located on the new stave shells to accommodate a snug fit. The stave shells were then placed into the main strut barrel housings. After achieving this goal, the remaining dives consisted of reinstallation of the retaining ring, fasteners, lock wiring, and removal of the multiple 50-ton hydraulic chain falls. The next steps involved replacement of rope guards and fairwaters for the strut barrel housing.

The job was finished during the day crew's shift. All PSNS, IMF, PHNX, and Bremerton Divers felt a sense of pride upon the realization that a job of this magnitude could be accomplished swiftly, precisely, and before the scheduled completion date. Both civilian and military personnel came together, providing a rapid response, calculated agenda and mission critical mentality, which gave the USS ABRAHAM LINCOLN the capability to deploy on its required departure date. PSNS, IMF, PHNX, and Bremerton Divers completed over three days of incident free bottom time. These efforts and accomplishments are truly a job well done.

ND2 Coe has served over 3 years in the U.S. Navy as a Diver after completing Dive school in November, 2008. Currenty serving second duty station in Everett, Washington.

Navy Reduces Costs While Refurbishing Deep-Dive Rigs

By Dan Broadstreet, NSWC PCD Public Affairs

The U.S. Navy achieved successful open water validation dives July 2012 on MK 16 MOD 1 Underwater Breathing Apparatus' (UBA) electronic circuitry to extend service life into the next decade for a world class unique diving rig capable of extreme depths in open sea water.

Naval Surface Warfare Center Panama City Division (NSWC PCD) Diving and Life Support Functional Area Manager Wes Hughson credited NAVSEA's Explosive Ordnance Disposal (EOD) and Naval Special Warfare (NSW) sponsors for having the foresight to stand up the Diving and Life Support Depot (DLSD) at Panama City in 2009. NSWC PCD is a field activity for the Naval Sea Systems Command (NAVSEA), the largest single business activity in the Navy and one of the largest business establishments in the federal government.

"For example, from June 2011 through June 2012, with the Navy's centralization and stand up of the DLSD at NSWC PCD, the repair and cleaning improvements helped achieve significant savings. It was equivalent to approximately two and one quarter Man Year's worth of savings for the U.S. Navy," Hughson said.

NSWC PCD Commanding Officer, CAPT. Scott Pratt, explained the diving rig's mission and safety requirements are what make this such a significant accomplishment.

"Particularly its mission safety requirements," Pratt said. "When we're putting a diver at depth, there is absolutely no room for mechanical or electrical failures in the rig's architecture. To date, the Navy's Tradeoff Analysis has not found any manufacturer able to replicate the MK 16 MOD 1 UBA as safely as our DLSD can. Nor has industry been able to demonstrate the cost savings we're achieving."

"NAVSEA Supervisor of Salvage and Diving also realizes significant total ownership cost savings for the EOD and NSW program sponsors," said NSWC PCD Equipment Specialist Dave Junker.

Project Engineer Terry Adams said this upgrade marked the completion of two and a half years of development, testing and fabrication of the new electronic control suite for the UBA.

"This electronic upgrade will allow continued use of the MK 16 MOD 1 UBA for an additional 10 years," Adams said. "Not only does this provide a service life extension, but it also ensures sufficient spares to fabricate additional UBA platforms. Had this program not been successful, the Navy would have been forced to outsource for an alternate UBA at great expense in time and dollars."

According to Hughson, by establishing NSWC PCD as the current MK 16 and Viper Depot several economies are realized by co-locating engineering, acquisition, and depot level functions.

"EOD's and NSW's organizational analysis, which utilized an objective third party, determined that co-locating a depot with its associated in-service engineering activities would capitalize on in-house expertise, streamline business processes and help protect the MK 16 MOD 1 UBA from obsolescence issues," Hughson said.

"For example, having these functional facilities centralized empowers NSWC PCD with the ability to rebuild or repair a depot item, which prevents us from having to purchase a new item. Also, locating the depot with NSWC PCD's inventory minimizes expenses with the logistics delay when materials are located elsewhere, Hughson said.

Pratt added by partnering with neighboring tenant command, Navy Experimental Diving Unit (NEDU), the DLSD is able to achieve cost avoidances as well.

"Our DLSD's partnership with NEDU adds to our ability to repair and oxygen clean items in one central location. This helps us avoid sending parts off base for cleaning, reducing logistics delay time and man hours spent," Pratt said.

"This type of direct Fleet support shortens the repair and cleaning process to less than two weeks, which significantly increases Fleet readiness and system availability," Hughson added, "a significant saving to the taxpayer."

Above: Senior Chief Randolph Lawson of EODMU Six Detachment Panama City (left) and NEDU Diver Chief Landry stand poised and ready on the Naval Diving and Salvage Training Center's YDT 18 diving stage preparing to enter the Gulf of Mexico's waters for MK 16 Re-breather certification dives. Left: Navy Diver exiting NDSTC'S PVA-1 Igloo after completing a test dive using the MK 16 Re-breather. (Photos by Wes Hughson/Released)

NSWC PCD is a Leader in Littoral Warfare and Coastal Defense.

Retiring Navy Diver Vic Marolda

Problem Solver and Teacher, Saved U.S. Navy Millions

Jack Hughes, TPM/Diving Officer, Engineering & Diving Support Unit

September 1, 2012, marks the end of an era. Vic Marolda, a mechanical engineer and U.S. Navy diver from Code 1534 retires on that date. In his 37-year career that began at the Naval Underwater Systems Center (NUSC) in New London, Conn., he worked on nearly 300 U.S. Navy ships. He undoubtedly saved the Navy millions of dollars, averted countless dry dockings, and allowed the fleet to get back to sea at full capability without extended delays.

Vic Marolda (top) and a Navy diver from USS Proteus (AS 19) are working on repairs to the sonar on USS Preble off the coast of Oman in 1984.

The magnitude of his impact may be truly known only by his fellow Divers. He has no equal. He will not be replaced. He cared less about personal accolades, and more about making significant contributions and doing his job efficiently and effectively. An amazing number of sea stories have chronicled his career as he has traveled all over the world—from under arctic ice to the warm Pacific Ocean—solving technical problems on land and in the water. He will be particularly missed when it comes to NUWC's emergent waterborne response to Fleet Towed Array Handling Systems problems.

In 1979, Marolda was a young mechanical engineer working at NUSC New London when he was selected to attend U.S. Navy Dive School in Groton, Conn. Upon completion, he became a member of the Scientific Diving Team working on various technical problems that required waterborne solutions.

Throughout the 1980's he came to work with a bag packed as the nature of his work had him traveling abroad on short notice. He and his fellow NUSC New London Divers utilized their technical expertise and U.S. Navy Diving qualifications to respond to the in-water troubleshooting and repair of surface ship sonar domes. They met ships at ports all over the world. The team's work in this area led them to the development of the in-water repair procedure that is currently utilized by NAVSEA 00C5—the Underwater Ship Husbandry Division of the Office of Ocean Engineering.

In the mid-1990s he began working on submarine Towed Array Handling Systems (TAHS). His engineering background coupled with his Navy Diving qualification were a good fit for the waterborne troubleshooting, maintenance, and repair of these systems. That work kept him on the road and living out of a suitcase for weeks at a time. He often would travel from one location to the next "fixing" things so that Navy assets could remain at full capability and head back out to sea on schedule.

Much of this work was done in very challenging conditions. The inside of submarine ballast tanks are dark, cold or hot, and littered with obstacles and obstructions not conducive to a comfortable work environment. In addition to the physical challenges of working inside ballast tanks, the mental stability required to focus on the work and ignore the conditions is nearly impossible for most. At times, work is done inside the ballast tank for six hours or more per shift, day after day.

This expertise and work evolved into the development of a TAHS course taught by Marolda, along with colleague Mike Peirson, and lead instructor Don Smith. The course is very well attended by engineers, technicians, shipyard workers, and divers who all consistently provide high ratings for the training. In addition, the number of TAHS casualties out in the fleet has decreased significantly over the last several years which is directly tied to the effectiveness of the course and the ability of the instructors to teach and share information.

Marolda's mechanical engineering abilities, coupled with his mechanical skills, creativity, Can-Do attitude and easy going personality make him a truly unique individual who has made significant contributions to the Navy and to NUWC. You cannot travel to a U.S. Navy dive locker anywhere in the world where they do not know him. He has made a significant impact on the fleet and the people he has worked with. He has logged more than 5,000 hours of time in the water. His approach to solving problems is based on teamwork and teaching. He always takes the time and opportunity to teach the younger Divers here at Newport and throughout the fleet how to recognize, approach, and solve technical problems. One of his favorite sayings is "Fast is Slow." Meaning if you rush what you are doing just to get it done, you may find yourself doing it over again. Not to mention that when you are working on multi-million dollar assets, making sure you do things properly is incredibly important.

Marolda has the ability to show up at locations worldwide with a spotlight on him as "the guy who came to fix it." The work itself is challenging enough, but the difficulty exponentially increases when you add the pressures of success resting solely on your ability to get it done right. Another of his favorite sayings is "Well, we are either going to be Heroes or Zeros." While his casual and laid back personality allow him to keep things in perspective, his professionalism and abilities have always made sure he never left a job as a "Zero."

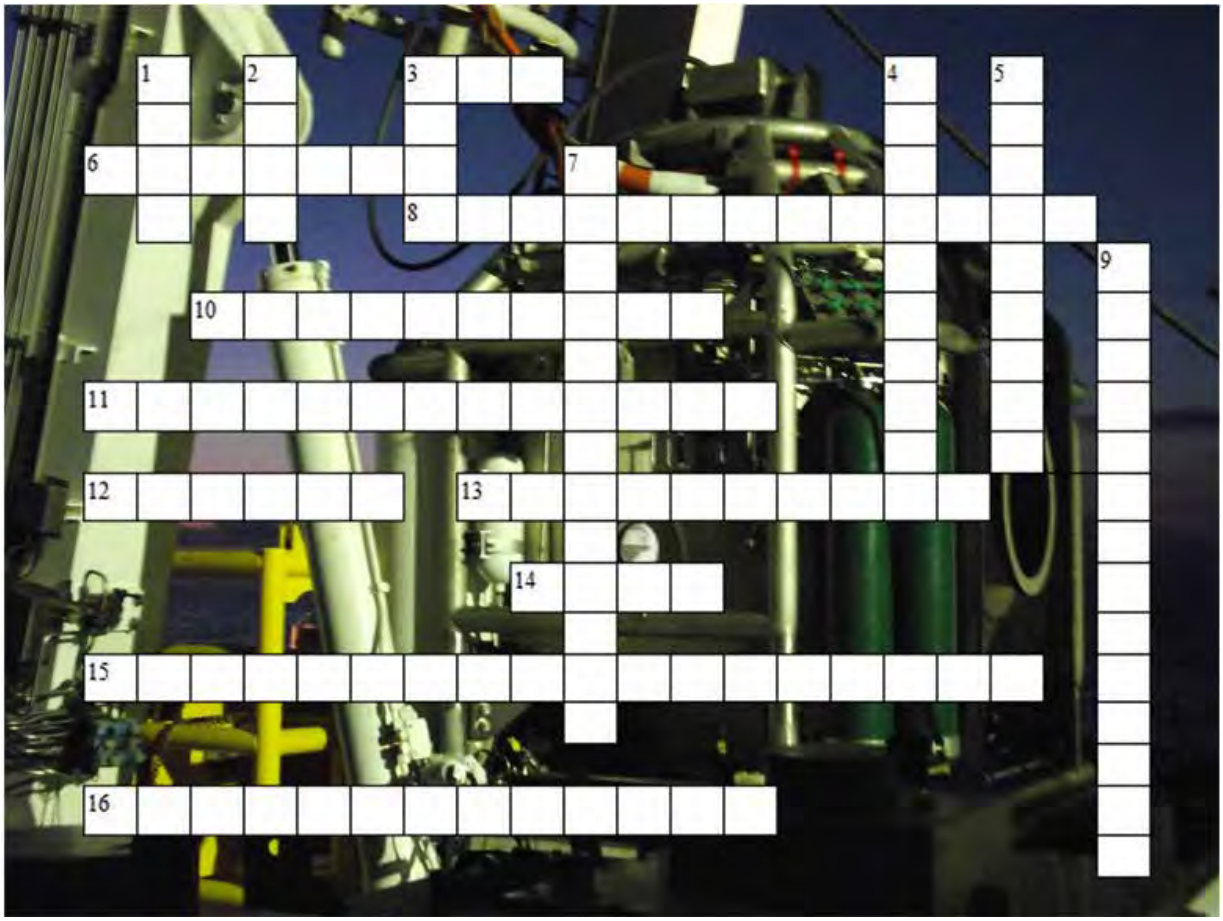
He is an Engineer with the insights of a technician, and the imagination of an artist. He is a Rigger, a U.S. Navy Diver, a colleague, and a friend to many. Marolda the person will be missed by the many people he has worked with over the years. Marolda the Mechanical Engineer and U.S. Navy Diver will be missed by his colleagues, his fellow Divers, and the fleet.

Hoo Yah Vic Marolda!

Jack Hughes is a Technical Project Manager and the Command Diving Officer for the Engineering & Diving Support Unit (EDSU) at the Naval Undersea Warfare Center Division Newport (NUWCDIVNPT) in Newport, RI.

Crossword Puzzle

U.S. Navy Diving Manual Revision 6, Change A



ACROSS

3. For Levels I and II, __ approval is required to use a non-Navy chamber.
6. The diver's _____ status affects the rate of inert gas uptake and elimination.
8. Use of a _____,can increase available bottom time by giving credit for time spent shallower than the maximum depth of the dive.
10. _____ diving is the preferred method for dives deeper than 300 fsw or for shallow dives where extensive in-water times are required.
11. Personnel conducting O_2 DLSS maintenance shall be qualified, in writing, as an _____ and DLSS maintenance Technician or O_2/mixed-gas UBA Technician for the UBA they are conducting maintenance on.
12. No _____ training may be conducted unless fully qualified instructors are present, recompression chamber is available within 5 minutes, Diving Medical Technician is on station, and a Diving Medical Officer is able to provide immediate response to an accident.
13. The minimum positive clearance of the keel to the bottom at mean low water of six feet must be established when diving below _____ on surface ships or below the maximum beam on submarines.
14. Diver tag-out procedures must be completed in accordance with the TUMS and SORM to ensure ASW and MSW pumps are not operated in ____mode.
15. A _____ Vessel is defined as a vessel actively using its propulsion system to maintain position and heading.
16. The new air tables are designed to provide safe _____ even for divers who work hard on the bottom or are exceptionally cold during decompression.

DOWN

1. The ____ has a single lock and allows a patient to be administered oxygen at 60 feet while in transport to a recompression chamber.
2. Divers who are ____ on the bottom will absorb more inert gas than divers who are cold.
3. Given identical exposures on the bottom, divers who are warm during decompression stops will lose more inert gas and have a lower risk of DCS than divers who are ____.
4. If DCS symptoms appear while the diver is undergoing decompression at 50, 40 or 30 fsw in the chamber, treat the symptoms as a _____ in accordance with Figure 20-3.
5. Navy Recompression Chamber Support _____ is defined as a U.S. Navy certified recompression chamber accessible within one hour of the casualty.
7. An Automated External _____ shall be available on the dive station for every diving operation.
9. Use of the _____ is mandatory when diving the MK 16 MOD 1 in Non-EOD diving operations.

Crossword answers on pg.30

USS DENVER

STAVE BEARING RETAINING RING AND FAIRWATER REPAIR

By: HM2 Schneider

Once again winter arrives in Sasebo, Japan and the divers of SRF-JRMC Det Sasebo find themselves with an extraordinary ship husbandry opportunity. On December 30, 2011 SEAWAY Systems was diving on the USS DENVER (LPD 9), conducting a routine intermediate hull cleaning. During the dive they discovered that the port side main strut fairwater was loose. Several bolts were hanging out with lock wire attached and appeared ready to fall off. On 3 Jan 2012 SRF Sasebo Divers removed the fairwater and fairwater retaining ring. Of the 8 studs that hold the fairwater on to the Stave Bearing retaining ring, only 1 was still intact. Upon closer inspection 13 of the 14 studs that hold the stave bearing retaining ring on the main strut were stripped out hanging by lock wire or missing. With just 14 days before the ship was scheduled to get underway, SRF Engineer Mr. Able Paule and MDV Pierick began planning and designing new studs and an elaborate drill jig that would facilitate drilling larger holes for tapping and a permanent repair.

A glance at the dive side setup.
Photo by: HM2 Matthew Schneider

A drill jig that would act like an underwater drill press was needed to facilitate straight and accurate drilling. The holes were originally drilled for a 7/8" threaded stud; Most of them were stripped to approximately 1". SRF Divers would enlarge all 14 holes to facilitate a 1 ¼" 3A Class fit thread that would only be threaded 1 3/8" into the strut. The ESSM Drill Press would not work for this application so work began to make a drill jig that would clamp to the shaft journal to facilitate accurate drilling.

The clock was ticking for the divers in Sasebo as the USS DENVER wanted to get underway to support scheduled bilateral training operations. The total repair consisted of drilling and tapping all fourteen holes to a larger bore, installing new studs, new zincs and reinstalling the fairwater. SRF wasted no time in ordering additional hydraulic drills, taps, drill bits, new fairwater bolts, bar stock to create new studs, and zinc stock to manufacture zincs that would bolt to the retaining ring. Requests went out to MDV Miller, SRF-JRMC Yokosuka and CWO2 Potts, SWRMC San Diego for divers to head to Sasebo for additional manning to support shift work on the USS Denver and provide a third team to cover other dives on the waterfront, as all home ported ships were just concluding their winter maintenance availabilities. Shortly after the New Year additional manning arrived in the form of six divers from Yokosuka and four divers from San Diego, providing twenty-four divers to repair the USS DENVER, and provide support to the seven other 7th Fleet ships home ported in Sasebo. This was a great opportunity for SRF and SWRMC to exercise Battle Damage Repair (BDR) Training by deploying divers to the 7th Fleet AOR in support of real world operations.

Jig set on shaft for drilling.
Photo by: HM2 Matthew Schneider

Starting on January 3rd, SRF Divers removed the old fairwater, fairwater retaining ring and last remaining bolt holding it in place. Measurements were taken on the 3rd and 4th for the creation of a drill jig that would hold the hydraulic drill assembly. On Jan 6th, divers measured the stave bearings on the port propeller strut to ensure they were still within specifications. The 7th and 8th passed with more waiting for parts and continued planning and design of the drill jig and new studs. On the 9th, the portion of the jig that would clamp onto the shaft was finished and Divers successfully fit tested it on the port shaft journal. Work continued the next day and Divers rigged scaffolding to the port strut as a working stage and removed the zinc retaining bolts. The zincs were completely gone and new zincs would have to be made for the replacement.

On 10 Jan, the dive station was set up 30 ft aft of the stern gate with two barges moored between the pier and the dive boat. Auxiliary equipment including two Bauer Capitano compressors, hydraulic power unit,

hydraulic hose reels, and two Shindaiwa light towers were staged for shift work.

On 11 Jan, all TAD divers were now on station and MDV conducted an extensive mission and safety briefing. The procedure was as follows:

1. Attach the drill jig to the port shaft journal and line it up for drilling at the 12 o'clock position. During drilling, Red Diver will advance the hydraulic drill and Green Diver will watch the drill progress and notify Red when the appropriate depth has been reached. This process would continue with a total of five step-up drill bits in each of the fourteen holes until they were completely drilled out. This is a total of 70 drill bit change outs.
2. All of the holes will have new threads tapped to 1 ¼".
3. Install 14 newly manufactured studs into strut body with Loctite 268.
4. Reinstall fairwater retaining ring, lock wire all the nuts.
5. Reinstall fairwater with 60 new bolts and stake them.
6. Final check on all completed work and de-rig all equipment, traveling lines and staging equipment from shaft. Utilizing two eight man crews working nine hour shifts, the estimated time of completion is Thursday, January 19th.

After an initial wait on materials and parts, diving commenced at 1900 on January 12th. Utilizing the MK 21 and working in 40 degree water, divers successfully set up the hydraulic drill jig and completed drilling and tapping the hole at the 12 o'clock position in four hours. The next day diving was delayed to wait on the 4 hour engine/propeller test of an oil tanker, inconveniently located at the pier adjacent to the dive site. With the test completed and visibility completely degraded to less than 6 inches divers began work again at 1200. At the end of the second shift, divers had completed drilling nine holes averaging an hour and a half to two hours for each. On the 15th of January, the first shift of divers finished drilling the remaining four holes and the second shift tapped the remaining thirteen holes. The 16th was a rest day for the divers and the 17th dive crews worked other jobs in the harbor as they waited for the bar stock to arrive.

Behind the scenes of the ever progressing dive job was the production shop of SRF-JRMC Detachment Sasebo. They worked 16-hour days to create the drill jig and modify any and all materials that were needed to complete the task including cutting two ½" half moon zinc's out of 24"x24"x1" zinc plate and manufacturing 14 new studs. By 0900 on the 18th of January the production shop delivered all of the studs, 50 custom made washers, and the refurbished fairwater components to the divers. With determination to complete the job, divers entered the water again. Due to the need for an exact fit and tightness, it was a slow process to install all of the studs as they were machined to a class 3A fit (zero tolerance and thread gap). With several modifications and patience, the first crew finished installing the studs. At 2100 the second shift relieved the first crew and divers proceeded to reinstall the fairwater, retaining ring, fairwater and all associated bolts, nuts and washers. Work was completed and the dive site completely de-rigged by 0645 on the morning of the 19th of January.

Between 3 - 20 January, Sasebo had logged 95 dives totaling 10,632 minutes of bottom time. This job was planned, coordinated by NDCS (MDV) Anthony Pierick and SRF Engineer Mr. Able Paule. Dives were supervised by NDC Timothy Canup, and ND1 Spencer Puett. Technical and material assistance from NAVSEA, Justin Pollack, and ESSM, Paul Kristiansen. Material production and planning assistance provided by SRF Production shop, and Denver Maintenance Team. The following dive Team Members were essential to completing this task: SRF Yokosuka Divers, Mr. Chihiro Yamazaki, Mr. Shuuhei Komatsu, Mr. Hitoshi Tashiro, ND1 Vincent Cunningham, ND2 Daniel Bradley, and ND3 David Close. SWRMC Divers ND1 Spencer Puett, ND1 Kristoffer Ilagan, ND2 Dietrick Zacher, and ND2 Charles Anderson. SRF Sasebo Divers ND1 Andy Strause, ND1 Brandon Persinger, ND1 Devin Wilhelms, HM2 Matthew Schneider, ND2 Michael Laux, ND2 Richard Maness, ND3 Mark Barnes, ND3 Daniel Burch, ND3 Sean Dargie, ND3 Zachary Hulbert, ND3 Patrick Halliday, and ND3 Jeremiah Kuipers.

SRF drill jig has been sent to ESSM for slight modifications and placement in ESSM Ready for Issue (RFI) Inventory.

Dive Team photo above by: ND1 Kristoffer Ilagan

HM2 Schneider is the Dive Medical Techincian (DMT) for SRF Sasebo.

UCT TWO & USCG Joint Efforts in Coos Bay

By: Construction Electrician Chief Adam Winters

For over 100 years there has been a U.S. Coast Guard station in the town of Charleston, Oregon, at the mouth of Coos Bay. USCG Motor Life Boat Station Coos Bay resides there today. The "International Port of Coos Bay" is the seventh largest port on the West coast, accommodating both large bulk carriers and an active commercial fishing fleet. In the summer months it is also home to a seasonal detachment of USCG Motor Life Boats (MLB). MLB's are 47-foot crafts capable of self righting and reaching speeds of 23 knots.

On June 11th, 2012 eleven SEABEES in Construction Dive Detachment Bravo (CDD/B) from Underwater Construction Team TWO (UCT TWO) arrived in Coos Bay for a 13 day stop during their PACOM deployment. They partnered with USCG members to locate and document the geographic position and condition of a sounding cable from its termination to a depth of 100 feet of sea water, a distance of 2.9 nautical miles from shore. During the month of June Coos Bay, Oregon experienced 8-foot tidal shifts, 1 to 3 knot currents, 4 to 5-foot swells, and an average water temp of 55 degrees. Diving in these conditions required flawless execution of diving operations with safety always in mind.

UCT TWO SEABEE Divers utilized the USCG MLBs to transport personnel and equipment to and from the dive site. In addition to the superb water transport in heavy swells the USCG MLB crew was a critical part of the emergency evacuation plan for diving or other casualties. According to SEABEE Builder Second Class Charles Runyon "It was an honor to work alongside such highly skilled members of the USCG. Their expertise in seamanship made mission accomplishment possible during inclement weather. I couldn't imagine transiting in and out of the port without their support."

During the first phase of the project, Divers utilized side scan sonar and Remote Operated Vehicles (ROV) to locate the cable. After locating the cable, its GPS coordinates were recorded and used to conduct diving operations. Depending on sea state and GPS issues, some days it was easier to locate the cable with the ROV and have divers following the ROV's umbilical all the way to the cable. This was the case during the last two diving days when divers conducted 13 dives, to depths of 100 feet of sea water, totaling 130 minutes of bottom time.

The partnership between the SEABEES and the USCG MLB crew was essential for mission accomplishment and provided a great opportunity for personnel from different services to learn and work together. Boatswain's Mate Third Class Howard said, "It was an interesting diversion. I was impressed with the safety procedures that the dive team had in place and I saw how we could incorporate some of that in our operations." Seaman Galvin from the USCG MLB crew added, "What the Navy team did was some pretty cool stuff; I wish I could do that for a living!"

Following the last day of diving operations the Seabee Divers stowed their gear and had a sports day with the Coast Guard personnel followed by a BBQ sponsored by UCT TWO personnel. The Officer-in-Charge of CDD/B, Construction Electrician Chief Adam Winters had nothing but good things to say about his interaction with the USCG personnel at Coos Bay, stating "The Coos Bay Coast Guard personnel are true professionals. It is obvious they take a great deal of pride in their work, their unit and the Coast Guard. Skipper Chavtur immediately made us feel at home and offered any support we needed. They are a well equipped well trained unit, I glad the Detachment was able to gain the experience in working alongside another branch of the Military. I would jump at the chance to work with the USCG again."

BM3 Brennan Howard, MK2 Brad Etzler, and FN Trenton Mitchell members of USCG MLB Coos Bay prepare to transfer members of UCT-2, BU2 (SCW/DV) Matthew Dawson, HM1 Eric Ketelsen, BU2 (SCW/DV) Christopher Farmer, and BU2 (SCW/DV) Charles Runyon, into the inflatable dive boat. Photo by: CM1(SCW/DV) James Richardson, UCT-2

CM1 (SCW/DV) James Richardson Underwater Construction Team Two, Construction Diving Detachment BRAVO's Assistant Officer in Charge.

Divers' Innovation at its Best

New Waterborne Repair Process Introduced on USS OLYMPIA (SSN 717)

By NDCS (MDV) Dalbert Rivera, Pearl Harbor Naval Shipyard

Pearl Harbor Naval Shipyard Divers recently pioneered a new process for waterborne replacement of an Electrical Hull Fitting (EHF) on LOS ANGELES Class submarines. The first job was completed on USS OLYMPIA (SSN 717) on March 15, 2012. It used a small fraction of the resources that a drydocking evolution would have taken and the submarine was returned to full mission readiness in a timely manner.

An EHF repair typically requires Main Ballast Tank (MBT) flood hole patches and cofferdams to be installed by divers in order to vent the MBT to atmospheric pressure. Once the MBT is vented, the topside access covers are removed and repair personnel can enter the MBT to conduct work. Because the OLYMPIA has no topside covers, her MBTs are accessible only by divers while the submarine is waterborne.

PHNSY Dive Locker Team-1. (from left to right): ND2 Neal, ND3 Carne, ND1 Johansen (green), ND2 Tombler, ND3 Soulliard (red), ND3 Thomas (console) and ND1 Vanvalkenburg. Photo By: ND2 Blyth

An unscheduled drydocking for the USS OLYMPIA would have caused scheduling conflicts with other projects already under way. Deferring the repair until her next docking availability would limit the ability of the submarine to successfully complete its mission. Shipyard divers proposed a method to change the EHF waterborne by venting the MBT and replacing the EHF without the use of patches or cofferdams. Shipyard Divers along with Ship Safety Officers and Project Engineers took to the task of writing a technical guidance process to perform the repair. Although the Electronics Shop was the lead trade and coordinated the work, Navy Divers performed all the work.

The task at hand did not allowed for mistakes, and could only be performed by the best and most capable divers. ND1 Landon Vanvalkenburg supervised the dive, as ND1 Joshua Johansen and ND3 Daniel Soulliard accessed the flooded tank and made their way to the damaged EHF. The divers measured the water level in relation to the position of the EHF penetration, and determined it was safe to remove the EHF for repairs. The removal took less than one hour and was uneventful. After repairs were completed, the divers reinstalled the EHF in one-and-a-half hours. The entire job took less than a month from planning to completion.

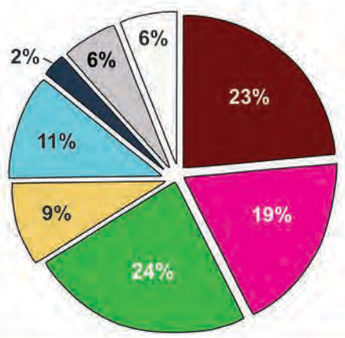
This effort reflects a willingness to work together to find solutions. This is an excellent example of deck plate innovation that maximizes resources while maintaining readiness. I congratulate them on a job well done. HOO YAH DEEP SEA!

NDCS(MDV) Dalbert Rivera is PHNSY & IMF Command Master Diver

Navy Diving Organizational Chart

- **Chief of Naval Operations** ☆☆☆☆
  - **Commandant Marine Corps** ★★★★
    - MARFORCOM
      - CG2 MEF
        - 2ND MAR DIV
        - 2ND Recon BN
      - MARFORPAC
        - CG3 MEF
          - 3RD MAR DIV
        - CG1 MEF
          - 1ST MAR DIV
          - 1ST Recon BN
  - **Special Operations Command** ☆☆☆☆
    - **Marine Special Operations Command** ☆☆
      - 1ST MSOB
      - 2ND MSOB
      - 3RD MSOB
    - **Navy Special Warfare Command** ★★
      - NSWG 1
        - LSU 1
        - NSWU 1
        - NSWU 3
        - ST 1
        - ST 3
        - ST 5
        - ST 7
      - NSWG 2
        - LSU 2
        - NSWU 2
        - ST 2
        - ST 4
        - ST 8
        - ST 10
        - RM Pool
      - NSWG 3
        - SDVT 1
        - NSWG 3 Det Little Creek
        - LSU 3
      - NSWCEN
        - BUDS
        - DET VA
        - DET HI
      - NSWDG
      - NSWG11
        - ST 17
        - ST 18
    - **Navy Expeditionary Combat Command** ★★
      - EODGRU 1
        - MDSU 1
        - MSDU 1 DET,CA
        - EODMU 1
        - EODMU 3
        - EODMU 5
        - EOD DET Sasebo, JA
        - EODOSU 7
        - EODMU 11
        - EODTEU 1
        - NECFC
        - EODOSU 1
      - EODGRU 2
        - MDSU 2
        - EODMU 2
        - EODMU 6
        - EODMU 8
        - EODOSU 10
        - EODMU 12
        - EODTEU 2
        - EODESU 2
    - **Commander Submarine Force / Atlantic** ☆☆☆
      - Commander Submarine Force Pacific ☆☆
        - USS EMORY S LAND (AS39)
        - USS FRANK CABLE (AS40)
        - SUBRON 1 Pearl Harbor, HI
        - DSU
        - SDS 5
        - NSSF New London, CT
        - SS School New London, CT
        - NSMRL New London, CT
        - TRF Kings Bay, GA
        - SUBRON 16 Kings Bay, GA
        - 1NCD ★★
          - 30 NCR
            - UCT 1
          - 25 NCR
            - UCT 2
    - **Commander Naval Sea Systems** ★★★
      - NEDU Panama City, FI
      - NUWC Key Port, WA
      - CSS Panama City, FI
      - EOD Tech Div Indian Head, MD
      - SPAWAR San Diego, CA
      - Pearl Harbor Naval Shipyard
      - Norfolk Naval Shipyard
      - Puget Naval Shipyard
        - NIMF Everett, WA
        - NIMF Bangor, WA
    - **Naval Facilities Engineering Command** ★★
      - NFESC Port Hueneme, CA
    - **Commander Regional Maintenance Centers N4** ★
      - SWRMC San Diego, CA
      - MARMC Norfolk, VA
      - SERMC Mayport, FI
      - SRF Yokosuka, JA
      - SRF Sasabo, JA
    - **Commander Installations Command** ★★★
      - NAVSTA Gitmo, Cuba
      - COMNAVMAR Guam
    - **Chief of Naval Personnel** ★★★
      - CNRC ☆☆
        - Recruiter
        - NPC ☆☆
          - Detailer
          - EMC
        - NETC ☆☆
          - CEODD
            - NDSTC
            - EODS
            - CEODD DET G.L., IL
          - RTC
    - **Naval Safety Center** ☆☆
    - **Naval Academy** ☆☆☆
    - **BUMED**
      - NSMRL
        - NAOMI Pensacola, FI
        - NAOMI Jacksonville, FI
        - NAOMI Pax River, VA
        - NAOMI Cherry PT, NC
        - NAOMI Norfolk, VA
        - NAOMI Lemoore, CA
        - NAOMI Miramar, CA
        - NAOMI Whitbey Is, WA

Force Structure



- Navy Expeditionary Combat Command
- Commander Fleet Forces Command/Regional Maintenance Centers
- Submarine Force
- Naval Sea Systems Command
- Naval Special Warfare Command
- Naval Total Force
- Marine Corps Systems Command
- Miscellaneous

Mobile Diving Salvage Unit Two Joins with Fleet Diving Unit Atlantic to Raise Derelict Vessel in Nova Scotia

By: LCDR Clint Lawler

Left to Right: Navy Diver Chief Jason Gray directs hydraulic puller operations during the beaching of Cape Ann III in Sydney, NS on 27 May 2012; A view of the engineroon on Cape Ann III where Navy Divers spent four days installing patches; Navy Diver Second Class Martin Horan cuts an access hole in the bow of Cape Ann III so that three sets of chain can be rigged to the ship to support the final beaching pull.

In May 2012, MDSU Company 2-6 traveled to Sydney, Nova Scotia with 18 Divers and four tractor trailers of equipment to participate in Exercise Frontier Sentinel. Over the course of the next three weeks, these Divers, joined by eight deep sea brothers and sisters from the Canadian Fleet Diving Unit Atlantic, dove, patched, pumped, and pulled until they had refloated and beached a sunken 300-ton fishing vessel, Cape Ann III.

The idea for this project began a year earlier when Canadian exercise planner made their first site visit to Sydney, Nova Scotia. As you drove the main stretches of the city, you noticed the pilothouse of a ship leaning hard to port with only the starboard deck edge rising up from the waters. She rested at a dilapidated mooring made of four cluster piles, just 20 feet from a jutting piece of shoreline. Mentioning the ship to a local would get you an earful of history and hypotheses about the ship and how she had come to rest at her current home. Need less to say, she was a salvor's dream.

During the initial planning conference in September of 2011, a plan was drafted and a team quickly formed to start working through a variety of legal, environmental, and logistical issues. Commanded by Rear Admiral David Gardam, RCN, Joint Task Force Atlantic (JTFA) had the lead for the exercise planning, as well as the decision-making authority. Fleet Diving Unit Atlantic (FDU-A), home-ported in Dartmouth, Nova Scotia, along with Mobile Diving and Salvage Unit TWO (MDSU TWO), home-ported in Little Creek, Virginia, would be tasked with raising the vessel and handing it over to a local non-profit organization, the Cape Ann III Artificial Reef Society (CAARS). Although the exercise promised to provide MDSU TWO and FDU-A exceptional training opportunities on the full range of salvage techniques in a real world environment (mud, muck, and cold water), a lot of heavy lifting would be required to make the project a reality.

In December of 2011, before the harbor in Sydney could ice over, MDSU Company 2-2 met FDU-A in Sydney, NS in order to survey the ship and determine if raising the vessel was a reasonable objective for the salvage component of the exercise. Technical documentation of the ship was not available, so the survey was a painstaking process. Surface-supplied Divers penetrated the dark internals of the vessel in order to reconstruct the ship only by what the divers could feel with their hands. What emerged was a picture of a ship that had been carelessly torn apart. There were no longer any longitudinal or transverse bulkheads subdividing the ship. An 18' long and 15' wide cut had been made through the two main decks in the stern in order to remove her main engine. Divers could move around the ship, but loose wires, debris, mud, and mussels were waiting at every turn. It was awesome training just doing the survey, and MDSU TWO knew they had the right people and tools to do the job.

Sailors from MDSU TWO and FDU-A show their colors on the bow of Cape Ann III after successfully raising her.

We told JTFA that we would need a month and some support on the ground. Captain Steve Wilson, RCAF, the lead planner from JTFA, took that response and started making things happen. An environmental assessment was conducted, legal requirements were agreed upon, and support agreements were put in place in the final months leading up to the exercise. As the exercise was beginning, the final signatures were stroked, and MDSU Company 2-6 was mobilizing to raise a sunken ship in Canada.

With a salvage survey complete, CWO3 Ray Miller, Company 2-6's Officer-In-Charge, and NDC Jason Gray, the company's Leading Chief Petty Officer, developed a salvage plan and logistics so that people and equipment would be ready to move once the exercise kicked off. There were a lot of constraints, so the plan was simple: right it, raise it, beach it. CWO3 Miller said "This isn't rocket science; we know how to move around 300 tons of steel." NDC Jason Gray, NDC Bryan Williams, and NDC John O'Donnell got busy prepping beach gear system and hydraulic pumping systems, so that MDSU would arrive in Sydney able to move 5000 gallons of water per minute and 200 tons in a straight pull.

NDC Gray and Cecil Harris from the Emergency Ship Salvage Material Warehouse at Cheatham Annex, Virginia put together a density list that filled four tractor trailers. NDC Gray said, "It was an amazing experience to draw so much equipment and then to see how it all worked together, like pieces in a puzzle, during different parts of the operations. We brought so much gear, and we needed all of it, including Mr. Harris (who supported MDSU TWO on site)." After 7 days of mobilization in Virginia, and 1500 miles of North American highways, MDSU TWO and FDU-A were on-site with all of their tools.

Phase 1 was righting the vessel. Two 6,000 lb anchors were buried and righting legs rigged from the anchors to the kingposts on the top of the ship. Internal diving surveys were completed and with 100,000 lbs of tension on the pullers, Cape Ann III righted from 30 degrees to 10 degrees. The vessel wouldn't come past 10 degrees due to the piles on her starboard side. Five days into the operation and righting was completed.

Phase 2 was raising of the vessel. Everyone on the team knew that this was going to be the most challenging phase. ND1 Abdul said, "we had all fought with a 'swiss cheese' sunken minesweeper in Albania during the last deployment, so we knew how hard making this watertight was going to be." Divers worked furiously building patches, filling sandbags, and prepping pumps. Because the structure was weakened from the large deck cuts, two compartments in the aft of the ship were isolated and 20 tons of lift bags were installed in order to ensure the stern refloated first.

Then there was the additional challenge of keeping the vessel stable through the raising process. This was a worst case scenario for stability: almost no compartmentalization meant that massive free surfaces of water would move inside the vessel, the main engines had been removed raising the center of gravity, and eight years with 30 degrees of list meant significant accumulation of silt and debris on the port side. So the plan was to let the vessel be unstable, but hold her with the cable pullers so that she could not roll – it worked. As the ship refloated she stayed pinned against the piles at 10 degrees to port until she regained buoyant stability. After a week of furious activity and long days, Cape Ann III was once again moving with the tides.

Phase 3 was beaching the vessel. In order to get the ship safely stranded and in a position to turnover to CAARS, we needed to pull the ship as far as we could onto the shore. However, with a tide range of only 3 to 4 feet and a beach with only a few degrees of slope, we needed to get as many pullers rigged into the ship as possible. With help of an excavator and front loader, the two righting anchors were dug up and reburied in line with the vessel's approach to the beach. Four pullers were then set-up and ready on the small spit of shoreline. After a one day delay due to weather, Cape Ann III got underway for her final voyage. With two pullers engaged, the vessel was hauled well up onto the beach. Only one more pull was needed. On the final day of operations, Divers cut access holes low in the bow of the ship and reeved three legs of beach gear through the ship. With 150 tons of pull, Cape Ann III came 15 feet higher up onto the beach, her bulbous bow above the high water mark and her prow casting a shadow over the pullers that moved her.

The raising of the Cape Ann III was completed. Everyone involved had worked hard, learned new skills, and forged new relationships. NDC O'Donnell said, "I really enjoyed working with the Canadian Divers. They are just like us. They love to work hard, get dirty, and have fun." Commander Gary Reddy, RCN, said, "It got pretty dicey during the pumping when that patch collapsed, but then one of the divers who was building the new patch looked up and said 'We've got this, sir,' and that was awesome." When asked which part was his favorite, ND2 Pounders responded "The end of the day. It didn't matter which phase we were in, the chain weighed the same. Everything we use is heavy."

LCDR Clint Lawler is an Engineering Duty Officer currently assigned as Engineer for Mobile Diving and Salvage Unit TWO.

Deep Sea Seabees

By: Chief (SCW/DV) Blair Mercado

Seabees from Underwater Construction Team Two (UCT TWO), Construction Dive Detachment CHARLIE, based out of Naval Base Ventura County in Port Hueneme, California, completed two months of cable stabilization, inspection and repair at Pacific Missile Range Facility in Barking Sands, Kauai, Hawaii this July. The tasking focused on repairing damage from last year's winter, and preparing the range for this year's Rim of the Pacific (RIMPAC) exercise. Pacific Missile Range Facility Barking Sands (PMRF) is the world's largest instrumented multi-environmental testing and training missile range capable of supporting surface, subsurface, air and space operations simultaneously. It is the only range in the world where submarines, surface ships, aircraft and space vehicles can operate and be tracked simultaneously. There are over 1,100 square miles of instrumented underwater range and over 42,000 square miles of controlled airspace.

UCT TWO Seabee Divers worked in depths from 30 to 120 feet of seawater off of a Lighter Amphibious Resupply Craft (LARC). Seabee Divers combine the best of both disciplines, relying on their construction capabilities as Seabees and their competence as Divers to accomplish missions that no other unit in the Navy is capable of performing. Three tons of cast iron pipe, designed to fit around the cables and protect them from the harsh sea state were installed. CDD CHARLIE also dove to depths of 110 feet in the open ocean to perform maintenance on 10 practice mines in a training mine field; with a bottom depth as deep as 450 feet. There was no room for error. In addition, two members of CDD CHARLIE, BU1(SCW/DV) Donny Wedekind and CM2(SCW) Ryan O'Toole, provided support to the SPAWAR Marine Mammal Unit using LARC's and small boats to recover practice rounds and targets for the exercise.

SW1 Sligo installing cable tags, PMRF Kauai, HI.

SW1 Sligo inspecting installed split pipe, PMRF Kauai, HI.

BU2 Ramos cleaning deep water buoy, Niihau island, Kauai HI.

When crossing the pristine Hawaiian beaches on your way to work certain unique challenges can present themselves. A mother sea turtle decided to lay her eggs on the beach next to the only landing zone for the Det's equipment. Base environmentalists put up a safety barrier and with careful maneuvering, day to day operations were not affected. This was a great example of environmental stewardship by the US Navy, and the UCT TWO Seabee's were happy to report that after 7 weeks of anticipation, all of the hatchling made it safely to the ocean.

The Seabees of Det CHARLIE worked 6 days a week to take advantage of the favorable weather conditions, completing over 170 dives totaling over 70 hours of bottom time, ensuring the range would be ready for the exercise.

CE2(SCW/DV) Daniel Lehne, project supervisor for the annual maintenance of PMRF, had this to say "Our Seabee divers performed a variety of tasks from drilling stabilization points, replacing zinc anodes and placing hundreds of pieces of split pipe to protect the sensitive acoustic range cables from the sea state. During the winter months, the rough wave action will move the cable across the sand, rock

BU1 Wedekind installing bolts on split pipe, PMRF Kauai, HI.

CEC (SCW/MDV) Terry Juergens installing split pipe on cable, PMRF Kauai, HI.

SW1 Sligo diving on J-box, PMRF Kauai, HI.

SW2 Oswald preparing split pipe for installation, PMRF Kauai, HI.

SW2(SCW/DV) Cody Oswald enjoys the busy deployment schedule, he had this to say "I love my job. The work is hard, but it's never the same thing twice. What we do has a direct impact to the Fleet, whether it's here at the largest training range in the Pacific, Fleet moorings in Japan, joint training with foreign military's or maintenance of Anti-Terrorism barriers at Fleet concentration areas."

and coral, stripping off the protective covering potentially destroying the cables. The work we do here saves the Navy hundreds of thousands of dollars in maintenance costs compared to a civilian company, and millions in replacement costs if the system were to go down." SW1 Nate Terrazas added, "This is the premier training range for the Pacific and the work we do here contributes directly towards Fleet readiness."

According to LT Sam Williams, a NAVAIR Integrated Project Team Lead overseeing work on the range, "Their (UCT TWO) work is a significant benefit to the Pacific Fleet for several reasons. Most importantly the BARSTUR range is a valuable training asset to the surface, air and subsurface components of the Fleet. Also, by extending the life of the range, UCT TWO's work saves money for the Navy. The alternatives would be decreased training capability or a total range refurbishment, which could cost the Navy upwards of $50M. The UCT TWO skill set is unique because the unit has expertise in both construction and deep sea diving. This allows the unit to perform quality construction work in the hazardous ocean environment, where the BARSTUR range is located.

Fulfilling their mission of supporting the Fleet and Marine forces in the PACOM AOR, UCT TWO's maintenance of the training range is the first stop on a 6 month deployment that will take them from Kauai to Japan to the south Pacific and Naval Region Northwest.

The world's largest international maritime exercise, RIMPAC provides a unique training opportunity to twenty-two nations, 42 ships, six submarines, more than 200 aircraft and 25,000 personnel. RIMPAC takes place in and around the Hawaiian Islands. RIMPAC helps participants foster and sustain the cooperative relationships that are critical to ensuring the safety of sea lanes and security on the world's oceans. The relevant, realistic training syllabus includes; amphibious, gunnery, missile, anti-submarine and air defense exercises. Additionally, it utilizes counter-piracy, mine clearance, explosive ordnance disposal and salvage operations.

EAC (SCW/DV) Blair Mercado Underwater Construction Team Two, Construction Diving Detachment CHARLIE's Officer in Charge.

Crossword Puzzle Answers

ACROSS:
3. CNO
6. thermal
8. dive computer
10. saturation
11. oxygen worker
12. ascent
13. bilge keel
14. fast
15. dynamic positioning
16. decompression

DOWN:
1. EEHS
2. warm
3. cold
4. reccurance
5. level two
7. defibrillator
9. full face mask

The Old Master

Stop, Look, Listen, Think, and Act. This was an acronym Master Diver (MDV) Matteoni use to preach during advanced diving supervisor training for MDV candidates prepping for MDV evaluation. I will never forget this advice from the Old Master. So as my career comes to an end, I can't help but STOP, think back to when I was seven, and couldn't wait for Sunday nights to watch the TV show called 'The Underwater Odyssey of Commander Jacque Cousteau'. I was so inspired by this show, that summer I cut several yards of grass to earn enough money to purchase a pair of fins and a dive mask for the family vacation. My first breath hold dive was at a pool in Daytona Beach, Florida. Man, did it pay big dividends; a quarter, two dimes, and lots of pennies. The life guards would toss money into the pool for kids to find everyday during the summer. I knew then that diving was my passion, and had no idea this was the start and pursuit of the Master Diver qualification / Insignia known as the FATPIN.

Command Master Diver
EODTECHDIV NDCM Gary Furr

At USN Basic Training we were introduced to the Navy's values of HONOR, COURAGE and COMMITMENT. You have to have the courage, be committed mentally and physically to be selected for Navy Diver training program. It was at Second Class Diver training where I knew what I wanted to be when I grew up. The first morning I reported to 2nd Class diver training I remember someone saying, here comes the Master Diver. Everyone stopped what they were doing and automatically came to attention. It was this instant respect for someone who most of us didn't know but knew it was in our best interest to pop tall. It was MDV Dick Arlington, a man of infinite diving knowledge and wisdom, and that was the kind of HONOR I was looking for.

So how does one young man passionate about diving come to be one of the Navy's top diving and salvage experts? The formula! The Formula, (L x M+ T = H/P), you won't find it in the USN dive manual, the Salvage handbook or the NDSTC diving formula booklet. However you will find these values being practiced in our CPO mess and the Ward room. The values in this formula if executed at highest possible means will bring honor and pride (H/P) in your adventures.

Dalton's Law states ; "The total pressure exerted by a mixture of gases is equal to the sum of the pressures of each of the different gases making up the mixture, with each gas acting as if it alone was present and occupied the total volume". So as a metaphor think of the gases in Dalton's law as the values, the mixture as the formula and the total volume as H/P. We all know what happens when the gas mix is not what it should be.

LEADERSHIP (L) is most critical value to success! Every Master Diver must have an above average value of leadership. Every member of the dive team puts their trust in the MDV's actions and it is essential to the success and safety of the dive mission. Teams who share great success are directly influenced by successful leadership. Your team could be the best of the best but if the leadership in charge lacks confidence, direction and intuition, the team will never get the recognition for its hard work and commitment. If you have a goal to achieve you have to take the initiative to find the leadership with the knowledge to show you how to achieve it.

MENTORSHIP (M) is the most valuable trait of a good leader. It is the main catalyst to effective teamwork. Your personal success is greatly depended on those who are dedicated to training and career development. One of the best mentors I ever had gave me homework every night in preparation for MDV evaluations. Sometimes I could not figure out the problem and in lowering my pride would have to ask for his help. I can still hear him say, "If I tell you everything I know then you would be as smart as me". This was RAGMANS (MDV Radecki) way of getting you to try harder and you never forgot it. I got it! MDV's like Rags, Hernandez, Shoulders, Leckner, Matteoni and many more took great pride in this value.

TEAMWORK (T) is a cooperative effort by the members of a group or team to achieve a common goal. Navy Divers are taught this in the very beginning phases of their training. This is the heart and soul, and lives depend on it. A team with high morale, care, and respect for one another are most confident in their abilities to succeed in the most challenging endeavors. Safety in the Navy's diving programs depends heavily on teamwork. There is no such thing as a one man dive team and there is no Navy Diver who accomplishes a dive mission by his or her self. I am sincerely grateful for the Navy Divers that I have had the opportunity to share this value with.

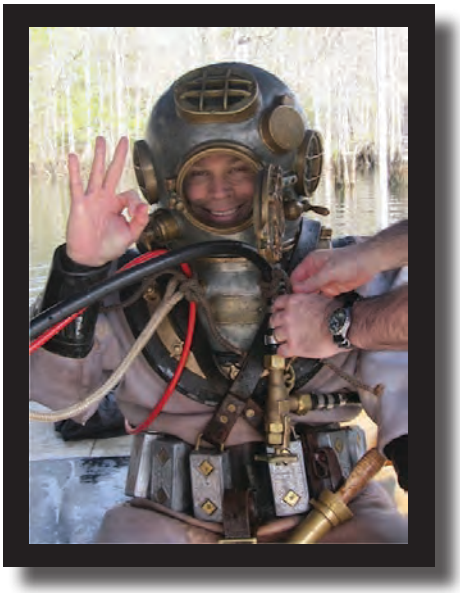
HONOR / PRIDE (H/P). Most recently I spoke about the pride and honor of a shipmate / brother going ashore who always inspired me to work harder, MDV Jeff Royse. The honor in which Jeff had the privilege of serving, was the same honor talked about in the Movie "Men of Honor", and has been passed down by MDV's like Brashear, Radecki, and Ledger. Every Navy Diver has been given the privilege and the opportunity to experience what the value HONOR feels like, and the PRIDE it instills in all of us. No matter what your badge of honor is, please take the time to Stop, Look, Listen, Think and Act when representing the honor our men and women in the U.S. Navy, and this grateful nation have worked so hard to establish and given us the opportunity to achieve.

So after SLLTA and as my (A) action I have used personal FATPIN appropriations to purchase two coins in recognition of the leaders, mentors, and team mates of whom I have had the highest honor of serving and a heart of pride that will always be HooYah Deep Sea. These coins are tokens of my sincere appreciation (TOA) from me to those who have supported this awesome USN diving adventure and career. These TOAs are called Honor and Pride. It has been an absolute honor to have served with the men and women of the Worlds greatest Navy. God Bless America!

SUPDIVE SENDS ...LCDR Sam Brasfield

I am LCDR Sam Brasfield. I reported to NAVSEA as Supervisor of Diving (SEA 003B) in late July from the Naval Diving and Salvage Training Center. Boy, what a treat it was to serve as the Executive Officer of the world's premier diver training facility! I know for a fact that all the services are getting the best trained divers possible. First off, the caliber of students showing up at NDSTC is top notch. The students are smarter, stronger, and more motivated than ever before. Yes, they do come to school younger (direct accessions) but there are many benefits to that as well. Secondly, these men and women are being trained by the best of the best. The instructors and staff at NDSTC never ceased to amaze me with their motivation and ability to train Divers. Thirdly, the facilities and training aids are world class. NAVSEA and NAVFAC have fielded many training aids that take the students from the crawling stage to the walking stage, prior to sending them to the Fleet where they will be required to run. If you have not seen the JATF (Joint Aquatic Training Facility), the Multi-Panel Projects (MPP), or the new salvage project you must get to Panama City to see them. I was also fortunate enough to work for a former SUPDIVE, CDR Michael Egan. In my 24 years of being in the U.S. Navy, he mentored me better than any other and the learning never stopped. He gets it! Thanks Sir!

I am excited to be here and look forward to all the challenges that will come with the job. I have to be honest, I am a bit overwhelmed with all there is to learn and do in this position. But, if I weren't overwhelmed I would wonder if I was in the right job. After all, challenges are what we (Military Divers) thrive on. It is a great time to be in diving! After 11 years in the desert many have forgotten that over 70% of the Earth's surface is covered with water. Following the CNO's tenets "Warfighting First, Operate Forward, Be Ready!" we at 00C3 are going to stay focused



on what we need to do for now and the future to keep military diving relevant.

I do have big shoes to fill. The previous SUPDIVE (CDR Mike Runkle) is a very smart guy who was involved in many things. CDR Runkle worked many issues, and one of his big projects was laying the ground work for a strategy that will increase the actual work time of the diver and encourage international collaboration. The United States has done some amazing things in diving but other countries have much to offer us. This cooperation will benefit us all. CDR Runkle took command of MDSU TWO in early September, and there is no doubt he will do great stuff and document the requirements to help bring our diving forces into the 21st century.

I would also like to say goodbye to Mr. Jim Fenner (NAVSEA 00C3) who retired at the end of August. He gave 47 years to serving this great Nation with most of it in U.S. Navy Diving. Although I only worked with him for a few weeks, I could tell by his demeanor and thoughtful approach that he is one of the best. He will be sorely missed and I hate that I did not have more time to work for him. His last words to me were, "Do what you know how to do and take care of those Divers out there." And that is what I intend to do.

As Supervisor of Diving, my job is clear. I am tasked with setting diving policy, ensuring that Divers have the right equipment and the correct diving procedures. I serve you (the Military Diver). With that, a little bit about the philosophy I bring.

I believe that we should not be in the business of telling people "no" but instead finding out how to tell them "yes". My two sons have heard from birth "Brasfields don't say can't". Of course they use that against me when I tell them they can't do something they really want to do, but I honestly believe if something is ethical, moral, and legal there is a way to do it. I do realize there are laws of physics to consider as well. There is also something known as "acceptable risk". Let's face it, what we do is risky and the rules are set to mitigate that risk. However, the rules that are set don't always cover every scenario. Don't think for a second that I am not going to ask the hard questions, but I do want to be the solution and not the problem.

I am a forward thinker. If you can conceive it, and get your leadership to believe it, we can achieve it. Push the requirements up your chain! And if you have a solution to that requirement, send that up as well. There is a process known as JCIDS (Joint Capabilities Integration and Development System) which is a methodology that uses top-level strategic guidance as a basis for identifying and describing shortfalls in joint warfighting capabilities. Navy Diving is going through that process starting with a CBA (Capabilities Based Assessment). However, the process takes time and many requirements start with the people doing the work. Steve Jobs said, "A lot of times, people don't know what they want until you show it to them." There may be some truth to this in regard to consumer electronics. However, I know that the most innovative thinkers the US Navy has are the Divers, SEABEES, SEALs, and EOD Techs. I am here to serve you! Help me, help you!

"Down In the Sea to Work",

a Tribute to Graduates of U.S. Navy Dive Schools, Past Present & Future

By: Ed Delanoy, CWO4 (Ret)

This is about military diving, Deep Sea Diving, the wearing of equipment almost too heavy to walk in, let alone work in underwater. Although not all military diving encompasses the wearing of some sort of deep diving rig, military diving is in itself the "stuff" that legends, tall tales and "Sea Stories" are made of, and when visible in national calamities, what newspapers write about. By the very nature of the work, the claustrophobic feel of the heavy unwieldy equipment, the dark often cold or zero visibility dives make the men and women of this profession exceptional in the same sense as an astronaut, pilot, or firemen. Like these other professions, it is always obvious who the graduates of Navy Dive School are. They stand out; they conduct themselves with a self-assuredness that is a requirement for those that meet danger and must master the very human instinct not to go into dark and dangerous environments. I heard it said once, "In a room full of boisterous men and women, how can you find the Military Diver among them? Just wait and they will tell you who they are!" Braggadocio? Perhaps, but more accurately, the feeling that goes through one's mind having met your fears, mastered them and are now personally confident that when asked, you can do anything by yourself. This is all perhaps nostalgic

Hollywood drama some would say. I say when the history of Navy and Military diving is studied and well known, when you hear the stories of routine risk of one's life and limb, when faced with the option that often you must put your life into the hands of other "trained" professionals, I say these Divers are this way, because they deserve to be. Like all "ALPHA" type personalities, Navy/Military trained divers covet the challenge, seek out that which is edgy, gravitate to those we recognize as having "Been there-done that!" For these select men and women graduates of Navy Dive schools, there has been a continuing daily commitment to the nation's military mission in all four corners of the world. Through the efforts of retired Navy Divers, and in recognition of this fraternity of men and women, a statue of the traditional Mark V Diver is being erected at the Naval Diving and Salvage Training Center on 26 October, 2012. This commemoration of all military Divers will be a new slice of Navy Diving history that will stand for all time, a representation of hard training, difficult working conditions, tales of daring-do, individual heroics and the daily toil under the seas of this world. This statue honors all those who graduated from Navy Dive Schools, and most directly, "All those who go down in the sea to work".

Mr. Ed Delanoy, CWO4 (Ret) is a Hyperbaric Division Officer at NDSTC, and newly elected President of the Diving Association Of Wise Guys (DAWGs).

Photo above: Paul Guiver demonstrating the size of Jake

DIVE WAIVER PROCESS

Diving waivers are a request from the Commanding Officer to OPNAV N97E3 via 00C for technical review and are for situations that are outside of the normal guidance of the OPNAVINST 3150.27B and the US Navy Dive Manual.

1. Read OPNAVINST 3150.27B
2. Ask yourself is a waiver required?
3. Give compelling justification why the waiver is required.
4. Outline the ORM and mitigation plan.
5. Include mission start and completion date.
6. Have Commanding Officer or Acting sign the waiver.
7. Contact NDCM (MDV) Phillips @ (202) 781-1451 for guidance, prior to submitting the waiver request.
8. Scan to PDF and email to NAVSEA 00C: arne.phillips@navy.mil, Samuel.brasfield@navy.mil, and glenn.moffat@navy.mil
9. Keep it unclassified if possible, if not send via SIPRNET. Send a note via NIPR requesting we check SIPR for incoming waiver.
10. Submit waiver request as early as possible.

Remember, the more information provided and the earlier it is submitted, the better the chance the waiver will receive a favorable recommendation and approval.