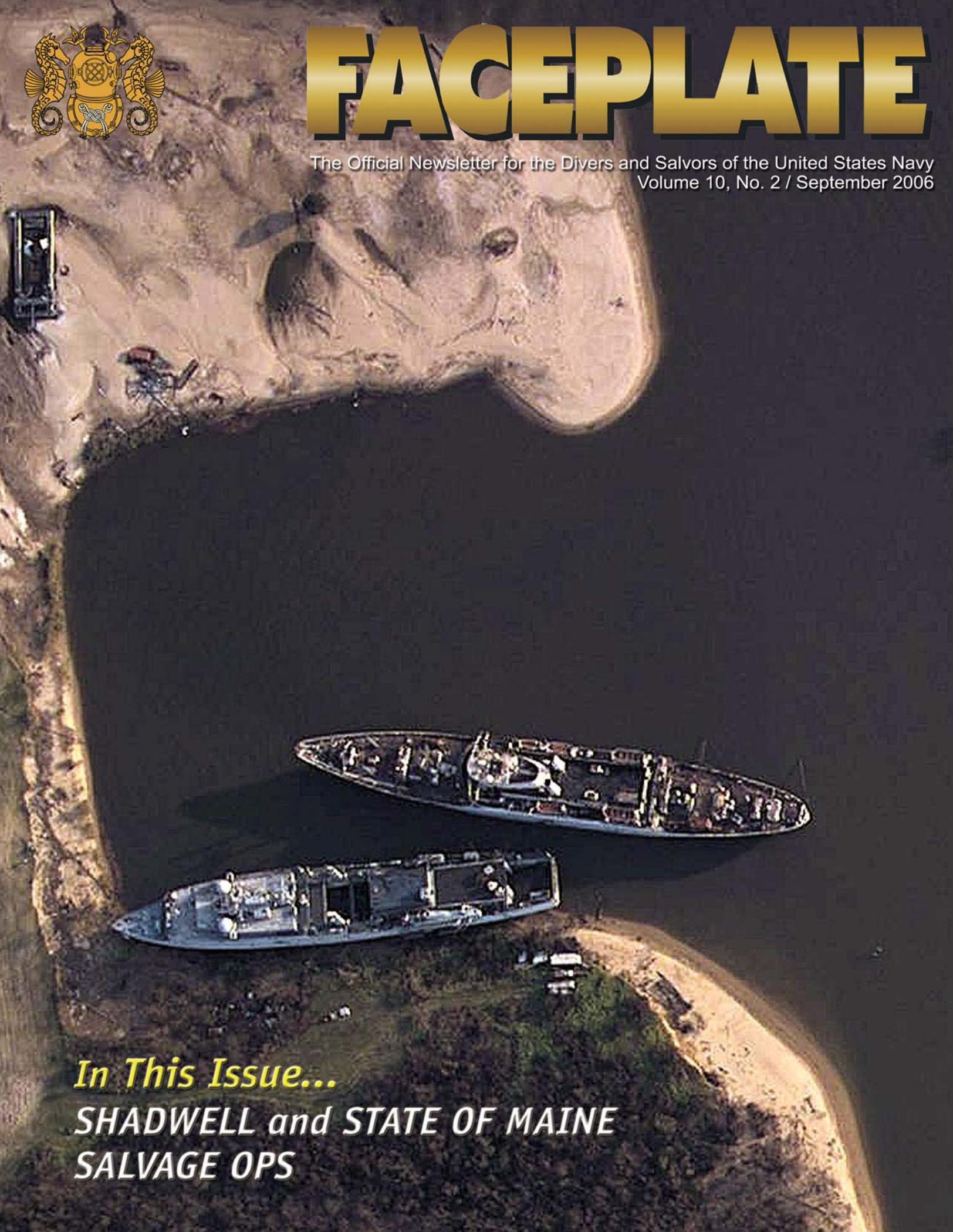




FACEPLATE

The Official Newsletter for the Divers and Salvors of the United States Navy
Volume 10, No. 2 / September 2006



In This Issue...

**SHADWELL and STATE OF MAINE
SALVAGE OPS**

SUPSALV SENDS

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

Articles, letters, queries and comments should be directed to the Commander, Naval Sea Systems Command, NAVSEA 00C, 1333 Isaac Hull Ave. SE Stop 1070, Washington Navy Yard, DC 20376-1070. (Attn: FACEPLATE). Visit our website at <http://www.supsalv.org>. To view an electronic version of Faceplate in PDF format go to our website and click on the word "Faceplate" located in the left hand column. This link will direct you to our list of Faceplate issues.

Captain Jim Wilkins, USN

Director of Ocean Engineering
Supervisor of Salvage and Diving
NAVSEA 00C
james.r.wilkins@navy.mil

Captain Mark Helmkamp, USN

Supervisor of Diving
Editor In Chief
mark.helmkamp@navy.mil

LCDR Jim Bladh, USN (Ret.)

Managing Editor
jimbladh@aol.com

NDCM (MDV) Danny Boyd, USN

NDCM (MDV) Fred K. Orns, USN
NDCM (MDV) Brian Pratschner, USN
Fleet Liaison Editors
danny.boyd@navy.mil
frederick.orns@navy.mil
brian.pratschner@navy.mil

Zoya Gorbunova

Production Editor
zgorbunova@roh-inc.com

Otto C. Adams

Graphic Designer
oadams@roh-inc.com

Note: This "SUPSALV SENDS" was written several weeks ago. Just as this edition was going to the press, we learned of two diving deaths in one of our sister services, and a diving accident in our own. Read carefully, and think hard about your own diving locker.

Diving Supervisors, muse on this one: How can "success" be our *adversary*?

Ordinarily, success is an ally. We strive and work hard to achieve success; it doesn't come easily. We're given tough jobs, and we're frequently rising to overcome what ever challenges get in our path to success. So when divers seem to once again inevitably accomplish the impossible, and rack up yet another success, how can that be viewed as adversarial to our Navy Diver community?

Here's how. Get enough successes under our belt, and pretty soon we begin to feel entitled to the next success. We begin to think success is inevitable. A disease called COMPLACENCY begins to germinate in the fertile culture of continued operational success. And as soon as COMPLACENCY takes root, success gets easily overwhelmed, and failures occur. It might be only little failures at first – oversights or omissions which get addressed as one time events and don't yet really deter from successful missions. Or it could be a significant "near miss" that everyone on the dive side recognizes, but since it didn't result in a major mishap, it goes unreported, and worse, unexamined. You've been there before...everyone looks around kind of sheepishly at each other, and gives silent thanks nothing bad really happened. Or worst of all, there may be no little failures to provide any warning... COMPLACENCY may lead to a compromise of safety so sudden and so severe that one of our divers is killed. It has happened before.

So how do we kill the opportunity for COMPLACENCY to infect the Navy Diving program? Lots of ways, and you folks on the waterfront each day are in the

best position to accomplish it. So I'm offering this challenge to each dive locker's senior leadership: Within the first week of reading this article, take a seemingly unnecessary "ten foot safety stop" by gathering your entire dive locker together to explore ways in which your recent successes may be setting you up for failure. What tried and true procedural steps are getting sloppy? What near misses or close calls happened that nobody really identified? Most importantly, what informal lessons learned have "root causes" which were never identified but need to be fixed before you jump back in the water? Our continued success is a great strength, but if not kept in perspective, success rapidly becomes a liability...particularly if the success masks some of the initial symptoms (inconsistent procedures, inadequate training, near-misses, etc.) of COMPLACENCY.

So let me lead the way with my own "ten foot stop" by relating a personal near miss event...one for which I still thank God didn't lead to catastrophe. It was December 1987 in a southeast province of the Republic of the Philippines' Luzon Island. A Marine Corps CH-53D on a mercy mission to provide rice to some typhoon-stricken villages was forced to conduct an emergency landing in a stream bed alongside the village due to a "chip light" alarm in the main rotor transmission. The first recovery attempt through "airborne" lift using slings connected to a sister CH-53E failed, and the stricken CH-53D got emergency "pickled" and dropped into a relatively shallow river bed in the same vicinity. Upon being dropped in the river, the CH-53D rolled over (rotor blades had been

("SUPSALV Sends" continued on p. 26)

In This Issue

SUPSALV Sends	2	MWSA Book Review - U.S. Navy Diver:		Salvage OPS	22
Crane and Rigging Safety	3	Performance Under Pressure	8	Divers Recall	26
Women Divers: Part of the Navy Team	4	KRASIN	9	Hard Hat History	27
Joint Operational Training	4	Kirby Morgan Helmets	11	From the Managing Editor	28
Divers' Charity Golf Classic	5	Sea Hunt	14	The Old Master	29
To Be or Not To Be: Continuous Educator	6	40 th Anniversary of Palomares	15	Crossword Puzzle Solution	30
Gulf Coast Maritime Domain Awareness Initiative	7	Crossword Puzzle	20	Red Diver; Topside	31
		Cert Notes	21	Conference Announcements	36

Cover Photo: Overhead view of EX-SHADWELL (LSD 15) and T/V STATE OF MAINE following landfall of Hurricane Katrina.



Crane And Rigging Safety

On 2 June 2006, a crane team was assigned to assist the divers with the installation of a submerged temporary platform. The team consisted of two divers, a Rigger in Charge (RIC), a Crane Operator (CO) and a Dive Supervisor (DS). Diver 1 was to be positioned with the platform on the bottom and would attach the rigging gear to the platform and chafing gear to protect the rigging gear. Diver 2 was to be positioned midship, next to the hull, to ensure that the rigging did not come into contact with the hull during the lift. The dive team would be utilizing radio communications (Round robin, all team members have continuous communications with each other, which include a Com's box at the dive control station, the RIC's head set, and head sets in the dive hats) during crane operations. Two wire rope pendants had been substituted for the Kevlar slings typically used. The substitution was made due to the wire rope's strength and durability and the concerns with the known chafing points around the attachment points. The technical work document (TWD) was a non-deviation document and did not authorize this substitution (**Problem 1, Severity Level 2**). The team did not recognize the need to mitigate the potential risk of the wire rope pendants twisting during the lift (**Problem 2, Severity Level 2**). This lift had been accomplished with Kevlar slings several times; this was the first time that wire rope pendants had been used to perform it.

When the Divers entered the water, Diver 1 proceeded to attach the rigging gear to the platform and install the required chafing gear. After completing this, he radioed something to the effect "All clear" or "Good to go" to Diver 2 and the RIC. Diver 2 had his left hand on the ship's hull and his right hand on one of the wire rope pendants to verify the distance between the hull and the wire rope pendant as the wire rope pendants were tensioned. This was due to the low visibility in the water. Diver 2 responded

to Diver 1 that there was at least 6 feet of clearance between the wires and the ships hull. Diver 1 then directed the RIC to signal the CO to hoist up and tension the rigging gear. As the rigging gear was tensioned, Diver 1 noticed that the chafing pads protecting the rigging had shifted and needed to be adjusted. He directed RIC to stop the lift and signal the CO to lower the rigging.

Kevlar slings in the TWD. A pen and ink change was made to the TWD reflecting concurrence with the substitution. Cog Tech Code recognized that the wire rope could potentially twist in this configuration but did not see a reason for concern in this application (**Problem 2 repeated, Severity Level 2**).

Probable Cause: The team did not recognize the potential of the wire rope

The team did not recognize the potential twisting together or mitigate the risk associated with it.

While Diver 1 was making adjustments to the chafing, Diver 2 positioned himself with his left hand on the ship's hull and his right hand on one of the wire rope pendants connected to the platform. When Diver 1 completed the adjustments to the chafing gear, he radioed the team "All clear" and requested the RIC to signal the CO to come up on the crane hoist again. Diver 2 acknowledged that tension was going to be applied to the rigging but did not hear the RIC's response "Coming up" indicating that tension was actually being applied to the crane. As the tension was applied to the rigging gear, the rigging in the crane hook began to spin and the RIC stopped the lift. When the wire twisted, Diver 2's right hand was pulled into the pinch point between the twisting pendants and two of his fingers were injured (**Event**). At this same time, Diver 1 heard an abnormal sound from Diver 2 and asked if he was okay. Diver 2 did not respond. Again Diver 2 was asked if he was okay. Diver 2 then replied "No" and was headed towards the surface. When he arrived at the surface he was assisted onto the barge and given First Aid until emergency medical personnel arrived and transported him to the hospital.

Engineering was later contacted about substituting wire rope pendants for the

pendants twisting together or mitigate the risk associated with it.

Contributing Factors:

- a. Rigging gear was substituted in a non-deviation technical work document (TWD) without authorization from the cognizant technical code.
- b. Team used the lift sketch but had not thoroughly reviewed the text of the TWD.
- c. Supervisor frequently used TWD's that allowed for substitution of longer, stronger gear.
- d. Team thought that the wire rope pendants were a good substitution for the Kevlar slings due to the known chafing points on the load.
- e. First time lift made with wire rope pendants in this rigging configuration.
- f. Lack of visibility.
- g. Lack of experience with small angle, long pendant rigging configurations.

Assessment of Damages: There was no material or property damage as a result of this accident. Injuries to the employee included a pinched right ring finger and a broken right middle finger.



Women Divers: Part of the Navy Team

By Bill Galvani

The Naval Undersea Museum in Keyport, WA, opened a new exhibit "Women Divers: Part of the Navy Team" on July 21, 2006. Fourteen of the divers featured in the exhibit have been inducted into the national Women Divers Hall of Fame. Captain Bobbie Scholley, USN (Ret.), an experienced Navy diver who has commanded afloat and shore Navy diving units, was the principal speaker at the opening.

All Navy divers, male and female, are extraordinarily capable people.



EMCM/MDV Mary Bonnin, now retired, is the only woman to qualify as a Master Diver.

Women first qualified as Navy divers in 1975. Since that time they have worked a full range of diving activities from routine cofferdam work to ship and aircraft salvage to the advancement of undersea medicine. The exhibit uses diving equipment and wet suits, photographs, video, and oral histories to describe, in the women's own words, the challenges they have faced and the accomplishments they have achieved.

"Women Divers: Part of the Navy Team" will be on exhibit through



Captain (Sel.) Bette Bolivar Bush, former MDSU 1 CO, is currently deployed to Afghanistan in support of Operation Enduring Freedom.

July 30, 2007. Admission is free.

For additional information, please call (360) 396-4148 or visit our website at <http://naval.undersea.museum>.

Bill Galvani is the Director of the Naval Undersea Museum in Keyport, WA.



Joint Operational Training USN and USCG Assets Train in San Diego

By CWO4 Rick Armstrong

USCGC GEORGE COBB (WLM 564) and Navy Divers from Southwest Regional Maintenance Center (SWRMC), Mobile Diving and Salvage Unit One Detachment One and Explosive Ordnance Disposal Mobile Unit Three recently participated in a joint Service diving exercise off the coast of San Diego, CA.

This joint training was the first of its kind with U.S. Navy divers utilizing a Coast Guard buoy tender as a diving platform. The four-day operation encompassed the on-load and set-up of the EODMU Three Recompression chamber, MDSU One Det One Light-weight Diving System, and USCGC COBB laying a two point moor in the vicinity of the sunken Canadian Destroyer HMS YUKON.



Numerous surface-supplied dives ranging in depths of 90 to 120 FSW were conducted with a total bottom time of 487 minutes. Master diver candidates and advance dive supervisors were evaluated and trained along side Coast Guardsmen who observed Navy deep sea diving evolutions for the first time.

The officers and crew of USCGC GEORGE COBB provided superb support and demonstrated expert seamanship during all sea and anchoring evolutions. USCGC GEORGE COBB's Commanding Officer LT Pete Niles commented on the professionalism and "Espirit de Corp" of the Fleet diving community, stating he would gladly serve with Master Divers Hugh Scully and Vern Malone on any diving and salvage mission.



This joint service operation provided a theory of concept for future diving and salvage training using Navy and Coast Guard assets and could prove to be a cost saving, inter-service operational mission concept of the future.

CWO4 Rick Armstrong is Diving Branch Head at SWRMC Code 990.



Divers' Charity Golf Classic

By Paul McMurtrie

The 4th Annual DC Diver Charity Golf Classic was a huge success. The event was organized by a group of Washington, DC area Navy Divers and those who support or work in the Navy Diving community and was held at Andrews Air Force Base. We get together once a year to golf, have a good time raising money for a worthy cause, and catch up with old friends. Although the event is not sponsored by NAVSEA or the U.S. Navy, traditionally the majority of golfers are NAVSEA personnel and retired Navy Divers living and working in the DC area.



Current and past NAVSEA OOC System Certification Authorities caught in the act stealing golf balls.

cial Naval Academy Golf Bag that was donated by Mr. Grant Thornton, who works in the SSGN program office at NAVSEA.

Sponsorships are essential to the financial success of the tournament, as all net proceeds from this tournament go directly to the Navy-Marine

Corps Relief Society (NMCRS), www.nmcrs.org. The NMCRS has helped junior Sailors and Marines with family emergencies and assists families of Sailors and Marines when a service member is injured or wounded in the line of duty. Additionally, the NMCRS played a leading role in the support and relocation of Navy and Marine Corps families displaced by hurricanes in the Gulf area.

Last tournament's sponsors were extremely generous. Their contributions added a touch of class to our humble event and provided the lion's share of our contribution to the NMCRS. Our diving contractor sponsorships were the very generous. Their cash donations surpassed our loftiest expectations. We would also like to especially thank Retired Navy Diver Mark Dickinson, from Legg Mason in Baltimore, who came through for us again this year by providing golf balls and "goodie bags" for the players.

After lunch and some socializing, the award ceremony followed as the "Master of Ceremonies" Retired Sat Diver Al Porteus entertained us with his wit during the presentation of the awards. Prizes for longest drives and closest to the pins were awarded. The winning team each year earns their names engraved on plaque attached to the "Captains Cup", an authentic MK V helmet that resides in the SUPSALV's office. Last year's winner was a team of "ringers" from outside the

Navy Diving community (no sour grapes here). This year it is imperative that a team of Navy Deep Sea Divers be assembled to reclaim the Captains Cup for the Navy Diving Community and regain our dignity.

After all earnings were counted, we were honored to present a check for \$3,000.00 to Brigadier General Fritz Warren, USMC (Ret.), of the Navy Marine Corps Relief Society. BGEN Warren gave a moving speech on the accomplishments of the NMCRS this past year and assured us that our efforts were for a truly noble cause. BGEN Warren closed with a heartfelt thanks for the donations and for remembering the NMCRS.



Golf committee member Paul McMurtrie presents a check for \$3,000.00 to Ret. Brigadier General Fritz Warren of the Navy Marine Corps Relief Society.

The golfers assembled early in the morning to register with Miss Kristina Mann from the Virginia Class Submarine program office and purchase their "Mulligans" and support the numerous raffles and drawings available. Golf committee members MDVs Steve "Fore" Smith and Brendan "I'll Take My Mulligan Now" Murphy did an outstanding job selling these opportunities to the golfers. Steve's "Yard of Rope" was a prolific seller and provided a mighty advantage to many of us golfers possessing exorbitant handicaps. Additionally, we raffled off an offi-



Golf committee members McMurtrie, Smith, and Murphy selling Mulligan tickets behind the "Captains Cup Helmet."

This year, the DC Divers Charity Golf Classic will again be held at the courses at Andrews Air Force Base on October 6th, 2006. Enclosed you will find a flyer, sign-up sheet, and sponsorship form. Mark your calendars and join us for a round of golf to raise money for the Sailors, Marines, and their families in need. If you know of any potential sponsors, we would appreciate all the help we can get.

D.C. Divers Charity Golf Classic Committee Members are Paul McMurtrie, Al Porteus, Brendan Murphy, Steve Smith, and Kristina Mann.

Paul McMurtrie is currently Deep Submergence and Saturation Diving Systems Certification Manager at NAVSEA OOC.

Every year this tournament has continued to grow in size and stature. The committee members put in many hours of hard work, on their own time, to ensure all of the golfers have a great time, while helping out the Navy and Marine Corp community. On behalf of the Office of the Supervisor of Salvage and Diving, I would like to take this opportunity to thank those people who made this tournament a great success last year, and are continuing their sacrificial service this year.

Sincerely, Capt Jim Wilkins, SUPSALV

To Be or Not To Be: Continuous Eductor

By Geoff Healy

Four years ago it was brought to my attention that a direct conflict existed between the NAVSEA Underwater Ship Husbandry Manual (Chapter 16, Cofferdams) and the NAVSEA SSN 688 Class Ship Systems Manual (Main Ballast Tank Topside Access Procedures, OI 637-12). The OI 637-12 requires continuous eductor operation to confirm a seal on the main ballast tank grate blanking patches. Chapter 16 requires that patch eductors be secured after de-watering is complete and a differential pressure seal of the patch is achieved. I became a student of the history of main



Diver handling bouyant patch on the surface.



Large four section patch assembly on the surface.

ballast tank blanking patch applications at many different maintenance activities. My assessment was that the established procedure (OI 637-12) was based on historic need to continuously de-water leaking patches which had never been designed to fit the SSN 688 hull form to achieve a differential pressure seal. I was politely told by many with experience in main ballast tank blanking that I was nuts!

Four years and a challenging patch design and fabrication effort later, I am happy to report that, at least as regards to main ballast tank blanking patches, I am not nuts! Recently-completed test application of the



NAVSEA Engineer going into MBT.

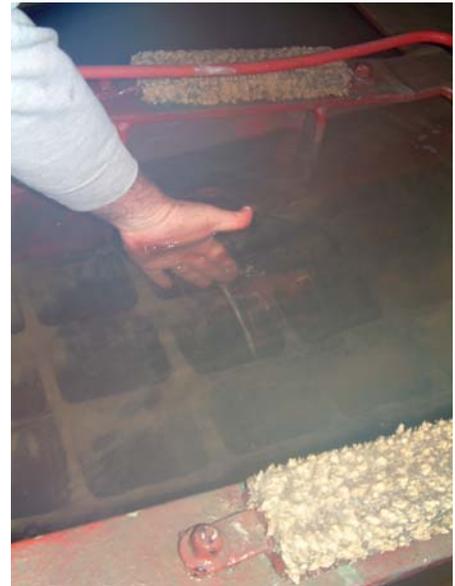
purpose designed and built patches for blanking the forward main ballast tanks demonstrated an excellent differential pressure seal with all de-watering eductors secured. Three days after de-watering eductors were secured topside entry into main ballast tanks 3A and 3B confirmed water level in each tank was roughly six inches above the deepest section of flood grates. Topside entry in main ballast tanks 2A and 2B confirmed slow leak flooding to roughly five feet above the deepest section of flood grates. Although slow, I was initially troubled by the greater leakage in tanks 2A and 2B. After de-watering again during topside entry, we were able to confirm the leak path was through a temporary seal on two unused J-bolt holes. The seven lower flood grates on main ballast tanks 2A or 2B are

covered with one long patch assembly made up of four patches bolted together on the pier. I decided it would be easier for the divers to install the long patch assembly with just two J-bolts one in each end of the assembly rather than needing to fish the two middle J-bolts into their

corresponding grates. I authorized use of a simple through-bolted plate compressing foam rubber to seal the unused J-bolt holes. Unfortunately at depth the temporary hole seal rubber was given just enough additional compression to cause the slow leakage through each unused J-bolt hole. These unused J-bolt holes will be welded closed for future operations.

Future plans include revision of OI 637-12 to require use of the new blanking patch configuration and procurement of additional patch sets to support issuance from our East Coast, West Coast and Pearl Harbor ESSM bases.

I would like to thank those who helped me achieve the objective of developing proper main ballast tank blanking patches: Jim Robbins and Mike Putnam of Norfolk Naval Shipyard for completion of the new patch designs for the SSN 688 Class,



Typical MBT 3 water level with eductor secured.

CWO Frank Perna of SUBLANT for his efforts to arrange the new test opportunity, Mike Dastous and the MARMC Alpha dive team for their support of the test installation, and USS BOISE (SSN 764) and crew for their support.

Geoff Healy is currently assigned as Propulsion Systems Program Manager of the Underwater Ship Husbandry Division.



Explosive Ordnance Disposal Team Participates in Gulf Coast Maritime Domain Awareness Initiative

By Journalist 2nd Class Andre McIntyre

Pascagoula, Miss. – The humid Mississippi heat embraced Sailors from Explosive Ordnance Disposal Mobile Unit (EODMU) 12, Det. 10, as they participated in the Gulf Coast Maritime Domain Awareness Initiative (GCI). This six-man EOD team embarked on Naval Station Pascagoula after leaving their home at Naval Weapons Station, Charleston, S.C.

The Navy is continually pushing the one Navy concept for full integration between active-duty and reserve components. However, EOD teams have already been doing just that. They rely heavily on each other while working side-by-side to meet team goals.

“EODMU-12 is the active duty component responsible for training the reservist,” explained Senior Chief Construction Mechanic (EOD) Anthony Uzzi. “The mobile unit has five reserve detachments. Each detachment consists of six highly trained divers, who are cross-trained to do other things outside of diving. We de-

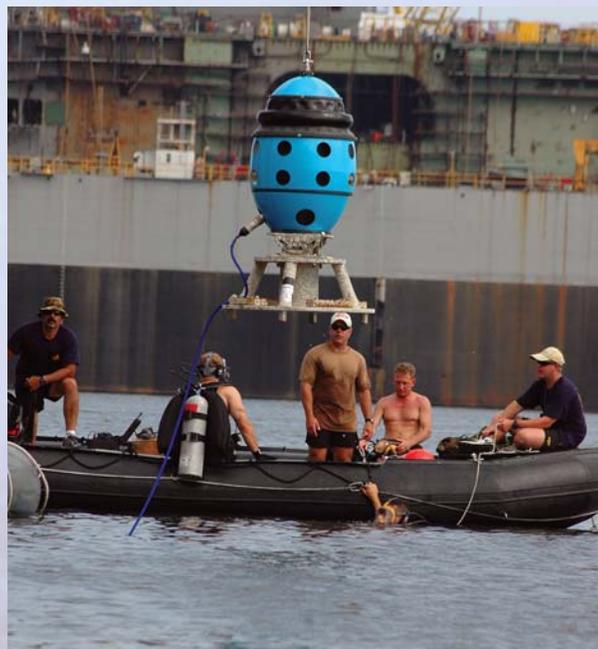
pend heavily on each other to carry out our assigned duties because we are all that we have and when one of us fails our survival rate is diminished. Survival is the name of the game when you are a self-contained team.”

high-traffic areas and hot spots for terrorist activity. Active-duty counterparts depend on the reserve component to step-in and provide professional support, and because of the specialized duties that they perform there is no room for error. “Navy EOD divers are looked upon as the best in the business,” said LTJG Kevin Grant, EOD officer in charge. “We are the underwater bomb squad for the Navy. We operate on land and sea. Our major purpose is the disposal of ordnance, which is a little different from the active duty component, which is trained to disarm ordnance with a process referred to as a Render Safe Procedure. They actually go

in and ‘stop time’ which means to render the explosive device inoperable and eradicate any possible high order explosion. The procedure that the reserve component uses is called Blow in Place. This is where you use a small explosive charge to detonate the ordnance in a controlled explosion. In short we blow the bomb in place with a smaller explosive.”

Ordnance Clearance Detachments (OCD) are tasked with augmenting EOD teams which are responsible for the detection, and identification of explosive ordnance and related devices. This includes foreign ordnance, chemical weapons, biological weapons, nuclear weapons, clandestine improvised devices and all ordnance/devices that may be encountered underwater and on land. EODMU divers are capable of removing ordnance such as mines and other explosive devices, while utilizing SCUBA or MK 16 rebreather.

This unit continues to remain busy and forward deployed and continually training.



Sailors from Explosive Ordnance Mobile Unit Twelve Det 10 prepare to guide the Cerberus Swimmer Detection System into the water at Naval Station Pascagoula.



EODMU 12 Divers during the setting of the MK 7 Deepwater Lift Kit.

pend heavily on each other to carry out our assigned duties because we are all that we have and when one of us fails our survival rate is diminished. Survival is the name of the game when you are a self-contained team.”

Integration becomes more important to EOD teams as overseas commerce continues to blossom in the United States. Ships move about ninety-five percent of all trade acquisitions made in the United States, thus making our coastal waters

“We spent four-weeks in Bahrain supporting the Global War on Terrorism,” said Chief Hull Maintenance Technician (EOD) Jeff Bailey. “While in Bahrain we received training we could not get anywhere else. We trained in the desert as well as in the water, while protecting foreign interest. After spending a little time in Bahrain, it is good to see that our military assets are also interested in things here at home.

Gulf Coast Maritime Domain Awareness Initiative is a Homeland Security Exercise specifically focusing on protecting my country, my people, my brothers and sisters. This exercise will help to coordinate efforts between the Coast Guard and the Navy to achieve a better state of readiness as well as protect our way of life and our freedoms from terrorist activity.”

“Anytime we get a chance to get in the water it is training for us,” said EOD Lt. Jeffrey Myers.

“This is also an opportunity to train with new equipment,” said Uzzi. “The equipment that we will be using is the MK 7, which is a deep water lift system for

mine recovery, the AGA 2G, a full face scuba mask and also wireless in-water communications. The wireless communication system allows crew members top-side to communicate with personnel underwater.”

OCD teams will not only be able to assess their unit capabilities, they are also key players in the overall operation of GCI.

“Our main purpose in this exercise is the deployment of the ‘the egg’ (Cerberus Swimmer Detection System),” said Myers. “The egg is a device that is designed to be a high-tech watchdog protecting our ships and coastline from terrorist insurgence. We will see how well it detects swimmers beneath the water and how well those monitoring the system can differentiate between terrorist (swimmers) and other creatures that travel underwater as we play out our scenarios.”

With the efforts of EODMU-12 Det 10, members of this exercise will be able to explore techniques and the interaction of federal (including DoD), state and local agencies preparing for and responding to terrorism in a maritime environment. In addition, the exercise is designed to provide a dynamic learning environment at both the management and tactical levels in support of local, state and national response plans.



LTJG Kevin Grant of EODMU-12 Det 10 tends a diver line during the insertion of the Cerberus Swimmer Detection System into the water.

“We will be able to examine the effectiveness of our ability to monitor and prevent potential terrorist activity on our coastal waters and against our assets,” said Aviation Ordnanceman 1st Class Richard Steele, EOD operations officer. “These guys, outside of deploying the egg, will act as the bad guys and try to infiltrate anti-terrorism detection devices and test the Navy’s ability to detect enemy swimmers. This is important to force protection and making sure that our coastline and fleet is safe.”

“Training like this is invaluable to the reservist of EODMU-12,” said Interior Communications Electrician 2nd Class Robbie Young. “This gives us the ability to coexist with our active-duty counterparts. We work hand in hand, like brothers.”



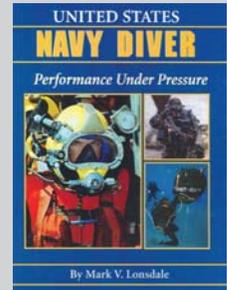
EODMU-12 Det 10 Diver, enters the water to test the recently deployed Cerberus Swimmer Detection System, which is able to differentiate between marine life and swimmers.

MWSA BOOK REVIEW

United States Navy Diver: Performance Under Pressure

Author: Mark V. Lonsdale
 Publisher: Best Publishing Company
 Reviewer: Bill McDonald (MWSA President)

Author Mark Lonsdale has done a great service to the Navy diving program with his coffee table sized book “United States Navy Diver – Performance Under Pressure.” This is the most complete and comprehensive book on the subject that can be found. It truly honors the traditions and glory of the entire Navy diving program from hard hat diving to SEALs.



This book is packed with great photos and lots of history, data, trivia, facts, and anecdotal information. There is enough information in the book to give the reader one of the richest educational experiences on the subject of the diving programs that one can have without actually having to join the U.S. Navy. The book takes the reader through the early history of U.S. Naval diving and the equipment. It tackles training and operations, including deep submergence and submarine rescue, to the war on terrorism. The reader will get an educational look at all aspects of the diving programs.

It is evident that this book was well researched and documented. It obviously was a labor of love for the author. Lonsdale really pays great homage and tribute to all those who have served in the Navy diving program. He treats the reader to an insider look at what we normally never see, or know little about. This is a book you would be proud to display on your own coffee table. The photos alone are well worth going through the book to look at. The text only adds to the full experience!

The Most Complete Book On Navy Divers!
Military Writers Society of America’s TOP RATING - FIVE STARS

Originally published on
www.militarywriters.com website.

Ледокол КРАСИН (Frozen Prop Job on KRASIN)

By Scott Heineman

Think back to when you were in school and learned about Antarctica. It's where the South Pole is; it's really, really cold, ice everywhere and home to penguins. I'm here to tell you that reading about it in books, or even seeing it on the Discovery Channel is not the same as being there.

A brief history lesson; McMurdo Station is Antarctica's largest community built on bare volcanic rock of Hut Point Peninsula on Ross Island, the farthest south solid ground that is accessible by ship. Established in 1956, it is the logistics hub of the U.S. Antarctic Program, with a harbor, landing strips on sea ice and shelf ice, and a helicopter pad. Its 85 or so buildings range in size from a small radio shack to large, three-story structures. The station takes its name from McMurdo Sound, which James Clark Ross named in 1841 after Lieutenant Archibald McMurdo of the ship *Terror*.

The station accommodates 1200 people in the summer and 200 in the winter. Research is performed at and near McMurdo in aeronomy and astrophysics, biology and medicine, geology and glacial geology, and ocean climate systems. The National Science Foundation (NSF) is the U.S. government agency responsible for the operation of McMurdo.

The station receives major supplies, cargo and fuel to operate just once a year,

in the summer by ship. If these supplies don't reach the station, the entire opera-



Diver working on starboard CPP propeller.

tion would be in jeopardy. These ships must transit through 20 miles of sea ice to reach McMurdo. This transit is made possible by icebreaker. The U.S. Coast Guard has been the normal provider of icebreaking capability, but this year was different. NSF contracted the Russian owned Far East Shipping Company (FESCO) to provide icebreaking services to McMurdo. It was during these duties the Motor Vessel Icebreaker KRASIN experienced a substantial vibration from their starboard shaft. The ship returned to McMurdo and NSF divers, yes they have divers there, inspected the ship and reported that one of the 12,000 lb blades was missing from the starboard shaft. The ship has three propellers (port, stbd and centerline), each having four bolt-on blades. The loss of this single blade reduced the ships ability to break ice substantially, so much so that emergent repairs were needed.

NSF contacted 00C to make repairs. 00C had previously been to McMurdo to make blade repairs to USCGC POLAR STAR (WAGB 10). Since welding repairs were likely in support of this operation, 00C con-

tracted Phoenix International, Inc, 00C's diving services contractor to travel to McMurdo to replace the missing propeller blade and ESSM to provide hydraulic tools and the Hytorc System. KRASIN carried onboard replacement propeller blades and bolts. All that was needed was a diving capability, and a means to travel 14,000 miles from the U.S. to Antarctica.

NSF has logistics fine-tuned to a science, no pun intended. Raytheon Polar Services is responsible for the transport of all personnel and equipment to and from the ice.

All you need to do is get to Christchurch, New Zealand; where the United States Antarctic Program is based.

Once there you are completely outfitted with all the Antarctic gear you need. Even though the weather in New Zealand was summer, and 75 degree's, they won't let you on the plane unless you are fully dressed out in Extreme Cold Weather (ECW) gear. You board an U.S. Air Force plane, a C-17 in this case, for the 2,000-mile flight. You land on an ice runway, of course. Then it's onboard a monster truck called Ivan the Terra Bus that takes you the one hour ride to McMurdo. Every vehicle at McMurdo is beyond heavy duty. Some of them even have tank tracks instead of tires. Once you arrive, you are given indoctrination on life at McMurdo, where everything is, and keys to your barracks room. One thing I forgot to mention. The sun is up all day, 24 hours a day. It just circles the sky. Makes you a little crazy after the first few days. Beats being there in the winter when it's total darkness for about four months.

We got right to work. The ship was pierside, although pierside at McMurdo is different than anywhere else. The pier is made of, you guessed it: ice. It's 400 ft long, 300 ft wide and 21 ft thick with wire rope running through it like reinforced concrete. It's a man-made ice cube. It's covered in volcanic dirt. You would never know it was ice



Rigging blade off ship.

or that it floats unless you are told so, or see the signs that say “Ice Pier”.

The NSF folks were there to support us every step of the way: without them, working in this environment would be impossible. They built us a shack on the ice to run the dive station, provided us with two sources of electrical power, heating blankets and heaters to warm up the frozen compressors, machine shop services, cranes, forklifts, and even a backhoe. We needed the backhoe to break a hole in the ice for diver access. The forklifts picked up all of our air, water and hydraulic hoses each night and put them inside a heated warehouse so they would not freeze, then delivered them to us each morning. We even had a phone line in the shack with



The KRASIN crew.

numbers to all the movers and shakers at NSF. You have to admire these folks that spend six months at a time, even through the winter, to support all that happens here. They are experts in every sense of the word, and many of them come back here year after year.

Early on we discovered the root cause of how and why the ship lost one of its propeller blades. Each blade is held in place with eight bolts. Each bolt is five inches in diameter, weighs 88 lbs each and is torqued in place with up to 27,000 ft/lbs. This presented another problem for 00C engineers. How to interpret the drawings for the 40-year-old ship that was built in Europe, and were printed in Russian. Each hex head bolt had two metal plates, keepers, which were cut to fit the head of

the bolt and were welded inside the blade palm. These welded keepers prevented the bolts from backing out. Each recess for the bolts was also filled in with concrete. In many cases on the remaining blades, most of the concrete was missing, and many of the keeper plates were missing as well. The high stress of ice breaking had taken its toll on the blades and hardware that kept them in place. Once the keepers failed, the bolts started backing out. Once enough bolts came out, the remaining bolts were ripped right out of the hub. This was key in determining our repair course of action. Since four of eight boltholes were wiped with little or no thread material remaining, re-installation of bolts as part of installing a replacement blade would be impossible. The minimum torque to hold each bolt (12,000 ft/lbs) would never be achieved. It was decided not to install a blade, remove all remnant bolt material, and fabricate keeper plates and weld them on bolt heads on the other

propeller blades. 00C also recommended with NSF to FESCO, the ship owner that we should remove the opposite blade, so the shaft would be in balance. FESCO rejected this option as getting the ship out to sea sooner to break ice was more important. Keep in mind that two ships were still waiting 20 miles out for passage to McMurdo, so the clock was ticking.

The KRASIN fabricated the keeper plates, and Phoenix divers went to work welding the plates in place. We also used the Hytorc machine to check the torque on the bolts that did not have any keeper plates on them. No movement was observed on any of the bolts. All work was completed on our seventh day of



Phoenix diver up and over.

operation. KRASIN got underway immediately once we cleared the water; we even handled lines and cast off the ship. The ship went to sea for several hours and returned so we could inspect our work. All keepers were intact and no further damage resulted. KRASIN left for the last time to start her escort duties and get McMurdo Station filled with groceries, gas, spare parts and more scientists.

We packed our bags and left the following day the way we arrived; dressed



KRASIN in the ice.

in 25 lbs of foul weather gear. We even found time to get a few souvenirs and polish our sea stories for years to come. If you ever get the chance to go to “The Ice”, go. You won’t regret it. It’s worth the 28,000 miles you have to travel to get there and back, even if you are flying in the middle seat!

Scott Heineman is the Underwater Ship Husbandry Operations Specialist at NAVSEA 00C.



Kirby Morgan Helmets

By Bev Morgan

Ed: The editors of Faceplate felt that this history would provide valuable education for our younger divers who might be interested in how diving equipment developed over the past 40 years. The Mask section will follow in the next issue of Faceplate. We plan to include information on other equipment manufacturers in future issues.

Kirby Morgan designs and manufactures a line of commercial/military diver's masks and helmets that are in use throughout the world. The development of the present day equipment has taken place in the last 40 years.

The Kirby Morgan Corporation was founded by Bev Morgan and Bob Kirby in 1966 in Santa Barbara, California. The purpose of the Corporation was (and is) to manufacture high quality commercial/military diving equipment. Prior to the start of the Corporation, Bob Kirby and Bev Morgan were commercial divers. Kirby was a former U.S. Navy diver before that. Both worked as abalone divers along the California Coast. They both believed that better masks and helmets were possible and had independently been working on designs of their own. Morgan made his first demand mask in 1949 and Kirby made his shortly after that.

The first products manufactured by the Kirby Morgan Corporation were heavy gear helmets. The transition from traditional helmets to the Kirby Morgan 37 and the Super-Mask 48 is filled with interesting underwater mask and helmet innovations that are shown and described below. The mechanical products are presented here.

Copper & Brass

KMAH-1. The Kirby Morgan Commercial Air Helmet.

This helmet was manufactured from 1965 to 1967 (Kirby and Morgan were working together as partners prior to the



(Kirby Morgan Corporation formation). The breastplate was made by Yokohama Diving Apparatus. The helmet was spun from two sheets of copper by Hummel Products in Santa Barbara. The forming and assembly was done by Kirby Morgan. The helmet had several improvements over previous designs. The viewing ports were made of one inch plexiglass, threaded to screw into the helmet and sealed with O rings. This eliminated the need for grills over the former glass ports, and thus improved visibility. Incoming air was more effectively silenced, improving communications and preventing a loss of hearing to the diver.



KMHeH-2. The Kirby Morgan Commercial Helium Helmet.

This helmet was manufactured from 1965 to 1967. The design was the same as the air hat with the addition of a permanently mounted canister and venturi recirculator system. A standard Sodasorb® CO₂ absorbent chemical cartridge was utilized in the canister. This helmet was the first practical commercial helium helmet with a venturi. Mr. H. Dan Wilson was the first designer and user of a commercial helium helmet that used a demand system, not a venturi. His helmet preceded this hat by two years. The U.S. Navy was the pioneer of gas diving, starting in the '30s.

Both of the above helmets were manufactured by Yokohama Diving Apparatus from 1966 to 1990. Kirby and Morgan could not economically produce the helmets in the United States. Yokohama Diving Apparatus is no longer in business.

Composite Helmets

Kirby Morgan began development of a line of light, fiberglass based masks and helmets which have culminated in the current (2004) state of the art masks and helmets produced by Kirby Morgan Dive Systems, Inc. today. These masks and helmets have a long and varied history, which is briefly touched on below. The endless research and testing continues today, ensuring that the Kirby Morgan products of today are the best and safest equipment to be found anywhere in the World.



MCSHX-3. The Morgan Clam Shell.

This hat was designed to be dry over the entire head with a neck seal. It was not immediately successful and was not used beyond tank testing. The primary problem was leaking in the joint between the front and rear of the hat. By the time this was fixed, other designs had been created and this hat was abandoned.

KMCSHX-4. Kirby Morgan Clam Shell Helmet.

The Kirby Morgan Clam Shell Helmet was designed and made in 1966 under contract with the U.S. Navy Experimental Diving Unit. The helmet was designed for use with semi-closed circuit breathing systems. The rear of the helmet was free-flooding. Only one prototype was made and tested.



KMCSHX-4



KMCSHX-5



KMCSH-6



KMSLH-7



KMSLHX-8



MHX-9

KMCSHX-5. Kirby Morgan Clam Shell Helmet.

The next progression in clam shells, this helmet used a demand regulator as a back up breathing system. The main breathing system was a back mounted semi-closed recirculator. This photograph shows Kirby suited up for a test, using a chest mounted breathing bag on a venturi recirculator. This helmet was free flooding in the rear and was made of fiberglass. Only one was made in 1967.

KMCSH-6. Kirby Morgan Clam Shell Helmet.

This was the final version of the early Kirby Morgan Clam Shell Helmets. The hinge point was at the front. It was made of fiberglass and was free-flooding in the rear. Twelve of these helmets were made in 1968 for the U.S. Navy and eight for commercial use. Several dry head versions of this helmet were tested, but were not successful. The wet head version had limited success.

KMSLH-7. Kirby Morgan Semi-Light Helmet.

At the same time the clam shell series was being made, the Semi-Light fiber glass helmet was designed and manufactured. A face seal separated the face area of this helmet from the back. The first was made in 1966. In all, 36 Semi-Lights were made and sold. The helmet was discontinued due to lack of time and funding. This helmet was the direct forerunner to the Kirby Morgan SuperLite-17.

KMSLHX-8. Kirby Morgan Experimental Semi-Light Helmet.

One modified version of the Semi-Light was made and tested. The balance was not right so the helmet was not manufactured.

MHX-9. Experimental Helmet.

This unnamed helmet was designed to be used with a rubber mask section inserted into the forward part of the helmet. One was made and tested.

MH-10. The Morgan 10 Recirculator Helmet.

This hat was designed in 1971 to be used with the General Electric Mark 10 closed circuit breathing system. The side mounted tubes were connected to hoses that ran breathing gas to and from the back mounted recirculator. A unique hood that was easily removable and adjustable was used on this unit.

MH-11. Morgan 11 Recirculator Helmet.

This helmet was similar to the MH-10 with the addition of a demand regulator which was used as a backup breathing system. It differs very little from the Band Mask design in appearance. The gas flow tubes are provided for use with the Westinghouse supplied U.S. Navy Mark 11 breathing system. The diver's head was dry in this hat.

MHX-12. Morgan 12 Experimental Dry Helmet Design To Attach To A Band Mask.

A rubber hood liner inside the hard helmet provided a dry environment for the diver's head. Two versions were made. This design led to the KMH-16.

KHX-13. The Bucket Hat.

This helmet was made as a joke, but several important findings were made as a result of water testing this unit. The helmet dives quite well and is surprisingly comfortable.

MHX-14. Morgan Helmet, Experimental 14.

This hat had a rubber insert in the front which isolated the diver's face from the rest of the helmet to improve the operation of the demand regulator. Water tests were not favorable, so work on this hat was stopped.



MH-10



MH-11



MHX-12



KHX-13



MHX-14

KHX-15. The Kirby Helmet, Experimental 15.

One was made and sold to the U.S. Navy. It was made of fiberglass and fitted with a simple steady flow breathing system. This hat was used as a platform on which to test a new neck dam and yoke system. The rubber neck dam (seal) is attached to a metal band that is clamped with a cam lever around the circular neck area of the helmet. The yoke system provides a closure at the bottom of the helmet that is smaller than a diver's head and securely fastens the hat to the head.

KHXD-15. The Kirby Experimental Demand 15.

This helmet had several features that were new. A silenced servo demand regulator was positioned on the side of the hat. One was made and tested. The overall size of the helmet required counter balancing weight that made it heavier than we liked.

KMH-16. The Kirby Morgan Helmet 16.

This helmet was an add on hat for the KMB-10 Band Mask. A rubber hood inside the fiberglass helmet provided a dry head environment to the diver. The neck seal clamped in place with a cam-action band similar to the SuperLite-17.

KMSL-17A/B. Kirby Morgan SuperLite-17B.

The SuperLite-17B Commercial Diver's Helmet was introduced in 1975. It was the culmination of all the years of testing and alterations by Kirby Morgan. This helmet set the working standard for the commercial diving industry worldwide for many years. Many thousands of underwater hours have proved the design to be dependable, comfortable, and extremely safe. The 17 continues to be the most widely used commercial diving helmet in the World.

KMSL-27. Kirby Morgan SuperLite-27.

The SuperLite-27 was introduced in 1991. Advances in metal machining that allowed cost reduction of the matched neck ring-neck dam ring designs. This enabled us to make improvements to that area of the helmet to improve sealing from water leaks and make the locking system simple but more secure. We also reduced the size of the helmet shell to reduce the buoyancy and weight of the hat.

KMSL-17K. Kirby Morgan SuperLite-17K.

We received many inquiries from divers with larger heads to make the improved neck ring, neck seal system on a larger hat. We combined the standard 17 shell design and the 27 neck ring design to make the 17K. This gave the divers who preferred the 17 the improved next ring at no change in the 17 size. However, there was some customer confusion and many of our customers did not realize the 17K was a very different hat from the 17B.

KMH-37. Kirby Morgan Helmet 37.

The model 37 Kirby Morgan Helmet made it clear that this new hat was an improved model and not just another 17. A new and very advanced exhaust system, the Tri-Valve Exhaust, was added to the 17K to make it the 37. The new exhaust system made the 37 very dry and yet lowered the breathing resistance.

KMH-47. Kirby Morgan Helmet 47.

As yet not released for sale, this hat has by far the lowest breathing resistance of any mask or helmet on the market. The new, "Rex" regulator system incorporates a balanced valve regulator that has proven rugged, reliable, and low maintenance. Testing continues on this hat.



KHX-15



KHXD-15



KMH-16



KMSL-17A/B



KMSL-17B



KMSL-27



KMSL-17K



KHM-37

KMH-57. Kirby Morgan 57.

The next helmet to be introduced will be the Kirby Morgan 57. In addition to several other improvements, this helmet will have a new stainless steel regulator that has extremely low breathing resistance.

Several other helmets have been developed by Kirby Morgan over the years. Over 200 prototypes of varying designs have been made. Some of the hats have been used in

major motion picture productions such as, "Sphere". Other designs have been used in many other television and documentary productions.

Many of our original designs have been copied by the current crop of competitors. Some of the copiers are so bold as to claim our designs as theirs. Unfortunately this prevents us from showing all of our experimental masks and helmets. Hopefully, the patent process will keep them at bay.

Bev Morgan worked as a commercial diver for many years. Shortly after becoming a diver, he started designing and making equipment and formed Kirby Morgan in the early 1960's. Through continued research and innovation, KMDSI has developed the world's leading line of diving helmets and full face masks.



My brother Greg and I were stationed aboard the USS Hartley (DE 1029) in the early sixties. Even though I was the one that ended up being a Navy Saturation Diver, my brother Greg was the one that first got into diving. I remember he purchased or traded for an old wet suit, regulator, mask, fins and a set of double 38s. Neither of us knew the dangers of diving but we were both fully aware of the mystique and challenge of diving. After all we both made sure we never missed a SEA HUNT show. Mike Nelson was our hero.

Anyway, Greg and I were in charge of the mechanics of the motor whaleboat and a boatswain mate by the name of Butler (I think that was his name) was in charge of the boat itself.

The three of us decided to go diving. We got all of Greg's gear together and found an old drysuit in the boatswain's locker. It was the two piece king that rolled together with a large o-ring.

We got underway and went out into the middle of the bay. I think we even tied up to a buoy (real knowledgeable sailors). We decided I would try out Greg's equipment first. I put all the gear on and dived head first into the bay. Needless to say the first thing that happened was I lost the mask. I tried to swim after it but my ears were in the process of imploding. I also had way too much weight on and started sinking. I thought I was going to die. I finally managed to make it to the



Captain Gary Windhorst, Commanding Officer of the Center for Explosive Ordnance Disposal and Diving (CENEODD) presents a belated Navy and Marine Corps Commendation Medal (For Heroic Action) to Gregory J. Sullivan for his act of heroism while stationed aboard the USS Hartley in 1967. Greg's wife Janet observes.

surface. I just wanted out of the water and into the boat. Greg was ready to try it but I had lost his mask. So we suited up Butler in the drysuit. We really didn't know what we were doing here either. We finally figure out how to roll the top and bottom together with the o-ring. But our biggest mistake was assuming the "DEFLATOR" hose was an "INFLATOR" hose, so we

put a little air in it to make sure he was buoyant. Butler told us he didn't know how to swim but wanted to try it anyway. Seems to me he just wanted to try breathing underwater, even though we had lost the mask. We tied a line around his waist. He dove in the water headfirst also. When he hit the water all the air in the suit went to his feet, which kept his head underwater. Greg and I got a big laugh out of that sight. But we figured he was fine cause he had SCUBA on. Pretty soon he started thrashing around in the water and ended up spinning around and wrapping the line around himself like a top. Greg and I finally realized he was in trouble. We started pulling in on the line real fast and Butler just started spinning like a top being unwound. Finally we got down to the knot and pulled him out of the water. He never had a clue that anything was wrong but did say he couldn't understand why we would want to learn to SCUBA dive. As far as he was concerned, it wasn't very much fun.

The reason I write about this is although my brother Greg was not a Navy Diver, approximately 40 years ago while stationed on the above mentioned ship, he performed an act of heroism that went unrecognized until a couple of Navy Divers got involved. I told the above story to Captain Helmkamp about my first dive during a sea story telling session a few years ago. Later I remembered something else Greg had done that I felt needed

("Sea Hunt" continued on p. 22)

40th Anniversary of Palomares

By DCR D. H. Moody, USN (Ret).

On 17 January 1966, a B-52 bomber collided with a KC-135 tanker aircraft while refueling over Spain. The collision and explosion destroyed both aircraft. Most crew members of the two A/C perished, only four crew member of the B-52 survived. During AC break-up, four Nuclear (Hydrogen) Bombs descended as part of the total debris that rained down on Spain and the Mediterranean Sea. Three H-Bombs impacted on land and were later Rendered Safe by AF EOD personnel. At least one of the H-Bombs had low ordered and burned, spreading alpha contamination over a large land area (and the shallows of the sea where it rapidly dispersed). The parachute deployed on the fourth H-Bomb and it descended slowly while being steered by the winds, eventually splashing into the Med. and descending to the depths off the coast of Palomares, Spain.

The A.F. mounted an operation to recover the H-Bombs, the A/C Debris and mitigate the Apha Contamination that was spread across the rural landscape. The USS KIWIA (ATF 12) conducted a two-day surface search for aircraft debris before being released. On January 19, the USS SAGACITY (MSO 469), USS PINNACLE (MSO 462), and a forward-deployed EOD Team from EODU2 started a near shore search with mine hunting sonar, while the EOD Team conducted shallow water searches in the surf line. The EOD Team recovered two B-52 ejection seats.

On January 22, the A.F. requested assistance from the U.S. Navy. This request set in motion a massive response to locate, recover, and Render Safe the missing H-Bomb. In Washington DC, the Navy convened a Technical Advisory Group (TAG), Chaired by RADM L. V. Swanson. This group was composed of individuals highly respected in their chosen field of expertise. Among them were Dr. John P. Craven (well known for his work on deep submergence) and CAPT W. F. Searle, Jr. (former Supervisor of Salvage and Director of Ocean En-



The H-Bomb over USS PETREL (ARS 14) fantail.

gineering at the Naval Ships Systems Command). The TAG identified four research submarines along with other equipment that could be of use during the proposed operation. Action was taken to immediately start moving additional skilled personnel, the four submersibles, and other assets to Spain.

I was the Officer in Charge of EODU2, Charleston, S.C. with the Mine Force Command, Atlantic Fleet. EODU2 was responsible for EOD Incidents on the East Coast of the United States and supported the Atlantic Fleet, including the European Theater. That night I received a call from the Duty Captain at CNO, directing EODU2 to respond with personnel and EOD assets. A general recall brought all EODU2 in and we were prepared to depart early on the morning of the 23rd. We departed Charleston on a KC-135 (stationed at Bergstrom AFB, Texas) from the same tanker squadron of the tanker lost over Spain. It was a very sol-

emn start of a demanding operation. After a number of weather related and schedule delays we arrived "Camp Wilson" at Palomares about 0830-25 Jan. The crew set up tents and diving equipment near the beach and checked out logistics. I was first briefed by the A.F. Operations Officer and about 0930 reported to RADM Guest on his flagship, USS MACDONOUGH (DLG 8). I was assigned to the staff of CTF 65 as the Assistant Operations Officer for EOD and Diving. The EOD officers and men at Camp Wilson continued to ready things for diving and were in the water later that same day. Bouys and jackstay lines were used to ensure that a complete search would be accomplished. The sea was calm, very little wave action, and visibility about 25 feet. They soon encountered A/C debris in the shallows.

Soon many other individuals and surface vessels reported for duty. There were Navy Officers, Scientists, Operational Analyst, Technicians, auxiliary

ships, amphibious ships, salvage ships, and more divers. Eventually about 23 ships and 3,400 personnel were involved to one degree or another. We worked long hours to develop a viable Operations Plan and determine if those unproven systems that were offered would work in the harsh environment of the operating site. The Navy did not have search equipment or remote control vehicles capable of working at the required depth. As the Op Plan was being finalized, I was also designated: CTG 65.3 – Inshore Underwater Search Group. Initially EOD personnel conducted the search until the USS FORT SNELLING (LSD 30) and UDT 22, Med. Detachment reported in. The EOD/UDT divers also conducted towed searches when visibility and weather permitted, and continued searching until the search area to a depth of 80 feet was covered twice or more. (After the operation was complete, it was officially reported that EOD/UDT divers located over 50 tons of debris.) The mission of CTG 65.3 was later expanded to include the salvage, recovery and Render Safe of the H-Bomb. We were also concerned about possible Alpha contamination and requested the A.F. monitor the shoreline between our search area and the debris site. In addition, we conducted Alpha radiation monitoring on all ships. The A.F. did find some contamination and moved part of the camp complex to a clean area. No Alpha contamination was reported by any CTF 65 ship.

It is impossible to remember all the dedicated officers and men that were a part of Salvops Med, but some of the individuals involved with setting up search parameters were:

- LCDR “Brad” Mooney – Designated as CTG 65 Assistant Operations Officer for Deep Submersibles. He was a qualified Submarine Officer and former OIC and Pilot of the Bathyscape Trieste II. He was at the controls of Trieste II when the debris of the SSN Thrasher was investigated in the depths of the Atlantic.

- LCDR Malcom “Mal” MacKinnon – Naval Architect/Engineer, represented the Supervisor of Salvage.
- CAPT Ray Pitts USN (Ret.) – CEO of Ocean Systems, Inc. and Senior Contract Administrator. All civilian contractors worked through CAPT Pitts.
- Mr. Jon Lindbergh, Ocean Systems, Inc. – Underwater and diving consultant. Lindburg had served with UDT Units while on active duty and worked in underwater research and diving after leaving the Navy.
- Dr. Henry R. “Tony” Richardson, Daniel Wagner Associates – Operations Tactical Analyst. Worked on the Thresher search and was an expert in search theory. (Unfortunately the Navy was in the position that we may have to prove the negative. In other words, if we did not find the H-Bomb, we had to prove statistically that it was not there. The Navy was in a really hot seat.)

The search effort was divided up according to personnel and equipment capability. Admittedly, we pushed the envelope, as it would be easier to become more conservative as the operation unfolded and operational constraints were refined. The search parameters were:

- 0 – 80 feet – SCUBA Divers
- 80 – 250 feet – Honeywell Sea Scanner mounted on a utility boat. Contacts identified by SCUBA or Hard Hat.
- 80 – 400 feet – PC3B Cubmarine. Contacts identified by SCUBA, Hard Hat or photograph.
- Shallow Water – 600 feet – Minesweeps (MSO) with Mine Hunting Sonar. Contacts identified by Cubmarine, Hard Hat or photograph.
- Deep Water – Westinghouse OBSS. Deep Submersibles Alvin and Aluminaut. Contacts in deep water were photographed for identification.

(One critical incident occurred when



The EOD men were joined by CAPT Page, C of S, CTF 65 and an unidentified A/F officer. The author is third from left.

a Salvage Ship, with divers down, was placed at hazard by another ship. The voice net got pretty hot, when the Salvage Ships C.O. pointed out the errors of endangering his divers. The Task Force Commander immediately corrected the situation and thereafter the C.O. of a Salvage Ship would be designated On Scene Commander when diving operations were ongoing.)

Deep Search Equipment

In the meantime some of the equipment for deep search started arriving.

Westinghouse Ocean Bottom Scanning Sonar (OBSS) is a low frequency towed sonar system was designed for mapping the geology of the ocean floor. The OBSS had some success, but it was ill suited as a search vehicle for a small target on an uneven precipitous bottom. Several ships toiled for several weeks (losing two tow fish after striking bottom) until the system was returned to CONUS. (Experience with the OBSS pointed out the need for a dedicated high speed oceanographic winch and a smaller (lighter) side scan sonar system for deep ocean search.)

Honeywell Sea Scanner and Bottom Profiler gave a visual readout and was equipped with an over the side transducer. It was mounted on a utility boat and employed in water depth from 80 to 200 feet of water. Targets were checked/identified/recovered by divers. The system had limited success on the larger pieces of debris and was used through most of the operation. (It's a great fish finder and many commercial fishermen used the unit in the Gulf of Mexico.) The Bottom Profiler gave a nice profile of the bottom, but had little success in locating debris.

Decca Hi-Fix Navigation System is a low frequency system which require three stations, one central interrogator antenna and two remote stations (responder) antennas about 15 miles North and South. Accuracy reported to be less then 30 yards, but found to be greater during the operation. Navy Oceanographic Office's Sur-



Unidentified A/F officer, MGEN Wilson, the author, CAPT. Page and RADM Guest inspecting the damage to the aft end of the bomb.

vey Ship, USNS DUTTON steamed in and was employed in a underwater survey from which charts were published and the Decca System was surveyed in. DUTTON also placed some underwater velocity meters. (Prior to DUTTON charts, the TF had to depend on some old Spanish charts dated in the early 1900's.)

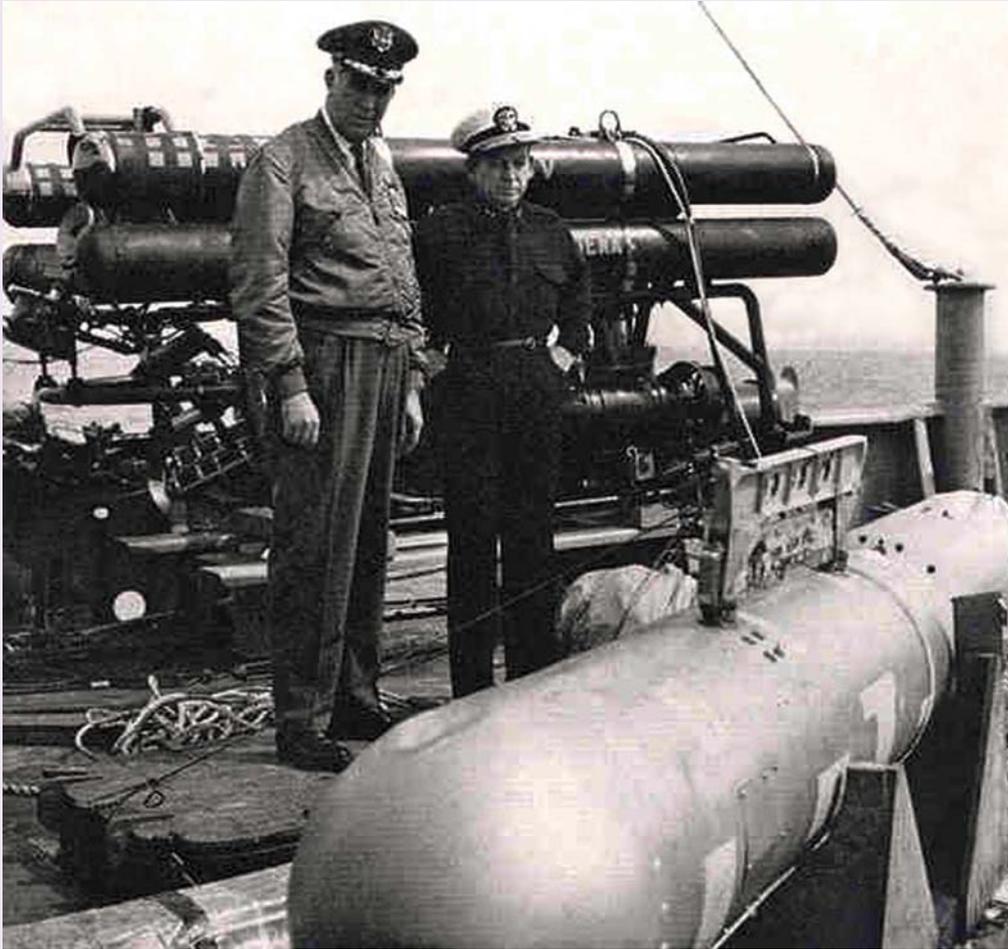
NOTS, Pasadena Underwater Television Cameras consisted of two TV Cameras and UW lights mounted in an over the side cage. It quickly proved unsatisfactory and was shipped back to CONUS.

The first submersible staged to Spain by air was the Deep Jeep which is designed to withstand a depth of 2,000 feet for four hours. DJ was found to be underpowered and after about three attempts to dive was returned to CONUS.

The Cubmarine PC3B, (arrived

about Feb. 16) built by Perry Submarines and owned by Ocean Systems, Inc looked like a big torpedo with a two person (operator/observer) compartment on the top center. It was a great performer in water depths down to about 400 feet. A Decca Receiver was installed with a trailing wire antenna. When debris was sighted the PC3B would settle on the bottom and if within diving limits, a diver would descend to complete the recovery. The PC3B was very versatile and rugged like a little submarine. It was easy to maintain and could be housed onboard and deployed by the flagships boat crane. (I have worked with other Perry Submarines since the Palomares Salvops and they have all been outstanding performers.)

The USNS MIZAR is an Oceanographic Research ship that had located the debris field of the SSN THRESHER. The



MGEN Wilson and RADM Guest inspecting the H-Bomb for the benefit of the international press.

MIZAR had a moon pool and a large winch system capable of towing instruments at great depth. MIZAR was outfitted to track and direct Alvin and Aluminaut, therefore allowing them to return to the bomb. Pingers were also requisitioned to assist in returning to a specific underwater location.

Operations

Salvage ships started arriving, among them the USS Petrel (ASR 14) reported in on 1 February. They were employed in identification and recovery and towing operations. The Salvage Ships spent some time laying and recovering multiple leg moors. Even when in a tight moor over a contact, it was difficult for the hard hat divers because of mobility, visibility and current. Eventually hard hat divers were primarily used in recovery operations.

Looking back in hindsight, a lot of diving manpower was wasted, waiting for meaningful tasks that were compatible with hard hat diving.

Operations settled down over time and some ships and individuals were detached. On 10 February Alvin and Aluminaut arrived. Alvin could be used to search the canyon areas, while Aluminaut was limited to the smoother bottom areas. Alvin underwent a short shake down and then commenced searching the rugged underwater slopes. Alvin sighted a skid mark going downslope unlike any of the trawl marks sighted on the flatter ocean floor. Alvin followed the skid mark down, often having to back down while increasing depth (sometime pausing to let the silt cloud clear) and eventually spotted the H-Bomb. Several unsuccessful attempts to send down recovery lines were attempted. We were faced with

the fact that Alvin would have been placed in danger and was under powered to carry down a line and the ocean environment carried away other systems. A rig designed by Pitts, Moody and Lindbergh, hence the code name "POODLE" was sent down by the Mizar and placed close to the bomb. The POODLE tumbled over on the bottom and Alvin was unable to clear all but one grapple. That grapple was attached to the parachute and a lift attempted by Mizar. Mizar drifted toward shore, dragging the weapon upslope. The grapple line failed and the weapon skidded back downslope. CTF 65 was once again engaged in a search effort.

The Navy also towed two barges into the Atlantic Ocean, where aircraft debris that had been recovered (ashore and underwater) was jettisoned in deep water (over 6,000 feet). After the barges returned to Spain, a small Alpha reading was detected. Two EOD Technicians were dispatched to the Spanish port to supervise the decontamination of the barges.

Capt. Searle had also set the following in motion:

- The Cable-control Underwater Vehicle (CURV) was modified to work in water depths of over 2000 feet, after which CURV and an operating crew deployed to Spain. "Mal" MacKinnon coordinated the modification and also deployed to Spain. This was to be the deepest attempt by a remote control vehicle to recover explosive ordnance from the ocean floor. CURV had already recovered a number of practice torpedoes in water depths less than 2000 feet.
- Several 3000 foot coils of braided three inch nylon line were dispatched to Spain. Lt Herman Kuntz was also ordered to Spain as an escort to insure the line did not get side tracked. Most nylon lines at this time were twisted, vice braided. This may well have been the first time braided nylon line was used in a deep ocean lift.

After a number of agonizing days Alvin once again made visual contact with the bomb. In the meantime CURV had been embarked on the Petrel. Alvin placed strobe lights and pingers at the bombs location. During the day the local winds blew onshore as the mountains warmed from the sun. Wave and wind action during the daylight hours was marginal. After sunset the mountains cooled down and the winds calmed accordingly. We conducted most of the critical operations at night to take advantage of the calm wind and sea. The Petrel held position over the site by use of two LCM's and CURV descended, homing in on the pingers and attached a grapple to the parachute risers. This method was repeated two other times, one successfully attaching a grapple. CURV was scheduled to de-



H-Bomb on the ocean floor, completely covered by its parachute.

scend and place the third lift line late the evening of 7 April. In anticipation of the attachment and lift, ADM. Guest shifted to the Petrel with a number of other staff members. There was standing room only in the tiny wardroom. The atmosphere was tense and when CURV became entangled, Howard Talkington, CURV Project Manager, fainted from the stress. Dr. Smith, a respected scientist who had constructed a scale model of the bottom terrain and an expert in lift out forces was onboard. Dr. Smith was extremely concerned that a lift from such depth in the ocean could cause harmonics (or attenuation) in the lift lines and cause the lines to fail. He paced back and forth, hands in his pocket, with an intense frown. So much so that we could tell he was upsetting some individuals in the wardroom. We steered Dr. Smith topside and as gently as possible asked him to either stay clear of the wardroom or lighten up. He understood the need to remain calm, gave us a slight grin and was smiling ear to ear before the morning was over. Both of these men were true gentlemen and devoted to their individual expertise. When it was apparent that CURV could not clear itself the decision was made to lift.

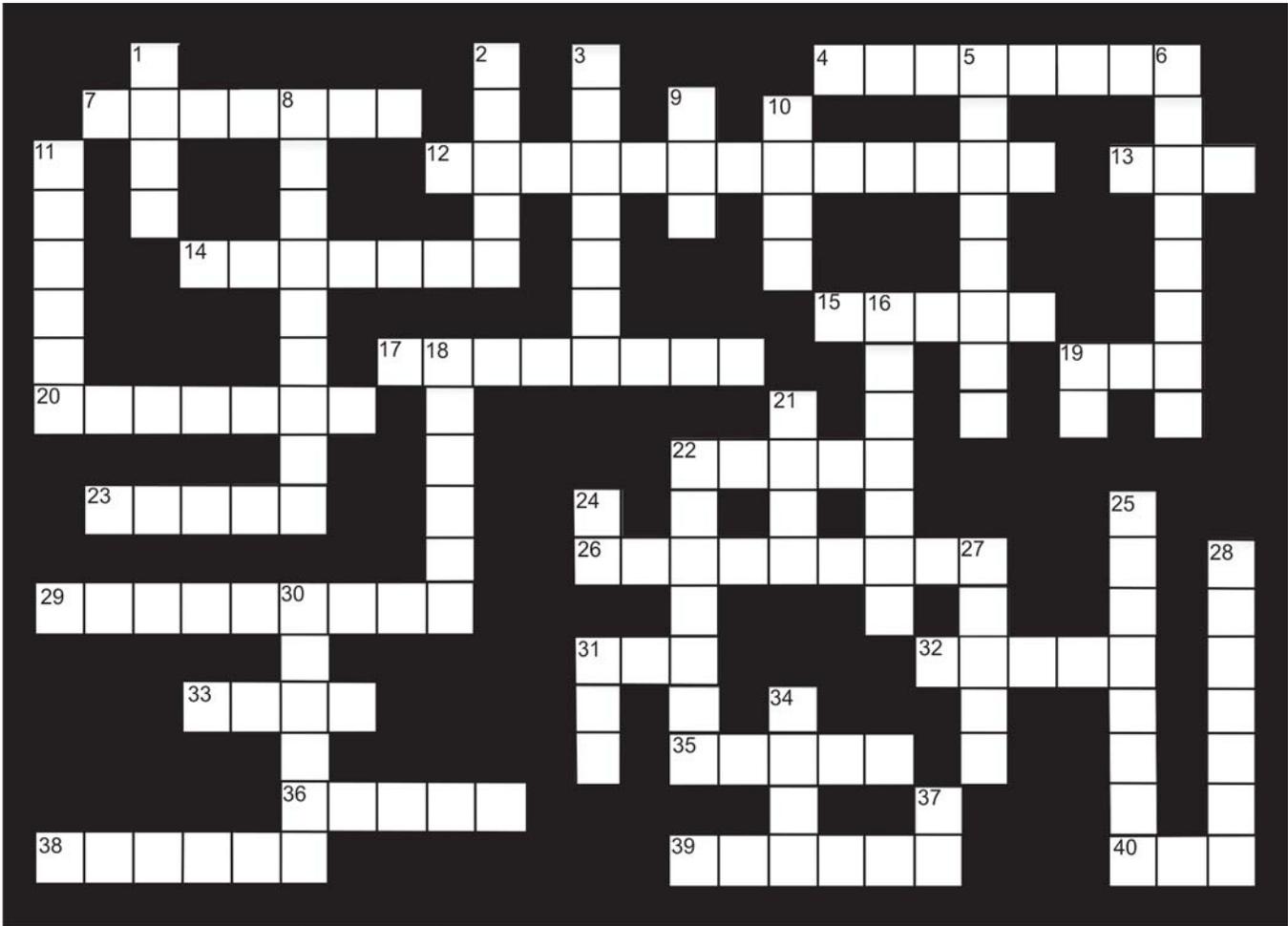
Prior to that decision (and based on hard lessons learned) it had been

decided that undue stress on the lift lines would not be acceptable. For example if the bomb weighed 1 ton – the maximum allowed force on the lift lines would be 5 tons – thus giving us a healthy safety margin. LCDR Max Harrel, C.O. of Petrel came up with a well designed system to lift, dividing the stress equally between the two lift lines, with a dynamometer placed such that it would indicate the total lift force being exerted. This system was excellent example of Max Harrells years of experience as a salvor. Once the decision to lift had been made it was the Petrel's show. Max had already held the Petrel in position for long hours and he continued to do so until the bomb was on deck. The deck force conducted a slow lift, monitoring the strain constantly, until the bomb was in sight at between 50-70 feet. Two EOD divers descended and placed wire straps (attached to a 3 inch nylon recovery line) around the bomb in such position that it would clear the water in a horizontal attitude. The weight of the bomb was transferred to the recovery line and hoisted clear of the water. The parachute presented a problem as it acted like a big sea anchor and had to be dealt with. The bomb was finally placed in a skid, allowing Lt. Walt Funston and his combined EOD Team (Navy and Air Force) to render it safe

(RSP). The outside case of the bomb was unclassified, so it was paraded past the flagship with a number of international press personnel to prove we had removed a nuclear threat. The carcass of the H-bomb now resides in the Sandia Laboratories Museum in Albuquerque, N.M.

After a demanding (and successful) operation, most participants returned to normal activities. Shortly thereafter some critics of ADM Guest made some remarks about his leadership style and ability. They apparently thought he was too tough, abrasive and ill prepared for such an operation. I flatly disagree with those critics. He was challenged with the toughest, first and only deep recovery of a nuclear weapon in our history. I found him to be demanding, but fair and sensitive about the conditions that his Task Force experienced and the hazards faced by the hard working people assigned. If you knew your job, worked hard and performed like a professional, he in turn respected you. That is one of the aspects of salvage and recovery in the sea that may not be clear to others untrained in such matters. Salvage in the sea is a difficult and demanding task. Divers for years have been known for their ability to accomplish the toughest of tasks under extreme conditions. When you add explosives in the mix (particularly nuclear bombs) the risk factor takes a huge leap. I salute all those skilled divers (past and present) who put up with tough leaders, tough operations and got the job done. This can be attributed to the people, the training and the "Can Do" spirit all up and down the line. During the operation situation reports (SITREP) were submitted daily. One such SITREP that addressed the thinking of most divers stated: "The individuals engaged in SALVOPS MED diving operations have been enthusiastic, devoted and tireless. They could be capable of much more versatile roles if they were furnished adequate systems with which to work. An integrated man-in-the-sea program encompassing all continental shelf depths could optimize the usefulness of the talented people."

CROSSWORD PUZZLE



ACROSS

- 4 We're Home! (2 words)
- 7 Salvage Diver (2 words)
- 12 GMs (slang, 2 words, plural)
- 13 Those That render explosives safe (abbr.)
- 14 Junk Food (slang)
- 15 Man Overboard
- 17 Die-Lock or _____ (2 words)
- 19 Creamed hamburger on toast (slang)
- 20 Plague Stopper (2 words)
- 22 Merritt-Chapman and _____
- 23 On a whale and an anchor
- 26 Measure of water depth
- 29 Safety valve on a MK V diving helmet
- 31 Early abbreviation for lab at Panama City
- 32 Side sonar system, also constellation of the hunter
- 33 Enlisted rating badge
- 35 T-ATF 171
- 36 Type of anchor (abbr.)
- 38 5 Short
- 39 CONREP Sys (abbr.)
- 40 Dip the _____

DOWN

- 1 Popular Supervisor of Salvage, Black _____
- 2 More Than Full
- 3 Stern (slang)
- 5 CVN (slang, 2 words)
- 6 Bogus Cleaning Agent (2 words)
- 8 Main Space Engineer (slang, 2 words)
- 9 Repetitive Dive Consideration (abbr.)
- 10 Senior Here (abbr.)
- 11 Stairs
- 16 Navigation instrument
- 18 DD (slang, 2 words)
- 19 Skivvie Waiver
- 21 Popa Topside
- 22 1939 sub lost, later salvaged by divers
- 24 Sewer Pipe (desig, old)
- 25 Sick List reported to the CO
- 27 Propeller
- 28 At the Dip
- 30 Type of underwater patch
- 31 Most senior diver designation (abbr.)
- 34 Number of view ports on a MK V
- 37 "You can trust your keel to the man who wears the wheel" (abbr.)

Note: For a fee, you can use Crossword Weaver to print a nice copy of this puzzle (one that doesn't look like a web page). You can check it out for free by downloading the demo from www.CrosswordWeaver.com . For puzzle solution, see page 30.

Cert Notes

By Paul McMurtrie

Top Ten Certification Hits and Some Unusual Situations

Some of the recent observations from the system certification folks in response to visits are recurring and others are unique. We have listed some recurring problems and some one-of-a-kind problems that we thought might be interesting to you.

1. Number ONE recurring problem that still persists is the lack of significant MDV involvement prior to and during the cert visit. Without exception, all the certification surveys have gone smoother when the MDV has been significantly involved.

2. TRCS/LWDS: Using a 5000-PSI compressor for jamming a 3000-PSI Flasks without a relief valve on compressor or whip has been noticed at some commands. This is extremely dangerous and is also ignoring a requirement IAW TRCS Technical Manual OP-8 and LWDS Technical Manual OP-7. As an option, the LWDS Roof Rack Assembly has a 3300-psig relief valve and is designed for jamming bottles that are in this exact circumstance.

3. TRCS: BENT POPPET VALVE STEM ON NATO MATING RING INTERLOCK: When mating the TRC to the TL, caution must be taken when turning the NATO manway ring. When rotating the ring closed, do not “slam” the NATO ring “into the stop.” Doing so has damaged a number of poppet valve stems, which has resulted in a leaking valve.

4. TRCS: MATING THE SYSTEM: This seems to be a common hurdle during TRCS certification surveys. It is evident that many lockers are not regularly performing this task as part of their TRCS training. It is not only frustrating to the SCA representative to witness repeated mating attempts during the survey, but we are sure a bit embarrassing for the diving command. This is and always will be part of the certification demonstration so ensure your locker is trained on this procedure.

5. DIVE SYSTEMS: All dive systems must have their own assigned gas supply and vice versa, each gas supply rack must

be assigned to, and certified as part of an entire DLSS. Gas supply racks cannot be used in any certified DLSS unless those racks are part of that system or part of another already certified system.

6. TRCS Bulk O₂ Supply: If you are going to use bulk O₂ (i.e. O₂ from any other source but your rack assembly), the whip from Bulk O₂ to Rack Assembly must have clean/hydro documentation and check valve or properly sized relief valve to prevent inadvertent over-pressurization of bulk O₂ sources. In addition, a sketch of the whip assembly and associated material must be approved by 00C3. The reason for this requirement is the possibility of over pressurization and the possibility of using unauthorized materials in an O₂ system. These same rules will apply for any future use of the ORCA.

7. Missing OQE: During recent reviews of some REC packages, we have been unable to find material OQE for parts replaced. Where material OQE is required, it must be available for review. For example, the required OQE for an O₂ valve replacement is:

- Hydrostatic test data to 1.5 times the working pressure of the system
- Valve seat tightness test
- Valve cleanliness IAW Mil-Std 1330D or other NAVSEA approved cleaning procedure
- Requisition forms and supporting COC's demonstrating that the valve ordered is in fact the valve received
- Proper torque requirements followed and accomplished correctly

Requisition forms or purchase orders that have a supporting COC. If the commands or contractors requisition form states that the ordered valve will be cleaned and tested as previously stated and the supplier or manufacturer of the valve provides a COC stating the part ordered under the specific requisition number meets those requirements then the requisition form and supporting COC will suffice as adequate OQE.

8. Umbilical: Hydro and pull test not accomplished IAW PMS periodicity.

9. Dive System/DFS: When a command orders a spare or replacement part from a vendor and the part received comes in with a part number other than that called out in the drawing, a Departure From Specification (DFS) must be submitted to 00C3. This must be done when the command decides it must use the part received because there is no longer the availability of part (number) called out for in drawing. Do not wait to submit DFS until the on-site survey team is conducting survey.

10. Dive System/PMS: Commands are not submitting PMS feedback reports when they find maintenance problems or inadequate PMS Coverage. Do not leave it to the SCA rep to ask why a particular maintenance action has not been accomplished as required in the quarterly schedule, or where the MIP is for a particular piece of equipment.

Items of interest:

a. On some of the Bauer VT26-E3 compressors that provide 3000 psi service for the FARCC, the inline check valve just prior to the BPR has developed a crack in the inlet body where a ¼ NPT adapter is threaded into it.

b. On some Swagelok hoses (stainless steel wire braided hose used on LWDS and CAOS gas racks) we have seen Stress Corrosion Cracking taking place in the swaged portion of the hose. Swagelok did not advertise the fact that the swaged portion of the fittings is CRES 303.

c. When using a Haskel Pump, the manufacture recommends using Diver Quality Air for your drive air. This became evident on a Haskel pump that was supplied unfiltered service air as its drive air, and the pump became completely inoperable due to moisture contamination. Another safety concern is not mixing hydrocarbon contaminated service air with oxygen in the event that the seal separating the oxygen and air-drive pistons fails.

Paul McMurtrie is currently Deep Submergence and Saturation Diving Systems Certification Manager at NAVSEA 00C.



SEA HUNT

By Dave Sullivan, NDSTC

(CONTINUED from p. 14)



recognition. I told CDR Dave Davis (CO NDSTC) and Captain Mark Helmkamp (Supervisor of Diving) about the act and asked what they would recommend for an award if the act were performed under their command. They both said it would be a Navy and Marine Corps Medal. I then asked what they thought the chances would be for an award forty years after the fact. CDR Davis said good luck and Captain Helmkamp said, what can I do to help. That started a year long endeavor by Captain Helmkamp and myself to gather official deck logs and affidavits concerning the event. Eventually SECNAV awarded the Navy and Marine Corps Commendation Medal (for heroic action) to my brother Greg. An award ceremony was conducted at NDSTC and the medal was presented by Captain Gary Windhorst, Commanding Officer of the Center for Explosive Ordnance Disposal and Diving (CENEODDIVE).

The citation read as follows:

For heroism while serving as a member of the damage control fire party onboard USS HARTLEY (DE 1029) on 9 February 1967, Naval Station Newport, Newport, Rhode Island. As a result of routine maintenance work, a Class Bravo fire broke out in the Operations berthing compartment and quickly became out of control. The situation was critical, as the adjacent ship's magazines were at risk of exploding due to the intense heat. After the primary hoseman was unable to enter the burning compartment due to the unbearable heat, flames and smoke, Petty Officer Sullivan volunteered to assume hoseman duties. Without regard for his own safety, he entered the engulfed space without any team members to assist him and commenced fighting the fire. With the ship developing a three-degree list from the large amount of firefighting water expended, Petty Officer Sullivan steadily fought the fire, despite being temporarily

knocked unconscious when making contact with a 440 alternate current power panel. Knowing that the ship's magazines were in jeopardy of exploding, he shook off the effects of the electric shock and was able to extinguish the fire. The fire's intensity was so severe that nearby tugs moved USS HARTLEY to a remote location in the harbor to minimize potential damage to other vessels. Petty Officer Sullivan's bravery, initiative, and willingness to risk his own life in the face of extreme danger were a true testament to his character. By his courageous and prompt actions in the face of great personal risk, Petty Officer Sullivan saved USS HARTLEY from extensive damage and saved the lives of his crewmates, thereby reflecting great credit upon himself and upholding the highest traditions of the United States Naval Service. Albeit forty years late, a Deep Sea HOOYAH to Greg Sullivan.

SALVAGE OPS: EX-USS SHADWELL & T/V STATE OF MAINE

By Rick Thiel

Standing on the dock observing the rising sun, it was hard to imagine the events that had occurred more than 7 months ago that brought SUPSALV and the salvage team to Mobile Bay, AL. On 29 August 2005, Hurricane Katrina struck the Gulf Coast with devastating results from Louisiana to Florida. In Mobile Bay, sustained winds were measured at 58 mph with gusts to 90 mph and a tidal surge of 12 feet. The damage to the local area was extensive and recovery work was still being done more than 6 months after the hurricane.

At the north end of Mobile Bay, in a cove on Little Sand Island, EX-USS SHADWELL (LSD 15) and T/V STATE OF MAINE (T-AP 198) were serving as fire research and test platforms for the Naval Research Laboratory and US Coast Guard, respectively. On the morning of the 29 August, the forces of the hurricane were more than their mooring systems could handle and the ships were driven northward.

EX-SHADWELL was moved approximately 100 yards north and rested on the beach at the north end of the cove. T/V STATE OF MAINE was driven 20 yards north and 150 yards east until it rested on a sand bar at the mouth of the cove.

An initial survey was conducted in September by SUPSALV and DONJON Marine (US Navy East Coast Salvage Contractor). Of immediate concern was the material condition of EX-SHADWELL's hull. Decommissioned in 1970, the ship had not been dry docked since then and had minimal maintenance on the external hull below the water line. The condition of T/V STATE OF MAINE

was significantly better, due to the ship's continuous usage through 1997.

From the initial survey, a notional salvage plan was developed which called for the use of dredging to reduce grounding forces and refloat the ships. An opportunity was also identified to



Salvage Master Dale Springer (DONJON Marine Services) observing repositioning of Dredges during effort to refloat EX-SHADWELL (LSD 15).

conduct a joint salvage operation between commercial assets (DONJON Marine and local subcontracted assets) and US Navy Salvage Forces (SUPSALV, ESSM, and MOBILE DIVING AND SALVAGE UNIT ONE, DET ONE), which would reduce the cost of the salvage operation to the US Government and provide valuable salvage training and experience to the US Navy participants.

USS GRAPPLE (ARS 53), in theater participating in the Gulf Coast recovery from Hurricane KATRINA, provided the first post-hurricane depth survey of the cove. This depth survey provided an indication of the amount of dredging work that would be required to refloat the ships. GRAPPLE also provided additional input

on the material condition of the ships and a situational report on the surrounding waters.

Due to the poor material condition of the hull, an in-depth survey of EX-SHADWELL's hull, including ultrasonic testing, was conducted by GPC/PCCI (US Navy contractors for ESSM support and POSSE Modeling) in November 2005. The survey documented considerable corrosion of the hull below the waterline and found that the longitudinals in this same region were completely wasted at the hull. This loss of the longitudinal stiffeners meant that much of the bottom plating was unsupported between the frames and susceptible to buckling under compressive loads.

Both hulls were modeled in SUPSALV's Program of Ship Salvage Engineering (POSSE) to calculate hull stresses and to estimate the ground reaction. POSSE's versatility allowed for hull corrosion and loss of structural support to be figured into the strength analysis of the hull girder. In EX-SHADWELL's case, buckling of the bottom plating in compressive loading was the dominant failure mode of concern and the ship was estimated to be 4088 LT aground. T/V STATE OF MAINE was estimated to be 1800 LT aground and the analysis yielded no significant concern for the strength of the hull girder.

Concern for the potential of local failure through plate buckling resulted



View of EX-SHADWELL (LSD 15) stern as dredge work proceeds on the port and starboard side of hull. Note channel created on port side to facilitate salvage work to refloat ship.



Salvage Team survey's underside of EX-SHADWELL (LSD 15) in preparation for start of salvage ops.

in the development of a system to monitor very small deflections of EX-SHADWELL's hull. This system, the Hull Girder Laser Monitoring System, uses a surveyor's laser level and a laser sensing target to measure changes in the hull at multiple defined points, which are then used to calculate stress in the hull. This system proved to be simple to operate, produced reliable data, and was accurate to within 1/16 an inch over the length of the well deck.

With the completion of a hydrographic survey of the bottom topography and soil core samples, the Salvage Plan was finalized. In general, the salvage plan called for a commercial dredge to remove bottom material from around the hulls, allowing the ships to settle into the water, and thereby reducing the ground reaction. T/V STATE OF MAINE was grounded aft with the bow cantilevered over the ship's previous mooring position. After first dressing up the mooring with the dredge,

the stern was to be dredged until the ground force was estimated to be 150 LT. This would allow beach gear to pull the ship free of the bar and then be repositioned it in its moor by tugs.

EX-SHADWELL was to first have the mid-section of its hull freed from the bottom via a combination of dredging and jetting by MDSU Divers, then to have the stern dredged. Dredging at the stern was designed to roll the ship upright from its 7.75° starboard list and then to lower the stern into the water. Once the stern was free or lightly supported, the bow would be freed from the beach. This sequence of dredging was intended to maintain the bottom plating in tension for most of the salvage operation and to minimize the magnitude and time the bottom plating would be in compression.

On 2 April 2006, personnel from ESSM arrived on the scene to receive and off-load Salvage Gear shipped from the ESSM Facility in Cheatham Annex, VA. Working with US Coast Guard Fire Safety and Test Det, Mobile, the equipment was transported to the site of operations on Little Sand Island. During this same time, MOBILE DIVING AND SALVAGE UNIT ONE, DET ONE arrived to assist in beach set-up, conduct dive surveys, and commence removal of known obstructions to dredging.

Dredging commenced on 11 April 2006. From the beginning, it was evident



Jetting in-progress from utility barges moored next to EX-SHADWELL.



MDSU-1, Det 1 divers prepare to descend on debris fouling dredge involved with work on T/V STATE OF MAINE.

that the amount of debris on the bottom was going to have a significant impact on the progress of dredging operations. MDSU Divers were in the water nearly every day removing obstructions and unfouling the dredge. Each job could take from a few hours to a few days.

As dredging proceeded on T/V STATE OF MAINE, the clay bottom composition began to have a significant impact on the operation. Not only was the clay more difficult than sand to cut through and pump with the dredge, the compacted clay underneath the hull was able to continue supporting the weight of the ship. Only after achieving cutting depths to 30 ft and angling the cut to extend under the hull, was an extreme low tide able to adequately load the column of clay under the hull and cause it to collapse. On the morning of 5 May 2006, T/V STATE OF MAINE was freed from its strand by beach gear set up and operated by MDSU. Local tugs were then used to move the ship to its previous mooring location.

Emphasis now shifted to EX-SHADWELL. Two weeks earlier, MDSU ONE began jetting under the mid-section of the hull from a utility barge loaded with jetting pumps and

support equipment, and moored alongside the ship. MDSU ONE Divers jetted using traditional Navy equipment and were successful in quickly removing the bottom material composed of sand. The task proved more daunting when all that remained was the Alabama clay. Undeterred, the Divers developed numerous methods to successfully complete removal of the clay.

The next phase of the plan involved removal of material along the port side of the hull using an extended arm excavator. To accomplish this, a large hill of spoil material needed to be moved more than 80 yards to the north. This allowed the trench to be widened so that a small dredge could be employed to create a channel on the port side

The plan worked so well that the big dredge was able to move into the newly created port channel and remove material at a depth of almost 30 ft. Dredging continued for 6 weeks, progressively lowering the stern into the water. On the morning of 26 June 2006, EX-SHADWELL floated free. The hull was

moved by a team of local tugs to its new mooring location at the south end of the cove.

A temporary 8 point mooring system was established using the ship's bow anchors and 6 mooring legs. The mooring legs were created from existing anchor and chain that was on the island and with 10" line provided from ESSM.

The salvage operation of EX-SHADWELL and T/V STATE OF MAINE took 13 weeks to complete and successfully combined commercial assets and US Navy Salvage Forces to refloat the two test ships. MDSU ONE provided critical services to the project at a substantial costs savings to the US Government. MDSU ONE statistics for the operation included 220 man-hours of diving, over 20,000 lbs of debris removed, mobilization of 65 tons of ESSM equipment, and the successful safe rigging and employment of 2 legs of beach gear.

This salvage operation was successful in that it returned assets back to the Navy and Coast Guard for continued use and provided valuable training and experience



MDSU-1, Det 1 works to set up beach gear to assist refloating of T/V STATE OF MAINE.

to US NAVY Salvage Forces. This salvage operation also demonstrated and reinforced the ability of US Navy Salvage to respond to domestic natural disasters with a robust multi-compositional salvage team that is adept at performing difficult large scale salvage.

Rick Thiel is currently the Salvage Engineer at NAVSEA 00C.



DIVER RECALL

By Dave Sullivan, NDSTC

Who we are and what we do is best explained by our mission statement. "To provide a friendly annual gathering of Deep Sea Divers, commercial and military, retired and active to foster and maintain the camaraderie that we all uniquely share that is inherent to the occupation to which we are proud."

We hold an annual reunion that continues to grow each year. Since 1993, our Reunion attendance has increased from approximately 100 to over 500 attendees. Held in Chesapeake at the Fleet Reserve Association Branch 40, we provide a camping area for tents, "pop-ups", and RV's. The gates open at noon for food, beverage, games, and entertainment. We sell Divers Recall

merchandise and provide display areas for our invited guests, local diving organizations. During the day we have a DJ and tournaments such as horseshoes, volleyball, and tug of war. During the evening we have a live band with a dancing area and ask that all children be off premises. To provide shelter, there are tents covering the dining area, band, and dancing area. We have a drawing for an authentic Mark V Diving helmet. Tickets are available through our web site www.diversrecall.org for a \$10 donation, and you need not be present to win. We will ship the helmet to your choice of destination at no cost to you. We have attendees from all over the U.S. and other parts of the world. The reunion is open

to ALL divers, not just military and commercial.

Admission at the gate is as follows:

Single \$20

Couple \$25

Family \$30

To raise funds for our annual event, we hold a fundraiser the last Friday of each month. Additionally, we request sponsorship from various diving companies, dive lockers, and business. The sponsor receives advertisement in the form of a "hot link" from our website to theirs. We also display banners if sponsors wish to provide at the Reunion.

For more information please visit our web site, www.diversrecall.org.

SUPSALV SENDS

("SUPSALV Sends" continued from p. 2) previously removed) due to topside weight, and it sank unceremoniously "wheels up" in the soft river mud. Two weeks later, I was on scene with a small SCUBA team assembled from available divers from SRF Subic and Diego Garcia. We'd arrived by T-ATF towing a lift-barge (with a 40-ton crane temporarily welded aboard) and two pusher boats to maneuver the barge up the shallow river and deploy the four mooring legs. There was a degree of military urgency to the mission as members of the New Peoples' Army (NPA – a Filipino communist rebel group which several months earlier assassinated U.S. military members) were reported in the area, and we only had small arms defenses.

Our salvage plan consisted of using our four member SCUBA dive team to place a wire-rope "choker" around the main rotor head of the inverted helicopter, then take tension and slowly rotate the helo out of the mud with the crane, lift it clear of the river and on deck. But during the two weeks prior to our arrival, the rotor head sank into the soft mud of the river bottom, and on the first dive it became clear that we'd have to tunnel through the mud to get to the rotor head. HT1 "Brick" Bradford was our first diver who upon surfacing reported the bottom conditions and that the rotor head was sunken below

arm's reach into the soft mud. Soon after we began constructing a make-shift jacking capability he recommended we make the lift instead by attaching slings to the accessible landing gear. I decided against that plan, as I didn't believe the landing gear would support the mud-suction loads associated with freeing the rotor head and upper fuselage. So Bradford went to work tunneling in soft mud to get to the rotor head. In SCUBA. After repeated "cave-ins," and reverse tunneling to free himself, we still had made little progress. I splashed next to give it a try. I should have listened to Bradford's advice. It was a near-impossible task with the tools and equipment we were using, and it was a violation of both common sense and the Navy Diving Manual. After a short but futile effort, I finally exercised some better judgment and changed plans. We rigged to the landing gear instead (as previously recommended), and sure enough – slowly – the CH-53D broke free of the mud and we landed her on deck. Upside down, damaged by the effort, but out of the river and with no diver casualties.

Lessons learned? Several that I've kept front and center since: (1) Don't get so mission-focused that you ignore or violate established procedures and good judgment (in short, don't be stupid). (2) Listen carefully to the collective wisdom

of the assembled dive team. (3) Be willing to risk further damage to an already broken airplane to protect diver safety. There are plenty of others, but I'll never forget those.

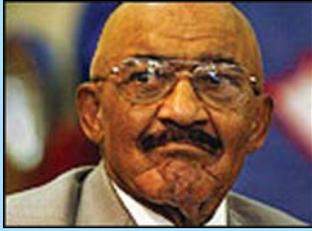
Elsewhere in this edition of *Faceplate*, you'll find an article regarding an underwater injury that occurred during heavy-rigging supporting underwater ship husbandry operations. The message? Even in the midst of mission success, take stock around you, and don't let any mishaps or close calls get ignored. Identify them, analyze them for root causes, establish root cause corrections, and advertise them through Naval Safety Center's new WESS, and *FACEPLATE* so others can learn. Aggressively attack all opportunity for COMPLACENCY to get a foothold into your dive locker.

Have you held your dive locker's "Ten Foot Safety Stop" yet...or are you too successful?

P.S. Hard as it is to believe, it has been my privilege and honor to be a Navy Diver for the past 25 years and in the Navy for almost 3 decades. I'll be turning over the SUPSALV reigns on 29 September 2006 to Captain Rich Hooper, an outstanding leader and diving and salvage officer. Hoo-yah, Deep Sea!

Hard Hat History

444...MDV Brashear...444



Navy pioneer's life, career led by determination

The Virginian-Pilot © July 30, 2006
By David Forster

NORFOLK — Even while dying, Carl Maxie Brashear seemed unwilling to let go of a life built on determination.

“Even though his lungs failed him, man, his heart was still beating,” Phillip Brashear said Saturday at his father’s funeral.

Carl Brashear, who died Tuesday at the age of 75, defied racism to become the Navy’s first black deep-sea diver. He lost a leg in a shipboard accident, then became the first amputee to return to active duty as a diver. His story inspired the movie “Men of Honor.”

About 780 people filled the Little Creek Amphibious Base Chapel for Saturday’s service.

Retired Master Chief K. Lemount King told the congregation that a television show on Brashear’s accomplishments inspired him as a teenager to become a master diver.

“Carl showed us what a human being is capable of when he’s faced with overwhelming odds,” he said.

The service even attracted those who never met Brashear. Wally Cotten came from his home in Suffolk and sat in the back of the church in an extra row of chairs.

“I had to be here,” Cotten said. “I know what he went through.”

Cotten joined the Navy in 1956 - eight years after Brashear - and said he often dealt with racism as the only black man in outfits of 100 or more sailors.

Brashear’s perseverance was only part of the story. A grainy black-and-white photo on the back of Saturday’s funeral program made this clear.

In the photo, Brashear is jogging in shorts and a hooded sweatshirt. His head is down. He appears to be struggling. The photographer caught him as the shoe on his prosthetic leg is about to hit ground.

Under the picture are Brashear’s words: “I ain’t gonna let nobody steal my dream.”

Such single-minded focus came out in a story that Brashear’s son DaWayne told about Sept. 11, 2001. DaWayne said he was working as a flight attendant that day for United Airlines. After hearing of the attacks on the World Trade Center, Brashear called United Airlines and stayed on the phone for an hour and 45 minutes.

“He wouldn’t let them hang up that phone until it was confirmed that I was OK,” DaWayne said.



In the eulogy, retired Master Chief Conley White recalled his first impression of Brashear, back in 1984. “When he entered the building I knew he was someone of enormous stature and importance,” White said.

Brashear carried himself as someone who demanded respect, but in a way that wasn’t overbearing or arrogant. He was humble yet oozed with confidence, White said.

“The amazing thing about him was, a man of his stature, yet he was approachable,” White said.

Brashear never turned down an opportunity to inspire a young sailor, said Hakim Diaz, Command Master Chief at the base. In retirement he became a pen pal to amputees. “It’s OK to fall down, as long as you get back up,” he liked to tell his sons.

“He stood for what we all should believe in our hearts,” Phillip Brashear said.

Reach Dave Forster at (757) 222-5563 or dave.forster@pilotonline.com.

36 Years Ago in Faceplate

The Black Fish

How did the “black fish,” which is painted on the bow of only one type of ship in the U.S. Navy, the Submarine Rescue Ship (ASR), come to be used? What is the true history of this insignia?

Efforts to find answers to these questions have created quite a puzzle! No official directive authorizing this insignia can be located. After a search of Naval Historical Records, the files of the Submarine Force Library and Museum in New London, and Library of Congress, nothing more than a picture of one the first commissioned ASR’s could be found. Finally, bits and pieces of information, collected from some of those who had served on these ships, were put together to form answers.

Although the following story is not recorded as true documentation, it represents our facts collected on the events concerning the history of the “black-fish insignia.” After you have read our version of this historical insignia, perhaps you will verify this or drop us a line and tell us your version.

* * *

In 1882, a diving school was established at the U.S. Naval Torpedo Station in Newport, Rhode Island by a retired Chief Gunner’s Mate, Jacob Anderson. At that time, the Chief trained volunteer divers by recovering practice torpedoes fired from the station’s tubes. As the story goes, the divers devised and displayed a flag from their boat to signify the recovery of torpedoes. At first, this flag was a black torpedo-like symbol against a white background with a red border. It wasn’t long after this that the divers called these torpedoes by the nickname “fish,” because these “fish” were all over the bottom of the river, and they did resemble a long fish-like objects. Logically, it follows that the symbol on the flag was replaced by a fish-like object, with a torpedo-like shape.

How did the “black fish,” which is painted on the bow of only one type of ship in the U.S. Navy, the Submarine Rescue Ship (ASR), come to be used?

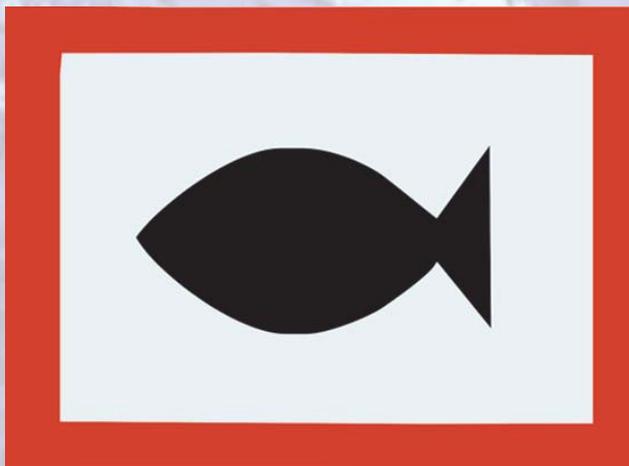
At the start of the twentieth century (about October 1900), our first submarine was commissioned as the USS HOLLAND (SS-1). When the submarine went to sea to conduct trials, it was escorted by a small craft. The mission of this escort was: to standby in case of an emergency while the submarine was submerged; to act as a safety vessel by patrolling the operational area to warn ships and other smaller craft to keep clear of the submarine operating area; and, to recover practice torpedoes fired by the submarine.

At this time in history, there was no international flag signal to signify that a submarine was conducting operations. Seemingly, because of the lack of any other flag signal, the small submarine escort displayed the same “black-fish insignia” as was displayed at the Newport torpedo firing range.

When our Navy began to operate more submarines further and further from their home bases, we came to realize the need for Submarine Rescue Ships. These ships would have to range far and conduct submarine rescue and salvage operations whenever needed. To meet this need, the U.S. Navy converted six minesweepers (the AM type) and commissioned all six of them on 12 September 1929. As soon as these ASR’s joined the Fleet, they assumed the role as “guardians of submarines,” and they adopted the “black-fish insignia.” It became traditional to paint this insignia on all the ASR-type ships.

During World War I and the years immediately after, this insignia stopped appearing on most of the ASR’s probably due to the heavy work schedules during the war and the mass reduction of manpower that followed. The insignia began to reappear in the early 1950’s. (A former officer on one of the ASR’s remembered the insignia being repainted on the bow after a noticeable period of absence. He recalled the First Lieutenant finding guidance on the size and location of the insignia in the Painting Instructions for the ASR type.)

A recent letter from the Commanding Officer of the USS KITTIWAKE (ASR 13), LCDR R.F. James, USN, advised that guidance for displaying the insignia is contained in the NAVSHIPS Technical



Manual, paragraph 9190.152, and NAVSHIPS Plan No. S-2804-860-342.

Today, the “black fish,” which has existed “on” and “off” for almost a century in our Navy, can be seen on the ASR types. This insignia represents the proud heritage of our Navy divers from their earliest days in small boats to the ocean-going ASR types of the present.

FROM THE MANAGING EDITOR

I recently attended a briefing in Washington at the Army and Navy Club to hear about the Ocean Technology Foundation’s upcoming search for the remains of the *Bonhomme Richard*, which was captained by U.S. naval hero John Paul Jones. On September 23, 1779, Jones engaged HMS SERAPIS in one of the most memorable battles in U.S. Naval History. It was during this three and a half hour fight, most of it taking place at point blank range, that Jones shouted his legendary words, “I have not yet begun to fight!” Ultimately, he emerged victorious and took control of *Serapis*. *Bonhomme Richard* had served him well, but 36 hours later Jones watched his ship disappear beneath the waters of the North Sea.

I was impressed with this event’s outstanding presentations by Peter Reaveley, expert on the battle of the BONHOMME RICHARD and HMS SERAPIS, and Evan Thomas, author of the bestselling book *John Paul Jones: Sailor, Hero, Father of the American Navy* and Assistant Managing Editor at Newsweek. The expedition is getting underway in July and I understand from CAPT Jack Ringelberg, President of the OTF, that funding is sufficient to operate for three weeks at sea. Their probability numbers indicate that six weeks is ideal for best search success. I commend this effort to you all, remembering that John Paul Jones is the Father of the United States Navy and if you read Evan Thomas’s book, you’ll discover that Jones seemed to possess many of the traits that deep-sea divers are known for when conducting themselves ashore. Articles about the upcoming expedition have been featured in *Naval History* magazine, the Surface Navy Association’s *Surface SITREP*, the U.S. Coast Guard Academy’s *Bulletin* and other publications, but for a complete description, please visit www.bonhommerichard.org.

NOTE: Captain Jack Ringelberg was the first Commanding Officer of the U.S. Navy Experimental Diving Unit at its present location in Panama City, FL.

Jim Bladh
Managing Editor



The Old Master



Do The Right Thing!

By MDV Richard Bettua

Recently, I traveled to the Salvage RESC in Washington, DC where SUPDIVE asked if I would write an article for this column. My first thought was "Oh, hell no," only the ole guys retiring get to write those articles, then SUPDIVE politely reminded me that I am not getting any younger.

I toiled over what to write about for quite some time. I really wanted to write about one of my past dive jobs, but to be honest it has been several years since the Navy has used me in that capacity. Just like the day will come that I will retire, the day has passed that I am as smart or sharp as the newest breed of Master

Divers. However, the weathering of and the tarnish on my dive pin has prepared me for my last job in the Navy, as a Command Master Chief (NEC 9580). Therefore, the topic I chose to write about is leadership, and doing the right thing!

Throughout our careers we make choices. It may seem that early on that those choices are made for us. As a young 2nd Class diver, I was arrogant, cocky, and my mouth was always getting me in trouble. In doing so, I always seemed to land the worst set of orders, or at least so it seemed. The Chiefs and

Master Divers who I thought were doing me a disservice by getting me orders onboard ships and in overseas dive lockers were in fact setting me up for success early on. These Supervisors of yesteryear did not pamper young sailors by constantly saying yes. In retrospect, they did the "right thing" and prepared sailors for future assignments. Therefore, eventually replacing themselves.

Recently a friend and co-worker of mine went to the Senior Enlisted Academy, and while there, he noticed that since the school's opening, only 5 Master Divers had attended. I would like to say this to those who are eligible but have not yet attended, how can you ask our young divers to go above and beyond if you are not willing to do so? Master Divers are short-changing themselves and our community by thinking they do not need this additional leadership training. Our qualification as the "Technical Master" in the field of Navy Diving is just a stepping stone. The writing is on the wall that future advancements will require College Degrees and Advanced Leadership Training.

With the advent of the Navy Diver Rating (ND), our community needs to align so that young sailors will always have upward mobility. It is imperative that we have more Senior Leaders grasp the reigns and assist in driving the Navy Diving program. Our three new Command Master Chief positions are just the beginning and hopefully soon we will get a Force Master Diver position at Fleet Forces Command. After that, the sky is the limit and a Master Diver may someday be the Master Chief Petty Officer of the Navy!

MDV Bettua is currently assigned to MDSU 1



MDV Bettua fishing!

BMC/M CDSW/SW/FunF, MDV, PJ 155, AW,
 MARK (Patton) LEET Leads The Way
 For The New improved Combat
 Expeditionary Diving SALVOR...

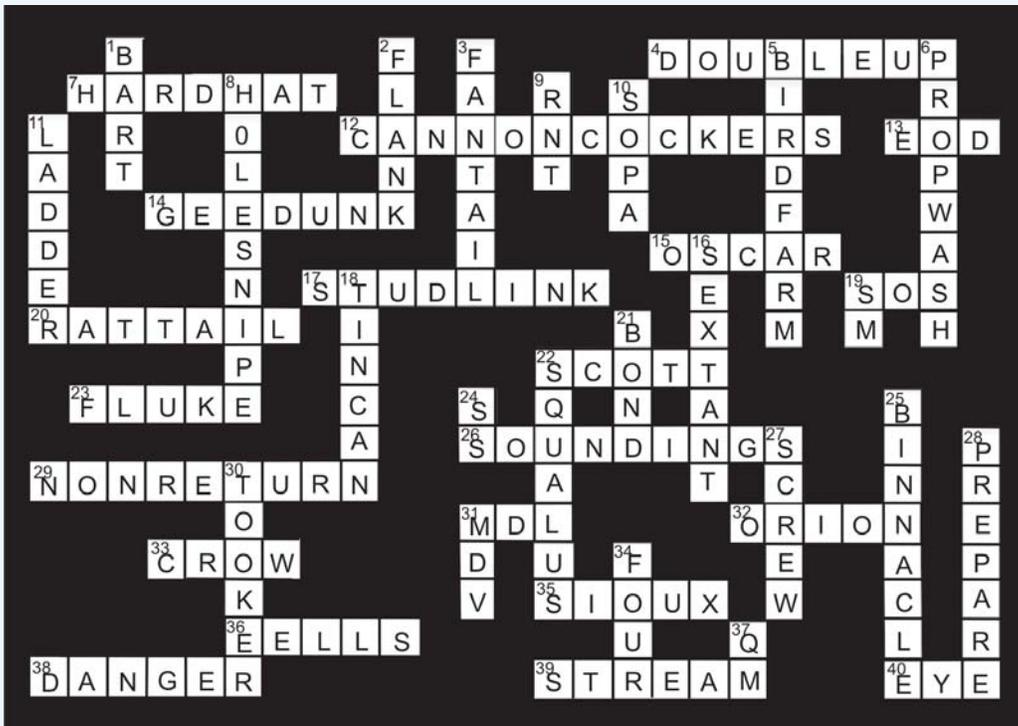
ATTENTION!!!

J
a
k
e'
s
C
o
r
n
e
r

By Rick Armstrong



CROSSWORD PUZZLE SOLUTION



Red Diver; Topside...

From the Supervisor of Diving

Captain Mark Helmkamp, USN



My Last Faceplate...

On 27 October at 1300, aboard USS Wisconsin (BB-64) I will retire, ending 26 years as a US Navy Diver. That date will also mark the beginning of my new career as Class Manager for the T-ARS and T-ATF class ships for the Military Sealift Fleet Support Command in Norfolk. Hopefully, we will have cool weather for the ceremony aboard the Whisky Boat; I initially considered a date in September, but that idea was soundly rejected by the little lady and my daughter "The Gator". Gator is a bright young woman but (to paraphrase Cory Farley) she can pack four syllables of abuse into the word "hot" in a way that makes me question our rejection of corporal punishment.

Since you are reading this, you must be on *Faceplate* distribution (or stole the magazine – and that's OK) and are in or an extended member of the Navy Diving family – and as such, please consider yourself invited to my retirement ceremony, even you *Faceplate* thieves out there. At first, I planned on slipping out without a ceremony, but MDV Paul Schadow and MDV Steve Smith both informed me that I was a numbskull and would soon regret that decision. And since I respect the opinion of all MDVs (well, maybe not MDV Brick Bradford – JK, JK) I decided to do the deed, but only if SUPSALV, Captain Jim Wilkins, agreed to yap as guest yapper. Besides, MDV Fred Orns put me in a head-lock until I agreed to have a ceremony. After a few seconds of a close-up visit with the die-lock chain (NOT stud-link you non-salvage pukers) tattooed around his biceps, I figured heck, why not? We'll meet at Jillian's after a brief ceremony and shake hands and slap backs. Please join me.

It's been a great deal of fun organizing and putting together this magazine (especially the crossword puzzle in this issue) and I reluctantly turn over editorial



A neophyte Deep-Sea Diver circa 1980.

and management responsibilities to Jim Bladh. But I will remember fondly the bile rising in Jim Wilkins' throat and the constriction of his pupils after I told him I put a centerfold in my first *Faceplate*. The color returned to his face after I told him it was of the MK V hat plans rather than MDV Storment in a studded, leather thong.

A hearty "Thank You" to all of you DVs out there "on the side" that tolerated my incessant whining for articles and "hi-rez" photos of diving operations – you were very convincing and I almost believe you didn't mind my nagging – good job, I'm at peace. Also, I appreciate Comradette Zoya Gorbunova's tireless efforts in keeping up with my maddening habit of constantly changing articles, last minute edits and selection and placement of photographs – thank you, Zoya (and Geoff, Otto and the U-Boot Kommander too!).

It's been a genuine blast being a US Navy Diver these past 26 years - I have great friends, I've had great experiences throughout the world, I've stored a vast compilation of unabridged -

well...embellished sea-stories in my pea-brain, and I have the requisite tattoo; time to move on. I am very excited about working with the Military Sealift Command and the professional civilian mariners that crew our USNS ships. They love to go to sea and one, Captain Tom Schwinn, has already offered great insight through his definition of the term ocean; "A large body of water surrounded by trouble."

Thank You: To "My Name is Robert August Barth", the only guy I will ever know who actually was on the television show "What's My Line?" (thanks for the "Barth Burgers"), Diamond Jim Bladh, Coop the Deep-Sea Weasel and the NOAA/Aquarius gang (THANKS for the opportunity to SAT with ya'll), MDV Frederick the Great (YOU should fight crime!), Christopher Cyrus, K2, KL, Sully-Mon (you really should ride a BMW K1200GT instead of that loud, nasty hawg), Super Dave, Uncle Dave, Bosn' Ed (of "Delaney Shoals" fame), Ragman (in Heaven's Dive Locker), Richard Scott and Krissy (Masters of His Most Royal Fatness, Bosco), Capn' Gym (the greatest CO of Reclaimer ever...except for me, and MAYBE Paul Bruno), Woody, Joel the Rambling Wreck, Silas (throwing nickels around like they were man-hole covers) EOD Paul (he retained ALL ten digits throughout his career!), EOD Dru (yea, EOD divers ARE better looking than hard-hats, OK?), Dr. Ross, Dr. John, Dr. Ed, Doc "Bobbie", Captain Fleck-man, Bru (NO partying with you; Bad Dog! Sit!), Doc "Row-He-Lee-Oh" Garcia, JR, "Arc Man" Glennster Rubin, Xerx the Deep-Sea Bubble-Head, JPJ, "Piggy", Butch, Trombone Frank, Mark V, MDV Chuck, MDV Pete, TK, Deep "C" Mikey Ward, UK Mike, Brit Dave, my British counterpart Chris, Speedster driver Buck the Brit, Walker the Stalker and his naturally aspirated big block, Fraulein Anke, Young Deep-Sea Citizens Vanzant & Griffin, Kasler (where's your Rolex?), Ranger Griz, Ed the SEAL, Junky, Leet the Great,

Furr the Lesser, Herby, MDV Paul “Aloha”, MDV Skeletor, Starky, Captain Bobbie S, Bubble Bob, the other “Kamper”, MDV Lyle, Capn’ Terry,



A wizened Deep-Sea Driver, circa 2006.

Vinchenzo Frag my gumba, Neil-Bob in P’Cola, Red-Light Sandy, Sweat-Pump, Glennster, Chip Chase (the most efficient dive re-qual organizer in this sector of the galaxy), and finally my Dive School SCUBA partner from 26 years ago, Gentleman Jim Wilkins, my Miss Kathie and many, many others up and down the umbilical and over and around the side for all these years – thanks for the memories!

MDV Brashear...4-4-4

About the time I was ready to send this issue to press, I received word through MDV Ken Brown and others that MDV Carl Brashear had been hospitalized and was near death. By now most all of you know that MDV Brashear left bottom on Tuesday, 25 July and made his ascent to the great Dive Locker in the sky. We received permission from the Virginia Pilot to copy his obituary in this issue.

In 2000, when I was CO of the Dive School, I was fortunate to have met MDV Brashear in Washington, DC at a premier showing of the movie “Men of Honor”. On stage with SECDEF, SECNAV, and the CNO, I proudly presented him the new and improved MDV certificate we developed while down in Panama City. Along with our CMC, MDV John Schnoering, I presented Cuba Gooding, Jr. a certificate making him an honorary US Navy 2nd Class Diver. MDV Schnoering jabbed a 2C pin on Gooding’s lapel while I remarked that Gooding was the first officially so honored. When I mentioned that the bar maids previously made

honorary Navy Divers at the Green Derby Bar & Grill were not “official” and therefore, Cuba Gooding, Jr. was still the first, I thought MDV Brashear was going to have a stroke he was laughing so hard.

Certainly MDV Brashear had a strong case for being bitter, but after having met him, I must to tell you that he exhibited nothing of the sort, and instead was a supremely pleasant and personable man. I’m glad I met him; rest in peace Carl.

WNY and NDSTC “Jake” Projects

Just before going to press, the Institute of Diving (IOD) has decided to focus their effort on erecting a Jake at NDSTC in Panama City instead at the old location of the NSDS and NEDU at the Washington Navy Yard. This decision was based on the high cost associated with site preparation required to support the combined weight of the statue and pedestal. See Bob Barth’s letter below for an update on the project and how you might contribute.

Meanwhile, the Homeland Security Policy Information Group (HSPIG) is forging ahead with plans to erect a Jake at the WNY location. Ken Dreger of HSPIG wrote me providing details on their efforts, including production of a film to document the process. Ken’s letter is below and within it you’ll find their website and associated links. Initial, conceptual architectural renderings of the WNY location are pretty impressive.

To both groups, I say: “Give it hell!”

Letters to the Editor...

Sea Stories and Great Memories from Bob Barth

The one thing that Navy divers are fond of is telling stories. During a career in diving, it is certainly no problem finding things to spin yarns about. Diving has its mystique, excitement and in a lot of cases the experiences that make for some great tales – and on special occasions – some of these tales are even known to be true. There’s not a one of us that can’t tell great stories about events we were involved with during our underwater career; there’s even a group out there that could

tell you about things they did that ‘till this day they can’t talk about, although others can write about.

Their tales would be something to hear. There’s not a one of us who at one time or another hasn’t experienced something that will remain in our memory bank for the rest of our life.

High excitement memories are what makes for great stories, however I have found that as you approach old age, (approach it hell, when you’re smack in the middle of it) you begin to think about the one thing that makes for far better memories than a dive in some far away place. No, what slowly begin to show up in your thought process are the folks you have met and worked with during your career.

I have had one of the best diving experiences anyone could ask for. I got to do stuff that few were able to do, go places that few had gone before, and now that it’s all over, I take great delight in remembering those who traveled that road with me. I would probably never tell you to your face what a great person I thought you were, I won’t reveal to you the respect and admiration I had for you, and I sure as hell would never tell you of the things you did that I will fondly remember. If I thought of you as one great individual, I sure would never tell you to your face. Hairy-chested Navy deep sea divers just don’t do that kind of thing.

As my life gets simpler, as I have less to do, I have more time to reflect on the folks I worked with and what an important part of my life they were. I worked alongside some giants, not many of them could earn the title of “Simple Men”; they were far from that. But loyalty and dedication seem appropriate; great shipmates sort of fit in there someplace. Some of them are still alive today, some are still in the Navy, some are retired and working in the diving fraternity someplace or another but far too many are gone and I never had a chance to tell them how much their friendship meant to me. We seem to be spending too much time putting them in the ground or spreading their ashes off the fantail of some vessel. What remains is, they are still alive in my mind and have a lot to do with providing the best memories I could ever hope for.





Not too far from where I live is a cemetery where my best friend is buried. I drive down the road several times a week and seldom do I not say out loud as I pass by "Hey Wilbur", then after a short pause I might add "I miss you, pal." Then, for some reason I added, "Say hi to everyone." Those of you who knew Wilbur will surely understand why I have some great memories of him – Wilbur Henry Eaton was just that kind of a guy and I can tell you one thing, he is the great provider of many things I think about.

A few weeks ago we took Frank Buski out to sea to spread his ashes. It was a windy day, not the kind of weather for spreading ashes. After a short ceremony, Fernando Lugo knelt over the side and let Frank back into the sea. With the wind like it was, a lot of us went home with some of Frank on our clothes. No one minded and I swear I heard Frank and Wilbur chuckling somewhere close by. A lot of young sailors have a lot to thank Buski for. Come to think of it, they are not young sailors any more. Frank Buski is another provider of good memories.

A few years ago I passed through Bat Cave, North Carolina and stopped by the graves of Doctor and Mrs. George Bond. They are buried side-by-side in the churchyard not too far from the clinic where, as a country doctor, he practiced medicine. Now, here is that giant of a man who has provided material for great memories, a big bunch of memories for not just for me but a hell of a lot of people who were part of the things George Foote Bond wanted to do in life. Bond was the man who provided me the most exciting experiences I could have ever imagined. I had a lot to say as I stood there and was sad because I don't think I ever took the time to tell him when he was alive, what he did for me, what I thought of him, let alone thank him. My life and memories are chock full of neat things we did when we worked for that man.

Some many years ago I was at the real NEDU in Washington, DC and worked with a guy known as Andy. Memories, my God, have I got some stories to tell about Lester Everett Anderson – some I could even write about in this article. Andy left a lot of memories with a

lot of divers. He and I made a 200-foot dive together with a bottom time of a bit over 16,000 minutes, all of which generated stories that have given me many a smile these past 41 years. Tell me the name of one man who couldn't tell the same kind of story about Andy. Lester Anderson died in his sleep a few short years ago.

Fortunately, a lot of the people who made an impact on my life are still around. They continue to add chapters of things to remember and their thoughts, as mine, travel back those many years and give us a lot of great stories to tell when we see each other. I am blessed to have known them all. Late at night I can push the "Great Memories Button" and entertain myself for hours with things that happened while I was a Diver in Uncle Sam's Navy. My list of notable men could go on for hours and even then only a small group will have been covered. I mentioned four; they are gone now and deserve honorable mention. But there are hundreds who have also made that contribution.

I am told that elders have the responsibility to pass on words of wisdom to those who follow in our footsteps. I never considered that I had a great deal of wisdom that I could pass on. But I can tell you for sure that what you do today, how you conduct your life, what you personally contribute to your diving career will make a big difference to someone some day as they begin to look back on their life as a Navy Diver. The more you put into it, the better it gets. What you do today is something that someone most likely will remember down the road. If you make it worthwhile and honorable, you will be remembered for the good you did and the esteem in which you are held by your peers.

Last year when I encountered my second Navy retirement, it had been 55 years since I got into this racket. Can you imagine all the great stories I could tell? Now if I could just remember the damn things. For those of you who are still at it, stop for a moment and think about it: is what you do today going to provide someone with fond memories? How you present yourselves can make a big difference to not only yourself but everyone around you. Whether you realize it or not, yours

is a story that might be told in years to come by those around you right now, give them something they will proudly remember. I have a lot of good stories to tell but most of them are about guys who are still alive and I don't want to embarrass them, more importantly I would never want them to think I held them in a special place. Divers don't do that kind of stuff.

You are a Diver because at one time or another in your life you saw a Diver at work, were witness to his daily routine as a Diver, saw a diving movie, saw some Diver sitting around with his UDT shorts on doing nothing inspirational, whatever it was, you decided that you had to be part of all. Whatever your motivation, you became a diver and it is now that you may inspire someone else who might want to follow in your footsteps, what he sees in you might make a big difference to his future. And while I'm talking about future, you are tasked with making someone's memories good ones, too. A diving pin on your chest does not necessarily make you a Navy Diver; that distinction has to be in your heart.

As you look back on your life make sure that when you get into the last part of it you can feel comfortable in thinking "I made that bunch of guys glad they were divers and glad they knew me." Tomorrow when you show up for work make it the best day you ever had and give your shipmates some great memories.

Bob Barth

Anniversary of DSS Mishaps...from RDML Timme

Twenty-four years ago, on 16 January 1982, men from the USS GRAYBACK (SS 574) were performing routine dive training operations. Such operations had been conducted safely for over a decade. Inside one of the boat's two large diving chambers, six divers awaited re-entry into the submarine. During an improperly conducted chamber drain-down process, the divers lost consciousness when a vacuum was created, and five subsequently drowned. One man survived when his arm hooked over a valve, keeping his head out of the water after he collapsed. The Navy review concluded that

“the accident...was the result of a combination of design deficiency, material defect, unsound operating procedures, and personnel error.”

Thirty-three years ago, on 17 June 1973, four men were operating the privately owned submersible Johnson Sea Link. The vessel had safely completed 129 dives. On this day, however, the submersible became entangled in wreckage on the sea bottom in 360 feet of water. By the afternoon of the next day, when a salvage vessel raised the submersible, the two men in its after compartment had died. One of them, Edwin C. Link, was the son of the submersible’s inventor. The U.S. Coast Guard Marine Casualty Report identified the causes as pilot error, inadequate rescue capability, poor submersible design, and casualness of operations.

Thirty-eight years ago, on 17 October 1968, Deep Submergence Vehicle ALVIN was preparing for dive number 308. With three men aboard and the hatch open, a hoisting cable parted. The occupants were able to escape with minor injury before ALVIN dropped to the bottom in 5,000 feet of water. The Advisory Committee Report cited the following causes: corroded lift cables, poorly designed hoist equipment, contaminated hydraulic fluid, uneven lift cable loading, and unsafe operating procedures.

Currently, NAVSEA is experiencing a rapid growth of new Deep Submergence Systems (DSS), from new submarine rescue systems to integrated systems onboard SSGN, SSN 23, and VIRGINIA Class submarines that provide lockout capability similar to USS GRAYBACK. At the same time, we are challenged by the demands of downsizing, rapid technology change, aggressive schedules, and diminishing dollars.

Recent events such as the near loss of the Russian submersible AS-28 remind us that, despite these challenges, we must maintain our vigilance, intensity, and integrity in all matters involving the DSS Program. Our outstanding DSS safety record since the tragic mishap on GRAYBACK is a direct result of disciplined compliance with the material and procedural requirements of the DSS Certification Program.

Has NAVSEA thought of everything that can go wrong? Have the DSS builders manufactured these systems in accordance with the drawings, using only approved materials? Has required maintenance been completed properly? Have the operators been adequately trained, and do they have a questioning attitude about unexpected indications?

Lives depend on the answers to these questions.

RDML W. G. Timme, USN
Deputy Commander Undersea Warfare
Naval Sea Systems Command
william.timme@navy.mil

Navy Expeditionary Combat Command...from RADM Bullard

In the short few months since I assumed command of the Navy Expeditionary Combat Command (NECC) I have been most impressed with the Navy Diver Community’s professionalism and expertise. Whether working on NOAA’s undersea laboratory Aquarius, responding to an “emergent” request from USS Albany, conducting coalition exercises in the Mediterranean, or serving with distinction in the Persian Gulf, you prove every day how fundamental Navy Divers are to the Navy’s mission throughout the world. Your performance has been nothing short of extraordinary.

As the Commander of NECC, I will bring fleet flag advocacy to the Diving Community. I intend to help our Navy make the best use of your skills at every level. I will need your help and support in moving the community forward to maintain readiness for today’s Global War on Terrorism, while looking forward to preparing Navy Divers for the challenges of the future. All levels of our military have a great need for you’re the experience and skills that Navy Divers bring to the fight. As we move forward with NECC, I am working on the overall makeup of the entire Expeditionary Force and how we better meld it together. My three goals for NECC, what I call the three “r’s” to accomplish this mission are to:

- Realign current Navy expeditionary forces into a structure that increases capacity for GWOT missions, improves

war-fighting effectiveness, and captures efficiencies in common synergies.

- Redistribute current forces throughout the Navy to better contribute to the GWOT and to temporarily relieve stress on Marine Corps and Army missions in Iraq and Afghanistan.
- Recognize where our Navy must expand current expeditionary capabilities and develop new ones for the long war.

With this all-encompassing approach, the Navy will ensure that expeditionary forces have sufficient capability and capacity to meet requirements for the Global War on Terrorism, major combat operations, and Homeland Defense, while maintaining solid core capabilities that can respond rapidly to evolving irregular-warfare missions.

Nearly 40,000 highly skilled Sailors are part of NECC including Divers, EOD technicians, security specialists, cargo handlers and constructionmen. Every day expeditionary combat Sailors are integrated in the joint maritime environment, filling critical needs to win the long war. NECC is developing our future capabilities so that there is truly a seamless transition from our powerful blue water forces into the green and brown water battle space. This includes the capability to contribute at home, as you did during post-Hurricane Katrina operations to open up ports for much needed relief supplies.

Navy Divers, as part of the expeditionary combat team, are flexible, scalable and rapidly deployable. You are self-reliant, self-sustaining and capable in the most diverse environments in the world. I am tremendously proud of the hard work, determination and performance of every Sailor who calls themselves: “Diver”. I thank you for serving your country and also thank you for the honor to serve with you.

With Respect,
Rear Adm. Don Bullard

NDSTC “Jake”... from Bob Barth

Most of you know, some of you do not, that we started a program a little over a year ago to take donations toward the





eventual fabrication and installation of an 8' tall bronze Mark V diver that will be placed near the location of the Navy Diving School and NEDU building at the Navy Yard in Washington. As of now we have about 100 folks who have put money towards this noble project, but we need more. Funds on hand and in the bank are approaching 28 K, That's about 30% of what we need to see this statue installed. You might want to look at our website www.markvmonument.org. It will tell you who the donors are, what we are trying to do, and every two weeks or so the total figure will be updated. You will also find on the website bits of interesting info and a place for you to leave us some words. If you might be to join in the endeavor (designed to honor the thousands of Divers that attended the school) please do, we need all the help we can get.

Man in the Sea Memorial Monument...from Ken Dreger

The MSMM project is intended for memorial monuments to ALL MILITARY DIVERS and locations where significant military diving events have taken place. Homeland Security Policy Institute Group will be taking orders soon for the "Limited Edition" of the official 250 of the 22" tall standing "Man In The Sea Memorial Monument" bronze miniatures. These statues will have an optional 2" thick 12" diameter granite-rotating base to allow for 360 degrees of viewing. The price for one of the 250 sequentially numbered bronze standing statues will be approximately \$3,900.00 each, which in today's market of bronze statues is in the middle price range, plus shipping, handling and tax with 50% down and the balance when the statue is ready to ship to the customer. After each pre-casting order is completed, proceeds will go to support creation of the full size 10' standing monument in Washington DC at the Navy yard. (Details on this can be made by contacting us). The approximate time for delivery will be 6 weeks after the initial order has been placed with HSPIG. These statues will be numbered serially for this release. If you would like one of the first ones, call us today or send us an E-mail to: orders@hspig.org so that we

can contact you. The sale of these will assist us in funding the standing 10' Man In The Sea Memorial Monument projects and ensure that we have the needed capital to build the full size statues! If you or your organization would like one of these limited edition standing miniatures, let us know and get on the list for this pre-casting order. This price will be held for Six weeks. You will receive a letter for the amount of deduction when you purchase your statue, and the proceeds of your donations will go towards this project.

If your organization or corporation would like to make a donation of over \$10,000 we will ship you a numbered statue for your generous donation, along with the granite base, a letter of appreciation of your efforts in this fine project and a donation receipt for taxes.

California Entertainment Group, Inc. (www.calentgrp.tv) is assisting in the coordinating of the production of "The Man In The Sea Memorial Monument" documentary series and has informed us that they are well on their way toward gathering material for the series, and hope to have more information for all of us in the near future. They have hopes of interviewing many of the divers who we have contacted, or who have contacted us about their part in diving history. **If you have a interesting diving history story or film from your diving career, please email us at: stories@hspig.org with the details and a short description of your unique story.** If your corporation is interested in being a sponsored advertiser on our TV Series, please contact us for further details about how you can participate, just send us a short note with your contact information to: tv@hspig.org

"JAKE"...from "Deep Sea" Dave Sullivan and the Institute of Diving

Since this is the last FACEPLATE that Captain Helmkamp will be the Editor on, the Institute of Diving (IOD) Mark V Monument Committee wanted to thank him for his many years of service as a Navy Diver and the immeasurable support he has provided for divers around the world.

As Supervisor of Diving, Captain Helmkamp's office is located on the historic Washington Navy Yard. Daily he would meander through the parking lot that had previously been the location of Naval School of Diving & Salvage (NSDS) and the Navy Experimental Diving Unit (NEDU). During one of these daily strolls he had an epiphany. He realized nothing marked the location where so many military divers began their journey into the small, specialized community. He felt it fitting that a bronze version of the classic "Jake" - the Mk V Air Diver - be commissioned and rigged along the waterfront at the historic Navy Yard. To memorialize all military divers at a location where neophyte divers earned and proudly wore, for the first time, the coveted Dive Pin indicating to all that "I am a professional military diver; I survived Navy Dive School."

Understanding that he could not endorse the project as SUPDIVE he mentioned it to Bob Barth and that is all it took. Bob got the Institute of Diving (IOD) in Panama City, Florida involved. IOD members formed a committee to spread the word of the project to divers around the world and to solicit and manage donations for the project. Homeland Security Policy Institute Group (HSPIG) volunteered their services to assist IOD in bringing the project to fruition. For the past year the effort has been to fulfill the vision of Captain Helmkamp and place the JAKE at WNY.

In a recent meeting to present the concept to the Commanding Officer of the WNY, Captain George Chamberlain, it was revealed by a prominent Engineering/Architectural firm, HDR, that the cost of engineering, design and site preparation for the monument would be in excess of \$3,500,000. With this information the IOD committee determined it would be cost prohibitive to place the JAKE at WNY. The IOD committee has decided Naval Diving and Salvage Training Center (NDSTC) Panama City is the proper place to place the JAKE. Thousands of divers will see it on an annual basis and students will pay homage to it daily.



As Captain Helmkamp so eloquently said, *“This monument is dedicated to Divers around the world who gave their life’s work to underwater construction and the salvage of ships lost at sea. Their method of training and development of equipment set standards adopted by the international diving community, from the development mixed-gas diving techniques used to save Squalus survivors to the saturation diving procedures developed by Sealab during the Man in the Sea Program that are now common in the oil industry. Their traditions will last forever.”*

You can find out more about the project and how to support it on the project web site markvmonument.org.

HOOYAH Captain Helmkamp.....

The IOD Mark V Monument Committee (Thanks Dave, I can’t take all of the credit, Captain Mike Herb and Lee Woolford were there at the beginning too, but ...sniff...you’re too kind ya knucklehead...sniff...darn, I said I wouldn’t cry! – Ed.)

Working Diver Conference ...from Captain Karin Lynn

This year’s Working Divers’ Conference was held 8-12 May in San Diego. Like those that have gone before, WDC 2006 was the latest opportunity for today’s military divers to get up-to-the-minute word on diving operations, medicine, equipment and technology. With over 40 presentations and workshops spanning the diverse spectrum of diving-related topics, NAVSEA 00C again provided an unparalleled forum for cross-tell, networking and collaboration among the many sub-communities of military diving. Topics included the most recent updates on diving medicine, and cutting edge

demonstrations and exhibits of the latest diving equipment. The packed agenda included overviews by Navy and sister service diving specialties, such as the comprehensive presentation on Underwater Construction Teams and the Navy’s Ocean Facilities Program. Community manpower and manning issues provided a common backdrop for lively discussion.

The imminent integration of most Navy diving communities within the Navy Expeditionary Combat Command (<http://www.necc.navy.mil/>) makes opportunities like WDC 2006 not only important but critical to the future of our multi-faceted discipline. Check out <http://www.supsalv.org> to download copies of briefs pertinent to your work. Thanks to SUPSALV for another great opportunity!

CAPT Karin Lynn, CEC, USN
NAVFACENGCOM HQ



You can find out more about the project and how to support it on the web site markvmonument.org

The Retirement Ceremony for Captain Jim Wilkins, SUPSALV, will be held on September 29, 2006.

The Retirement Ceremony for Captain Mark “V” Helmkamp, SUPDIVE, will be held on October 27, 2006 aboard USS WISCONSIN (BB 64) in Norfolk, VA.