



# FACEPLATE

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

*Volume 21, No. 1 / November 2017*



## *In This Issue...*

*Collision Response USS JOHN S MCCAIN (DDG 56)  
The Recovery of the CSS GEORGIA  
Navy Divers Salvage Vietnam Era Barge  
EX USS SHADWELL Wreck In Place*

**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.navsea.navy.mil/Home/SUP\\_SALV/00C3-Diving/Faceplate-Magazine/toview/printFaceplate](http://www.navsea.navy.mil/Home/SUP_SALV/00C3-Diving/Faceplate-Magazine/toview/printFaceplate).

## Editorial Staff

**Captain Keith Lehnhardt, USN**  
Director of Ocean Engineering  
Supervisor of Salvage and Diving

**Commander John Porter, USN**  
Supervisor of Diving  
Editor-In-Chief

**NDCM (MDV) Ryan Stewart, USN**  
**NDCM (MDV) John Hopkins, USN**  
**CWO5 Michael Hart, USN**  
**LT Mark Hyatt, USN**  
Fleet Liaison Editors

**Kelly Leizear**  
Production Manager  
Graphic Designer

## In This Issue

SUPSALV Sends	3
U.S. Navy Diving Manual Revision 7	4
Navy and Army Engineering Units Assess Exigent Repair Technology	5
Underwater Construction Team One Diver Training	7
NAVSEA 00C supports Collision Response USS JOHN S MCCAIN	9
Navy Divers Salvage Vietnam Era Barge	11
First Navy Female Chief Diver Inducted into Women Divers Hall of Fame	13
EODGRU 1 Training Unit Underwater Demolition	14
EX-USS SHADWELL Wreck In Place	15
Mark V Monument Scholarship Project	17
The Recovery of the CSS GEORGIA	18
MV-22 Operation with MDSU 1	26
The Old Master	29
SUPDIVE Sends	30
Faceplate Feedback	30

## Cover



Onboard M/V Treasure, USS JOHN S MCCAIN is being prepared for voyage to Yokosuka, JA. Tasks remaining prior to departure include completing blocking and seafastening. Photo by: CAPT Lehnhardt





Greetings Navy Divers! What a busy year since the last issue of Faceplate! Good to be busy worldwide and across the entire diving community, but in our business, that usually means that some type of emergent or tragic event has taken place that requires a diving, husbandry, or search or salvage response. As such, I write this article from a hotel room in Singapore as an integrated team of fleet divers, government civilians, and contractors make final preparations to heavy lift the USS JOHN S. McCAIN. More on that in a second. Last issue, I spent some time discussing the CNO's, "A Design for Maintaining Maritime Superiority," and highlighted his four lines of effort to:

- Strengthen naval power at and from sea
- Achieve high velocity learning at every level
- Strengthen our Navy team for the future
- Expand and strengthen our network of partners

From my perspective, in all aspects, divers around the fleet have done an exceptional job in both supporting and leading these CNO priorities. In this issue, I'd like to talk a bit about his first line of effort: strengthen naval power at and from sea. The picture below of the USS J.S. McCAIN getting underway is a prime example. After its collision with the MV Alnic MC on August 21st, that tragically claimed the lives of 10 of our sailors, divers were among the first responders to assess the damaged ship. A comingled team from CTF73, SRF Japan, SWRMC, MDSU-1, AS-39, AS-40 and 00C (with topside support from Marines off of USS



America), worked tirelessly around the clock to locate and recover ALL of our fallen shipmates, remove damaged portions of the ship, patch and pump compartments, remove all 10 propeller blades, and clean out debris from the flooded compartments. I had the opportunity to conduct a dive on the damaged sections of the McCAIN and witnessed firsthand the impressive work that was accomplished in exceptionally adverse conditions. Hats off to you guys! It's because of YOUR diligent effort that this ship is now situated on the back of MV TREASURE, underway and in route back to SRF Japan for further evaluation and permanent repair.

If that wasn't enough, just two short months before the McCAIN collision, divers from SRF Japan, MDSU-1, CTF-73, and 00C led the effort to recover the 7 sailors who perished, stabilize the ship, patch damaged sections and pump out flooded spaces on the USS FITZGER-

ALD after her collision with ACX Crystal on June 17th. It was truly a heroic effort by those involved, and allowed the ship to proceed expeditiously into dry dock within three and a half weeks of the incident, receiving temporary repairs prior to its upcoming heavy lift back to the states for permanent repairs.

Oh, by the way, all of this was accomplished in addition to the "day job" of keeping ships across the fleet afloat, repaired, and underway. By my count, there have been at least 126 underwater ship husbandry jobs thus far this year that were supported or equipped through the 00C5 office, in addition to the hundreds more that I don't have visibility on. Conservatively, you have saved the fleet more than 80M dollars and returned at least 480 operational days back to our sailors in FY17! If this isn't **Strengthening Naval Power** for our current fleet, I don't know what is!

In closing, let me say that I appreciate all of the hard work that you do on a daily basis. The 'git-er-done' reputation that the diving community has around the fleet, DoD, and nation is definitely alive and well, and growing stronger with each successful operation. Keep up the great work and, do me a favor, **share your operations and successes on the dive side through Faceplate.**

The articles that you all provide are great tools to keep us all abreast of the numerous diving and salvage missions that are going on out there, and help us learn from the successes and challenges of others. I hope that you enjoy this issue and, as always, be safe and I'll see you on the dive side! Hooyah Deep Sea!



# U.S. NAVY DIVING MANUAL

## REVISION 7

By: NDCM (MDV) Ryan J. Stewart

In December 2016, Naval Sea Systems Command (NAVSEA 00C) completed Revision Seven of the U.S. Navy Diving Manual. This was one of the largest revisions ever completed, and took over two years to finalize. The mission of Revision Seven was two-fold: First it was based on the Diving Operations Assessment (DOA) formed by direction from the Chief of Naval Operations in October 2014, based on a series of Class A mishaps. Secondly, it required an update of the technical information and procedures in accordance with the OP-NAVINST 3150.27 (series).

To this aim, we wanted to give the Diving Fleet more control over their diving forces. We sought to provide a better planning process and guidance on how to dive, instead of providing more rules to follow. Also, we replaced rule-based decision-making with analytical decision-making, returning the operational risk decision making back to the Fleet.

With that in mind, we concentrated on ways to strengthen the Diving Supervisor since they are the primary person responsible for executing safe and effective diving, and the person most able to prevent mishaps. This is based on the fact that not every side has a Diving Officer or a Master Diver, but every side has a Diving Supervisor. To provide the Diving Supervisor with the most effective tools to accomplish the mission we updated the planning and Operational

Risk Management (ORM) information in Chapter 6, consolidated emergency procedures, improved readability, and provided new and updated checklists.

To improve the readability of Revision Seven, we reduced redundancies by

formulas from Chapter 12 were integrated into Chapter 2, the information from Chapter 13 was combined with Chapter 14, and the information from Chapter 17 was integrated with Chapter 15.

While reducing the overall growth, the manual includes new additions such as Appendix 2B (U.S. Navy Dive Computer), 2C (Environmental and Operational Hazards), and 2D (Guidance for U.S. Navy Diving on Dynamic Positioning Vessels).

In closing, the focus on Revision Seven was to provide Navy Divers the best resource we can give them to learn and apply their chosen trade. With that being said, the U.S. Navy Diving Manual must be constantly updated since it is, among other things, the Navy Diver (ND) rate-training manual. Over the last 11 months, we've received change requests for Revision 7 Change A, which will forego a thorough review/approval process before implementation. All change requests are available to view on the SECURE SUPSALV website, under the Dive Manual Change Database. An

option to submit a change request is also available on the website. If you decide to submit a change request, ensure all applicable information is filled out. A change request sample has been provided. Currently, NAVSEA 00C is planning on releasing Change A in the next 3-4 months.

---

*NDCM (MDV) Ryan Stewart is a Command Master Diver at NAVSEA 00C.*

---



consolidating information to one location, moved information to the most relevant location, and clarified material and bulletized paragraphs where possible.

Overall, we reduced the number of chapters from 21 in Revision Six to 18 in Revision Seven, while slightly reducing the total growth of page numbers. Of the three chapters deleted, they include Chapter 12, Chapter 13, and Chapter 17. The





# Navy and Army Engineering Units Assess Exigent Repair Technology at JBPBH Pearl City Annex

By: Lt. Cmdr. Jennifer Cragg, Navy Expeditionary Combat Command Public Affairs

Sailors assigned to Navy Expeditionary Combat Command (NECC) and NECC Pacific took part in a Joint Capability Technology Demonstration with U.S. Army engineering counterparts March 3 at Joint Base Pearl Harbor Hawaii Pearl City Annex.

The demonstration was the first of its kind to examine how a remotely operated reconnaissance vehicle would be used to create rapid pier repair technology. Additionally, during the demonstration assessments were made to determine how

the technology can be utilized to achieve expedient practices for creating repairs to damaged concrete and timber piles.

Underwater Construction Team (UCT) 1, UCT 2, and U.S. Navy Mobile Diving and Salvage Unit One personnel trained and worked alongside U.S. Army team from the 7th Engineer Dive Detachment, 84th Engineer Battalion, and 130th Theater Engineer Brigade.

During the demonstration, Sailors prepared pier pile jacketing in support of rapid pier reconstruction testing, as well

as piloted the Multifunctional Assessment Reconnaissance Vessel (MARV) as part of a Joint Capability Testing and Development event in support of rapid port reconstruction operations.

"This demonstration was a great opportunity for Navy Expeditionary Forces to showcase their diving, logistics, and engineering capabilities in the Pacific Fleet area of operations," said Cmdr. Michael McCain, who is currently assigned to NECC-Pacific.

In addition to the use of a re-

motely operated reconnaissance vehicle, Army and Navy engineering teams employed an innovative remotely operated surface vessel to capture detailed engineering survey data. Army and Navy divers demonstrated a rapid pile jacketing technology. This technology when developed in the future will enable military engineers to rapidly repair a damaged pier and return the facility to limited service.

UCT and MDSU units are the premier U.S. Navy expeditionary forces for port reconstruction and rapid expeditionary salvage operations worldwide.

NECC/NECC-Pacific is an enduring warfighting force providing sea-to-shore and inland operating envi-



*U.S. Divers prepare underwater pier piles for repair as part of a Joint Capability Technology Demonstration (JCTD). The event focused on improving our U.S. Army and Navy Diving and Engineering capabilities to rapidly repair ports that may have been damaged by natural disasters or in response to enemy kinetic action. (Photo from PACOM JCTD Event Lead)*



*U.S. Navy and Army Divers participate in two weeks of pier repair events as part of a Joint Capability Technology Demonstration (JCTD) Event. This joint diving event is designed to provide our U.S. Diving and Engineering Teams with improved processes and technology to repair damaged port facilities due to natural disaster or kinetic effects. (Photo from PACOM JCTD Event Lead)*

ronment capabilities across the full range of military operations which is focused on delivering combat-effective expeditionary forces ready for worldwide operations now and into the future.

---

*Article Cover Photo: US Army Soldiers conduct simulated port repairs as part of a Joint Capability Technology Demonstration (JCTD). As part of a Limited Operational Utility Assessment (LOUA), members from the 7th Engineer Dive Detachment, 84th Engineering Battalion, and US Navy Underwater Construction Teams and a Mobile Diving Salvage Company participated in a two week intended to demonstrate new port improvement technology and processes. (Photo from PACOM JCTD Event Lead)*

---



# Underwater Construction Team One Diver Training

By: MC2 Sean Furey



*Construction Mechanic 1st Class Brandon Burrow, assigned to Underwater Construction Team (UCT) 1, climbs a ladder after diving during diver-qualification training off the coast of Naval Station Guantanamo Bay, Feb. 12, 2017.*



*Construction Mechanic 2nd Class Michael Dupray, assigned to Underwater Construction Team (UCT) 1, conducts a KM-37 surface supplied dive during diver-qualification training off the coast of Naval Station Guantanamo Bay, Feb. 19, 2017.*



*A Seabee, assigned to Underwater Construction Team (UCT) 1, conducts a KM-37 surface supplied dive during diver-qualification training off the coast of Naval Station Guantanamo Bay, Feb. 19, 2017.*



*LTJG Brandon Rivera, assigned to Underwater Construction Team (UCT) 1, dives on a plane wreck during diver-qualification training off the coast of Naval Station Guantanamo Bay, Feb. 15, 2017.*

*Construction Mechanic 2nd Class Ryan Jeffery, assigned to Underwater Construction Team (UCT) 1, prepares to surface during diver qualification training off the coast of Naval Station Guantanamo Bay, Feb. 12, 2017.*



*Seabees, assigned to Underwater Construction Team (UCT) 1, conduct a KM-37 surface supplied dive during diver-qualification training off the coast of Naval Station Guantanamo Bay, Feb. 19, 2017.*

Mass Communication Specialist 2nd Class Sean Furey is currently part of the U.S. Navy Underwater Photography Team and is stationed at Expeditionary Combat Camera.



*Construction Mechanic 2nd Class Michael Dupray, assigned to Underwater Construction Team (UCT) 1, conducts a KM-37 surface supplied dive during diver-qualification training off the coast of Naval Station Guantanamo Bay, Feb. 19, 2017.*





# NAVSEA 00C SUPPORTS



## USS JOHN S MCCAIN (DDG 56) COLLISION RESPONSE

BY: DON FEGLEY

NAVSEA's Supervisor of Salvage and Diving (SUPSALV / SEA 00C) activated a multi-phase response to facilitate Commander Seventh Fleet's recovery plan for USS JOHN S MCCAIN which docked in Changi, Singapore after it sustained damage to its port quarter during a collision with an oil tanker on 21 August 2017.

SUPSALV's initial efforts included immediate stability and structural engineering analysis as well as provision of emergency pumping systems and transportable surface supplied diving systems from its Emergency Ship Salvage Material Base in Singapore.

As the casualty stabilized, the decision was made to transport the damaged vessel to the U.S. Navy Ship Repair Fa-

cility in Yokosuka, Japan. SUPSALV, the Navy's Technical Warrant holder for Heavy Lift transport, is overseeing the process. SEA 00C executed their Western Pacific Salvage contract and tasked SMIT International N.V. to install a temporary patch to the damaged hull section and to transport USS JOHN S MCCAIN to Japan via heavy lift.

To support this evolution, SUPSALV deployed a Salvage Engineer / Naval Architect, along with a heavy lift Project Officer from the SUPSALV Naval Reserve detachment, to SMIT's headquarters in the Netherlands to oversee development of the highly technical "Transport Manual". SUPSALV also deployed an Underwater Ship Husbandry Operations Specialist to oversee the removal of the

propeller blades by a Navy dive team from Mobile Diving and Salvage Unit ONE (MDSU 1). Removal of the propeller blades was necessary to load MCCAIN onto the flat deck of the heavy lift ship.

SUPSALV also deployed a Heavy Lift Engineer, along with support personnel from the Heavy Lift Reserve Detachment, to Singapore to oversee the installation of the patch and execution of the lift. The SUPSALV representative also worked with the ship's crew and port engineers to ensure the ship was prepared for the trip.

As preparations continued, the Navy dive team completed removal of all propeller blades. The patch was fabricated, welded to the MCCAIN hull, and the flooded spaces were pumped dry. The



USS JOHN S MCCAIN positioned on the alignment posts which have been welded to the deck of heavy lift ship TRESSURE. In this picture, divers had verified the keel was sitting correctly on the blocks and deballasting has begun.



The completed patch being positioned next to USS JOHN S MCCAIN for installation.



Seven of JOHN S MCCAIN's propeller blades removed from the hub. The sheerleg crane, CYCLONE, is shown in the background supporting patch installation.



Shop van set up on the pier to provide a dive site for the Navy dive team removing USS JOHN S MCCAIN's propeller blades.

heavy lift ship, TRESSURE, after arriving in Singapore, was prepared to accept MCCAIN for transporting to Japan.

On 4 October, TRESSURE moved from the dock to a designated anchorage area where the currents remained calm for the lift process to begin its pre-ballast procedure. On 5 October, USS JOHN S MCCAIN also moved from the dock to an anchorage adjacent to TRESSURE.

The lift process, which takes approximately 18 hours, began on 6 October before dawn. After TRESSURE was fully ballasted down, MCCAIN was positioned over the blocks, alignment verified by divers, and deballasting began. The lift will continue throughout the day and by evening, MCCAIN will be lifted clear of the water and seafastening and other preparations for going to sea will begin to take place. When preparations are complete, TRESSURE, with JOHN S MCCAIN onboard, will depart Singapore to transit to Yokosuka, Japan. SUPSALV, based in Washington

DC, is responsible for Navy ocean engineering, including salvage, pollution response, in-water ship repair, towing, diving safety, and equipment maintenance and procurement.

*Article Cover Photo: JOHN S MCCAIN onboard M/V TRESSURE in Singapore harbor conducting voyage preparations on 7 October. The patch welded to MCCAIN can be seen on her port quarter and note that MCCAIN sits at an angle relative to TRESSURE to allow clearance for her sonar dome which sits below keel level.*

*Don Fegley a Marine Systems Analyst has been supporting SUPSALV since 1996 with documentation and technology solutions.*





# Navy Divers Salvage Vietnam Era Barge

*By: Fleet Combat Camera Pacific*

Navy Divers, assigned to Explosive Ordnance Disposal Mobile Unit 11, Mobile Diving Salvage Company 11-7 (MDS CO 11-7), recovered a sunken Vietnam-era work barge on Naval Base San Diego April 3-10, 2017.

Over six days the salvage and recovery involved 27 dives. The dives included rigging, sinking, cutting, separating and recovery of a platform barge. The platform barge weighed approximately 158 thousand pounds.

"Initially they tried to pull it out of the water. Unfortunately because of how deteriorated the barge was it actually flexed and would have snapped if they tried to take it out," said Chief Navy Diver John Wayne Jones, assigned to MDS CO 11-7. "That's when they called us."

According to Navy Diver 1st Class Curtis Fees, the salvage and recovery planning is the most crucial and challenging part of the salvage.

"Every job is different; there isn't a book to look at that has the answer for every situation. You collaborate with your team, come up with a plan, and then you execute the plan," said Fees. "First we surveyed the half sunken barge, conducted a controlled sinking, cut the barge in half, and raised the pieces with a crane."

MDS CO 11-7 had just finished their pre-deployment training when they received the order for this job.

"We had a window of opportunity and when the tasking came down we were able to incorporate that into the end of our training cycle," Jones said.

Training for every possible situation is not always practical; there-

fore training to the equipment is preferred, according to Fees.

"We made our plan and executed it successfully," said Fees. "It is rewarding to see your work produce favorable results."

U.S. Navy Divers are the world's premier combat force for conducting expeditionary diving and salvage.

*Article cover photo above: Navy Diver 2nd Class Chris Dahlstrom, assigned to Mobile Diving and Salvage Company 11-7, swims a wooden plank to shore April 4, 2017 on Naval Base San Diego, California. Mobile Diving and Salvage Company 11-7 took part in efforts to dismantle and remove a partially sunken barge from San Diego Bay. (U.S. Navy Combat Camera photo by Mass Communication Specialist 2nd Class Shannon Burns)*





*Mobile Diving and Salvage Company 11-7 divers prepare to remove a sunken, Vietnam era port services barge from the water at Naval Base San Diego Apr. 10, 2017. (U.S. Navy Combat Camera photo by Mass Communication Specialist 1st Class Trevor Andersen/Released)*



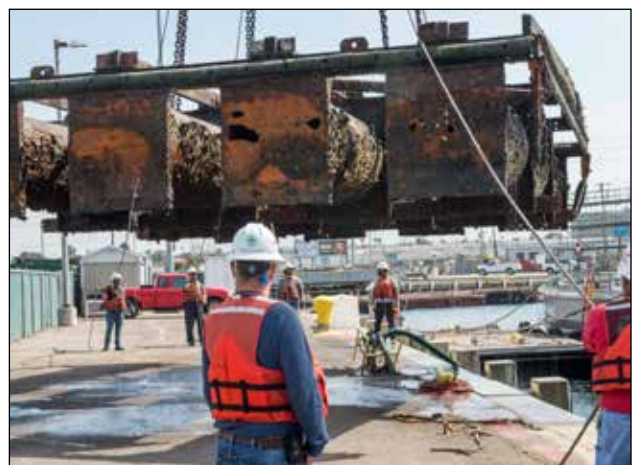
*Navy Diver 2nd Class Chris Dahlstrom, assigned to Mobile Diving and Salvage Company 11-7, jumps into the water April 4, 2017 on Naval Base San Diego, California. Mobile Diving and Salvage Company 11-7 took part in efforts to dismantle and remove a partially sunken barge from San Diego Bay. (U.S. Navy Combat Camera photo by Mass Communication Specialist 2nd Class Shannon Burns)*



*Mobile Diving and Salvage Company 11-7 divers and Navy civilian contractors salvage a sunken Vietnam era port services barge from the water at Naval Base San Diego Apr. 10, 2017. (U.S. Navy Combat Camera photo by Mass Communication Specialist 1st Class Trevor Andersen/Released)*



*A Navy civilian contractor checks out a salvaged, Vietnam era port services barge at Naval Base San Diego Apr. 10, 2017. (U.S. Navy Combat Camera photo by Mass Communication Specialist 1st Class Trevor Andersen/Released)*



*Mobile Diving and Salvage Company 11-7 divers and Navy civilian contractors remove a sunken Vietnam era port services barge from the water at Naval Base San Diego Apr. 10, 2017. (U.S. Navy Combat Camera photo by Mass Communication Specialist 1st Class Trevor Andersen/Released)*





# FIRST NAVY FEMALE CHIEF DIVER INDUCTED INTO WOMEN DIVERS HALL OF FAME

By Chief Mass Communication Specialist Edward S. Kessler,  
Navy Expeditionary Combat Command Public Affairs

**R**etired Chief Navy Diver Rebecca Jones, a civilian Navy maintenance manager with Naval Special Warfare Logistics and Support Unit Two, was inducted into the Women Divers Hall of Fame March 25. Jones and other elite members of the female diving community were honored at this year's "Beneath the Sea" conference held in Secaucus, New Jersey.

In 2007, Jones was the first woman in the U.S. Navy to be promoted to rank of Chief Navy Diver and only the second female deep sea diver in the U.S. Navy to attain the rank of Chief Petty Officer.

The Women Divers Hall of Fame is a non-profit organization comprised of elite female leaders and innovators in the diving community who have made significant international contributions to the exploration, understanding, safety and enjoyment of the underwater world. The organization donates thousands of dollars every year for scholarships and grants promoting diving.

"After everything I've experienced, everything I have done in my Naval career I am just so honored to have been nominated," said Jones. "I have never thought of myself as special or that I was different, to me, I was a Navy Diver, I am here to do my job."

Jones began her journey of becoming a Navy diver in 1996 aboard the USS Grapple (ARS 53) where she was stationed as an engineman during recovery operations of TWA Flight 800 and the 1998 crash of Swiss Air 111.

"I saw the camaraderie that the divers had, it was amazing to me," said Jones. "I had a really great commanding officer who supported me at that time because honestly I never knew women could do it until I saw a woman DMT, Susanne Pickman."

After reporting to Costal Systems Station in Panama City, Florida in 1998, Jones later submitted her dive package and was accepted to 2nd Class Dive School at Naval Diving and Salvage Training Center, where she graduated first in her class in 2000.

During her career she was a member of the 2004 USS Monitor mission, the Joint Recovery Team for Hurricane Katrina relief, and served as a Naval Diving Safety Inspector for Special Operations, Naval Special Warfare and Fleet diving communities.

"I was in the Navy for eight years before I realized I could do something else," said Jones, "I worked really hard to become a Navy Diver."

For the past 10 years, Jones and her husband have continued to support the Deep Sea diving community by running the Divers Recall in Virginia Beach bringing together diver families.

The ranks of female divers in the Navy are a very small, but elite group, yet Jones continues to reach out and mentor them as they serve in Navy diving.

"I take being a Navy Diver to heart, I knew it was going to be challenging, but I succeeded so it's important to me to keep in contact with all the other women," said Jones.

Like any rate in the Navy, competition to make Chief is stiff. This cycle there are two women who have made board, and Jones is keeping her fingers crossed that they will be selected.

"I absolutely love the diving community and I don't think I would have stayed in the Navy if I hadn't made it through dive school," said Jones, "That's how passionate I am about Navy Diving and the community."

The Women Divers Hall of Fame began in 1999 with 72 inductees and is now much more competitive than in the past, with a maximum of 10 inductees per year.

According to Dr. Hillary Viders, one of the founders of the WDHOE, nominees must set a world record, be a pioneer in one area of diving, or bring about great innovations in diving on an international scale to be considered for induction.

"I think it's very important for us to recognize the leading women in diving," Viders said. "It inspires young women everywhere, especially those now in high school or college who are coming up through the ranks. You never know who is out there."

Jones retired from the U.S. Navy in 2016.



# Explosive Ordnance Disposal Group One (EODGRU 1) Training Unit Underwater Demolition



U.S. Navy Sailors assigned to Explosive Ordnance Disposal Group One (EODGRU 1) successfully detonate an underwater over pressure charge on an inert mine while conducting an underwater demolition training exercise off the coast of San Diego on May 24, 2017. Navy EOD is the world's premier combat force for countering explosive hazards and enabling freedom of movement on land or at sea. (U.S. Navy Combat Camera Photo by Mass Communication Specialist 2nd Class Dan Rolston/Released)



U.S. Navy Sailors assigned to Explosive Ordnance Disposal Group One (EODGRU 1) dive with a shape charge to perform an over pressure detonation on an inert mine while conducting an underwater demolition training exercise off the coast of San Diego on May 25, 2017. Navy EOD is the world's premier combat force for countering explosive hazards and enabling freedom of movement on land or at sea. (U.S. Navy Combat Camera Photo by Mass Communication Specialist 2nd Class Dan Rolston/Released)



U.S. Navy Sailors assigned to Explosive Ordnance Disposal Group One (EODGRU 1) check the status of the remote detonator receiver and transponder while conducting an underwater demolition training exercise off the coast of San Diego on May 24, 2017. Navy EOD is the world's premier combat force for countering explosive hazards and enabling freedom of movement on land or at sea. (U.S. Navy Combat Camera Photo by Mass Communication Specialist 2nd Class Dan Rolston/Released)





# EX-USS SHADWELL

## Wreck In Place

By: LCDR Eric D. Brege, PE

---

*Top to bottom: EX SHADWELL  
Before Wreck In Place Operations;  
EX-SHADWELL After Hurricane  
Katrina; Floating Crane Ferrell  
Conducting 40 Ton Lift.*

---



For members of Navy's Salvage Team's at SUPSALV and MDSU, the EX-USS SHADWELL is a familiar ship. After Hurricane Katrina she was pushed completely out of the water and grounded on Little Sand Island in Mobile, AL. In 2015, Salvage teams went to work on her during two separate incidents. In late winter/early spring of 2015, a team of SUPSALV and MDSU-2 dredged around her bow and refloated her after she was partially grounded from river sediment depositing around the vessel. That year, a similar team of SUPSALV and MDSU-2 refloated her after she sank following the 4th of July weekend.

After distinguished service in WWII, Korea, and Vietnam, she was decommissioned and placed in the reserve fleet. She entered service again in 1988 as the Navy's full scale firefighting test ship for nearly 30 years. While being moored at Little Sand Island Mobile AL, the EX-Shadwell was regularly set ablaze in a controlled environment. These efforts furthered the safety of the operational Navy and civilian shipboard firefighting measures by developing new fire protection technologies and marine firefighting procedures.

After service in multiple capacities for the Navy, the CASA GRANDE class LSD is finally being salvaged for the last time. The EX-Shadwell's mate-

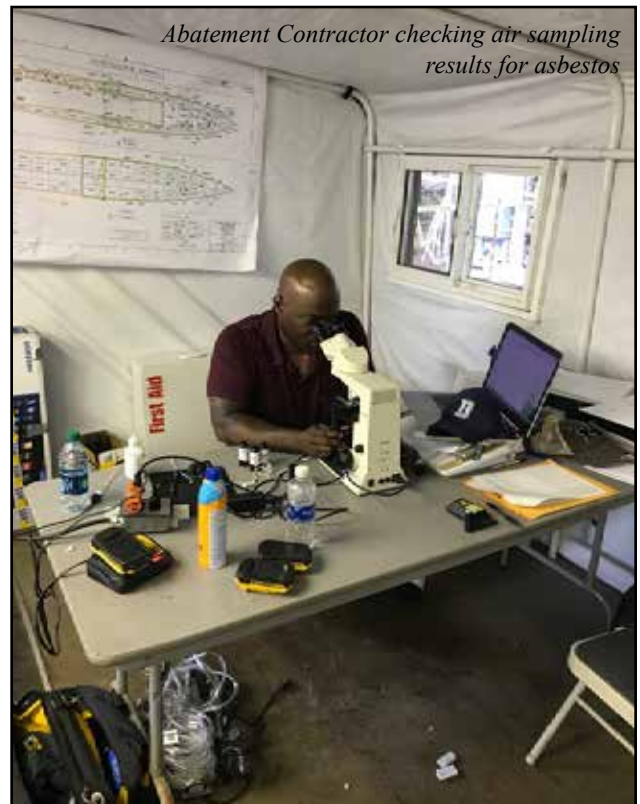
rial condition has degraded to a point that its continued use as an experimental fire test platform is considered operationally unsafe, and can no longer fulfill its current DON fire test mission. As a result, the U.S. Naval Research Laboratory (NRL) coordinated with SUPSALV to assess potential disposal options. In fall of 2016, SUPSALV, in conjunction with their East Coast Salvage Contractor (DONJON), completed a detailed engineering survey and assessment of the vessel. Following this survey, three different alternatives were analyzed: conduct a long distance tow to a scrap yard; conduct a short distance tow to local dock for scrapping; Wreck in Place.

The detailed analysis of alternatives showed that from both a cost and technical perspective, the best option was to conduct a Wreck in Place of SHADWELL. The primary drivers for this decision were based on her being grounded along 70 percent of the ship's length, and that hull thickness measured less than 1/8" in many locations below the waterline. Getting her underway, for both a short or long distance tow, would require significant dredging to get her into the shipping channel.

After the decision was made to wreck in place, a detailed Salvage Plan was drafted, which included applicable Environmental, OSHA, and EPA requirements. Before starting the project, multiple soil and sediment samples were taken in the surrounding area to establish baseline levels of hydrocarbons, Asbestos and Polychlorinated Biphenyl (PCB), and heavy metals.

The EX-Shadwell Wreck in-place commenced on 10 July 2017 and is expected to be completed by December 2017. The projects phases are described below.

The Wreck in Place is progressing on schedule. More than 50 percent of the PCB's and asbestos have been removed, and approximately 25 percent of the structure above the waterline has been removed. Like any project, there have been several challenges along the way, but



*Abatement Contractor checking air sampling results for asbestos*

the project is progressing as expected and should be finished by December 2017.

*LCDR Eric Brege is an assistant for Salvage at NAVSEA 00C.*

- Phase 1: Strip furnishings, fittings, and trash. After decades of being used as a test ship, and the sinking in 2015, the ship was full of damaged equipment and trash. Using a floating barge, and more than 50 dumpsters, the loose trash was removed to support Phase 2.
- Phase 2: Remove Asbestos and Polychlorinated biphenyl (PCB). The ship was built in an era where PCB's and asbestos were commonplace, so the ship was full of potentially hazardous substances. Nearly 50 percent of the project will be spent on the removal of hazardous substances. A separate subcontractor has been hired to complete this work, and is nearly 50% complete with asbestos and PCB removals at this time.
- Phase 3: Cut vessel down to the waterline. Although listed as separate phase, cutting the vessel down to the water line is being performed in conjunction with Phase 2. As portions of the vessel are cleared from asbestos, they are cut and then lifted off the ship in 5-50 Ton pieces using the salvage contractors 250 Ton crane.
- Phase 4: Transfer scrap to processing facility. This phase is also done in conjunction with phase 3. As large pieces of the ship are removed, they are transferred to barges moored alongside SHADWELL. These barges are then transferred to local scrapping facilities where they are processed for reuse.
- Phase 5: Chop/Cut waterline and below. This phase will be performed after all asbestos and PCB's have been removed, and will be conducted on land or in water by sectioning the remaining hulk into 50-150 ton pieces. The cutting will be performed using a crane and chopping beam while waterborne, or by torches after pulled up on to the beach. All scrap will be transferred as described in Phase 4.
- Phase 6: Removing of mooring system. During the salvage of EX-SHADWELL after Hurricane Katrina, additional moorings were placed on Little Sand Island by burying large concrete anchors. These anchors and associated chain/line will be removed using heavy equipment on Little Sand Island.
- Phase 7: Rehabilitate Local Site. After both the vessel and anchoring system have been removed, the beach on Little Sand Island will be regraded back to its original elevation.



# Mark V Monument Scholarship Project

By: Dave Sullivan Mark V Monument Scholarship VP, T, & S

“The Mark V Monument Project” originally undertook a mission to obtain the necessary Navy approval and private funding to fabricate and erect a ten foot tall bronze/granite JAKE monument at the entrance to the Naval Diving and Salvage Training Center in Panama City, Florida. The monument was completed in October 2012, and dedicated to all U.S. Military Diver graduates, past, present and future that go down in the sea to work.

Military Divers are among the hardest working people that willingly labor at one of the highest risk and toughest jobs in country. They generally do not earn enough to bear the high cost of college education for their family without some kind of financial assistance. Therefore, the Mark V Monument Project is in its fourth year of a mission to generate funds that will provide scholarship assistance to the children, grandchildren, and spouses of U.S. Military Divers. We are excited to now focus on this and worthy mission and are grateful for the donations and volunteer efforts that enable us to operate toward success. We recently distributed the annual scholarship awards for 2017

The recipients of the 2017 Mark V Monument Scholarships are;



**Keenan Williams**

son of

Kelly Saxon Williams USN Ret.

*“The MK V Monument Scholarship is a real opportunity for me to be able to continue higher education in college. This scholarship will help me pay for expenses to begin my freshman year at Florida Atlantic University to pursue an Ocean Engineering degree, as well as swim on the Men’s Swim team.”*



**Katie Murray**

daughter of

Chris Murray USN Capt Ret. Former  
SUPDIVE

*“I am so grateful to be receiving a scholarship from the Mark V Monument Scholarship Project. The scholarship will allow me to continue my studies at the University of Virginia and complete my Systems Engineering degree. I am especially honored to be receiving this award because it comes from such a great organization that supports Navy Divers and their families.”*

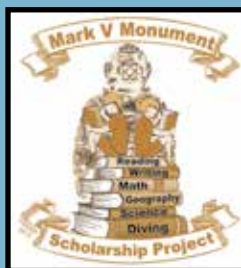


**Mallory Daniels**

daughter of

Robert Daniels USN LCDR Ret.

*“I am so grateful to the Mark V Monument Project for supporting me in my academic pursuits. It is an honor to be chosen as a scholarship winner of such a unique mission! Your support is sincerely appreciated by my family.”*

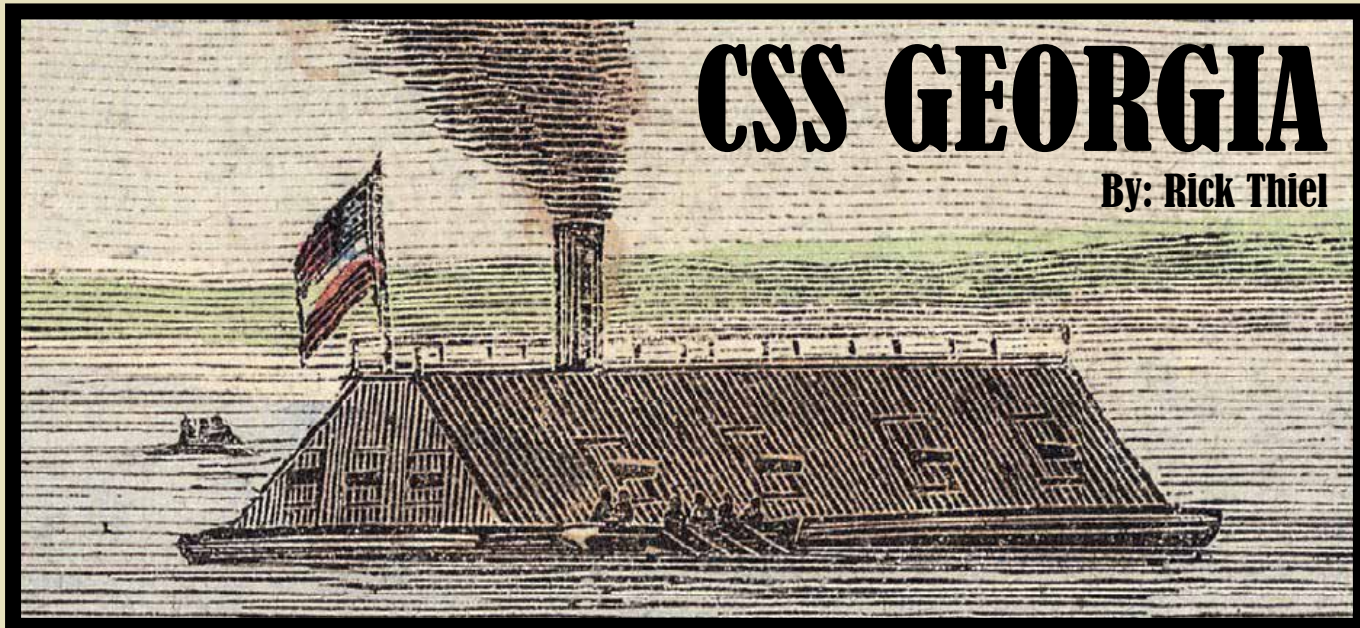


**Lane Weeman**

# The Recovery of the

# CSS GEORGIA

By: Rick Thiel



Resting on the bottom of the Savannah River, adjacent to the shipping channel and across from Old Fort Jackson, the remains of CSS Georgia impeded the channel expansion planned by the Savannah Harbor Expansion Project (SHEP). The expansion (widening and deepening) of the channel by SHEP was to allow for economic growth of the port and to provide the ability to handle the next generation of Container Ships that resulted from the new Panama Canal. SHEP also covered a number of environmental improvements and mitigation endeavors, as well as cultural projects.

The CSS GEORGIA was locally built in 1862 for the protection of Georgia's coastal and river towns, with funds raised by the Ladies Gunboat Association. Originally designed as an ironclad gunboat, CSS GEORGIA's engines proved to be too weak in the powerful currents of the Savannah River, so it became a floating battery moored, opposite Old Fort Jackson, for the protection of the Savannah Harbor. CSS GEORGIA deterred attack by Union Naval Forces until she was scuttled by her crew on 20 December, 1864 to prevent capture by General W.T. Sherman's Union Army, which was advancing on the city of Savannah.

Whereas the site was eligible for the National Registry of Historic Places, the U.S. Army Corps of Engineers, in coordination with the Georgia and South Carolina State Historical Offices,

proposed a minimal impact salvage operation to recover and relocate the wreck of the CSS GEORGIA. The Recovery and Repositioning of the CSS GEORGIA, under the purview of the Naval History and Heritage Command, was planned to be accomplished in 5 Phases:

- Phase I: Archeological data recovery in which a baseline and onsite datum was established; large artifacts and components were located, identified, and mapped; small artifacts were recovered; and the casemate sections were in-depth documented in situ with some site excavations.
- Phase II: Large artifact recovery was initiated with engineering coordination to develop the recovery task force, then design and engineer the recovery methods. On water operations began with the recovery of the Discarded Military Munitions (DMM – round and conical shells and cannon), followed by the recovery of large components (engines cylinders, propeller with shaft, deck fittings, etc.). Casemate recovery for conservation and repositioning was the final objective of this phase.
- Phase III: Mechanized site recovery involve the use of a grapple and clam shell to methodically recover all artifacts from the wreck site by mechanical means. Required the use of teams of personnel to screen and sift through the mud and clay for artifacts.

- Phase IV: Final archeological clearance by dive teams of archeologists, survey the wreck site for additional artifacts, and remote sensing with side scan and multi-beam sonar.
- Phase V: Redisposition and burial of casemate and other artifacts that were not selected for conservation and further study. Due to the sheer volume and size of the casemate material and number of artifacts recovered, limited funding allowed only a portion to be conserved and the balance to be reburied (in an area not to interfere with SHEP) for future possible conservation.

This project was conducted over several years, September 2013 to July 2017, in order to meet the complex requirements. The operation brought together a wide array of participants: US Army Corps Engineers, SUPSALV, MDSU-2, EODMU-6 (Detachment Kings Bay), DONJON Marine, ESSM/GPC, Salomon Marine, Panamerican Consultants, Texas A&M (Conservation Research Lab), MCAS Beaufort EOD, and Muni-Rem, Inc.

---

*Rick Thiel, CSS GEORGIA Salvage Project Manager, is a retired ED Salvage Officer. His abnormal day job is the ESSM Program Manager for Facilities and Salvage Equipment Life Cycle Manager.*

---

*Article Cover Photo: 1863 Lithograph of CSS GEORGIA.*

---



## Summary of Project Accomplishments

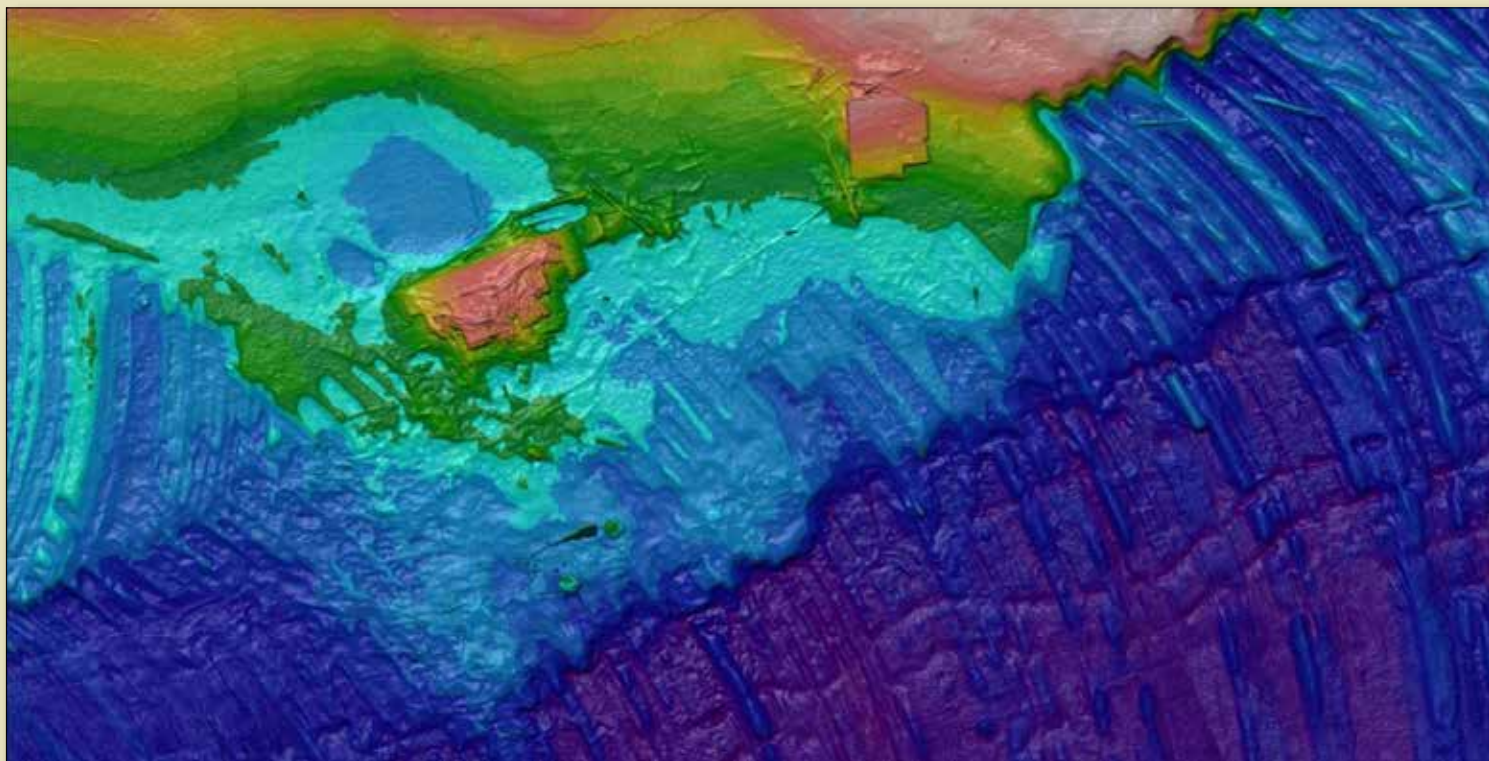
- 311 Dives Completed (Zero Accidents)
- 241 DMM Recovered (round and conical shells)
- 5 Cannon Recovered
- 1100 Grapple Picks
- 1835 Clam Shell Picks
- 29,000 + artifacts recorded
- 13,000 + artifacts (145 tons) shipped to CRL for conservation
- 17,000 (approx.) artifacts (175 tons) reburied
- East (94,000 lbs) and West (62,000 lbs) casemates recovered and reburied (after study)
- Largest Single Lift: 139,000 lbs (rigging + East Casemate)



Salvage Barges as seen from Old Fort Jackson.



Panoramic of the Mechanized Recovery.



Multi-Beam Sonar Image of the CSS GEORGIA Wreck Site.





Recovered Discarded Military Munitions (DMM) loaded into baskets for temporary holding and transport to shore for inerting then conservation.



Recovery of test Casemate Section in 2013.



Cross-section of Armor from CSS GEORGIA test Casemate Section.

Recovering a section of Casemate as seen from the Crane Cab.





Prop and shaft coming up.



“Red Diver - Enter the Water!”



Dahlgren Cannon being lifted from the wreck of CSS GEORGIA.





Using a Grapple and Clam Shell to recover artifacts from the wreck site.



Artifacts from CSS GEORGIA.



Washing away the mud and clay to uncover the artifacts from the wreck site.





Shackling in the Lifting Frame and positioning for recovery of the East Casemate.



Artifacts from CSS GEORGIA.



Airlift Dredging to clear area around the East Casemate.







Cleaning the East Casemate in preparation for Study.



Casemate getting a good scrubbing.



Side view of the Rails and massive Wooden Timbers.



Close-up of the Casemate Armor, end view.



A Casemate Gun Port. Detail of a Casemate section still showing the red paint.







East and West Casemate documented and ready for Reburial.



West Casemate up and on the deck.



Finalizing the West Casemate Frame.



Reburying artifacts and casemate not selected for conservation.



# MV-22 Operation with MDSU 1

By: LCDR Daniel Neverosky



On the afternoon of 05 August, 2017, a USMC MV-22 OSPREY launched from the USS BONHOMME RICHARD (LHD 6) (BHR) to conduct regularly-scheduled operations. They just concluded the joint mili-

There were twenty-six Marine personnel on board the Osprey when it crashed into the water and twenty-three Marines were pulled from the water and rescued. Vessels and aircraft from the 31st Marine Expeditionary Unit (MEU)

and the BHR Expeditionary Strike Group (ESG) immediately responded and took part in the rescue operation. Three Marines were killed

assisted with the immediate response to the crash. MLV arrived on station and commenced a sonar survey to locate the downed MV-22. MLV located the MV-22 in close proximity of the water entry position in 60 meters of water marked by GBY during the time of the crash. After locating the wreck site, RAN commenced with ROV operations to assess the wreckage and determined the MV-22 was inverted and partially rolled to its port side resting on its upper fuselage. Large pieces of debris (exhaust deflectors) were concentrated around the aircraft.



*RAN Divers assist with response to MV-22 crash site.*

tary training exercise, Talisman Sabre. A biennial event hosted by the U.S. and Australia that involves more than 30,000 troops and 200 aircraft operating in the vicinity of Shoalwater Bay, Australia (22°35.616'S, 151°06.370'E). On its final approach to the USS GREEN BAY (LPD 20) (GBY) the aircraft crashed and badly damaged the flight deck.

in the crash.

A long with MEU and ESG, the Royal Australian Navy vessel (RAN) HMAS Melbourne (MLV)



*USNS SALVOR reports on scene for MV-22 recovery operation.*





*M/V PINNACLE reports on station for heavy lift of MV-22.*



*MDSU 1 Divers prepare to commence rigging evolution.*

The U.S. Navy Salvage capability was set in motion upon report of crash on 05 August. CTF 73 Dive and Salvage Officer initiated response to the crash and utilized all three legs of the salvage triad - Mobile Dive and Salvage Units (MD-SUs), MSC Salvage Ships, and Supervisor of Salvage and Diving (SUPSALV) to support the salvage of the MV-22 Osprey. USNS SALVOR (SAL) was ordered to make best speed to Australia to support salvage of MV-22 aircraft from current location IVO the Philippines with MDSU 1 personnel aboard.

Due to the depth of water, a mixed gas dive side was required; therefore,

the Flyaway Mixed Gas System (FMGS) and additional members from the MDSU 1 team were mobilized from Hawaii. Due to the water depth and the condition of the aircraft, a secondary vessel with a large crane and aft deck space was required to recover the aircraft in one piece.

SUPSALV maintains worldwide emergency salvage services contracts to

stationed over the wreck and the rigging phase of the salvage operation was underway. A collective effort from MDSU 1, SUPSALV, and SMIT Salvage developed the rigging and lift plan. MDSU 1 divers executed the rigging plan-ahead of M/V PINNACLE's arrival on station. It was masterfully executed despite heavy winds and seas, USNS SALVOR's dragging anchor, loss of a mooring leg anchor, and minimal bottom time given the depth.

In 1981, the World Heritage Convention named the Great Barrier Reef Marine Park as a site of universal value. This naming required all debris from aircraft be recovered prior to departure from OPAREA.

Due to the environmental sensitivity of the GBRMP, after rigging evolutions during the day, debris field scan and clean

up utilizing a SEABOTIX ROV would commence in the evenings. The SEABOTIX ROV was able to recover personnel effects, weapons, and debris. The ROV was also crucial in identifying the location of the larger pieces of debris that would require rigging and lifting by the divers.

Upon completion of the rigging phase of salvage operation, M/V PIN-



*Member from Explosive Ordnance Disposal Mobile Unit (EODMU) 5 operates SEABOTIX ROV to scan debris field.*

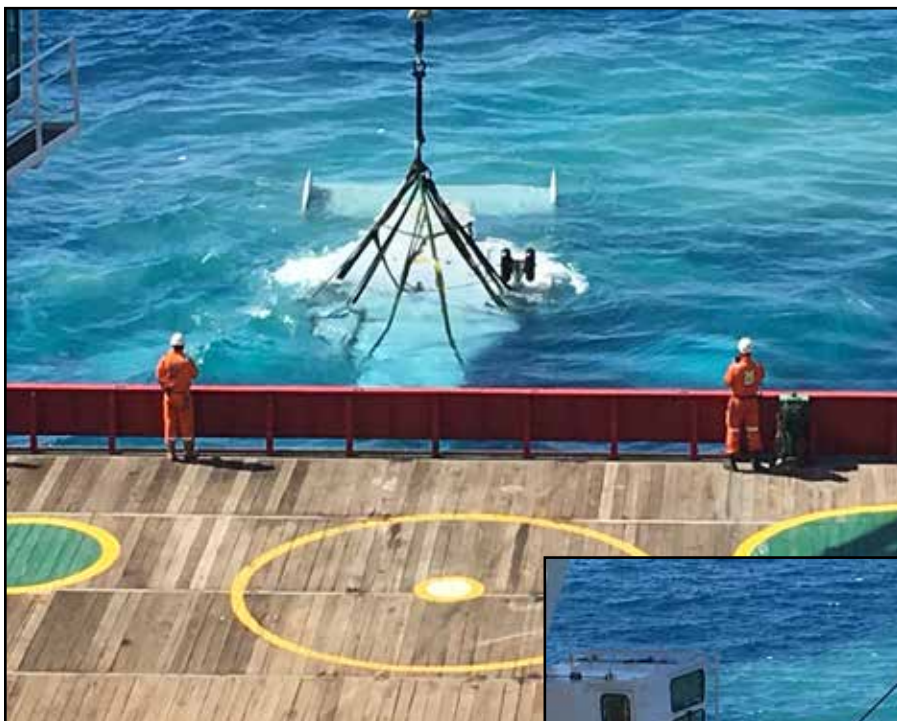


*Display of ROV footage of main hook pendant suspended in water column by lift bags.*

provide support for Navy fleet operations. SUPSALV executed their WESTPAC Salvage Service Contract with SMIT Salvage to provide personnel and commercial assets that included M/V PINNACLE, a 150T dynamic position vessel. With all three legs of the Navy Salvage triad in place, the recovery operation began.

By 24 August, USNS SALVOR was





*MV-22 lifted to surface.*

NACLE arrived on station and conducted dynamic positioning trials. MDSU 1, SUPSALV, SMIT Salvage, and M/V PINNACLE personnel conducted lift plan conference onboard M/V PINNACLE.



*MV-22 recovered to deck of M/V PINNACLE.*



*MV-22 lifted free and clear of surface.*

CLE to discuss lift phase of recovery. SAL slipped moor to allow M/V PINNACLE to position over wreck site for lift. On the morning of 30 August M/V PINNACLE moved into position for lift at 0800. Utilizing an ROV to direct vessel, PINNACLE's Master was able to use dynamic positioning of vessel to drive the main hook pendant suspended in the water column by the MDSU 1 divers using lift bags.

Once the main hook

landed onto pendant, lifting of the MV-22 aircraft commenced. The crane came up on the hook so the aircraft was free of the water. This position was held until all the water was drained out of the MV-22. SAL small boat was standing by to collect any debris that came out of aircraft and was standing by with Pollution kits if any pollutants were present. MV-22 aircraft was recovered to deck approximately 1000 On 30 August.

Once aircraft was on deck the Aviation Mishap Board (AMB) commenced physical investigation of aircraft. Non-volatile Memory Equipment were recovered and placed in fresh water buckets

for preparations for transport. SAL and M/V PINNACLE commenced transit to Townsville, Australia for final transfer of aircraft to shore. Once MV-22 aircraft was landed ashore the AMB took custody of aircraft and salvage team commenced preparations for demobilization. The successful salvage operation of the USMC MV-22 Osprey once again demonstrates the capability of the U.S. Navy Salvage triad. Hooyah and BZ to all who took part in this Deep Sea Operation!

*Article Cover Photo: USMC MV-22 Osprey Recovery.*

*LCDR Daniel Neverosky is an assistant for Salvage at NAVSEA 00C*





# The Old Master



NDCM(DSW/SCW/MDV)  
William C. Hargaray

## “The Nod”

Greetings Deep Sea,

As the sun creeps towards the horizon on my Deep Sea journey, I had a couple of reflections that may be relevant or helpful for some in our family. I have run a few Eval classes and one of the things I would like to share is that it usually serves as a great learning event, but it is not intended solely for that purpose. In that, “The Show” is intended for you to step up and demonstrate under pressure you can keep your act and team together to solve any of the problems that can be inherent with diving. A few too many folks come here and try to reinvent themselves and thus usually leave unsuccessful. Keep in mind, to get to “The Show”; you have already demonstrated your leadership, team building, organization and management abilities (good Chief traits) in benign as well as stressful situations to receive “The Nod” from your leading MDV and CO.

Leading up to and beyond receiving “The Nod” practice, practice, practice. One of the best things to do is team up with somebody that shares your aspirations and practice with them. Dry dives are just as good as shadow boxing for a fighter. Develop some scenarios (I encourage realistic) and run them through a dry dive so if the problem happens to you it’s not the first time your developing a COA to deal with it. Attending Pre-Screeners and well planned and executed diver training are some of the best opportunities to hone your skills. Although, that being said, they are not the end all-be all. Your confidence along with your MDV’s confidence in your abilities should be your end all-be all gauge.

Once you receive the “The Nod” and get down to Evals, RUN YOUR DIVE. Since it is your team and your dive, do

what it takes to get your head deeply involved in the dive and the details. As the dive unfolds, manage the situations as they reveal themselves and get the dive back to normal. When I say normal, you still owe things to your divers like a breathing medium, MMP, a controlled ascent, decompression, first aid, keeping the side informed etc... Most likely you received the Nod for demonstrating all the things I mentioned above. I have seen it first hand, when S!#\* hits the fan, everybody seems to act like a chicken with its head cut off. Somebody has to keep it together and take care of the situation and the people involved, that’s you the Sup. Last not but not least, find ways to keep your nerves in check.

Keep up with the good fight and HOO YAH Deep Sea!





# SUPDIVE SENDS ...CDR John Porter

I hope this "SUPDIVE Sends" finds everyone well. We recently finished another MDTC and it was great to see a lot of faces I have not seen for 10, 20 almost 30 years. We are currently processing all the constructive feedback received, which is greatly appreciated. It seems the Ice Diving brief must have touched a lot of us as almost all feedback we have received said it was the best or the worst training event of the year, no in-between. Plans for the MDTC 2018 are underway as we look for a location on the East Coast that will fit our growing numbers and very importantly, not have an airplane flying over every 20 minutes. If you have recommendations for training you would like to receive or guest speakers you think would be a good fit, please let us know.

A few other updates, our NAVSEA 00C DORI team is now embedded with the NAVSEA Inspector General's office. What this means for the NAVSEA enterprise is that you will receive your DORI and Command IG audit at the

same time, minimizing the frequency of inspections. This new system seems to be well received as we have successfully completed six DORIs.

At this time everyone should have seen the FFC/CPF 3150 which was released over summer. The instruction does not create work for any command but does line up FFC/CPF forces with the OPNAVINST 3150. The instruction also opens the door for the Quality Assurance Surveillance Program (QASP), currently unfunded, to assist commands that conduct DORIs.

We are also spending a lot of time recently looking at OSHA requirements and how they correspond to military diving. I do not expect a quick answer to OSHA questions as everything needs to go through legal counsel; I believe we will be visiting the OSHA Diving SME soon to discuss in person.

OPNAV N97 (Deputy Dive) is hard at work in the Pentagon coordinating the first diving Initial Capabilities Document (ICD). Currently, there are almost

no approved requirements for Navy Diving and CDR Ewaldsen is working to get our capability gaps documented and approved through Navy leadership. This will provide us the official documentation to reference when making funding requests in the budget to improve our capabilities. Nothing happens quickly, but once this is approved we should have a better leg to stand on during budget discussions in DC.

Last month CW05 Eric MacDonald left us to CEODD where I am sure he will accomplish great things. He will be missed but his relief, CWO5 Mike Hart has not missed a beat taking on some of our biggest programs (NAVSEAINST 3150, DORI Checklist updates) which should be ready for the fleet shortly.

As always, we value your feedback and ideas so please keep them coming, especially if you have ideas for Faceplate articles or topics for the MDTC. I'm privileged to continue serving as your Supervisor of Diving and look forward to seeing everyone at MDTC 2018!

## Faceplate Feedback

**FACEPLATE** appreciates feedback on our entire publication. So if you want to sound off about something we have published, please do!

**faceplate\_editor@supsalv.org**

**<http://www.navsea.navy.mil/Home/SUPSALV/00C3-Diving/Faceplate-Magazine/>**

