



**GLOBAL**  
Diving & Salvage, Inc.

# GLOBAL NEWSLETTER

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Volume 3 | Issue 3

September | 2014

## BARGE SALVAGE, 14HR TOW, & EMERGENCY SCUTTLE PERFORMED

The 260'-long barge NASH, loaded with magnesium chloride in an aqueous solution (essentially a by-product of solar desalinization), was part of a tandem tow between Mexico and Canada. The barge sank in the vicinity of Point Conception, just off the rugged California coastline near Santa Barbara.

With a specific gravity of 1.3, magnesium chloride is much heavier than water. This prevented the barge's tanks from being completely filled so as not to exceed the ABS load-line certificate for the barge. As the barge began to sink, the air contained within the aft cargo holds reached a depth at which the pressure differential between the seawater on the outside of the barge and the air on the inside caused the tanks to implode. This led to the catastrophic failure of the hull.

The barge's stern came to rest on the seafloor in 235' of water. The undamaged



forward cargo and bow rake tanks retained enough air to prevent the barge from "falling over," which left the barge "aground" in a completely vertical orientation.

Global was contracted to render assistance in salvaging the barge. The barge was located just 600 yards south of an active high-capacity oil pipeline and 600 yards north of a Marine Protected Area. The proximity of these critical resources added an element of urgency and need for a well-executed plan. Global's Casualty Response Group began developing a removal plan while dive and salvage equipment was mobilized out of Port Hueneme, CA.

The 6000 HP tractor tug DELTA LINDSEY was contracted from American Navigation (AmNav) to stand by in the immediate vicinity of the NASH to ensure that she did not move closer to the pipeline or MPA.

An ROV inspection was promptly completed, which revealed that the bow rake was leaking air through a weld in the main deck and that the hull was badly damaged in water depths greater than 100'. It became evident that refloating the barge to her traditional horizontal position was going to be difficult and that an alternate removal strategy would be necessary.

Global, acting as Incident Commander in the Unified Command, worked with the

US Coast Guard, the Bureau of Safety and Environmental Enforcement, and state agencies to secure an emergency scuttle permit from the US Environmental Protection Agency. Global crews immediately began executing the salvage plan, which consisted of offloading some of the cargo, adding enough air to the bow rakes and forward cargo holds to get the barge to float free of the seafloor, and towing her 14 miles offshore to the EPA-approved scuttling location.

Divers gained access into the tanks and created openings to discharge the cargo. Divers then installed air lines to delicately introduce air into the tanks while an ROV positioned at the seafloor provided live video of the progress. The "DELTA LINDSEY" was brought alongside the NASH and deployed a tow wire to the barge's bridal.

When a suitable amount of air had been introduced into the forward compartments, the tug began taking an easy strain. Just before high tide, the barge came free from her strand, and the 14-hour, very challenging tow to the EPA dump site began.

Meanwhile, Global and the USCG developed a plan to scuttle the barge upon arrival at the dump site. The difficulty in scuttling the NASH lay in the fact that crew worked feverishly to introduce air into the barge to keep it from sinking; now, though, that same

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T: 206.623.0621 | F: 206.932.9036

## NASH Salvage

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air needed to come out of the barge very quickly. Sea conditions grew worse during the tow offshore, and it was not safe for anyone to board the vessel to manually cut holes in the barge.

The USCG came up with a method for rapidly sinking the NASH - the USCGC BLACK FIN, an 87' cutter with a .50 caliber machine gun. The BLACK FIN was mobilized to the scuttling location and shot 500 armor-piercing rounds at the exposed bow of the NASH. The bullet holes allowed air to escape and water to enter the barge. The NASH was last seen approximately one hour after the live fire when she left the surface and began her descent to her 2600'-deep, watery resting place.

This very unique salvage operation was completed in approximately one week, without injuries or illnesses, due to the great work performed by Andy Lawrence, Bill Akan, Dave Partlow, Erik Woltjen, Jay Stevens, Kerry Walsh, Kyle Watson, Pete Jobes, Scott Hynd, Shawn Taschner, Tanner Hirakida, and Warren Posten.



## Update from Okinawa, Japan Phase II: PLEM & SBM Replacement

Global Diving & Salvage, Inc. completed Phase II of a pipeline end manifold (PLEM) and single buoy mooring (SBM) replacement for Truston Technologies, Inc., contracted by the US Defense Logistics Agency. Work was performed in Kin Bay, Okinawa between May and July 2014.

In later 2012, Global was contracted to perform Phase I, which consisted of inspecting the existing installation and conducting metrology and planning for a new structure. For Phase II, Global returned to Okinawa to remove the existing structure from the seafloor and replace it with the newly completed design, comprised of a pigging loop and the replacement of the topside SBM with additional anchor chains. During both phases, the dive crew worked off a derrick barge supplied by Ryukyu Zosen Shipyard out of Naha.

Despite the challenging engineering tasks

and complications by environmental factors such as a typhoon, stonefish, lionfish and sea snakes, the PLEM was installed as per the engineer's directions and drawings with no alterations necessary on-site.

The installation was accomplished without any spare nuts or washers, a testament to the skill of the dive crew involved with the work. The team consistently worked long hours and endured extremes of heat and inclement weather. A translator was utilized onboard during work hours, and despite language and cultural differences, complicated evolutions were conducted and the project was completed safely without incident.



This project could not have been completed without the dedication of the crew: foreman Richard Vonderhaar from Truston Technologies, Inc., engineer Perry Smith of Smith LaSalle, NAVFAC onboard representative Nate Sinclair, the derrick barge crew from Ryukyu Zosen Shipyard, translator Miho Onishi, and the Global crew, Ahmed Evans, Bryan Patrick, Craig Gutshall, Danny Broadhurst, Gene Purtell, Kevin Severns, Mikael Kyrklund, and Spencer Dell.

## BUSY SEASON IN THE NORTH SOUND AREA



In addition to the contracted daily Tesoro pre-booming operations and OTB booming, local crews have been able to provide initial response and follow-up support to numerous jobs, including:

- First responders on-site as the 90' yacht Baden rolled over on her inaugural launch in late May.
- Assisting with towing of the 50' derelict F/V Orbit from Neah Bay to Port Angeles in late June
- Response and salvage work at the Anacortes Marina Fire in early July
- A multitude of DNR projects

## MODIFYING A WATER INTAKE AT LAKE MEAD

Due to years of extensive drought conditions in the state of Nevada, Lake Mead, the area's primary water supply, has been diminishing.

There are currently two independent intakes that draw water from different elevations of Lake Mead. A third intake is being constructed at the lowest elevation possible in the lake. Due to the droughts, the first intake installed (IPS-1) has the potential to become inoperative.

Southern Nevada Water Authority (SNWA) elected to construct a passage between IPS-1 and IPS-2 in order to retain the redundancy and water capacity. Global was contracted by Renda Pacific to perform underwater concrete placement to prepare IPS-1 for modifications.

Upon initial inspection, Global found that a landslide had occurred, increasing the amount of material needed to be relocated. Following removal, Global welded a series of support gussets around an existing flange. Before concrete could be placed, a combination of sand bags, angle iron, and steel sheets were used to construct a form capable of withstanding the force of 200+ cubic yards of concrete.

No cold joints in the concrete were permitted, so the operation could not be terminated until the required level of coverage was attained. After roughly 20 hours of continuous work, the pour was completed by the crew: Abraham Rodriguez Garcia, Chris Butler, Cully Mizer, Dean Stone, Douglas Bouchard, Ernest Richarte, Matt Ballard, Michael Carey, Paul Guiou, Rick Rivers, Ryan Smith, Wade St. Clair, and Zach Coats, successfully achieving all requirements specified by the SNWA.

The dome cap was removed from the top of the Intake TEE and a bulkhead was placed inside for dewatering. Due to Global's work, Renda Pacific successfully dewatered the tunnel, connected IPS-1 and IPS-2, and re-watered the tunnel. Several months later, Global removed the bulkhead from IPS-1 and reinstalled the dome cap.



## CALIFORNIA REGION : MARINE OIL TERMINAL INSPECTION

Global performed a California state required Marine Oil Terminal Engineering and Maintenance (MOTEM) inspection for a local terminal. The inspection was conducted on various steel and timber components, including approximately 97 timber piles, 8 timber fender piles, 4 ea. 70" steel monopiles and 8 ea. 24" steel pipe piles.

Work was performed off Global's M/V Dawn. A contracted engineering-diver was utilized to fulfill the required engineer oversight.

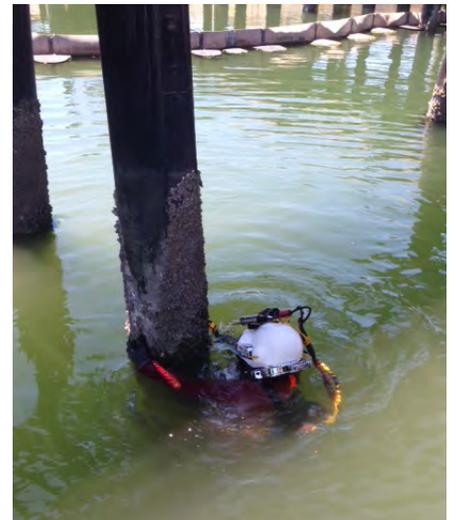
All levels of inspection were performed:

- Level I visual & tactile inspection was conducted on 100% of the underwater structure.
- Level II cleaning & close visual inspection as needed.
- Level III inspection including ultrasonic thickness readings of the steel members and cathodic potential measurements. Core samples were taken of the timber structures for analysis and plugged.

Upon completion of the inspection and

recommendations for repairs, the Global crew, comprised of Brian Donnalley, Fred Foster, Jared Soares, Joel Silver, and Kyle Coppinger, performed coating and pile wrap repair and replacement, eliminating all deficiencies.

All work was performed without incident and to the highest degree of detail.



## SUPPORT GROUP UPDATES

**Professional Development:** Global began building its program earlier this year, formally announcing it at the employee summit held in April. Comprised of Training, Mentoring, Employee Development, and Succession Planning, it is focused on growing the skills, knowledge and abilities of our entire employee base.

Global has always encouraged employee training and development, but it is now taking a formal approach to prepare employees for the work ahead while providing them the skills to realize their professional goals.

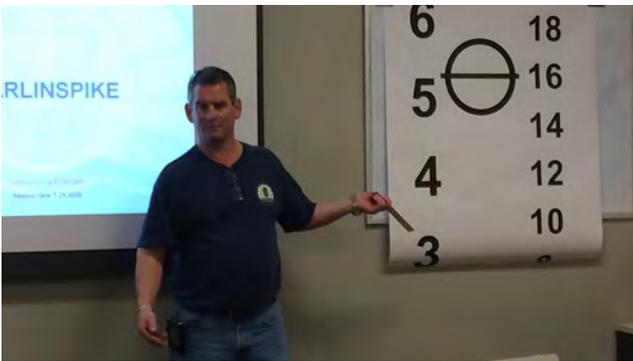
Global plans to leverage its experienced, strong talent base to help facilitate various aspects of the program, including hands-on field training. A recent example was the marlinspike workshop facilitated by Kris Lindberg in Seattle, where Environmental crews were able to improve practical skills from a trusted professional.

This is the beginning stage of a long term commitment by Global to establish a successful program for all employees.

**Safety Committee:** Global has revamped the Safety Committee's structure and primary focus. The committee's goal is to find resolutions as a cohesive unit on behalf of fellow employees. The Safety Committee will be asked to give input on task items that come up during Monthly Safety Meetings and also on policies and training.

This employee-driven committee is intended to be a neutral platform to discuss matters that may not be brought up in other forums. Recent contributions include reformatting the company's TEAM cards as well as Global's knife and PFD policies.

We are excited to see the committee help foster a positive safety environment. Thank you to the 2014 Safety Committee members: Ben Swan, Bernie Rosenberger, Brent Seymour, Chris Butler, Chris Hume, Chris Moritz, Colins Goertzen, Devin Bunnell, Donald Hosford, Erik Woltjen, Ian Costin, James Simonson, Jeff Wilson, Joel Silver, Pat Chappelle, Ron Larsen, Scott Hynd, Sterling Ulrich, Thuan Ngo, Wade St. Clair, Warren Posten, Weston Durocher, and Zach Coats.



## Global Announcements:

### Celebrating Years of Service\* (based on original start dates)

10 Years: Ben Daily, Sam Humphrey, Kathy Kaae, Kevin Pehle, Gene Purtell, Kevin Severns, and Dean Stone

5 Years: Merrill Collins, Jacob Elhard, Deirdre Gross, and Jeremy Zimmer

### New Faces in New Places

Damon Beattie - Enviro Tech  
 Christopher Brock - TX Shop Hand  
 Kendell Burgess - TX Shop Hand  
 Michael Carpenter - ROV Pilot  
 Travis Havens - Project Manager  
 Benjamin Jaech - Saturation Technician

Michael Johnson - Diver  
 Donald Lindstrom - Enviro Tech  
 Bradley Marynik - Diver  
 Kevin Skinner - TX Shop Hand  
 Sarah Sokol - Payroll Clerk  
 Steven Wick - Enviro Tech

**Equal Opportunity & Affirmative Action**  
 Global Diving & Salvage, Inc. is an Equal Opportunity Employer and has in place EEO and Affirmative Action Policies. Global requests cooperation from its industry partners in meeting established goals in the hiring of qualified minorities, females, veterans and those with disabilities.