

Helix Performance Profile

Emergency ROV Inspection of Tanker Hull Damage



Quick Stats

Tanker collision 76 miles south of Galveston, Texas

ROV vessel needed to inspect unknown hull damage

Response time under 12 hours

Damaged vessel escorted to port

OBJECTIVE

In March 2009, Canyon Offshore, Inc. was contracted to respond to an emergency situation involving a 900-ft Norwegian flagged tanker vessel carrying 130,000 mT of crude oil that struck a submerged jack-up rig. Canyon Offshore quickly mobilized the *Northern Canyon* ROV Support Vessel out of Galveston, Texas. The responding vessel was onsite 76 miles offshore in less than 24 hours and transferred to inspect the SKS Satilla's damaged hull and locate the object the tanker struck. Canyon Offshore is a division of Helix Energy Solutions Group, Inc., a global offshore energy services company.



ROV SPECIFICATIONS

The Triton XLS, with up to 150 hp available, represents the latest design in Perry Slingsby Systems' highly successful Triton series. The enhancements to the previous system include improved performance and upgraded controls, increased depth capabilities, and a significantly longer 600 m tether cable deployed from the proven Triton top hat tether management system. The Triton XLS system's 3,000 Kg of through-frame lift provides a platform for a wide variety of tooling modules and custom intervention work skids.

Depth-rated to 3,000 m, the Triton XLS is designed specifically for deep and ultra-deepwater operations. The Triton-class ROV systems, including this latest XLS design, have performed more deepwater construction, intervention, salvage and project support activities worldwide than any other ROV design.

OPERATION HIGHLIGHTS

Within 12 hours of the client's call to Canyon Offshore requesting a vessel and an ROV, the *Northern Canyon* was departing the dock and underway to the accident location in the offshore lightering area.

Once on site Canyon Offshore's crew successfully transferred U.S. Coast Guard and client personnel on board the *SKS Satilla* where they found her crew of 25 to be uninjured. However, the vessel was listing at eight degrees and loaded with 41-million gallons of crude oil.

The *Northern Canyon* then surveyed the damaged hull and discovered a breach in the vessel's hull estimated to be approximately 160 ft in length with damage from 23 to 58 ft on the hull's draft. Sections of the breach were found to be large enough for the ROV to fit inside. The vessel's double-hull structure prevented a major leak and saved the ship.

Once the inspection of the *SKS Satilla* was completed, the next task was to locate the submerged object that caused the damage to the hull. The location of the suspected impact was approximately 5 miles from the *SKS Satilla's* current location. The ROV crew worked with the survey team on the vessel to plot a search pattern then the ROV used sonar to locate the submerged structure which turned out to be the ENSCO 74 jack up rig that was lost during Hurricane Ike in September 2008.



OPERATIONS TIME BREAKDOWN

Project Depth	115 fsw
Total Project Duration Including Transits	43:42
Response Time	12:00
ROV Dive Time	16:48
Down Time	0:00

The sunken rig – half as tall as *SKS Satilla* is long – had originally been anchored 90 miles (145 kilometers) southeast of its newly revealed location. It had been heavily damaged and sunk by the hurricane with its structure extending up to just 21 ft below the water's surface. Inspecting the ENSCO 74 revealed damage that correlated to the tanker's damage and a buoy was anchored above the wrecked rig.

ENVIRONMENTAL CONDITIONS

Wind Direction	SE
Wind Speed (KTS)	12-18
Wave Direction	SSE
Seas (ft)	3
Swell (ft)	4-6
Subsea Visibility	6-8 ft

CONCLUSION

Canyon Offshore successfully achieved the client's goals of identifying the damage to the *SKS Satilla* and to identify the source of the damage, which turned out to be the sunken jack-up rig the *ENSCO 74*. The *SKS Satilla* was safely escorted to port without incurring any release of oil into the environment. *Northern Canyon's* team members used the ship's advanced technologies, and their own expertise, to get both survey and search jobs done quickly and efficiently, without complications. The client praised both *Northern Canyon's* quick response and her crew's operational expertise which contributed to a successful project.





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