Report on Activities at SS *Central America* Shipwreck Site

November 5 – 9, 2014

Prepared by Odyssey Marine Exploration, Inc. for Recovery Limited Partnership, LLC

Report # 14-06

Overview

Odyssey Marine Exploration recently acquired a new deep search and survey tool, the Teledyne Reson dual-head SeaBat 7125 acoustic multibeam system. The 6,000 meter deep tow system was installed aboard the *Odyssey Explorer* in late September and was tested during an Odyssey shipwreck search program in October and early November. The results from the tests were positive and it was determined that a wide-area acoustic survey of the area around the SS *Central America* shipwreck could be helpful to understand the ship's 7,200 foot descent through the water column and to map outlying anomalies related to the debris field. This survey was conducted between November 5 and November 9, 2014.

Operational Details

The Teledyne Reson dual-head SeaBat 7125 Deep Tow system consists of a dual-head SeaBat 7125-AUV and auxiliary equipment and sensors installed and integrated into a Teledyne Benthos deep tow body vehicle.

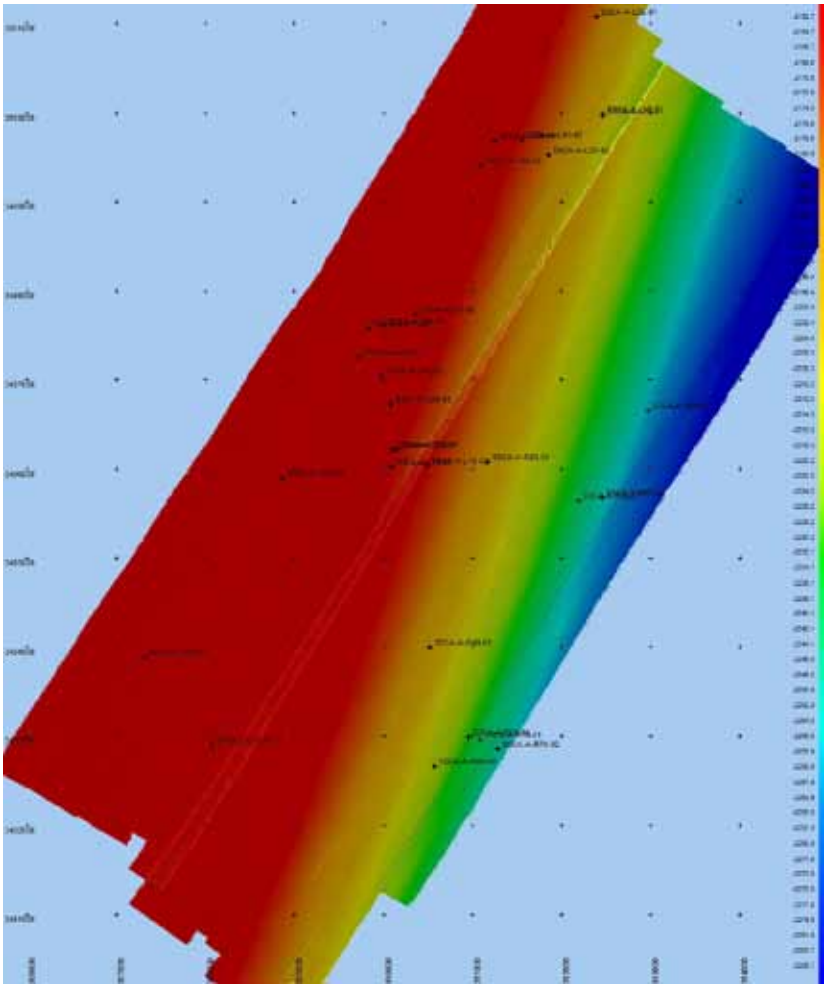
The deep tow has the built-in ability to interface with numerous sensors including motion reference units (MRU), Doppler velocity logs (DVL), magnetometers and USBL transponders. It is designed to operate on a fiber optic umbilical cable and is capable of being operated on fiber optic tow cables as long as 10 kilometers and at depths up to 6,000 meters.

The survey of the area surrounding the SS *Central America* shipwreck began on November 5. The dual-head system was towed 40 meters above the seabed down 10 kilometers data collection lines, which were spaced 300 meters apart. Each pass covered a swath 400 meters wide and 10 kilometers long. With 300 meter spacing between lines, a 50% overlap was achieved. Data from 15 north/south lines was collected using the 400KHz FM mode on both sonars for best resolution. The entire block surveyed covers 4.5 kilometers wide by 10 kilometers long.

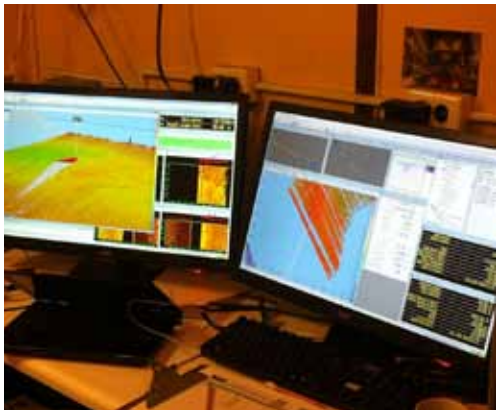
On November 9, the survey was complete and the operations team selected several anomalies to inspect with the remotely operated vehicle during the afternoon and evening of November 9. The first target inspected (SCA-A-R5N-01) was a 35 meter long copper-sheathed shipwreck estimated to be from the same approximate time period as the SS *Central America*. The second inspection (SCA-A-2N-01) revealed a large metal drum. The third target (SCA-A-4LS-07) consisted of hundreds of steel boxes. The second and third targets inspected are believed to be related to the proximity of a charted explosives dumping area.

The information gathered from this survey, as well as the 161,000 square meter video survey completed in September and additional shore-based research will be evaluated by RLP and Odyssey to determine appropriate next steps for the project.

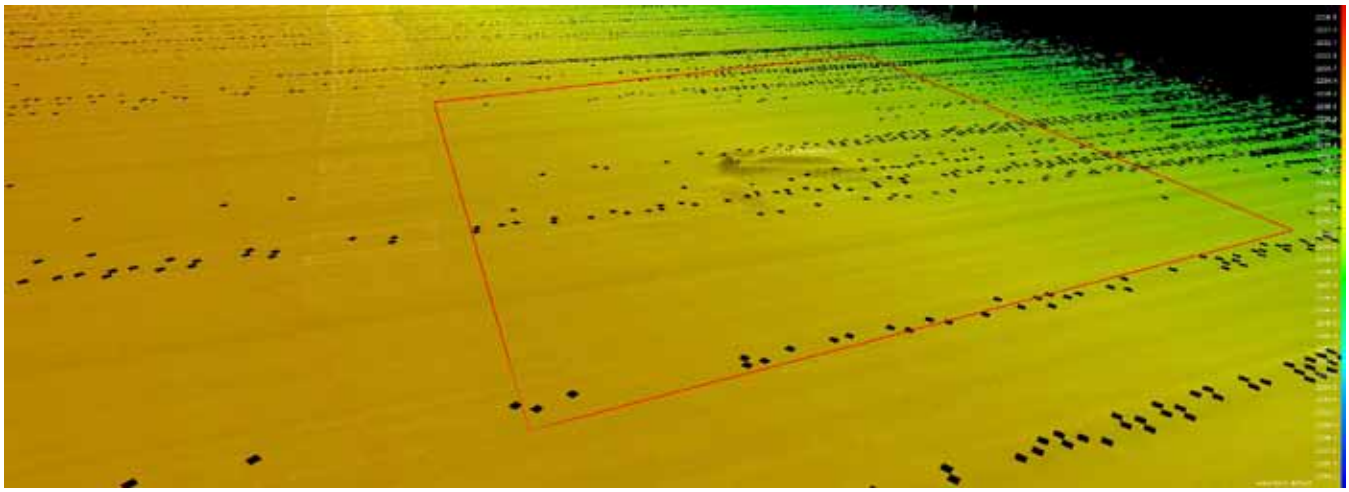
The Teledyne Reson dual-head SeaBat 7125 Deep Tow acoustic multibeam system on the deck of the Odyssey Explorer *(left) and being recovered from an underwater survey (right).*



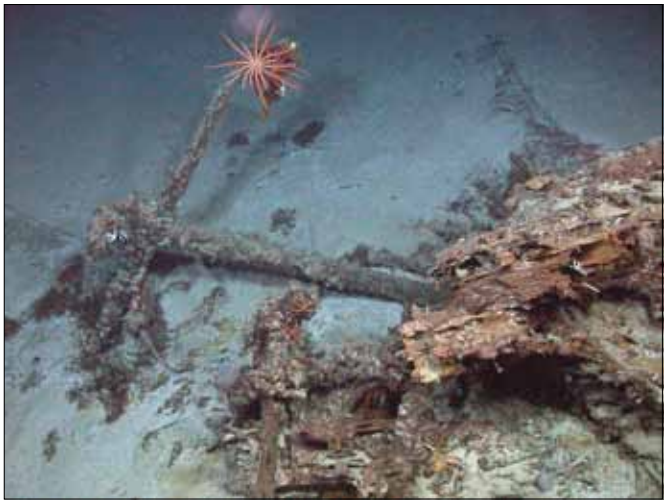
Multiple anomalies were logged during the survey and several were selected for visual inspection with the remotely operated vehicle (ROV).



The control console provides real time feed back to the technicians aboard the vessel and also allows anomalies to be reviewed after the survey (pics of computer screen).



ROV inspection of this anomaly revealed it to be a 35 meter long copper-sheathed shipwreck estimated to be from the 19th century.



ROV inspections of three anomalies discovered during the 4.5 kilometer by 10 kilometer survey included a 19th century 35 meter copper-sheathed shipwreck (upper photos), a large metal drum (lower left) and an area of hundreds of steel boxes (lower right). The second and third targets are believed to be related to the proximity to a charted explosives dumping area.