

DEPTH MILESTONE FOR UNIVERSITY EXPLORER AUV

International Submarine Engineering Ltd is pleased to learn of its customer's new depth record obtained by the ISE Explorer Autonomous Underwater Vehicle (AUV) 'Eagle Ray', a cooperative venture of the University of Southern Mississippi and the University of Mississippi. Operated by the National Institute for Undersea Science and Technology (NIUST), the Eagle Ray AUV completed a survey in the Gulf of Mexico to a depth of 1634 meters.

"This is a new depth record for Eagle Ray and she performed brilliantly," stated Roy Jarnagin, Undersea Vehicle Systems Engineer for NIUST. "The survey was conducted at 50 meters altitude while acquiring multibeam sonar and chirp subbottom profiler data. We are currently operating from the LUMCON vessel RV Pelican. The AUV operations personnel in addition to myself are Dr. Arne Diercks, Max Woolsey, Marco D'Emidio, Steven Tidwell, and Clayton Dike."

Initially built and delivered in 2003, the Explorer class AUV is rated by the USM for deepwater operation to 2200 meters. Its 5.5 meter length provides payload volume for mission-specific sensors, as well as the multibeam sonar and conductivity-temperature-density (CTD) sensor. Surveys greater than 150 km long and deployments over 36 hours in duration can be achieved.

In addition to Eagle Ray, NIUST operates a Woods Hole Oceanographic Institution (WHOI) SeaBED class AUV named Mola Mola. This vehicle also completed a mission to a depth of 1612 meters. The Mola Mola vehicle acquires photographs of the seabed while operating at 3 meters altitude.



Explorer is ISE's current medium size AUV. It is available in several depth ratings and configurations to satisfy the needs of scientific, defence and commercial sectors. In addition to USM/UM, Explorer AUVs can be found with esteemed organizations around the globe including Ifremer, France, University of Bremen, Germany, and Natural Resources Canada (NRCAN). NRCAN's Arctic Explorer AUVs are two vehicles performing under ice survey missions. The Arctic Explorer AUV completed more than 1000 kms of unsupervised survey. This was the first sea floor survey under the ice by an AUV. It also recorded the second deepest dive by an AUV in Arctic waters of 3162 meters.

ISE also built the Theseus AUV. It was designed to lay 220 kilometre fibre-optic cables in the Arctic for the Canadian and US navies. Theseus was deployed to the Arctic for trials in 1995 with cable laying missions taking place in 1996. Until very recently, Theseus was the largest AUV in operation and held the record for the longest AUV mission – 460 kilometres, all of which was under ice.

International Submarine Engineering Ltd.

ISE was formed in 1974 to design and build underwater vehicles. Based just outside Vancouver, Canada, ISE has delivered 240 vehicles and over 400 robotic manipulators to more than 20 countries around the world.

The ISE family of vehicles includes ROVs, AUVs, submersibles, semi-submersibles, and active towfish. ISE has a robotics capability, having built underwater manipulators for a variety of functions and land based robotic systems including an automated car refueling station and the Canadian Space Agency robotic manipulator training system. ISE's HYSUB ROVs have been used in offshore drilling support, pipeline inspection, scientific research, cable maintenance, accident investigation and torpedo recovery.

For more information, please contact:

International Submarine Engineering Ltd.

1734 Broadway Street, Port Coquitlam, British Columbia, V3C 2M8 Canada
T: +1.604.942.5223 F: +1.604.942.7577 www.ise.bc.ca info@ise.bc.ca

