

ISE RECEIVES NEW CONTRACT TO BUILD TWO AUVS

PORT COQUITLAM, BC – International Submarine Engineering Ltd is pleased to announce the award of a contract to supply and operate two Explorer Autonomous Underwater Vehicles (AUVs) to Natural Resources Canada (NRCan).

The AUVs are designed to be used under the ice in the Lincoln Sea, supporting Canada's seabed survey program in 2010 and 2011 under Article 76 of the United Nations Convention on the Law of the Sea (UNCLOS).

The contract comprises the build of two Explorer AUVs rated to a depth of 5000 meters. NRCan requirements call for a payload configuration consisting of both single and multibeam echosounders, and an inertial navigation system with external acoustic homing.

The 6.0 meter long hull configuration will also allow for the installation of a 48.75 kWh Lithium-ion battery pack, providing an endurance of 85 hours. The Explorer vehicle design is modular – all major subsystems including control electronics and batteries can be accessed and maintained in the field.

As with all ISE vehicles, the company's open architecture control system software Automated Control Engine (ACE) will be provided. ACE is designed to provide the capability to create complex, high performance, reconfigurable real-time

control systems using a library of control components.

A key requirement of the UNCLOS program is to conduct a schedule-sensitive development program that will validate the navigation and support procedures used during surveys. The program involves underwater vehicle operations in open waters of Newfoundland and frozen waters of Northern Canada. It will involve the use of Memorial University of Newfoundland's ISE built Explorer 3000 meter AUV and AUV operating team for developmental trials.

Additionally, ISE's involvement in the early 90's with its Theseus AUV performing cable-laying under the ice and subsequent arctic survey experience will lend additional expertise to the program.



Memorial University of Newfoundland Explorer 3000 Meter Depth AUV

The two NRCan AUVs bring the number to seven in the family of ISE Explorer AUVs. "We are delighted to receive this contract, and we look forward to working with the other Arctic experts in NRCan, Defence Research and Development Canada and Memorial University on this milestone Canadian project." said Dr. Jim McFarlane, ISE's President.

Since the 1980's ISE has had extensive experience with the operation of various underwater vehicles in under-ice environments. The Theseus AUV that was developed jointly with the Department of National Defence (DND) holds the record



Theseus, Explorer AUVs ISE Facilities, Port Coquitlam, BC

for the longest under-ice transit – 440km.



University of Southern Mississippi Explorer AUV

ABOUT INTERNATIONAL SUBMARINE ENGINEERING LTD.

Based in British Columbia, Canada, International Submarine Engineering Ltd has been involved in the design and development of autonomous and remotely operated vehicles for over 34 years. ISE's experience is represented by the over 215 underwater vehicles built and delivered to clients in 20 countries.

