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Seaforth Geosurveys and Arctic Research Foundation Complete Complex Marine Survey in Ungava Bay to Support Tamaani Fibre-Optic Connectivity for Inuit Communities

Ungava Bay, Quebec, Canada, November 2025

In one of Canada's most remote and challenging marine environments, Seaforth Geosurveys, in partnership with the Arctic Research Foundation (ARF), has successfully completed a comprehensive marine and terrestrial geophysical, hydrographic, and oceanographic survey for the Kativik Regional Government (KRG).

This unique & complex survey project for the KRG kick-started Seaforth's extensive Arctic survey season for 2025, which encompassed five independent contracts conducted on four separate vessels across the region.

The purpose of the marine and terrestrial survey was to support future installation of subsea fibre optic cables for the Eastern Arctic Underwater Fibre Optic Network (EAUFON), which will allow Tamaani Internet, a KRG subsidiary, to deliver improved communications and connectivity to residents, organizations and businesses in 14 remote Nunavik municipalities across northern Québec.

Operating in Ungava Bay, an area defined by immense tidal ranges, strong currents, and limited local infrastructure, Seaforth and ARF surveyed nine potential cable landfall sites in shallow water (<20 m). The team deployed an array of advanced sensors from Seaforth's 20 ft survey vessel. To link marine and terrestrial datasets, RTK corrected high resolution UAV (drone) surveys were conducted along each coastal approach.

A key objective of the 2025 survey was to map and characterize surficial and subsurface boulders that pose potential risks to cable installation. To enhance this effort, Seaforth engaged Sulmara, deploying the Edgetech Buried Object Sensing Sonar (eBOSS) mounted on their WAM-V 16 autonomous surface vehicle (ASV). This innovation enabled efficient 3D detection and mapping of buried boulders (to depths of approximately 2 m below seabed) along the EAUFON-3 route, identified as an area of elevated ice keel risk.

In addition, ASL Environmental Sciences was contracted to collect in-situ and moored current data using Teledyne acoustic doppler current profilers (ADCPs) deployed in the Koksoak River and Leaf Basin (Tasiujuaq) regions that experience some of the largest tidal ranges in the world. These measurements will be crucial to understanding sediment dynamics and hydrodynamic forces impacting cable route design.

Survey operations were supported by the Reformar research vessel Coriolis II, which served as the main platform for offshore logistics and data processing.

The 2025 program builds on Seaforth's earlier survey work for the KRG in 2022 and continues to deliver accurate seabed intelligence and environmental data supporting the development of resilient northern infrastructure.

Quotes:

“Operating in Ungava Bay presents exceptional challenges, vast tides, powerful currents, and minimal shore-side support. Delivering a successful, high-quality survey in such an environment is a testament to the expertise of our team and the strength of collaboration with our partners.

Ben Wentzell, Senior Geologist & Project Lead, Seaforth Geosurveys

“Seaforth's comprehensive marine and terrestrial survey is the backbone of a groundbreaking EAUFON fibre optic cable network that is bringing life-saving healthcare, educational, commercial and community connectivity to Nunavik. The Seaforth team once again demonstrated their depth of knowledge, expertise and experience in the delivery of survey services with multiple partners in a remote and challenging Nunavik environment.”

Dan Pellerin, Special Advisor, Telecommunications, Kativik Regional Government, and EAUFON Project Lead

Seaforth extends thanks to all project partners, Kativik Regional Government, Arctic Research Foundation, Sulmara, ASL Environmental Sciences, and Reformar, for their contributions to the success of this campaign.

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