



Experience

ERT data ensures Offshore Windfarm cables are safely installed

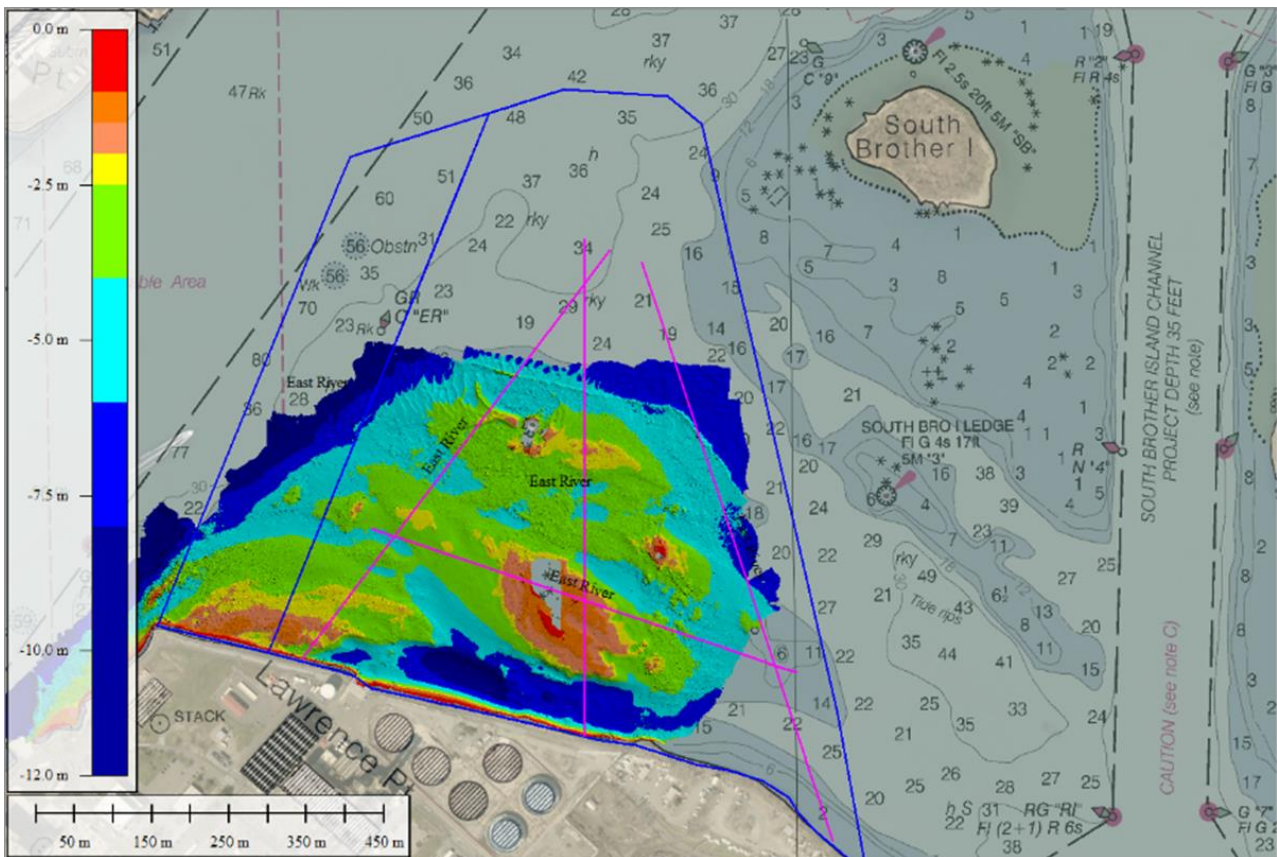
Offshore services

▽ Location: Hudson Bay, New York, USA

Challenge

When Offshore Windfarm cables need to come to shore, how do you ensure the HDD drill will not hit any bedrock pinnacles?

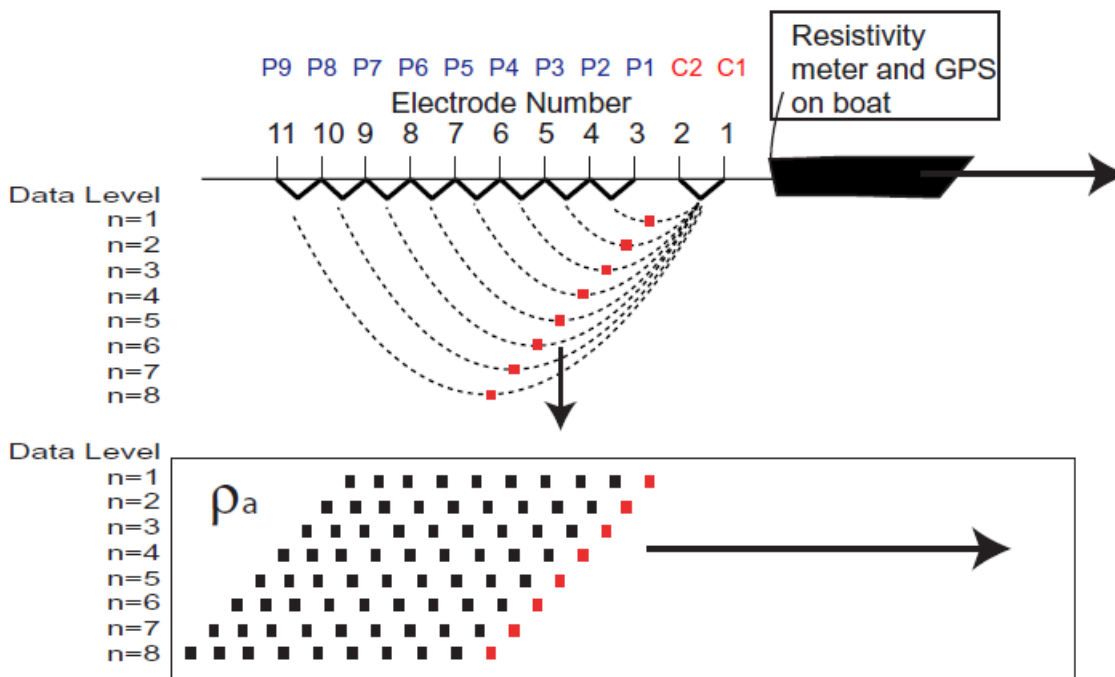
Electronic Resistivity Tomography (ERT) data was required by the client to ensure that their cables were installed safely. They commissioned Sulmara to collect, process and profile ERT data over multiple challenging shallow water sites in the Hudson Bay, New York, so they could correlate with their seismic reflection and refraction data.



Delivery

All data was collected, processed and delivered in less than a week.

The Sulmara marine ERT system is a continuous profiling system that is towed and consists of a single cable with two source electrodes and 8 measuring/sampling electrodes. With the vessel was moving forward at about 0.5 - 1 knot and a measurement performed approximately every 3 seconds for a duration of 800 ms (0.8 sec). The results give a new reading approximately every 1 meter of travel. This dense sampling allowed for some data clean-up and meaningful information for the client's engineers.



Resilience

A residential fishing vessel ignored survey vessel warnings and approached at high speed, running over the ERT cable. The damaged caused completely ruined the cable and another one (the only other one in the US) was sourced and shipped out the next day. The new cable was not a direct replacement, but it was able to get the job done and we were able to integrate both data sets without issue.

Conditions in Reynolds Channel were very challenging with strong tidal currents, little manoeuvrability, and winter temperatures. Cold temperatures would cause the topside controller to freeze up and miss measurements. After each profile, the data was checked and if measurements were missed then the profile would be rerun. We also made physical adjustments to the setup which mitigated the dropped measurements due to the cold temperatures.



Impact

The client was able to safely plot the route to shore of its windfarm cables ensuring the HDD drill avoided all major obstacles.

“Sulmara is one of the only companies in the US to offer this service and we bring our experience of the operational challenges to de-risk every project we work on.”



Andy Nicol
Director of Western Hemisphere

