

Seafloor mapping for onshore/offshore bedrock correlation in offshore basins, western Newfoundland

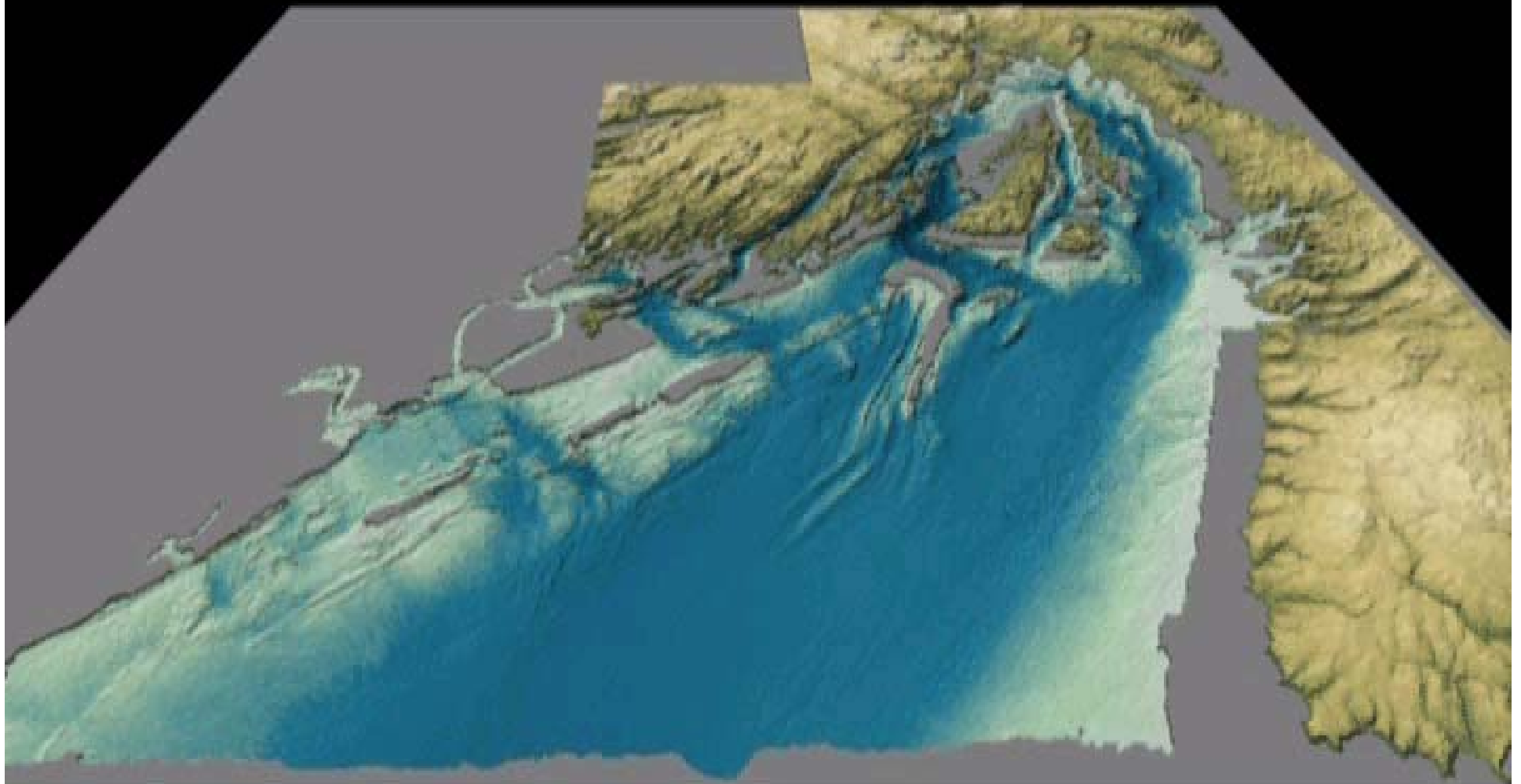
PEEP Workshop
October 23, 2013

Project objectives

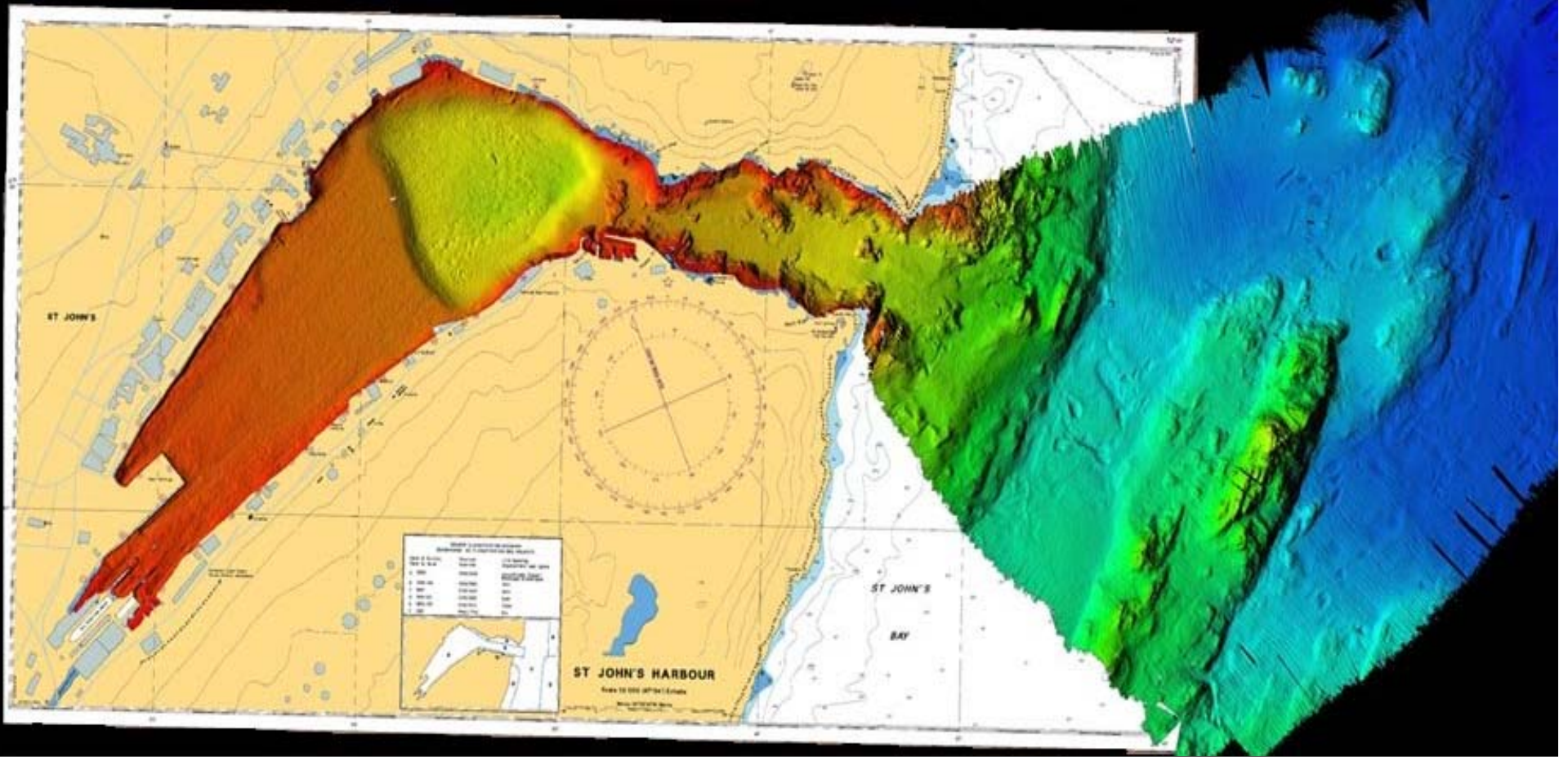
- ⇒ Demonstrate the benefits of high resolution multibeam sonar and sub-bottom profiler data to assist with mapping submarine bedrock trends, structures (faults, fold axes) and features (gas vents) and aid interpretation of conventional seismic and potential field (aeromag/gravity) data.

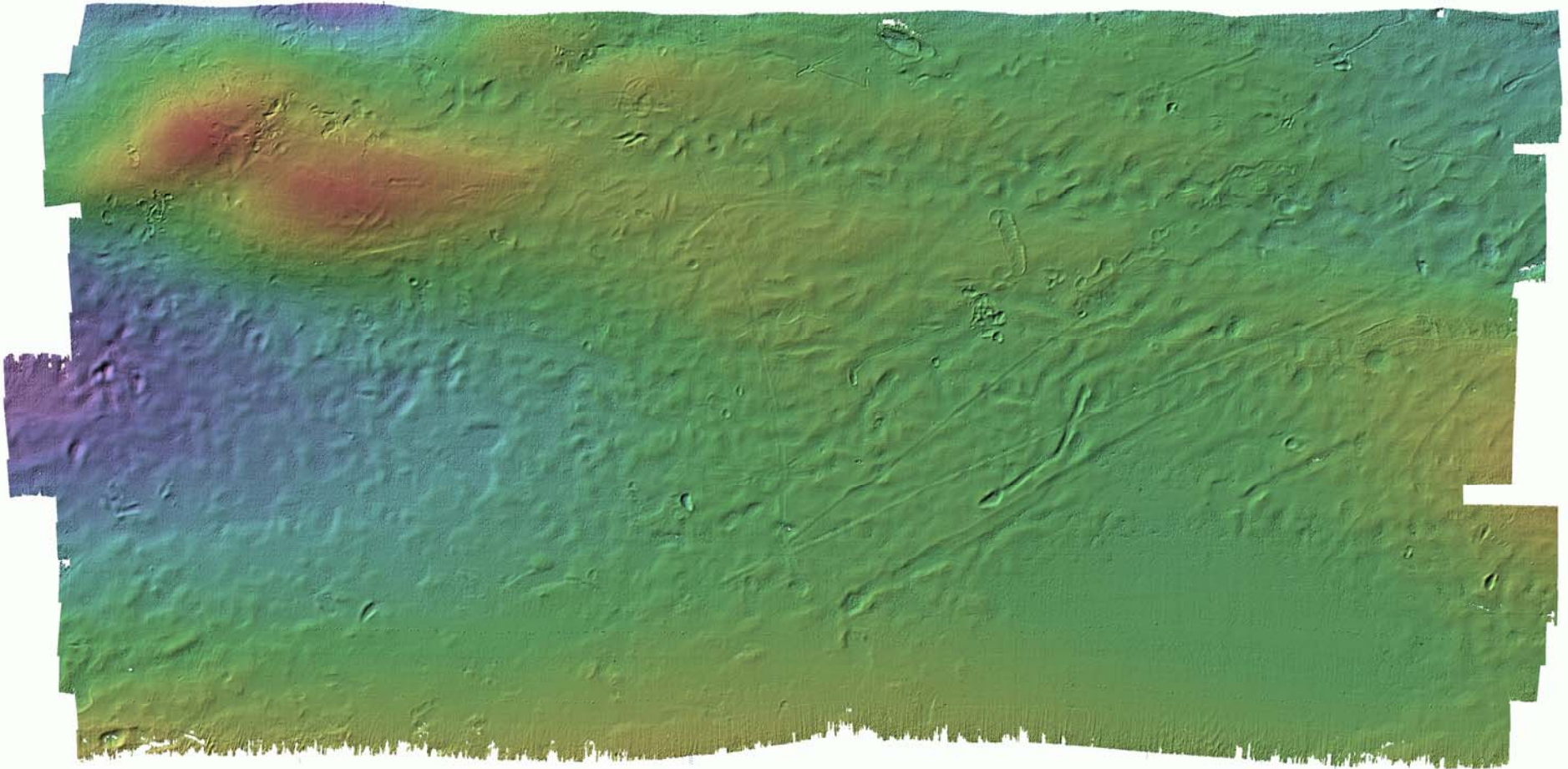
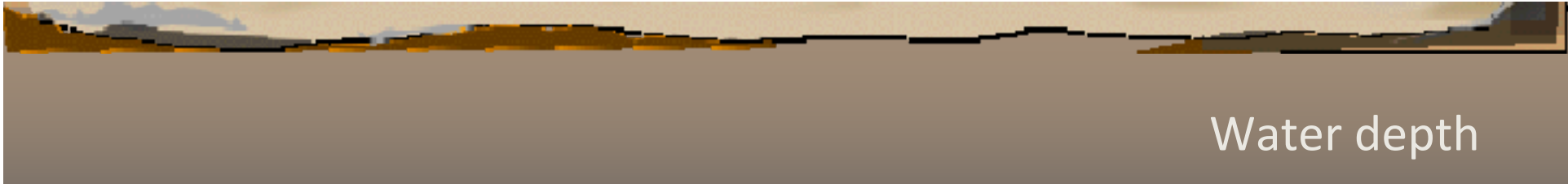
‘The shoreline is an accident of history’.

Brian Bornhold, GSC-Pacific



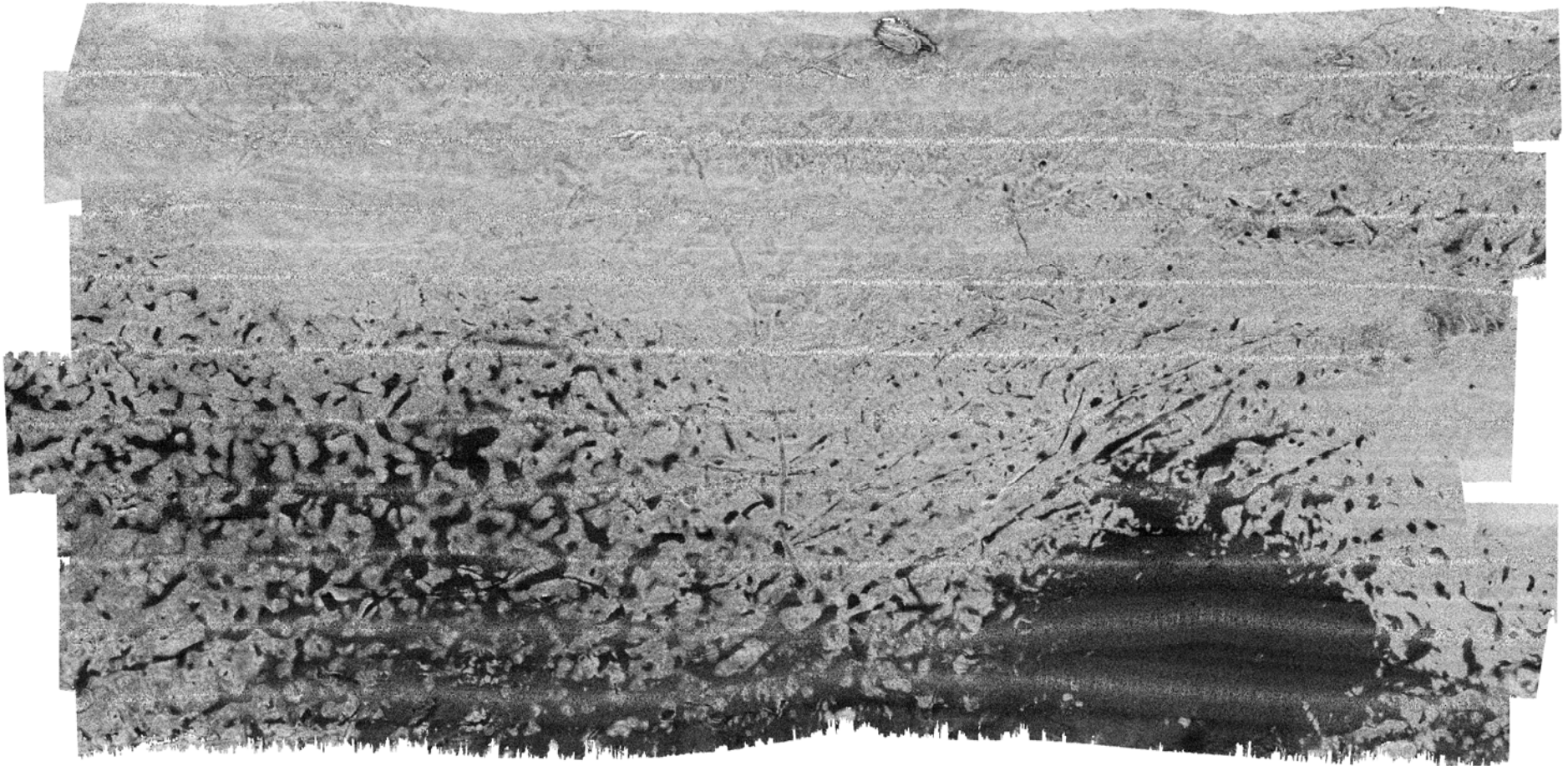
Placentia Bay – multibeam + satellite



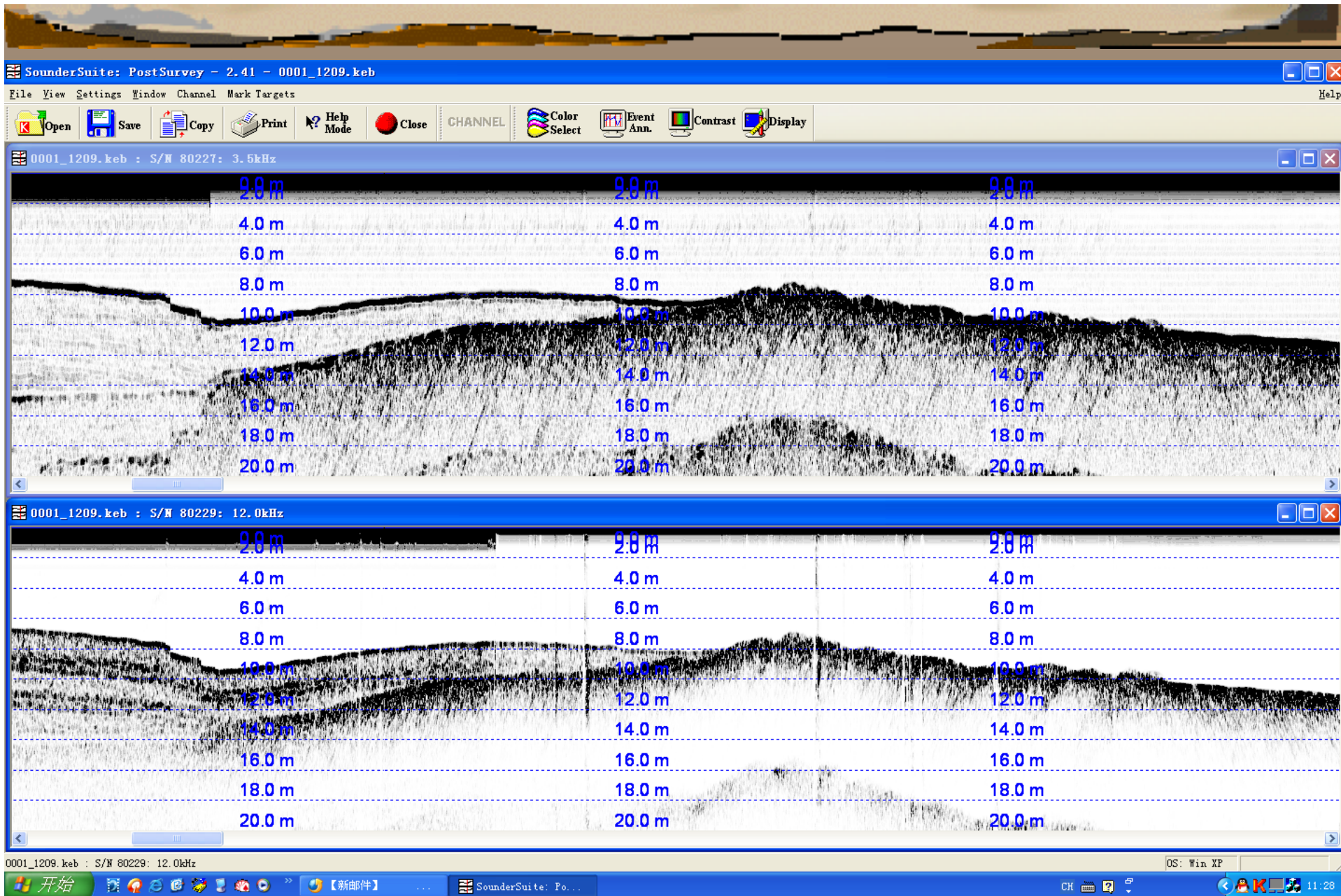


Multibeam sonar, Conception Bay, Newfoundland

Acoustic backscatter



Multibeam sonar, Conception Bay, Newfoundland



Knudsen 4-channel CHIRP hull mounted sub-bottom profiler

Project objectives (cont'd)

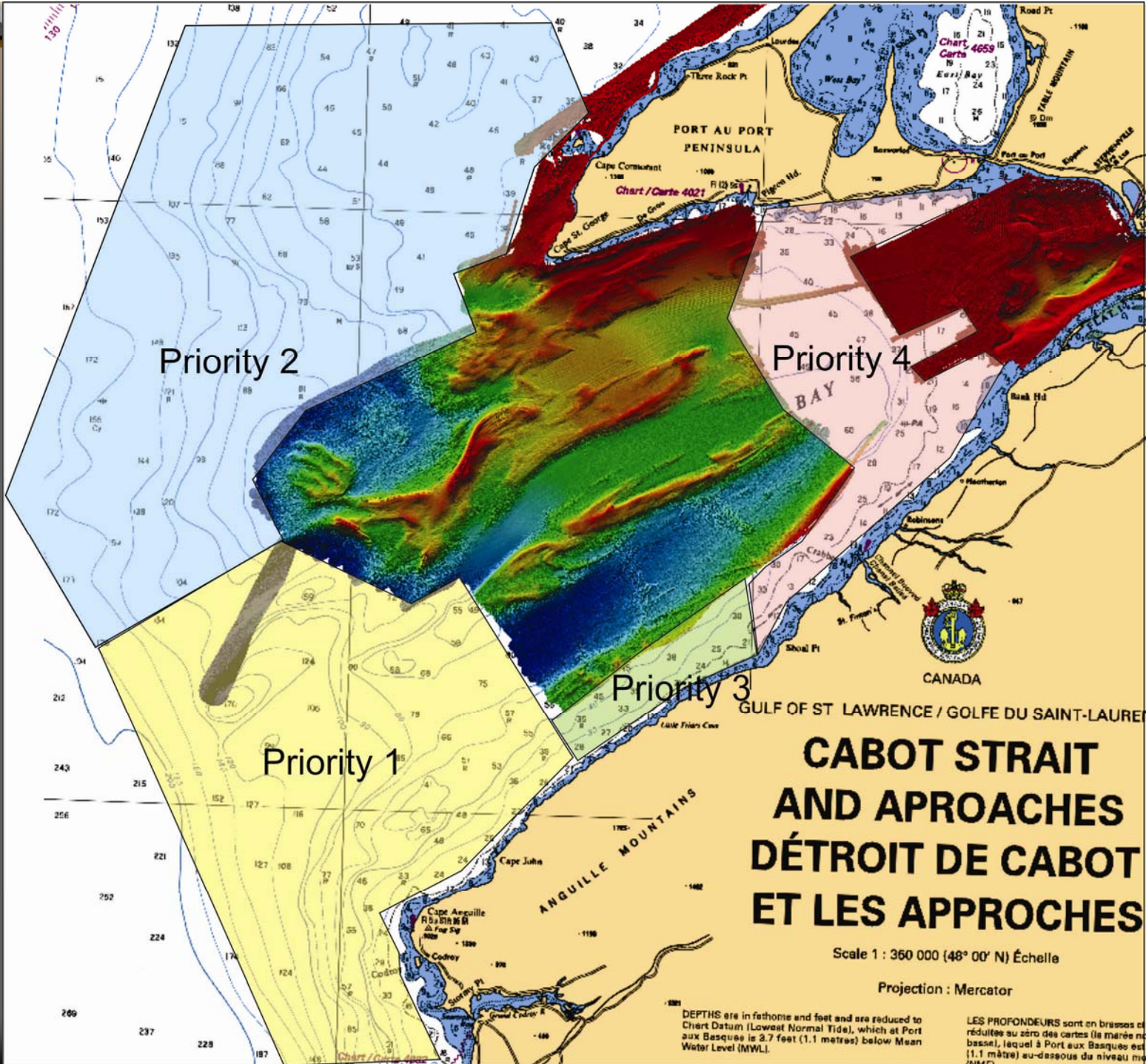
- ⇒ To realize maximum value from existing geophysical data
- ⇒ To produce publicly accessible data and reports for use in evaluation and planning for future energy opportunities offshore western NL
- ⇒ To build capacity at the Marine Institute
- ⇒ To encourage partnerships between project participants.

Project partners

- ⇒ Marine Institute, Centre for Applied Ocean Technology
- ⇒ NL Research and Development Corporation (RDC)
- ⇒ Natural Resources Canada (withdrew March 2012)
- ⇒ NL Department of Natural Resources
- ⇒ University of Alberta, Department of Earth and Atmospheric Sciences
- ⇒ Canadian Hydrographic Service

Anticipated outcomes

- ⇒ Seabed data (bathymetry, backscatter, sub-bottom) to support offshore geoscience and other applications (e.g. benthic habitat mapping)
- ⇒ Reduce exploration risk and attract industry attention to the region
- ⇒ Accelerate MI efforts to deliver proven ocean mapping capability (faculty and students)



Priority 2

Priority 4

Priority 3

Priority 1

**CABOT STRAIT
AND APPROACHES
DÉTROIT DE CABOT
ET LES APPROCHES**

Scale 1 : 360 000 (48° 00' N) Échelle

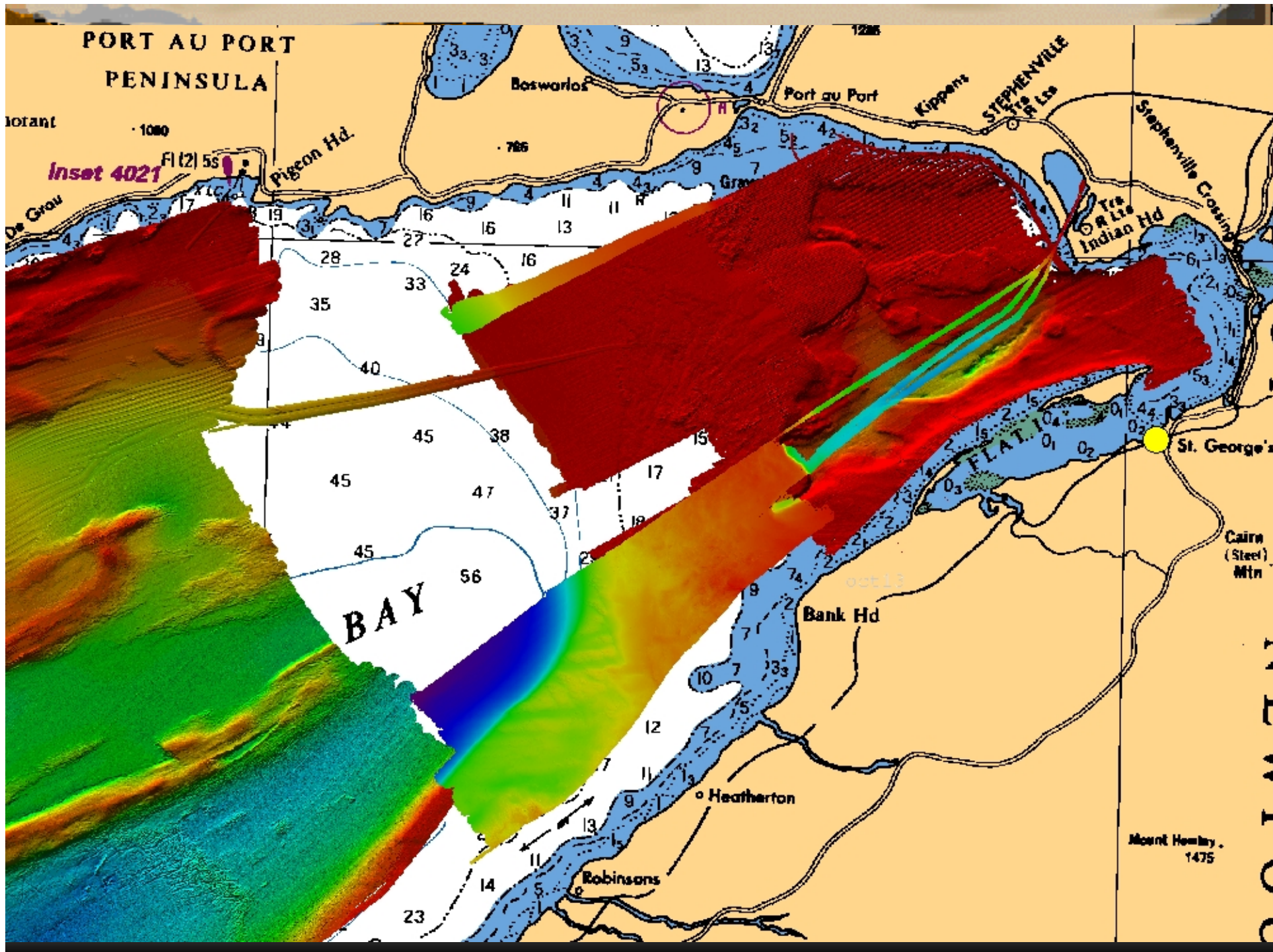
Projection : Mercator

DEPTHS are in fathoms and feet and are reduced to Chart Datum (Lowest Normal Tide), which at Port aux Basques is 2.7 feet (1.1 metres) below Mean Water Level (MWL).

LES PROFONDEURS sont en brasses et réduites au zéro des cartes (la marée normale), lequel à Port aux Basques est (1,1 mètre) au-dessous du niveau moyen (N.M.).

Progress update

- ⇒ Initial MI data collection October 2011
- ⇒ NRCan withdrawal from project March 2012
- ⇒ New PI (John Waldron, University of Alberta) and graduate student (Morgan Snyder) confirmed July 2013
- ⇒ PEEP funding secured August 2013
- ⇒ Multibeam sonar and sub-bottom profiler systems moved from M/V Atlanticat to M/V Anne S. Pierce August 2013



For information...

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