



Comparison of field and synthetic seismic reflection images of Gulf Stream and Slope waters southeast of Nova Scotia

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In 2007, the Geological Survey of Canada commissioned a multi-channel seismic (MCS) survey south of Nova Scotia over the Sohm Abyssal Plain. The survey lines crossed an oceanographic boundary between the Gulf Stream and the slope waters. We collected a dense hydrographic dataset coincident with two transects of the MCS survey. Separation between successive XBTs was approximately 1 km. From the hydrographic data, profiles of acoustic impedance are computed from 1D P-wave velocities and densities, which are then interpolated into 2D. This procedure allows us to produce synthetic seismic reflection sections by convolving the estimated seismic source wavelet with the inferred acoustic impedance map. We plan to compare the synthetic sections to preliminary poststack migrated seismic profiles, and to discuss potential explanations for differences between the two.