

spacing was 150 m in the central region, and 320 to 750 m in the eastern and western extremities of the study area.

Stratigraphic assignments are based on comparisons with the ground-truthed geological units present off the Scotian Shelf and include bedrock, till, Emerald Silt facies A, Emerald Silt facies B and LaHave Clay. Some differences were noted from the Scotian Shelf region including the presence of a single layer of non-interdigitating till, which becomes discontinuous to the north. Several sedimentary packages restricted to the northern region of the study area are related to the local outflow of the Saint John River or local seabed currents (e.g., the Mispéc dune field). To the north, the LaHave Clay also appears to undergo a facies change, as more typical laminar bedding is replaced by cross-bedded units, which may reflect higher near-shore currents, or the influence of the Saint John River.

Several areally-extensive unconformities are defined, revealed by reflector truncation, including two within the Emerald Silt facies B unit, and one at the base of the LaHave Clay. The Mispéc dune field, in the east of the study area, lies unconformably on older units. South of the dune field, the seafloor appears to have changed from being predominantly depositional during glacial times to one which is now dominated by erosion. Recent erosion has exposed Emerald Silt facies B on the seabed.

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**The Quaternary erosional and depositional history  
of the Black Point area, Saint John, New Brunswick,  
based on seismic sub-bottom profiles**

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High-resolution seismic sub-bottom profiles from the region offshore of Saint John Harbour facilitate the first investigation of coastal marine Quaternary units in the area. The data were obtained from a region 7 km W-E, and 10 km N-S encompassing an ocean disposal site located near Black Point in the approaches to Saint John harbour. Sediments dredged from shipping channels in Saint John harbour are disposed of at this site. One sub-bottom profile extends north of the main study area into the mouth of the Saint John River, and another profile extends 21 km south of Partridge Island. A total of 41, mostly N-S oriented lines, were interpreted. The nominal line