

November 18, 1929 tsunami-laid sand and pebble deposits on the Burin Peninsula, NewfoundlandA. Ruffman¹, M.P. Tuttle² and T.W. Anderson³¹*Geomarine Associates Limited, P.O. Box 41, Station M, 5112 Prince Street, Halifax, Nova Scotia B3J 2L4, Canada*²*Department of Geology, University of Maryland, College Park, Maryland 20742, U.S.A.*³*Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario K1A 0E8, Canada*

The 1993 discovery of a tsunami-laid sand at Taylor's Bay on the Burin Peninsula has been detailed with trenching, surveying and electronic leveling as well as ²¹⁰Pb dating along with analysis of the peat section by the Terrain Sciences Division of the Geological Survey of Canada. Both tsunami-laid sand and pebble deposits have been found in at least four locations along the south coast of the Burin. The ²¹⁰Pb dating has confirmed that the deposit at Taylor's Bay is from the 1929 tsunami. The peat below the tsunami-laid sand (t-ls) at Taylor's Bay shows a normal peat plant succession. The addition of the

3 to 6 cm thick t-ls appears to have altered the drainage and the peat immediately above the t-ls shows a dramatic change to much more grass. The grasses slowly revert to a normal peat succession upwards from the t-ls.

The ideal conditions to create and to capture a tsunami-laid deposit appear to require a very nearshore or beach source of sand or fine pebbles, a back-beach pond to capture storm overwash and a low, flat marsh or peat bog 'meadow' shoreward of the pond to trap the slurry of fine sediment swept in by the tsunami.