dry top of a long undersea ridge, lies 90 miles off the nearest point of the continental coast and less than 25 miles from the rim of the deep oceanic basin. This Island is reported to be moving oceanward owing to the action of sea and wind, the sea encroaching on the western end and the land extending eastward.

The whole floor of the marginal sea appears to be traversed with channels and gulleys, as yet imperfectly charted but sufficiently so to indicate the general outlines. The outer edge of this submerged flank of the continent is trenched with deep submarine ravines cutting well into the shelf. Outstanding of these is a bold, canyon-like depression which commences in the deep Atlantic Basin south of the Great Banks of Newfoundland and separating St. Pierre Bank on the north and Banquereau on the south. It continues northwestward through Cabot Strait, crosses the open Gulf of St. Lawrence to the north of the Magdalen Islands, thence runs past the Gaspe Coast into the broad estuary of the St. Lawrence. Branches extend for some distance into the northeast arm of the Gulf towards Belle Isle, and also along the northeastern coast of Anticosti Island. Depths in this trough vary from nearly 300 fathoms in Cabot Strait, to 100 fathoms in the St. Lawrence Estuary a short distance below the Saguenay. In referring to the Estuary of the St. Lawrence it is of interest to record that, off the mouth of the Saguenay, the water of the St. Lawrence is salt; at the lower end of Orleans Island it is brackish and the range of tide here reaches its maximum; at Quebec the water is fresh. The true head of the Estuary, therefore, is at the lower end of Orleans Island.

The main features of the topography of the Atlantic marginal sea-floor are attributed to glacial origin, but other agencies are at work constantly modifying the submarine relief. Land erosion is an important factor, eroded materials from the continent being carried by rivers, ice, or winds to the foreshores from whence the solid detritus is spread over wide areas by sea and ice. Stones, gravels, sand and muds are thus transported. Wave action against cliffs and shore banks accounts for enormous masses of continental substances being washed away and deposited over the surrounding sea-floor. The processes of erosion on a great scale are apparent in the Magdalen Islands area in the centre of the Gulf of St. Lawrence. There, the comparatively soft sandstone cliffs are continually being nibbled into fantastic shapes, or worn away by the violent seas to which the coast is exposed. As a result, shallow submarine flats and sand-bars are formed, and bottom contours fluctuate to a considerable degree.

Sea ice, also, is an active agent in the processes of littoral erosion, transport and deposition of eroded materials. A very good illustration can be seen each spring in Cabot Strait where, for many weeks prior to the opening of navigation, an extensive procession of winter ice from the Gulf and River St. Lawrence and Chaleur Bay streams out along the Atlantic coast of Cape Breton on its journey to the sea. The ice which was formed in shallow water and along the shores is laden with erosion products, the mud, sand or clay scoured from the bottom, or swept from the land by gales. The origin of such ice can be recognized: that formed in the St. Lawrence River and Chaleur Bay is dark with the characteristic muds and clays conveyed from those regions, while the ice from the Northumberland Strait area is red with the coloured sand peculiar to the southern part of the Gulf. Ice navigators and coastal dwellers refer to the latter as "red" ice—a welcome sight in the spring as it moves down the coast of Cape Breton for, being the last of the winter ice to flow out of the Gulf, it heralds the opening of navigation. Much of this ice-borne material is carried well out on the Continental Shelf, some of it reaching even beyond Sable Island before the ice deteriorates.