

DISCUSSION

Introduction

The major topographic features depicted in the map series were formed by glacial processes. In broad terms, these features are interpreted here to represent a geologic history that developed in several stages. Ice containing rock debris moved across the region, sculpting its landforms and depositing sediments in the large, deep, glacial troughs. Many of the features observed here represent the last, or latest, stage of glaciation. They are the result of processes at work when much of the area was covered by a thick sheet of ice, and are the result of glacial meltwater, glacial till, and glacial activity in the region during the last glacial period. The area and the region formerly occupied by ice, and seabed features were partly eroded and some new sedimentary deposits were formed. Today, the sea floor is modified mainly by strong, southward-flowing bottom currents caused by strong winds from the south. These currents are responsible for the changes in the seabed banks and the banks themselves. Within time, the banks formed by these currents become coarser, and the banks themselves are eventually removed by the currents.

as sand and mud are removed and gravel remains; and the western flanks of the banks, as well as adjacent basins, are built up by deposits of mud and sand.

Quadrangle 16 features

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Valentine, P.C., Utria, T.S., Baker, J.L., and Roworth, E.T., 1997, Sea floor topography of Quadrangle 16 in the Stellwagen Bank National Marine Sanctuary off Boston, Massachusetts: U.S. Geological Survey Open-File Report 97-229, scale 1:250,000.

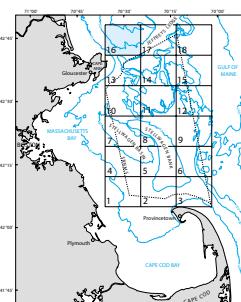
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Location map outlining the 18 quadrangles in this series. Quadrangle 16 shown in blue. Boundary of Stellwagen Bank National Marine Sanctuary (SBNMS) indicated by dashed line. Bathymetric contours in meters.

SUN-ILLUMINATED SEA FLOOR TOPOGRAPHY OF QUADRANGLE 16 IN THE STELLWAGEN BANK
NATIONAL MARINE SANCTUARY OFF BOSTON, MASSACHUSETTS

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