



Map data provided by the National Oceanic and Atmospheric Administration, 1980; North American Datum 1983. Longitude of central meridian 70° 18' W, latitude of true scale 41° 59' N. This map is not intended for navigational purposes.

SCALE: 1:60,000
ONE CENTIMETER ON THE MAP REPRESENTS ONE METERS ON THE SEAFLOOR

CONTOUR INTERVAL: 4 METERS
BATHYMETRIC CONTOURS REPRESENT TOPOGRAFICAL ELEVATIONS
DATA FROM NOAA CHART 1302

SEA FLOOR TERRAIN RUGGEDNESS INDEX

0-30	30-60	60-90	90-120	120-150	150-180	180-210	210-240	240-270	270-300
these intervals are not shown on map									
Interval: >3 to 2 m (100-cm increments)			Interval: >2 to 1 m (50-cm increments)			Interval: >1 to 0.5 m (100-cm increments)			

Colors represent the average change in elevation, in centimeters, between a central area (a 15 x 15-m pixel) and the eight pixels that surround it. Total area analyzed is three pixels by three pixels, or 39 x 39 m in size. For example, on the map yellow-orange represents central pixels having an average elevation change of >200 to 300 cm with respect to their surrounding eight-pixel area. Note the elevation-change increments in the color scale.

White areas on the map represent areas where ruggedness values were not calculated. A filter was applied to the ruggedness index image to smooth the boundaries between the ruggedness intervals. The filter calculated the mean of the TR values of each pixel and its eight neighboring pixels in a 3-pixel by 3-pixel grid that measures 39 x 39 m. Areas of ruggedness were calculated using this filtered image; see table 1 for map D on the DVD-ROM.

Sheet 5.—Sea floor ruggedness in the >2- to 6-meter range and sun-illuminated topography.

MAP D.—SEA FLOOR RUGGEDNESS IN THE STELLWAGEN BANK NATIONAL MARINE SANCTUARY REGION

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2005

Sea Floor Image Maps Showing Topography, Sun-Illuminated Topography, Backscatter Intensity, Ruggedness, Slope, and the Distribution of Boulder Ridges and Bedrock Outcrops in the Stellwagen Bank National Marine Sanctuary Region of Boston, Massachusetts

Page C. Valentine, editor

