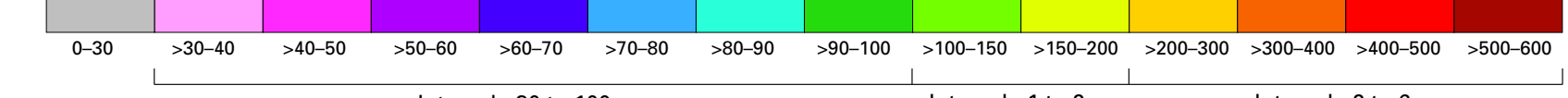


Mapview projection: Conformal Reference System 1983; North American Datum 1983
Longitude of central meridian: 70°12' W; Interval of true scale: 4°30' W
This map is not intended for navigational purposes.

SCALE 1:60,000
ONE CENTIMETER ON THE MAP REPRESENTS SIX METERS ON THE SEA FLOOR

CONTOUR INTERVAL: 5 METERS
BROWN CONTOURS REPRESENT TOPOGRAPHIC LOWS
DATA FROM NAUTICAL CHARTS

SEA FLOOR TERRAIN RUGGEDNESS INDEX



Colors represent the average change in elevation, in centimeters, between a central area (a 13 x 13-m pixel) and the eight pixels that surround it. The filter calculated the mean of the TRR value of each pixel and the eight neighboring pixels in a three-pixel by three-pixel grid that measures 30 x 30 m. Areas of ruggedness were calculated using the Hiron image; see table 1 for map D on the DVD-ROM.

Sheet 2.—General sea floor ruggedness and sun-illuminated topography.

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

By
Page C. Valentine, Lian A. Scully, and Sarah J. Fuller

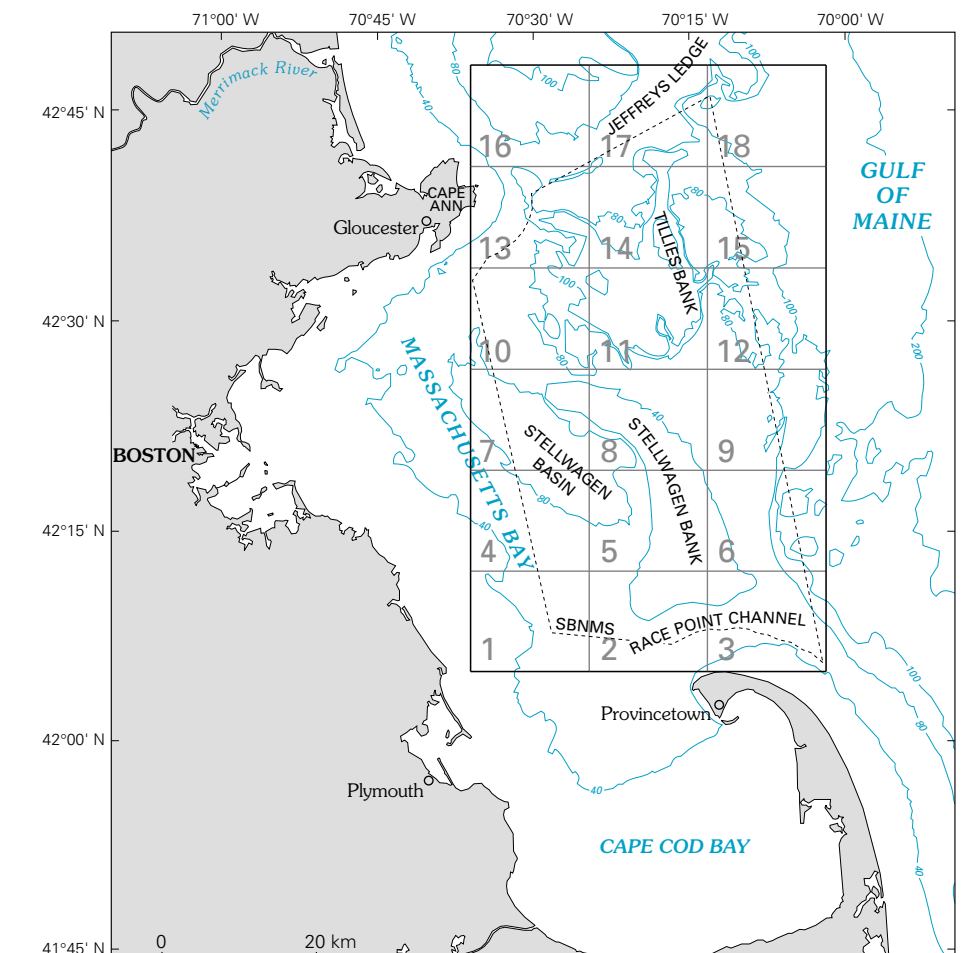
2005

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



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U.S. GEOLOGICAL SURVEY
National Center, Reston, Virginia 20192
Digital Data Center, Reston, Virginia 20192
Map Information: 1:60,000 scale, North American Datum 1983, UTM projection, UTM zone 18N
Publication title: 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
Author: Page C. Valentine, Lian A. Scully, and Sarah J. Fuller
Editor: Page C. Valentine
Date: 2005
Scale: 1:60,000
Projection: UTM
Datum: NAD 83
Units: Meters



Location Map.—Regional setting of the map area outlined in black. Publication title, scale, and datum are listed in the explanatory text file on the DVD-ROM. The map area is shaded in light gray. The map area is shaded in light gray. The map area is shaded in light gray.