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High-resolution seismic-reflection profiles from the R/V COLUMBUS ISELIN,
cruise CI 7-78-2, over the Continental Shelf and Slope
in the Georges Bank area

by

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In September 1978, the U. S. Geological Survey (USGS) collected 5,029 km of single-channel seismic-reflection data from the Georges Bank area of the Atlantic Continental Shelf and Slope (fig. 1) during the R/V COLUMBUS ISELIN cruise CI 7-78-2. The purpose of the cruise was to determine the location and frequency of mass sediment movement and other geologic hazards along the Continental Slope.

Navigation of the COLUMBUS ISELIN was by LORAN-C; position fixes were automatically recorded at 5-minute intervals and manually plotted and recorded at 15-minute intervals. The navigation equipment included a Northstar 6000 LORAN receiver and a Texas Instruments Silent 700 tape and paper recorder.

The seismic equipment consisted of a 40-in³ airgun, a 5-in³ airgun, a Teledyne 600-joule mnisparker, and ORE (Ocean Research Equipment Inc.) 3.5-kHz transducer. The seismic profiles obtained were recorded on paper by EPC (EPC Labs Inc.) recorders and on magnetic tape by a 7-channel analog tape recorder. Overall, the data quality is excellent, and penetration and resolution are good although in some areas, the underlying structure was obscured by rough topography.

The original records may be viewed at the USGS office in Woods Hole, Massachusetts. Microfilm copies of the data may be purchased only from the National Geophysical and Solar-Terrestrial Data Center, NOAA/EDIS/NGSDC, Code D621, 325 Broadway, Boulder, CO 80303 (Telephone: 303-497-6338).

*This report is preliminary and has not been reviewed for conformity with U. S. Geological Survey editorial standards. Any use of trade names is for descriptive purposes only and does not imply endorsement by the USGS.

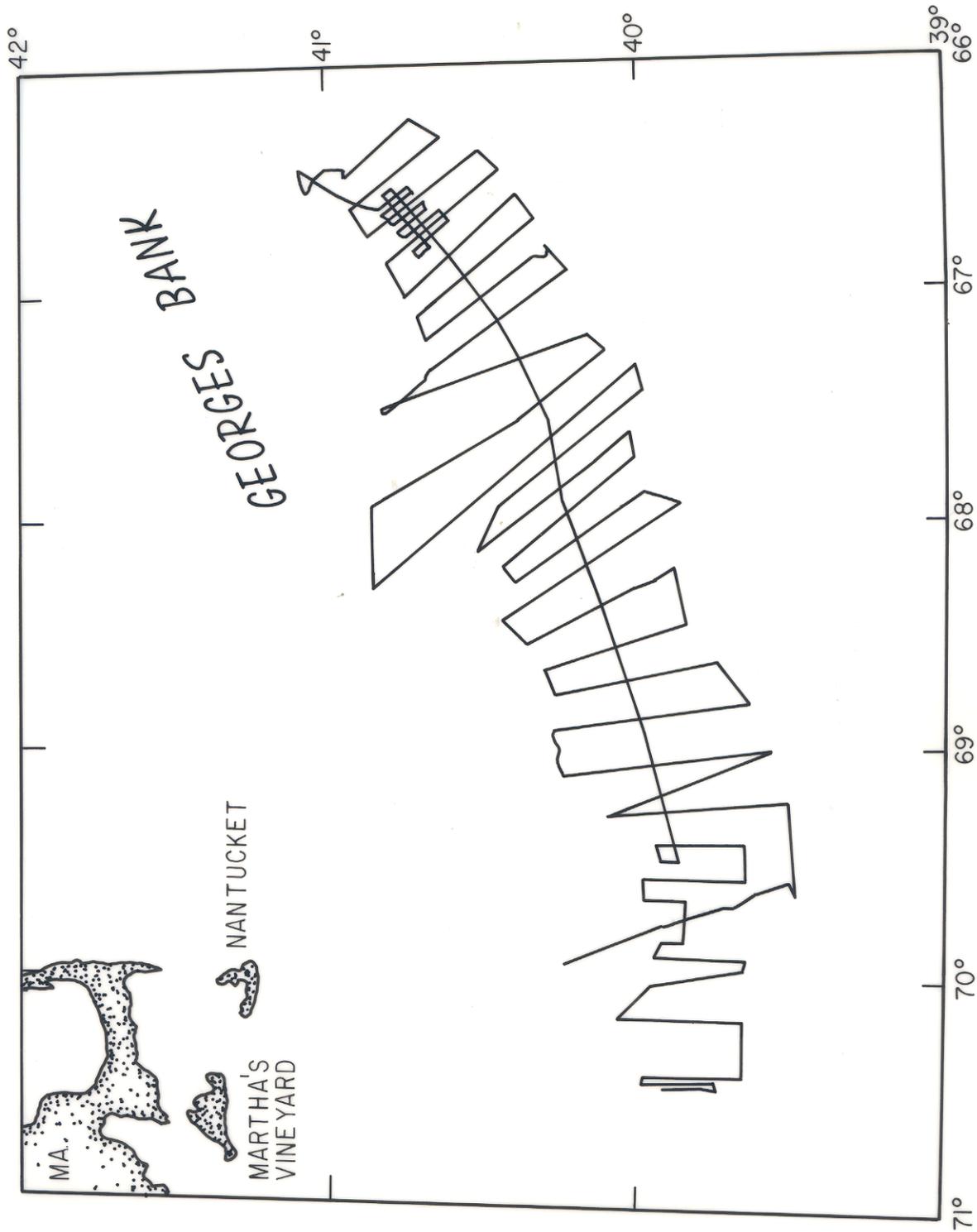


FIGURE I. Map showing location of tracklines for COLUMBUS ISELIN cruise CI 7-78-2.