

U.S. Department of Interior Geological Survey Open File Report  
High-resolution seismic-reflection profiling data from the Inner Continental

Shelf of southeastern Massachusetts

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Six hundred-seventy kilometers of closely spaced high-resolution seismic-reflection data have been collected from eastern Rhode Island Sound and Vineyard Sound, Mass. (Fig. 1), by the U.S. Geological Survey in cooperation with the Massachusetts Department of Public Works. These data were obtained during the June 1975 cruise of the R/V ASTERIAS as part of a continuing regional study of the Massachusetts offshore area to assess potential mineral resources, to evaluate environmental impact of mining of resources and of offshore disposal of solid waste and harbor dredge-spoil materials, and to map the offshore geology and shallow structure.

The data were obtained by using a surface-towed EG&G Unit Pulse Boomer\* (300 joules; 400 Hz-8kHz frequency) sound source. Reflected acoustic energy was detected by a 4.6-m, 8-element hydrophone array, was amplified, was actively filtered (400 Hz-4kHz bandpass), and was graphically displayed on an EPC\* dry paper recorder at a 0.25-second sweep rate. System resolution was generally 1 to 1.5 m. Navigational control was provided by Loran C (positional accuracy within 0.2 km) and was supplemented by radar and visual fixes. Positional information was logged at 15-minute intervals and at major course changes.

The original records may be examined at the Data Library, U.S. Geological Survey, Woods Hole, MA 02543. Microfilm copies of the data are available for purchase from the National Geophysical and Solar-Terrestrial Data Center (NGSDC), Boulder, CO 80302.

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\*Use of Trade names in this report are for descriptive purposes only, and does not constitute endorsement by the U.S. Geological Survey.

This report is preliminary and has not been edited or reviewed for conformity with U.S. Geological Survey standards or nomenclature.

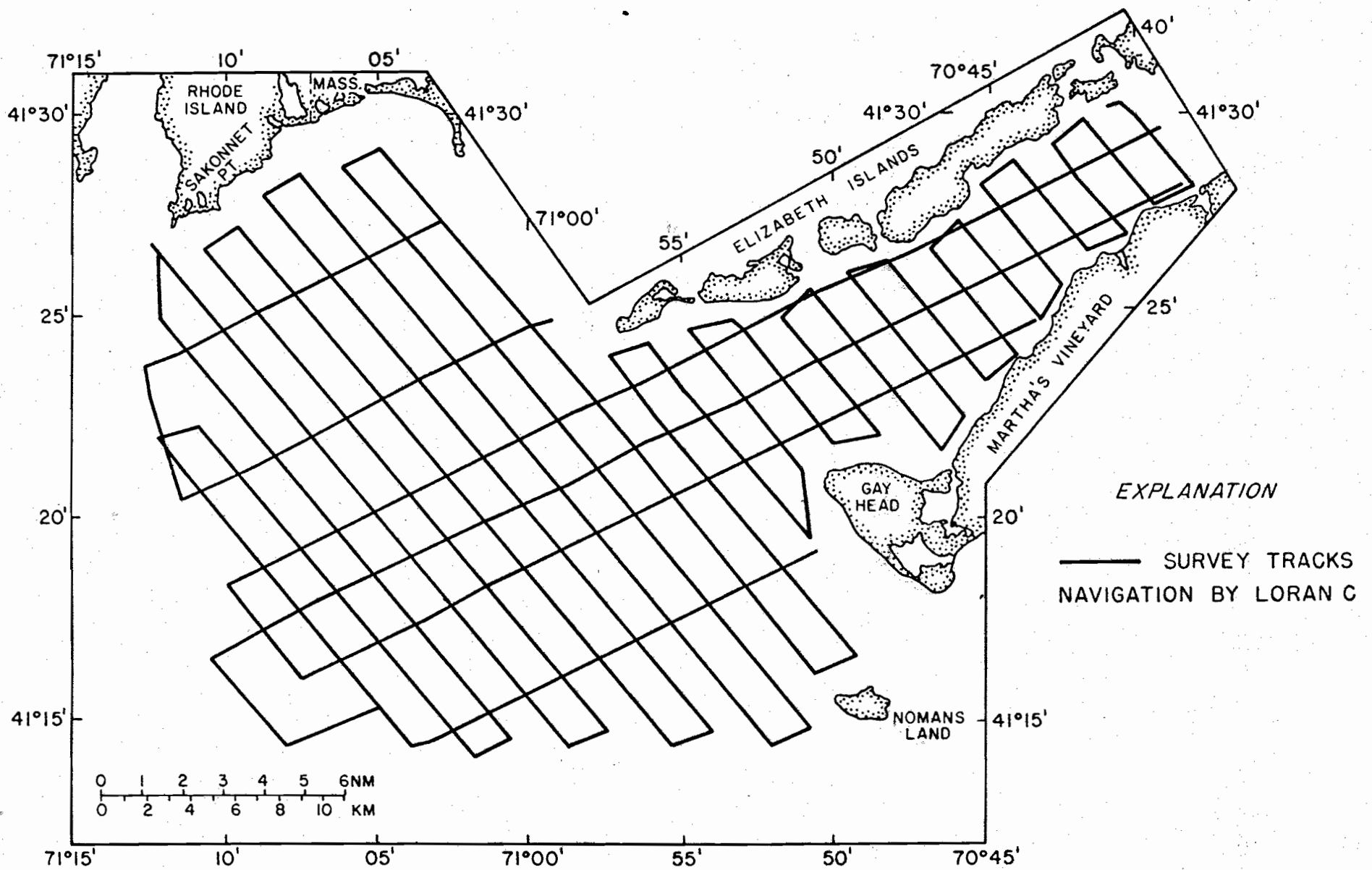


FIGURE 1— MAP SHOWING LOCATION OF HIGH-RESOLUTION  
 SUBBOTTOM PROFILES OBTAINED IN EASTERN RHODE  
 ISLAND SOUND AND VINEYARD SOUND, MASSACHUSETTS