

U.S. Geological Survey Open-File Report 80-935

High-resolution seismic-reflection profiles collected by the
R/V COLUMBUS ISELIN, cruise CI 7807-1, in the
Baltimore Canyon Outer Continental Shelf area,
offshore New Jersey

by

James M. Robb

High-resolution seismic-reflection profiles were collected by the U.S. Geological Survey (USGS) aboard R/V COLUMBUS ISELIN, cruise 7807-1, from 18 August to 4 September 1978 over the Continental Slope of the Eastern United States between Wilmington and Hudson Canyons. These data were acquired as part of a study to determine potential geologic hazards to petroleum development of the Baltimore Canyon trough area. On this cruise, the Continental Slope between Lindenkohl and Carteret Canyons (fig. 1) was surveyed along lines spaced one-half nautical mile apart to study the size and distribution of mass-wasting features as a guide to assess the importance of mass wasting processes on the Continental Slope. The seismic-reflection profiles were placed to complement other data gathered previously by the USGS (Robb and Kirby, in press).

Track lines are shown in figure 1. Track-line distances totaled 2,050 km of 40-in³ air-gun (with wave shaper) profiles, 2,100 km of 800-J sparker data, and 2,100 km of 3.5-kHz data. The air-gun and sparker profiles are of high quality, but the 3.5-kHz system did not

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function well and achieved no subbottom penetration. The side-scan sonar system was operated along the uppermost Continental Slope to investigate its potential for use in this environment. Data were acquired over 22 km of ship's track.

Navigation was by Loran-C (5-minute fix interval).

The original records can be examined at the U.S. Geological Survey offices in Woods Hole, Massachusetts 02543. Microfilm copies of the data are available for purchase from the National Geophysical and Solar-Terrestrial Data Center (NGSDC), Boulder, Colorado 80303.

REFERENCE CITED

Robb, J. M., and Kirby, J. R., in press, Maps showing kinds and sources of environmental geologic and geophysical data collected by the U.S. Geological Survey in the Baltimore Canyon trough area: U.S. Geological Survey Miscellaneous Field Studies Map MF-1210.

USGS TRACKLINE MAP R/V COLUMBUS ISELIN

CI 7807-1 18 AUG. - 4 SEPT. 1978

