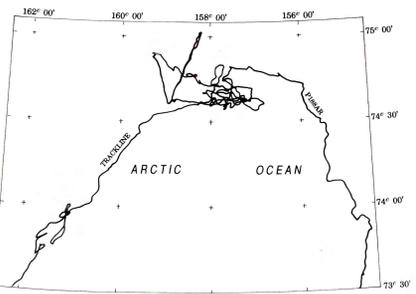


Index map showing location of mapped area with respect to northern Alaska



Location of U.S. Geological Survey bathymetric data in mapped area gathered from U.S.C.G.C. Polar Star in September, 1988. Other data sources listed in References Cited

**DATA SOURCES**

The bathymetric map of the southern Northwind Ridge and vicinity, Arctic Ocean is based on new data acquired during surveys conducted by the U.S. Geological Survey in 1988 from the USCGC POLAR STAR, and older data sets reinterpreted in view of the 1988 data. Bathymetric data were collected with a 12 kHz echo sounding system, and navigation was by Global Positioning System (GPS) satellite supplemented with integrated satellite navigation when GPS satellites were out of range. The trackline of the 1988 cruise is shown on the index map. The older data sets are summarized in Hill and others (1984) and Perry and others (1985).

**USES OF THIS MAP**

The bathymetric map was prepared as a base for displaying physiographic and geologic data of the U.S. Geological Survey on the continental shelf, slope, and rise north of Alaska and adjacent Arctic Ocean basin. It was not designed to serve as a chart for navigation.

**DATUM AND SOURCES OF ERROR**

The datum and sources of error are discussed in Grantz and Mullen (1991). Sources of error for new data collected in 1988 are electronic noise and water column inhomogeneities, commonly estimated to produce random errors of about 1 or 2 percent, and nonvertical echoes.

**CONVERSION OF REFLECTION TIME TO WATER DEPTH**

The U.S.G.S. soundings were converted to depth using a constant velocity of sound in the water column of 1,464 m/s (meters per second). The basis for this approximation of water velocity and the correction of other data sets is discussed in Hill and others (1984) and Greenberg and others (1981).

**ACKNOWLEDGEMENTS**

We are indebted to the U.S. Coast Guard for providing the icebreaker USCGC POLAR STAR as a platform for our surveys, and to Captain P.R. Taylor and crew for their support of the Geological Survey field party in 1988.

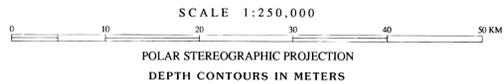
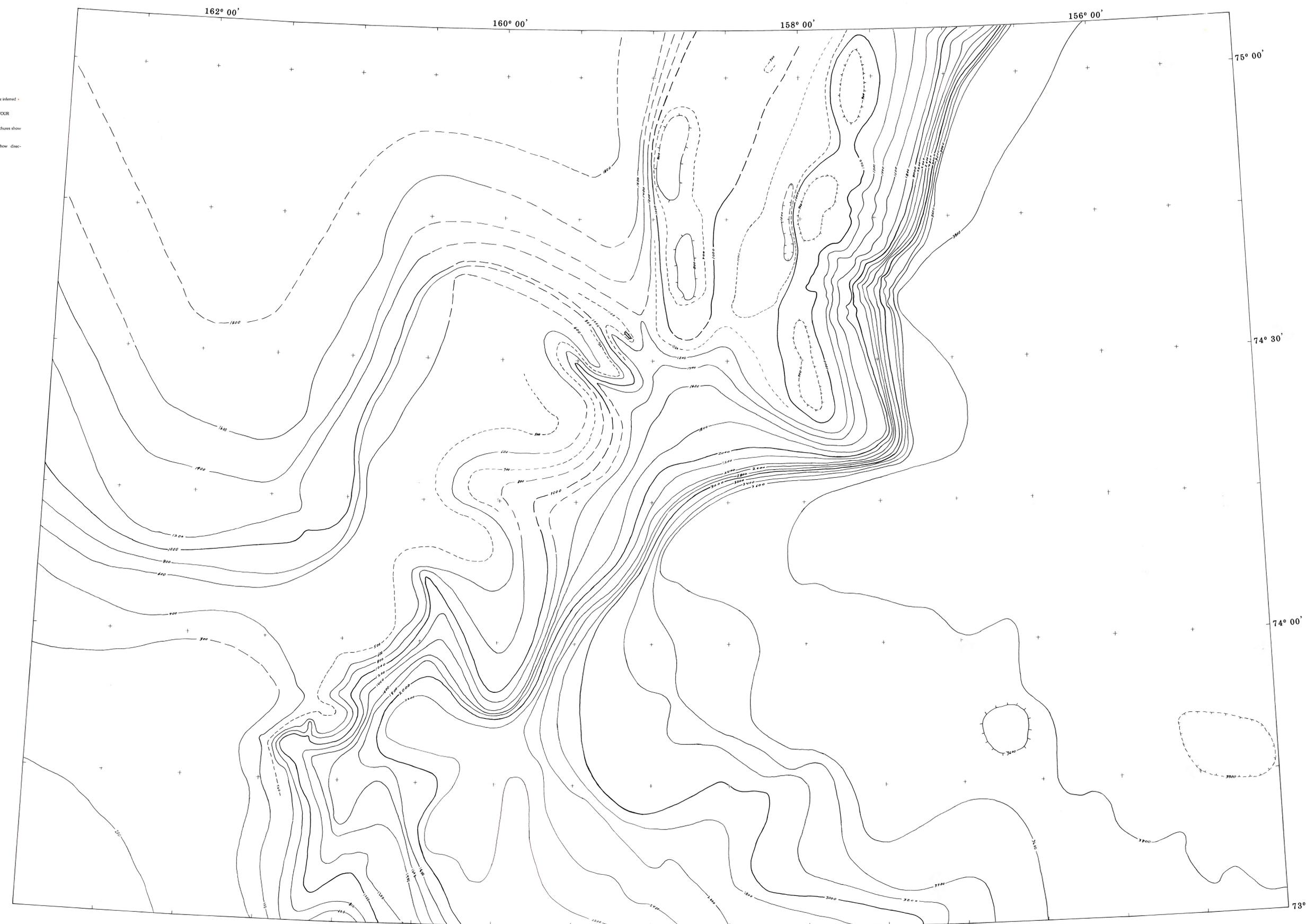
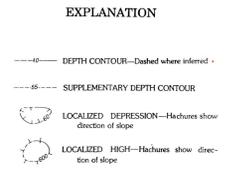
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**BATHYMETRIC MAP OF SOUTHERN NORTHWIND RIDGE AND VICINITY, ARCTIC OCEAN**  
 BY  
**MICHAEL W. MULLEN AND ARTHUR GRANTZ**

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