

UTM ZONE 3

BATHYMETRIC MAP

The bathymetric map was constructed by hand digitizing and hand contouring high-resolution seismic reflection data. The servo-beam towed system consisted of an ISE Marine Transducer with a beam width of 2.5° and a frequency of 40 kHz. Water depths were calculated according to an assumed constant acoustic velocity of 1,500 m/s. Although tidal fluctuations may be as much as 1.2 m near Apoon Pass, the vertical datum is assumed to be mean sea level. Measurements were corrected for a transducer depth of 1.5 m. The estimated resolution in digitizing depths from fathometer profiles is 0.4 m. The internal consistency of the data set was checked by comparing the computed depths at track line intersections. On the 500 m track intersections, the average difference in the depth is 0.4 m, which equals the hand digitizing accuracy; therefore, no major errors such as tidal fluctuations are in the measurements. Contour lines are annotated with either H or L, to indicate a hypsographic high or low.

OPEN-FILE REPORT SERIES IN NORTON SOUND, ALASKA, 1981

The U.S. Department of the Interior has scheduled for late 1982 Norton Sound, North Coastward Shelf (NCS) 011 and Sea Level Data 51. This map is one of a series of five U.S. Geological Survey maps prepared as part of the prelease investigation of the surface and near-surface geologic environment of Norton Sound. The maps in this series are:

- Bathymetric map of Norton Sound, Alaska, by D. A. Steffy, B. W. Turner, and L. D. Lybeck. Open-File Report 81-719, 1 oversized sheet, scale 1:250,000.
- Isobath map of Holocene sedimentary units, Norton Sound, Alaska, by D. A. Steffy, B. W. Turner, L. D. Lybeck, and S. L. Rose. Open-File Report 81-720, 1 oversized sheet, scale 1:250,000.
- Map showing selected geologic features, Norton Sound, Alaska, by D. A. Steffy and L. D. Lybeck. Open-File Report 81-721, 1 oversized sheet, scale 1:250,000.
- Map showing acoustic anomalies and near-surface faulting, Norton Sound, Alaska, by D. A. Steffy and S. L. Rose. Open-File Report 81-722, 1 oversized sheet, scale 1:250,000.
- Isobath map of Quaternary and upper tertiary strata, Norton Sound, Alaska, by S. L. Rose, D. A. Steffy, and L. D. Lybeck. Open-File Report 81-723, 1 oversized sheet, scale 1:250,000.

The data used to construct these maps were collected in 1980 by Nelson, under contract to the U.S. Geological Survey. These data include 5,300 line kilometers of multibeam, high-resolution seismic records. The acoustic systems used include a multibeam echosounder, a 1500-kHz echosounder with both custom-developed (COP) processing and analog format, a 1-kHz echosounder, and an analog echosounder. A 3.5-MHz geoelectric profiler, a fathometer, and side-scan sonar. The profiles along which data were collected are shown on each map. Navigation along preplanned survey lines was accomplished using a Cyclic Interferometric Tracking Grid Overlay (CITGO) system with an accuracy of 20 meters and a precision of 6 meters. Aerials Model 111 series was used to calibrate the CITGO system and as a backup.

4-424 2 4-424 grid representing the Great Circle lines from the Bureau of Land Management Protraction Diagram is superimposed on each map. The tracts to be offered for lease are entirely within the area shown on these maps. For lease purposes, the official production diagram should be used. Copies of the map and official production diagram can be obtained from the National Department of the Interior, Geological Survey, Center for Geologic Data, 600 National Center, Denver, Colorado 80202. Inquiries should refer to GCS Site 57, data set identifier NK 19181.

BERING SEA

NORTON SOUND

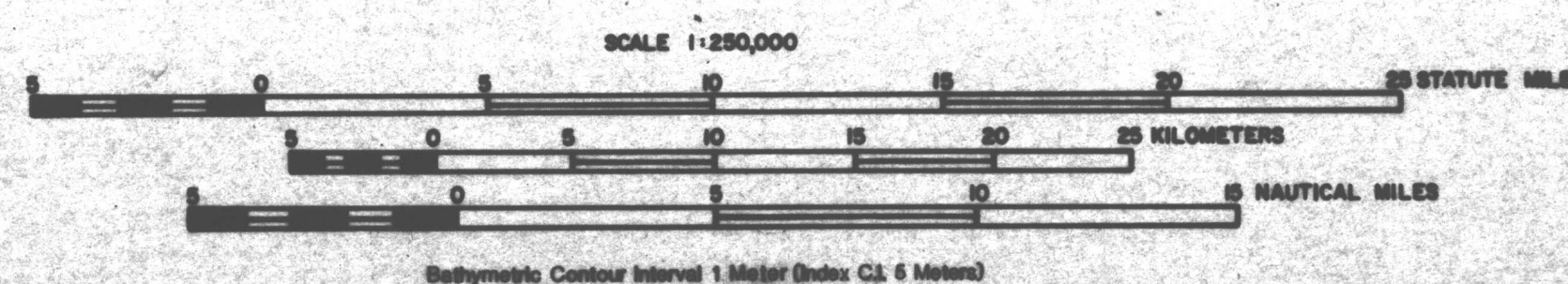
STUART ISLAND

YUKON RIVER DELTA

This map is not intended for navigational purposes. It has not been edited for conformity with Geological Survey editorial standards. Any use of trade names is for descriptive purposes only, and does not constitute endorsement of these products by the Geological Survey.



SOURCE OF SHORELINE FROM BLM
PROTRACTION DIAGRAMS NQ3-7,
NQ3-8, NP3-1 AND NP3-2.
PUBLISHED IN 1976.



BATHYMETRIC MAP OF NORTON SOUND, ALASKA
DAVID A. STEFFY, BRUCE W. TURNER, AND LYNN D. LYBECK
1981

MAP PROJECTION UTM CLARKE
1868 SPHEROID, ZONE 3.