DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

PRELEASE INVESTIGATION MAPS OF THE NORTH ALEUTIAN SHELF OUTER CONTINENTAL SHELF BERING SEA ALASKA 1984

by
P. J. HOOSE
K.H. ASHENFELTER
L.D. LYBECK
and
M.J. HOUSE

MMS MAP SERIES
84-0002

Published by
Minerals Management Service
Alaska OCS Region
1984

SCALE 1:250,000

PRELEASE INVESTIGATION MAPS OF THE NORTH ALEUTIAN SHELF, OUTER CONTINENTAL SHELF, BERING SEA, ALASKA, 1984

The U.S. Department of the Interior has scheduled the North Aleutian Shelf, Outer Continental Shelf (OCS) Oil and Gas Lease Offering for April 1985. This map is one of five prepared as part of the prelease investigation of the surface and near-surface geologic environment of the North Aleutian Shelf. Maps in the study area are:

Bathymetric map of North Aleutian Shelf, Bering Sea, Alaska, by P. J. Hoose and L. D. Lybeck. Sheet 1.

Isopach map of Holocene sediment, North Aleutian Shelf, Bering Sea, Alaska, by P. J. Hoose, L. D. Lybeck, and M. J. House. Sheet 2.

Map showing acoustic anomalies and faults, North Aleutian Shelf, Bering Sea, Alaska, by P. J. Hoose and K. H. Ashenfelter. Sheet 3.

Structure-contour map of the Pre-Holocene surface, North Aleutian Shelf, Bering Sea, Alaska, by K. H. Ashenfelter and P. J. Hoose. Sheet 4.

Map showing contemporary sea-floor bed forms, North Aleutian Shelf, Bering Sea, Alaska, by P. J. Hoose and K. H. Ashenfelter. Sheet 5.

The information presented in these five reports was interpreted mainly from 4,008 line km of multisensored, high-resolution seismic data collected in 1981 by Marine Technical Services, Inc. (MTS), while under contract to the U.S. Geological Survey. The seismic systems used included an array of up to four 15-cubic-inch water guns displayed in both 12-fold, common-depth-point (CDP) processed and analog formats. The CDP data were sampled at a 0.5-ms rate and recorded for 1 s. The other systems were an 800-joule minisparker, a 3.5-kHz piezoelectric profiler, a 40-kHz narrow-beam fathometer, and a side-scan sonar.

During the survey, navigation along preplotted track lines was accomplished using a Cubic Western DM-54 Automatic Ranging Grid Overlay (ARGO) system with an accuracy of 30 m and a precision of 8 m. A Motorola Mini-Ranger III system was used to calibrate the ARGO system and as a backup.

Copies of the data, base maps, and digital navigation tapes can be obtained from the National Geophysical Data Center (address: NOAA, EDIS/NGDC, Code D-621, 325 Broadway, Boulder, Colorado, 80303). Inquiries should refer to OCS Sale 92, data set identifier AK 19891.

The MTS data were supplemented by a 1976 survey performed by the U.S. Geological Survey aboard the R/V S.P. Lee. The seismic system used was an array of five air guns totaling 1,326 cubic inches and was recorded on 24 channels and CDP processed. The CDP data were sampled at a 2-ms rate and recorded for 5 s. Navigation was by satellite fixes supplemented by Loran C and doppler sonar. Approximately 672 line km of data were collected in the North Aleutian Shelf study area. Copies of the data and navigation are available from the National Geophysical Data Center, Boulder, Colorado. Inquiries should refer to OCS Sales 70 and 75.

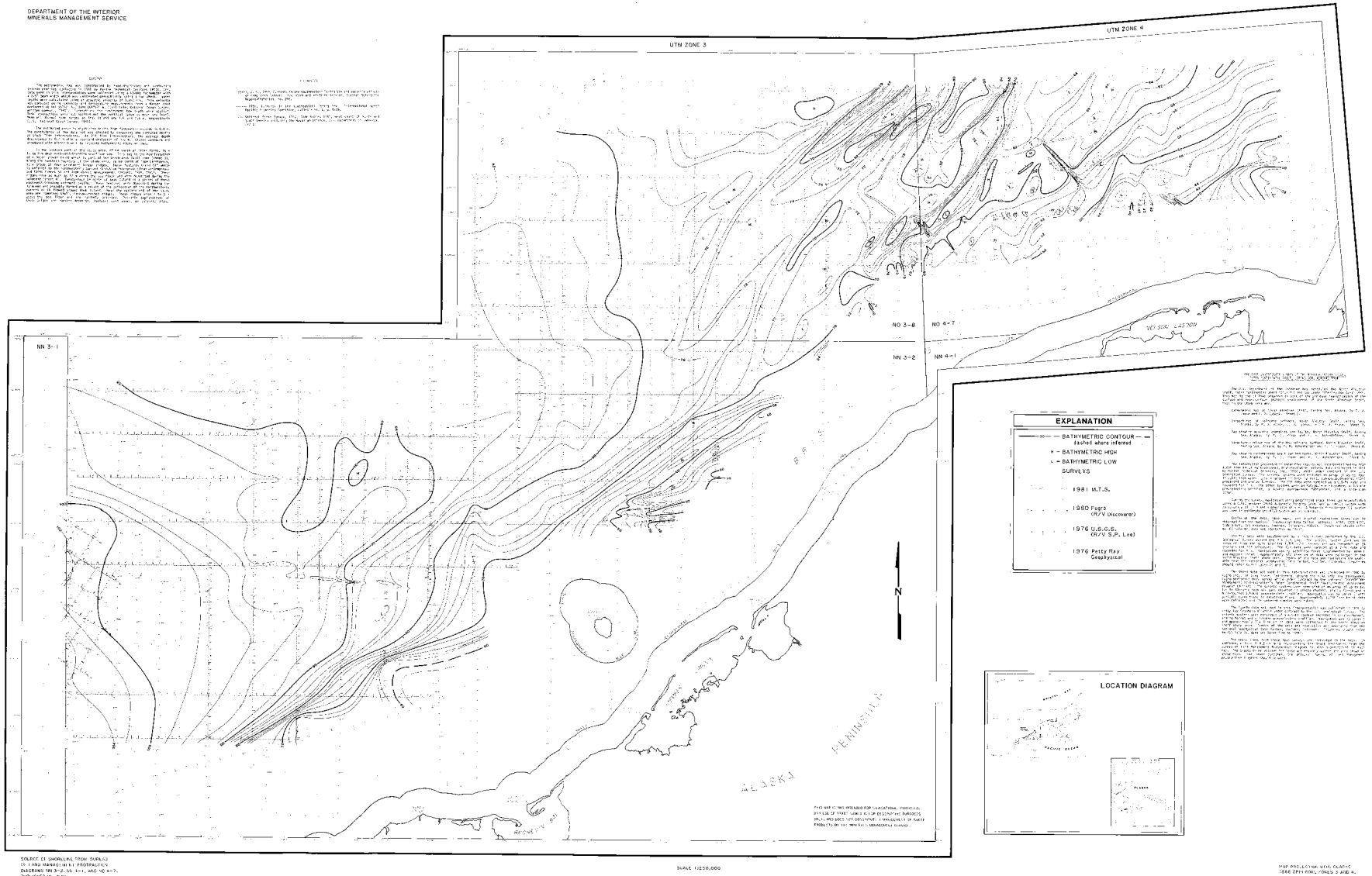
The third data set used in this interpretation was collected in 1980 by Fugro Inc., of Long Beach, California, aboard the NOAA ship R/V Discoverer. Fugro performed this survey while under contract to the National Oceanic and Atmospheric Administration's Outer Continental Shelf Environmental Assessment Program (OCSEAP). The seismic systems used consisted of an array of up to two 10- to 40-cubic-inch air guns recorded in single-channel, analog format and a hull-mounted 3.5-kHz piezoelectric profiler. Navigation was by Loran C with periodic corrections by satellite fixes. Approximately 4,214 line km of data were collected and 108 sediment samples were taken.

The fourth data set used in this interpretation was collected in 1976 by Petty Ray Geophysical while under contract to the U.S. Geological Survey. The seismic systems used consisted of a 4.6-kJ sparker recorded in single-channel, analog format and a 3.5-kHz piezoelectric profiler. Navigation was by Loran C and approximately 114 line km of data were collected in the North Aleutian Shelf study area. Copies of the data and navigation are available from the National Geophysical Data Center, Boulder, Colorado. Inquiries should refer to OCS Sale 70, data set identifier AK 15947.

The track lines from these four surveys are indicated on the maps. In addition, a 4.8- X 4.8-km grid representing the tract boundaries from the Bureau of Land Management Protraction Diagram is also 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 Bureau of Land Management protraction diagrams should be used.

MMS MAP SERIES 84-0002
SHEET 1 OF 5

DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE



EXPLANATION

— 30 — BATHYMETRIC CONTOUR — Dashed where inferred

H – BATHYMETRIC HIGH

L – BATHYMETRIC LOW

SURVEYS

1981 M.T.S.

1980 Fugro (R/V Discoverer)

1976 U.S.G.S. (R/V S.P. Lee)

1976 Petty Ray Geophysical

LOCATION DIAGRAM

SOURCE OF SHORELINE FROM BUREAU OF LAND MANAGEMENT PROTRACTION DIAGRAMS NN 3-2, NO 4-1, AND NO 4-7, PUBLISHED IN 1976.

SCALE 1:250,000

50 STATUTE MILES
50 KILOMETERS
50 NAUTICAL MILES

BATHYMETRIC CONTOUR INTERVAL 5 METERS (SOLEX C.), 10 METERS

MAP PROJECTION WITH CLARKE 1866 SPHEROID, FORCED 3 ARC M.

BATHYMETRIC MAP OF NORTH ALEUTIAN SHELF, BERING SEA, ALASKA

PETER J. HOOSE AND LYNN D. LYBECK

1984