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MULTICHANNEL SEISMIC-REFLECTION DATA COLLECTED IN 1980 IN THE EASTERN CHUKCHI SEA

by

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The U.S. Geological Survey (USGS) collected approximately 2,652 km of 24-channel seismic-reflection data in early September, 1980, over the continental shelf in the eastern Chukchi Sea (Fig. 1). The profiles were collected on the USGS Research Vessel S.P. Lee. The seismic energy source consisted of a tuned array of five airguns with a total volume of 1213 cubic inches of air compressed to approximately 1900 psi. The recording system consisted of a 24-channel, 2400 meter long streamer with a group interval of 100 m, and a GUS (Global Universal Science) model 4200 digital recording instrument. Shots were fired every 50 meters. Navigational control for the survey was provided by a Magnavox integrated navigation system using transit satellites and doppler-sonar augmented by Loran C (Rho-Rho). A 2-millisecond sampling rate was used in the field; the data were later desampled to 4-milliseconds during the demultiplexing process. 8 seconds data length was recorded. Processing was done at the USGS Pacific Marine Geology Multichannel Processing Center in Menlo Park, California, in the sequence: editing-demultiplexing, velocity analysis, CDP stacking, deconvolution-filtering, and plotting on an electrostatic plotter. Plate 1 is a trackline chart showing shotpoint navigation.

The data are available in the following formats:

1) Electrostatically plotted profiles which have been deconvolved and filtered after stacking. Copies of the profiles may be purchased through:

   National Geophysical Data Center
   NOAA/EDIS/Code D64
   325 Broadway
   Boulder, Colorado 80302

2) Digital magnetic stack tapes which have been processed using velocities derived from velocity analysis. These tapes are not deconvolved or band-pass filtered. Stack tapes are in Phoenix format; a Seismograph Service Corp., 16-bit integer trace sequential format. Copies of the stack tapes and a description of the tape format can be obtained at the requesters expense by contacting:

   Dennis M. Mann
   Pacific Branch of Marine Geology
   U.S. Geological Survey
   345 Middlefield Rd. MS 979
   Menlo Park, California 94025

3) Digital magnetic demultiplexed tapes. These tapes have been editted for missed shots, blanking times, and muting times. Demultiplexed tapes are in Phoenix-I format; a modified S.E.G.-X 32-bit floating point format. Copies of the demultiplexed tapes and a description of the tape formats can be obtained at the requesters expense by contacting Dennis Mann at the above address.

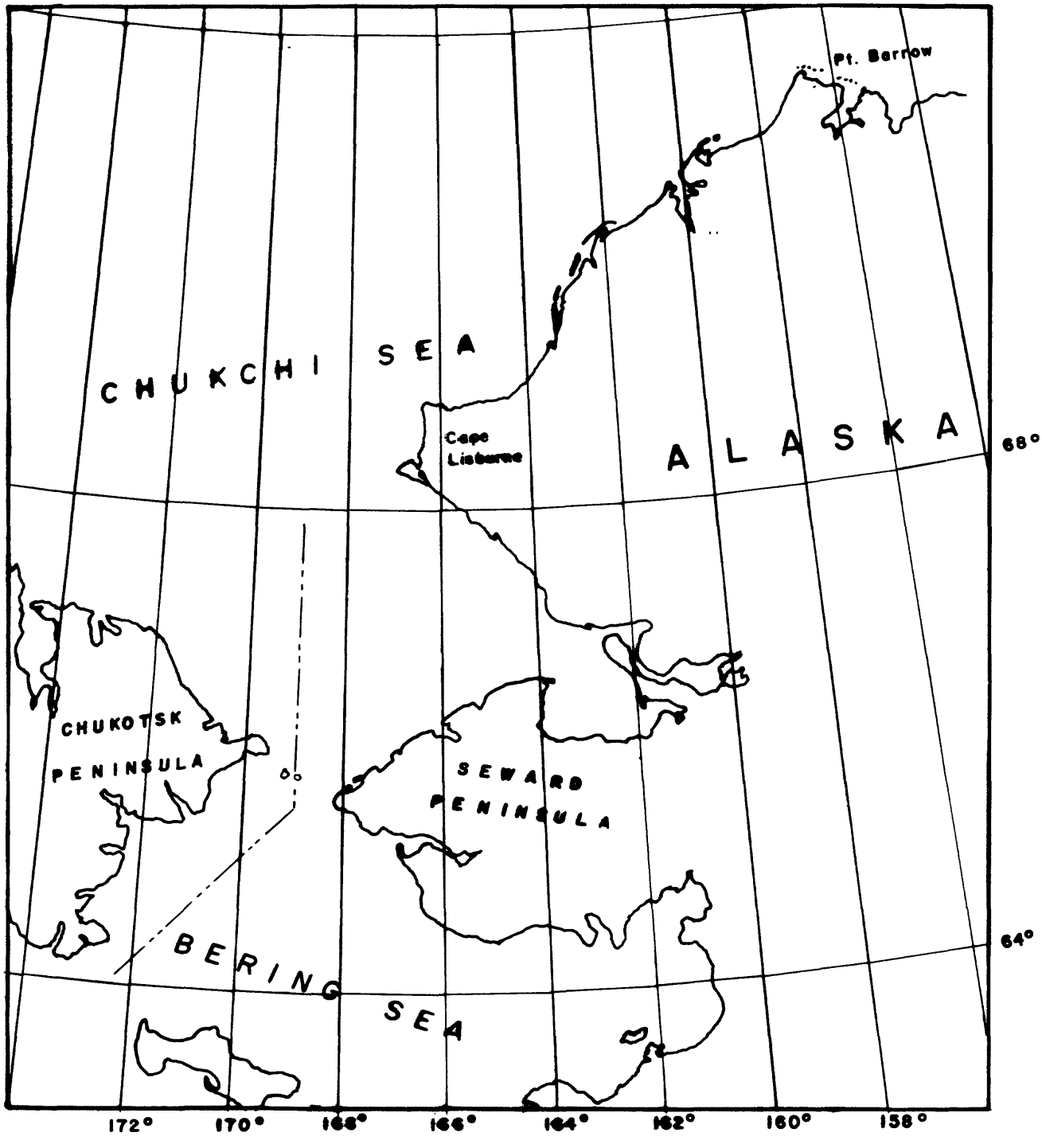

FIGURE 1. AREA OF STUDY. PLATE 1 SHOWS DETAILED LOCATION OF TRACKLINES AND SHOTPOINTS