MULTICHANNEL SEISMIC-REFLECTION PROFILES COLLECTED IN 1977 IN THE WESTERN GULF OF ALASKA

by

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During the summer of 1977 the U.S. Geological Survey (USGS) collected approximately 2382 km. of 24-channel seismic-reflection data in the western Gulf of Alaska (fig. 1). The profiles were collected on the USGS Research Vessel S.P. Lee using a sound source of five aurguns with a volume of 1326 cubic inches of air compressed to approximately 1900 psi. The recording system consisted of a 24-group streamer, 2400 meters long and a GUS (Global Universal Science) model 4200 recording instrument. Shots were fired every 50 meters and the group interval was 100 meters. A 2-millisecond sampling rate was used in the field; the data were later desampled to 4-milliseconds during the demultiplexing process. Navigational control for the survey was by a Marconi integrated satellite-doppler sonar navigation sytem. Record lengths vary from 7 to 13 seconds, depending on water depth in order to obtain 6 to 7 seconds below the seafloor. Processing was done at the USGS Marine Geology Multichannel Seismic Processing Center in Menlo Park, California in the sequence: editing-demultiplexing, velocity analysis, stacking, deconvolution-filtering, and finally displayed on an electrostatic plotter. Plate 1 is a trackline chart showing shotpoint navigation.

The data are available in 3 formats:

1) Electrostatically plotted profiles which have been deconvolved and filtered after stacking. Copies of the profiles may be purchased through:
National Geophysical and Solar Terrestrial Data Center
National Oceanic and Atmospheric Administration
Boulder, Colorado 80302

2) Digital magnetic stack tapes which have been processed using velocities derived from velocity analysis. These tapes are not deconvolved or frequency filtered. Copies of the stack tapes and a description of the tape format can be obtained at the requesters expense by contacting:
Data Curator
Pacific Branch of Marine Geology
U.S. Geological Survey
345 Middlefield Rd.
Menlo Park, California 94025

3) Digital magnetic demultiplexed tapes. These tapes have been edited for missed shots, blanking time, and muting times. Copies of the demultiplexed tapes and a description of the tape formats can be obtained at the requesters expense by contacting the above address.
FIGURE 1. AREA OF STUDY. PLATE I SHOWS DETAILED LOCATION OF TRACKLINES AND SHOTPOINTS.