MULTICHANNEL SEISMIC-REFLECTION PROFILES COLLECTED IN 1979, BETWEEN LATITUDES 34° 15' AND 36° 30' NORTH, OFF THE CALIFORNIA COAST FROM PT. CONCEPTION TO POINT SUR

by

D. S. MCCULLOCH, D. M. MANN, R. SLITER AND P. H. MCCLELLAN

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During the fall of 1979 the U.S. Geological Survey (USGS) collected approximately 680 km of 24-channel seismic-reflection data across the continental margin in the eastern Pacific Ocean off of the California coast north of Point Conception (Plate 1). The data were collected on the USGS Research Vessel S. P. Lee (cruise identifier L5-79-NC) using a sound source of five airguns totalling 1,326 cubic inches at a manifold pressure of approximately 1900 psi. The recording system consisted of a 24-group streamer, 2400 meters long, and a GUS (Global Universal Science) model 4200 digital recording instrument. Records were sampled in the field at a 2-millisecond rate and later processed at a 4-millisecond rate. Navigational control for the survey was by satellite fixes augmented by Loran C (Rho-Rho) and doppler-sonar bottom-track navigation. Detailed navigation data were not recorded digitally at sea, so shot locations were later reconstructed from the seismic system operator's log. Plate 1 is a track-line chart showing shotpoint navigation.

The seismic reflection records vary in length from 8 to 12 seconds depending on water depth and geologic structure. The data have been edited, NMO-corrected, stacked, deconvolved, and filtered, and finally graphically displayed by an electrostatic plotter (Table 1). Processing was carried out at the USGS Marine Geology Seismic Processing Center in Menlo Park, California.

The data are available in three formats:

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

National Geophysical Data Center
National Oceanic and Atmospheric Administration
Boulder, Colorado 80302

2. Digital magnetic stack tapes. Copies of the stack tapes and a description of the tape format can be obtained at the requester's expense by contacting:

Data Curator
Branch of Pacific Marine Geology
U.S. Geological Survey, MS 999
345 Middlefield Road
Menlo Park, California 94025
3. Digital magnetic demultiplexed tapes. Copies of the demultiplexed tapes and a description of the tape format can be obtained at the requester's expense by contacting the USGS at the above address.
Table 1. Recording parameters, processing sequence and plot parameters for stacked multichannel seismic-reflection data collected on USGS cruise L5-79-NC.