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MULTICHANNEL SEISMIC-REFLECTION PROFILES COLLECTED  
IN 1978 IN THE EASTERN GULF OF ALASKA

by

TERRY R. BRUNS, DENNIS M. MANN, and RAY W. SLITER

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During the summer of 1978 the U.S. Geological Survey (USGS) collected 2108 km of 24-channel seismic-reflection data in the eastern Gulf of Alaska (Fig. 1). The profiles were collected on the USGS Research Vessel S.P. Lee, (USGS survey identifier L3-78-EG).

Seismic energy was provided by a tuned array of five airguns with a total volume of 1326 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. A shooting geometry of 50-m shotpoint intervals with 100-m group intervals resulted in 24-fold data collection. Navigational control for the survey was provided by a Marconi integrated navigation system using transit satellites and doppler-sonar augmented by Loran C (Rho-Rho). The seismic-reflection data were recorded with a 2-millisecond sampling rate; the data were later desampled to 4-milliseconds during the demultiplexing process. Data were recorded for 6 seconds subbottom time, which combined with a deep water delay, yielded a total of up to 11 seconds of two way travel time. Processing was done at the USGS Pacific Marine Geology Multichannel Processing Center in Menlo Park, California. The processing sequence was: editing-demultiplexing, velocity analysis, CDP stacking, deconvolution-filtering, and plotting on an electrostatic plotter. Plate 1 is a trackline chart showing shotpoint navigation.

Interpretations of these data are shown in Bruns (1983a,b; 1985);

Bruns and Carlson (in press) and Bruns and Schwab (1983). Other multichannel seismic data sets in the northern and eastern Gulf of Alaska are discussed by Bruns and Bayer (1977) and Mann and Bruns (1984).

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 edited for missed shots, blanking times, and muting times. Demultiplexed tapes are in Phoenix-I format; a Seismograph Service Corp. 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.

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