High Resolution Seismic Profiles Adjacent to Whidbey and Fidalgo Islands, Washington

by

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Approximately 120 km of high-resolution seismic reflection profiles were recorded in the environs of Whidbey and Fidalgo Islands, Washington from the U.S. Geological Survey's research vessel DON J. MILLER on January 14 and 15, 1976. These data were obtained to provide information on the thickness and distribution of Quaternary deposits to identify structures that deform them and to provide a basis for assessing geological environmental hazards.

Tracklines shown on the accompanying map were located by a combination of precision transponder navigation system and ship's radar with variable range marker. The tracklines are dashed where the ship circled due to equipment failures.

The source of seismic energy used was a 400 Joule double-back Uniboom system with recorder sweep rate of 1/4-second and a 1/4-second firing rate. Filter settings for lines B and B-1 were 6000 Hz (high) and 200 Hz (low); lines C and C-1 were 6000 Hz and 300 Hz; and lines D and D-1 were 3000 Hz and 300 Hz. Ship's speed averaged about 5 knots.

The superior seamanship of Captain Robert D. Stacey and his crew contributed substantially to the success of the cruise.