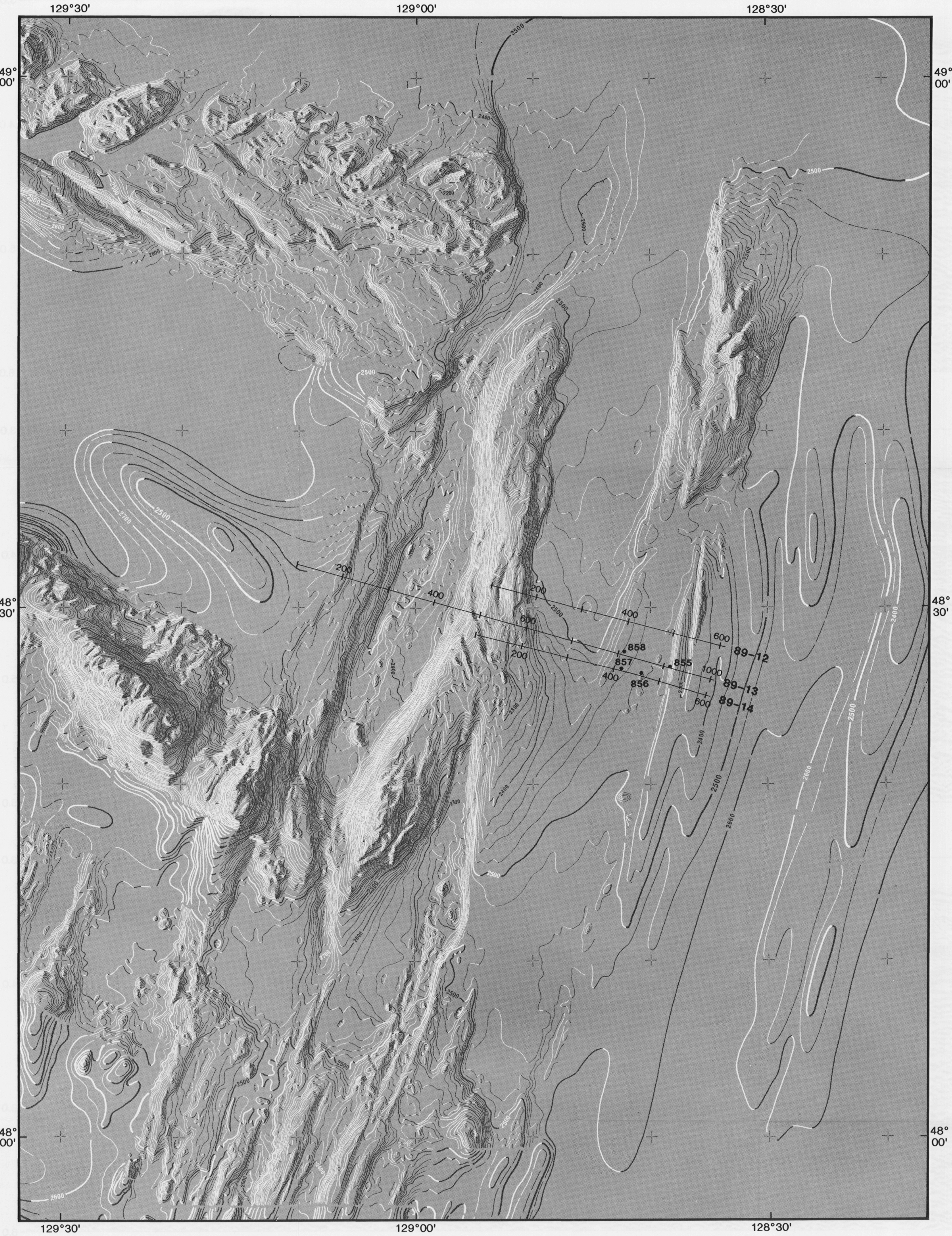


Bathymetry of the northern Juan de Fuca Ridge, including the northern part of the Endeavour Ridge segment (intersecting the lower edge of the map at 129°5'W) and the West Valley and Middle Valley rifts. Bathymetric contours over most of the area are derived from SeaBeam swath soundings (National Oceanographic and Atmospheric Administration) and are shown at 20-m intervals. Depths were computed assuming a sound velocity of 1500 m/s. Relief is simulated by "illuminating" the contours from the west. Drilling sites occupied in Middle Valley during Leg 139 are indicated, as are the tracklines for the multichannel seismic reflection profiles shown on the reverse side of this foldout.



Side-scan acoustic image mosaic of the same area of the northern Juan de Fuca Ridge as is shown in the bathymetric map. The acoustic images were acquired with a 12-kHz SeaMARC II mapping system (Hawaii Institute of Geophysics), and contain information about the local roughness and slope of the seafloor. Rough surfaces such as those of thinly sedimented or unsedimented basalt flows cause strong acoustic backscatter and appear dark, as do specular reflections from the steep topography of fault scarps that face the instrument. Smooth sedimented seafloor and acoustic shadows appear light. Both this mosaic and the bathymetric map are reprinted from Geological Survey of Canada Maps 6-1987 and 14-1987. A summary of the tectonics of the area can be found in Davis and Villinger (this volume).





Migrated multichannel seismic reflection profiles crossing Middle Valley and the drilling sites occupied during Leg 139. The locations of tracklines are shown on the maps on the reverse side of this foldout. Profiles are reprinted from Geological Survey of Canada Open File 2476 (Rohr et al., 1992), where a full description of the acquisition and processing parameters appears.

