Silver Falls State Park is near the southern extent of the Columbia River Basalt Group as mapped in western Oregon. The flows in the park were identified as belonging to subdivisions of the Columbia River Basalt Group on the basis of physical characteristics and trace element geochemistry. The sequence of flows present is as follows: 3-4 flows of the Low-Mg chemical type of the Grande Ronde Basalt, 2 flows of the High-Mg chemical type of the Grande Ronde Basalt, 3 flows of the Frenchman Springs Member of the Wanapum Basalt, and one flow of anomolous geochemistry. The flows dip west to
southwest two to three degrees on the limb of an open anticline. Two related trends are represented in the jointing pattern of the flows, N 20 W and N 70 E. A paleostream appearing to follow one of these trends eroded 90 m into the Low-Mg and High-Mg flows before its valley was obscured by the incursion of a Frenchman Springs flow. The possibility arises that this stream drainage may provide access to the coast via the coast range for the Frenchman Springs basalts.