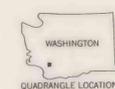
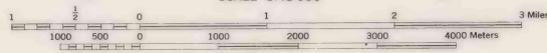


Base by U. S. Geological Survey, 1957

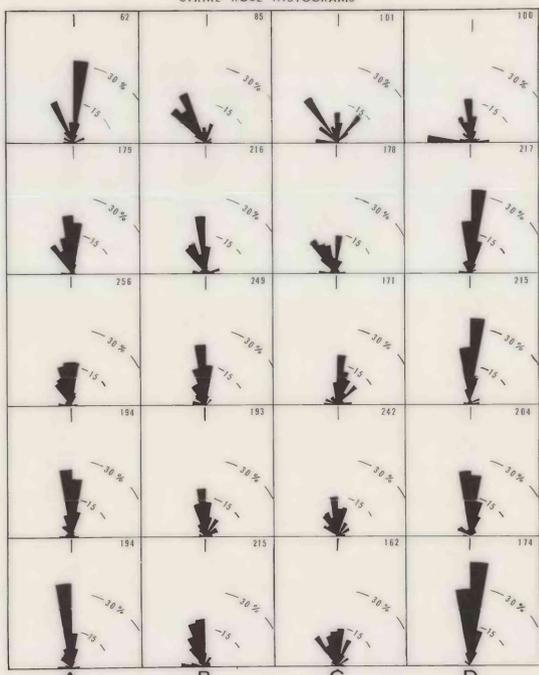


This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

SPIRIT LAKE, WASH.
N4619-W12200/15



STRIKE-ROSE HISTOGRAMS



TEXT

A large number of photo lineaments occur in the Spirit Lake quadrangle. They consist of alignments of trees that stand 3-10 meters above the average tree height. In the logged off areas the lineaments consist of alignments of shrubs and new growth. Three major groupings of lineaments are present (see strike-rose histograms); $N5\pm 10^\circ$, $N. 55^\circ E.$, and $N. 25^\circ W.$ Some, but not all, of the lineaments may be artifacts of sun angle and shadows because many lineaments observed on high altitude September 1975 photos are present on the low altitude July 1952 photos taken at a different time of day. Ground checking of the northeastern quarter of the quadrangle in 1977 failed to match many faults and dikes with the lineaments. This was only in part due to coverage of 70-85 percent of the bedrock by tephra deposits from Mount St. Helens because where lineaments crossed exposed bedrock, even at localities where streams were offset, few were found to coincide with dikes or faults. However, a fair correspondence was found between the number and orientation of joints and the number and orientation of photo lineaments, and there is a suggestion of a concentric pattern of photo lineaments around the outer margins of the multiphase Miocene pluton of 7 km radius, centered approximately on Deadman's Lake near the center of the quadrangle. The strike-rose histograms were constructed by measuring the orientation of the photo lineaments in increments of 500 meters (one unit).

MAPS OF PHOTO LINEAMENTS AND GEOMORPHIC FEATURES IN THE SPIRIT LAKE QUADRANGLE, WASHINGTON
A. PHOTO LINEAMENTS

BY Norman G. Banks, Charles A. Bennett, and Jeanine M. Schmidt