

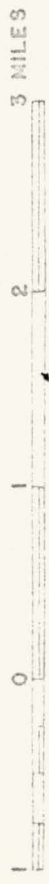
Abstract

The Sprague River drainage basin was possibly the scene of volcanic activity throughout the greater part of the Cenozoic era. The geology of the lower Sprague River area indicates that active volcanism existed there in Pliocene & Pleistocene time.

In the Pliocene epoch several hundred feet of lake deposit accumulated in a basin formed of probably Miocene and early Pliocene extensive rocks. The lake beds were, in turn, buried later in the Pliocene by as much as 1000 feet of basic lava. These basalts were extruded either from low-shield volcanoes or from fissures. During the latter part of the Pliocene and in early Pleistocene time the area was fractured by a series of normal faults that strike northwest. The faults divided the country into a number of eastward tilting blocks. Early in the Pleistocene perhaps before the faulting had ceased, a number of volcanic cones developed along the fault lines. Most of these were cinder cones but a few became composite volcanoes. The latter erupted basalt and andesite throughout the Pleistocene. Pumice from the last eruption of Mt. Mezzan covers the northern half of the area.

The potential mineral resources of the region are pumice, diatomite, ~~and~~ groundwater, and titaniferous magnetite. None of these are being developed at this time.

SCALE 62,500



CONTOUR INTERVAL 100 FEET

1953

APPLEGATE BUTTE

A' 7000'  
6000'  
5000'  
4000'  
3000'

QTb

QTb

B'

B'' 7000'  
6000'  
5000'  
4000'  
3000'

QTb

Qal

Qal

Qtp

Qal

Ts

SPRAGUE RIVER  
WATCH DOG BUTTE

GENERALIZED STRUCTURAL SECTIONS