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 Oligocene-Pliocene time.

In the Oligocene epoch several hundreds feet of lake deposit accumulated in a basin formed probably by minor and early Pliocene eruption rocks. The lake beds were, in turn, buried later in the Pliocene by as much as 1000 feet of basic lava. These basalt flows extended either from low shields 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 eroded basalt and andesite throughout the Pleistocene. Furnace from the last eruption of Mt. Mazama covers the northern half of the area.

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