



Modoc Plateau Geomorphic Province



The **Modoc Plateau** is a volcanic tableland with elevations ranging between 4,000 and 6,000 feet above sea level. Most of the volcanic rocks erupted as extensive fluid lava flows during the Tertiary period, between 10 and 2 million years ago. The Modoc plateau eruptive centers consist of fissures and many small cones. Eruptions were nowhere near as explosive as the Cascade volcanoes. Instead, the volcanic products consist of a thick accumulation of lava flows and tuff/ash beds that have built the plateau. Many northerly-trending faults cut across the plateau, breaking it up into tilt-block mountains.

Tectonic Setting

This style of volcanism occurs in regions experiencing crustal thinning and extension such as in the Basin and Range geomorphic province to the east. The region consists of 1) Tertiary and Pleistocene basalt lava flows with more recent flows at the edge of the Cascade Range geomorphic province, and 2) closely spaced, northerly-trending faults characteristic of the Basin and Range province. The Modoc Plateau geomorphic province can be thought of as a broad boundary zone between the Cascade and Basin and Range provinces.



GeoGem

Ahjumawi Lava Springs State Park occupies one of those enigmatic geomorphic addresses that share characteristics with multiple geomorphic provinces—the Cascade Range, Basin and Range, and the Modoc Plateau. The interplay of water and rock combine to create a unique geologic/hydrologic environment at Ahjumawi Lava Springs State Park. Rain and snow that fall on the Medicine Lake Volcano to the north of the park sink into the fractured volcanic rock, resulting in a hard-edged, dry volcanic landscape mostly devoid of surface streams. The park preserves the refreshing linkage between the atmosphere above and the earth below as the groundwater that has percolated down from the Medicine Lake Volcano emerges as springs, marshes and lakes.

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Simplified Geologic Map | Modoc Plateau Geomorphic Province



