



## GEOLOGY - From Review of Unique Qualities at Saddle Mountain by Tonopah Area Coalition; 2000.

Geology is the basic tenant underlying Saddle Mountain; a distinctive landform located 50 miles due west of downtown Phoenix, Arizona.

Saddle Mountain's distinctive size and shape make it the predominant landform on the horizon west of the White Tank Mountains. The regions geologic corner stone, Saddle Mountain divides the Tonopah Desert on the east, from the Harquahala Valley on the west. The mountain's multifaceted outline is visible from all directions.

Today, west-bound travelers on Interstate 10 see the mountain as one large Monument Valley like form. But travelers during the early automobile area - on historic Salome Road - would have easily noticed the low gap between the *two* mountain masses which gave the impression of a saddle.

First labeled as "Cliffs" in the 1913 Arizona Road Map & Tour Book by 1917 Saddle Mountain was affixed to the location on the Maricopa Country Engineer's Map. But regardless of today's name, the mountain has been a clearly visible waypoint for travelers within the western deserts of Arizona for many thousands of years.

Saddle Mountain is located in the Sonoran Desert subdivision of the Basin and Range physiographic and tectonic province which in this region has undergone moderate to severe Tertiary extension and magmatism (Ort & Skotnicki 1993).

A striking volcanic upthrust only a hour's drive from metropolitan Phoenix, Saddle Mountain is a familiar landmark to travelers in the area (Upper Sonoran EIS 1989). Saddle Mountain shares a common volcanic origin with neighboring ranges, but because it is separated from the other ranges, the mountain is a natural volcanic island.

***“The volcanic upthrust of the mountain has a highly visual and educational example of geologic forces”***

Upper Sonoran WSA, RMP-EIS Bureau of Land Management 1989.

Saddle Mountain is a showcase for basalt and basaltic andesite lava flows along with cinder cones representing volcanic vents in the lower part of the sequence and ash-flow and fallout tuffs with monolithologic breccia and andesite flows in the upper part of the sequence (Ort, Skotnicki 1993).

Today the mountain's 1,500-foot high cliffs and towering spires are the visible remains of a major volcanic vent which appears to have been just west of the mountain summit; with Saddle Mountain itself consisting of the lava flows and associated breccia's that were associated with the vent.

Easy accessibility to the mountain's north side provides even a casual visitor with views of this geologic history where flows and fallout tuffs are displayed like pages in a textbook. The mountain demonstrates the region's volcanic history with a dramatic form. At Saddle Mountain, anyone can easily view rock formations that are representative of a large part of the mid-Tertiary volcanic geology of western Arizona (Upper Sonoran Wilderness EIS). Cliff, spires, and buttes tinted by andesite, rhyolite, and basalt result in magnificent scenery.

Another result of Saddle Mountain's complex volcanic period was 'baskets' of colorful minerals scattered across the northern skirt of the mountain (Mitchell 1988). Easy accessibility on the mountain's north side, has made the area popular for picnics, rock hunters, and car camping. However, its popularity with rock hunters has diminished in recent years as the once plentiful fire agate, calcite, and chalcedony "desert roses" have become scarce. The increasing popularity of Saddle Mountain has shown the need for protection to protect this scenic area.

Recent research shows that the geology interpretive values of Saddle Mountains must be expanded to include cultural relationships. Examples are the water collecting volcanic rocks that stored water (tinajas) in these arid environments. Water was an element critical for wildlife and the subsistence economies of prehistoric peoples who utilized Saddle Mountain (D.B. Craig 1995).

Even today's culture of outdoor recreation is well served by the area's geology. Qualified as "outstanding" for scenic qualities in the Wilderness Study EIS, Saddle Mountain rewards visitors with varied opportunities for picnics, day hikes, photography, plus cultural and geologic sight-seeing. Cliff's facet the mountains like a gem stone while its flanks are back-cut by erosion that created a dozen canyons. These features account for the great scenic variety offered at Saddle Mountain which is contrasted by the nearby Palo Verde Hills.

Many types of volcanic rock give the area interpretive values for geology. The dramatic geology provides excellent scenic qualities that are photogenic and educational (Upper Sonoran EIS, 1989). The four decades of day hikes are recorded in the log at the top of 3,037-foot peak of Saddle Mountain.

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Bureau of Land Management 1989. Upper Sonoran WSA, Resource Management Plan - EIS.

Craig, D.B., 1995. Archaeological Investigations at the Saddle Mountain site. Northland Research, Inc., Report 95-4.

Ort, M.H., Skotnicki, S., 1993. Geologic Map of Saddle Mountain, Open File Report 93-6. Arizona Geological Survey, Tucson.