



Earthquake Hazards Program

Database Search

Complete Report for Mine Mountain fault (Class A) No. 1066

[Brief Report](#) || [Partial Report](#)

citation for this record: Anderson, R.Ernest, compiler, 1998, Fault number 1066, Mine Mountain fault, in Quaternary fault and fold database of the United States: U.S.

Geological Survey website, <http://earthquakes.usgs.gov/regional/qfaults>, accessed 01/29/2010 12:54 PM.

Synopsis The Mine Mountain fault is one of several northeast-striking faults with known or suspected normal-sinistral displacement in and near the southern part of the Nevada Test Site. The total fault length as indicated by its buried or bedrock traces is as much as 20 km. However, the part of this fault with known Quaternary displacement appears to be restricted to 3-km-long trace of the fault to the west of Mid Valley.

Name comments Name applied by Carr (1984 #1472) to a northeast-striking fault or fault zone that passes through Mid Valley between Yucca Flat on the northeast and Jackass Flats on the southwest. Mine Mountain is the low series of hills located to the northeast of Mid Valley, along the northeast projection of the older, longer fault trace..Name applied by Carr (1984 #1472) to a northeast-striking fault or fault zone that passes through Mid Valley between Yucca Flat on the northeast and Jackass Flats on the southwest. Mine Mountain is the low series of hills located to the northeast of Mid Valley, along the northeast projection of the older, longer fault trace.

Fault ID Comments:

Referred to as fault DV4 dePolo (1998 #2845).

County(s) and State(s) NYE COUNTY COUNTY, NEVADA

State(s)

AMS sheet(s) [Death Valley](#)

Physiographic province(s) BASIN AND RANGE

Reliability of location

Poor

Compiled at 1:100,000 scale.

Comments: There is much diversity in the trace of the Mine Mountain fault as depicted in published maps and illustrations (Ekren and Sargent, 1965 #1509; Orkild, 1968 #1506; Cornwall, 1972 #1482; Carr, 1974 #1469; Barnes and others, 1982 #1441; Carr, 1984 #1472). Geologic maps (Ekren and Sargent, 1965 #1509; Orkild, 1968 #1506; Cornwall, 1972 #1482; Frizzell and Shulters, 1990 #1037) show the fault in pre-Quaternary strata, but buried in areas of Quaternary deposits. The total fault length as indicated by its buried or bedrock traces is as much as 20 km. However, the part of this fault with known Quaternary displacement appears to be restricted to as little as the 3 km trace along the southeastern flank of Shoshone Mountain (Reheis and Noller, 1991 #1195). That is the part shown in the present compilation. The reliability of that location is good, having been mapped at scale of 1:100,000 from aerial photos at 1:60,000 scale.

Geologic setting The Mine Mountain fault is one of four main faults that are part of the 30- to-60-km-wide Spotted Range-Mine Mountain structural zone (SRMM), which is characterized by northeast-striking, left-lateral faults that have relatively small amounts of displacement (p. 9 in Carr, 1974 #1470; p. 56 in Carr, 1984 #1472). The other three faults in the SRMM are the Cane Spring fault [1067], the Rock Valley fault [1065], and the Wahmonie fault [1068]. These faults have been interpreted to be "first-order structures that form a conjugate system with the northwest-striking, right-lateral faults of the Las Vegas Valley shear zone" (Barnes and others, 1982 #1441).

Length (km) 3 km.

Average strike N40°E

Sense of movement Normal

movement

Comments: Shown as a normal fault (Frizzell and Shulters, 1990 #1037), a sinistral normal fault (Reheis and Noller, 1991 #1195), and characterized as a sinistral fault (Carr, 1984 #1472). Displacement inferred to be oblique by Piety (1995 #915). Normal/sinistral sense reported herein is based on field studies reported in a summary of northeast-trending faults of the Spotted Range-Mine Mountain structural zone (TRW Environmental Safety Systems Inc., 1998 #3907). No exposures of the Mine Mountain fault were found, so its displacement sense is uncertain.