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Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the interactive fault map.

unnamed fault near High Rock Canyon (Class A) No. 1482

Last Review Date: 1998-07-19

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1482, unnamed fault near High Rock Canyon, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, https://earthquakes.usgs.gov/hazards/qfaults, accessed 12/14/2020 02:50 PM.**

Synopsis	These faults are part of a distributed group, which is wider than it is long, of parallel intra-plateau faults that extend north-northwest across a Tertiary volcanic plateau in the High Rock Canyon area west of Black Buttes, east of Grassy Rock, and south of Yellow Hills. Most of the faults in this zone displace Tertiary volcanic and sedimentary rocks and are not shown here. Quaternary movement is suspected on the two faults included here, based on their expression as prominent topographic escarpments. Reconnaissance photogeologic of the fault zone and detailed geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been conducted.
Name	Refers to faults mapped by Ach (1988 #3000) and Dohrenwend

comments	and Moring (1991 #281) in the High Rock Canyon area west of Black Buttes, east of Grassy Rock, and south of Yellow Hills.
County(s) and State(s)	WASHOE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations along and west of High Rock Canyon are based on 1:24,000-scale geologic map of Ach (1988 #3000) and elsewhere in the zone locations are based on 1:250,000-scale map of Dohrenwend and Moring (1991 #281); mapping by photogeologic analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle maps enlarged to scale of the photographs and then reduced and transferred to 1:250,000-scale topographic maps.
Geologic setting	These faults are part of a distributed group, which is wider than it is long, of parallel intra-plateau faults extends north-northwest across a Tertiary volcanic plateau in the High Rock Canyon area west of Black Buttes, east of Grassy Rock, and south of Yellow Hills.
Length (km)	6 km.
Average strike	N21°W
Sense of movement	Normal *Comments:* Shown as normal faults by Ach (1988 #3000).
Dip Direction	E
Paleoseismology studies	
Geomorphic expression	These faults are expressed as prominent topographic escarpments, aligned hillside benches, and possibly influence the pattern of the local fault-parallel drainage system (Dohrenwend and Moring, 1991 #281), suggesting but not proving that they may have had young movement.
Age of faulted	Tertiary. These faults only displace Tertiary volcanic and

surficial deposits	sedimentary rocks (Ach, 1988 #3000; Dohrenwend and Moring, 1991 #281).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent event is not well constrained, a Quaternary time is suspected for based on reconnaissance photogeologic mapping by Dohrenwend and Moring (1991 #281).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region and height of topographic escarpments on resistant Tertiary volcanic rocks.
Date and Compiler(s)	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#3000 Ach, J.A., 1988, Geologic map of the Yellow Hills quadrangle, Washoe County, Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-2028, scale 1:24,000. #281 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Vya 1° by 2° quadrangle, Nevada, Oregon, and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2174, 1 sheet, scale 1:250,000.