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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 zone in the Hays Canyon Range (Class A) No. 1465

Last Review Date: 1998-07-19

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1465, unnamed fault zone in the Hays Canyon Range, 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 02:05 PM.**

Synopsis	These faults are part of a distributed group of short intra-plateau normal faults in the Hays Canyon Range. Most of the faults in this area displace only Tertiary basalt and sedimentary rocks (and are thus not included); they may be related to faults of similar orientation in fault zone 1470. The north-striking faults shown here bound a graben in the Table Lakes area northeast of Little Hat Mountain, and young movement is suspected based on their prominent topographic expression, possible scarps on piedmont-slope deposits in the Table Lakes area, and closed depressions along and near the graben-bounding faults. Reconnaissance photogeologic mapping of the fault zone and regional geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been conducted.

Name comments	Refers to faults mapped by Slemmons (1966, unpublished Vya 1? X 2? sheet), Bonham (1969 #2999) and Dohrenwend and Moring (1991 #281) in the Hays Canyon Range from Fortynine Mountain south to Little Hat Mountain.
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 *Comments:* Location based on 1:250,000-scale maps of Dohrenwend and Moring (1991 #281) and Slemmons (1966, unpublished Vya 1? X 2? sheet); mapping by Dohrenwend and Moring (1991 #281) is from 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. Mapping by Slemmons (1966, unpublished Vya 1? X 2? sheet) is from analysis of 1:60,000-scale AMS photography transferred to mylar overlaid onto a 1:250,000-scale topographic map using proportional dividers. A few selected fault locations are based on 1:250,000-scale geologic map of Bonham (1969 #2999).
Geologic setting	This north-striking graben is part of a distributed zone of short intra-plateau faults in the Hays Canyon Range (Slemmons, 1966, unpublished Vya 1? X 2? sheet; Bonham, 1969 #2999; Dohrenwend and Moring, 1991 #281). Total displacement is probably small based on topographic relief.
Length (km)	9 km.
Average strike	N2°E
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement is inferred from topography (Slemmons, 1966, unpublished Vya 1? X 2? sheet).
Dip Direction	E; W
Paleoseismology	

studies	
Geomorphic expression	Quaternary movement is based on possible scarps on late Quaternary piedmont-slope deposits in the Table Lakes area, and the presence of closed depressions along and near the graben-bounding faults (Slemmons, 966, unpublished Vya 1? X 2? sheet; Bonham, 1969 #2999; Dohrenwend and Moring, 1991 #281).
Age of faulted surficial deposits	Late Quaternary; Tertiary. The faults shown here in the Table Lakes area apparently displace late Quaternary piedmont-slope deposits (Slemmons, 1966, unpublished Vya 1? X 2? sheet).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The timing of most recent event is not well constrained and the two map sources differ greatly. Slemmons (1966, unpublished Vya 1? X 2? sheet) suggests a late Quaternary age. However, Dohrenwend and Moring (1991 #281) only indicates that the fault is in Tertiary bedrock. The assigned age category is the most conservative option based on the sole published source.
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 from height of topographic escarpments (up to 250 m) on Tertiary basalt.
Date and Compiler(s)	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2999 Bonham, H.F., 1969, Geology and mineral deposits of Washoe and Storey Counties, Nevada: Nevada Bureau of Mines and Geology Bulletin 70, 140 p., 1 pl., scale 1:250,000. #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.