

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 faults near Hog Ranch Creek (Class A) No. 1483

Last Review Date: 1998-07-19

citation for this record: Sawyer, T.L., compiler, 1998, Fault number 1483, unnamed faults near Hog Ranch Creek, 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

The faults shown here are part of a distributed group of north- to northwest-striking (mainly Class C faults) that bound the east front of the northern Granite Range near Leadville and the west side of Butte Spring Hills. The group of probably older faults includes right-stepping northwest-striking faults that extend across the Tertiary volcanic plateau north of the Granite Range and along the east and northeast slopes of Mahogany Mountain to High Rock Canyon, south of Yellow Rock Canyon. Faults in this broad zone may be related to an adjacent fault zone [1484]. Only one fault, which is at the range front near Leadville, appears to be expressed by a short scarp on piedmont-slope deposits. However, the fault bounding the west side of Butte Spring Hills and two faults near Mahogany Creek are also considered Class A structures since they juxtapose Quaternary piedmont-slope deposits and Tertiary volcanic and sedimentary rocks. The Class

	<p>C faults in the zone only offset Tertiary rocks. Even though they are expressed by prominent topographic lineaments and are spatially associated with fault having Quaternary movement, possibly indicating young movement; these faults are not included herein due to their unproven age. Reconnaissance photogeologic of the fault zone and detailed and regional geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been conducted.</p>
Name comments	<p>Refers to some of the faults mapped by Bonham (1969 #2999), Ach and others (1991 #281), and Dohrenwend and Moring (1991 #281) from east front of northern Granite Range near Leadville, northward along west side of Butte Spring Hills, across canyons of Little High Rock Creek and Mahogany Creek and eastern slopes of Mahogany Mountain, to High Rock Canyon south of Yellow Rock Canyon.</p>
County(s) and State(s)	<p>WASHOE COUNTY, NEVADA</p>
Physiographic province(s)	<p>BASIN AND RANGE</p>
Reliability of location	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Fault locations are chiefly 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. Fault locations west of High Rock Lake area are based on 1:24,000-scale geologic map of Ach and others (1991 #281).</p>
Geologic setting	<p>The faults shown here are part of a distributed group of north- to northwest-striking faults bound the east front of the northern Granite Range near Leadville and the west side of Butte Spring Hills, and include right-stepping northwest-striking faults that extend across the Tertiary volcanic plateau north of the range and along the east and northeast slopes of Mahogany Mountain to High Rock Canyon south of Yellow Rock Canyon. Faults in this group may be related to those of fault 1484.</p>

Length (km)	30 km.
Average strike	N8°W
Sense of movement	Normal <i>Comments:</i> Maps show normal sense of movement (Dohrenwend and Moring, 1991 #281; Ach and others, 1991 #3001).
Dip Direction	W; E
Paleoseismology studies	
Geomorphic expression	Only one fault at the range front near Leadville appears to be expressed by a short scarp on piedmont-slope deposits. Other Class A faults bound the west side of Butte Spring Hills and near Mahogany Creek juxtapose Quaternary piedmont-slope deposits and Tertiary volcanic and sedimentary rocks; the fault at Butte Spring Hills also may bound a small closed depression. However, most faults in the zone are characterized as Class C structures that are marked by prominent topographic lineaments, suggesting but not proving that they may have had young movement.
Age of faulted surficial deposits	Quaternary; Tertiary. Quaternary piedmont-slope deposits are locally juxtaposed against Tertiary volcanic and sedimentary rocks near Leadville, along west side of Butte Spring Hills, and near Mahogany Creek. The intra-plateau faults (Class C) offset similar Tertiary rocks (Bonham, 1969 #2999; Dohrenwend and Moring, 1991 #281; Ach and others, 1991 #3001).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Although timing of most recent event is not well constrained, a Quaternary time is suggested based on reconnaissance photogeologic mapping by Dohrenwend and Moring (1991 #281).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> 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	<p>#3001 Ach, J.A., Bateson, J.T., Turrin, B.D., Keith, W.J., Noble, D.C., and Swisher, C.C., 1991, Geologic map of the High Rock Lake quadrangle, Washoe and Humboldt counties, Nevada: Miscellaneous Field Studies Map 2157, scale 1:24,000.</p> <p>#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.</p> <p>#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.</p>

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