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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 faults west of Aurora Crater (Class A) No. 1298

Last Review Date: 1998-07-20

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1998, Fault number 1298, unnamed faults west of Aurora Crater, 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 02:14 PM.**

Synopsis	This distributed zone of short predominately north-striking intermontane faults is west of Aurora Crater in the vicinity of Rough and Bodie Creeks. Most of the faults in this group displace only bedrock and are distinguished by aligned drainages and saddles. However, other faults displace Quaternary erosional surfaces and juxtapose Quaternary/Tertiary erosional surfaces against bedrock. Reconnaissance photogeologic mapping and bedrock mapping of the faults are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to a group of faults west of Aurora Crater, mapped by Dohrenwend (1982 #2481; 1982 #2870; 1982 #2871), Dohrenwend and Brem (1982 #2872), and Stewart and others

	(1982 #2873).
County(s) and State(s)	MINERAL COUNTY, NEVADA MONO COUNTY, CALIFORNIA
Physiographic province(s)	BASIN AND RANGE CASCADE-SIERRA MOUNTAINS
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Locations primarily based on 1:62,500 maps of Dohrenwend (1982 #2871) and Dohrenwend and Brem (1982 #2872) and 1:250,000-scale maps of Dohrenwend (1982 #2481; 1982 #2870); small-scale 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.
Geologic setting	This distributed zone of short predominately north-striking intermontane faults is located west of Aurora Crater in the vicinity of Rough and Bodie Creeks.
Length (km)	24 km.
Average strike	N4°E
Sense of movement	Normal *Comments:* Normal sense of movement is primarily inferred from topography.
Dip Direction	W; E
Paleoseismology studies	
Geomorphic expression	Most of the faults in this group displace only bedrock and are distinguished by aligned drainages and saddles (Dohrenwend, 1982 #2871; Dohrenwend and Brem, 1982 #2872). However, evidence of young faulting is suggested by some faults that displace Quaternary erosional surfaces and juxtapose Quaternary/Tertiary erosional surfaces against bedrock (Dohrenwend, 1982 #2871).
Age of faulted surficial	Upper Quaternary through Tertiary. Faults displace Quaternary erosional surfaces and juxtapose Quaternary/Tertiary erosional

deposits	surfaces against bedrock (Dohrenwend, 1982 #2871). Two faults included in this group also displace or juxtapose upper Quaternary alluvium against older Quaternary deposits or bedrock. Elsewhere, the faults only involve Tertiary bedrock, but are included in this group because of similar trend and proximity to faults with demonstrated Quaternary offset.
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 based on mapping by Dohrenwend (1982 #2871).
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.
Date and Compiler(s)	1998 Kenneth Adams, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2481 Dohrenwend, J.C., 1982, Map showing late Cenozoic faults in the Walker Lake 1° by 2° quadrangle, Nevada-California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-D, 1 sheet, scale 1:250,000. #2870 Dohrenwend, J.C., 1982, Surficial geologic map of the Walker Lake 1° by 2° quadrangle, Nevada-California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-C, 1 sheet, scale 1:250,000. #2871 Dohrenwend, J.C., 1982, Reconnaissance surficial geologic map of the Aurora quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1373, scale 1:62,500. #2872 Dohrenwend, J.C., and Brem, G.F., 1982, Reconnaissance surficial geologic map of the Bridgeport quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1371, scale 1:62,500.

	#287 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Lund 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2180, 1 sheet, scale 1:250,000. #28 Hamilton, W., 1963, Overlapping of late Mesozoic orogens in western Idaho: Geological Society of America Bulletin, v. 74, p. 779-788. #2873 Stewart, J.H., Carlson, J.E., and Johannesen, D.C., 1982, Geologic map of the Walker Lake 1° by 2° quadrangle, California and Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-A, scale 1:250,000.