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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 north of Odell Mountain (Class A) No. 1527

Last Review Date: 1999-01-27

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1999, Fault number 1527, unnamed faults north of Odell Mountain, 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	This arcuate belt of intra-plateau faults extends across the northwestern Owyhee Desert from near the Humboldt-Elko County line at Taylor Flat westward to Mahogany Ridge, and west-northwest parallel to the East Fork of the Quinn River to the Oregon-Nevada State line. Although, the faults primarily displace Tertiary volcanic and sedimentary rocks, evidence for young movement is provided by the fault bounding the south side of Mahogany Ridge which is expressed as a prominent topographic escarpment above the East Fork of the Quinn River and juxtaposes Quaternary alluvium against bedrock. Other faults are expressed as less prominent topographic lineaments consisting of aligned segments of stream channels and aligned saddles and sidehill benches. Reconnaissance photogeologic mapping of the faults is the source of data.

Name comments	Refers to a group of faults mapped Dohrenwend and Moring (1991 #284) in northwestern Owyhee Desert, north of the Odell Mountain, extending from near the Humboldt-Elko County line at Taylor Flat westward to Mahogany Ridge, and west-northwest parallel to the East Fork of the Quinn River to the Oregon-Nevada state line.
County(s) and State(s)	HUMBOLDT COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE COLUMBIA PLATEAU
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Fault locations are based on 1:250,000-scale map of Dohrenwend and Moring (1991 #284) which was produced by 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. The fault is not shown to extend into Oregon in any known published source.
Geologic setting	This arcuate belt of intra-plateau faults extends across the northwestern Owyhee Desert from near the Humboldt-Elko county line at Taylor Flat westward to Mahogany Ridge, and west-northwest parallel to the East Fork of the Quinn River to the Oregon-Nevada state line.
Length (km)	36 km.
Average strike	N88°W
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement is inferred from topography.
Dip Direction	S
Paleoseismology studies	
Geomorphic expression	Although, the faults primarily displace Tertiary volcanic and sedimentary rocks (Willden, 1964 #3002), evidence for young movement is provided by the fault bounding the south side of Mahogany Ridge which is expressed as a prominent topographic

	escarpment above the East Fork of the Quinn River and juxtaposes Quaternary alluvium against bedrock (Dohrenwend and Moring, 1991 #284). Other faults shown by Dohrenwend and Moring (1991 #284) that are less prominent topographic lineaments consisting of aligned segments of stream channels and aligned saddles and sidehill benches are not shown herein.
Age of faulted surficial deposits	Faults primarily displace Tertiary volcanic and sedimentary rocks, but fault on the south side of Mahogany Ridge juxtaposes Quaternary alluvium against bedrock (Dohrenwend and Moring, 1991 #284).
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 suggested based on reconnaissance photogeologic mapping of Dohrenwend and Moring (1991 #284).
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)	1999 Kenneth Adams, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#284 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the McDermitt 1° by 2° quadrangle, Nevada, Oregon, and Idaho: U.S. Geological Survey Miscellaneous Field Studies Map MF-2177, 1 sheet, scale 1:250,000. #3002 Willden, R., 1964, Geology and mineral deposits of Humboldt County, Nevada: Nevada Bureau of Mines and Geology Bulletin 59, 154 p., scale 1:250,000.

Questions or comments?