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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 east of Chimney Reservoir (Class A) No. 1529

Last Review Date: 1999-01-27

citation for this record: **Sawyer, T.L., compiler, 1999, Fault number 1529, unnamed faults east of Chimney Reservoir, 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	Group of suspected Quaternary faults that occur within a distributed zone of normal faults with diverse strikes, which occurs within or bounds the northeast front of the Snowstorm Mountains. Young movement is suspected based on their expression as locally prominent topographic lineaments that appear to control local drainage patterns, and one fault east of Chimney Reservoir that juxtaposes Quaternary alluvium against bedrock. The older, nearby, presumably Tertiary faults are not included herein. Reconnaissance photogeologic and bedrock mapping of the faults are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name	Refers to a few of a group of faults mapped by Slemmons

comments	(unpublished McDermitt 1? X 2? sheet), Coats (1987 #2861), and Dohrenwend and Moring (1991 #284) in southwestern Owyhee Desert that extend along and east of the northeast side of the Snowstorm Mountains, from South Fork of the Little Humboldt River at Oregon Flat to north end of range, and continuing northward across the North Fork of the Little Humboldt River at North Fork V.
County(s) and State(s)	ELKO COUNTY, NEVADA HUMBOLDT COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 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. Additional fault locations based on 1:250,000-scale map of Slemmons (1966, unpublished McDermitt 1? X 2? sheet); mapping from analysis of 1:60,000-scale AMS photography transferred to mylar overlaid onto a 1:250,000-scale topographic map using proportional dividers.
Geologic setting	Group of suspected Quaternary faults that occur within a distributed zone of normal faults with diverse strikes, which occurs within or bounds the northeast front of the Snowstorm Mountains (Coats, 1987 #2861; Dohrenwend and Moring, 1991 #284). Nearby faults that are probably Tertiary as indicated by Dohrenwend and Moring (1991 #284) are not included herein.
Length (km)	12 km.
Average strike	N41°E
Sense of movement	Normal *Comments:* (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet)
Dip Direction	N; S; W
Paleoseismology	

studies	
Geomorphic expression	Although the majority of faults in this area primarily displace Tertiary volcanic and sedimentary rocks (Coats, 1987 #2861), young movement is suspected on some based on their expression as locally prominent topographic lineaments that appear to control local drainage patterns, and one fault of similar expression east of Chimney Reservoir that juxtaposes Quaternary alluvium against bedrock (Dohrenwend and Moring, 1991 #284). The northwest-striking range-bounding faults form a major topographic escarpment on northeast side of the Snowstorm Mountains. Other faults in the group are expressed as east- and west-facing scarps on Tertiary bedrock or as minor topographic escarpments and aligned saddles and sidehill benches (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet; Dohrenwend and Moring, 1991 #284).
Age of faulted surficial deposits	Quaternary; Tertiary. Faults in this group primarily displace Tertiary volcanic and sedimentary rocks, but one fault juxtaposes Quaternary alluvium against bedrock (Coats, 1987 #2861; 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 Slemmons (1966, unpublished McDermitt 1? X 2? sheet) and 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 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2861 Coats, R.R., 1987, Geology of Elko County, Nevada: Nevada Bureau of Mines and Geology Bulletin 101, 112 p., scale 1:250,000.

	#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.