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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 in southern Gillis Range (Class A) No. 1306

Last Review Date: 1998-09-24

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1998, Fault number 1306, unnamed faults in southern Gillis 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 02:15 PM.**

Synopsis	This distributed group of faults consists of generally short, east-west to northeast-striking intermontane faults in the southern Gillis Range from the vicinity of Montreal Canyon on the south to west of Win Wan Valley on the north. Quaternary movement is suspected, but not conclusively demonstrated. Reconnaissance photogeologic mapping of surficial deposits and young faults and general bedrock mapping are the sources of data. Trench Investigations and studies of scarp morphology have not been conducted for this group of faults.
Name comments	Refers to group of faults in the southern Gillis Range that extend from near Montreal Canyon north to southeast of Buckley Flat mapped by Dohrenwend (1982 #2481; 1982 #2870; 1982 #2871), Stewart and others (1982 #2873), and Ekren and Byers (1984

	#2902; 1985 #2903).
County(s) and State(s)	MINERAL COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on 1:62,500-scale (Dohrenwend, 1982 #2871) 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 group of faults consists of generally short, east-west to northeast-striking intermontane faults in the southern Gillis Range from the vicinity of Montreal Canyon on the south to west of Win Wan Valley on the north.
Length (km)	12 km.
Average strike	N76°E
Sense of movement	Normal *Comments:* (Ekren and Byers, 1985 #2903)
Dip	50° N *Comments:* Ekren and Byers (1985 #2903) reported a dip of 50? N for a short east-west-striking fault in bedrock near Sheeps Head Canyon.
Paleoseismology studies	
Geomorphic expression	The faults are expressed as strong topographic lineaments delineated by aligned drainages, saddles, and sidehill benches. Quaternary movement is suspected, but not conclusively demonstrated, because some of the faults bound small intermontane basins filled with apparently unfaulted Quaternary alluvium (Dohrenwend, 1982 #2871). However, Ekren and Byers

	(1985 #2903) identify two locations where Quaternary alluvium is apparently in fault contact with bedrock, but Dohrenwend (1982 #2871) mapped these as depositional contacts.
Age of faulted surficial deposits	Quaternary to Mesozoic. Ekren and Byers (1985 #2903) identify two locations where Quaternary alluvium is apparently in fault contact with bedrock, but Dohrenwend (1982 #2871) mapped these as depositional contacts. Dohrenwend (1982 #2871) mapped a fault juxtaposing late Quaternary alluvial-fan deposits against bedrock near Sheeps Head Canyon.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although the time of the most recent event is not well constrained. Quaternary time is based on mapping by Dohrenwend and others (1996 #2846). Younger faulting may be implied by the suggestion that the fault involves late Quaternary deposits (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. #2846 Dohrenwend, J.C., Schell, B.A., Menges, C.M., Moring, B.C., and McKittrick, M.A., 1996, Reconnaissance photogeologic map of young (Quaternary and late Tertiary) faults in Nevada, *in* Singer, D.A., ed., Analysis of Nevada's metal-bearing mineral resources: Nevada Bureau of Mines and Geology Open-File Report 96-2, 1 pl., scale 1:1,000,000. #2902 Ekren, E.B., and Byers, F.M., Jr., 1984, The Gabbs Valley Range—A well exposed segment of the Walker Lane in west-central Nevada, *in* Lintz, J., Jr., ed., Western geological excursions: Geological Society of America, Annual Meeting, Reno, Nevada, Guidebook, v. 4, p. 203-215. #2903 Ekren, E.B., and Byers, F.M., Jr., 1985, Geologic map of the Win Wan Flat, Kinkaid NW, Kinkaid, and Indian Head Peak quadrangles, Mineral County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-1578, scale 1:48,000. #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.