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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.

Agai Pah Hills fault zone (Class A) No. 1308

Last Review Date: 1998-09-22

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1998, Fault number 1308, Agai Pah Hills fault zone, 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 group of faults consists of generally short, north to northwest-striking intermontane faults and minor range-bounding faults interior to the northern Gillis Range. The most continuous fault is located on the east side of the Agai Pah Hills and extends northwest from south of Wildhorse Canyon to the northern piedmont slope of the Gillis Range. Quaternary movement is suspected for the faults which only displace bedrock because of the similar orientation and proximity to demonstrably Quaternary faults in the group. 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 group of faults in the Gillis Range that extend from Wovoka Wash and Wildhorse Canyon northwest to northern end of the Gillis Range. Ekren and Byers (1984 #2902) refer to a

	northwest-striking fault along the east side of the Agai Pah Hills as the Agai Pah Hills fault; the Agai Pah Hills name is used herein to describe this entire zone including the Agai Pah Hills fault of Ekren and Byers (1984 #2902). Faults mapped by Slemmons (1966, unpublished Walker Lake 1? X 2? sheet), Hardyman (1980 #2904), Dohrenwend (1982 #2481; 1982 #2870; 1982 #2871), Stewart and others (1982 #2873), and Ekren and Byers (1984 #2902).
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 1:250,000-scale maps of Dohrenwend (1982 #2481; 1982 #2870); 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, north to northwest-striking intermontane faults and minor range-bounding faults interior to the northern Gillis Range. The most continuous fault is located on the east side of the Agai Pah Hills and extends northwest from south of Wildhorse Canyon to the northern piedmont slope of the Gillis Range, a strike length of about 18 km.
Length (km)	21 km.
Average strike	N23°W
Sense of movement	Right lateral *Comments:* (Hardyman, 1980 #2904; Ekren and Byers, 1984 #2902)
Dip Direction	E; W
Paleoseismology studies	
Geomorphic	Faults are expressed as intermontane and minor range-bounding

expression	faults along the east side of the Agai Pah Hills, as intermontane faults denoted by prominent topographic lineaments, and as minor range bounding faults that juxtapose Quaternary alluvium against bedrock.
Age of faulted surficial deposits	Upper Quaternary to Tertiary. Faults displace and juxtapose upper Quaternary alluvium against bedrock and Pleistocene alluvium against middle and lower Pleistocene erosional surfaces and bedrock (Dohrenwend, 1982 #2481; 1982 #2870). Along much of their lengths, faults only cut across bedrock but a Quaternary time is suspected because of their trend and apparent continuity with demonstrably active faults in the zone.
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).
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. #2904 Hardyman, R.F., 1980, Geologic map of the Gillis Canyon quadrangle, Mineral County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-1237, 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.