Jump to Navigation

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 northwestern Squaw Valley (Class A) No. 1534

Last Review Date: 1999-01-20

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1999, Fault number 1534, unnamed faults in northwestern Squaw Valley, 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 02:36 PM.**

Synopsis	This distributed group of short predominately northeast-striking piedmont faults in the northeastern part of Squaw Valley extend eastward across the southern part of Castle Ridge from Frazer Creek to Scraper Springs Creek. Faults are expressed as a cluster of short northwest- and southeast-facing scarps on piedmont-slope deposits that may be as young as Holocene and (or) late Pleistocene in age. 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Name comments	Refers to a group of faults mapped by Slemmons (1966, unpublished McDermitt 1? X 2? sheet), Coats (1987 #2861), and Dohrenwend and Moring (1991 #284) that extend across the

	southern part of Castle Ridge from Frazer Creek to Scraper Springs Creek in the northeastern part of Squaw Valley.
County(s) and State(s)	ELKO COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations are primarily 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. Locations were checked against 1:250,000-scale photogeologic map of Slemmons (1966, unpublished McDermitt 1? X 2? sheet) and 1:250,000-scale bedrock map of Coats (1987 #2861).
Geologic setting	This distributed group of short predominately northeast-striking piedmont faults in the northeastern part of Squaw Valley extend eastward across the southern part of Castle Ridge from Frazer Creek to Scraper Springs Creek (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet; Dohrenwend and Moring, 1991 #284).
Length (km)	7 km.
Average strike	N71°E
Sense of movement	Normal *Comments:* (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet; Dohrenwend and Moring, 1991 #284)
Dip Direction	N; S
Paleoseismology studies	
Geomorphic expression	Faults are expressed as a cluster of short north- and south-facing scarps on piedmont-slope deposits that may be as young as Holocene and (or) late Pleistocene in age (Dohrenwend and Moring, 1991 #284).
Age of faulted	latest Quaternary(?); early to middle Quaternary; Tertiary. The

surficial deposits	piedmont faults displace Holocene(?) and (or) latest Pleistocene and early to middle Quaternary piedmont-slope deposits (Coats, 1987 #2861; Dohrenwend and Moring, 1991 #284).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Although timing of most recent event is not well constrained, a late 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	#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.