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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.

Goshute Valley fault zone (Class A) No. 1589

Last Review Date: 1998-10-02

citation for this record: **Oswald, J.A., and Sawyer, T.L., compilers, 1998, Fault number 1589, Goshute Valley 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 02:36 PM.**

Synopsis	This distributed group of short, parallel normal faults extends across eastern piedmont slope of the Pequop Mountains in northern Goshute Valley. The faults displace Pleistocene alluvium and form lineaments on Quaternary alluvium. Reconnaissance photogeologic mapping of fault related features is the source of data. Trench investigations and studies of scarp morphology have not been conducted along the fault.
Name comments	Refers to faults mapped by Slemmons (1964, unpublished Wells 1? X 2? sheet) and Dohrenwend and others (1991 #290). Named the Goshute Valley fault swarm by dePolo (1998 #2845); located in northern Goshute Valley, north of Oasis. **Fault ID:** Refers to fault number WE13 (Goshute Valley fault swarm) of dePolo (1998 #2845).
County(s) and	

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:* Location based on 1:250,000-scale map of Dohrenwend and others (1991 #290); 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 distributed group of short, parallel normal faults extends across eastern piedmont slope of the Pequop Mountains in northern Goshute Valley.
Length (km)	7 km.
Average strike	N18°E
Sense of movement	Normal *Comments:* (dePolo, 1998 #2845)
Dip Direction	W; E
Paleoseismology studies	
Geomorphic expression	The faults are expressed by scarps and lineaments on Pleistocene alluvium surface (Dohrenwend and others, 1991 #290); one fault is marked by a short scarp on a late Pleistocene piedmont-slope surface (Slemmons, 1964, unpublished Wells 1? X 2? sheet).
Age of faulted surficial deposits	Pleistocene. The faults displace alluvium interpreted from photogeologic mapping to be late Pleistocene and early to late Pleistocene in age (Dohrenwend and others, 1991 #290).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Although timing of the most recent event is not well constrained, Slemmons (1964, unpublished Wells 1? X 2? sheet)

	and Dohrenwend and others (1991 #290; 1996 #2846) suggested a late Quaternary time based on reconnaissance photogeologic studies.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No detailed data exists to determine slip rates for this fault. dePolo (1998 #2845) assigned a reconnaissance vertical slip rate of 0.01 mm/yr for the fault based on the presence of scarps on alluvium and the absence of basal facets. The late Quaternary characteristics of this fault (overall geomorphic expression, continuity of scarps, age of faulted deposits, etc.) support a low slip rate. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
Date and Compiler(s)	1998 John A. Oswald, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2845 dePolo, C.M., 1998, A reconnaissance technique for estimating the slip rate of normal-slip faults in the Great Basin, and application to faults in Nevada, U.S.A.: Reno, University of Nevada, unpublished Ph.D. dissertation, 199 p. #290 Dohrenwend, J.C., McKittrick, M.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Wells 1° by 2° quadrangle, Nevada, Utah, and Idaho: U.S. Geological Survey Miscellaneous Field Studies Map MF-2184, 1 sheet, scale 1:250,000. #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.

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