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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 fault southwest of Pilot Mountains (Class A) No. 1327

Last Review Date: 1998-07-19

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1327, unnamed fault southwest of Pilot Mountains, 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 northwest-striking, down-to-the-southwest fault bounds the linear front of southwesternmost Pilot Mountains and southwest edge of a ridge of low hills that continues into southern Monte Cristo Valley; the fault-bounded ridges resemble the east-tilted homoclinal blocks east and south of the Paradise Range in Ione Valley [1333]. At south end of the Pilot Mountains, this fault intersects the Bettles Wells fault zone [1326], which appears to terminate at the intersection although one piedmont fault extends along strike south of the intersection. Quaternary movement is suggested along this fault and is suspected along the entire fault zone even though most of the faults are inferred to juxtapose Quaternary deposits against bedrock. No detailed studies have been conducted to confirm the presence of faulting.

Name comments	Refers to faults mapped by Dohrenwend and others (1996 #2846) along front of southwesternmost Pilot Mountains and along west side of a ridge of low hills that continues southeastward into southern Monte Cristo Valley, south of Kibby Flat.
County(s) and State(s)	MINERAL COUNTY, NEVADA ESMERALDA COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location primarily based on unpublished map of the Tonopah 1?x2? sheet by J.C. Dohrenwend published at 1:100,000-scale by Dohrenwend and others (1996 #2846). Mapping is based on 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	These northwest-striking linear faults bound west front of the southern Pilot Mountains and southwest edge of a ridge of low hills that continues into southern Monte Cristo Valley; these fault-bounded ridges resemble the east-tilted homoclinal blocks east and south of the Paradise Range in Ione Valley [1333]. Overall this fault and the Bettles Wells fault zone [1326] form an echelon right stepover, however at south end of the Pilot Mountains these through-going faults intersect and the Bettles Wells fault zone appears to terminate.
Length (km)	16 km.
Average strike	N27°W
Sense of movement	Normal *Comments:* Not studied in detail; normal sense of movement is inferred from topography. A dextral sense of movement is possible based on similarity to other northwest-striking faults in the region.
Dip Direction	SW
Paleoseismology	

studies	
Geomorphic expression	The fault is marked by locally abrupt and well-defined scarps along linear southwestern front of the Pilot Mountains and discontinuously along edge of bedrock ridge that trends southeastward into southern Monte Cristo Valley. The fault juxtaposes Quaternary deposits against bedrock and is oblique to the scarp and (or) lineament southwest of Kibby Flat that is on high-level piedmont-slope surfaces.
Age of faulted surficial deposits	Quaternary. Scarps have been mapped juxtaposing Quaternary deposits against bedrock and on Quaternary piedmont-slope surfaces (Dohrenwend and others, 1996 #2846).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent prehistorical event is not well constrained, a Quaternary time is suspected based on mapping by Dohrenwend and others (1996 #2846).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No age or displacement data are reported that could constrain the slip rate. 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 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#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.

Questions or comments?