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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 of western Pahranagat Valley (Class A) No. 1739

Last Review Date: 2002-01-03

citation for this record: **Anderson, R.E., compiler, 2002, Fault number 1739, unnamed faults of western Pahranagat 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 02:24 PM.**

Synopsis	These faults in the west part of northern Pahranagat Valley strike north and may form the structural boundary between the Mount Irish Range on the west and a basin beneath Pahranagat Valley on the east. No detailed studies have been made, and recurrence times and slip rates are not known. East-facing scarps are estimated photogeologically to be formed on late Pleistocene deposits or surfaces.
Name comments	Fault referred to as Eastern North Pahranagat Range fault by dePolo (1998 #2845); however, that name is abandoned because the physiographic feature shown on the 1? x 2? Caliente sheet is shown on the more modern (1996) 1/2? x 1? Timpahute Range quadrangle as the Mount Irish Range. Two unaligned groups of traces are mapped; a northern group extending 7 km north and 8

	km south of Logan Creek, and a southern group about 5 km that are long northwest of Hancock Summit. It not known how or if these two groups of faults are related, but both appear to bound the same range block. **Fault ID:** Fault C9 of dePolo (1998 #2845).
County(s) and State(s)	LINCOLN COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on an unpublished compilation of Quaternary faults in the Caliente 1? x 2? sheet by J. C. Dohrenwend (published at 1:1,000,000 by Dohrenwend and others, 1996 #2846). The unpublished map was prepared by photogeologic analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle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	The fault strikes north and forms the east margin of part of the Mount Irish Range (formerly the North Pahranagat Range). Although not mapped as a major range-bounding fault (Dohrenwend and others, 1996 #2846), it may separate the range from a basin to the east beneath northern Pahranagat Valley.
Length (km)	25 km.
Average strike	N1°E
Sense of movement	Normal *Comments:* Referred to as a normal fault by dePolo (1998 #2845).
Dip Direction	E
Paleoseismology studies	
Geomorphic expression	Apparently expressed as east-facing bedrock and alluvial scarps based on an unpublished compilation of Quaternary faults in the Caliente 1? x 2? sheet by J. C. Dohrenwend (published at 1:1,000,000 by Dohrenwend and others, 1996 #2846). No details

	of scarp morphology or height are available.
Age of faulted surficial deposits	Late Quaternary on the basis of photogeologic estimate of age of deposits or surfaces on which scarps are formed (Dohrenwend and others, 1996 #2846).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* In an unpublished compilation of Quaternary faults in the Caliente 1? x 2? sheet by J. C. Dohrenwend (published at 1:1,000,000 by Dohrenwend and others, 1996 #2846), east-facing scarps are estimated, on the basis of photogeologic study, to be formed on deposits or surfaces of late Pleistocene (10-130 ka) age.
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.) suggest the slip rate during this period is of a lesser magnitude. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
Date and Compiler(s)	2002 R. Ernest Anderson, U.S. Geological Survey, Emeritus
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. #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.