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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 east of Mount Lewis, Shoshone Range (Class A) No. 1162

Last Review Date: 2001-07-16

citation for this record: **Anderson, R.E., compiler, 2001, Fault number 1162, unnamed faults east of Mount Lewis, Shoshone Range, 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 02:17 PM.**

Synopsis	These unnamed faults are within the Shoshone Range, west of Mount Lewis, and are apparently intra-block down-to-the-west normal faults with an overall convex-west trace. The northern ones extend along the eastern edge of a topographically subdued area within the Shoshone Range called The Park and the southern ones along Smith Flat. Little is known of the geomorphic expression of the fault, other than that scarps face west. The northern part of both faults have scarps on surficial deposits or erosion surfaces of Pleistocene (0.01-1.6 Ma) age. The southern fault may have scarps on late Quaternary (10-130 ka). No detailed study is reported, and neither the recurrence time or slip rate is known.
Name	These faults have not been named in regional compilations. It is

comments	uncertain if Wallace (1979 #203) intended for them to be part of his "Beowawe scarps" [1151], an alignment of discontinuous scarps extending less than 40 km to the northeast. The extent of the faults, as compiled here, is taken from Dohrenwend and Moring (1991 #282) who show them extending south from Corral Canyon to the southern flank of Bullion Mountain and the faults they depict south of Horse Mountain.
County(s) and State(s)	LANDER COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* The northeast part of the main trace is taken from the 1:125,000-scale map of young fault scarps by Wallace (1979 #203). That map was compiled mostly from field and photogeologic study of 1:60,000-scale aerial photos. The remainder of the faults are taken from the map of Dohrenwend and Moring (1991 #282). That map was compiled at scale 1:250,000-scale based on photogeologic study 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 unnamed faults are located within the Shoshone Range east and south of Mount Lewis and, as such, are block interior rather than range-bounding structures. This assignment is consistent with the mapping by Dohrenwend and Moring (1991 #282), who classified them as faults of lesser size and extent than range-front faults. They are apparently down-to-the-west normal faults. Their southern part strikes north and their northern part strikes northeast, giving them a slightly convex-west trace. The northern part apparently displaces Quaternary alluvium, whereas the southern part is apparently formed in bedrock (Stewart and Carlson, 1978 #3413).
Length (km)	9 km.
Average strike	N16°E
Sense of movement	Normal

	Comments: These unnamed faults are examples of many north- to northeast-striking normal faults in north-central Nevada (Wallace, 1978 #2648; Stewart, 1978 #3413). The predominant strikes of Quaternary normal faults in the Winnemucca 1? x 2? sheet range from N12?E to N28?E (Dohrenwend and Moring, 1991 #282).
Dip Direction	W; NW *Comments:* Inferred from the direction scarps face as noted by Wallace (1979 #203) and Dohrenwend and Moring (1991 #282).
Paleoseismology studies	
Geomorphic expression	These unnamed faults are located at the eastern edge of a topographically subdued areas within the Shoshone Range called The Park and Smith Flat. Little is known of the geomorphic expression of scarps, other than that they face west.
Age of faulted surficial deposits	The northern part of the fault places Quaternary/Tertiary alluvium against pre-Tertiary bedrock of the footwall block (on the east). On the basis of photogeologic reconnaissance, Dohrenwend and Moring (1991 #282) estimated that scarps along the north part of the fault are formed on Pleistocene (0.01-1.6 Ma) surficial deposits or erosion surfaces. The southernmost part of the fault my have evidence of younger movement.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* On the basis of photogeologic reconnaissance, Dohrenwend and Moring (1991 #282) estimate that scarps along the north part of the fault are formed on surficial deposits or erosion surfaces of Pleistocene (0.01-1.6 Ma) age. In the absence of detailed study, the Quaternary history of displacement on these faults is essentially unknown.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No data available to constrain slip-rate estimate. Low

	slip-rate category chosen in accordance with other relatively inactive faults in the region (Wallace, 1978 #2648).
Date and Compiler(s)	2001 R. Ernest Anderson, U.S. Geological Survey, Emeritus
References	#282 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Winnemucca 1° by 2° quadrangle, Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-2175, 1 sheet, scale 1:250,000. #3413 Stewart, J.H., and Carlson, J.E., 1978, Geologic map of Nevada: U.S. Geological Survey, Special Geologic Map, 1, scale 1:500,000. #2648 Wallace, R.E., 1978, Geometry and rates of change of fault-generated range fronts, north-central Nevada: Journal of Research of the U.S. Geological Survey, v. 6, no. 5, p. 637-649. #203 Wallace, R.E., 1979, Map of young fault scarps related to earthquakes in north-central Nevada: U.S. Geological Survey Open-File Report 79-1554, 2 sheet, scale 1:125,000.