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 east of Freeland and Lampson Canyons (Class A) No. 1219

Last Review Date: 2000-10-24

citation for this record: **Redsteer, M.H., compiler, 2000, Fault number 1219, unnamed faults east of Freeland and Lampson Canyons, 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 expressed as subparallel north-south trending scarps with down-to-the-west displacement, located north of Freeland Canyon and directly south of the Mokomoke Mountains of the White Pine Range. These faults juxtapose bedrock against Quaternary sediment. Reconnaissance, photogeologic mapping is the source of data. The central fault scarp is coincident with the eastern flank of the Blackrock detachment. Terrace sediments are either offset by faulting or deposited against the fault scarp. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to subparallel faults between Lampson and Freeland Canyon as mapped by Dohrenwend and others (1992 #2480).
County(s) and	

County(s) and State(s)	WHITE PINE 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 (1992 #2480), with original mapping by photogeologic analysis of 1:24,000-scale color aerial photography supplemented with 1:60,000-scale black-and-white aerial photography, transferred by inspection to 1:62,500-scale topographic maps and photographically reduced and transferred to 1:250,000-scale topographic maps, and subsequent 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	These unnamed faults are located within the White Pine Range.
Length (km)	17 km.
Average strike	N0°E
Sense of movement	Normal
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	These well-defined escarpments are expressed topographically by a north-south trending linear ridge crest and abrupt changes in elevation parallel to the ridge line. Dohrenwend and others (1992 #2480) show the faults as juxtaposing bedrock against Quaternary alluvium, although no fault scarps in surficial materials have been noticed. Most of the southeastern extension of these faults is shown as a lineament and is not included on the map.
Age of faulted surficial deposits	Paleozoic rocks, Quaternary sediment (undivided).
Historic earthquake	

Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Dohrenwend and others (1992 #2480) considered the last fault movement to be of Quaternary age.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category is assigned on the basis of poor geomorphic preservation, lack of mapped fault scarps, and relative inactivity of similar distributed faults in the Basin and Range province.
Date and Compiler(s)	2000 Margaret Hisa Redsteer, U.S. Geological Survey
References	#2480 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Ely 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2181, 1 sheet, scale 1:250,000. #4340 Tracy, W.C., 1980, Structure and stratigraphy of the central White Pine Range, east-central Nevada: Long Beach, California State University, unpublished M.S. thesis, 66 p.