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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 on west side of Snake Range (Class A) No. 1251

Last Review Date: 2000-11-16

citation for this record: **Redsteer, M.H., compiler, 2000, Fault number 1251, unnamed fault on west side of Snake 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 02:16 PM.**

Synopsis	The fault is located on the western margin of the northern Snake Range and is characterized by north trending, down-to-the-west discontinuous scarps. The fault defines the steep, linear western range front of the northern Snake Range. Faults are mapped as juxtaposing bedrock against Quaternary alluvium. Reconnaissance photogeologic mapping is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	This unnamed fault is located on the west side of the northern Snake Range. The fault consists of a series of north trending, down-to-the-west scarps that define the western range front of these mountains. The fault extends from about 2 km south of White Cloud Wash south to Fourmile Canyon.

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). Mapping based on photogeologic analysis of primarily 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 directly transferred to 1:250,000-scale topographic maps. 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	This unnamed fault was mapped by Dohrenwend and others (1992 #2480) as juxtaposing bedrock against Quaternary alluvium in the northern Snake Range and defines the steep, linear range front that typifies Basin and Range extensional faulting. Bedrock in the northern Snake Range includes a Paleozoic sequence of miogeoclinal strata that was deposited on the western margin of North America. These units are metamorphosed and intruded by Jurassic granite. Other units include Tertiary lava flows, intrusions and tuffs, Tertiary conglomerate, Pleistocene lacustrine sediments, and alluvial fan deposits which have been subdivided into older and younger Quaternary units (Gans and others, 1999 #4407). Lee and others map western range front faulting as part of the Northern Snake Range Decollement, a prominent structural feature of this region.
Length (km)	26 km.
Average strike	N5°W
Sense of movement	Normal
Dip Direction	W
Paleoseismology	

studies	
Geomorphic expression	The fault is mapped by Dohrenwend and others (1992 #2480) where resistant Paleozoic bedrock is juxtaposed against Quaternary sediments, producing an abrupt change in topography. Fault location coincides with transition between the western margin of the Snake Range and the flat floor of Spring Valley.
Age of faulted surficial deposits	Dohrenwend and others (1992 #2480) considered the fault as offsetting late Quaternary deposits on the northern end of the structure. To the south, most of the fault consists of prominent topographic escarpments that juxtapose bedrock against undivided Quaternary deposits.
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Dohrenwend and others (1992 #2480) suggested an age of less than 30 ka for the northern end of this fault based on ages of offset units.
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, general 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. #4407 Gans, P.B., Miller, E.L., and Lee, J., 1999, Geologic map of the Spring Mountain quadrangle, Nevada and Utah: Nevada Bureau of Mines and Geology Field Studies Map 18, scale 1:24,000.