

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 on western margin of Antelope Range (Class A) No. 1266

Last Review Date: 2000-11-27

citation for this record: Redsteer, M.H., compiler, 2000, Fault number 1266, unnamed faults on western margin of Antelope 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	This unnamed group of faults on the western side of the Antelope Range is expressed by offset that juxtaposes bedrock against Quaternary alluvium, and scarps that exhibit down-to-the-west and minor east displacement. These faults cover an area on the western margin of the Antelope Range that is approximately 27 km long and 4 to 5 km wide. Reconnaissance photogeologic mapping is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to unnamed group of fault on western margin of Antelope Range as mapped by Dohrenwend and others (1992 #2480). The faults form a zone about 27 km long and 4 km wide that trends north from 5 km south of Twelvemile Summit to the region immediately west of the divide from Tunnel Canyon in the

	Antelope Range
County(s) and State(s)	WHITE PINE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Location based on 1:250,000-scale map of Dohrenwend and others (1992 #2480). Mapping based on photogeologic analysis of 1:24,000-scale color aerial photography supplemented with 1:60,000-scale black-and-white aerial photography, transferred 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.</p>
Geologic setting	This unnamed group of faults is located on the western margin of the Antelope Range, which is composed of Paleozoic clastic and carbonate rocks, and Eocene to Oligocene volcanic rocks (Hose and Blake, 1976 #4341). The Antelope Range is within part of the Great Basin that was compressed during Jurassic and Late Cretaceous orogenies, and later extended during the middle to late Tertiary (Nutt and Thorman, 1994).
Length (km)	27 km.
Average strike	N2°E
Sense of movement	Normal
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	These faults were mapped by Dohrenwend and others (1992 #2480) as a broad zone of displacement that juxtaposes Quaternary sediment against carbonate bedrock and volcanic rocks on the western margin of the Antelope Range. The faults offset units within a broad zone that coincides with the westward-sloping valley and western range-front of the Antelope Range.

Age of faulted surficial deposits	Quaternary, Tertiary, and Paleozoic. Although most of the faults juxtapose Quaternary sediment against bedrock, several of the faults to the north form scarps on surficial deposits. Dohrenwend and others (1992 #2480) classified the age of the faulted surficial deposits as early to middle and possibly late Pleistocene (10 ka to 1.6 Ma) based on geomorphic criteria.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> 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 <i>Comments:</i> 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. #4341 Hose, R.K., and Blake, M.C., Jr., 1976, Geology and mineral resources of White Pine County, Nevada: Nevada Bureau of Mines and Geology Bulletin 85, 105 p. #4400 Nutt, C.J., and Thorman, C.H., 1994, Geologic map of the Weaver Canyon quadrangle, Nevada and Utah, and parts of the Ibapah Peak quadrangle, Utah, and Tippett Canyon quadrangle, Nevada: U.S. Geological Survey Open-File Report 96-635, scale 1:24,000.

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