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 of New Pass Range (Class A) No. 1174

Last Review Date: 2000-08-23

citation for this record: **Lidke, D.J., compiler, 2000, Fault number 1174, unnamed faults of New Pass 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 group of north-striking faults form some scarps, but the zone of deformation is mostly characterized by faults that place Paleozoic and Tertiary bedrock against Pleistocene piedmont-slope deposits. Although some faults of this zone place bedrock against Pleistocene deposits along the front of the New Pass Range, none of these faults show the topographic expression characteristic of range-front faults. These unnamed faults have not been studied in detail and the principal sources of data are geologic mapping and reconnaissance photogeologic mapping.
Name comments	Refers to north-striking faults at the southwest end of the Antelope Valley and along the eastern and northeastern flanks of the New Pass Range. Stewart and McKee (1969 #4353; 1977 #4351) and Dohrenwend and others (1992 #283) mapped faults of

	this unnamed zone of deformation. This zone of faults extends northward along the range-front and piedmont slope from a few kilometers south of Water Canyon Spring to a few kilometers north of Little Antelope Spring.
County(s) and State(s)	LANDER COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Location is from 1:250,000-scale map of Dohrenwend and others (1992 #283), which shows mapping based on photogeologic analysis of 1:58,000-nominal-scale, color-infrared photography transferred directly to 1:100,000-scale topographic maps enlarged to the scale of the photographs; these maps were then reduced and compiled at 1:250,000-scale.
Geologic setting	This group of north-striking faults includes western faults that place Paleozoic rocks against Pleistocene deposits along the eastern flank of the New Pass Range, and includes eastern faults that place Tertiary volcanic rocks against Pleistocene deposits of the Antelope Valley (Stewart and McKee, 1969 #4353; 1977 #4351). Collectively, these faults appear to form a small, north-trending graben at the southwestern end of Antelope Valley. These faults probably are related to continued Quaternary uplift of the New Pass Range relative to the adjacent Antelope Valley. However, almost nothing is known of the character of these faults and the nature of offsets along them.
Length (km)	15 km.
Average strike	N2°E
Sense of movement	Normal *Comments:* Not specifically reported; normal sense of slip is inferred from the presence of these faults within the Basin and Range Province that is primarily an extensional tectonic province characterized by normal faults.
Dip Direction	E; W

	Comments: Not reported, but probably steep, based on dip measurements of other Quaternary faults in localities nearby and elsewhere in the Basin and Range Province
Paleoseismology studies	
Geomorphic expression	This unnamed group of faults appears to define a narrow, north-trending graben that influences the form of the southwestern end of the Antelope Valley, as determined from mapping by Stewart and McKee (1969 #4353; 1977 #4351) and Dohrenwend and others (1992 #283). A few springs also appear to be aligned along a northerly trend within this north-striking zone of faults
Age of faulted surficial deposits	Dohrenwend and others (1992 #283) assigned an early and middle, and (or) late Pleistocene age to faulted surficial deposits along one fault scarp. Stewart and McKee (1969 #4353; 1977 #4351) assigned an age range of Pleistocene to Holocene to all of the faulted deposits.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although the timing of the most recent prehistoric faulting event is not tightly constrained, reconnaissance photogeologic mapping by Dohrenwend and others (1992 #283) and geologic mapping by Stewart and McKee (1969 #4353; 1977 #4351) agree that the most recent prehistoric event is no older than Pleistocene in age.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Not reported; low slip rate selected based mainly on lack of continuity and apparent timing of these faults.
Date and Compiler(s)	2000 David J. Lidke, U.S. Geological Survey
References	#283 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Millett 1° by 2° quadrangle, Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-2176, 1 sheet, scale

	1:250,000. #4353 Stewart, J.H., and McKee, E.H., 1969, Geologic map of the west-central part of Lander County, Nevada: U.S. Geological Survey Open-File Report 69-270, 2 sheets, scale 1:62,500. #4351 Stewart, J.H., and McKee, E.H., 1977, Geology and mineral deposits of Lander County, Nevada: Nevada Bureau of Mines and Geology Bulletin 88, 106 p., 3 pls.