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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 east of Moody Mountain (Class A) No. 1280

Last Review Date: 2000-02-01

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Synopsis	The fault consists of north- and northeast-trending semi-parallel lineaments, and fault scarps with short, down-to-the-east normal displacement. The fault lies within the eastern piedmont slope of the Pancake Range. It extends 7 km from Brown Summit to the southern boundary of the Ely quadrangle and southward approximately 3.5 km into the Lund quadrangle. Reconnaissance, photogeologic mapping, and limited analysis of scarp morphology by Schell (1981 #2843), Dohrenwend and others (1992 #2480) are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	The fault is located on the eastern flank of the Pancake Range, near Moody Mountain. It extends from Bull Fork in the Ely 1? X 2? sheet south to immediately north of Brown Summit in the

	Lund 1?x2? sheet.
County(s) and State(s)	NYE 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 (1991 #287; 1992 #2480), with original mapping by photogeologic analysis of primarily 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. 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 lies within the Duckwater Valley, at the eastern range front of the Pancake Range within the piedmont slope. Range front faults are the typical expression of regional extension in the Basin and Range Province. The Duckwater Valley is situated in the central part of the Great Basin within the Basin and Range. During the Paleozoic, the central part of the Great Basin was located on the eastern margin of the Cordilleran geosyncline (Kay, 1951 #4402). The majority of the area was overlain with Paleozoic sedimentary rocks more than a mile thick that are primarily of marine origin (Hose and Blake, 1976 #4341). This Paleozoic carbonate and clastic sequence is deformed by folding, thrust faulting, and unconformably capped by Tertiary volcanic and intrusive rocks from Eocene to Oligocene and perhaps Miocene age (Stewart, 1980 #3056). These rocks have been uplifted into mountain ranges with elevations of 3,000 m that alternate with 1700 m high flat-floored valleys. Valley sediments are typically comprised of Pleistocene lake deposits, and sand and gravel deposits of alluvial fans and terraces.
Length (km)	11 km.
Average strike	N1W°
Sense of	Normal

movement	Normal
Dip Direction	E
Paleoseismology studies	
Geomorphic expression	The unnamed fault is defined by a series of north trending lineaments and fault scarps within the eastern Duckwater Valley, at the piedmont slope of the Pancake Range. Fault displacement is expressed by an abrupt change in slope at the valley margin.
Age of faulted surficial deposits	late Pleistocene (Dohrenwend and others, 1992 #2480).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Age estimated to be late Pleistocene (15 to 700 ka) by Dohrenwend and others (1992 #2480).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region.
Date and Compiler(s)	2000 Margaret Hisa Redsteer, U.S. Geological Survey
References	#287 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Lund 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2180, 1 sheet, scale 1:250,000. #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. #4402 Kay, M., 1951, North American geosynclines: Geological Society of America Memoir 48, 143 p. #2843 Schell, B.A., 1981, Faults and lineaments in the MX Sitting Region, Nevada and Utah, Volume I: Technical report to U.S. Department of [Defense] the Air Force, Norton Air Force Base, California, under Contract FO4704-80-C-0006, November 6, 1981, 77 p. #3056 Stewart, J.H., 1980, Geology of Nevada—A discussion to accompany the geologic map of Nevada: Nevada Bureau of Mines and Geology Special Publication 4, 136 p.