

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](#).

South-central Reese River Valley fault zone (Class A) No. 1197

Last Review Date: 2000-10-01

citation for this record: Lidke, D.J., compiler, 2000, Fault number 1197, South-central Reese River Valley fault zone, 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	This northeast-striking fault zone in the south-central Reese River Valley is characterized by southeast-facing scarps and by some linear features on low-level piedmont slope deposits east of the Reese River. There is evidence for at least one Quaternary faulting event that is no older than early Pleistocene and perhaps no older than late Pleistocene in age. The consistent southeast-aspect of the scarps suggests the Quaternary movement is mostly down-to-the-southeast. The fault zone has not been studied in detail, thus, little is actually known with certainty about its nature, character, and movement history. The principal sources of data consist of geologic mapping, reconnaissance photogeologic mapping, and reconnaissance geomorphic study of fault scarps.
Name	Refers to northeast-striking faults mapped by Kleinhampl and

comments	<p>Ziony (1985 #2851), and Dohrenwend and others (1992 #283; 1996 #2846) in the south-central part of Reese River Valley. dePolo (1998 #2845) portrayed and referred to this fault zone as the south-central Reese River Valley fault; a slight modification of that name is used herein. This fault zone extends from about Tierney Creek, southwest through the central part of the Reese River Valley to about 5 km east of Spanish Spring.</p> <p>Fault ID: Refers to fault zone that dePolo (1998 #2845) portrayed and labeled MI10.</p>
County(s) and State(s)	<p>NYE COUNTY, NEVADA</p>
Physiographic province(s)	<p>BASIN AND RANGE</p>
Reliability of location	<p>Good Compiled at 1:250,000 scale.</p> <p><i>Comments:</i> Location based on 1:250,000-scale maps of Dohrenwend and others (1992 #283) and unpublished map of the Tonopah 1°x2° sheet by J.C. Dohrenwend published at 1:100,000-scale by Dohrenwend and others (1996 #2846). Mapping based on 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	<p>This zone of northeast-striking faults in the central part of southern Reese River Valley, is marked by a relatively continuous alignment of southeast-facing fault scarps on Quaternary piedmont and piedmont-slope deposits (Kleinhampl and Ziony, 1985 #2851; Dohrenwend and others, 1992 #283; 1996 #2846). There is evidence for Quaternary movement along this zone and the consistent southeast-aspect of the fault scarps implies principally down-to-the-southeast offset and continued down-dropping of the Reese River Valley relative to the adjacent mountain ranges. The fault zone has not been studied in detail, however, and other insights and estimates that concern Quaternary offsets have not been reported.</p>
Length (km)	<p>22 km.</p>
Average strike	<p>N33°E</p>

Sense of movement	<p>Normal</p> <p><i>Comments:</i> Not specifically reported, however, the southeast-facing direction of the fault scarps suggests mostly down-to-the-southeast offsets, which in this extensional regime probably reflects principally normal, dip-slip movement along east-dipping faults.</p>
Dip Direction	<p>SE</p> <p><i>Comments:</i> Not reported, but probably steep, based on dip measurements of other Quaternary faults in localities nearby and elsewhere in the Basin and Range Province.</p>
Paleoseismology studies	
Geomorphic expression	<p>The deformation is expressed by a relatively continuous zone of southeast-facing fault scarps and some southeast-facing fault scarps that are southeast of the central part of the main zone (Dohrenwend and others, 1992 #283; 1996 #2846). Locally, northeast-trending linear features appear to make a structural connection between isolated scarps.</p>
Age of faulted surficial deposits	<p>Kleinhampl and Ziony (1985 #2851) mapped faulted as alluvial-fan deposits as Pleistocene to Holocene age. Based on reconnaissance photogeologic mapping, Dohrenwend and others (1992 #283; 1996 #2846) assigned an early to middle Pleistocene age to faulted deposits along one scarp, and early to middle and (or) late Pleistocene age to faulted deposits along several other fault scarps of the zone.</p>
Historic earthquake	
Most recent prehistoric deformation	<p>undifferentiated Quaternary (<1.6 Ma)</p> <p><i>Comments:</i> The timing of the most recent prehistoric faulting event is not well constrained. Based on reconnaissance photogeologic mapping, Dohrenwend and others (1992 #283; 1996 #2846) indicated that the most recent faulting event is no older than early Pleistocene (<1.6 Ma) and may be no older than late Pleistocene (<130 ka) in age.</p>
Recurrence	

interval	
Slip-rate category	<p>Less than 0.2 mm/yr</p> <p><i>Comments:</i> No detailed data exists to determine slip rates for this fault. dePolo (1998 #2845) assigned a reconnaissance vertical slip rate of 0.01 mm/yr for the fault based on the presence of scarps on alluvium and the absence of basal facets. The late Quaternary characteristics of this fault (overall geomorphic expression, continuity of scarps, age of faulted deposits, etc.) support a low slip rate. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.</p>
Date and Compiler(s)	<p>2000</p> <p>David J. Lidke, U.S. Geological Survey</p>
References	<p>#2845 dePolo, C.M., 1998, A reconnaissance technique for estimating the slip rate of normal-slip faults in the Great Basin, and application to faults in Nevada, U.S.A.: Reno, University of Nevada, unpublished Ph.D. dissertation, 199 p.</p> <p>#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.</p> <p>#2846 Dohrenwend, J.C., Schell, B.A., Menges, C.M., Moring, B.C., and McKittrick, M.A., 1996, Reconnaissance photogeologic map of young (Quaternary and late Tertiary) faults in Nevada, <i>in</i> Singer, D.A., ed., Analysis of Nevada's metal-bearing mineral resources: Nevada Bureau of Mines and Geology Open-File Report 96-2, 1 pl., scale 1:1,000,000.</p> <p>#2851 Kleinhampl, F.J., and Ziony, J.I., 1985, Geology of Northern Nye County, Nevada: Nevada Bureau of Mines and Geology Bulletin 99A, 172 p.</p>

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