

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](#).

Tybo Well fault (Class A) No. 1363

Last Review Date: 1998-08-01

citation for this record: Sawyer, T.L., compiler, 1998, Fault number 1363, Tybo Well fault, 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 02:13 PM.

Synopsis	This distributed group of subparallel faults crosses the floor of Hot Creek Valley and piedmont slope on southern Hot Creek Range. Reconnaissance photogeologic mapping of these faults is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to faults mapped by Quinlivan and Rogers (1974 #2938), the Tybo Well fault mapped and named by Schell (1981 #2844), and also mapped by Dohrenwend and others (1996 #2846). The fault extends from U.S. Highway 6, on the floor of Hot Creek Valley to the west of Sandy Summit at the north end of Palisade Mesa. Fault ID: Refers to fault 49 on Plate A7 in Schell (1981 #2844).
County(s) and State(s)	NYE COUNTY, NEVADA
Physiographic	

Topographic 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 Location based on 1:250,000-scale maps of Schell (1981 #2844) and unpublished map of the Tonopah 1?x2?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 by Schell (1981 #2843; 1981 #2844) 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, and subsequent field verification. Mapping by Dohrenwend and others (1996 #2846) 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	This distributed group of subparallel faults crosses the floor of Hot Creek Valley and piedmont slope on southern Hot Creek Range.
Length (km)	21 km.
Average strike	N14°E
Sense of movement	<p>Normal</p> <p><i>Comments:</i> (Quinlivan and Rogers, 1974 #2938; Schell, 1981 #2844)</p>
Dip Direction	W; E
Paleoseismology studies	
Geomorphic expression	The fault is expressed by scarps and lineaments on Quaternary alluvium (Quinlivan and Rogers, 1974 #2938; Schell, 1981 #2844; Dohrenwend and others, 1996 #2846).
Age of faulted surficial deposits	Latest Pleistocene alluvium (Schell, 1981 #2844), Quaternary surficial deposits (Quinlivan and Rogers, 1974 #2938; Dohrenwend and others, 1996 #2846).

Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> The timing of most recent prehistorical event is not well constrained, and the two sources do not concur Schell (1981 #2844) indicates that the southernmost scarps may have been active in the latest Quaternary. In contrast, Dohrenwend and others (1996 #2846) only indicate undifferentiated Pleistocene movement based on a reconnaissance photogeologic study. We assign herein the most conservative age as suggested by reconnaissance photogeologic mapping of Dohrenwend and others (1991 #287).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> No age or displacement data are reported that could constrain the slip rate. 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.
Date and Compiler(s)	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#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. #2938 Quinlivan, W.D., and Rogers, C.L., 1974, Geologic map of the Tybo quadrangle, Nye County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-821. #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.

#2844 Schell, B.A., 1981, Faults and lineaments in the MX Siting Region, Nevada and Utah, Volume II: 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, 29 p., 11 pls., scale 1:250,000.

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