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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.

Hulligan Mesa fault (Class A) No. 1362

Last Review Date: 1998-08-01

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1362, Hulligan Mesa 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 short zone of northeast-striking normal faults crosses floor of Hot Creek Valley and piedmont slope flanking Hulligan Mesa. 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 Ekren and others (1973 #2936), the Hulligan Mesa fault mapped and named by Schell (1981 #2844), and also mapped by Dohrenwend and others (1996 #2846). The fault extends from west of the south end of Hulligan Mesa, across the piedmont slope of eastern Hot Creek Valley, to the low divide between that valley and Big Sand Springs Valley. **Fault ID:** Refers to fault 49 on Plate A7 in Schell (1981 #2844).
County(s) and State(s)	NYE COUNTY, NEVADA
Physiographic	

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on 1:250,000-scale maps of Schell (1981 #2844) and unpublished map of the Tonopah 1?x2?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.
Geologic setting	This short zone of northeast-striking normal faults crosses floor of Hot Creek Valley and piedmont slope flanking Hulligan Mesa.
Length (km)	14 km.
Average strike	N40°E
Sense of movement	Normal *Comments:* (Ekren and others, 1973 #2936; Schell, 1981 #2844; Dohrenwend and others, 1996 #2846)
Dip Direction	NW
Paleoseismology studies	
Geomorphic expression	The fault is expressed by scarps and lineaments on Quaternary alluvium (Ekren and others, 1973 #2936; Schell, 1981 #2844; Dohrenwend and others, 1996 #2846).
Age of faulted surficial deposits	Pleistocene surficial deposits (Dohrenwend and others, 1996 #2846); Quaternary alluvium (Kleinhampl and Ziony, 1985 #2851); early Pleistocene to Pliocene water-laid tuffs (Schell, 1981 #2844).

Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent prehistorical event is not well constrained, Dohrenwend (1996 #2846) suggested a Quaternary time based on reconnaissance photogeologic studies.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* 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, *in* 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. #2936 Ekren, E.B., Hinrichs, E.N., Quinlivan, W.D., and Hoover, D.L., 1973, Geologic map of the Moores Station quadrangle, Nye County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-756, scale 1:48,000. #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. #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.