

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 zone in Oneil Basin (Class A) No. 1572

Last Review Date: 1998-10-13

citation for this record: Oswald, J.A., and Sawyer, T.L., compilers, 1998, Fault number 1572, unnamed fault zone in Oneil Basin, 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 02:36 PM.

Synopsis	Highly distributed group of piedmont and range-front normal faults that bounds the Badlands and extends across Oneil Basin. In this group faults juxtapose Quaternary alluvium against bedrock, form scarps on early to middle Pleistocene alluvium, and are marked by lineaments on Quaternary and Tertiary deposits. Reconnaissance photogeologic mapping of fault related features is the source of data.
Name comments	Refers to faults mapped by Dohrenwend and others (1991 #290), and includes the Oneil Basin fault zone by dePolo (1998 #2845); bounds west side of the Badlands and extends across Oneil Basin. Fault ID: Fault zone shown herein contains fault number WE5C (Oneil Basin fault zone) of dePolo (1998 #2845).

County(s) and State(s)	ELKO COUNTY, NEVADA
Physiographic province(s)	COLUMBIA PLATEAU
Reliability of location	Good Compiled at 1:100,000 scale. <i>Comments:</i> Location based on 1:250,000-scale map of Dohrenwend and others (1991 #290); 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	Highly distributed group of piedmont and range-front normal faults that bound the Badlands and extend across Oneil Basin. The fault juxtaposes Quaternary alluvium against bedrock, forms scarps on early to middle Pleistocene alluvium, and forms lineaments on Quaternary and Tertiary deposits.
Length (km)	20 km.
Average strike	N°5E
Sense of movement	Normal <i>Comments:</i> Dohrenwend and others (1991 #290)
Dip Direction	W; E
Paleoseismology studies	
Geomorphic expression	The fault zone is expressed by Quaternary alluvium juxtaposed against bedrock along range-front faults, scarps on early to middle Pleistocene piedmont slopes, and lineaments on Quaternary alluvium and prominent topographic lineaments on Tertiary deposits.
Age of faulted surficial deposits	Early to middle Pleistocene; Quaternary. The fault displaces alluvium interpreted from photogeologic mapping to be early to middle Pleistocene and Quaternary in age (Dohrenwend and others, 1991 #290).
Historic earthquake	

Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Although timing of the most recent event is not well constrained, Dohrenwend and others (1991 #290; 1996 #2846) suggested an early to middle Pleistocene time based on reconnaissance .
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> 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.
Date and Compiler(s)	1998 John A. Oswald, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#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. #290 Dohrenwend, J.C., McKittrick, M.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Wells 1° by 2° quadrangle, Nevada, Utah, and Idaho: U.S. Geological Survey Miscellaneous Field Studies Map MF-2184, 1 sheet, scale 1:250,000. #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.

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