

# 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 Delano Mountains (Class A) No. 1593

Last Review Date: 1998-10-01

*citation for this record:* Oswald, J.A., and Sawyer, T.L., compilers, 1998, Fault number 1593, unnamed fault east of Delano Mountains, 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.

<b>Synopsis</b>	This group of discontinuous, north-striking normal faults bounds the eastern front of the Delano Mountains and Grassy Hill and includes one northwest-striking fault that bounds the northeastern front of the Delano Mountains. The faults juxtapose Quaternary alluvium against bedrock and forms scarps and (or) lineaments on Quaternary alluvium adjacent to the range front. Reconnaissance photogeologic mapping of fault related features is the source of data. Trench investigations and studies of scarp morphology have not been conducted along the fault.
<b>Name comments</b>	Refers to faults mapped by Dohrenwend and others (1991 #290) along the northeastern and eastern front of the Delano Mountains, and to the east along the eastern range front of Grassy Hill.
<b>County(s) and</b>	

<b>County(s) and State(s)</b>	ELKO COUNTY, NEVADA
<b>Physiographic province(s)</b>	BASIN AND RANGE
<b>Reliability of location</b>	<p>Good Compiled at 1:100,000 scale.</p> <p><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.</p>
<b>Geologic setting</b>	This group of discontinuous, north-striking normal faults bounds the eastern front of the Delano Mountains and Grassy Hill and includes one northwest-striking fault that bounds the northeastern front of the Delano Mountains (Dohrenwend and others, 1991 #290).
<b>Length (km)</b>	17 km.
<b>Average strike</b>	N16°W
<b>Sense of movement</b>	<p>Normal</p> <p><i>Comments:</i> Not studied in detail; sense of movement is inferred from topography.</p>
<b>Dip Direction</b>	E; NE
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	Faults in this group juxtapose Quaternary alluvium against bedrock and form scarps and (or) lineaments on Quaternary alluvium adjacent to the range front (Dohrenwend and others, 1991 #290).
<b>Age of faulted surficial deposits</b>	Quaternary; Tertiary. The northwest-striking range-front fault displaces alluvium interpreted from photogeologic mapping to be Quaternary in age against bedrock and the faults along the eastern front of the Delano Mountains and Grassy Hill also displace Quaternary alluvium (Dohrenwend and others, 1991 #290).
<b>Historic</b>	

<b>earthquake</b>	
<b>Most recent prehistoric deformation</b>	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 a Quaternary and/or late Tertiary time based on reconnaissance photogeologic studies.
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr <i>Comments:</i> A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region.
<b>Date and Compiler(s)</b>	1998 John A. Oswald, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
<b>References</b>	#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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