

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 on east side of Selenite Range (Class A) No. 1616

Last Review Date: 1999-03-09

citation for this record: Sawyer, T.L., and Adams, K., compilers, 1999, Fault number 1616, unnamed fault zone on east side of Selenite Range, 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 02:26 PM.

Synopsis

This relatively long, discontinuous zone is comprised of normal faults that bound the eastern front of the Selenite Range from south end of range northward to east of Luxor Peak. It includes piedmont faults near the range front in western Kumiva Valley east of Mt. Limbo and Purgatory Peak, between Betty Creek and east of Rocky Point Springs, and from east of Selenite Peak to near the north end of the range southeast of Arcturus Mine. The range-bounding faults juxtapose Quaternary alluvium against bedrock and are expressed as abrupt topographic transitions between the piedmont slope and range front. Piedmont faults in the group are expressed as lineaments on Quaternary piedmont alluvium. Reconnaissance photogeologic mapping and regional geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been conducted.

Name comments	Refers to faults mapped by Slemmons (1974, unpublished Lovelock 1? X 2? sheet), Johnson (1977 #2569), and Dohrenwend and others (1991 #285) on the eastern side of the Selenite Range. The faults extend from the south end of range near Winnemucca Lake (a dry lake basin) northward along the east margin of the Selenite Range and western side of Kumiva Valley. The north end of the fault zone is southeast of Arcturus Mine, near the north end of range.
County(s) and State(s)	PERSHING COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Fault locations for the northern half of the fault are primarily based on 1:250,000-scale map of Dohrenwend and others (1991 #285), which was produced by 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. Additional fault locations are from 1:250,000-scale bedrock map of Johnson (1977 #2569). Fault locations were checked against 1:250,000-scale photogeologic map of Slemmons (1974, unpublished Lovelock 1? X 2? sheet).</p>
Geologic setting	This relatively long, discontinuous zone is comprised of normal faults that bound the eastern front of the Selenite Range from south end of range northward to east of Luxor Peak. It includes piedmont faults near the range front in western Kumiva Valley east of Mt. Limbo and Purgatory Peak, between Betty Creek and east of Rocky Point Springs, and from east of Selenite Peak to near the north end of the range southeast of Arcturus Mine (Johnson, 1977 #2569; Dohrenwend and others, 1991 #285).
Length (km)	45 km.
Average strike	N8°E
Sense of movement	<p>Normal</p> <p><i>Comments:</i> Not studied in detail; sense of movement inferred from topography.</p>

Dip Direction	E
Paleoseismology studies	
Geomorphic expression	The range-bounding faults juxtapose Quaternary alluvium against bedrock and are expressed as abrupt topographic transitions between piedmont slope and the range front. Piedmont faults in the zone are expressed as lineaments on Quaternary piedmont alluvium (Johnson, 1977 #2569; Dohrenwend and others, 1991 #285).
Age of faulted surficial deposits	Quaternary alluvium and Quaternary-Tertiary basalt are involved in faulting (Johnson, 1977 #2569; Dohrenwend and others, 1991 #285).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Although timing of most recent event is poorly constrained, a Quaternary time is suggested based on reconnaissance photogeologic mapping of Dohrenwend and others (1991 #285).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> A low slip rate is inferred from a general knowledge of slip rates from other faults in the region.
Date and Compiler(s)	1999 Thomas L. Sawyer, Piedmont Geosciences, Inc. Kenneth Adams, Piedmont Geosciences, Inc.
References	#285 Dohrenwend, J.C., McKittrick, M.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Lovelock 1° by 2° quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2178, 1 sheet, scale 1:250,000. #2569 Johnson, M.G., 1977, Geology and mineral deposits of Pershing County, Nevada: Nevada Bureau of Mines and Geology Bulletin 89, 115 p., scale 1:250,000.

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