

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 near North Valley (Class A) No. 1671

Last Review Date: 1999-06-22

citation for this record: Adams, K., and Sawyer, J.E., compilers, 1999, Fault number 1671, unnamed fault zone near North Valley, 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 distributed group of short faults has intra basin fault in North Valley, range-front faults bounding east and west sides of Fireball Ridge, and intermontane faults in Truckee Range east of Juniper Peak. Fireball Ridge apparently is an uplifted small horst composed of Mesozoic bedrock. 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Name comments	Refers to faults mapped by Slemmons (1968, unpublished Reno 1? X 2? sheet), Wilden and Speed (1974 #3645), Bell (1984 #105), and Greene and others (1991 #3487) in Truckee Range in the vicinity of North Valley.
County(s) and	

County(s) and State(s)	CHURCHILL 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 are primarily based on 1:250,000-scale map of Bell (1981 #2875; 1984 #105). Mapping is from photogeologic analysis of 1:40,000-scale low sun-angle aerial photography, supplemented with 1:12,000-scale aerial photography of selected areas, several low-altitude aerial reconnaissance flights, and field reconnaissance of major structural and stratigraphic relationships. Additional fault locations from reconnaissance photogeologic mapping of Slemmons (1968, unpublished Reno 1? X 2? sheet).</p>
Geologic setting	<p>This distributed group of short faults has intra basin fault in North Valley, range-front faults bounding east and west sides of Fireball Ridge, and intermontane faults in Truckee Range east of Juniper Peak (Slemmons, 1968, unpublished Reno 1? X 2? sheet; Bell, 1984 #105); Fireball Ridge apparently is an uplifted small horst composed of Mesozoic bedrock (Willden and Speed, 1974 #3645; Greene and others, 1991 #3487).</p>
Length (km)	17 km.
Average strike	N19°E
Sense of movement	<p>Normal</p> <p><i>Comments:</i> (Slemmons, 1968, unpublished Reno 1? X 2? sheet)</p>
Dip Direction	SW; SE
Paleoseismology studies	
Geomorphic expression	<p>Intrabasin faults are predominately expressed by short southeast-facing scarps on Quaternary alluvium; an adjacent southwest-facing scarp immediately north of cluster of southeast-facing scarps (Slemmons, 1968, unpublished Reno 1? X 2? sheet). Faults bounding Fireball ridge juxtapose Quaternary alluvium against bedrock (Greene and others, 1991 #3487). Other faults in group are expressed as short north-trending lineaments on Quaternary</p>

	alluvium or Tertiary bedrock (Bell, 1984 #105).
Age of faulted surficial deposits	Quaternary; Tertiary. Faults displace undifferentiated Quaternary alluvium and Tertiary volcanic rocks (Slemmons, 1968, unpublished Reno 1? X 2? sheet, Willden and Speed, 1974 #3645; Bell, 1984 #105; Greene and others, 1991 #3487).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> The timing of most recent event is not well constrained, reconnaissance photogeologic mapping of Bell (1984 #105) and Dohrenwend and others (1996 #2846) supports a Quaternary time for the most recent event and is the basis for the age-category assignment. A latest Quaternary time may be indicated by mapping by Slemmons (1968, unpublished Reno 1? X 2? sheet).
Recurrence interval	
Slip-rate category	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.
Date and Compiler(s)	1999 Kenneth Adams, Piedmont Geosciences, Inc. Janet E. Sawyer, Piedmont Geosciences, Inc.
References	#2875 Bell, J.W., 1981, Quaternary fault map of the Reno 1° by 2° quadrangle, Nevada-California: U.S. Geological Survey Open-File Report 81-982, 62 p., http://pubs.er.usgs.gov/publication/ofr81982 . #105 Bell, J.W., 1984, Quaternary fault map of Nevada—Reno sheet: Nevada Bureau of Mines and Geology Map 79, 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.

#3487 Greene, R.C., Stewart, J.H., John, D.A., Hardyman, R.F., Silberling, N.J., and Sorensen, M.L., 1991, Geologic map of the Reno 1° by 2° quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2154-A, scale 1:250,000.

#3645 Willden, R., and Speed, R.C., 1974, Geology and mineral deposits of Churchill County, Nevada: Nevada Bureau of Mines and Geology Bulletin 83, 95 p.

[Questions or comments?](#)

[Facebook](#) [Twitter](#) [Google](#) [Email](#)

[Hazards](#)

[Design](#) [Ground Motions](#) [Seismic Hazard Maps & Site-Specific Data](#) [Faults](#) [Scenarios](#)

[Earthquakes](#) [Hazards](#) [Data](#) [Education](#) [Monitoring](#) [Research](#)

[Home](#) [About Us](#) [Contacts](#) [Legal](#)