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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.

unnamed faults northern Monte Cristo Mountains (Class A) No. 1694

Last Review Date: 1999-03-24

citation for this record: **Sawyer, T.L., compiler, 1999, Fault number 1694, unnamed faults northern Monte Cristo 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 02:26 PM.**

Synopsis	These possibly related short faults include range-front faults bounding east front and west slope of Bell Mountain and east and west flanks of an unnamed isolated peak to north-northeast, intra-plateau faults between north end of the Monte Cristo Mountains and Broken Hills, and piedmont faults east of Bell Mountain and north of Broken Hills. Reconnaissance photogeologic mapping of the faults and detailed 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 Bell (1984 #105), Greene and others (1991 #3487), and Henry (1996 #3710) at north end of the Monte Cristo Mountains, on either side of Bell Mountain.
County(s) and	CHURCHILL COUNTY, NEVADA

State(s)	MINERAL COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations along east side of Bell Mountain and to north-northeast are based on 1:24,000-scale map of Henry (1996 #3710). Other fault locations are based on 1:250,000-scale map of Bell (1981 #2875; 1984 #105) based on 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.
Geologic setting	These possibly related short faults include range-front faults bounding east front and west slope of Bell Mountain and east and west flanks of an unnamed isolated peak to north-northeast, intra-plateau faults between north end of Monte Cristo Mountains and Broken Hills, and piedmont faults east of Bell Mountain and north of Broken Hills (Bell, 1984 #105; Greene and others, 1991 #3487; Henry, 1996 #3710).
Length (km)	20 km.
Average strike	N6°W
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement from Henry (1996 #3710) and inferred from topography.
Dip Direction	E; SW
Paleoseismology studies	
Geomorphic expression	Most range-front faults juxtaposed older Quaternary alluvium against bedrock and are expressed as abrupt curvilinear east front of Bell Mountain and less abrupt fronts of unnamed peak to the north-northeast (Bell, 1984 #105; Greene and others, 1991 #3487; Henry, 1996 #3710). Fault along southwest slope of Bell Mountain is marked by a (tonal?) lineament (Bell, 1984 #105) that coincides with veins in Tertiary volcanic rocks (Henry, 1996 #3710). Inter-plateau faults are marked by low dissected

	topographic lineaments on Tertiary volcanic and sedimentary rocks, suggesting young movement. Piedmont faults are expressed a short lineaments on piedmont-slope deposits.
Age of faulted surficial deposits	late Quaternary; Quaternary; Tertiary. Henry (1996 #3710) mapped late Quaternary alluvium and older Quaternary alluvium juxtaposed against Tertiary bedrock along east front of Bell Mountain, which is generally consistent with mapping by Bell (1984 #105), and mapped older Quaternary alluvium juxtaposed against Tertiary bedrock along southeast front of the unnamed peak to north-northeast. Bell (1984 #105) mapped lineaments believe to be faults in Tertiary volcanic rocks mapped by Henry (1996 #3710).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent event is not well constrained, a Quaternary time is suggested based on detailed geologic mapping of Henry (1996 #3710) and mapping by Bell (1984 #105).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region and low height of topographic lineaments on Tertiary rocks.
Date and Compiler(s)	1999 Thomas L. 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. #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. #3710 Henry, C.D., 1996, Geologic map of the Bell Canyon quadrangle, western Nevada: Nevada Bureau of Mines and Geology Field Studies Map 11, scale 1:24,000.