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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 southeast Clan Alpine Mountains (Class A) No. 1693

Last Review Date: 1999-03-29

citation for this record: **Sawyer, T.L., compiler, 1999, Fault number 1693, unnamed faults southeast Clan Alpine 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 two short, northeast-striking faults locally bound the southern Clan Alpine Mountains near West Gate and have a total extent of only a few kilometers. The faults appear to juxtapose upper piedmont-slope deposits against bedrock and one of the faults is expressed as a southeast-facing scarp. Reconnaissance photogeologic mapping of the faults and regional geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to faults mapped by Slemmons (1968, unpublished Reno 1? X 2? sheet), Bell (1984 #105), and Greene and others (1991 #3487) along and near southeast side of Clan Alpine Mountains.
County(s) and	CHURCHILL COUNTY, NEVADA

State(s)	CHURCHILL COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations are based on 1:250,000-scale maps of Bell (1984 #105) and Slemmons (1968, unpublished Reno 1? X 2? sheet). Mapping by Bell (1984 #105) is from photogeologic analysis of 1:40,000-scale low sun-angle aerial photography, supplemented with 1:12,000-scale of selected areas, and several low-altitude aerial reconnaissance flights and field reconnaissance of major structural and stratigraphic relationships. Mapping by Slemmons (1968, unpublished Reno 1? X 2? sheet) is from analysis of 1:60,000-scale AMS photography transferred to mylar overlaid onto a 1:250,000-scale topographic map using proportional dividers.
Geologic setting	These two short faults are northeast-striking features that locally bound the southern Clan Alpine Mountains near West Gate (Bell, 1984 #105; Greene and others, 1991 #3487).
Length (km)	5 km.
Average strike	N34°E
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement is inferred from topography and by Slemmons (1968, unpublished Reno 1? X 2? sheet).
Dip Direction	SE
Paleoseismology studies	
Geomorphic expression	Fault appears to juxtapose upper piedmont-slope deposits against bedrock and is expressed as a southeast-facing scarp (Bell, 1984 #105; Greene and others, 1991 #3487).
Age of faulted surficial deposits	Quaternary; Tertiary. Fault displaces undifferentiated Quaternary piedmont-slope deposits and juxtaposes these deposits against Tertiary and older bedrock (Bell, 1984 #105; Greene and others,

	1991 #3487).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent paleoevent is not well constrained, a Quaternary time is suggested based on the mapping of Slemmons (1968, unpublished Reno 1? X 2? sheet), Bell (1984 #105), and Greene and others (1991 #3487).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Not studied in detail. A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region.
Date and Compiler(s)	1999 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#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.