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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 in the southern part of the Trinity Range (Class A) No. 1630

Last Review Date: 1999-03-10

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Synopsis	This widely distributed group of faults is comprised of rang-front, intermontane, and piedmont faults that bound the southern part of the Trinity Range. The northwest- to northeast-striking, range-front faults are discontinuous along the western and eastern margins of the southern Trinity Range west of Lovelock, the intermontane faults are within this part of the range, and a few piedmont faults are located west of Lowry Well and north of Granite Point. The longer and more continuous faults are generally within bedrock of the Trinity Range, but the presence of offset Quaternary alluvium and Quaternary-Tertiary basalt provide evidence of Quaternary movement. The range-front faults juxtapose Quaternary alluvium and Quaternary-Tertiary basalt against bedrock and are expressed by relatively minor topographic escarpments. West- and north-facing scarps on Quaternary alluvium on the west side of Trinity Peak and on the

	north side of Ragged Top Mountain, respectively, also mark these faults. The intermontane faults form a northward-bifurcating pattern expressed by prominent topographic lineaments formed by aligned sections of stream drainages and saddles, and hillside benches. Intermontane faults also traverse small basins where they offset or juxtapose Quaternary alluvium and Quaternary-Tertiary basalt against 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 along the western and eastern margins of the southern Trinity Range from west of Toulon Lake to west of Lovelock, intermontane faults within the southern part of the Trinity Range from east of Ragged Top Mountain north to north of Trinity Peak, and a few piedmont faults west of Lowry Well and about 5 km north of Granite Point.
County(s) and State(s)	PERSHING COUNTY, NEVADA CHURCHILL COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations are primarily based on 1:250,000-scale maps of Johnson (1977 #2569) and Dohrenwend and others (1991 #285). Dohrenwend and others (1991 #285) map 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. Fault locations checked against 1:250,000-scale photogeologic map of Slemmons (1968, unpublished Reno 1? X 2? sheet; 1974, unpublished Lovelock 1? X 2? sheet).
Geologic setting	This widely distributed zone is comprised of northwest- to northeast-striking, range-front faults that discontinuously bound the western and eastern margins of the southern Trinity Range west of Lovelock, intermontane faults within this part of the range, and a few piedmont faults west of Lowry Well and north of Granite Point (Johnson, 1977 #2569; Dohrenwend and others, 1991 #285). The longer and more continuous faults are generally within bedrock of the Trinity Range.

Length (km)	32 km.
Average strike	N4°W
Sense of movement	Normal *Comments:* Inferred from topography and as shown by Dohrenwend and others (1991 #285).
Dip Direction	W; E
Paleoseismology studies	
Geomorphic expression	Range-front faults are expressed by relatively minor topographic escarpments (Johnson, 1977 #2569; Dohrenwend and others, 1991 #285). West- and north-facing scarps on Quaternary alluvium also mark also mark these faults (Dohrenwend and others, 1991 #285). Intermontane faults form a northward bifurcating pattern expressed by prominent topographic lineaments consisting of aligned sections of stream drainages and saddles, and hillside benches. The longer and more continuous faults are generally within the Trinity Range, but offset Quaternary alluvium and Quaternary-Tertiary basalt, providing evidence of young movement (Johnson, 1977 #2569).
Age of faulted surficial deposits	Pleistocene alluvium , Quaternary-Tertiary basalt, and Tertiary sediment are offset by these faults (Johnson, 1977 #2569; Dohrenwend and others, 1991 #285). The longer and more continuous faults are generally within the Trinity Range, but offset Quaternary alluvium and Quaternary-Tertiary basalt, providing evidence of young movement (Johnson, 1977 #2569).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent event is not well constrained, a Pleistocene time is suggested based on reconnaissance photogeologic mapping of Dohrenwend and others (1991 #285) and bedrock mapping by Johnson (1977 #2569). A latest Quaternary time is suggested by Slemmons (1968, unpublished Reno 1? X 2? sheet) for the southernmost fault in the group. The assigned age category is based on the published sources even though there is a suggestion that the

	timing of the most recent event may be characterized by a younger age category.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low slip rate is inferred from a general knowledge of slip rates from other faults in the region.
Date and Compiler(s)	1999 Kenneth Adams, Piedmont Geosciences, Inc. Thomas L. Sawyer, 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.