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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.

Sacrament Pass fault (Class A) No. 1245

Last Review Date: 2000-11-03

citation for this record: **Redsteer, M.H., compiler, 2000, Fault number 1245, Sacrament Pass fault, 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 02:16 PM.**

Synopsis	The Sacramento Pass fault is composed of subparallel, northeast-trending lineaments and short down-to-the-southeast scarps that cross Silver Creek, 5 km north of Baker, Nevada. The fault scarps and lineaments are coincident with the contact between Quaternary alluvium and Tertiary conglomerate on the geologic map of the Lehman Cave quadrangle. Reconnaissance photogeologic mapping and limited analysis of scarp morphology and geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Referred to as the Sacramento Pass fault by Schell (1981 #2843) and consisting of northeast-trending fault scarps located 5 km north of Baker, Nevada, that cross Silver Creek, on the southeastern flank of the Snake Range.

	Fault ID: Includes fault number 121 of Schell (1981 #2843).
County(s) and State(s)	WHITE PINE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on 1:250,000-scale map of Dohrenwend and others (1992 #2480). Mapping based on photogeologic analysis of primarily 1:24,000-scale color aerial photography supplemented with 1:60,000-scale black-and-white aerial photography, transferred by inspection to 1:62,500-scale topographic maps and photographically reduced and directly transferred to 1:250,000-scale topographic maps, and subsequent mapping by photogeologic 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.
Geologic setting	The Sacrament Pass fault was mapped by Schell (1981 #2843) and Dohrenwend and others (1992 #2480), and is located on the Lehman Caves 7.5-minute quadrangle of Miller and others (1995 #4404; 1999 #4408). This fault is northeast of the southern Snake Range, where rocks exposed include Late Proterozoic and Cambrian units as well as a Paleozoic sequence of miogeoclinal strata that was deposited on the western margin of North America. These units are metamorphosed and intruded by Jurassic granite. The fault is located within the fault-bound depression of the Sacramento Pass area. Tertiary rocks deposited within this depression include lava flows and tuffs, lacustrine limestone, Tertiary conglomerate, and alluvial-fan deposits, which have been subdivided into older and younger Quaternary units (Miller and others, 1995 #4404; 1999 #4408). The Tertiary conglomerate contains cobbles that were shed from uplifted units into this depression, and contain clasts with Miocene fission-track ages, constraining fault movement to be Miocene and younger (Miller, 1989 #4405). The fault is located at the contact between Tertiary conglomerate and older Quaternary alluvial-fan sediment that have been incised.
Length (km)	13 km.

Average strike	N25°E
Sense of movement	Normal
Dip Direction	SE
Paleoseismology studies	
Geomorphic expression	The faults are mapped by Dohrenwend and others (1992 #2480) and Miller and others (1995 #4404; 1999 #4408) on gentle southeast-facing piedmont slopes at the contact between Quaternary alluvium and Tertiary conglomerate. Described by Schell (1981 #2843) as a zone of short scarps, these features exhibit little to no topographic expression. These fault seem to crosscut a large embayment in the Snake Range, and may be providing structural linkage between faults along the range front to the north [1246] and southwest [1433].
Age of faulted surficial deposits	Miocene and Quaternary sediment. Dohrenwend and others (1992 #2480) did not differentiate any of the Quaternary units along these faults.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Dohrenwend and others (1992 #2480) considered the last fault movement to be of Quaternary age.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category is assigned on the basis of poor geomorphic preservation of mapped fault scarps, and relative inactivity of similar distributed faults in the Basin and Range province.
Date and Compiler(s)	2000 Margaret Hisa Redsteer, U.S. Geological Survey
References	#2480 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Ely 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey

	Miscellaneous Field Studies Map MF-2181, 1 sheet, scale 1:250,000. #4405 Miller, E.L., Gans, P.B., and Gleadow, A.J.W., 1989, Uplift history of the Snake Range metamorphic core complex, Basin and Range Province, USA, from apatite fission track data: Eos, Transactions of the American Geophysical Union, v. 70, p. 1309. #4408 Miller, E.L., Gans, P.B., Grier, S.P., Higgins, C.C., and Lee, J., 1999, Geologic map of the Old Mans Canyon quadrangle, Nevada: Nevada Bureau of Mines and Geology Field Studies Map 21, scale 1:24,000. #4404 Miller, E.L., Grier, S.P., and Brown, J.L., 1995, Geologic map of the Lehman Caves quadrangle, White Pine County, Nevada: U.S. Geological Survey Geologic quadrangle Map GQ-1758, 1 sheet, scale 1:24,000. #2843 Schell, B.A., 1981, Faults and lineaments in the MX Sitting Region, Nevada and Utah, Volume I: Technical report to U.S. Department of [Defense] the Air Force, Norton Air Force Base, California, under Contract FO4704-80-C-0006, November 6, 1981, 77 p.