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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.

The Cove fault (Class A) No. 1390

Last Review Date: 1998-07-11

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1390, The Cove 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 02:14 PM.**

Synopsis	This arcuate zone of down-to-the-east and southeast normal faults bounds east flank of the Horse Range and western margin of The Cove. Reconnaissance photogeologic mapping of the fault zone is the source of data. Trench investigations and studies of scarp morphology have not been completed.
Name comments	The northern part of the fault was mapped and named by Schell (1981 #2844) and subsequently Dohrenwend and others (1991 #287) mapped the fault and additional faults northeast of Wells Station Summit bounding The Cove. The eastward-curving arcuate fault extends from near Wells Station Summit northward along east flank of Horse Range to west of the south end of the Preston fault [1389]. North end of fault is about 15 km southeast of Lund. **Fault ID:** Refers to number 144 on Plate A6 in Schell (1981 #2844).

County(s) and State(s)	WHITE PINE COUNTY, NEVADA NYE 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 maps of Schell (1981 #2844) and of Dohrenwend and others (1991 #287). Original mapping by Schell (1981 #2843; 1981 #2844) 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 field verification. Mapping by Dohrenwend and others (1991 #287) based on 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	This arcuate zone of down-to-the-east and southeast normal faults bounds east flank of the Horse Range and western margin of The Cove.
Length (km)	21 km.
Average strike	N°30E
Sense of movement	Normal *Comments:* (Schell, 1981 #2844)
Dip Direction	E; SE
Paleoseismology studies	
Geomorphic expression	The fault is expressed by discontinuous fault scarps juxtaposing Quaternary alluvium against bedrock and by scarps on Quaternary alluvium, abrupt hillslope-piedmont transitions, and by lineaments on Quaternary deposits.
Age of faulted surficial	Late to Middle Quaternary (15,000 to 700,000 k.y.; probably less

surficial deposits	than 200,000 k.y.) (Schell, 1981 #2843).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Although timing of most recent prehistorical event is not well constrained, Schell (1981 #2844) suggested a late Quaternary time based on a reconnaissance study of geomorphology and soil development. Dohrenwend (1996 #2846) suggested a Quaternary time based on a reconnaissance photogeologic study.
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.
Date and Compiler(s)	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#287 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Lund 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2180, 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, *in* 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. #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. #2844 Schell, B.A., 1981, Faults and lineaments in the MX Siting Region, Nevada and Utah, Volume II: 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, 29 p., 11 pls., scale 1:250,000.