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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 fault zone south of Bull Run Mountains (Class A) No. 1551

Last Review Date: 1999-01-08

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1999, Fault number 1551, unnamed fault zone south of Bull Run 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 02:36 PM.**

Synopsis	This fault zone bounds the southern Bull Run Mountains range-front and contains a piedmont fault in northwestern Bull Run Basin, near Bull Run Reservoir. Reconnaissance photogeologic mapping and bedrock mapping of the faults 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Name comments	Refers to faults mapped by Slemmons (1966, unpublished McDermitt 1:250,000-scale map), Coats (1987 #2861), and Dohrenwend and Moring (1991 #284) along the south side of the Bull Run Mountains and in northwestern Bull Run Basin.,Refers to faults mapped by Slemmons (1966, unpublished McDermitt 1:250,000-scale map), Coats (1987 #2861), and Dohrenwend and Moring (1991 #284) along the south side of the Bull Run

	Mountains and in northwestern Bull Run Basin.
County(s) and State(s)	ELKO COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE COLUMBIA PLATEAU
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations primarily based on 1:250,000-scale map of Dohrenwend and Moring (1991 #284) which 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. The location of additional faults is from 1:250,000-scale geologic mapping of Coats (1987 #2861).
Geologic setting	This fault zone bounds the southern Bull Run Mountains range-front and contains a piedmont fault in northwestern Bull Run Basin, near Bull Run Reservoir (Coats, 1987 #2861; Dohrenwend and Moring, 1991 #284). Dohrenwend and Moring (1991 #284) show an older Tertiary structure continuing to the south along the east flanks of Lime Mountain and Wilson Peak.
Length (km)	11 km.
Average strike	N61°E
Sense of movement	Normal *Comments:* Not studied in detail; normal sense of movement inferred from topography.
Dip Direction	S
Paleoseismology studies	
Geomorphic expression	The range-front faults are expressed as the abrupt linear front of the Bull Run Mountains. The piedmont fault juxtaposes Quaternary alluvium against bedrock and also is expressed as a topographic lineament (Coats, 1987 #2861; Dohrenwend and Moring, 1991 #284).
Age of faulted	Quaternary; Tertiary; Paleozoic. Faults juxtapose Quaternary

surficial deposits	alluvium against Tertiary and Paleozoic bedrock and displace Tertiary rocks (Coats, 1987 #2861; Dohrenwend and Moring, 1991 #284).
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 reconnaissance photogeologic mapping of Dohrenwend and Moring (1991 #284).
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)	1999 Kenneth Adams, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2861 Coats, R.R., 1987, Geology of Elko County, Nevada: Nevada Bureau of Mines and Geology Bulletin 101, 112 p., scale 1:250,000. #284 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the McDermitt 1° by 2° quadrangle, Nevada, Oregon, and Idaho: U.S. Geological Survey Miscellaneous Field Studies Map MF-2177, 1 sheet, scale 1:250,000.