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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 near Evans and Button Lakes (Class A) No. 1528

Last Review Date: 1999-01-27

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1999, Fault number 1528, unnamed faults near Evans and Button Lakes, 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 02:50 PM.**

Synopsis	These three faults along the margin of Evans Lake and Button Lake occur within an older, distributed zone of short intra-plateau faults that extends across southwestern Owyhee Desert from the Red Hills eastward across North Fork of the Little Humboldt River. Only the faults that demonstrate evidence of Quaternary movement in abrupt well-defined scarps that juxtapose Quaternary alluvium against bedrock are shown herein. Reconnaissance photogeologic mapping of the fault is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to three faults within a group of older faults mapped Dohrenwend and Moring (1991 #284) in southwestern Owyhee Desert.

County(s) and State(s)	ELKO COUNTY, NEVADA HUMBOLDT 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 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.
Geologic setting	These three faults along the margin of Evans Lake and Button Lake occur within an older, distributed zone of short intra-plateau faults that extends across southwestern Owyhee Desert from the Red Hills eastward across North Fork of the Little Humboldt River (Dohrenwend and Moring, 1991 #284).
Length (km)	12 km.
Average strike	N81°W
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement is inferred from topography.
Dip Direction	N
Paleoseismology studies	
Geomorphic expression	Faults bounding Evans Lake and bounding and near Button Lake are expressed as abrupt well-defined scarps and juxtapose Quaternary alluvium against bedrock (Dohrenwend and Moring, 1991 #284).
Age of faulted surficial deposits	Quaternary and Tertiary. Many of the nearby faults primarily displace Tertiary volcanic and sedimentary rocks (Willden, 1964 #3002; Coats, 1987 #2861) and are not shown herein. However, evidence of Quaternary movement is provided by faults bounding Evans Lake and bounding and near Button Lake that are expressed as abrupt well-defined scarps and juxtapose Quaternary

	alluvium against bedrock (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. #3002 Willden, R., 1964, Geology and mineral deposits of Humboldt County, Nevada: Nevada Bureau of Mines and Geology Bulletin 59, 154 p., scale 1:250,000.