

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 east of the Highland Range (Class A) No. 1735

Last Review Date: 2001-11-21

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Synopsis	These north- and east-striking faults are located in the piedmont slopes east of the Highland Range and south of the Pioche Hills. The north-striking faults could reflect a basin-bounding structure in the west part of the basin beneath Meadow Valley. The setting of the east-striking fault is obscure because such faults are rare in the area. Nothing is known of the geomorphic expression of these faults other than their facing direction of east and south. They are apparently formed mostly on Quaternary/Tertiary alluvium. No detailed studies are known, no recurrence times reported, and no scarp-height or stratigraphic-offset data allow for estimating the slip rate closer than the slowest category of < 0.2 mm/yr.
Name comments	Refers to previously unnamed faults in the piedmont east of the Highland Range west and north of Cathedral Gorge State Park.

	Two widely separated northerly striking faults are located between Bennett Spring on the south and the latitude of Highland Peak on the north, and an east-striking fault is located about 3 km south of Caselton Heights.
County(s) and State(s)	LINCOLN COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. <i>Comments:</i> The fault traces are shown in an unpublished 1:250,000-scale map by J. C. Dohrenwend of Quaternary faults in the 1? x2? Caliente sheet (published at 1:1,000,000 by Dohrenwend and others, 1996 #2846). The unpublished map was produced by photogeologic analysis of 1:58,000 nominal-scale, color infrared photography. The photogeologic mapping was transferred directly to 1/2? x 1? topographic quadrangle maps enlarged to the scale of the photographs and then reduced to and compiled on the 1:250,00 Caliente sheet.
Geologic setting	These north- and east-striking faults are located in the piedmont slopes east of the Highland Range and south of the Pioche Hills. The north-striking faults could reflect a basin-bounding structure in the west part of the basin beneath Meadow Valley where gravity data (Blank and Kucks, 1989 #4714) suggest the main basin-bounding fault (Rowley and Shroba, 1991 #4690). The geologic setting of the east-striking fault is obscure because such faults are rare in the area (Ekren and others, 1977 #1036).
Length (km)	14 km.
Average strike	N49°E
Sense of movement	Normal <i>Comments:</i> Inferred on the basis of location within an extensional tectonic province.
Dip Direction	E; S
Paleoseismology studies	

Geomorphic expression	Nothing is known of the geomorphic expression of these faults other than their facing direction of east and south as indicated in an unpublished compilation of Quaternary faults in the Caliente 1? x2? sheet by J. C. Dohrenwend (published at 1:1,000,000 by Dohrenwend and others, 1996 #2846).
Age of faulted surficial deposits	The faults are located on piedmont slopes and their traces are probably in Quaternary/Tertiary alluvium and possibly also in late Tertiary basin fill deposits of the Panaca Formation (Ekren and others, 1977 #1036).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Although timing of the most recent event is not well constrained, reconnaissance studies by Dohrenwend and others (1996 #2846) suggest a Quaternary time based on photogeologic interpretation.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region.
Date and Compiler(s)	2001 R. Ernest Anderson, U.S. Geological Survey, Emeritus
References	#4714 Blank, H.R., and Kucks, R.P., 1989, Complete-Bouguer gravity anomaly map of the USGS BARCO project area, southwestern Utah, southeastern Nevada, and northwestern Arizona: U.S. Geological Survey Open-File Report 89-432, 1 pl., 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, <i>in</i> 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. #1036 Ekren, E.B., Orkild, P.P., Sargent, K.A., and Dixon, G.L.,

1977, Geologic map of Tertiary rocks, Lincoln County, Nevada:
U.S. Geological Survey Miscellaneous Investigations Map I-
1041, 1 sheet, scale 1:250,000.

#4690 Rowley, P.D., and Shroba, R.R., 1991, Geologic map of the
Indian Cove quadrangle, Lincoln County, Nevada: U.S.
Geological Survey Geologic quadrangle Map GQ-1701, scale
1:24,000.

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