

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](#).

East Belted Range fault (Class A) No. 1083

Last Review Date: 1998-12-07

citation for this record: Anderson, R.E., compiler, 1998, Fault number 1083, East Belted Range 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 02:19 PM.

Synopsis	The East Belted Range fault consists of two possibly unrelated north-northwest-trending groups of fault traces on the east flank of the Belted Range. Northern and southern groups of traces are separated by about 10 km. The southern group of traces is marked by faint lineaments or scarps in Quaternary deposits. The northern group of traces is similarly marked by fault-related lineaments on Quaternary deposits or erosional surfaces, but it is also marked by faults that juxtapose Quaternary alluvium against bedrock. No field data are available, and neither the dip, dip direction, displacement sense, recurrence interval nor slip rate is known; there is some doubt as to whether or not the northern group of faults has a Quaternary displacement history.
Name comments	Name taken from Piety (1995 #915) who applied it to two widely separated groups of north-northwest-striking Quaternary fault traces. A northern group of traces is present in the Goldfield sheet

	<p>and consists of two traces that were identified by Dohrenwend and others (1992 #289) but not by Reheis (1992 #1604), and a southern group of traces is present in the Caliente sheet and was identified in both studies. The two groups are each about 7 km long but do not lie exactly along strike of one another, and they are separated by about 10 km and may not represent a single fault. The fault zone is along the east flank of the northern part of the Belted Range.</p> <p>Fault ID: Refers to fault EBR of Piety (1995 #915).</p>
County(s) and State(s)	NYE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Compiled from photogeologic mapping by Reheis (1992 #1604) based on aerial photographs at scales of 1:60,000 and 1:80,000; and from photogeologic mapping by Dohrenwend and others (1992 #289) based on aerial photographs at scales of 1:115,000, 1:124,000, and 1:58,000.</p>
Geologic setting	A north-northwest-striking fault zone located along the east flank of the north-trending Belted Range, western Basin and Range.
Length (km)	29 km.
Average strike	N2°W
Sense of movement	<p>Normal</p> <p><i>Comments:</i> Reheis (1992 #1604) shows the most continuous fault in the southern group of traces as having sinistral normal (down to west) displacement as determined from photogeologic studies.</p>
Dip Direction	<p>E; W</p> <p><i>Comments:</i> Reheis (1992 #1604) shows the southern group of fault traces as marked by east- and southeast-facing scarps, possibly suggesting that the faults dip east. No information is available for the northern group, but late Tertiary strata in that part of the Belted Range dip eastward and are down-faulted to the</p>

	west (Ekren and others, 1967 #4695), possibly suggesting a west dip for the faults mapped by Dohrenwend and others (1992 #289). Ekren and others (1967 #4695) also show some buried faults east of the range with down-to-the-west displacement, possibly suggesting west dip.
Paleoseismology studies	
Geomorphic expression	Reheis (1992 #1604) characterizes the southern group of traces as marked by faint lineaments or scarps in Quaternary deposits. Similarly, Dohrenwend and others (1992 #289) show the north group as marked by fault-related lineaments on Quaternary depositional or erosional surfaces and as faults juxtaposing Quaternary alluvium against bedrock. No field data are available.
Age of faulted surficial deposits	Quaternary
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> No subdivision of Quaternary surficial deposits has been made along the east flank of the Belted Range (Ekren and others, 1967 #4695), and no field study of the faults has been made.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> Not reported; low slip rate selected on the basis of the faults geomorphic expression. The possibility exists that the northern part of this fault has had no Quaternary displacement (Reheis, 1992 #1604).
Date and Compiler(s)	1998 R. Ernest Anderson, U.S. Geological Survey, Emeritus
References	#289 Dohrenwend, J.C., Schell, B.A., McKittrick, M.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Goldfield 1° by 2° quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies

Map MF-2183, 1 sheet, scale 1:250,000.

#4695 Ekren, E.B., Rogers, C.L., Anderson, R.E., and Botinelly, T., 1967, Geologic map of the Belted Peak quadrangle Nye County, Nevada: U.S. Geological Survey Geologic quadrangle Map GQ-606, scale 1:62,500.

#915 Piety, L.A., 1995, Compilation of known and suspected Quaternary faults within 100 km of Yucca Mountain, Nevada and California: U.S. Geological Survey Open-File Report 94-112, 404 p., 2 pls., scale 1:250,000.

#1604 Reheis, M.C., 1992, Aerial photographic interpretation of lineaments and faults in late Cenozoic deposits in the Cactus Flat and Pahute Mesa 1:100,000 quadrangles and the western parts of the Timpahute Range, Pahrnagat Range, Indian Springs, and Las Vegas 1:100,000 quadrangles, Nevada: U.S. Geological Survey Open-File Report 92-193, 14 p., 3 pls., scale 1:100,000.

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