Jump to Navigation

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 Antelope Mountain (Class A) No. 836

Last Review Date: 2002-12-06

citation for this record: **Personius, S.F., compiler, 2002, Fault number 836, unnamed faults near Antelope Mountain, 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 03:15 PM.**

Synopsis	This series of northwest-trending normal or high-angle faults offset Miocene to e Pliocene mafic volcanic rocks at Antelope Mountain and a large basalt complex i surrounding region in south-central Oregon. The fault cutting Antelope Mountain marked by a southwest facing, 60- to 80-m-high escarpment; other faults in the z form shallow grabens (Antelope Flat, Bear Flat, and Sellers Marsh) filled with Quaternary sediment. No fault scarps on Quaternary deposits have been describe Quaternary displacement is inferred, probably based on the presence of the promi escarpment at Antelope Mountain and the presence of grabens filled with Quatern sediment.
Name comments	These faults offset the volcanic complex near Antelope Mountain, located west o Silver Lake in south-central Oregon (MacLeod and Sherrod, 1992 #3566; Pezzop 1993 #3544; Geomatrix Consultants Inc., 1995 #3593).
County(s) and	KLAMATH COUNTY, OREGON

State(s)	LAKE COUNTY, OREGON
Physiographic province(s)	COLUMBIA PLATEAU BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Location of fault from ORActiveFaults (http://www.oregongeology.org/arcgis/rest/services/Public/ORActiveFaults/MapS downloaded 06/02/2016) attributed to 1:250,000-scale mapping of MacLeod and Sherrod (1992 #3566).
Geologic setting	These northwest-trending faults offset the mafic volcanic vent complex at Antelo Mountain and a large basalt complex in the surrounding region; these rocks are Miocene to Pliocene in age (MacLeod and Sherrod, 1992 #3566).
Length (km)	38 km.
Average strike	N36°W
Sense of movement	Normal *Comments:* These faults are mapped as a normal or high-angle faults by MacLeo Sherrod (1992 #3566), Walker and MacLeod (1991 #3646), and Pezzopane (199 #3544).
Dip Direction	NE; SW
Paleoseismology studies	
Geomorphic expression	The fault cutting Antelope Mountain is marked by a southwest facing, 60- to 80-r high escarpment; other faults in the zone form shallow, northwest-trending grabe (Antelope Flat, Bear Flat, and Sellers Marsh) filled with Quaternary sediment. No scarps on Quaternary deposits have been described along these faults, but Weldo others (2002 #5648) map lineaments across Quaternary deposits based on interpretation of 1:100,000-scale DEMs of the area.
Age of faulted surficial deposits	These faults are mapped as offsetting Miocene to Pliocene volcanic rocks at Ante Mountain and the surrounding basalt complex (MacLeod and Sherrod, 1992 #356 No fault scarps on Quaternary deposits have been described along these faults, although Walker and MacLeod (1991 #3646) map some of these faults juxtaposir Quaternary sediment against volcanic bedrock.
Historic earthquake	

Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Pezzopane (1993 #3544) and subsequent compilations (Geomatrix Consultants Inc., 1995 #3593; Madin and Mabey, 1996 #3575; Weldon and other 2002 #5648) infer Quaternary (<1.6–1.8 Ma) displacement on the faults near Ant Mountain, probably based on the presence of the prominent escarpment at Antelo Mountain and the presence of grabens filled with Quaternary sediment.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No published slip data are available for the unnamed faults near Ante Mountain. However, the prominent fault at Antelope Mountain is marked by a 60 80-m-high escarpment on late Miocene to early Pliocene volcanic rocks; such slip indicate low rates of long-term slip.
Date and Compiler(s)	2002 Stephen F. Personius, U.S. Geological Survey
References	#3593 Geomatrix Consultants, Inc., 1995, Seismic design mapping, State of Oreg Technical report to Oregon Department of Transportation, Salem, Oregon, under Contract 11688, January 1995, unpaginated, 5 pls., scale 1:1,250,000. #3566 MacLeod, N.S., and Sherrod, D.R., 1992, Reconnaissance geologic map o west half of the Crescent 1° by 2° quadrangle, central Oregon: U.S. Geological S Miscellaneous Investigations Map I-2215, 1 sheet, scale 1:250,000. #3575 Madin, I.P., and Mabey, M.A., 1996, Earthquake hazard maps for Oregon: of Oregon, Department of Geology and Mineral Industries Geological Map Serie GMS-100, 1 sheet. #3544 Pezzopane, S.K., 1993, Active faults and earthquake ground motions in O Eugene, Oregon, University of Oregon, unpublished Ph.D. dissertation, 208 p. #3646 Walker, G.W., and MacLeod, N.S., 1991, Geologic map of Oregon: U.S. Geological Survey, Special Geologic Map, 2 sheets, scale 1:500,000. #5648 Weldon, R.J., Fletcher, D.K., Weldon, E.M., Scharer, K.M., and McCrory, 2002, An update of Quaternary faults of central and eastern Oregon: U.S. Geolog Survey Open-File Report 02-301 (CD-ROM), 26 sheets, scale 1:100,000.

Questions or comments?