

# 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 Arrowwood Point (Class B) No. 1805

Last Review Date: 2002-12-09

*citation for this record:* Personius, S.F., compiler, 2002, Fault number 1805, unnamed faults near Arrowwood Point, 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 02:24 PM.

<b>Synopsis</b>	These east-west-trending unnamed faults form a graben in middle (?) Pliocene to Pleistocene basalts in an eruptive center near Arrowwood Point in central Oregon faults are mostly restricted to volcanic rocks and may be related to volcano-tectonic processes. No field studies have been described, but the limited available data have been used to infer middle and late Quaternary displacement. Herein the faults are classified as Class B structures because of their probable volcanic origin.
<b>Name comments</b>	These unnamed faults are located near Arrowwood Point in central Oregon (Swain 1969 #3592; Walker and MacLeod, 1991 #3646; Pezzopane, 1993 #3544).
<b>County(s) and State(s)</b>	CROOK COUNTY, OREGON
<b>Physiographic province(s)</b>	COLUMBIA PLATEAU

<b>Reliability of location</b>	<p>Good Compiled at 1:250,000 scale.</p> <p><i>Comments:</i> Location of fault from ORActiveFaults (<a href="http://www.oregongeology.org/arcgis/rest/services/Public/ORActiveFaults/MapServer">http://www.oregongeology.org/arcgis/rest/services/Public/ORActiveFaults/MapServer</a> downloaded 06/02/2016) attributed to 1:250,000-scale mapping of Swanson (1969 #3592).</p>
<b>Geologic setting</b>	<p>These east-west-trending unnamed faults form a graben in middle (?) Pliocene to Pleistocene basalts in an eruptive center near Arrowwood Point in central Oregon (Swanson, 1969 #3592; Walker and MacLeod, 1991 #3646). The faults are mostly restricted to volcanic rocks and may be related to volcano-tectonic processes.</p>
<b>Length (km)</b>	13 km.
<b>Average strike</b>	N67°W
<b>Sense of movement</b>	<p>Normal</p> <p><i>Comments:</i> These structures are depicted as normal faults on the maps of Swanson (1969 #3592) Walker (1991 #3646), and Pezzopane (1993 #3544).</p>
<b>Dip Direction</b>	S
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	<p>No information on geomorphic expression is available. Swanson (1969 #3592) describes the volcanic rocks in this vicinity as "prominently faulted". Escarpment approximately 30 to 40 m high on Plio-Pleistocene volcanic rocks are coincident with the most prominent of these faults. Weldon and others (2002 #5648) observed lineaments across Quaternary units on 1:100,000-scale DEMs of the area.</p>
<b>Age of faulted surficial deposits</b>	<p>The faults are developed in rocks mapped as middle (?) Pliocene to lower Pleistocene (Swanson, 1969 #3592; Walker and MacLeod, 1991 #3646).</p>
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	<p>middle and late Quaternary (&lt;750 ka)</p> <p><i>Comments:</i> Pezzopane (1993 #3544) used airphoto analysis and Weldon and others (2002 #5648) used analysis of airphotos and 1:100,000-scale DEMs to infer middle and late Quaternary (&lt;700–780 ka) displacement. However, these faults are considered Class B structures herein because of their probable volcanic origin.</p>

<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr  <i>Comments:</i> No published slip rate data are available for the unnamed faults near Arrowwood Point. However, probable 30- to 40-m-high escarpments on middle (Pliocene to lower Pleistocene volcanic rocks indicate low rates of long-term slip.
<b>Date and Compiler(s)</b>	2002 Stephen F. Personius, U.S. Geological Survey
<b>References</b>	#3544 Pezzopane, S.K., 1993, Active faults and earthquake ground motions in Oregon, Eugene, Oregon, University of Oregon, unpublished Ph.D. dissertation, 208 p.  #3592 Swanson, D.A., 1969, Reconnaissance geologic map of the east half of the quadrangle, Crook, Wheeler, Jefferson, Wasco, and Deschutes Counties, Oregon: Geological Survey Miscellaneous Geologic Investigations I-568, 1 sheet, scale 1:250,000.  #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. Geological Survey Open-File Report 02-301 (CD-ROM), 26 sheets, scale 1:100,000.

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