

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 fault south of Shavano Peak (Class A) No. 2311

Last Review Date: 1998-06-10

Compiled in cooperation with the Colorado Geological Survey

citation for this record: Widmann, B.L., compiler, 1998, Fault number 2311, unnamed fault south of Shavano Peak, 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 03:00 PM.

Synopsis

The fault is at the south end of the southern section of the Sawatch fault [2308b] on the flank of Taylor Mountain. The Sawatch fault forms the western margin of the upper Arkansas Valley graben, a Neogene west-tilted structure that forms the northernmost topographically prominent expression of the Rio Grande rift. Tweto and others (1976 #2774) mapped pre-Bull Lake glacial drift against the fault and Bull Lake and younger glacial deposits as concealing the fault. Without better age constraints, and stronger evidence for Quaternary offset, the fault is herein only tentatively considered to have moved during the

	Quaternary.
Name comments	<p>This unnamed fault extends from the south end of southern section of Sawatch fault [2308b]. It is nearly perpendicular to the Sawatch fault at a location just north of the Arkansas River on the flank of Taylor Mountain.</p> <p>Fault ID: Fault number Q59 of Widman and others (1998 #3441).</p>
County(s) and State(s)	CHAFFEE COUNTY, COLORADO
Physiographic province(s)	SOUTHERN ROCKY MOUNTAINS
Reliability of location	<p>Good Compiled at 1:250,000 scale.</p> <p><i>Comments:</i> The fault was mapped at a scale of 1:250,000 by Tweto and others (1976 #2774).</p>
Geologic setting	<p>The Sawatch fault is a high-angle, down-to-the-east normal fault. It forms the eastern margin of the Collegiate Peaks and is on the west margin of the upper Arkansas Valley graben, a Neogene west-tilted structure that forms the northernmost topographically prominent expression of the Rio Grande rift. The graben developed along the axial crest of the Laramide age Sawatch anticline. This unnamed fault is perpendicular to and abuts the south end of the Sawatch fault.</p>
Length (km)	6 km.
Average strike	N15°W
Sense of movement	Normal
Dip Direction	<p>E</p> <p><i>Comments:</i> This fault is down to the east.</p>
Paleoseismology studies	
Geomorphic	No information is reported about the faults geomorphic

expression	expression.
Age of faulted surficial deposits	Tweto and others (1976 #2774) mapped pre-Bull Lake glacial drift as against the fault whereas Bull Lake and younger deposits conceal the fault. The fault is primarily in Precambrian bedrock with about 30 percent of the fault extending into Quaternary deposits.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Tweto and others (1976 #2774) mapped Quaternary pre-Bull Lake deposits as abutting the fault. Without better age constraints, and stronger evidence for Quaternary offset, the fault is tentatively herein considered to have moved during the Quaternary.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> Widmann and others (1998 #3441) placed this fault in the <0.2 mm/yr slip-rate category.
Date and Compiler(s)	1998 Beth L. Widmann, Colorado Geological Survey
References	#2774 Tweto, O., Steven, T.A., Hail, W.J., Jr., and Moench, R.H., 1976, Preliminary geologic map of the Montrose 1° x 2° quadrangle, southwestern Colorado: U.S. Geological Survey Miscellaneous Field Studies Map MF-761. #3441 Widmann, B.L., Kirkham, R.M., and Rogers, W.P., 1998, Preliminary Quaternary fault and fold map and database of Colorado: Colorado Geological Survey Open-File Report 98-8, 331 p., 1 pl., scale 1:500,000.

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