

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](#).

Soup Creek fault (Class A) No. 675

Last Review Date: 1993-04-20

Compiled in cooperation with the Montana Bureau of Mines and Geology

citation for this record: Machette, M.N., compiler, 1993, Fault number 675, Soup Creek 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 02:04 PM.

Synopsis	Poorly studied, range-bounding, normal fault inferred to be at base of Big Belt Mountains. Included here because it may be part of an en echelon system that is comprised of the Hilger [674], Soup Creek, and Canyon Ferry [671] faults. This fault may have had earlier Pleistocene displacement as similarly suggested for the Hilger fault.
Name comments	Johns and others (1982 #259) use this name, which is a small creek near the middle of the fault, and cite Schaffer (1971 #529) as their sole reference. Limits of fault are poorly known; as shown on Johns and others (1982 #259), fault extends from about Beaver Creek (near Nelson) southwest through York to the Canyon Ferry

	<p>fault [671]. However, south of York Creek, the fault's location is poorly known; therefore we only the fault south to York Creek.</p> <p>Fault ID: Refers to fault 124 (Soup Creek fault) of Johns and others (1982 #259).</p>
County(s) and State(s)	LEWIS AND CLARK COUNTY, MONTANA
Physiographic province(s)	NORTHERN ROCKY MOUNTAINS
Reliability of location	<p>Poor Compiled at 1:250,000 scale.</p> <p><i>Comments:</i> Transferred from Johns and others (1982 #259) 1:500,000 scale map to 1:250,000 sheet; then adjusted to fit topography. Trace of fault south of York Canyon to junction with Canyon Ferry fault [671] is conjectural and thus not shown.</p>
Geologic setting	Range-bounding, down-to-the-southwest, high-angle(?) normal fault that bounds southwestern flank of Middleman Mountain in northern part of Big Belt Mountains. Schaffer (1971 #529) reported about 300 m of unknown age offset on this fault.
Length (km)	13 km.
Average strike	N31°W
Sense of movement	Normal
Dip Direction	SW
Paleoseismology studies	
Geomorphic expression	No known scarps; fault is probably inferred on basis of aligned faceted spurs on bedrock of Big Belt Mountains. Johns and others (1982 #259) indicate a low confidence in the fault's existence.
Age of faulted surficial deposits	
Historic earthquake	
Most recent	undifferentiated Quaternary (<1.6 Ma)

prehistoric deformation	<i>Comments:</i> Considered to be a Quaternary structure by Johns and others (1982 #259). Bartholomew and Stickney (1987 #9) found no evidence of late Quaternary movement.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> Inferred low slip rate is based on the absence of fault scarps.
Date and Compiler(s)	1993 Michael N. Machette, U.S. Geological Survey, Retired
References	#9 Bartholomew, M.J., and Stickney, M.C., 1987, Late Quaternary faulting in southwestern Montana: Geological Society of America Abstracts with Programs, v. 19, p. 258-259. #259 Johns, W.M., Straw, W.T., Bergantino, R.N., Dresser, H.W., Hendrix, T.E., McClernan, H.G., Palmquist, J.C., and Schmidt, C.J., 1982, Neotectonic features of southern Montana east of 112°30' west longitude: Montana Bureau of Mines and Geology Open-File Report 91, 79 p., 2 sheets. #529 Schaffer, W.L., 1971, Geology of the Hogback Mountain area, northern Big Belt Mountains, Montana: Albuquerque, University of New Mexico, unpublished M.S. thesis, 66 p., 2 pls., scale 1:24,000.

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