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.

Kissick fault (Class A) No. 647

Last Review Date: 1993-03-31

Compiled in cooperation with the Montana Bureau of Mines and Geology

citation for this record: **Haller, K.M., compiler, 1993, Fault number 647, Kissick 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 02:03 PM.**

Synopsis	Fault is poorly understood, no known studies have been completed at time of this compilation. Age is poorly constrained, movement on fault may be entirely Tertiary in age.
Name comments	Name is possibly from Scholten and others (1955 #69), who showed it as extending a few kilometers north of location shown in this compilation. Fault extends from approximately the latitude of confluence of Hansen Creek and Medicine Lodge Creek southeastward to near head waters of Warm Springs Creek. **Fault ID:** Refers to number 12 (Kissick fault) of Witkind (1975 #317).
County(s) and	

County(s) and State(s)	BEAVERHEAD COUNTY, MONTANA
Physiographic province(s)	NORTHERN ROCKY MOUNTAINS
Reliability of location	Poor Compiled at 1:250,000 scale. *Comments:* Fault trace is from 1:700,000-scale map of Ostenaa and Wood (1990 #318).
Geologic setting	High-angle, down-to-southwest, normal fault that traverses irregular topography on western side of northern part of Tendoy Range (Ostenaa and Wood, 1990 #318).
Length (km)	14 km.
Average strike	N24°W
Sense of movement	Normal *Comments:* (Scholten and others, 1955 #69)
Dip Direction	SW
Paleoseismology studies	
Geomorphic expression	Fault has no geomorphic expression, faceted spurs, or scarps on Tertiary basin fill or Quaternary alluvium, which has limited aerial extent (Ostenaa and Wood, 1990 #318).
Age of faulted surficial deposits	Unknown; Scholten and others (1955 #69) described the fault as juxtaposing Tertiary and Precambrian allochthonous rocks.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Fault has no characteristics of being active in the late Quaternary, but is considered it to be potential seismic source (Ostenaa and Wood, 1990 #318). Fault was active at least as recently as Miocene time (Scholten and others, 1955 #69). Witkind (1975 #317) showed fault as late Cenozoic in age. Pierce and Morgan (1992 #539) indicate that this fault was active during

	the Tertiary but do not preclude Quaternary movement. Because details are lacking, the fault is included in this compilation. Due to the lack of agreement in the timing of the most recent movement, a Quaternary age is assigned here.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Absence of scarps indicates a low slip rate.
Date and Compiler(s)	1993 Kathleen M. Haller, U.S. Geological Survey
References	#318 Ostenaa, D., and Wood, C., 1990, Seismotectonic study for Clark Canyon Dam, Pick-Sloan Missouri Basin Program, Montana: U.S. Bureau of Reclamation Seismotectonic Report 90-4, 78 p., 1 pl. #539 Pierce, K.L., and Morgan, L.A., 1992, The track of the Yellowstone hot spot—Volcanism, faulting, and uplift, *in* Link, P.K., Kuntz, M.A., and Platt, L.B., eds., Regional geology of eastern Idaho and western Wyoming: Geological Society of America Memoir 179, p. 1-53, 1 pl. #69 Scholten, R., Keenmon, K.A., and Kupsch, W.O., 1955, Geology of the Lima region, southwestern Montana and adjacent Idaho: Geological Society of America Bulletin, v. 66, p. 345-404. #317 Witkind, I.J., 1975, Preliminary map showing known and suspected active faults in western Montana: U.S. Geological Survey Open-File Report 75-285, 36 p. pamphlet, 1 sheet, scale 1:500,000.