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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.

Porcupine Mountain faults (Class A) No. 2380

Last Review Date: 1999-10-01

Compiled in cooperation with the Utah Geological Survey

citation for this record: **Black, B.D., Hylland, M.D., and Hecker, S., compilers, 1999, Fault number 2380, Porcupine Mountain faults, 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 02:59 PM.**

Synopsis	Poorly understood Quaternary faults along the west and east sides of Porcupine Mountain, east of Coalville. From Utah, the fault extends about 8 km to the northeast into Wyoming.
Name comments	Named for Porcupine Mountain, which bounds the southwestern portion of the Bear River Valley. **Fault ID:** Refers to fault number 11-20 of Hecker (1993 #642).
County(s) and State(s)	UINTA COUNTY, WYOMING SUMMIT COUNTY, UTAH
Physiographic	

Physiographic province(s)	MIDDLE ROCKY MOUNTAINS
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Mapping at 1:100,000 scale from Bryant (1990 #4511) and J.C. Coogan and J.K. King (unpublished UGS mapping for the Ogden 30' x 60' quadrangle).
Geologic setting	North- to northeast-trending normal faults along the west and east sides of Porcupine Mountain. Porcupine Mountain bounds the southwestern portion of the Bear River Valley, which is characterized by a wide flood plain of the Bear River bordered by extensive alluvial slopes.
Length (km)	35 km.
Average strike	N18°E
Sense of movement	Normal
Dip Direction	W; E
Paleoseismology studies	
Geomorphic expression	In Utah, the fault is principally in Tertiary and Cretaceous bedrock, but buried locally by landslides and late Quaternary surficial deposits. Along the Wyoming border, fault scarps are found on late Quaternary alluvium.
Age of faulted surficial deposits	Quaternary
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Pliocene or Pleistocene gravel deposits are reportedly faulted in Utah. In Wyoming, the northeastern part of the fault has evidence for younger, late Quaternary (<130 ka) movement.
Recurrence	

interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* The lack of clear evidence for late Quaternary displacement in Utah and subdued geomorphic expression of faulting in Quaternary deposits in Wyoming indicate a low slip rate.
Date and Compiler(s)	1999 Bill D. Black, Utah Geological Survey Michael D. Hylland, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#4511 Bryant, B., 1990, Geologic map of the Salt Lake City 30' x 60' quadrangle, north central Utah, and Uinta County, Wyoming: U.S. Geological Survey Miscellaneous Investigations Map I-1944, scale 1:100,000. #642 Hecker, S., 1993, Quaternary tectonics of Utah with emphasis on earthquake-hazard characterization: Utah Geological Survey Bulletin 127, 157 p., 6 pls., scale 1:500,000.