

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](#).

Big Pass faults (Class A) No. 2366

Last Review Date: 1999-10-01

Compiled in cooperation with the Utah Geological Survey

citation for this record: Black, B.D., and Hecker, S., compilers, 1999, Fault number 2366, Big Pass 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 02:57 PM.

Synopsis	Poorly understood Quaternary(?) faults in the Big Pass area in northwestern Utah.
Name comments	Fault ID: Refers to fault number 6-7 of Hecker (1993 #642).
County(s) and State(s)	BOX ELDER COUNTY, UTAH
Physiographic province(s)	BASIN AND RANGE
Reliability of	Poor

location	Compiled at 1:125,000 scale. <i>Comments:</i> Mapped or discussed by Stifel (1964 #4501) and Doelling (1980 #4482). Mapping from Doelling (1980 #4482).
Geologic setting	Range-front normal faults along the east side of the Hogup Mountains in northern Utah. The Hogup Mountains are a low, arid mountain range separating Great Salt Lake from the Great Salt Lake Desert.
Length (km)	17 km.
Average strike	N20°W
Sense of movement	Normal
Dip Direction	NE; SE
Paleoseismology studies	
Geomorphic expression	Main northwest-trending trace at the base of the Hogup Mountains in the north and a secondary southwest-trending trace several kilometers to the south.
Age of faulted surficial deposits	Late Pleistocene(?)
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> The southern fault reportedly displaces Bonneville deposits, which would indicate a late Pleistocene age.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr
Date and Compiler(s)	1999 Bill D. Black, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey

References

#4482 Doelling, H.H., 1980, Geology and mineral resources of Box Elder County, Utah: Utah Geological and Mineral Survey Bulletin 115, 251 p., 1 pl., scale 1:125,000.

#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.

#4501 Stifel, P.B., 1964, Geology of the Terrace and Hogup Mountains, Box Elder County, Utah: Salt Lake City, University of Utah, unpublished Ph.D. dissertation, 173 p.

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