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.

Pine Ridge faults (Class B) No. 2512

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 2512, Pine Ridge 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 02:55 PM.**

Synopsis	Poorly understood suspected Quaternary faults in the Pine Ridge area in eastern Utah, formed from salt dissolution and collapse. Because of their possible non-seismogenic origin, we considered these features to be Class B structures.
Name comments	**Fault ID:** Refers to fault number 18-5 in Hecker (1993 #642).
County(s) and State(s)	SAN JUAN COUNTY, UTAH
Physiographic province(s)	COLORADO PLATEAUS

Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Mapped or discussed by Williams (1964 #2789) and Woodward-Clyde Consultants (1982 #5025). Fault traces from 1:250,000-scale mapping of Williams (1964 #2789).
Geologic setting	The faults border an area of collapse along the crest of the Spanish Valley anticline, southeast of the southern end of the La Sal Mountains in eastern Utah.
Length (km)	6 km.
Average strike	N72°W
Sense of movement	Normal
Dip Direction	SW
Paleoseismology studies	
Geomorphic expression	Bedrock-alluvium contact.
Age of faulted surficial deposits	
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The faults have a suspected Quaternary age based on their similarity to deformation from salt dissolution and collapse to the northwest in Spanish Valley. However, Woodward-Clyde Consultants (1996 #5027) found no evidence for Quaternary tectonism in Moab and Spanish Valleys. Because of their possible non-seismogenic origin, we considered these features to be Class B structures.
Recurrence interval	
Slip-rate	Less than 0.2 mm/yr

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	#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. #2789 Williams, P.L., 1964, Geology, structure, and uranium deposits of the Moab quadrangle, Colorado and Utah: U.S. Geological Survey Miscellaneous Geologic Investigations I-360. #5025 Woodward-Clyde Consultants, 1982, Geologic characterization report for the Paradox Basin study region, Utah study areas, volume II, Gibson Dome: Technical report to Battelle Memorial Institute, Office of Nuclear Waste Isolation, under Contract ONWI-290, variously paginated, scale 1:340,000. #5027 Woodward-Clyde Federal Services, 1996, Evaluation and potential seismic and salt dissolution hazards at the Atlas Uranium Mill tailings site, Moab, Utah: Technical report to Smith Environmental Technologies and Atlas Corporation, under Contract SK9407, variously paginated.