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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.

Andrus Canyon fault (Class A) No. 1013

Last Review Date: 1998-01-28

Compiled in cooperation with the Arizona Geological Survey

citation for this record: **Pearthree, P.A., compiler, 1998, Fault number 1013, Andrus Canyon 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 02:20 PM.**

Synopsis	The Andrus Canyon fault is a short, north-trending, down-to-the-west normal fault on the western Colorado Plateau, just north of the Grand Canyon. There is substantial vertical displacement of Paleozoic rocks across the fault and late Quaternary sediments have been deposited locally along the fault. Although Holocene or late Quaternary activity has been inferred for this fault by some workers, no definitive evidence of faulting of Quaternary deposits has been documented.
Name comments	Mapped, described, and named the "subsidiary fault" by Huntoon (1977 #2185); geology mapped by Huntoon and others (1981 #2100); renamed the Andrus Canyon fault by Menges and

	Pearthree (1983 #2073) for its proximity to Andrus Canyon.
County(s) and State(s)	MOHAVE COUNTY, ARIZONA
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Mapped at 1:48,000 scale by Billingsley and others (1981 #2188), transferred to 1:250,000-scale map for digitization.
Geologic setting	The Andrus Canyon fault is a short, north-trending, down-to-the-west normal fault near the southern end of the Shivwitz Plateau, just north of the Grand Canyon. There is substantial vertical displacement of Paleozoic rocks across the fault.
Length (km)	6 km.
Average strike	N1°W
Sense of movement	Normal *Comments:* Inferred from topography and regional geologic relations.
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	A moderately steep, linear escarpment is formed on Paleozoic bedrock. Locally, young deposition has occurred along the fault, but no alluvial fault scarps have been documented.
Age of faulted surficial deposits	Paleozoic (bedrock); no reported deformation of Quaternary deposits.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Holocene activity on this fault was implied by Huntoon (1977 #2185). This implication was disputed by

	Anderson and this difference in opinion was acknowledged by Huntoon (in Anderson and Huntoon, 1979 #2098). The fault escarpment is moderately steep and linear, and local young deposition at the base of the escarpment is consistent with Quaternary fault activity, but there is no definitive evidence of late Quaternary activity.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No slip rate has been reported owing to a lack of clear Quaternary offset.
Date and Compiler(s)	1998 Philip A. Pearthree, Arizona Geological Survey
References	#2098 Anderson, R.E., and Huntoon, P.W., 1979, Holocene faulting in the western Grand Canyon, Arizona—Discussion and reply: Geological Society of America Bulletin, v. 90, no. 2, p. 221-224. #2188 Billingsley, G.H., Jr., and Huntoon, P.W., 1981, Geologic map of Hurricane fault zone and vicinity, western Grand Canyon, Arizona: Grand Canyon Natural History Association, 1 sheet, scale 1:48,000. #2185 Huntoon, P.W., 1977, Holocene faulting in the western Grand Canyon, Arizona: Geological Society of America Bulletin, v. 88, p. 1619-1622. #2100 Huntoon, P.W., Billingsley, G.W., and Clark, M.D., 1981, Geologic map of the Hurricane fault and vicinity, western Grand Canyon, Arizona: Grand Canyon, Arizona, Grand Canyon Natural History Association, 1 sheet, scale 1:48,000. #2073 Menges, C.M., and Pearthree, P.A., 1983, Map of neotectonic (latest Pliocene-Quaternary) deformation in Arizona: Arizona Geological Survey Open-File Report 83-22, 48 p., scale 1:500,000.