

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](#).

Huachuca fault zone (Class A) No. 932

Last Review Date: 1996-01-03

Compiled in cooperation with the Arizona Geological Survey

citation for this record: Pearthree, P.A., compiler, 1996, Fault number 932, Huachuca fault zone, 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 03:11 PM.

Synopsis	Low, subtle, discontinuous fault scarps trend north to northwest from near the U.S.-Mexico border to Arizona State Route 90. The faults displace lower and middle Pleistocene alluvial-fan deposits by a few meters or less; upper Pleistocene and Holocene deposits are not faulted. Detailed geologic mapping and morphologic fault scarp analysis indicate that the youngest fault rupture occurred 100 k.y. to 200 k.y. ago. It is possible that faulting occurred in the early Quaternary as well.
Name comments	The fault zone was initially mapped and named by Menges and Pearthree (1983 #2073); geology of the fault zone was mapped in detail by Demsey and Pearthree (1994 #2117).

County(s) and State(s)	COCHISE COUNTY, ARIZONA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. <i>Comments:</i> Detailed mapping at 1:24,000-scale with field-checking (Demsey and Pearthree, 1994 #2117).
Geologic setting	This fault zone parallels the general trend of the Huachuca Mountains, typically 3 to 8 km east of the embayed mountain front. The resultant scarps are near the western margin of a moderately deep (<1500 m) Cenozoic sedimentary basin in the upper San Pedro Valley.
Length (km)	25 km.
Average strike	N8°W
Sense of movement	Normal <i>Comments:</i> No fault-plane exposures were observed; sense of movement and fault-dip direction inferred from regional geologic relations.
Dip Direction	E <i>Comments:</i> No fault exposures observed; direction inferred from surface displacement and regional geology.
Paleoseismology studies	
Geomorphic expression	Faulting is expressed as low, subdued, east-facing piedmont fault scarps as much as 3 m high on middle Pleistocene and older alluvial fans and terraces. Analysis of scarp morphology indicates a middle to late Pleistocene scarp age (Demsey and Pearthree, 1994 #2117).
Age of faulted surficial deposits	Early Pleistocene, middle Pleistocene. Age of deposits estimated from soil development on deposits and from geomorphic characteristics of faulted surfaces.

Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) <i>Comments:</i> Scarp morphology suggests an early late Quaternary age. Middle Pleistocene deposits are faulted, and upper Pleistocene and Holocene deposits are not faulted.
Recurrence interval	<i>Comments:</i> Evidence for more than one Quaternary fault movement is ambiguous.
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> A low slip rate is inferred based on about 2 m of vertical displacement since the middle Pleistocene.
Date and Compiler(s)	1996 Philip A. Pearthree, Arizona Geological Survey
References	#2117 Demsey, K.A., and Pearthree, P.A., 1994, Surficial and environmental geology of the Sierra Vista area, Cochise County, Arizona: Arizona Geological Survey Open-File Report 83-22, 14 p., scale 1:500,000. #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.

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