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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.

Phone Booth faults (Class A) No. 982

Last Review Date: 1997-01-30

Compiled in cooperation with the Arizona Geological Survey

citation for this record: **Pearthree, P.A., compiler, 1997, Fault number 982, Phone Booth 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 03:11 PM.**

Synopsis	A moderately sharply defined, narrow graben and a narrow horst on trend with and northwest of the graben are formed on upper Miocene and Pliocene volcanic rock. Total surface displacement is about 30 m. No definitive evidence of Quaternary fault activity has been discovered, but the moderately sharp geomorphic expression of the graben and horst suggest possible Quaternary activity.
Name comments	Mapped but not named by Menges and Pearthree (1983 #2073); investigated and named by Pearthree and others (1996 #2153). The general geology of this area mapped by Ulrich and others (1984 #2157).

County(s) and State(s)	COCONINO COUNTY, ARIZONA
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Trace mapped at 1:100,000 scale; transferred to 1:250,000-scale topographic base map.
Geologic setting	This fault zone is one of several west northwest-trending fault zones located near the Colorado Plateau margin, southwest of Quaternary volcanic rocks of the Pliocene-Pleistocene San Francisco field. Faults displace upper Miocene volcanic rocks about 30 m, and also displace Pliocene volcanic rocks.
Length (km)	6 km.
Average strike	N63°W
Sense of movement	Normal *Comments:* Predominantly normal movement is inferred from topographic relations.
Dip Direction	NE; SW
Paleoseismology studies	
Geomorphic expression	A narrow (<500-m-wide), moderately deep (<30-m-seep) graben is formed in Pliocene volcanic rocks, and a narrow horst bounded by small valleys is approximately on trend with the trough. Scarps bounding the graben and horst are moderately steep.
Age of faulted surficial deposits	Late Miocene, Pliocene
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* No definitive evidence of Quaternary activity has

	been documented, but Pliocene volcanic rocks are displaced by a substantial amount. In addition, the moderately sharp geomorphic expression of the fault scarps suggests possible Quaternary fault activity.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low long-term slip rate is inferred based on 30 m of displacement of upper Miocene (ca. 6 Ma) basalt. The Quaternary slip rate is almost certainly very low.
Date and Compiler(s)	1997 Philip A. Pearthree, Arizona Geological Survey
References	#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. #2153 Pearthree, P.A., Vincent, K.R., Brazier, R., and Hendricks, D.M., 1996, Plio-Quaternary faulting and seismic hazard in the Flagstaff area, northern Arizona: Arizona Geological Survey Bulletin 200, 40 p., 2 pls. #2157 Ulrich, G.E., Billingsley, G.H., Hereford, R., Wolfe, E.W., Nealey, L.D., and Sutton, R.L., 1984, Maps showing geology, structure, and uranium deposits of the Flagstaff 1° by 2° quadrangle, Arizona: U.S. Geological Survey Miscellaneous Investigations Map I-1446, 2 sheets, scale 1:250,000.