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.

unnamed fault east of Mangas (Class A) No. 2137

Last Review Date: 2016-04-22

Compiled in cooperation with the New Mexico Bureau of Geology & Mineral Resources

citation for this record: **Machette, M.N., and Jochems, A.P., compilers, 2016, Fault number 2137, unnamed fault east of Mangas, 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 02:21 PM.**

Synopsis	This short Quaternary fault trace seems to represent minor reactivation of an older northwest-trending Tertiary fault that connects the Mangas (pre-Quaternary) fault on the west with the pre-Quaternary trace of the Hickman fault [2136] on the east. The fault forms a scarp of unknown height on Pliocene to early Pleistocene gravel.
Name comments	The Quaternary trace of this short fault was mapped by Chamberlin and others (1994 #1256). It extends southeast from Cottonwood Draw, and seems to represent reactivation of an older

	Tertiary fault that extends much farther northwest and southeast.
County(s) and State(s)	CATRON COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. *Comments:* Trace from 1:100,000-scale geologic map of the Quemado 30 x 60-minute sheet by Chamberlin and others (1994 #1256) and accurate placement at 1:24,000 scale using photogrammetric methods.
Geologic setting	This northwest-trending primarily Tertiary fault connects the Mangas (pre-Quaternary) fault on the west with the pre-Quaternary trace of the Hickman fault [2136] on the east (Chamberlin and others, 1994 #1256). It is one of several north- to northwest-trending faults that connect a wide belt of northeast-trending faults of Neogene age.
Length (km)	3 km.
Average strike	N23°W
Sense of movement	Normal *Comments:* Shown as a normal fault by Chamberlin and others (1994 #1256).
Dip Direction	SW
Paleoseismology studies	
Geomorphic expression	Fault forms a suspect (not confirmed) southwest-facing scarp on locally derived basin-fill sediment (mainly gravel). No information has been published about the size or morphology of the scarp.
Age of faulted surficial deposits	Chamberlin and others (1994 #1256) showed the fault as offsetting the Quemado Formation, a Pliocene to lower Pleistocene unit that is widespread but locally derived from sources in western New Mexico. The deposits are comprised primarily of unconsolidated to poorly consolidated gravel and

	sand.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Timing poorly controlled. Based on presence of scarp on deposits of possible early Quaternary age (Chamberlin and others, 1994 #1256).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category assigned based on inferred small size of scarp and slip rates determined for similar faults in the region.
Date and Compiler(s)	2016 Michael N. Machette, U.S. Geological Survey, Retired Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1256 Chamberlin, R.M., Cather, S.M., Anderson, O.J., and Jones, G.E., 1994, Reconnaissance geologic map of the Quemado 30 x 60 minute quadrangle, Catron County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Open-File Report 406, 29 p. pamphlet, 1 sheet, scale 1:100,000.