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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.

Caballo fault, southern section (Class A) No. 906b

Last Review Date: 1993-11-29

Compiled in cooperation with the Texas Bureau of Economic Geology

citation for this record: **Collins, E., compiler, 1993, Fault number 906b, Caballo fault, southern section, 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 03:14 PM.**

Synopsis	**General:** The Caballo fault bounds the west side of the Quitman Mountains. The fault is mostly covered although several short scarps are preserved along the northern of its two sections. Reconnaissance studies of scarp morphology and mapping of faulted Quaternary deposits are the sources of data. Trench investigations have not been conducted. **Sections:** This fault has 2 sections. Two possible sections have been suggested by Collins and Raney (1991 #846; 1993 #852), although detailed work along the entire length of the fault has not

	been done. Reconnaissance fieldwork suggests north and south parts of the fault may have had different rupture histories.
Name comments	**General:** Named by Jones and Reaser (1970 #858). Fault extends from about 8 km east of old Fort Quitman, southeastward to Indian Hot Springs. The fault most likely continues southeastward into Mexico beneath young alluvium of the Rio Grande. **Section:** Sections arbitrarily divided near mid point of concealed part of fault on west side of Quitman Mountains.
County(s) and State(s)	HUDSPETH COUNTY, TEXAS
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Locations in New Mexico are based on a 1:250,000-scale map compiled from aerial photographs and 1:24,000- to 1:48,000-scale maps of Jones and Reaser (1970 #858) and Collins and Raney (1991 #846).
Geologic setting	Down-to-southwest fault that bounds the west margin of the Quitman Mountains.
Length (km)	This section is 25 km of a total fault length of 42 km.
Average strike	N30°W (for section) versus N33°W (for whole fault)
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement inferred from topography.
Dip	70°-80° SW *Comments:* Dip based on outcrops of faulted Cretaceous limestone and Pliocene-Pleistocene sediment (Collins and Raney, 1993 #852).
Paleoseismology studies	
Geomorphic	No distinct scarps were found along this section of the fault;

expression	much of it's length is inferred or covered (Collins and Raney, 1993 #852).
Age of faulted surficial deposits	Fault cuts Pliocene-Pleistocene deposits along part of its trace. It also has placed Pliocene-Pleistocene deposits against limestone bedrock in some areas (Jones and Reaser, 1970 #858; Henry, 1979 #959; Collins and Raney, 1991 #846).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Age of youngest faulted deposits is Pleistocene as estimated from development of calcic soils (Collins and Raney, 1993 #852). Scarps were not observed on middle Pleistocene or younger deposits. Reconnaissance fieldwork suggests north and south parts of the fault may have had different rupture histories, although detailed field work along the entire length of the fault has not been done.
Recurrence interval	*Comments:* Not studied in detail, but long recurrence interval inferred from comparison with northern section [906a], which appears more active.
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip rate inferred from comparison with northern section [906a], which appears to be less than 0.2 mm/yr.
Date and Compiler(s)	1993 E.W. Collins, Bureau of Economic Geology, The University of Texas at Austin
References	#846 Collins, E.W., and Raney, J.A., 1991, Tertiary and Quaternary structure and paleotectonics of the Hueco basin, trans-Pecos Texas and Chihuahua, Mexico: The University of Texas at Austin, [Texas] Bureau of Economic Geology Geological Circular 91-2, 44 p. #852 Collins, E.W., and Raney, J.A., 1993, Late Cenozoic faults of the region surrounding the Eagle Flat study area, northwestern trans-Pecos Texas: Technical report to Texas Low-Level Radioactive Waste Disposal Authority, under Contract IAC(92-93)-0910, 74 p.

	#959 Henry, C.D., 1979, Geologic setting and geochemistry of thermal water and geothermal assessment, Trans-Pecos Texas: The University of Texas at Austin, [Texas] Bureau of Economic Geology Report of Investigations 96, 48 p. #858 Jones, B.R., and Reaser, D.F., 1970, Geology of southern Quitman Mountains, Hudspeth County, Texas: The University of Texas at Austin, [Texas] Bureau of Economic Geology Geologic quadrangle Map 39, 24 p. pamphlet, 1 sheet, scale 1:48,000.