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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.

Dugout Wells fault (Class A) No. 923

Last Review Date: 1995-10-17

Compiled in cooperation with the Texas Bureau of Economic Geology

citation for this record: **Collins, E., compiler, 1995, Fault number 923, Dugout Wells 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 03:13 PM.**

Synopsis	Fault is on western side of the Tornillo Graben. The faulted deposits are only briefly described as being Quaternary in age and having a low scarp. Detailed observations and measurements of scarp morphology have not been made, nor has the fault been confirmed by field studies.
Name comments	Named by Stevens (1994 #914). Fault extends from about 2.5 km northeast of Panther Junction to about 0.75 km east of Dugout Wells, Big Bend National Park.
County(s) and State(s)	BREWSTER COUNTY, TEXAS
Physiographic	BASIN AND RANGE

province(s)	BASIN AND RANGE
Reliability of location	Poor Compiled at 1:250,000 scale. *Comments:* Location based on 1:250,000-scale map compiled from 1:65,000-scale aerial photographs by E.W. Collins in 1995 and brief description of Stevens (1994 #914) and P.W. Dickerson (oral commun., 1995).
Geologic setting	This down-to-northeast fault is on the western side of the Tornillo Graben. It may be the same fault that Henry and others (1985 #866) mapped, although they did not find evidence of Quaternary surface rupture.
Length (km)	3 km.
Average strike	N16°W
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement inferred from topography. Some Cenozoic faults in the Big Bend region exhibit oblique and horizontal slip, thus detailed investigations of the Dugout Wells fault are required to determine the actual sense of movement.
Dip Direction	NE
Paleoseismology studies	
Geomorphic expression	Stevens (1994 #914) recognized a low scarp but did not report its heights or slope angles.
Age of faulted surficial deposits	Quaternary. Stevens (1994 #914) reported Quaternary deposits as faulted but did not describe the fault or faulted deposits in detail.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Based on Stevens (1994 #914).
Recurrence	

interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Inferred low slip rate based on general knowledge of slip rate estimates for other faults in the region.
Date and Compiler(s)	1995 E.W. Collins, Bureau of Economic Geology, The University of Texas at Austin
References	#866 Henry, C.D., Gluck, J.K., and Bockoven, N.T., 1985, Tectonic map of the Basin and Range province of Texas and adjacent Mexico: The University of Texas at Austin, [Texas] Bureau of Economic Geology Miscellaneous Map 36, 1 sheet, scale 1:500,000. #914 Stevens, J.B., 1994, Stop 8—Dugout Wells, *in* Laroche, T.M., and Viveiros, J.J., eds., Structure and tectonics of the Big Bend area and southern Permian Basin, Texas: West Texas Geological Society Publication 94-95, p. 87.