

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](#).

North Sierra Diablo fault (Class A) No. 909

Last Review Date: 1993-12-30

Compiled in cooperation with the Texas Bureau of Economic Geology

citation for this record: Collins, E., compiler, 1993, Fault number 909, North Sierra Diablo 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 03:14 PM.

Synopsis	These short, west-northwest-trending fault scarps bound the northern margin of Sierra Diablo and Salt Basin. Mapping and reconnaissance field studies of fault scarps have been conducted, but not trench investigations.
Name comments	Named by Collins and Raney (1993 #852) for their proximity to the northern margin of Sierra Diablo. This short fault is about 30 km south-southeast of Salt Flat and extends west from Apache Canyon about 4 km.
County(s) and State(s)	HUDSPETH COUNTY, TEXAS CULBERSON COUNTY, TEXAS

Physiographic province(s)	BASIN AND RANGE
Reliability of location	<p>Good Compiled at 1:250,000 scale.</p> <p><i>Comments:</i> Location based on 1:250,000-scale map compiled from aerial photographs and 1:24,000- to 1:65,000-scale maps of Collins and Raney (1993 #852). Other maps of fault include those by Belcher and others (1977 #875), and Goetz (1977 #863; 1980 #859).</p>
Geologic setting	This down-to-the-north fault bounds the north margin of the Sierra Diablo and Salt Basin. The fault possibly may be a section of the East Sierra Diablo fault [910] (Collins and Raney, 1993 #852). The North Sierra Diablo fault coincides with a part of the Babb flexure (Goetz, 1980 #859).
Length (km)	4 km.
Average strike	N83°W
Sense of movement	<p>Normal</p> <p><i>Comments:</i> Not studied in detail; sense of movement inferred from topography.</p>
Dip Direction	N
Paleoseismology studies	
Geomorphic expression	The westward part of the fault is marked by locally distinct scarps on Quaternary alluvium; elsewhere, the fault is covered or eroded.
Age of faulted surficial deposits	Quaternary
Historic earthquake	
Most recent prehistoric deformation	<p>undifferentiated Quaternary (<1.6 Ma)</p> <p><i>Comments:</i> Based solely on presence of scarp on Quaternary alluvium (Collins and Raney, 1993 #852).</p>

Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> Inferred low slip rate based on general knowledge of slip-rate estimates for other faults in the region.
Date and Compiler(s)	1993 E.W. Collins, Bureau of Economic Geology, The University of Texas at Austin
References	#875 Belcher, R.C., Goetz, L.K., and Muehlberger, W.R., 1977, Map B—Fault scarps within Quaternary units in West Texas, <i>in</i> Goetz, L.K., ed., Quaternary faulting in Salt Basin graben, West Texas: The University of Texas at Austin, unpublished M.S. thesis, 1 pl., scale 1:500,000. #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. #863 Goetz, L.K., 1977, Quaternary faulting in Salt Basin graben, West Texas: The University of Texas at Austin, unpublished M.S. thesis, 136 p. #859 Goetz, L.K., 1980, Quaternary faulting in Salt Basin graben, West Texas, <i>in</i> Dickerson, P.W., and Hoffer, J.M., eds., Trans-Pecos region southeastern New Mexico and West Texas: New Mexico Geological Society, 31st Field Conference, November 6-8, 1980, Guidebook, p. 83-92.

[Questions or comments?](#)

[Facebook](#) [Twitter](#) [Google](#) [Email](#)

[Hazards](#)

[Design Ground Motions](#)[Seismic Hazard Maps & Site-Specific Data](#)[Faults](#)[Scenarios](#)

[Earthquakes](#)[Hazards](#)[Data](#)[Education](#)[Monitoring](#)[Research](#)

[Home](#)[About Us](#)[Contacts](#)[Legal](#)