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.

West Wylie Mountains fault (Class A) No. 919

Last Review Date: 1993-01-25

Compiled in cooperation with the Texas Bureau of Economic Geology

citation for this record: **Collins, E., compiler, 1993, Fault number 919, West Wylie Mountains 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	West of Canning Ridge, a scarp on Quaternary deposits at the southern part of the fault has been confirmed on aerial photographs and by fly-over identification. Field studies of the scarp have not been conducted to characterize its age.
Name comments	Named by Hay-Roe (1957 #867) for the fault that flanks the western side of the Wylie Mountains. Fault is about 6 km west-southwest of Van Horn and extends southeastward along the Wylie Mountains and western edge of Canning Ridge to a point about 9 km east-southeast of Lobo.
County(s) and	CULBERSON COUNTY, TEXAS

State(s)	CULBERSON COUNTY, TEXAS
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Identified on 1:24,000- to 1:65,000-scale photos by Collins and Raney (1993 #852) and compiled on 1:250,000-scale base map. Fault also was mapped by Hay-Roe (1957 #867).
Geologic setting	This down-to-the-west range-front fault separates the northeast Lobo Valley from the Wylie Mountains and Canning Ridge. Little is known about the amount of Quaternary offset or time of most recent movement on the fault.
Length (km)	19 km.
Average strike	N26°W
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement inferred from topography.
Dip Direction	SW; W
Paleoseismology studies	
Geomorphic expression	A distinct scarp on Quaternary alluvial-fan deposits is preserved west of Canning Ridge (Collins and Raney, 1993 #852).
Age of faulted surficial deposits	Quaternary. Fault also cuts older basin-fill (Tertiary) and bedrock deposits (Hay-Roe, 1957 #867; Collins and Raney, 1993 #852).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Not studied in detail. Aerial photographic interpretations and reconnaissance field studies of accessible areas west of the scarp indicate that faulted deposits are probably middle Pleistocene or older (Collins and Raney, 1993 #852).

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)	1993 E.W. Collins, Bureau of Economic Geology, The University of Texas at Austin
References	#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. #867 Hay-Roe, H., 1957, Geology of Wylie Mountains and vicinity, Culberson and Jeff Davis Counties, Texas: The University of Texas at Austin, [Texas] Bureau of Economic Geology Geologic quadrangle Map 21, scale 1:63,360.