

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 faults northeast of Datil (Class A) No. 2126

Last Review Date: 2016-04-13

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 2126, unnamed faults northeast of Datil, 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 02:22 PM.

Synopsis	Little is known about these faults that form the eastern margin of the Datil Mountains and short, subtle basinward scarps. They were mapped on the basis of aerial photography and map interpretation, and form east- and southeast-facing scarps on piedmont-slope deposits of middle (?) Pleistocene age. No scarp profiles have been measured and the age of the piedmont-slope deposits is not well established.
Name comments	These fault scarps were first mapped by Lopez and Bornhorst (1979 #1739) and later confirmed by Machette and McGimsey

	(1983 #1024) on the basis of aerial photo interpretation. They extend discontinuously from the southwest across the piedmont slope on the southeast margin of the Datil Mountains to a point about 20 km northeast of Datil, New Mexico.
County(s) and State(s)	SOCORRO COUNTY, NEW MEXICO CATRON COUNTY, NEW MEXICO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:24,000 scale. <i>Comments:</i> Trace from mapping of Lopez and Bornhorst (1979 #1739), which Machette used to compile the 1:250,000-scale fault map of Socorro quadrangle (Machette and McGimsey, 1983 #1024). Recently digitized at 1:24,000 scale using photogrammetric methods to accurately place fault traces. Also shown on 1:100,000-scale geologic map of Socorro County (Osburn, 1984 #1238).
Geologic setting	These down-to-the-southeast normal faults are parallel to the northwest margin of the San Agustin Plains, which might be controlled by earlier (Tertiary) rifting.
Length (km)	21 km.
Average strike	N24°E
Sense of movement	Normal
Dip Direction	E; SE; W
Paleoseismology studies	
Geomorphic expression	These faults form a main southeast-facing scarp and several short (1–3 km), subtle scarps to the east (basinward) on piedmont-slope deposits. A small, antithetic scarp faces west near the center of the main strand. The scarps largely compliment the regional gradient (to the southeast) of the piedmont and thus do not block drainages. They appear subdued on aerial photography, but no detailed studies have been conducted. Machette and McGimsey (1983 #1024) estimated as much as 5 m of displacement across these scarps.

Age of faulted surficial deposits	No detailed studies or mapping of the faulted deposits have been conducted, but Machette and McGimsey (1983 #1024) inferred that the scarps are formed on piedmont-slope deposits of middle Pleistocene age. These inferences were made of the basis of unpublished mapping and aerial photo interpretation for the Socorro quadrangle (Machette, 1978 #1223; Machette and McGimsey, 1983 #1024).
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) <i>Comments:</i> Based on presence of scarps on deposits suspect to be middle Pleistocene in age.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> Low slip-rate category assigned based on data presented by Machette and McGimsey (1983 #1024) who estimated less than 5 m of displacement of middle (?) Pleistocene deposits.
Date and Compiler(s)	2016 Michael N. Machette, U.S. Geological Survey, Retired Andrew P. Jochems, New Mexico Bureau of Geology & Mineral Resources
References	#1739 Lopez, D.A., and Bornhorst, T.J., 1979, Geologic map of the Datil area, Catron County, New Mexico: U.S. Geological Survey Miscellaneous Investigations Map I-1098, 1 sheet, scale 1:50,000. #1024 Machette, M.N., and McGimsey, R.G., 1983, Map of Quaternary and Pliocene faults in the Socorro and western part of the Fort Sumner 1° x 2° quadrangles, central New Mexico: U.S. Geological Survey Miscellaneous Field Studies Map MF-1465-A, 12 p. pamphlet, 1 sheet, scale 1:250,000. #1223 Machette, M.N., compiler, 1978, Preliminary geologic map of the Socorro 1° by 2° quadrangle, central New Mexico: U.S. Geological Survey Open-File Report 78-607, 1 sheet, scale 1:250,000.

#1238 Osburn, G.R., compiler, 1984, Geology of Socorro County:
New Mexico Bureau of Mines and Mineral Resources Open-File
Report 238, 13 p. pamphlet, 1 sheet, scale 1:200,000.

[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](#)