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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.

unnamed fault near Bridgeport (Class A) No. 2259

Last Review Date: 1997-06-11

Compiled in cooperation with the Colorado Geological Survey

citation for this record: **Widmann, B.L., compiler, 1997, Fault number 2259, unnamed fault near Bridgeport, 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 03:00 PM.**

Synopsis	This fault lies on the northeast margin of the Uncompahgre Uplift southeast of Grand Junction. Quaternary deposits may be offset by this fault across the Gunnison River valley according to Williams (1964 #2789). Based on the timing of abandonment of Unaweep Canyon by the Gunnison River, Cater (1966 #2671) indicated uplift of the Uncompahgre Plateau began in the mid-Pliocene and continued into the Pleistocene, resulting in as much as 640 m of differential uplift. Despite the lack of evidence of faulted Quaternary deposits along this unnamed fault, it has been classified as a Quaternary fault (Kirkham and Rogers, 1981 #792;

	Colman, 1985 #1953; Lettis and others, 1996).
Name comments	This unnamed northwest-trending fault lies on the the northeast margin of the Uncompahgre Uplift near the town of Bridgeport, southeast of Grand Junction. The west end of the fault grades into the Deer Run monocline (Lohman, 1963 #2718). **Fault ID:** Fault 71 in Kirkham and Rogers (1981 #792) and fault number Q9 of Widman and others (1998 #3441).
County(s) and State(s)	DELTA COUNTY, COLORADO MESA COUNTY, COLORADO
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* The fault was mapped at a scale of 1:31,680 by Lohman (1963 #2718; 1965 #2719), and at a scale of 1:250,000 by Williams (1964 #2789) and Lettis and others (1996). The trace used herein is from Williams (1964 #2789).
Geologic setting	This fault is part of the northeast margin of the Uncompahgre Uplift south of Grand Junction. The Uncompahgre Uplift is a northwest-trending, east-tilted fault block. This fault is high-angle, normal ,down to the north, and grades westward into a faulted monocline. The fault lies in a tectonically weakened area above the ancestral Garmesa and Douglass Creek fault zones (Stone, 1977 #2749).
Length (km)	11 km.
Average strike	N72°W
Sense of movement	Normal *Comments:* Kirkham and Rogers (1981 #792) described this fault as normal.
Dip Direction	N
Paleoseismology studies	
Geomorphic	Geomorphic indicators of youthful faulting have not been

expression	reported.
Age of faulted surficial deposits	Williams (1964 #2789) mapped this fault trace as a solid line through a narrow finger of Quaternary alluvium along the Gunnison River valley, suggesting offset of the Quaternary deposits. The Cretaceous Mancos Shale is the next youngest deposit offset by the fault, but the majority of the fault lies in lower Mesozoic bedrock.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Williams (1964 #2789) showed a very small finger of Quaternary alluvium as offset by the fault. Based on the timing of abandonment of Unaweep Canyon by the Gunnison River, Cater (1966 #2671) indicated uplift of the Uncompahgre Plateau began in the mid-Pliocene and continued into the Pleistocene, resulting in as much as 640 m of differential uplift. This structure was mapped as a Quaternary fault by Kirkham and Rogers (1981 #792) and Colman (1985 #1953). Lettis and others (1996) suggested Quaternary movement on many of the faults associated with the Uncompahgre Uplift and map the structure as a fault with known or suspected late Quaternary movement, but they do not discuss this particular fault specifically in the text of their report.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Widmann and others (1998 #3441) placed this structure within the <0.2 mm/yr slip-rate category based on calculations of an overall uplift rate of 0.4 m/1000 yr since 1.8 Ma for the Uncompahgre Uplift (Perry, 1989 #2731).
Date and Compiler(s)	1997 Beth L. Widmann, Colorado Geological Survey
References	#2671 Cater, F.W., Jr., 1966, Age of the Uncompahgre Uplift and Unaweep Canyon, west-central Colorado: U.S. Geological Survey Professional Paper 550-C, 86-92 p. #1953 Colman, S.M., 1985, Map showing tectonic features of late

Cenozoic origin in Colorado: U.S. Geological Survey Miscellaneous Geologic Investigations I-1566, 1 sheet, scale 1:1,000,000.

#4453 Lettis, W., Noller, J., Wong, I., Ake, J., Vetter, U., and LaForge, R., 1996, Draft report, Seismotectonic evaluation of Colorado River storage project-Crystal, Morrow Point, Blue Mesa dams, Smith Fork project-Crawford dam, west-central Colorado: Technical report to U.S. Bureau of Reclamation, Denver, Colorado, 177 p.

#2718 Lohman, S.W., 1963, Geologic map of Grand Junction area, Colorado: U.S. Geological Survey Miscellaneous Geologic Investigations I-404.

#2719 Lohman, S.W., 1965, Geology and artesian water supply of the Grand Junction area, Colorado: U.S. Geological Survey Professional Paper 451, 149 p.

#2731 Perry, T.W.V., 1989, Tectonic inference and computer simulation in stream longitudinal profile evolution, Unaweep Canyon and vicinity, Colorado and Utah: Geological Society of America Abstracts with Programs, v. 21, no. 6, p. 269.

#2749 Stone, D.S., 1977, Tectonic history of the Uncompahgre Uplift, *in* Veal, H.K., ed., Exploration Frontiers of the central and southern Rockies: Rocky Mountain Association of Geologists, 1977 Field Conference Guidebook, p. 23-30.

#3441 Widmann, B.L., Kirkham, R.M., and Rogers, W.P., 1998, Preliminary Quaternary fault and fold map and database of Colorado: Colorado Geological Survey Open-File Report 98-8, 331 p., 1 pl., scale 1:500,000.

#2789 Williams, P.L., 1964, Geology, structure, and uranium deposits of the Moab quadrangle, Colorado and Utah: U.S. Geological Survey Miscellaneous Geologic Investigations I-360.

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