

# 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 near Burns (Class B) No. 2296

Last Review Date: 1997-06-12

### Compiled in cooperation with the Colorado Geological Survey

*citation for this record:* Widmann, B.L., compiler, 1997, Fault number 2296, unnamed faults near Burns, 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 03:02 PM.

<b>Synopsis</b>	These faults were first described by Kirkham and Rogers (1981 #792). Vegetation and topographic lineaments are present in Quaternary pediment gravels. The faults offset pre-Bull Lake deposits and are tentatively attributed to local flowage and dissolution of evaporite deposits from beneath the area. In as much as the faulting may be salt related, we consider these to be Class B structures.
<b>Name comments</b>	This fault number refers to a series of about seven variously oriented faults near the towns of Burns and Sylvan along the Colorado River valley. The faults were first recognized by Kirkham and Rogers (1981 #792).

	<b>Fault ID:</b> Fault 57 in Kirkham and Rogers (1981 #792) and fault number Q45 of Widman and others (1998 #3441).
<b>County(s) and State(s)</b>	EAGLE COUNTY, COLORADO
<b>Physiographic province(s)</b>	SOUTHERN ROCKY MOUNTAINS WYOMING BASIN
<b>Reliability of location</b>	Poor Compiled at 1:250,000 scale.  <i>Comments:</i> These faults were originally recognized on air photos by R.M. Kirkham in 1977, but were mapped in 1981 by Kirkham and Rogers at a scale of 1:500,000. Unruh and others (1993 #2777) showed several photolineaments in this location on their 1:250,000 map, but the lineaments do not coincide with the faults mapped by Kirkham and Rogers (1981 #792). The traces used herein are from Kirkham (unpublished mapping, 1977).
<b>Geologic setting</b>	Kirkham and Rogers (1981 #792) described these faults as having a normal sense of movement. The faults are northeast of the White River uplift near the Colorado River. The faults are in bedrock and Quaternary deposits that overlie Pennsylvanian evaporite deposits. They are variously oriented and appear to be related to salt tectonism.
<b>Length (km)</b>	14 km.
<b>Average strike</b>	N47°W
<b>Sense of movement</b>	Normal  <i>Comments:</i> Kirkham and Rogers (1981 #792) described these faults as normal.
<b>Dip</b>	75° NW  <i>Comments:</i> Kirkham and Rogers (1981 #792) measured a dip of 75° NW on the northern of two northeast-trending faults in a roadcut near Blue Hill (SW 1/4 of sec. 18, T2S, R84W).
<b>Paleoseismology studies</b>	

<b>Geomorphic expression</b>	Vegetation and topographic lineaments are present in pediment gravels and landslide deposits (Kirkham and Rogers, 1981 #792).
<b>Age of faulted surficial deposits</b>	Kirkham and Rogers (1981 #792) reported that Quaternary landslide deposits and pediment gravel (pre-Bull Lake?) are offset by faults in this area. Two faults are exposed in a road cut near Blue Hill. The northerly fault offsets pre-Bull Lake pediment gravel about 2 m. The southerly fault offsets the pediment gravel about 0.7 m (Kirkham and Rogers, 1981 #792). The faults are primarily in Cretaceous Mancos Shale and Dakota Sandstone.
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	middle and late Quaternary (<750 ka)  <i>Comments:</i> Kirkham and Rogers (1981 #792) described pre-Bull Lake deposits (>130 ka) as offset by the fault. Colman (1985 #1953) assigned these faults to the middle to early Pleistocene.
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr  <i>Comments:</i> Widmann and others (1998 #3441) placed these faults within the <0.2 mm/yr slip-rate category on the basis of 0.7-2.0 m of offset in pre-Bull Lake pediment gravel (Kirkham and Roger, 1981 #792).
<b>Date and Compiler(s)</b>	1997 Beth L. Widmann, Colorado Geological Survey
<b>References</b>	#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.  #792 Kirkham, R.M., and Rogers, W.P., 1981, Earthquake potential in Colorado: Colorado Geological Survey Bulletin 43, 171 p., 3 pls.  #2777 Unruh, J.R., Wong, I.G., Bott, J.D.J., Silva, W.J., and Lettis, W.R., 1993, Seismotectonic evaluation, Rifle Gap Dam, Silt Project, Ruedi Dam, Fryingpan-Arkansas Project, northwestern Colorado: U.S. Bureau of Reclamation, 154 p.

#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.

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