

# 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 east of Paradise Range (Class A) No. 1333

Last Review Date: 1998-07-19

*citation for this record:* Sawyer, T.L., compiler, 1998, Fault number 1333, unnamed fault east of Paradise Range, 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 02:15 PM.

### Synopsis

This subparallel group of down-to-the-west normal faults generally bounds west front of east-tilted homoclinal blocks along the west side of Ione Valley, from Brunton Pass to east of Alum Spring, and bounds southwest front of Paradise Peak and west edge of Pactolus Hills. Short scarps on Quaternary deposits are preserved near Brunton Pass and south of Paradise Peak providing evidence for Quaternary movement on the two most-continuous faults in the zone. A piedmont fault marked by a linear east-facing scarp in Ione Valley east of Band C Spring is consistent with young movement. However most faults, marked by scarps and lineaments on Tertiary bedrock, are inferred to juxtapose Quaternary deposits against bedrock, or are mostly covered by piedmont-slope deposits; Quaternary movement is inferred along these faults. Reconnaissance photogeologic mapping of the fault is the source of data.

<b>Name comments</b>	Refers to faults mapped by Dohrenwend and others (1996 #2846) on west side of Ione Valley extending along the east side of the Paradise Range and continuing beyond the end of the range to State Route 89 south of Pactolus; includes a fault southeast of Paradise Peak shown on Plate A1A in Kleinhampl and Ziony (1985 #2851).,Refers to faults mapped by Dohrenwend and others (1996 #2846) on west side of Ione Valley extending along the east side of the Paradise Range and continuing beyond the end of the range to State Route 89 south of Pactolus; includes a fault southeast of Paradise Peak shown on Plate A1A in Kleinhampl and Ziony (1985 #2851).
<b>County(s) and State(s)</b>	NYE COUNTY, NEVADA
<b>Physiographic province(s)</b>	BASIN AND RANGE
<b>Reliability of location</b>	Good Compiled at 1:100,000 scale.  <i>Comments:</i> Location primarily based on unpublished map of the Tonopah 1?x2? sheet by J.C. Dohrenwend published at 1:100,000-scale by Dohrenwend and others (1996 #2846). Mapping based on photogeologic analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle maps enlarged to scale of the photographs. A piedmont fault in the Ione Valley east of Paradise Peak and a fault along the base of a hill north of Brunton Springs were located using 1:62,500-scale map of Vitaliano (1963 #2927).
<b>Geologic setting</b>	This subparallel series of down-to-the-west normal faults generally bounds west front of east-tilted homoclinal blocks along the west side of Ione Valley, from Brunton Pass to east of Alum Spring, and bounds southwest front of Paradise Peak and west edge of Pactolus Hills.
<b>Length (km)</b>	34 km.
<b>Average strike</b>	N1°E
<b>Sense of movement</b>	Normal  <i>Comments:</i> (Vitaliano, 1963 #2927)

<b>Dip Direction</b>	W; E
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	Most of the fault is marked by scarps and lineaments on Tertiary bedrock and by mostly covered faults along the west edge of volcanic hills and southwest flank of Paradise Peak. Short scarps are preserved near Brunton Pass, east of Band C Spring, and south of Paradise Peak on Quaternary deposits (Vitaliano, 1963 #2927).
<b>Age of faulted surficial deposits</b>	Quaternary. Scarps have been mapped on Quaternary deposits in Ione Valley and along west front of Pactolus Hills (Vitaliano, 1963 #2927; Dohrenwend and others, 1996 #2846).
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	undifferentiated Quaternary (<1.6 Ma)  <i>Comments:</i> Although timing of most recent prehistorical event is not well constrained, mapping by Dohrenwend and others (1996 #2846) suggests a Quaternary time; which is generally consistent with previous studies (Vitaliano, 1963 #2927; Kleinhampl and Ziony, 1985 #2851).
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr  <i>Comments:</i> No age or displacement data are reported that could constrain the slip rate. The late Quaternary characteristics of this fault (overall geomorphic expression, continuity of scarps, age of faulted deposits, etc.) support a low slip rate. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
<b>Date and Compiler(s)</b>	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
<b>References</b>	#2846 Dohrenwend, J.C., Schell, B.A., Menges, C.M., Moring, B.C., and McKittrick, M.A., 1996, Reconnaissance photogeologic map of young (Quaternary and late Tertiary) faults in Nevada, <i>in</i> Singer, D.A., ed., Analysis of Nevada's metal-bearing mineral resources: Nevada Bureau of Mines and Geology Open-File

Report 96-2, 1 pl., scale 1:1,000,000.

#2851 Kleinhampl, F.J., and Ziony, J.I., 1985, Geology of Northern Nye County, Nevada: Nevada Bureau of Mines and Geology Bulletin 99A, 172 p.

#2927 Vitaliano, C.H., 1963, Cenozoic geology and section of the Ione quadrangle, Nye County, Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-255, scale 1:62,500.

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