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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 faults in Paradise Valley (Class A) No. 1515

Last Review Date: 1999-01-28

citation for this record: **Adams, K., compiler, 1999, Fault number 1515, unnamed faults in Paradise Valley, 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 02:50 PM.**

Synopsis	This group of four short faults north of the Little Humboldt River in eastern Paradise Valley offsets Tertiary rocks and Quaternary alluvium. Two of the faults in this group are expressed as short southwest-facing scarps on late Quaternary alluvium and the other two are expressed as abrupt and well-defined north-trending scarps along faults that juxtapose Quaternary alluvium against Tertiary bedrock. Reconnaissance photogeologic mapping of the faults is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to a small group of faults in eastern Paradise Valley near the Little Humboldt River mapped by Slemmons (1966, unpublished McDermitt 1? X 2? sheet) and Dohrenwend and Moring (1991 #284).

County(s) and State(s)	HUMBOLDT COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations are based on 1:250,000-scale map of Dohrenwend and Moring (1991 #284) and Slemmons (1966, unpublished McDermitt 1? X 2? sheet). The map of Dohrenwend and Moring (1991 #284) was produced by 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. Slemmons (1966, unpublished McDermitt 1? X 2? sheet) mapped from analysis of 1:60,000-scale AMS photography transferred to mylar overlaid onto a 1:250,000-scale topographic map using proportional dividers.
Geologic setting	This group of four short north- to northwest-striking faults north of the Little Humboldt River in eastern Paradise Valley offsets Tertiary rocks (Willden, 1964 #3002) and possibly Quaternary alluvium (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet).
Length (km)	3 km.
Average strike	N22°W
Sense of movement	Normal *Comments:* (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet)
Dip Direction	SW; W
Paleoseismology studies	
Geomorphic expression	Two of the faults are expressed as short southwest-facing scarps on late Quaternary alluvium (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet) and the other two are expressed by abrupt and well-defined north-trending scarps along faults that juxtapose Quaternary alluvium against Tertiary bedrock (Willden, 1964 #3002; Dohrenwend and Moring, 1991 #284) .

Age of faulted surficial deposits	Quaternary and Tertiary. Faults displace both Quaternary alluvium (Slemmons, 1966, unpublished McDermitt 1? X 2? sheet) and Tertiary bedrock (Dohrenwend and Moring, 1991 #284).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The timing of most recent event is not well constrained and the two map sources differ greatly. Slemmons (1966, unpublished McDermitt 1? X 2? sheet) shows the two western scarps as being late Quaternary in age. Dohrenwend and Moring (1991 #284) do not map those scarps, and only show the two eastern faults as juxtaposing Quaternary against bedrock. The assigned age category is based on the sole published source.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region.
Date and Compiler(s)	1999 Kenneth Adams, Piedmont Geosciences, Inc.
References	#284 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the McDermitt 1° by 2° quadrangle, Nevada, Oregon, and Idaho: U.S. Geological Survey Miscellaneous Field Studies Map MF-2177, 1 sheet, scale 1:250,000. #3002 Willden, R., 1964, Geology and mineral deposits of Humboldt County, Nevada: Nevada Bureau of Mines and Geology Bulletin 59, 154 p., scale 1:250,000.