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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 the Volcanic Hills (Class A) No. 1319

Last Review Date: 1998-07-19

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1998, Fault number 1319, unnamed faults in the Volcanic Hills, 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 widely distributed group of short predominately intermontane faults, having various strikes ranging from east-west through northwest and northeast, extends from the Volcanic Hills and the southwest piedmont slope of Miller Mountain west past the town of Basalt to low hills near the upper reaches of Jacks Spring Canyon. Reconnaissance photogeologic mapping and bedrock mapping of the fault zone are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to faults in the Volcanic Hills south of U.S. Highway 6 extending west to near upper Jacks Spring Canyon, mapped by Dohrenwend (1982 #2481; 1982 #2870; 1982 #2900), Stewart (1981 #2914), and Stewart and others (1982 #2873).

County(s) and State(s)	ESMERALDA COUNTY, NEVADA MINERAL COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on 1:62,500-scale (Dohrenwend, 1982 #2900) and 1:250,000-scale maps (Dohrenwend, 1982 #2481); small-scale mapping by 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.
Geologic setting	These short predominately intermontane faults have various strikes ranging from east-west through northwest and northeast and extend from the Volcanic Hills and the southeast piedmont slope of Miller Mountain west past the town of Basalt to low hills near the upper reaches of Jacks Spring Canyon.
Length (km)	39 km.
Average strike	N7°W
Sense of movement	Left lateral *Comments:* Not studied in detail; sinistral sense is inferred from general knowledge of sense of movement on other east northeast-striking faults in the region and normal sense of movement is inferred from topography.
Dip Direction	N; S
Paleoseismology studies	
Geomorphic expression	On the southeast piedmont slope of Miller Mountain, faults bound low hills, but most cut bedrock and are expressed as aligned drainages, saddles, and sidehill benches. Other faults bound small basins filled with eolian and alluvial deposits.
Age of faulted surficial deposits	Holocene through Tertiary. In the central part of the group, many of the faults only displace Tertiary bedrock, but at both the east and west ends of the group faults displace Holocene and (or)

	upper Pleistocene alluvium, juxtapose Holocene and upper Pleistocene alluvium against bedrock, and displace middle and lower Pleistocene erosional surfaces (Dohrenwend, 1982 #2900).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* The timing of most recent event is not well constrained. Quaternary time is suspected based on reconnaissance photogeologic mapping by Dohrenwend (1982 #2481; 1982 #2870; 1982 #2900), although some discontinuous scarps may be as young as Holocene.
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)	1998 Kenneth Adams, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2481 Dohrenwend, J.C., 1982, Map showing late Cenozoic faults in the Walker Lake 1° by 2° quadrangle, Nevada-California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-D, 1 sheet, scale 1:250,000. #2870 Dohrenwend, J.C., 1982, Surficial geologic map of the Walker Lake 1° by 2° quadrangle, Nevada-California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-C, 1 sheet, scale 1:250,000. #2900 Dohrenwend, J.C., 1982, Preliminary surficial geologic map of the Excelsior Mountains area, west-central Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-1372, scale 1:62,500. #2914 Stewart, J.H., 1981, Geology map of the Basalt quadrangle, Mineral County, Nevada: U.S. Geological Survey Open-File Report 81-369, scale 1:24,000. #2873 Stewart, J.H., Carlson, J.E., and Johannesen, D.C., 1982,

	Geologic map of the Walker Lake 1° by 2° quadrangle, California and Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-A, scale 1:250,000.