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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 east of Buck Mountain (Class A) No. 1284

Last Review Date: 2000-12-01

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Synopsis	This unnamed fault forms northeast-trending scarps with down-to-the-east displacement and lineaments (not included herein). The fault scarps are on the eastern margin of the Buck Mountain, and extends about 30 km, from 3 km north of Buck Pass, southwest to about 2 km north of Barrel Spring, at the southern end of Buck Mountain. Reconnaissance photogeologic mapping is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	This unnamed fault lies on the eastern margin of Buck Mountain. The fault extends discontinuously from about 3 km north of Buck Pass, south to the southern end of Buck Mountain (a north-trending ridge).
County(s) and	

County(s) and State(s)	WHITE PINE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on 1:250,000-scale map of Dohrenwend and others (1992 #2480. Mapping based on photogeologic analysis of 1:24,000-scale color aerial photography supplemented with 1:60,000-scale black-and-white aerial photography, transferred to 1:62,500-scale topographic maps and photographically reduced and transferred to 1:250,000-scale topographic maps, with subsequent 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	This unnamed fault lies on the eastern margin of Buck Mountain, northwest of Illipah, Nevada. Buck Mountain is situated in the central part of the Great Basin within the Basin and Range province. During the Paleozoic, the central part of the Great Basin was located on the eastern margin of the Cordilleran geosyncline (Kay, 1951 #4402)). The majority of the area was overlain with Paleozoic sedimentary rocks that are more than 1.6 km thick, primarily of marine origin (Hose and Blake, 1976 #4341). The Paleozoic sequence is deformed by folding and thrust faulting, and unconformably capped by Tertiary volcanic and intrusive rocks from Eocene to Oligocene and perhaps Miocene age (Stewart, 1980 #3056). These rocks have been uplifted into Mountain Ranges with elevations of 3,000 m that alternate with 1,700 m high flat-floored valleys. Valley sediments are primarily comprised of Pleistocene lake deposits and sand and gravel deposits of alluvial fans and terraces. Fault-bound north-south trending mountains separated by broad desert valleys are typical of Basin and Range topography. This fault has a northeast trend which is not considered typical of Basin and Range faults, but seems to be relatively common for young faults within the region of the Ely 1? x 2? sheet. Campbell (1981 #4346) mapped the Eastern Boundary fault in the Buck Mountain area as parallel and east of this unnamed fault.
Length (km)	20 km.

Average strike	N29°E
Sense of movement	Normal
Dip Direction	SE
Paleoseismology studies	
Geomorphic expression	This fault is defined by a series of northeast-trending lineaments (not included herein) and scarps on the eastern margin of Buck Mountain. Lineaments coincide with an abrupt change in relief and slope along the eastern side of Buck Mountain, but are of unproven age.
Age of faulted surficial deposits	Quaternary, Tertiary and Paleozoic (Campbell, 1981; Tomastik, 1981). Dohrenwend and others (1992 #2480) show these faults as juxtaposing bedrock and Quaternary deposits.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Dohrenwend and others (1992 #2480) considered the last fault movement to be of Quaternary age.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category is assigned on the basis of poor geomorphic preservation, lack of mapped fault scarps, and relative inactivity of similar distributed faults in the Basin and Range province.
Date and Compiler(s)	2000 Margaret Hisa Redsteer, U.S. Geological Survey
References	#4346 Campbell, M.D., 1981, Geology of the northern Buck Mountain area, White Pine County, Nevada: Athens, Ohio University, unpublished M.S. thesis, 70 p. #2480 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Ely 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey

	Miscellaneous Field Studies Map MF-2181, 1 sheet, scale 1:250,000. #4341 Hose, R.K., and Blake, M.C., Jr., 1976, Geology and mineral resources of White Pine County, Nevada: Nevada Bureau of Mines and Geology Bulletin 85, 105 p. #4402 Kay, M., 1951, North American geosynclines: Geological Society of America Memoir 48, 143 p. #3056 Stewart, J.H., 1980, Geology of Nevada—A discussion to accompany the geologic map of Nevada: Nevada Bureau of Mines and Geology Special Publication 4, 136 p.