



## Earthquake Hazards Program

### Database Search

#### Complete Report for Eglington fault (Class A) No. 1733

[Brief Report](#) || [Partial Report](#)

*citation for this record:* Anderson, R. Ernest, compiler, 1999, Fault number 1733, Eglington fault, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, <http://earthquakes.usgs.gov/regional/qfaults>, accessed 03/29/2010 04:23 PM.

**Synopsis** The alluvial-fan and basin-fill deposits that form the floor of Las Vegas Valley contain several gently sloping, scarps as much as 30 m high in a zone about 27 km long and varying from 6 km wide in the south to 12 km wide in the north. The Eglington fault forms a prominent scarp at the northern end of broad arcuate zone (convex west) that extends through metropolitan Las Vegas. There is a contemporary debate as to whether this and associated scarps [1120] are tectonic, or of polygenetic origin that would include major enhancement by processes of dissolution and/or hydrocompaction. Little is known about the offset of the basin-floor bedrock units beneath these scarps or of their structural significance in the development of the Las Vegas basin. Most of the scarps are not known to be located over intrabasin faults, but the northeast-striking Eglington scarp is apparently situated over a large basement offset (about 200 m) buried beneath about 2 km of basin-fill sediment. Although unlikely, reports addressing the fault suggest it may have recurrence interval of a few thousand years and a slip rate as high as 1.5 mm/yr.

**Name comments** Referred to as the Eglington fault by dePolo (1998 #2845). This fault forms scarps of uncertain origin in the northern part of Las Vegas Valley in the vicinity of Las Vegas, Nev.

**Fault ID Comments:**

Refers to fault number LV12 by dePolo (1998 #2845).

**County(s) and State(s)** CLARK COUNTY COUNTY, NEVADA

**AMS sheet(s)** Las Vegas

**Physiographic province(s)** BASIN AND RANGE

**Reliability of location** Good

Compiled at 1:100,000 scale.

*Comments:* The scarp was mapped at 1:250,000 scale by Bell and Price (1992 #2419; 1993 #4703) and at that same scale by Dohrenwend and others (1991 #288) as part of a photogeologic compilation of Quaternary faults. The traces used herein are compiled from an unpublished geologic map of the Las Vegas 1°x1/2° quadrangle (scale 1:100,000) in preparation by the U. S. Geological Survey (R. Page, written commun, 1998).

**Geologic setting** The alluvial fan and basin-fill deposits that form the floor of Las Vegas Valley contain several high scarps in a zone about 27 km long and varying from 6 km wide in the south to 12 km wide in the north (Mifflin, 1999 #4709). The northeast-striking Eglington scarp is the northernmost of this group, the others being described separately [1120]. The scarps in the south strike mostly north-northwest and, as traced north, curve to the northeast suggesting a broadly arcuate shape (convex west) extending through metropolitan Las Vegas. This shape is similar to that of the Frenchman Mountain fault [1117] (Bell and dePolo, 1998 #4710). There is a contemporary debate as to whether these scarps are tectonic or of polygenetic origin that would include major enhancement by processes of dissolution and/or hydrocompaction (dePolo and Ramell, 1998 #4707; Mifflin, 1998 #4709; Zuckerman, 1998 #4713). Little is known of the offset of the basin floor beneath these scarps or of their structural significance in the development of the Las Vegas basin. Most are not known to be located over intrabasin faults, but the Eglington scarp at the north margin of the group is apparently situated over a large basement offset (about 200 m) buried beneath about 2 km of basin-fill sediments (Slemmons, 1998 #4708, Bell, 1998 #4710).

**Length (km)** 11 km.

**Average strike** N28°E

**Sense of movement** Normal

**movement**

*Comments:* Bell and dePolo (1998 #4710) noted that faults in Las Vegas Valley parallel those in and adjacent to the marginal mountain ranges, faults that have both normal and strike slip.