

Earthquakes



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SHAKE.

Sunday afternoon last, about four o'clock, three distinct shakes of the earth were felt at Ft. Gibson, this, and other places in our Nation. A rumbling noise, which was distinctly heard by many, accompanied the shaking. At Ft. Gibson, the trembling and vibrating were so severe as to cause door and window shutters to open and shut, hogs in pens to fall and squeal, poultry to run and hide, the tops of weeds to dip, cattle to lowe, &c., &c. Immediately preceding and after the shake there was not a particle of movement, visible, in the atmosphere. Our exchanges speak of the earthquake as having been felt over a large area in the south and west. Eight or ten years ago a shock was felt in many places in this country, but it was a "wee bit" of a thing compared with that of Sunday last.

Figure 14 (question 45). Short article from the October 27, 1882 *Cherokee Advocate* describing the October 22 earthquake. The location of the epicenter of this earthquake, which was felt in Kansas, Missouri, Arkansas, Texas, and the Indian Territory, is unknown. Based on historical records of damage, it appears to have been centered near Ft. Gibson. (Copy of article courtesy of the Oklahoma Historical Society, Oklahoma City.)

45. What was Oklahoma's largest earthquake?

The largest known earthquake centered in Oklahoma occurred near El Reno on April 9, 1952; its magnitude was 5.5.

The 1952 El Reno earthquake was felt as far away as Austin, Texas, and Des Moines, Iowa, and was felt over an area of about 140,000 square miles. However, damage from the earthquake was not severe. The shock caused cracks in several buildings, including the State Capitol Office Building and an office building in Tulsa. A chimney in El Reno fell through a roof. Mostly, windows and dishes rattled and wall hangings were knocked askew.

The earliest historical earthquakes reported in present-day Oklahoma (then Arkansas Territory) are the New Madrid earthquakes of December 1811 through February 1812; the epicenters were near the boot heel of Missouri. An earthquake in October 1822 may have been centered in Oklahoma (Fig. 14). The earliest recorded earthquake with a positively identified epicenter in Oklahoma occurred on December 2, 1897, near Jefferson in Grant County.

46. How many earthquakes occur in Oklahoma each year?

During the 22 years from 1978 through 1999, 1,449 earthquakes were recorded in Oklahoma. This averages to about 66 per year.

Beginning in 1978, the Oklahoma Geological Survey has recorded every Oklahoma earthquake of magnitude 1.6 or greater (Fig. 15). The most active year, 1995, had 167 earthquakes. The least active year was 1978 when 35 earthquakes were recorded. Two to four earthquakes are felt by Oklahomans each year. Graphs and tables of annual earthquake occurrences may be found at the Oklahoma Geophysical Observatory's website (Appendix 1).

47. When was the last earthquake in Oklahoma?

Since this answer was printed.

The last earthquake in Oklahoma (and several others before it) occurred after this report was written. The Oklahoma Geophysical Observatory's website (Appendix 1) has a catalog of all recent Oklahoma earthquakes. (The latest earthquake is at the bottom of the list. Click the underlined link for seismograms [Fig. 16] or other information.)