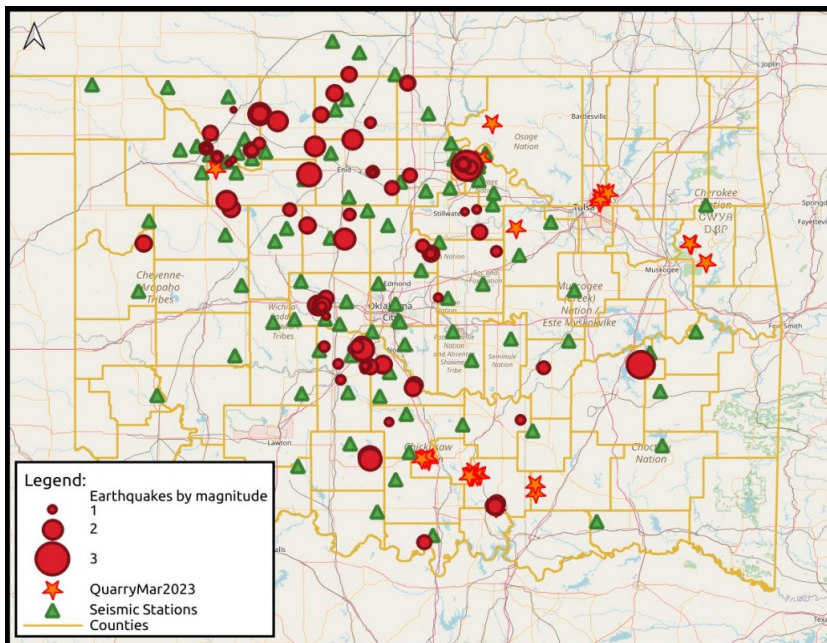


Bulletin of seismic activity in Oklahoma for the month of March 2023

This bulletin details earthquake activity as analyzed by the Oklahoma Geological Survey for March 2023. During March, a total of 160 earthquakes including 27 quarry blasts (Figure 1), were detected and reviewed. That represents an increase of 37 earthquakes as compared with the previous month, February 2023, during which 123 earthquakes were detected and reviewed. The cumulative number of earthquakes from January through March 2023 is 454.



During March 2023, Grady county recorded the most seismic activity with 18 earthquakes, followed by Canadian county with 16 earthquakes. 35 out of 77 counties within the state have experienced at least 1 earthquake in March 2023 (Table 1).

The earthquake depths range from 0 to 24 km while the magnitudes fluctuate from 0.1 M_L to 3.1 M_L (Table 2). Excluding the quarry blasts that have a depth of 0, the average depth during this month is 6.17 km.

Figure 1. Epicenter Map of Earthquakes in Oklahoma during March 2023.

Earthquakes per Counties							
County	Earthquakes	County	Earthquakes	County	Earthquakes	County	Earthquakes
Alfalfa	4	Garvin	1	Love	1	Payne	3
Atoka	2	Grady	18	Major	3	Pittsburg	2
Blaine	2	Grant	3	McClain	11	Pontotoc	1
Canadian	16	Hugges	1	Murray	11	Roger	1
Cherokee	1	Johnston	6	Muskogee	2	Stephens	11
Cleveland	2	Kay	2	Noble	3	Tulsa	5
Creek	1	Kingfisher	3	Oklahoma	1	Woods	7
Dewey	2	Lincoln	1	Osage	1	Woodward	11
Garfield	7	Logan	4	Pawnee	10		

Table 1. Table of earthquakes per county in Oklahoma during March 2023.

Number of Earthquakes per Magnitude range		
Magnitude range	Number of Earthquakes	Earthquake Effects
0 – 0.9	13	Usually not felt.
1 – 1.9	129	Usually not felt.
2 – 2.9	18	Often felt.

The largest earthquake that was recorded during March 2023 was in Pawnee county and had a magnitude of 2.8 M_L .

Table 2. Number of earthquakes per magnitude in Oklahoma during March 2023.

For the most current information on earthquakes and other OGS-related news, visit: <https://www.ou.edu/ogs>.