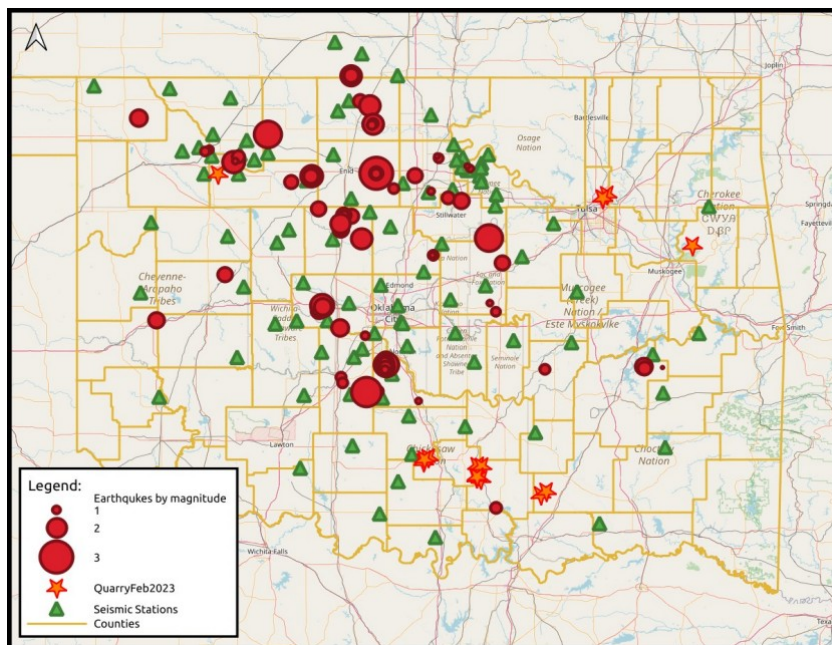


Bulletin of seismic activity in Oklahoma for the month of February 2023

This bulletin details earthquake activity as analyzed by the Oklahoma Geological Survey for February 2023. During February, a total of 123 earthquakes including 15 quarry blasts (Figure 1), were detected and reviewed. That represents a decrease of 48 earthquakes as compared with the previous month, January 2023, during which 171 earthquakes were detected and reviewed. The cumulative number of earthquakes from January through February 2023 is 294.



During February 2023, McClain county recorded the most seismic activity with 18 earthquakes, followed by Grant county with 15 earthquakes. 28 out of 77 counties within the state have experienced at least 1 earthquake in February 2023 (Table 1).

The earthquake depths range from 0 to 27 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 7.19 km.

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

Earthquakes per Counties							
County	Earthquakes	County	Earthquakes	County	Earthquakes	County	Earthquakes
Alfalfa	5	Grady	2	Major	3	Pittsburg	4
Atoka	2	Grant	15	McClain	18	Tulsa	3
Beckman	1	Harper	1	Murray	8	Woods	2
Canadian	1	Hugges	1	Muskogee	1	Woodward	5
Cleveland	1	Johnston	1	Noble	3		
Custer	1	Kingfisher	1	Osage	2		
Garfield	8	Lincoln	4	Pawnee	3		
Garvin	2	Logan	3	Payne	3		

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

Number of Earthquakes per Magnitude range		
Magnitude range	Number of Earthquakes	Earthquake Effects
0 – 0.9	15	Usually not felt.
1 – 1.9	93	Usually not felt.
2 – 2.9	14	Often felt.
3 – 3.9	1	More likely to be felt

The largest earthquake that was recorded during February 2023 was in Garfield county and had a magnitude of 3.1 M_L .

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

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