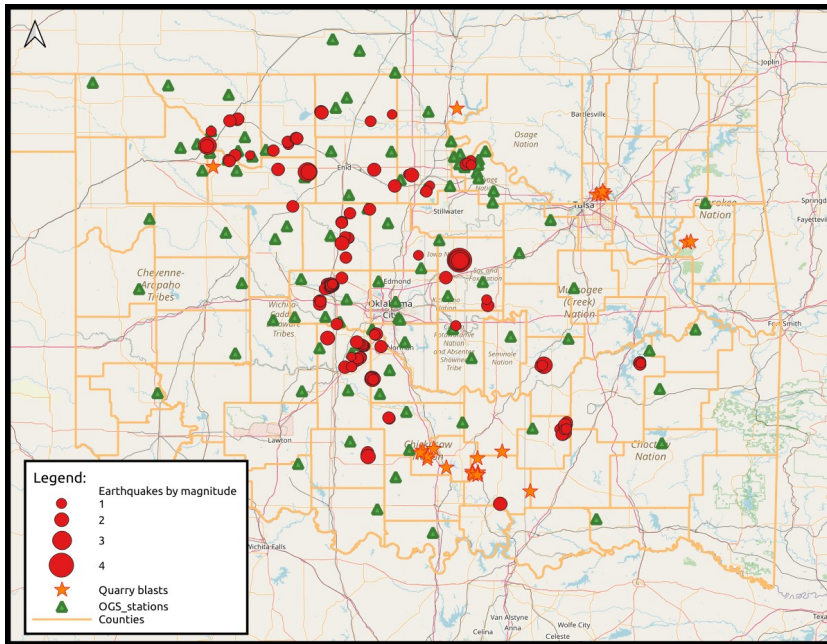




## Bulletin of seismic activity in Oklahoma for the month of April 2023

This bulletin details earthquake activity as analyzed by the Oklahoma Geological Survey for April 2023. During April, a total of 255 earthquakes including 23 quarry blasts (Figure 1), were detected and reviewed. That represents an increase of 95 earthquakes as compared with the previous month, March 2023, during which 160 earthquakes were detected and reviewed. The cumulative number of earthquakes from January through April 2023 is 709.



During April 2023, Lincoln county recorded the most seismic activity with 66 earthquakes, followed by Canadian county with 39 earthquakes. 29 out of 77 counties within the state have experienced at least 1 earthquake in April 2023 (Table 1).

The earthquake depths range from 0 to 22 km while the magnitudes fluctuate from 0.5  $M_L$  to 4.0  $M_W$  (Table 2). Excluding the quarry blasts that have a depth of 0, the average depth during this month is 6.71 km.

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

Earthquakes per Counties							
County	Earthquakes	County	Earthquakes	County	Earthquakes	County	Earthquakes
Alfalfa	11	Hughes	3	Murray	12	Pottawatomie	1
Blaine	1	Johnston	2	Muskogee	2	Stephens	4
Canadian	39	Kay	1	Noble	5	Tulsa	4
Coal	11	Kingfisher	13	Oklahoma	1	Woods	6
Garfield	1	Lincoln	66	Osage	1	Woodward	14
Garvin	3	Logan	2	Pawnee	5		
Grady	9	Major	5	Pittsburg	4		
Grant	1	McClain	27	Pontotoc	1		

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

Number of Earthquakes per Magnitude range		
Magnitude range	Number of Earthquakes	Earthquake Effects
0 – 0.9	44	Usually not felt.
1 – 1.9	192	Usually not felt.
2 – 2.9	14	Often felt.
3 – 3.9	4	More likely to be felt
4 – 4.9	1	Widely felt

The largest earthquake that was recorded during April 2023 was in Lincoln county and had a magnitude of 4.0  $M_W$ .

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

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