



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

This bulletin details earthquake activity as analyzed by the Oklahoma Geological Survey for June 2023. During June, a total of 513 earthquakes including 51 quarry blasts (Figure 1), were detected and reviewed. That represents an increase of 191 earthquakes as compared with the previous month, May 2023, during which 322 earthquakes were detected and reviewed. The cumulative number of earthquakes from January through June 2023 is 1544.

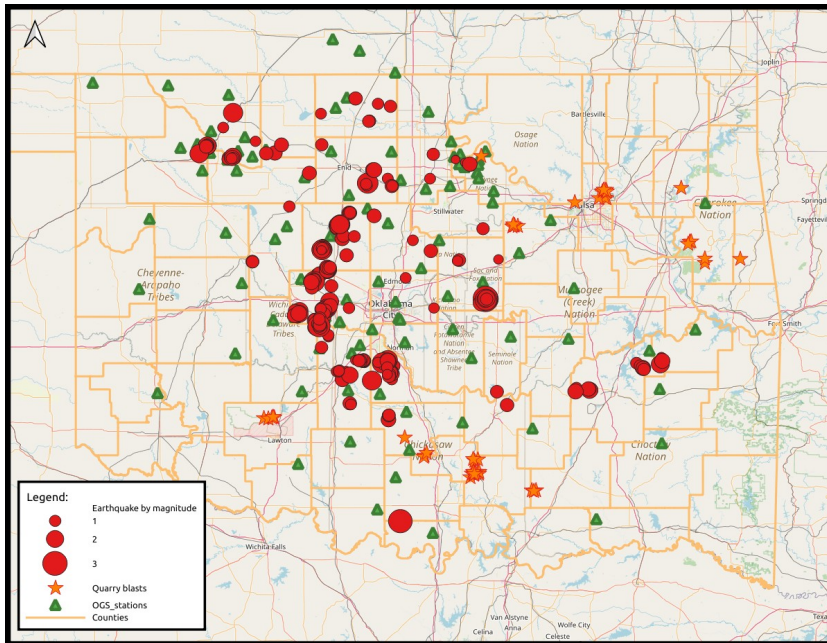


Figure 1. Epicenter Map of Earthquakes in Oklahoma during June 2023.

During June 2023, Canadian county recorded the most seismic activity with 126 earthquakes, followed by Kingfisher county with 99 earthquakes. 34 out of 77 counties within the state have experienced at least 1 earthquake in June 2023 (Table 1).

The earthquake depths range from 0 to 24 km while the magnitudes fluctuate from 0.01 M_L to 3.3 M_L (Table 2). Excluding the quarry blasts that have a depth of 0, the average depth during this month is 6.13 km.

Earthquakes per Counties							
County	Earthquakes	County	Earthquakes	County	Earthquakes	County	Earthquakes
Adair	1	Comanche	5	Logan	3	Payne	1
Alfalfa	5	Creek	6	Major	6	Pittsburg	17
Atoka	1	Custer	2	Mayes	1	Pontotoc	2
Blaine	3	Garfield	6	McClain	57	Rogers	1
Bryan	2	Garvin	4	Murray	18	Tulsa	9
Caddo	12	Grady	25	Muskogee	3	Woods	4
Canadian	126	Grant	5	Noble	6	Woodward	26
Carter	1	Kingfisher	99	Oklahoma	2		
Cherokee	2	Lincoln	44	Pawnee	8		

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

Number of Earthquakes per Magnitude range		
Magnitude range	Number of Earthquakes	Earthquake Effects
0 – 0.9	76	Usually not felt.
1 – 1.9	384	Usually not felt.
2 – 2.9	50	Often felt.
3 – 3.9	3	More likely to be felt

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

The largest earthquake that was recorded during June 2023 was in Lincoln county and had a magnitude of 3.3 M_L .

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