Swarm of earthquakes rocks Texas with largest nearly 4 magnitude

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By STACY LIBERATORE, US SCIENCE & TECHNOLOGY EDITOR

Texas experienced multiple earthquakes within three hours on Monday.

The US Geological Survey recorded three tremors in the western part of the state, the largest measuring 3.6 in magnitude that hit about 35 miles south of Whites City, **New Mexico**.

Two smaller quakes, located northeast of the largest, registered magnitudes of 2.7 and 2.8.

The swarm of earthquakes also struck one day after the USGS <u>detected a powerful 5.4</u> magnitude tremor in the same area on Sunday night.

It was followed by two smaller 2.9 magnitude aftershocks, although the USGS warned that more could follow in the coming week.

Monday's seismic activity was likely aftershocks from the powerful quake that hit the night before.

<u>Texas is known for its extensive use of fracking</u>, which is carried out by blasting large quantities of water, chemicals, and sand into rock formations to crack them open and release the fuels trapped inside.

Fracking is not usually the direct cause of an earthquake, but the process of disposing wastewater produced through fracking that can trigger tremors.



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A 2022 study by the University of Texas at Austin concluded that 68 percent of Texas quakes above magnitude 1.5 were 'highly associated' with oil and gas production.

Dr Alexandros Savvaidis recently explained how more drilling could end up leading to more seismic activity in the state.

'Deep injection wells, in particular, are linked to higher-magnitude earthquakes,' Dr Savvaidis told KMID.

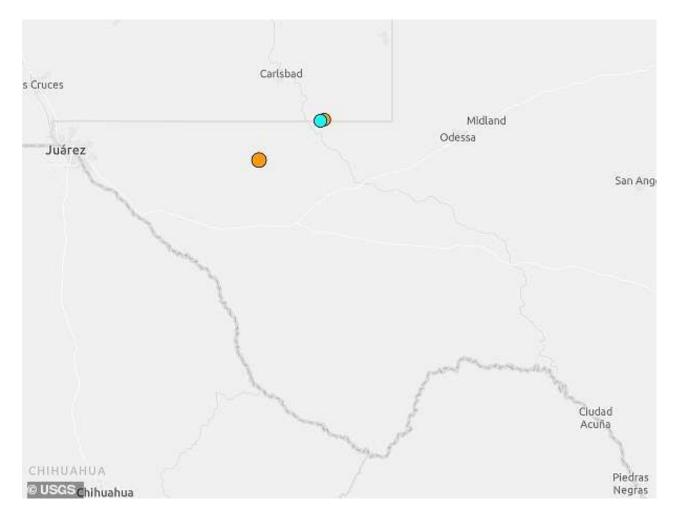
'Whereas shallower injections seem to be less hazardous in terms of large seismic events.'

The 3.6 magnitude earthquake that hit Monday was detected at the epicenter of Sunday's powerful 5.4 magnitude tremor.

The smaller quakes hit northeast, along the New Mexico border.

Sunday's earthquake was felt at least 200 miles away from the epicenter.

Locals in El Paso shared videos of streets shaking amid the tremor.



The US Geological Survey detected three earthquakes on Monday

No fatalities or damage has been reported from the tremors so far, although more than 1,500 people reported feeling its impact.

Only a handful of people reported feeling Monday's earthquakes.

An assessment from Michigan Tech University showed that people typically do not feel quakes with a magnitude of 2.5 or less.

Those from 2.5 to 5.4 are often felt but only cause minor damage.

The seismic activity in the last 24 hours were all in West Texas, signaling they were likely triggered by fracking processes.

'The practice of deep injection of oil field wastewater, known as saltwater disposal, has the strongest tie to the increase in the rate of earthquakes and to the strongest earthquakes that have occurred in recent years,' said Peter Hennings, research professor at The University of Texas's Bureau of Economic Geology.

However, it was not until 2015 did researchers first discover that the state's earthquakes were due to fracking.

Scientists from the Southern Methodist University looked at 84 days from November 2013 to January 2014, finding 27 magnitude 2 or greater earthquakes hit around Azle that is home to fracking practises.

Matthew Hornbach, a Southern Methodist University geophysicist, said the timing and location of the quakes correlates better to the drilling and injection than any other possible reason.

'There appears to be little doubt about the conclusion that the earthquakes were in fact induced,' USGS seismologist Susan Hough, who wasn't part of the study team, said.

'There's almost an abundance of smoking guns in this case.'

The strongest earthquake reported in Texas was the 6.0 magnitude quake with an epicenter in Valentine in Jeff Davis County on August 16, 1931.

Newspapers reported shaking was felt as far east as Taylor, just north of Austin, and as far south as San Antonio.

An alarming seven tremors shook the area that day, some lasting as long as 72 seconds. The series of quakes started early morning and continued to the early afternoon.

West Texas was hit by a 5.0 magnitude earthquake this past February, near the border of Culberson and Reeves counties.

The USGS reported about 950,000 people felt weak to light shaking.

Texas