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**WEST TEXAS HAS BEEN HIT BY OVER 7,000
EARTHQUAKES IN THE LAST 10 YEARS**

BY **HANNAH OSBORNE** ON 11/5/19 AT 10:08 AM EST



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Over 7,000 earthquakes have hit West Texas since 2019, scientists have found. This represents a significant increase in earthquake activity compared with the decade before—and is potentially linked with the area being developed for oil and gas extraction "from unconventional wells," the team says.

Research increasingly indicates earthquakes are being caused by oil and gas extraction. In 2015, Oklahoma—a state far from any tectonic plate boundaries—recorded over 800 earthquakes of magnitude 3 or above. Historically, just one to 1.5 earthquakes of this size were recorded annually. The state's Geological Survey said it is "very likely" the uptick in earthquakes is not the result of natural processes. "The primary suspected source of triggered seismicity is...from the injection/disposal of water associated with oil and gas production," [its report said](#).

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One region currently being heavily developed for oil and gas is the Permian Basin. This is a sedimentary basin that lies across western Texas and southeastern New Mexico. In this sedimentary basin is a huge oil field that has been drilled for over a century.

In a study published in the [Journal of Geophysical Research: Solid Earth](#), a team of scientists at The University of Texas at Austin has now looked at the earthquake activity in an area near the city of Pecos. While researchers have been aware of increased activity, the extent of it was unclear as the state's earthquake monitoring system only had data going back to 2017.

To look further back, the team, led by Cliff Frohlich, from the university's Texas Institute for Geophysics, used records from a monitoring system near Lajitas, about 150 miles away.

This system had seismic data going back 20 years. Using this, the team was able to look at earthquakes that hit the area around Pecos from 2000 to 2017.

Findings showed there was a significant increase in earthquake activity from 2009. In the last 10 years, scientists found there had been over 7,000 earthquakes. This activity increased over time—in 2009, there were 19 earthquakes of magnitude 1 or above, while in 2017, there were over 1,600.

This, the team says, shows there is a correlation between earthquakes and oil and gas activity. However, it does not show cause and effect, they say.

Researchers note that petroleum production in the West Texas portion of the Permian Basin has been increasing rapidly since 2007 and is expected to become the world's second biggest producer (after Saudi Arabia) by 2023.

They wrote: "Developing this domestic source of energy has profound economic and political implications, especially since protecting vital foreign sources of energy has been a major factor affecting U.S. foreign policy...Understanding the relationship between production and earthquake activity is a critical first step towards mitigating seismic hazards that could affect local populations and compromise the development of these vital petroleum resources."

Representative image of an oil field in Texas. Researchers have found there were over 7,000 earthquakes in West Texas in the last 10 years.

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