

FIRST ON CBS7: Historical data confirms dramatically more earthquakes in West Texas

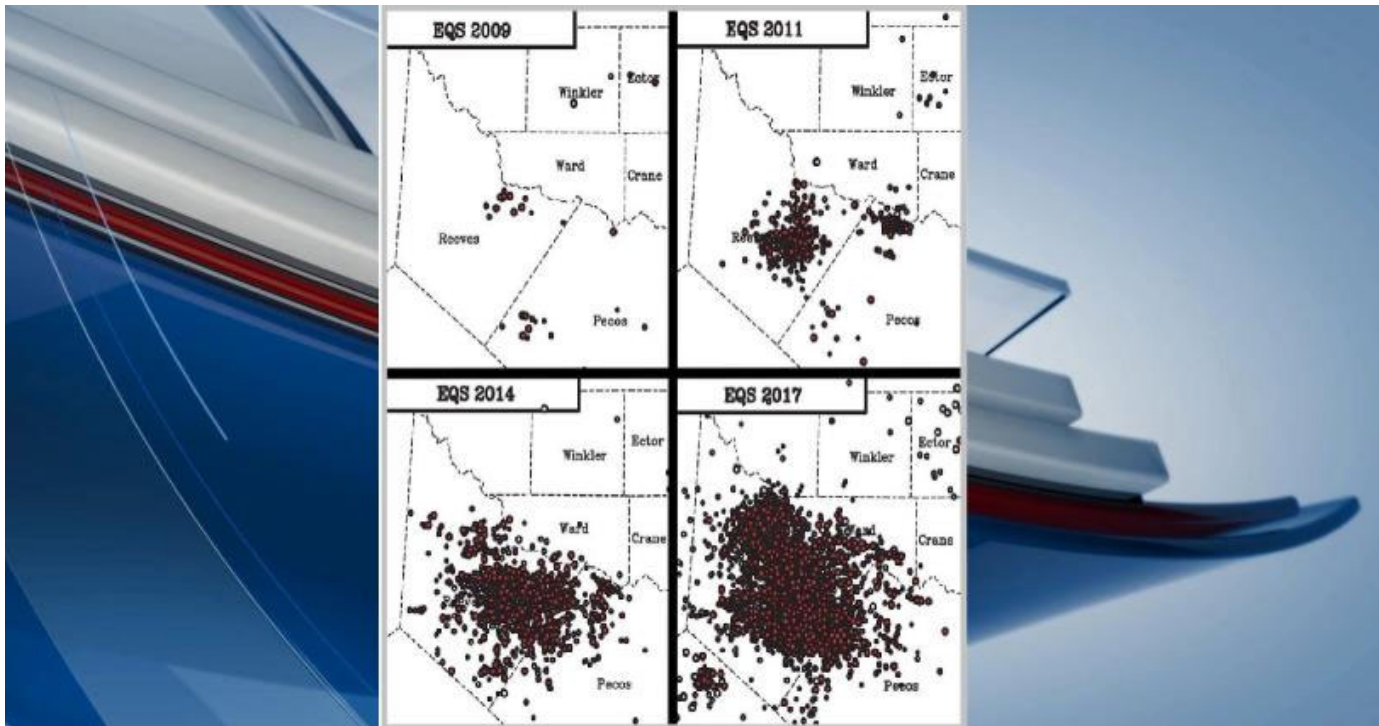


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Posted: Mon 11:15 AM, Nov 04, 2019 | Updated: Mon 11:26 AM, Nov 04, 2019

AUSTIN, Tx (UT NEWS) -- A new analysis of historical seismic data led by The University of Texas at Austin has found that earthquake activity in West Texas near the city of Pecos has increased dramatically since 2009.

The study, published Nov. 4 in the *Journal of Geophysical Research: Solid Earth*, is important because it leverages old, unmined data to track seismic activity over nearly 20 years – much further back than other studies – to show that activity has increased during the past decade in an area of the Permian Basin that is being heavily developed for oil and gas. Although researchers have generally thought that to be true, the statewide TexNet earthquake monitoring system has been gathering data since only 2017, making it impossible to definitely determine when the cluster of seismic activity around Pecos really began.

The researchers were able to extend the seismic record of the area by turning to the older TXAR system near Lajitas, Texas, about 150 miles to the south. TXAR is an array of 10 seismographs installed in the 1990s by scientists at Southern Methodist University (SMU) to help track nuclear testing across the world, said lead author Cliff Frohlich, a senior research scientist emeritus at the University of Texas Institute for Geophysics (UTIG).

“Especially for these West Texas earthquakes, we would like to get some information about when they started,” Frohlich said. “I really saw this as a way to bridge the gap before TexNet.”

The TXAR system is some distance from Pecos, but Frohlich said the equipment is highly sensitive and that the area

is remote and seismically very quiet, making the system perfect for picking up vibrations from explosions across the world or from earthquakes 150 miles away. Frohlich and SMU scientist Chris Hayward developed a method to derive the earthquake data from the international data TXAR collects and build an earthquake catalog for the Delaware Basin near Pecos from 2000 to 2017.

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