

**Midland Reporter-Telegram**

Quakes raise concern in already-geologically stressed Culberson County

By Trevor Hawes

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<https://www.mrt.com/news/article/culberson-county-texas-earthquake-20174279.php>

Late Friday evening, a magnitude 5.0 earthquake — one of the largest in Texas history — struck in remote eastern Culberson County. On Tuesday morning, West Texas and southeastern New Mexico shook again, this time from a 4.7.

“Earthquakes are common to that area thanks to a combination of existing fault lines and the deep injection of wastewater (from oil and gas activity) very close to the basement there,” Alexandros Savvaidis, a research professor at the University of Texas’ Bureau of Economic Geology (BEG), told the Reporter-Telegram on Tuesday.

Savvaidis said the seismicity isn’t necessarily occurring below where injection wells are located; however, wastewater injections are increasing pore pressures in an area that is already geologically stressed, raising it to the “critically stressed” level.

In geological terms, “stress” is the force applied to the geological formations. “Critically stressed” is when the geological formations are subjected to stress levels that bring them to the brink of failure.

“This area already had a lot of faults, and now the seismicity has started,” he said. “The magnitude 5.0 earthquake we just had is changing the stress in this area.”

According to BEG’s TexNet, which Savvaidis helped establish, Culberson County’s earthquakes are occurring in a large study area that has dozens of wastewater injection wells...