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# RRC: Evidence lacking that injection wells caused earthquakes

## XTO Energy, EnerVest can continue disposal wells near Reno, Azle

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**Texas Energy Report**

The **Texas Railroad Commission** found Tuesday that wastewater disposal wells run by **XTO Energy** and **EnerVest Operating** did not cause a swarm of earthquakes in North Texas that rattled residents of two small towns.

The three elected commissioners unanimously agreed with hearing examiners that they lacked enough evidence to conclude the wells contributed to seismic activity in and around Azle and Reno from November 2013 through April 2014.

The commission, as a result, will allow the companies to continue operations of the wells under existing permits.

The commission's findings conflict with conclusions of **Southern Methodist University** scientists who conducted a peer-reviewed study published in April by the journal **Nature Communications**.

The SMU study found that the wastewater injection wells, along with production of briny water from oil and gas drilling, were the most likely causes of heightened seismic activity that stretched from Parker County into adjoining Tarrant County.

The hearing examiners, who heard evidence from XTO and EnerVest on June 10 and June 15, called SMU's study a "commendable first order investigation that posits the plausibility of injection-induced seismicity in these two cases."

However, it added that the data presented in SMU's causal factors study "indicated a weak temporal correlation" between injection and seismic activities that is "too small . . . to imply a causal relationship without further corroborating evidence."

The examiners said the SMU study "hypothesized but did not attempt to establish a mechanical hydraulic linkage or estimate induced pressure on the Azle fault at a depth of 20,000 feet where the initial rupture occurred."

**Commissioner Ryan Sitton** praised the examiners for doing a "really good job of digging into the technical meat of this issue," saying he supports their effort and agrees with their findings.

Sitton noted that the Railroad Commission had hired a seismologist in response to the North Texas earthquakes and revised its rules regarding wastewater disposal wells, far more plentiful after the boom in hydraulic fracturing, including North Texas' **Barnett Shale**.

Sitton also made a reference to recent earthquakes that have also unnerved residents in the larger city of Irving, also in North Texas.

"I think a lot of people have questions in places like Irving where there doesn't seem to be any oil and gas activity even in proximity," he said.

Last spring, Texas lawmakers held hearings on seismic activity and oil-and-gas wastewater disposal wells, mindful of the tension between one of the state's most powerful industries and their own frightened constituents.

Consequently, lawmakers approved \$4.5 million to fund a broader study of the rise in earthquakes and seismic activity by researchers at the **University of Texas at Austin's Bureau of Economic Geology**.