INVESTIGATIONS

Inside the fight over what — and who — is causing earthquakes near Texas oilfields

By **Amanda Drane**, *Staff Writer*

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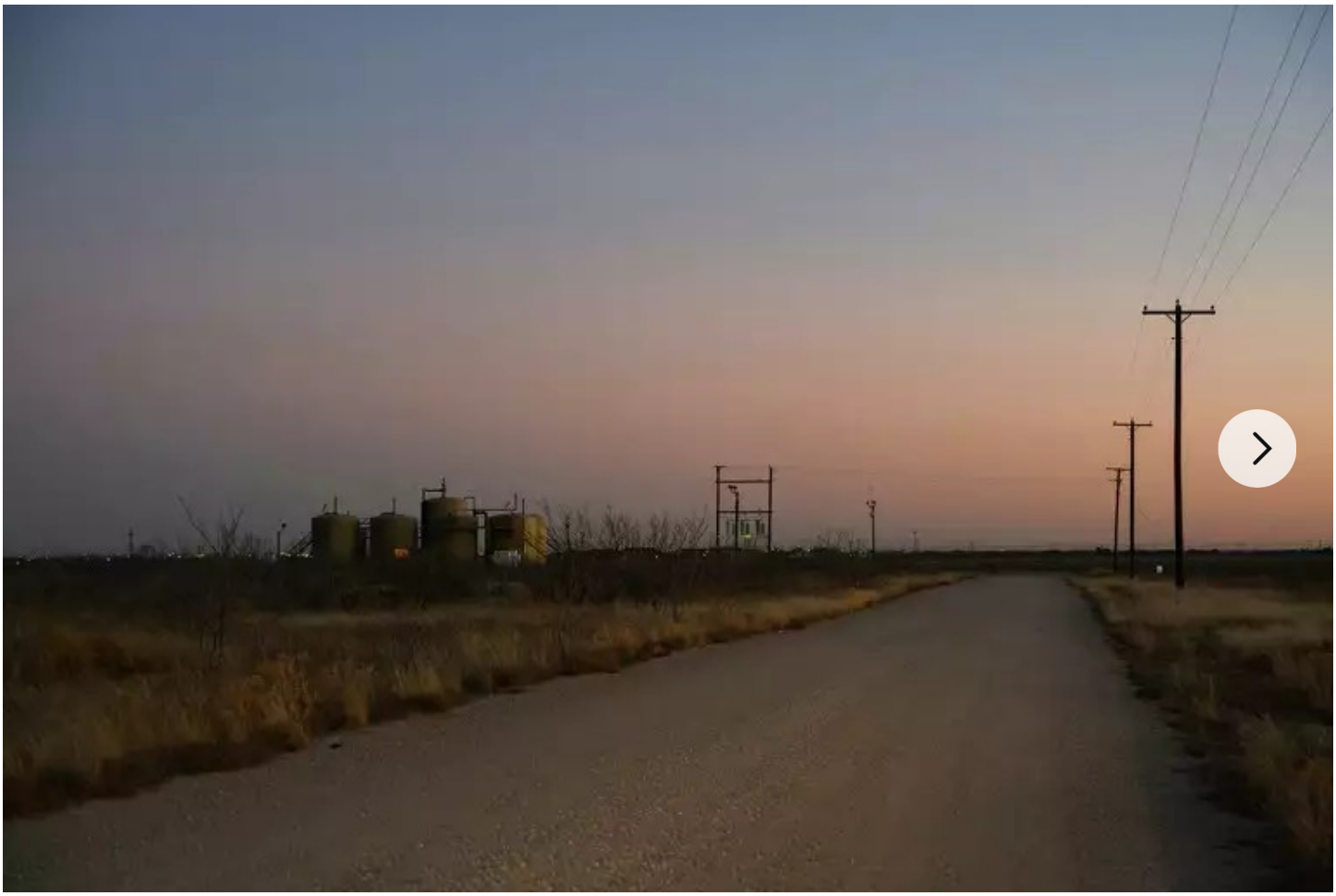

An injection well site is seen just outside Odessa. Fracking, which has been linked to seismic activity, is

common in the area where a 5.2 magnitude earthquake struck Wednesday near the Texas-New Mexico border.
Eli Hartman for The Texas Tribune

The common oilfield practice of disposing of the industry's dirty water in deep underground caverns hit a wall in recent years as regulators, scientists and industry experts reached a consensus — the practice was causing earthquakes.

But Houston-based disposal company Blackbuck Resources pressed on, even after the Texas Railroad Commission banned the practice in places with more frequent seismic activity.

More than a year after the commission suspended permits within the Northern Culberson-Reeves Seismic Response Area, Blackbuck is still injecting high volumes of wastewater in the stretch of land that straddles Culberson and Reeves counties near the state's border with New Mexico.

LEAKING WELLS: Another oil well is leaking in West Texas. Here's what to know about the growing issue

It has done so even as earthquakes have continued to plague the region. One of the state's strongest earthquakes to-date — a magnitude 5.0 — rattled the Culberson-Reeves area last month. Four days later, a second earthquake in the area reached magnitude 4.7.

Blackbuck argues that its own well couldn't be causing earthquakes and challenges both the commission's scientific backing and its legal authority to suspend the company's permit, state filings show. Blackbuck also says shutting down the well, as the Railroad Commission directed, would deal a significant financial blow.

Blackbuck spent about $35 million developing its well, according to a transcript of its hearings with the Railroad Commission. The Houston company is not large, and the site accounts for roughly 40% of its overall disposal business, said Ryan

Hassler, vice president of oil field service research at Rystad.

Oil companies Chevron and Permian Resources have supported Blackbuck's operations by continuing to pay Blackbuck to dispose of their wastewater at the site, filings show. Chevron said in a statement it was contractually obligated to work with Blackbuck through mid-2025. Permian Resources declined to comment.

Meanwhile, Blackbuck is legally allowed to continue injecting wastewater at the site while the commission makes its case in legal proceedings.The merits of the Blackbuck suspension are being considered by an administrative law judge. An outcome is pending.

Earthquakes continue

The Railroad Commission suspended deep disposal permits in the Culberson-Reeves area after a 5.3 magnitude earthquake struck Mentone in December 2023 — the second-most powerful to shake the region after a 5.4 magnitude quake

prompted new guidelines the year before. The suspension affected 23 wells, including Blackbuck's TR UE Blue well, and took effect in January 2024.

As of September, Blackbuck was the only operator still injecting its wastewater deep underground in Culberson-Reeves, the Railroad Commission said. All other operators had complied.

Blackbuck disposed of 629,401 barrels of wastewater into TR UE Blue in January, according to state data. In February, it injected around 608,404 barrels.

Two strong quakes shook the area in February.

A 4.8-magnitude earthquake north of Midland last week — in between the Gardendale and Stanton seismic response areas — forced operators to shut down another 11 injection wells, Railroad Commission Chairman Christi Craddick said Monday during a legislative hearing.

The loss of disposal wells poses a challenge for operators such as Chevron, as it forces them to figure out new places to put their wastewater.

Hassler said Chevron has been advocating for other disposal, recycling or reuse options in that area for about two years, "so it's a little surprising that Chevron in particular would continue disposing of barrels in that well."

Chevron said in a statement that "(t)he company is obligated to send a small volume of water to Blackbuck through mid-2025."

Chevron said it aims to lead the way when it comes to addressing issues related to the oil industry's wastewater. Nearly 65% of the water it used for fracking last

year in the Permian was recycled oilfield wastewater, it said.

Pressuring faults

The primary legal question is whether Blackbuck is “likely to be” contributing to earthquakes in the area. State law says a wastewater disposal permit can be suspended if it is "likely to be or determined to be contributing to seismic activity.”

Blackbuck argues it couldn’t possibly be contributing to earthquakes because there is no evidence of a “pressure connection,” or a pathway for pressure to travel between Blackbuck’s well and a seismically active fault.

Whether or not there is a fault or fracture providing a direct pathway, each well is contributing to underground pressure that can trigger earthquakes, said Katie Smye, principal investigator at the Bureau of Economic Geology’s Center for Injection and Seismicity Research at the University of Texas at Austin.

"The broad and clear scientific consensus is that changes in pressure associated with deep injection have led to seismicity,” she said of the area. “Each active deep injection well contributes something to that regional pressure increase."

Blackbuck’s CEO Samuel Oliver said his company hired a technical team that spent two years on the science underpinning the case.

“They determined 17 wells are causing the seismic activity – none of them are ours,” he said in an emailed statement.

Blackbuck argues that its well, unlike others in the area, is geologically isolated and therefore could not be contributing to the rash of recent earthquakes.

In closing arguments, the Railroad Commission disputed Blackbuck's findings. While it's true that earthquakes were occurring before Blackbuck drilled the well, the commission contends that each individual well in the area is contributing to the problem.

"This argument is a red herring akin to arguing that because traffic was congested before I got on the highway, I cannot be contributing to the traffic after I entered the highway," it said.

Blackbuck offered a competing analogy: "its car is driving down a sandy island road with no ferry service, but being accused of contributing to a traffic jam on the mainland."

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Amanda Drane is the energy investigative reporter for the Houston Chronicle.

Amanda is responsible for holding major energy companies, power providers and their leadership to account. She works to help audiences make sense of these companies' roles and responsibilities in major news events, while diving into some of the consequences of their choices and decisions in our region.

Before joining the paper's business desk in May 2020, she worked as a City Hall reporter in Massachusetts, where she won regional awards for covering issues such as police accountability and the exploitation of undocumented restaurant workers.

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