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A Permian Basin oil well in New Mexico (Dreamstime/Pancaketom)

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"Something just blew up!"

Cora Gonzales was in her room on Jan. 4 when she heard her father yell. In the evenings he watches TV while sitting by the living room window, and that's where she found him, looking outside and not at the tube. The rest of the family quickly joined them and they stared through the picture window as flames shot into the night sky from a nearby well pad.

This particular fire was uncommon. That's because it was quiet. "Usually whenever things blow up," she says, "we can feel the house shake and also hear a boom."

Gonzales and her family live on a 160-acre ranch outside Loving, New Mexico. Their land is dotted with drilling pads and tank batteries that hold and pump oil and natural gas. A couple of times a year, she says, the whole house shakes when one of those pumps or batteries catches fire and goes "boom."

"It's just the normal thing around here ... just another day," Gonzales says. "We look and watch and we get tired of watching it and then go back to our normal program."

It's unclear how common these explosions are here in the Permian Basin in southeastern New Mexico. About 129,000 people live amid more than 20,000 wells actively churning out oil and gas in this pancake-flat stretch of the Chihuahuan Desert. Despite state regulations that require operators to report accidents, what

triggered them, and how much oil, gas and water were lost or spilled, it's not clear operators always file those reports. Furthermore, the state of New Mexico still lacks comprehensive regulations covering leaks, spills and other accidents in the oil and gas production process. That leaves families like the Gonzaleses scratching their heads.

A security camera on the front of the Gonzales home caught the explosion and subsequent fire. In stark black and white, it shows the darkness explode into a burning white light. Caza Petroleum of Texas operates the facility and filed an incident report with New Mexico's Oil Conservation Division (OCD).

Video of gas field explosion from security camera footage from the Gonzales home (Vimeo/Capital & Main/Courtesy of Cora Gonzales)

In a phone call, Tony Sam, vice president of operations at the company, says that he doesn't know exactly what happened that night or why, but he thinks it was a stack fire — when a flare that burns off natural gas and impurities from a well malfunctions and burns out of control. According to the OCD report, the fire was considered a "major release" since it included a fire or explosion. It also spilled 47 Mcf of natural gas, two barrels of oil and two barrels of produced water. Sam did not respond to follow-up questions about the accident.

There are approximately 80 large-scale wells, as defined by OCD, within a 2-mile radius of the Gonzales family ranch. In the past five years, operators have reported 20 facility fires in the surrounding OCD district, which covers thousands of wells across half of New Mexico's portion of the Permian Basin. The Jan. 4 fire was the only one listed close to their home, even though Gonzales says they see fires at nearby drilling and tank sites a couple of times a year.

When they see these fires, she says they call 911. "We usually see the emergency lights head [out] but then they always get lost and turn around" in the local maze of country roads winding across the desert. She tries to find out what happened from the local newspaper or by searching online "but we never hear anything of it."

Not only that, but OCD's regulators may not be hearing about explosions and leaks either.

It's up to operators to file emergency reports. Susan Torres, public information officer at the Oil Conservation Division, notes that major releases must be reported within 24 hours. If OCD finds out they didn't, the operator risks daily penalties of several thousand dollars, up to a maximum possible fine of $200,000. Sometimes, she says, first responders notify OCD, but the obligation still rests with the operators.

Oilfield work is inherently dangerous. Extraction, heavy construction and transportation all play integral parts in the oil and gas industry, and all rank among the country's most dangerous jobs, according to the U.S. Bureau of Labor Statistics. In March 2020, two men were electrocuted and died while working with a forklift in the rain on a pad site south of Malaga. COG, a subsidiary of Concho Resources — which was recently purchased by ConocoPhillips for $13.3 billion — operates the site.

But the dangers don't end at the edge of the drilling pad.

Throughout the Permian Basin, there are many families like the Gonzaleses, whose homes and ranches are surrounded by drilling operations. Sometimes the pipes carrying gas and oil and contaminated water run right through people's yards.

> 'In the oilfield, it’s your property. But they do as they please.'
>
> —Cora Gonzales
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Gonzales says that her family no longer runs cattle on their ranch. Instead, they charge producers to run pipes across the land. But that brings other problems, like broken water lines from the heavy trenching machinery. And in another instance, a contract company digging a trench was fired mid-job and left behind a "big, gaping hole."

"In the oilfield, it's your property," she says, "but they do as they please."

When oilfield workers enter a wellsite, drilling pad or tank farm, they know and expect the serious risks involved with bringing toxic and highly flammable oil and gas up from the bowels of the earth. But they often don't live there. Families like the

Gonzaleses live among the dangers year after year, and they are often closest when things go wrong.

In January 2020, for example, a pipe carrying so-called produced water ruptured near Carlsbad in the middle of the night. Produced water is the briny solution that comes up with oil and gas in a well. Heavy in salts, it also has varying amounts of oil and grease, chemicals from the fracking process and, often, naturally occurring radioactive minerals.

When the pipe burst, that water rained down on the home of Penny Aucoin and Carl Dee George. Their chickens, a dog and a goat were all drenched — and had to be euthanized. The family developed rashes and pustules from the water that soaked them as they tried to save their animals.

WPX, the company that operates the pipeline, eventually dug up and carted off 40 barrels of contaminated soil from the yard.

Aucoin says she called state officials repeatedly about the incident, but says their response was slow.

The day that Aucoin and her husband announced a settlement with WPX was the same day that the well stack near Cora Gonzales caught fire. And the next day, WPX was bought by Devon Energy — another major producer in the Permian — in a deal worth about $2.6 billion. Aucoin and George wouldn't say how much they received in their settlement, but they are using the money to move away from the area, to Clovis.

In a January press conference announcing the family's settlement with WPX, Aucoin said, "We need our government to stand up to the big oil and gas. ... There should be someone standing up for the victims."

But to a certain extent, the state government's hands are tied by New Mexico's lack of regulations and a lack of funding.

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While the New Mexico Environment Department normally regulates and monitors water and air pollution across the state, produced water is different. Maddy Hayden,

public information officer at the New Mexico Environment Department, explains that this type of water, while it is "under the control of owners and operators" like WPX, falls under the purview of the Oil Conservation Division, in accordance with the 2019 Produced Water Act, which clarified jurisdiction between the two agencies.

She continues, "We recognize the need for enforceable requirements and increased oversight of this industry."

Torres at OCD points out that spills in and of themselves are not violations under current OCD rules. The violation occurs if the company doesn't report the spill. So when the ruptured pipeline sprayed the Aucoin/George home with contaminated water, and WPX filed a report, there was no OCD violation. Torres adds that the authority to levy fines was only reinstated at the end of February 2020.

This lack of regulatory teeth for the Oil Conservation Division stems from a 2009 New Mexico Supreme Court ruling that sided in favor of oil and gas companies against the state, saying the division doesn't have the authority to assess penalties and sanctions against companies without backing legislation.

In light of these gaps in spill regulation, state Sen. Antoinette Sedillo López (D-Albuquerque) has introduced Senate Bill 86, which adds new prohibitions and penalties for spills under the state Oil and Gas Act. It provides a penalty schedule for spills of all types, requires producers to track produced water and disclose the chemicals found in it, creates a data collection fund and controls the use of produced water outside the oil field, among many other proposals. Torres says the agency is analyzing the bill, but that "additional regulations could be difficult to enforce effectively without additional funding tied to the mandate."

When she heard of the accident at the Aucoin/George residence, Sedillo López said, "See? I told you. There is no regulation down there and this is the kind of thing that happens."

According to Sedillo López, a fellow legislator who owns an oil and gas company told her the chemicals used in fracking were no different from the bottles of chemicals under her sink. "And I said, you know, 'Would you drink that stuff?' "

When Sedillo López introduced a bill to pause fracking so the state could study its effects and possible legislation, "The oil and gas industry just went crazy," she says. But she says she also received calls at her office from people across the Permian Basin telling her stories of explosions, smoke, spills and smells. They wanted her to

know what they had seen, and "it was just stunning," she says.

> 'We’re in a battle with our country fields and our nature. And the oilfields are winning.'
>
> —Ervie Ornelas
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"In every single case I said, 'Would you be willing to testify on behalf of my bills?' and in every single case they said, 'Absolutely not.'" Sedillo López says they were afraid of angering the oil and gas companies. "They're so scared."

Sedillo López, whose district in Albuquerque is many hours' drive from the Permian, says legislators from the basin have asked why she cares. She says a fellow legislator told her the area is "already a waste. All we can do is make sure it just doesn't spread."

She says, "We should not have any corner of the planet that is a waste zone."

Ervie Ornelas grew up on the outskirts of Loving and has lived in the Permian Basin for all his 49 years. When he was a kid, he would run around the sage fields in the wide-open vistas surrounding his home, hunting rabbits in the gullies, watching for burrowing owls and catching fish in a nearby pond.

Then in the 1990s, oil wells started popping up. The rabbits and owls slowly disappeared. The pond was fenced in and a "KEEP OUT" sign posted. All of the open vistas were rimmed with machinery.

"We're in a battle with our country fields and our nature," he says today. "And the oilfields are winning."

Ornelas says he understands people need to make a living, and oilfield work pays good money. But "Loving just isn't Loving anymore."

These days he works at a children's day care in Carlsbad and, until November, he would visit his mother at his childhood home on weekends.

From his mother's place, he can see four tank farms. "And from the very beginning you can smell it from the front yard," he says. "My mother used to get dizzy, dizzy with the smells." A search of the online OCD Oil and Gas Map shows 15 wells within a mile of the house.

Ornelas' mother lived in that house until she died of COVID-19 in November. Pervasive air pollution — the kind produced by the oil and gas industry and monitored in the Permian — is tied to increased risks of dying from COVID-19. A peer-reviewed study published in October estimates that "about 15% of deaths worldwide from COVID-19 could be attributed to long-term exposure to air pollution." Hearing that "made my heart drop just thinking it could have added more to her problem," he says.

Just before his mother died, Ornelas' 24-year-old son Zach died from brain cancer. Zach was diagnosed just after graduating from high school, and he fought off the disease for six years before succumbing in October.

For the last three months of his life, Ervie and his wife wouldn't let him outside.

"My wife is a registered nurse, and she was afraid that the [air pollution] would mess up his breathing."

Pastor Nick King moved to Carlsbad eight years ago to preach at the Mennonite Church. In his spare time, he looks at his corner of the state from space, courtesy of Google Maps. "Miles and miles and miles," he says, "all you see is oil wells all over the place."

"That's how we care for the Earth God's given us."

King sees the spread of oil and gas wells and the problems associated with them as the antithesis of the Christian beliefs trumpeted by people in the area. In fact, he calls the thinking "a kind of religious blasphemy."

"We don't worry about the environment," he says. "We don't worry about the future. If it's money for me — now — then we do it."

For his part, Ornelas still roams the country around his childhood home. Now, instead of hunting and fishing, he's taking photos, trying to capture on silicon what remains of his memories made outdoors. But that isn't going so well, either.

"When we were kids, we'd see maybe one or two oilfields," he says. "Now, It's like a blanket of them. And that's what hurts.

"That's what hurts."

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