## Tioga Tribune

## **Documenting the Broken Hearts of the Bakken**

Posted 9/08/15 (Tue)



## By Nicky Ouellet

The dusty gravel road leading to the farmhouse is long, but Sarah Christianson doesn't mind the drive. The California-based photographer enjoys the slow cruise past golden wheat fields punctuated by pumping well jacks. Christianson makes an annual pilgrimage down this road to visit Brenda Jorgenson, who ranches and farms the rolling hills and valleys outside White Earth.

Together, the two women sit in Jorgenson's basement living room looking through photos Christianson shot during a flyover of the land. In each photo, a line of clearly discolored vegetation is visible. The line is the right of way of the Tioga Lateral Alliance Pipeline, a 12-inch diameter natural gas transmission pipeline that runs from Tioga to Chicago.

The two women are part of a growing set of artists, scientists, legislators and landowners pushing for greater documentation of the less obvious impacts of the oil boom, what Christianson describes as "the broken hearts of the Bakken."

For Christianson, whose own great-grandparents homesteaded in the Red River Valley, this means returning to her home state more and more to photograph the effects of energy development on the land and people in a project called "When the Landscape is Quiet Again."

One picture shows a trail of brown trees, killed by a massive brine spill outside Mandaree in McKenzie County. An aerial shot captures the widespread damage of a saltwater spill on a farm outside Antler in Bottineau County. In another, a farmer holds the shrinking barley plants of his failing crop, which was exposed to toxic levels of sodium and chloride.

Humans are rarely seen in Christianson's photographs, which typically juxtapose the beauty of the natural landscape with industrial development. "Not a lot of people are willing to speak up or put themselves out there, but as this thing drags on and on, more are," she said.

At the same time landowners are stepping up to participate in Christianson's visual documentation project, scientists are filling a gap in research data relating to the oil boom's long term impact on soil, water and air quality.

A recent study published in Science Magazine estimated that from 2002 to 2012, the land area housing rigs, roads and storage facilities relating to oil and gas drilling totaled roughly 7.5 million acres, the equivalent of three Yellowstone National Parks. The same land once produced crops. The researchers estimate a loss in cropland biomass equivalent to 120 million bushels of wheat, roughly 13 percent of what the U.S. exported in 2013.

Brady Allred, lead author of the study and an ecologist at the University of Montana, was quoted as saying, "For all intents and purposes, these are parking lots . . . The question is: How long are they going to stay this way?"

North Dakota has made strides to ensure pad sites and pipelines are restored to productivity by promoting best practices in construction, like separating out and replacing the topsoil, using proper seed mixes and weeding out opportunistic intruding plants. But often, it falls on the landowner to negotiate these best practices into an easement agreement.

Ron Ness, president of the North Dakota Petroleum Council, says landowners are their land's best advocate when it comes to ensuring development is done right. "They know what the agreement was," he said. "They're the eyes on the ground. They know what's possible within reason and I think they need to be the monitor of it."

This holds true for Brenda Jorgenson, who said, "We used to think just farming was hard." Over the past three years, Jorgenson and her husband worked, sometimes successfully, sometimes frustratingly, with representatives from Alliance to return their land to the way it was.

But in declining to agree to a voluntary easement back in 2012, the Jorgensons effectively removed themselves from some of the decision making process. Jorgenson remembers suggesting the company send the pipeline through a natural break in a Juneberry treeline. The pipeline runs roughly 50 yards parallel to it, not because her suggestion fell on deaf ears, but because the company was bound to the route approved in the court-ordered easement that could not be modified.

She remembers asking for a specific seed mix that would match the native prairie of the valley, but later finding non-native plants blooming along the right of way. Alliance reseded with a mix approved by several environmental agencies, a mix Alliance's corporate communications manager, Alan Roth, said Jorgenson herself agreed to in July of 2014 and again this past spring.

What Jorgenson finds hardest to swallow are the frequent visits by Alliance employees, who she says often don't follow approved access points. She finds them driving around her fields and sometimes even on her own driveway. She photographs their vehicles and sends word to the sheriff, but without catching them on his own, there's no way for her to press charges of trespassing.

Her experience represents one extreme of the landowner-developer relationship, an experience Roth says is not typical. "A pipeline construction project follows a very typical project management process, with near-identical procedures and activities being completed along the entire pipeline route," he said. "While issues do arise on occasion, Alliance is unaware of any other landowner that has expressed a similar experience."

Recently the pipeline has even crept into Jorgenson's dreams. In one, a helicopter lands in her yard. Men in executive suits with their families walk into her home and start discussing how they could use each room. "It was my house!" she says, clearly bothered by the symbolism.

Psychological impacts like these may be the most harmful of the boom, suggests Tom DeSutter, a soil scientist at NDSU. "From a human health standpoint, I would say the mental side of it probably weighs more than the actual risk of the biological health of a human," he said. "There's no remediation option that's going to fix that immediately."

Back in Jorgenson's living room, Christianson flips through photo after photo of Alliance disturbances. Jorgenson sighs. "It's a huge wake up call to learn the company doesn't have your interest and the future of your land at heart," says Christianson.

Only recently has Christianson started to portray the human angle of the boom in her photographs. Her landscapes are so powerful she didn't feel a need to show the humans who lived here. Looking forward, she realizes the story is becoming, and maybe always was, about the locals.

"I'm always looking for new things to photograph and new people to tell me their stories," she said. "I'm ready and willing to listen."

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