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HOME / EXPLORER / Archive / June 2012 / Buffalo Roam as Oil Pumps

## Tallgrass Harmony

### Buffalo Roam as Oil Pumps

By KEN MILAM, EXPLORER Correspondent



Bison and the industry are coexisting just fine on Oklahoma's Tallgrass Prairie Preserve. *Photo courtesy of Todd Freeman*

Oklahoma's Tallgrass Prairie Preserve is a place of beauty, one of the few surviving remnants of the once-vast North American prairie.

It is home to free-roaming bison and several sensitive and endangered species of fauna and flora.

It's also home to oil production – a lot of it.

In other words, the story from this beautiful slice of the earth is that, with a little effort and understanding by all parties, coexistence seems to be working just fine.

Located in Osage County in the northeastern part of the state, it has been explored and exploited by the petroleum industry for more than a century.

While the 40,000-plus-acre tract is owned by The Nature Conservancy, a group dedicated to protecting and preserving the original character of the prairie, oil activity continues and is even encouraged, according to TNC spokesman Bob Hamilton.



When the Conservancy bought the historic Barnard Ranch in 1989, "Nobody knew who we were ... they thought we were going to sue everybody and shut down the oil patch," Hamilton said.

"Actually, we get along pretty good," Hamilton said. "We're a reasonable bunch of folks. We realize mineral rights are superior to surface rights.

"We try for mutual agreement (on practices) from the git-go. That takes away a lot of the heartburn later," he said.

"We meet (the company representatives) on site, look at their plan, adjust it if it's too close to sensitive features," he explained. "For example, power lines will displace grassland birds ... because they may fear perching predators. We may suggest consolidating where there is already a disturbance – run lines along an existing road, etc.," Hamilton said.

"Birds are also sensitive to sound. They need to hear themselves sing, so a pumpjack may need a good muffler," he said.

"Also our neighbors, ranchers," he added. "Nobody likes to see power lines across open prairie."

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### Meet the Beetles

Working in environmentally sensitive areas brings other challenges.

Archeological surveys, endangered beetles, Native American mineral rights, groundwater contamination worries and public concerns about hydraulic fracturing are just a few of the factors to consider, said AAPG member Bay Woods, district geologist for Oklahoma City-based Chaparral Energy, one of the companies operating in the preserve's Mississippi Line.

The company currently is doing a microseismic study to monitor the effects of hydraulic fracturing and fluid flow to ensure groundwater is not tainted, Woods said.

Horizontal wells also help minimize surface disturbance, Hamilton said.

Chaparral has one horizontal project working, but the final results are not in yet, Woods said. Other similar sites operate in the preserve, Hamilton said.

While the historic field is "pretty well defined" geologically, taking over old sites sometimes requires more cleanup than the well would be worth, Woods said. It also keeps some smaller companies out of the game.

Constant archeological surveys guard against interference with cultural sites, and the preserve is home to the endangered American burying beetle. If the insects are found in a prospective area, experts bait them away from the work area, Woods said.



"We spend the money and take the hits" to comply with TNC's "best practices" policies, Woods said.

"I think we do a good job," he said.

Invasive species are seen as perhaps the biggest threat to the preserve, Hamilton said.

Companies are encouraged to use native seeds when reclaiming sites, he said.

### Local Concerns

Hamilton estimates TNC has made about a dozen leases since it bought the land, and several other wells had been in place for years.

The organization charges standard fees for leases and roads, but receives no royalties because the mineral rights in the area are held in trust by the U.S. government for the Osage Tribe. Those dealings are handled by the Bureau of Indian Affairs.

A specific body of law applies in the case of the Osage, because the tribe was "one of the first and biggest in the oil patch," according to Nancy Appleby, a Washington attorney specializing in helping people who do business with Indian tribes.

The Osage "have done quite well developing those resources ... and are more sophisticated in that regard" than some tribes, Appleby said.

Anyone planning to work in so-called "Indian Country" still would be "foolhardy not to be familiar with local politics," she said.

Being aware of what level of government law applies and treating tribes as governments are essential, she said.

Appleby said her "boutique practice" helps bring dollars into Indian Country.

Oklahoma State University is the Conservancy's primary partner in the preserve, and typically has two to three dozen research projects ongoing, including Bison tracking, grassland dynamics and more.

According to Hamilton, more than 180 scientific publications have come out of work at the preserve.

The University of Tulsa is another major preserve partner, Hamilton said.

Salt water and oil remediation studies led to a joint fundraising effort, which led to the building of an Ecological Research Station, Hamilton said.

The 6,500-square-foot facility houses labs, specimen rooms, offices and a classroom that seats 60 for workshops, Hamilton said.

"We're all about research. Things developed here are used on a much broader scale than just the oil industry," he said.

"When we work with companies, we approach it from the science, not emotion," he said. "In the long run it makes economic sense. We think of ourselves as being in the 'business' of conservation." 