

## 700,000 acres: Chesapeake leases large chunk of Converse County for oil drilling

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In the largest local oil play in recent years, Chesapeake Energy has leased more than 700,000 acres of federal land in the Powder River Basin, most of it in Converse County. The company plans on drilling for oil and natural gas in the area.

Recent technological advancements in horizontal drilling and hydraulic fracturing techniques will allow Chesapeake Energy access to explore the ground of Converse County for minerals that previously were economically not viable.

"It could be a real bonus for Wyoming, not only for the immediate, but for the long haul as well," State Oil and Gas Supervisor Tom Doll said.

The purchase was announced by Chesapeake Chairman and CEO Aubrey McClendon at Hart Energy's Developing Unconventional Gas conference in Fort Worth, Texas.

Chesapeake is the second largest producer of natural gas in the country and historically has steered clear of the Rocky Mountain region.

Chesapeake currently has one horizontal well about four miles northwest of Douglas, Doll said.

"If my memory serves me, the vertical wells drilled many years ago were in the 50-60 barrels per day range and this one came in at 900 and dropped off, but is still at several hundred barrels a day," he said.

The increased oil activity in the region should be a boon to the local community as more drilling leads to increased jobs and taxes returned to local governments.

There are three primary taxes on oil. The federal government takes a 12.5 percent royalty tax, but 49 percent of that is given back to Wyoming. The state collects a 6 percent severance tax and the county gets a 7 percent ad valorem tax.

For 100 barrels at \$60 a barrel, the federal government gets \$656, but gives \$321 back of that to the state. The severance tax contributes an additional \$315 to the state and the county gets \$367 from the ad valorem tax.

A 2005 study by the Rand Corporation – a non-profit research organization – estimated there are 800 billion barrels of recoverable oil under the Green River Formation in Colorado, Utah and Wyoming, more than three times the reserves of Saudi Arabia; making it the largest oil deposit in the world. But it has been too costly to extract.

"Since the early 1980s, oil shale has not been on the U.S. energy policy agenda, and very little attention has been directed at technology or energy market developments that might change the commercial prospects for oil shale," the Rand report said.

The oil is located deep in the earth, below many geological layers and below mountains, in many instances. Shale oil can't just be pumped out of the ground like its cousin, crude oil. Shale oil is actually trapped within rocks. Those rocks must be slowly heated to bleed the oil out, which can then be pumped to the surface.

Converse County is not part of the Green River Formation, but is close enough that it is geologically and financially relevant.

"We have a pretty good idea of what we have, but there are still a lot of areas that are unexplored," said Nick Jones, geologist for the Wyoming State Geological Survey.

"It should have a positive impact on the fact that there hasn't been a lot of recent drilling into the Frontier Formation," Doll said.

"The fact that they drilled that horizontal well north and west of Douglas and completed it at such a high, productive rate as compared to the vertical wells that were drilled there many years ago . . . is phenomenal. It really opens up a whole lot of potential drilling opportunities."

Chesapeake told the Wyoming Oil and Gas Commission it intends on relocating some employees to Casper and Douglas, but did not say how many or what kind of investment they are making in the region.

"These are going to be expensive wells, over \$7 million a piece," Doll said. "I expect over the next several years we are going to see quite a bit of drilling activity in that part of Converse County."

"During your exploration phase and research phase, you are going to try and delineate fields that are going to be productive and when they get those established, they spend their time and capital bringing those fields online," Jones said.

What makes Converse County exciting for Chesapeake Energy is horizontal drilling. The new technology allows drills to turn sharply, providing a single station access to a larger underground area at much smaller cost to the company.

"You don't want to drill a 15,000 foot well that's going to give you two barrels a day. You're going to definitely want the well to show more before you put that kind of investment in," Jones said. "It reduces the footprint of a well pad. With directional drilling technology, off of one pad, it allows the drill to bore away and out and take advantage of different reservoir targets."