

Deep, lucrative Utica Shale formation extends play to Southern Tier

By Tom Wilber • twilber@gannett.com • June 5, 2010, 9:50 pm

Marcellus Shale development may be just the beginning.

The massive gas-bearing shale formation that extends from West Virginia through the Southern Tier of New York, lies above another formation of equal or greater size, called the Utica Shale.

The Utica formation runs from the heart of Pennsylvania through Quebec, and its potential is enormous.

Until now, most of the attention has been focused on the Marcellus, by many estimates the largest reserve in the country. But as more exploration brings more data, new riches are coming to light.

There are more than a half-dozen gas-bearing formations under New York state, varying in size and location, with the Marcellus and the Utica being by far the largest. Smaller formations include the Oriskany, the Herkimer, the Medina — all sandstone formations — and the Trenton Black River, a limestone formation.

Gastem Inc., a Montreal company, drilled an exploratory vertical well in Otsego County through various formations, including the Utica and the Marcellus, according to a company report in January. The well "largely exceeded our expectations and we are accelerating programs," Gastem CEO Raymond Savoie said in a statement.

Norse Energy, based in Norway, also has tested several of the formations with promising results.

"We believe the Utica potential in regions of New York to be every bit as significant as the Marcellus," said Dennis Holbrook, a Norse spokesman.

While the sweet spots of the Marcellus tend to be in Broome, Tioga and Delaware Counties, the prime location for the Utica tends to be in Central New York, said Bill Kappel, a USGS hydrogeologist.

What it means is this: Upstate residents who once thought major gas development issues were mostly limited to the Southern Tier, should soon realize they will affect most of the state, said Lindsay Wickham, a field representative for the New York State Farm Bureau.

Residents need to plan and unite to capitalize on the good aspects and minimize the bad, said Wickham, who helps organize landowners into coalitions to leverage bargaining power and land use agreements with gas companies seeking rights to their land.

"People north of Broome and Tioga Counties, in the Finger Lakes area and central New York, need to know they will be dealing with all the same kind of issues they are dealing with in the Southern Tier," he said.

Waiting game

Companies have been producing gas from New York, mostly from the Trenton and Medina formations, for decades, but on a tiny scale compared to what the shale formations would bring. A good well in one of the sandstone formations, for example, may produce between 500,000 to 1 million cubic feet of gas per day. A well in the Marcellus is likely to produce 10 times that, said Don Zaengle, a geologist from Worcester.

Because the geology of the sandstones and

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limestone is less consistent from place to place, the wells are more sporadically located, with many of them in Western New York.

Marcellus and Utica development would be more uniform and prolific, requiring more extensive infrastructure throughout the state, including a comprehensive network of compressor stations and gathering lines.

But while the potential riches from the shale formations are staggering, New York landowners — and gas companies — are playing a waiting game. Shale formations require drilling horizontally through the bedrock and injecting millions of gallons of a chemical solution under high pressure to fracture the shale and release gas, a process known as fracking, short for hydraulic fracturing. The state is not issuing permits for large frack jobs until it completes a review of concerns about the impact on water supplies and the environment in general. The final review, called the Supplemental Generic Environmental Impact Statement, is expected to be challenged by environmental groups when it is released later this year.

Until companies can get permits to drill horizontally into the Marcellus and the Utica, Holbrook said, estimations of their potential are "deductive reasoning."

In the meantime, multi-national gas companies are beginning to shift manpower and resources to capitalize the Marcellus development in Pennsylvania, as early production figures meet and exceed expectations. More manpower and resources are leading to more discoveries. More discoveries are increasing the prospects and production, leading to more infrastructure. All of this activity, in turn, attracts more attention and resources.

Shell Oil and Exxon Mobile are examples of multi-national companies spending billions to buy into domestic natural gas production, with significant stakes in the northern Pennsylvania and southern New York.

Late last month, Royal Dutch Shell said it will buy East Resources Inc., a major owner of shale gas holdings in the Marcellus, for \$4.7 billion.

Last year, Exxon Mobil announced a \$31 billion deal to buy XTO to increase its natural gas holdings, including Marcellus Shale rights.

And now comes the Utica formation, which has the potential to match or exceed the Marcellus in upstate New York, said Zaengle, who, after 20 years experience with Shell Oil, now works for landowner groups in the Southern Tier.

But there is still relatively little information about it, he added, and it is too early to know for sure what the outcome might be.

"We don't know a lot about it," he said. "But based on what we do know about it, it looks like it has a lot of the same attributes as the Marcellus."

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