 [Click to Print](#)

[SAVE THIS](#) | [EMAIL THIS](#) | [Close](#)

Posted on Sun, May. 23, 2010

Firms find more gas beyond the Marcellus field

The discovery gives hope to drillers for extending the life of Pa. mining efforts. Wells could be sunk from existing sites.

By Andrew Maykuth

Inquirer Staff Writer

As big as the Marcellus Shale gas bonanza has become, it's not the only Pennsylvania geologic formation yielding new and unexpected quantities of natural gas.

Two exploration companies have reported promising discoveries in rock formations layered around the Marcellus like a geologic parfait. Those finds raise the prospect of even more drilling in a state where the gas boom has generated ardent economic hopes as well as passionate environmental fears.

Range Resources Corp., a Texas company that pioneered Marcellus development in 2003, reported to analysts last month that it had completed horizontal test wells in shale formations above and below the mile-deep Marcellus. Range says the two formations contain significant commercial quantities of natural gas.

"The Marcellus has gotten a lot of great research and a lot of great results, and you might think it's the only shale play up here of any magnitude," William Zagorski, Range vice president of geology in Appalachia, said in an interview Friday.

But Zagorski said two new shale formations - the Utica Shale deeper below the surface and the shallower Upper Devonian Shale - were "in the same ballpark" as the Marcellus.

Though both lie under large stretches of the eastern United States - the Utica is being developed in Quebec - Range officials say the Utica Shale appears to be most promising in Western Pennsylvania, and the Upper Devonian Shale in southwestern Pennsylvania and parts of West Virginia. Drilling is going on in both areas, including some directed at the Marcellus.

Meanwhile, Cabot Oil & Gas Corp., a Houston company, disclosed to analysts last year that it had drilled a successful horizontal well through the Purcell Limestone in its Marcellus acreage in Susquehanna County north of Scranton.

The Purcell Limestone is an intermediate stratum sandwiched between two layers of the Marcellus Shale. Before drilling the Purcell well, Cabot's activity was exclusively confined to the richer, lower

Marcellus.

The new well, which produced an impressive 7.3 million cubic feet of gas per day over 30 days, allowed Cabot to access the upper Marcellus Shale without impairing production from its deeper wells, Dan O. Dinges, Cabot's chief executive officer, told analysts in a February conference call.

With the new results, Cabot and other operators in Pennsylvania's northern tier might multiply production from their existing acreage by running pairs of horizontal wells at different depths.

That would be good news for owners of mineral rights, as well as the industry, whose fuel is used primarily to generate electricity and heat homes.

"While still early, this revelation may suggest an increase in the resource potential of our acreage," Dinges said, according to a Bloomberg L.P. transcript of the session. "Additional testing is obviously planned in the future."

Gas operators declined to offer many specifics about the test wells for competitive reasons.

"There's tremendous amounts of gas in place and potentially a large amount of recoverable gas there," John H. Pinkerton, Range's chief executive, told analysts. "So we'll be coy there."

Terry Engelder, a Pennsylvania State University geosciences professor, said the new discoveries were unsurprising.

"The star of the show so far has been the lower Marcellus, but there are other shales out there," said Engelder, whose 2008 estimates of the Marcellus set the stage for the boom. "Gas is prolific in the entire Appalachian basin."

Though drillers have exploited pockets of natural gas from several Pennsylvania formations for 150 years, the current activity is different in scale and approach.

Using horizontal-drilling techniques, operators now can capture gas under large stretches of acreage with multiple wells drilled from a single location. But the wells must be hydraulically fractured - a onetime injection of high-pressure fluid and sand that breaks up the shale to unlock gas molecules.

The extraction technology and frenzied drilling activity have generated protests. The Environment Protection Agency is studying hydraulic fracturing, and Pennsylvania has proposed stricter regulations on drilling and wastewater disposal to address environmental concerns.

Nevertheless, unconventional shale-gas extraction is shaking up the energy world. From Texas to Michigan - and in Eastern Europe and China - vast new reserves of gas entombed in shale has become economically accessible. Natural gas now trades at about one-third the price of a comparable unit of petroleum. A few years ago they cost about the same.

The Marcellus, considered the largest shale reserve in America, stretches from New York state to Virginia. It lies under about two-thirds of Pennsylvania, and geologists say it contains enough gas to stay in production for decades.

The discovery of more gas-rich shale formations in Pennsylvania will add years to the life of the business, operators say.

In southwestern Pennsylvania, where the gas-rich shales are layered in a column, Range's Zagorski said the additional strata could be accessed by new wells drilled from existing locations. That would reduce surface disturbances and allow the industry to maximize pipelines and infrastructure built for the Marcellus.

"In southwestern Pennsylvania, there are areas where all three of these shale plays exactly stack over the same well bore, over the same leases," Zagorski said. "That's extremely valuable. You're not having to disturb new ground or to build new pads to access some of these formations."

As old wells go into decline, new wells could be drilled from the same site, satisfying the industry's need to constantly develop new sources to maintain price stability.


Zagorski said the new discoveries were significant enough to be developed on their own, though they are more attractive when done in combination with Marcellus wells.

"I think they'll get developed and be important in the same way the Marcellus is; it will just take more time," he said.

Contact staff writer Andrew Maykuth at 215-854-2947 or amaykuth@phillynews.com.

Find this article at:

http://www.philly.com/philly/business/homepage/20100523_Firms_find_more_gas_beyond_the_Marcellus_field.html

 **Click to Print**

[SAVE THIS](#) | [EMAIL THIS](#) | [Close](#)

Check the box to include the list of links referenced in the article.

© Copyright | Philly Online, LLC. All Rights Reserved. Any copying, redistribution or retransmission of any of the contents of this service without the express written consent of Philly Online, LLC is expressly prohibited.

