

Pittsburgh Post-Gazette Op Ed

Sunday Forum: Full of gas

'Land men' are scrambling to exploit the huge natural gas deposits that sit below Pennsylvania; property owners should make sure they're not exploited, too, says geoscientist

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In 1859, Edwin Drake struck oil in Titusville, Pa., after months of frustration with a pioneering method to extract oil from the ground -- drilling. The ensuing Pennsylvania oil rush pushed up real estate prices and attracted fortune-seekers. The oil refining business was born, but Drake would not get rich -- having failed to patent his invention, he lost his savings in oil speculation.

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Today, Pennsylvanians face an opportunity similar to the Drake discovery. Many of us sit on top of a deep deposit of natural gas known as the Marcellus shale. The shale is a geological layer more than 50 feet thick under more than 34 million acres that stretches from the Appalachian Plateau of Pennsylvania into New York, Ohio and West Virginia.

The energy industry has long known about the Marcellus, but it took basic science research at Penn State University and the State University of New York at Fredonia, along with technology employed by companies such as Range Resources and Cabot, to bring this resource on line once rising commodity prices made its extraction commercially viable.

Currently, hundreds of company "land men" are combing counties in the northeastern and western part of Pennsylvania. They are competing for leases by offering attractive signing bonuses, in addition to the standard 12.5 percent royalty on gas production. In fact, so many companies are prospecting in Pennsylvania that parcels of land are being fractured into a patchwork quilt of small leases, and some large operators are leasing more land than they can develop within a reasonable length of time.

A scattering of leases will slow drilling and development because large pipeline gathering systems are required to connect disjointed pieces of land. Industry will favor those leases that encompass more than 2,000 contiguous acres and develop them first. So the rate of development may well depend on how effectively individual landowners work together to organize their leases into larger parcels of land.

Landowners also should be aware that one strategy some companies employ is to acquire drilling rights from property owners who don't really appreciate their value -- with plans to resell the rights at a tidy profit after shale gas leases become even more valuable. Landowners see nothing from such second-generation deals, and if the "flipping" of land rights becomes a common feature of the race to exploit the Marcellus shale, little of the new-found money will stay in Pennsylvania.

For landowners, the value of the shale is in both the signing bonuses and future royalties, but the bonuses don't matter nearly as much over time as negotiating adequate royalties, which should be more than the standard rate of 12.5 percent. Landowners should search carefully for companies that plan to actually drill on their property and that offer sweet royalty deals -- in lieu of seductive but ultimately less rewarding signing bonuses. They should shy away from speculators.

Consider the example of Jackie Root and her neighbors in Tioga County, who live above a geological formation full of natural gas. Until recently, this underground resource wasn't worth much to them. In 2000, gas drilling and exploration companies were offering just \$2 per acre per year for the right to drill at a future date.

When leasing agents approached Ms. Root, she decided not to sign and instead began researching her options. With the help of Penn State extension staff, in 2005 she organized one of the first Pennsylvania landowner groups, composed of 35 members, and was able to negotiate a good deal. Other landowners and the state of Pennsylvania would benefit a great deal by following Ms. Root's example and guarding against speculators who want to cheat landowners of the royalties they deserve.

The Marcellus shale could contain up to 516 trillion cubic feet of natural gas. Ten percent of such deposits are commonly recovered, which could value the Marcellus at up to \$1 trillion, assuming expected price increases. The current annual production of the United States, plus Canada and Mexico, is 30 trillion cubic feet.

The bottom line: The Marcellus shale is so rich that individual landowners should not worry about missing out if they don't jump on the first deal that comes their way. Regardless of what pressure is brought to bear by the land men, time is *not* of essence. Landowners should organize with their neighbors and weigh carefully the pros and cons of short-term gratification versus long-term gain.