



Utica and Marcellus shale development for Ohio schools

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Recent technological advancements have made it possible to produce oil, natural gas, and certain liquids (such as ethane, methane, and propane) from deep shale reservoirs in the State of Ohio. However, oil and gas development is not new to Ohio. According to the Ohio Oil and Gas Association (OOGA), oil from a drilled well was first discovered in Ohio in 1814 when “a saltwater well driller discovered oil at a depth of 475 feet in Noble County.” The first commercial oil well went into production several decades later in Washington County. Since that time, the Ohio Department of Natural Resources (ODNR) reports that more than 275,000 oil and gas wells have been drilled in Ohio, ranking Ohio fourth in the nation behind Texas, Oklahoma, and Pennsylvania.

The Marcellus and Utica Shale

Ohio is well-positioned in the two large shale plays in the Appalachian Basin. The first, known as the Marcellus Shale, is located thousands of feet below the surface in southeastern Ohio, eastern West Virginia, much of Pennsylvania, and portions of New York and Maryland. As one of the largest deposits of natural gas in the United States, the Marcellus Shale reservoir is estimated to contain enough gas to meet the entire energy demand in the United States for at least the next decade. [Map showing the general area of expected Marcellus development in Ohio.](#)

Although the area appears quite large, it is likely that development of the Marcellus Shale will be focused on the southeastern Ohio counties of Belmont and Monroe. As of November 27, 2011, ODNR has issued 11 horizontal drilling

permits for the Marcellus Shale, eight (8) of which are in Belmont and Monroe Counties.

Located approximately 7,000 feet below the surface, and stretching across significant portions of eastern and central Ohio, the Utica Shale is rich in oil and liquid hydrocarbons (also known as “wet gas”). The Utica Shale play is expected to be the focus of developers in Ohio. As of November 27, 2011, ODNR has issued 76 horizontal drilling permits for the Utica Shale in Ashland, Ashtabula, Belmont, Carroll, Columbiana, Coshocton, Geauga, Guernsey, Harrison, Jefferson, Mahoning, Medina, Monroe, Muskingum, Noble, Portage, Stark and Tuscarawas Counties, but only 14 horizontal wells have actually been drilled.

Overview of Oil and Gas Leasing in Ohio

Large landowners in many Ohio counties, including many public landowners, will be (or already have been) approached by landmen, lease brokers, and large oil and gas company representatives to enter into oil and gas leases. There is no disputing the fact that the financial terms of modern oil and gas leases (where up-front bonus payments have reached as high as \$5,800/acre and royalties have exceeded 20 percent) are mind-boggling. However, an oil and gas lease will be on your property for decades. Making sure that landowners, especially public landowners, have comprehensive, landowner-friendly oil and gas leases is not only important for your own protection, but also for the sustained use and development of your property.

Unlike conventional, shallower oil and gas operations that have been around Ohio for more than a century, the leasing and development of Utica and Marcellus Shale mineral rights are more complex. Traditional 2-3 page oil and gas leases are not sufficient. As the Ohio Farm Bureau emphasizes, “Landowners should request and expect longer, more detailed leases, and realize the importance of working with an attorney.” The assistance of experienced legal counsel can be valuable in navigating the development process, determining the lands available for leasing, negotiating a fair and potentially lucrative lease, and providing appropriate protections in connection with the drilling and operation of wells on their property, including the environmental issues associated with them.

Statutory Authority for Public Landowners to Enter Into Oil and Gas Leases

Public landowners in the State of Ohio, including municipalities (ORC 721.01 and 721.03), townships (ORC 505.11), counties (307.11), school districts (3313.45), and the State of Ohio (House Bill 133), have the statutory authority to enter into oil and gas leases.

Ohio Revised Code Section 3313.45 authorizes boards of education to enter into oil and gas leases when the “school district would be benefited.” This authority is being utilized by a number of school districts to provide supplemental revenue that is not dependent on existing state and local funding sources. Under this statute, the board of education retains a high degree of discretion over the terms of the oil and gas lease.

The only statutory limitations on such leases are that: (1) the lease must be forfeited upon non-compliance; and (2) all royalties paid under the oil and gas lease must go into the school district’s general fund. Perhaps most importantly, there is no requirement in the statute that an oil and gas lease be competitively bid. Although it often is advantageous to a school district to conduct some sort of bidding or request for proposal (RFP) process when soliciting an oil and gas lease, there is no such requirement under Ohio law.

Key Considerations When Entering into an Oil and Gas Lease

There are many variables a property owner must consider before entering into an oil and gas lease, including the following:

The geologic horizons being leased (e.g., Marcellus Shale, Utica Shale) and whether shallow formations (e.g. Berea or Clinton) will be reserved to the landowner	Financial terms of the lease (e.g., the per acre bonus payment, gross vs. net royalties, royalty percentage, payments in lieu of free gas)
Whether the lease will be a drilling or non-drilling lease	Rights of assignment of the oil and gas lease
Duration of the lease (primary and secondary term), including forfeiture provisions	Water protection provisions (e.g., pre- and post-drilling water testing) and water use limitations/prohibitions
Unitization (e.g., pugh clauses, size and shape of drilling units)	The method of verifying royalty payments (e.g., audits)
Insurance provisions	Environmental and other indemnity provisions
Surface use prohibitions (e.g., landowner approval of location of equipment, roads, pipelines; setbacks from residences)	Whether the lease or a memorandum of lease will be recorded
Restoration/damage/non-disturbance provisions	Minerals being leased (e.g., oil and gas only, liquids)

Hydraulic Fracturing and Horizontal Drilling

Utica and Marcellus Shale development also presents special challenges in terms of community relations and the rights of adjoining landowners based on its use of two technologies– horizontal drilling and hydraulic fracturing:

- Horizontal drilling begins with a vertical well bore that gradually extends horizontally over a distance that can exceed one (1) mile. This technology allows for increased production of oil and gas.
- Hydraulic fracturing is the process of injecting a highly pressurized mixture of water, sand and chemicals into shale formations to crack the rock and stimulate oil and gas production.

Because the fluid used in the hydraulic fracturing process is primarily comprised of water, enormous volumes are required for the “fracking” of a single Marcellus or Utica shale well. In fact, there are estimates that a single well going through the hydraulic fracturing process will use more than four (4) million gallons of water obtained from water on the landowner’s property, public water supplies or water wells. In addition, and due to the high internal pressures within the Marcellus and Utica shale formations, a significant amount of “flowback” returns to the surface within 7-10 days of being pumped into the well.

The flowback carries minerals (such as calcium and sulfur), suspended solids, soluble salts, and low-levels of naturally occurring radioactive elements (such as radium). The end product is a low salinity wastewater solution that must be properly disposed of by the producer, generally in Class II injection wells. In fact, the disposal of used “frac” fluids in Ohio is virtually always accomplished through injection in such wells. Other methods of disposal include recycling and treatment and public wastewater treatment works.

Because of the public debate over these technologies, especially hydraulic fracturing, public landowners and oil and gas developers may face opposition from local residents and environmental groups. Landowners, especially public landowners, need to effectively protect themselves from environmental problems and political concerns, and to

develop an education plan for members of the community.

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