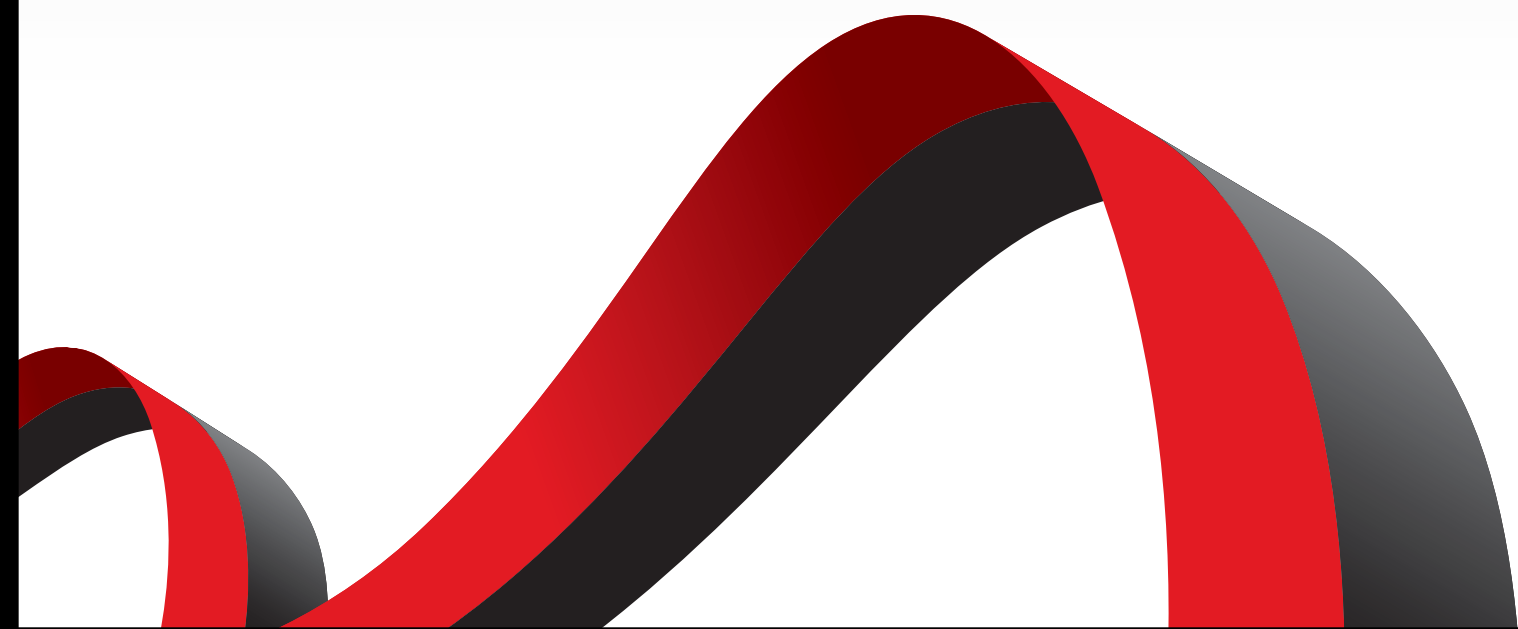


Oil & Gas Law Report

Blog series:

**Ohio Oil & Gas Laws:
History and Perspective**



A relationship of a
different stripe.

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Jeff Fort advises oil and gas clients on operational, governance, environmental, employment and contracting issues. His practice also encompasses permitting, regulatory compliance, environmental audits and assessments, and solid and hazardous waste disposal.



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Rob Schmidt represents clients in environmental programs such as the Clean Air Act, Clean Water Act, Superfund, solid and hazardous waste, emergency planning and agricultural issues. He has extensive experience negotiating with state and federal environmental agencies.



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Ohio's Oil Boom — Why It Will Be Different This Time

August 24, 2012 | Jeff Fort

This is not Ohio's first oil and gas boom. There has been a series of them. I think it is fair to say that in the past the oil and gas business had a freer rein (some would say reign). But this time things are likely to be different. With the internet, higher land prices, higher cost wells, financially-strapped governments, more laws and regulations, and environmental awareness — fundamentally, people's expectations are different. As a result, the relationships between oil companies, mineral owners and regulators, who represent the public in general, are changing.

As in the past, the cost and availability of energy will have a major impact on Ohio. Energy independence is apparently within our grasp and Ohio needs the economic development that comes with energy resources more than ever. Do we have the will to realize it? Surely, as any "fracktivist" will tell you, whatever is realized will be the product of a new and different process.

It's not business as usual in the oil patch this time. Success in this climate will require insight gained from experience in a variety of disciplines and an awareness, if not an understanding, of a new landscape. A business skating toward anything other than where the puck will be is going to be frustrated.

Following are what some might call my musings on this topic, gleaned from a career in the oil and gas industry.



Near Cygnet, Wood County, Ohio, in 1885. Source: ODNR website

Past Oil Booms and Impacts

The first oil well drilled in Ohio for commercial production was located in Macksburg, Washington County. It was drilled in 1860, one year after Colonel Drake discovered the first oil well in Titusville, Pennsylvania. From 1861 through the early 1900's shallow sandstone reservoirs were developed in southeastern Ohio.

In 1884 the Lima oil field was discovered in northwestern Ohio, making Ohio the world's largest oil producer at the time. As a result, businesses were formed, opportunity flourished, and people flocked to Ohio. Past booms have left their mark.

The Standard Oil Company, established as on Ohio Corporation in 1870, was the predominant integrated producing, transporting, refining, and marketing company of its time. It was the largest oil refiner in the world. The Husky refineries

operating in Lima and Toledo were once owned by Standard. Standard's production component became the Ohio Oil Company. A successor, Marathon Petroleum Company, still operates in Findlay, Ohio. Pipelines throughout Ohio, some still operating under the original rights of way, will be reborn as new Ohio and Pennsylvania production comes on line.

Through much of the 20th Century, Ohio built a reputation as the world's glassmaker. Nearly free natural gas lured east coast glassmakers to the state in droves and Ohio became a dominant world player in the glass industry by riding the demand of the nearby auto industry. Toledo became "the glass city," and Fostoria, Findlay, Tiffin and others also had thriving glass businesses.

In fact, Ohio historic industrial cycles can be explained in large measure by the availability and cost of energy. Another cycle is beginning, this time driven by abundant natural gas liquids (e.g., ethane), feed stocks for the plastics industry, and natural gas (methane), which can be used in transportation.

The Law

The law adapts to cycles because, in the long run, the law is exactly what we want it to be — it is a reflection of the values of a society. And, like society in general, there is a tension in the law between the

predictable and comfortable status quo and the need to recognize and accommodate change. Laws relevant to oil field production are illustrative.

When oil was discovered in Ohio, the prevailing principle of mineral ownership was that the property owner owned from the heavens to the center of the earth. While this principle worked well with hard minerals, it did not work with oil and gas. Oil and gas can migrate underground in response to geologic forces and it is fungible so that it is impossible to know from whose property it may have originated. These characteristics of oil and gas made the prevailing legal principal obsolete. Further, the *laissez faire* political and economic theory of the era, which sought to reward the diligent worker to the ultimate benefit of society, demanded change so that oil and gas resources could be developed.



The "rule of capture" in Morrow County, 1963. Source: ODNR website

The law responded by adopting the "rule of capture" to modify the old ownership doctrine. See, John S. Lowe, *Oil and Gas Law*, West, 2003. Under the rule of capture courts likened oil and gas to wild animals. That is, animals and oil cannot be owned until captured. It was every man for himself. Private property was not only private, but could now include oil from the neighbor's property!

As late as the 1960's, an unfettered "rule of capture" governed how producers

developed Ohio oilfields. For example, an oil boom in Morrow County got started in 1961 when a 200 bbl/day well was drilled on Orrie Myers' property. When wells sprung up everywhere, it became obvious that the law had to change once again. Well spacing and conservation laws were a result of the Morrow County boom and the rule of capture was replaced with the doctrine of correlative rights.

Now What?

While helping shut-in shallow Midwest oil wells in the 1980's (when oil prices were in the range of \$20 per barrel), this author was told, "There is a lot of \$40 oil in the ground." It's true. The quantity of oil and gas is a function of its price in the market and the cost to recover it. Supply and demand, pure and simple. But supply is also a function of technology. Hydraulic fracturing ("fracing" or "fracking"), combined with horizontal drilling technology, has changed everything. Once again, the law must change.

Environmental Awareness

In the old days, tanks did not have bottoms, produced fluids were contained, somewhat, in pits and discharges to surface waters were not only unregulated, it was not even seen as a concern. A creek running through Findlay, Ohio, adjacent to a former refinery site, is still known as "Oil Ditch."

Times have changed. One need only to have raised children in the 1980s and '90s and to have helped them with their science homework, perhaps even environmental science, to know that environmental awareness is much more acute. We now have environmental advocacy groups, "green" standards for

everything from buildings to computers, advanced degrees in environmental science, and environmental laws and regulations. Like everything else it seems, divisive partisanism is everywhere and what is reasonable is probably somewhere in the middle. Ironically, cleaner burning natural gas will benefit the environment, but that doesn't seem to matter when the habitat of the spotted owl might be affected by a pipeline or natural gas-fired power plant.

Project Size

Unlike older traditional wells that could be drilled by regional or local businesses, horizontal shale wells are deeper, more expensive, require more land, millions of gallons of water, etc. Only bigger, multistate or international companies have the skill and capital for such projects. For these companies, where to drill is a function of return on investment. They can pick where to drill and if they can get a better return in one state as opposed to another that's where they will drill. Law makers, regulators and taxing authorities need to understand that the producers have choices.

Regulation

Since the advent of environmental laws in the 1970s and 1980s, emissions and releases of hydrocarbons to the air, water, groundwater and land are now regulated in a myriad of ways. The low hanging fruit has long since been regulated. Now the focus is on well construction standards, pre and post drilling groundwater testing, the composition of drilling mud, brine transportation and disposal and new source performance standards. And there is more to come. The oil and gas sector is going to be regulated like never before.

Found Money and Taxes

Yet some things have not changed. There is something exciting about the oil business. Black gold, Jed Clampett, J.R. Ewing — landowners and wildcatters can strike it rich. It exemplifies the American dream. But this time around cash-strapped governments are also looking for ways to take their share. Severance taxes, ad valorem taxes, commercial activity taxes, state and local sales taxes, payroll taxes, state, local, and school income taxes, permit fees, workers compensation fees, etc. For taxing authorities (there are 3,300 of them in Ohio), it is found money. The oil industry has always been a big target for taxing authorities, but it will probably be worse this time.

Land Value

It is fair to say that during the 1900s, the value of farm real estate has generally risen, but not much. See, William McD. Herr and Phillip Eberle, "[Trends in Farm Real Estate Values in the North Central States: 1912 to 1989](#)," [Farm Real Estate](#), Illinois North Regional Extension, August, 1990, page 7.

It is also fair to say that oil and gas can make the land much more valuable than it would have been otherwise. Even today a farmer or other landowner would be hard pressed to turn down the possibility of a signing bonus and a monthly royalty check.

What has changed, however, is that farmland, at least in Northwest Ohio, goes for \$6-7,000 an acre. That, coupled with environmental awareness, has changed oil

leases and spawned surface use agreements. Where before a lease might contain a provision that lessee would pay lessor for damage caused to growing crops, now the impact of roads, pipelines, soil compression, drill pads, permanent production facilities, etc., are heavily negotiated and often measured, and paid for, by the square foot. A lessor may even require a performance bond to ensure proper reclamation of this valuable asset.

Internet

On top of all that there is the Internet. Where before it might have been difficult to gather information, now the challenge is to differentiate the good, or at least reasonable, information from misinformation. Need to negotiate a lease or easement, organize NIMBY opposition, find a pipeline opposition attorney, confirm your expectations that fracking is a threat to groundwater, or confirm a conspiracy theory that big oil and big government are out to screw all of us? No problem. In this information age it is too easy to become, as they say, too smart by half.

The Role of Government

More unsettling is the tendency to find acceptable the government's involvement in more aspects of what used to be private land and private business. Clearly, the unfettered rule of capture was not sustainable. So too, the rest of where we are heading is probably inevitable for the same reasons. But there is still something appealing about less government, at least to this writer.

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Mandatory Pooling and Unitization in Ohio, Part I: History and Constitutionality

February 13, 2013 | [Andrew Trafford](#)

Landowners, in certain situations, can be compelled by the state to combine their mineral interest with their neighbors for the purpose of producing oil and gas. In Part I of a multi-part series, I explain the history and constitutionality of this practice.

What Is Compelled Participation?

“Compelled participation” is the term I will use throughout this blog series to refer collectively to mandatory pooling and unitization. Mandatory pooling and unitization are variations of similar state action — forcing mineral owners to include their mineral interests with other owners in a pool or unit. In later posts the two concepts will be distinguished and discussed separately, but because they have the same legal and historical origins, it also makes sense to discuss them collectively. Admittedly, this term is imperfect, but is preferable to untangling the Gordian knot of terminology in this area of oil and gas

law ([see our earlier blog discussing these confusing terms](#)).

Compelled participation occurs when an operator cannot negotiate an agreement (usually in the form of an oil and gas lease) with enough landowners to legally or efficiently develop oil and gas resources. In those situations the operator can apply for an order from a state agency forcing the recalcitrant landowners to nevertheless participate.

Compelled participation occurs primarily in two situations. The first situation is “mandatory pooling,” which is done to create a *drilling unit*. A drilling unit is a tract of land that complies with state minimum acreage and spacing requirements for an individual well. The second situation is “unitization,” which is done to create a larger area of land for the purpose of maximizing productivity of a certain geological formation (often an underground reservoir of oil). Both situations are designed to protect each owners’ correlative rights in the minerals.

I will explain in my next post how and when compelled participation can happen in Ohio. But before that, it is important to understand how Ohio and other states decided that this practice was necessary. First, let’s look at the legal background.



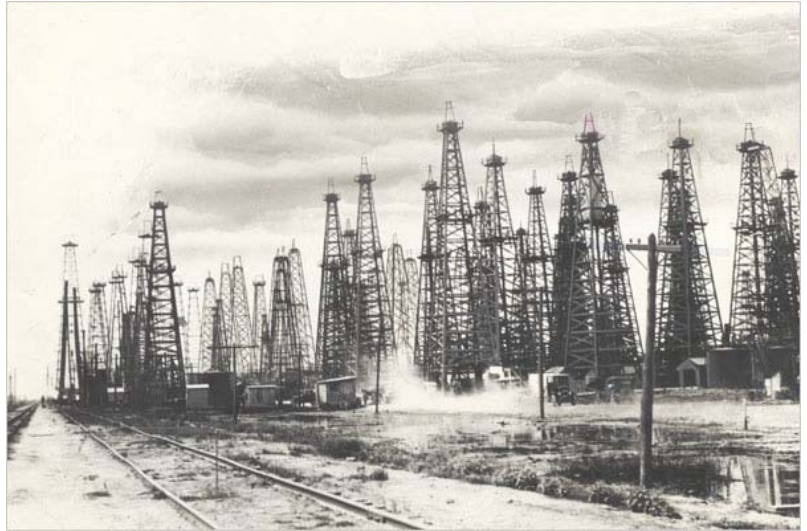
The Legal Background: Property Rights

Three property rights intersect to create the need for compelled participation. The first right is the “rule of capture,” a legal principle imported from English law that wild resources are the property of the first person to capture them. The rule came into existence over a hunting dispute, but it applies today to oil and gas because, like wild animals, oil and gas move around the earth without regard for arbitrary property boundaries imposed by law. Oil is therefore considered a “wild” resource that belongs to the first person to extract it, subject to limitations created by the doctrine of “correlative rights.”

The doctrine of correlative rights is a descendant of the rule of capture and it is the primary legal doctrine that regulates a property owner’s right to produce oil and gas in Ohio. Correlative rights are enjoyed by landowners having access to a common natural resource whose supply shifts across boundaries, such as gas or oil. The doctrine establishes the right of each landowner to have a “reasonable opportunity” to capture the resource under his or her property, in a share equal to the size of their land in proportion to the size of the underlying geological formation. Correlative rights recognizes that the “wild” nature of oil and gas makes it appropriate for owners of property containing a common pool of oil and gas to have somewhat interrelated property rights.

Third is the right to property. Property rights are bedrock in America, protected in multiple places in the Constitution. However, the right to own and develop property is not absolute and those rights must bend to the common good. Eminent domain, taxation, zoning, and various health and safety laws modify private

property rights in favor of a greater public concern. An unregulated right to drill for oil and gas has sometimes created neighborhoods that look like this:



Historical Background: Balancing Interests

The picture above is from the Spindletop oil field, outside of Beaumont, Texas, where the discovery of oil in 1901 sparked the first Texas oil boom. Because the nascent industry had little to no regulation, speculators and oilmen (including an Ohioan, W. Scott Heywood) rushed to sink their own wells, creating a forest of oil derricks.

Spindletop was not only ugly, it was also inefficient. The sheer density of wells stifled the productivity of the underground oil reservoir. Oil, like other natural resources, is capable of being overproduced, and it was a serious problem in the early days of the oil industry. Each well depends on natural pressure from the underground reservoir pushing the oil upwards, and every additional well reduces that pressure.

In response, states began imposing *spacing requirements*, described as “conservation laws” to prevent overproduction. Spacing requirements

mandate that each well have a certain minimum number of acres to itself and that each well be a minimum distance from other wells and property boundaries. After the Ohio equivalent to Spindletop in Morrow County in the 1960s, Ohio adopted its conservation law. Ohio spacing requirements came into effect in 1965 and are now codified at R.C. 1509.24 and O.A.C. 150:9-1-104. For wells producing oil or gas from at least 4,000 feet below the surface (which includes all existing horizontal shale wells in Ohio), the well cannot be drilled on a tract less than 40 acres (a drilling unit, described earlier), must be 1,000 feet from any other well, and must be 500 feet from the boundary of the tract.

But while minimum spacing requirements achieved great results for conservation and efficiency, they created a new problem. Landowners wanting to drill might be unable to form a drilling unit if their neighbors objected and there was insufficient space for the well without the neighbor's consent. This pitted consenting and nonconsenting landowners against each other, while also threatening the public interest in developing the state's oil and gas resources. Fortunately, the correlative rights doctrine provided the state with legal authority to impose a solution: compelled participation.

Compelled participation reconciles the competing interests of consenting landowners, nonconsenting landowners and the public. Nonconsenting landowners who refuse to lease or otherwise join a unit can be compelled to join the unit so that they cannot stand in the way of the efficient production of oil and gas from a reservoir. Then, the costs, expenses and revenues of that well are divided among

the landowners within the unit and the operator of the well. Under this method, everyone gets their fair share of the revenue, all property owners' rights to enjoy the common natural resource are preserved, and the oil and gas is produced efficiently.

In Brief: Is Compelled Participation Constitutional?

Compelling landowners to dispose of a property interest against their will naturally invokes questions of constitutionality. Mandatory pooling statutes have long been held constitutional as necessary to balance the competing interests discussed above. Municipal mandatory pooling statutes have been upheld citing the Supreme Court's ruling in *Village of Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926). Statewide mandatory pooling statutes have been upheld according to the Supreme Court's ruling in *Ohio Oil Co. v. Indiana*, 177 U.S. 190 (1899).

In *Ohio Oil Co.*, the Supreme Court of the United States invoked the doctrine of correlative rights to uphold statewide bans on wasting oil and gas. The Court held that "[a]s to gas and oil, the surface proprietors within the gas field all have the right to reduce to possession the gas and oil beneath." *Id.* at 209. Given such precedent, statewide mandatory pooling statutes have consistently been held constitutional as necessary to achieve the best outcome for consenting mineral rights owners, nonconsenting owners and the public at large.

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A Tool of Last Resort: Mandatory Pooling in Ohio

March 4, 2013 | [Andrew Trafford](#)

This is the second in a multi-part series on the practice of compelled participation – forcing unwilling mineral rights owners to participate in oil and gas production from their property. [Part I discussed the history and constitutionality of this practice in the U.S.](#)

Every day, crowds of title researchers and landmen pack county offices in Eastern Ohio looking for the owners of unleased property. They are discovering a quilt of landowners with varying degrees of interest in leasing their land for oil and gas drilling. But even after attempting to negotiate with landowners, oil and gas companies often cannot lease enough land to comply with Ohio's minimum spacing laws. As a result of those laws, uncooperative landowners threaten to interfere with landowners who have leased and want to have oil produced from their land.

Fortunately, under the right circumstances, an operator or the consenting landowners may be able to invoke Ohio's mandatory pooling laws, the most common form of compelled participation. Mandatory pooling laws force hold-out landowners to submit their mineral rights to oil and gas operations when their recalcitrance prevents an operator from meeting state spacing requirements. [Read more about these and other industry terms in a previous post.](#)

As explained by the Ohio Oil and Gas Commission:

Mandatory pooling prevents a minority landowner, whose acreage is small but necessary to form a legal drilling unit, from disrupting the majority landowner's ability to develop property. Mandatory pooling is solely designed to protect landowners' correlative rights. It is a tool of last resort. (See E.R. Ashmus, 11.)



Conserving Resources and Protecting Owners' Rights Sometimes Warrants Mandatory Pooling

In 1965, Ohio followed other oil producing states by enacting minimum spacing and set-back requirements. The purpose of these requirements, often called "conservation laws," "was twofold, to conserve oil and gas resources and to protect the correlative rights of adjoining owners." (See H.B. 234.) The chief of the newly created Ohio Department of Natural Resources was given the authority to establish these requirements, which are currently determined based on the depth of the well, as follows:

Depth of Well (feet)	0-1,000'	1,000'-2,000'	2,000'-4,000'	4,000'+
Minimum Drilling Unit (acres)	1	10	20	40
Minimum Distance to Other Wells (feet)	200	460	600	1,000
Minimum Distance to Boundary of Tract (feet)	100	230	300	500

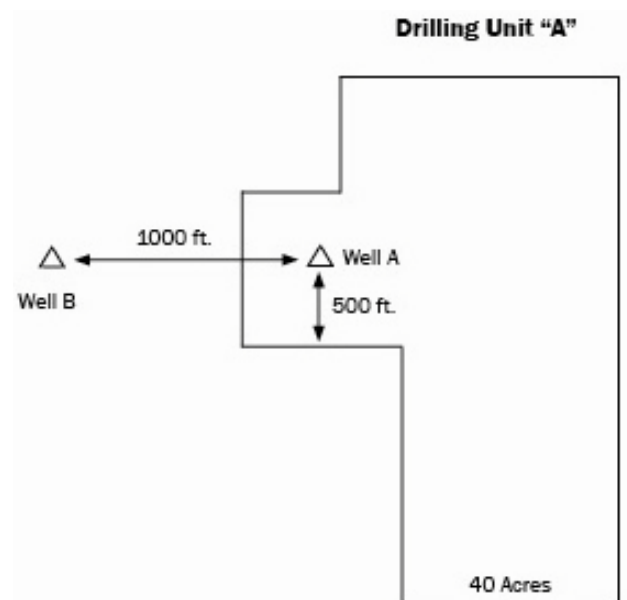
The graphic at right illustrates these conservation laws in practice. Well A represents an operator's proposed well, at a depth below 4,000 feet. For a well of that depth the operator must:

- Have under lease at least 40 "compact and contiguous" acres of mineral rights
- Place the well at least 500 feet from the boundary of the drilling unit
- Place the well at least 1000 feet from any other well producing from the same underground source of oil (Well B)

Ohio law explicitly encourages the "voluntary pooling" of lease rights to form a drilling unit through private negotiation between landowners and oil and gas operators that result in an arrangement acceptable to all parties. But some landowners won't agree to a lease at any price, leaving small pieces missing from a potential drilling unit and therefore preventing the other property owners from receiving the benefit of their leases. It is in these situations that mandatory pooling becomes necessary.

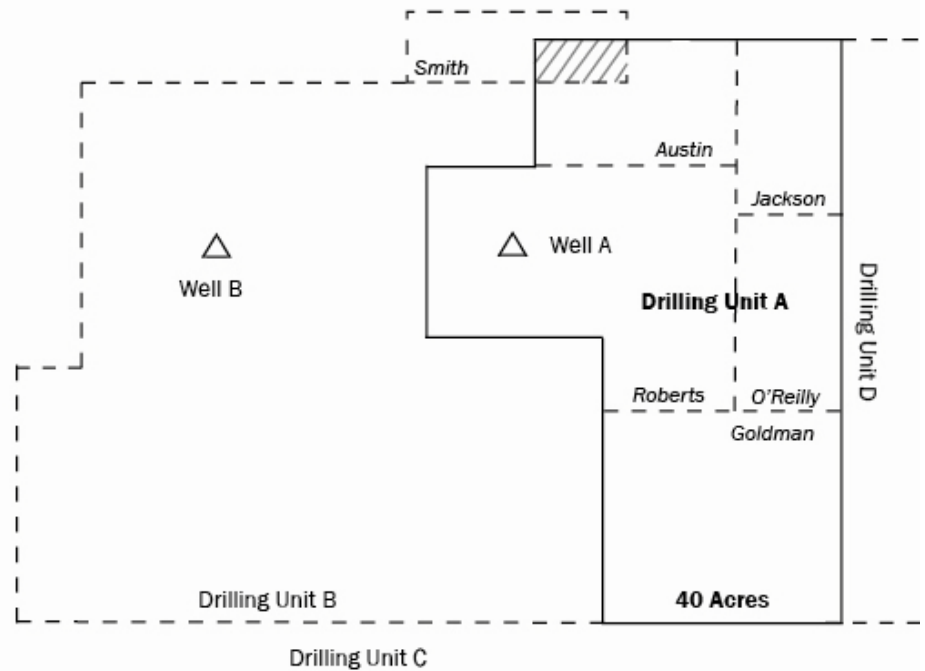
The mandatory pooling statute, R.C. 1509.27, allows an operator to apply for a pooling order if two conditions are met:

1. The tract is of insufficient size or shape to form a drilling unit
2. The operator has been unable, through "just and equitable efforts" to gather sufficient acreage through private negotiation with mineral rights owners under R.C. 1509.26. *E.R. Ashmus v. Division of Mineral Resources Management*, #797, 13 (Ohio Oil and Gas Commission, Nov. 18, 2008)



The chief will also typically require the operator to obtain consent from the owners of at least 90% of acreage in the proposed unit before a mandatory pooling order will be issued.

To illustrate, imagine an operator who successfully negotiated leases with every landowner in a potential unit — Austin, Jackson, Roberts, O'Reilly, and Goldman — except *Smith*. The graphic at right shows that the operator needs at least the shaded corner of Smith's land to secure the necessary 40 acres for a well. If the operator has presented Smith with multiple offers, including fair royalty payments and a signing bonus but Smith will not sign a lease, the operator has probably satisfied the two conditions to mandatorily pool Smith in Drilling Unit A.



use, and conservation of oil and gas...” (See R.C. 1509.27.)

In the above example, Smith's unwillingness to lease prevents the other landowners from developing their mineral resources. To protect Smith's and the neighbors' correlative rights, the chief will

Procedure and Legal Standard for a Mandatory Pooling Order

To compel Smith to participate in Drilling Unit A under the mandatory pooling statute, the operator must submit an application for a mandatory pooling order to the chief of the [Division of Oil and Gas Resource Management \(DOGRM\)](#).

Upon receipt of the application, the chief informs the “owners of the land within the area proposed to be included within the drilling unit of their right to a hearing.” (See R.C. 1509.27.) After a hearing, or after 30 days if the affected landowners do not request a hearing, the chief will issue the mandatory pooling order if he finds it “necessary to protect correlative rights and to provide effective development,

issue a mandatory pooling order forcing Smith's land into the drilling unit.

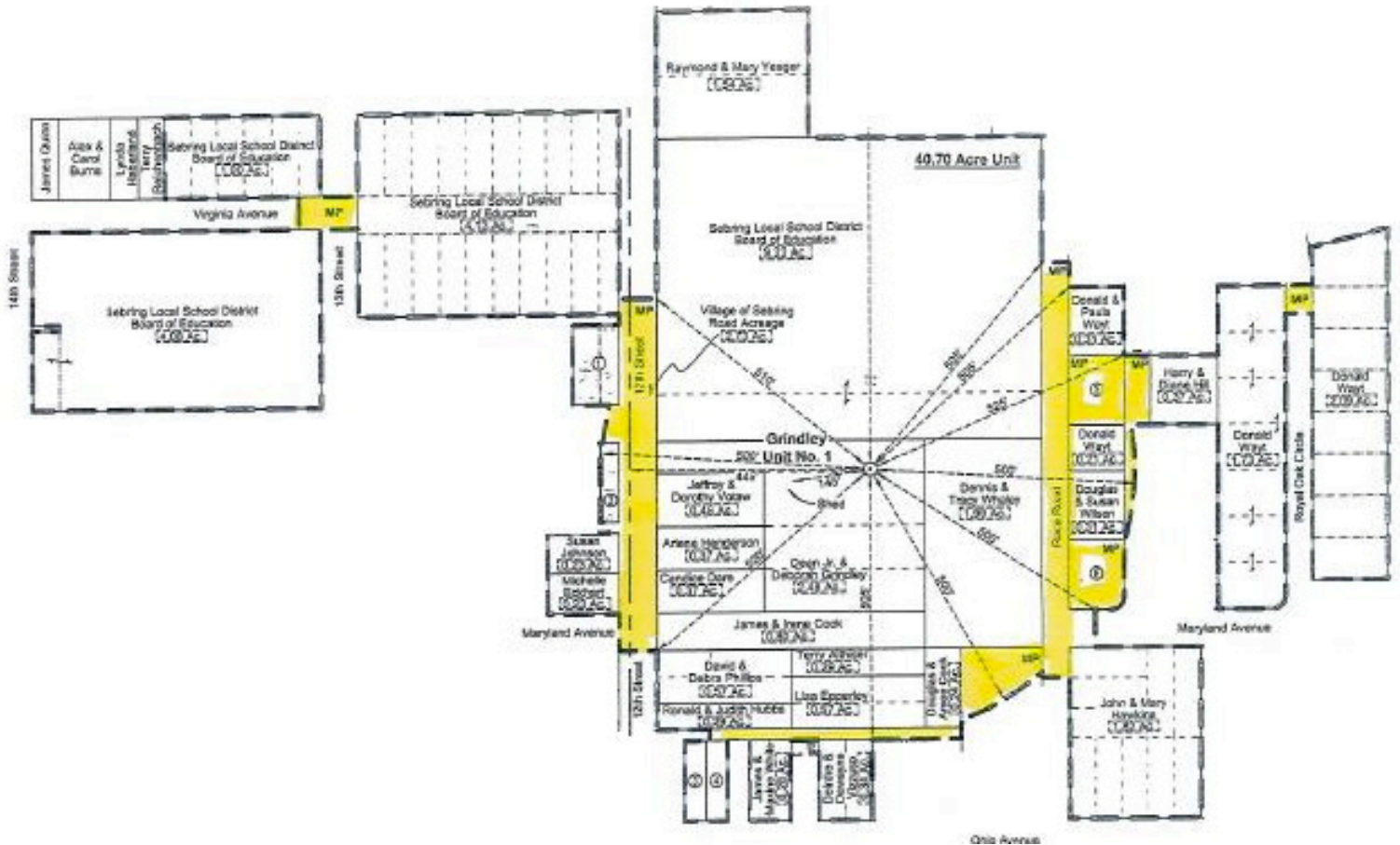
A few consolation prizes are given to the forced-in mineral rights owner. First, Smith will receive an allocated share of production from the Unit. Second, no surface operations are allowed on Smith's land. This means the well cannot be placed on Smith's land (in the graphic above the well is placed on Roberts' land). Finally, *not all* of Smith's property is forced in; only the shaded portion of Smith's property that is necessary to create a drilling unit will be included. To learn more about how compelled participants are compensated, [read this previous post that describes a similar situation](#).

In the real world, mandatory pooling applications come in all shapes and sizes, and get complicated very quickly. In the example below from *Municipality of Sebring v. Division, #839* (Ohio Oil and Gas Commission, Aug. 6, 2012), the land sought to be mandatorily pooled is shaded in yellow and the sprawling perimeter of the unit is marked by a bold dashed line.

This example also illustrates that not all applications are successful. In this case, the commission overturned the chief's mandatory pooling order because the unit's snake-like shape was not "compact and contiguous" as required by R.C. 1509.24(A).

As the Ohio Oil and Gas Commission stated, mandatory pooling is a "tool of last resort," one reluctantly used to protect correlative rights and to ensure the development of Ohio's oil and gas resources.

If you think forming a 40-acre drilling unit is complex, imagine forming a unit for a mile long unit required by a horizontal shale well. [That topic is next in our series.](#)



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Unitization in Ohio: Compelled Participation in the New Context of the Utica Shale

April 25, 2013 | [Andrew Trafford](#)

In many ways, the Utica Shale play caught Ohio off guard. The state became a main focus of the oil and gas industry almost overnight. Ohio responded by updating its oil and gas laws, including major overhauls resulting from Senate bills 165 in 2010 and 315 in 2012. But in some cases, operators and regulatory agencies are still applying old law that was written with conventional drilling methods in mind. In this post, part 3 of our series on compelled participation (see [Part 1](#) and [Part 2](#)), we look at unitization — one of these old laws being put to new use.

What Is Unitization?

Unitization is the creation or designation of a contiguous area of land, called a “unit,” for the efficient development of the oil and gas resources underlying that land. Units can be formed by order of the Ohio Department of Natural Resources (ODNR),

on application from an operator. Units also can be formed voluntarily by consent of interest owners, usually owners of the leasehold. Inevitably, the land sought to be unitized — really the geologic formation below the surface — is subject to a patchwork of different ownership interests. The operator attempts to negotiate lease rights with all such land or mineral rights owners, but it is often the case that the operator cannot reach an agreement with all of them. When an operator has the consent of all but a small portion of the land for a unit, Ohio law allows the operator to apply for ODNR to compel the non-consenting interest owners to join the unit.

Unitization is a close relative of [mandatory pooling](#), in that mineral rights owners who are unwilling to lease their rights for drilling operations are compelled to cooperate by

ODNR. The difference lies in the size of the unit. Mandatory pooling is about gathering sufficient land to meet minimum spacing requirements set by law to create a “drilling unit” of 40 acres or less, depending on the total depth of the well.

Unitization, on the other hand, is about gathering all the mineral rights for a specific portion of oil and gas resources and bringing its development under common control. In the context of drilling in the Utica Shale, this creates units hundreds of acres in size.



A New Context: What Is a “Pool” These Days?

Before going further, we should clarify a key term. ODNR issues unitization orders in relation to a “pool” of oil or gas. To obtain a unitization order, the owners of at least 65% of the land overlying a pool must apply to ODNR to have the pool, or part of it, operated as a unit. R.C. §1509.28.

Usually, it is the operator who makes the application pursuant to the authority granted to him in the leases. A “pool” as used here, is distinct from mandatory pooling ([we’ve discussed these confusing terms](#) before). A “pool” is defined in the Revised Code as “an underground reservoir containing a common accumulation of oil or gas, or both, but does not include a gas storage reservoir.”

Herein lies the new application of an old law. Passed in 1965, Ohio’s unitization law predates the advent of horizontal drilling methods. A “pool” as defined in 1965 fits with the idea of liquid contained in a geologic trap susceptible to conventional drilling. A “pool” was just that: an underground reservoir of oil or gas, sloshing around in liquid or gaseous form usually within a sandstone formation. In the context of unconventional — i.e., horizontal — drilling, the concept of a pool has broadened to include geologic formations of source rock such as shale.

Qualifying for a Unitization Order: Is Unitization Necessary to Increase Recovery?

To obtain an order, the operator must present evidence that the proposed unit qualifies under the statutory legal standard. This legal standard is whether or not the proposed unit is “reasonably necessary to increase substantially the ultimate recovery of oil and gas, and the value of the estimated additional recovery

of oil or gas exceeds the estimated additional cost [of operating the unit].” R.C. §1509.28. The applicants must prove that having control of a large area is important enough to justify compelling unwilling mineral owners to cooperate.

In support of unitization applications, operators point out that the oil and gas resources lying in shale rock formations are not economically viable with vertical drilling methods. “It is unlikely that vertical development of the unit would ever take place,” wrote Chesapeake in its Colescott South application. *Application for Unit Operation, Colescott South Unit*, at 6. However, horizontal drilling brings a certain efficiency to bear that allows shale oil and shale gas to be economically produced, with less impact to the surface of the land.

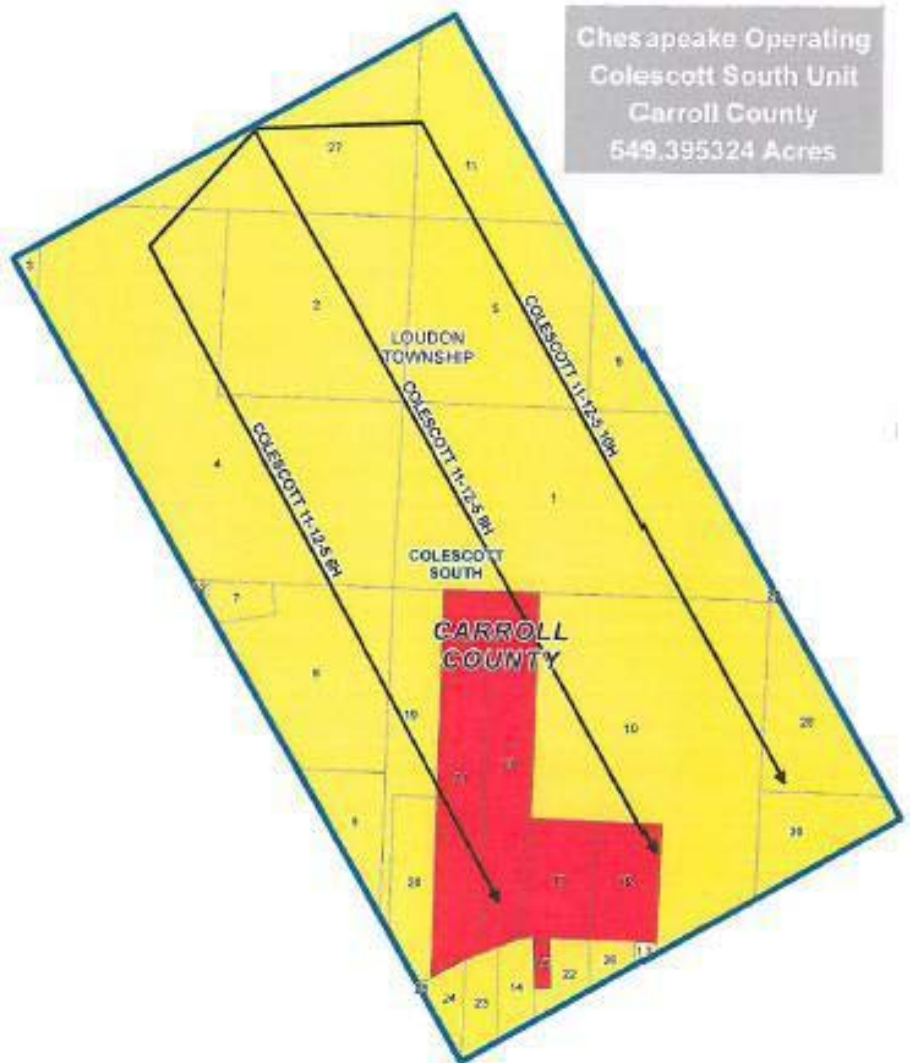
But accessing the oil and gas using horizontal drilling methods requires space, and a lot of it. To be profitable, horizontal shale drilling requires large, uninterrupted areas of mineral rights. Drilling units of the size commonly associated with vertical wells are too small — they won’t produce enough to be profitable and they aren’t large enough to drill horizontally in the first place. The most efficient horizontal shale drilling techniques use horizontal well bores or “laterals,” which may extend one or two miles from the well pad. In its application for the Colescott South Unit, Chesapeake argued that “oil and gas recovery from horizontal drilling methods is directly related to the length of the [horizontal] lateral — limit a lateral’s length and you limit its ultimate recovery.” *Id.* Chesapeake presented evidence that its proposed unit, which would grant Chesapeake rights to 75 extra acres (a 12% increase), would result in a 48% increase in oil and gas recovery. *Id.*

Further, to maximize economic efficiencies and reduce potential environmental impacts and surface disturbance, operators frequently drill multiple laterals from a single well pad. Chesapeake's Colescott South Unit, depicted at right, shows three laterals extending from one well pad but it is not uncommon for an operator to drill as many as eight laterals from one pad.

Because the law imposes spacing requirements between wells (the laterals) and from each well to the boundary of the unit (generally, an operator must allow 1,000 feet between wells and 500 feet to the boundary of the unit, unless a variance is granted), in this case 549 acres are necessary to accommodate the three laterals in the unit shown at right. Chesapeake negotiated leases of the mineral rights underlying all but five tracts, which are shaded in red. Because the owner of the five shaded tracts would not lease, Chesapeake applied for — and was granted — a Unitization Order forcing these tracts into the unit. *Order No. 2013-06, Order for Unit Operations of the Utica/Point Pleasant Formations for the Colescott South Unit, Carroll County, Ohio*, March 7, 2013.

The Unitization Order

If ODNR is satisfied that a proposed unit meets the legal standard and is necessary for increased recovery, it will issue a unitization order. The order is required by statute to "be upon terms and conditions that are just and reasonable," and must



contain certain descriptions of the unitized area, the dates for drilling operation to begin and terminate, and the nature of the drilling operations. R.C. §1509.28(A).

Operators and the forced-in mineral owners pay particular attention to one part of the order — the money/payment provisions. Because the mineral owner never agreed to a lease, ODNR determines the terms by which the mineral owner is included in the unit operations, including the royalty interest, working interest and risk penalty. The terms of the order will differ as the situation dictates.

In two orders issued to Chesapeake, each forced-in mineral owner received a 1/8 royalty interest, which commences upon production, and a 7/8 net production revenue interest that begins to pay out only after the operator recovers 200% of the cost of drilling and operation for the first well and 150% of the costs of any subsequent wells. For two orders issued to BP, because the chance of production was perceived as riskier, ODNR raised the risk penalty to 300% of costs for both initial and subsequent wells, but awarded the mineral owners a 15% royalty interest and 85% of net production revenue. [One of the ODNR orders](#) also required BP to pay the mineral owners a one-time payment, akin to a privately negotiated signing bonus.

In addition, the BP orders provide for forcing in “uncommitted working interest owners” — i.e., non-operating leasehold owners. ODNR compelled these leasehold owners to participate as if they had signed an operating agreement with BP. Here, too, ODNR prescribed a 300% risk penalty for the first and subsequent wells if the working interest owner cannot meet their financial obligations, i.e., to pay in their share of the cost up front.

Unitization as a Policy: Correlative Rights and Balancing Interests

As with mandatory pooling, unitization relies on the principle of correlative rights as a restraint on the rule of capture. The correlative rights doctrine (explained in [Part 1](#)), prevents a few recalcitrant landowners from standing in the way of development of their neighbor’s natural resources. In the Colescott South Unit, for example, Chesapeake had voluntarily acquired rights to 88% of the proposed unit. The doctrine dictates that the other 12% (who were mostly non-responsive, rather than overtly unwilling) should not be allowed to prevent the majority from reaping the benefits of the minerals owned by the majority.

But correlative rights works both ways: The same doctrine motivates ODNR to award “just and reasonable” royalty interests to the mineral owners who were forced into the unit. By relying on the correlative rights doctrine, unitization is ultimately a balancing of interests. In looking for the right balance, Ohio has found new use for an old law.

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Oil and Gas Terms... Confused? You Aren't the Only One

November 19, 2012 | Jeff Fort

The terms "pooling" and "unitization" are often used interchangeably. To confuse the matter further, in Ohio, there are statutory definitions for a "pool" and a "drilling unit" and neither is related to a "unit." Hopefully, this will provide some clarification.

Pooling and Unitization, Generally

To "pool" [the verb] is to combine multiples into a common entity or fund. In an unfortunate and confusing coincidence, a "pool" [the noun] is an accumulation of a liquid, including oil. As in other specialized areas of law, common terms can have special meanings — so-called "terms of art."

In the world of oil and gas, the common understanding of pooling, a pool or a pooled unit is the joining together or a combination of small tracts or portions of tracts for the purpose of having sufficient acreage to receive a well drilling permit under the relevant state spacing laws and regulations, and for the purpose of sharing production by interest owners in such a pooled unit. Bruce M. Kramer & Patrick H. Martin, The Law of Pooling and Unitization 1-3 (3d ed. 2006).

In contrast, "unitization" or unit operations refers to the consolidation (don't use the word "pooling") of mineral or leasehold interests covering all or part of a common



source of supply. *Id.* at 1-4. That is, "unitization" refers to field or reservoir-wide development, which entails much more to accomplish than a pooled unit around a single well.

The objective of unitization is to provide for the unified development and operation of an entire geologic prospect or producing reservoir so that exploration, drilling and production can proceed in the most efficient and economical manner by one operator.

Usually, a pool or unit is formed by the owner of the leasehold pursuant to the authority granted in the lease by the mineral owner.

Ohio

The Ohio Legislature, at ORC section 1509.24, authorizes ODNR to establish

“minimum acreage requirements for drilling units ... to a *source of supply* different from the existing *pool* from boundaries of tracts, drilling units, and other wells for the purpose of conserving oil and gas reserves.” (emphasis added)

Earlier in the Code, a “pool” [i.e., the noun form of the word] is defined as “an underground reservoir containing a common accumulation of oil or gas, or both...” and, a “drilling unit” is defined as “the minimum acreage on which one well may be drilled...” ORC 1509.01(E) & (G).

Depending on the depth of the well, the minimum acreage is 1, 10, 20 or 40 acres.

Voluntary “Pooling”

Ohio Revised Code section 1509.26, [titled, “Agreements to pool tracts to form drilling unit”], provides, “The owners of adjoining tracts may agree to pool the tracts to form a drilling unit that conforms to the minimum acreage and distance requirements....” Notification of the agreement is provided to ODNR with the well permit application.

Often a drilling unit thus formed is called a pool or pooled unit, but avoid doing so.

Mandatory pooling

Of course, a voluntary agreement amongst the mineral owners is desirable and cheaper. But if there is a holdout, all is not lost. ORC section 1509.27 provides:

“If a tract of land is of insufficient size or shape to meet the requirements for drilling a well thereon as provided in section 1509.24 or 1509.25 of the Revised Code, whichever is

applicable, and the owner of the tract who also is the owner of the mineral interest has been unable to form a drilling unit under agreement as provided in section 1509.26 of the Revised Code, on a just and equitable basis, such an owner may make application to the division of oil and gas resources management for a mandatory pooling order.”

That is, the recalcitrant owner can be forced into the drilling unit as if he/she signed the lease.

On its web site, the ODNR Division of Oil and Gas Resources Management provides a document, “[Mandatory Pooling Procedural Outline](#),” dated June 10, 2010, which lists the requirements for the mandatory pooling application and describes the review process. This process includes a review by the Technical Advisory Council on Oil and Gas (“TAC”), notice to owners, a hearing by TAC and the issuance of an Order.

Among other requirements, there must be no obvious alternate location for the well and the operator must have assembled the majority (>90% is recommended) of his unit with lessors that want to have a well drilled.

Just to reemphasize, voluntary pooling and mandatory pooling in the Ohio Revised Code refer to the forming of a minimum acreage “drilling unit.”

Multiple Lessees

If the leases and acreage to be pooled are owned by multiple lessees, then the lessees’ consent to make a drilling unit will be encompassed in both: (i) a Joint Operating Agreement into which the lessees customarily enter for the purposes of designating an operator for the unit well,

specifying the various terms and provisions relating to operation and development of the pooled unit and accounting issues, and (ii) the pooling declaration or designation filed at the County Recorder as required by the pooling provision of the lease.

Units and Unit Operating Agreements

Just as mineral interests and leases are pooled to form, in Ohio, a "drilling unit" to meet the spacing requirements, so too are leases "unitized" to provide for a larger area of joint operation, often called a "unit," by a single operator. Among other advantages relating to geology and economies of scale, the operator can account to the owners of the produced hydrocarbons with one set of tanks as opposed to multiple tanks for multiple parcels, leases and owners.

Order of Unit Operation of Pool

Analogous to mandatory pooling, ODNR can establish a "unit" if 65% of the owners of the land overlying the pool ask for it. The owners who do not agree can be, in effect, forced in if, after a hearing, ODNR finds that such operation is:

"reasonably necessary to increase substantially the ultimate recovery of oil and gas, and the value of the estimated additional recovery of oil or gas exceeds the estimated additional cost incident to conducting the operation." ORC 1509.28.

In past oil booms, it was secondary recovery (e.g., water flooding to drive the oil out of the sandstone) or tertiary recovery (adding a surfactant to help the oil detach from the sandstone) that necessitated a procedure to combine tracts of land and/or multiple leases to allow for such unit operations.

Now, the simple fact that horizontal wells require a larger area of land than a vertical well means that this procedure is likely to be used more often. And anytime anyone is forced to do something by the government, especially when it impacts something as fundamental as the private ownership of land, it will be controversial.

Summary

Is it not unfortunate that a combination of leases is called a "pool" or is the result of "pooling" in the drilling unit context and is called a "unit" in the larger acreage, unitization context?

In any event, whether it's a combination of interests to form a drilling unit or a more complex combination of leases to form an area-wide joint operation, this is a specialized area of the law and there are tried and true ways to get things done.

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