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Development of Shale Gas Resources in North Carolina Will Require Improvements to Existing Property Record Systems for Subsurface Interests

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The recent interest natural gas development in North Carolina has raised a number of issues about property ownership and how relationships between owners of surface interests and subsurface interests are managed. This issue goes beyond interests in natural gas to all subsurface interests. Unlike interests in natural gas, subsurface interests in minerals are found in most counties in North Carolina. Improving the relationship between owners of surface rights and owners of subsurface rights can reduce transaction costs associated with using real property.

This issue of the NC State Economist discusses severed estates where ownership of the surface and subsurface are separate. It discusses the difficulties with matching surface and subsurface interests and with establishing accurate valuations. Methods that may reduce these difficulties are also discussed.

Severed Estates Defined

It is possible to own the subsurface of land separately from the surface. In legal terminology, these are called “severed estates.” Such severed estates may include oil and gas, coal bed methane, and subsurface deposits of sand and gravel and minerals, but not natural surface deposits of sand and gravel. The

severed interests may be subdivided among more than one owner, just as an interest in the surface may be subdivided. Ownership of oil and gas is usually held by one person as a single interest, because most hydrocarbon bearing deposits that contain oil contain gas mixed with the oil.

It is also possible for a person to acquire the right to work an interest without actually owning the interest. The most common type of arrangement of this sort is an oil and gas lease. An oil and gas lease is derivative of the real property interest in that the lease itself is personal property that may be bought or sold. There is an active market in oil and gas leases. There are also interests that provide something less than a lease. These are usually some sort of right to a share of profits, payable if the owner or the lessee of the oil and gas interests decides to produce oil and/or gas.

An important distinction between ownership of oil and gas interests—as opposed to other interests in oil and gas, such as a lease—is that only an owner of the subsurface interest owns the oil and gas in place (that is, in the ground). A lessee owns the oil and gas only once it has been severed from the subsurface deposit by pumping it to the surface. Should the lease terminate for any reason, the lessee has

no property interest in the oil and gas remaining in the ground.

Modern exploration, development and production of oil and gas is an expensive undertaking. A single gas well that has been developed using state-of-the-art hydraulic fracturing technology costs between \$2 million and \$10 million to bring into production. No rational investor would make such an investment where the ownership of the gas is uncertain. Mining has been conducted in North Carolina from the eighteenth century to the modern era, and as a result many old, viable, severed subsurface interests exist.

Matching the Surface Estate with the Subsurface Estate

In North Carolina the boundaries of the severed interests were defined using what is termed the metes and bounds system rather than the rectangular system used in western states. For that reason, determining the boundaries of the severed interests is often difficult.

The metes and bounds system of delineating real property interests is an ancient system developed in England. English colonists brought it along with the English legal system with them to North America. The system relies on monuments and compass points to delineate the boundaries of parcels of real property. There are several problems with the system. It is well known that, depending on where one is located, compasses do not read true North. That means that compass directions in metes and bounds descriptions are often inaccurate. The monuments used as the corners in the property description can move or disappear. For example, many property descriptions use a road, a stream, an iron stake, an old oak tree, or a large rock as the boundary marker. Courses of streams move and roads can be straightened. Trees die and rot away. Rocks and iron stakes can be inadvertently or intentionally moved. Where an interest has been severed from the surface, it may be difficult or impossible to match an old grant of

mineral interests to the corresponding surface interest.

While the use of global positioning system (GPS) technology cannot solve the problem of matching the pieces of severed interests where boundaries are inaccurate or lost, it can prevent further errors in property records through prospective application. GPS coordinates are extremely accurate, so property descriptions using them make identification of property lines relatively easy. Correspondingly, the use of GPS coordinates makes matching subsurface and surface interests easy. The problem of matching surface and subsurface boundaries may be solved by using GPS coordinates to designate property boundaries and incorporating that information into a Geographic Information System (GIS).

Geographic Information Systems are generally owned and operated by counties in North Carolina. The availability of a GIS is dependent upon county funding. Wealthier counties, especially urban counties, generally have excellent GIS databases, while poorer counties have lower-quality systems or none at all. There are counties in North Carolina where the property records have never been digitized and all records searches must be done in paper during normal business hours. All other things equal, businesses gravitate to those counties with good information and stay away from counties with poor information systems. This accentuates the current urban and rural divide.

Valuation and Taxation of Respective Interests

While there has long been a market for mining interests in North Carolina, there has never been an active market for interests in oil and gas properties in North Carolina. This lack of an active market is due to several factors, including (a) the lack of authority on the part of the State of North Carolina to issue permits for hydraulically fractured wells that employ horizontal drilling; (b) the limited geographic scope of oil and gas resources in North

Carolina; (c) the lack of production history; (d) the lack of oil and gas infrastructure; (e) the lack of nearby deep well injection sites for drilling waste; (f) the fragmented nature of property ownership in the areas of oil and gas resources; (g) the lack of skilled labor necessary for gas and oil production; (h) the uncertainty of resource ownership discussed above; and (i) current (low) gas prices. Session Law 2014-4 (Senate Bill 786) removed the prohibition on horizontal drilling, effective June 4, 2014 and extended the deadline for the adoption of rules governing land-based oil and gas exploration, development, and production to January 1, 2015.

The lack of an active market makes realistic valuation of oil and gas resources impossible. This complicates estate planning for those who wish to divide the property among their heirs. This also makes the task of valuing oil and gas interests difficult for county tax offices. Section 20 of Senate Bill 786 requires the Local Government Division of the Department of Revenue to study how other states value oil and gas properties for purposes of property taxation. Section 21 requires the Joint Legislative Commission on Energy Policy to study how development of an oil and gas industry in North Carolina affect the property tax revenues of local governments. In that study the N.C. General Assembly directed the Commission to study means to limit the growth of local tax revenue from the development of an oil and gas industry, both to promote development of the industry and to prevent excessive growth of local government. The Commission is also directed to study how the presence of oil and gas resources will affect the value of property enrolled in the present use value (PUV) program. The PUV program permits taxation of agricultural, forest, and horticultural land at its value in those industries rather than its higher fair market value.

Failure to list for taxation

In light of the difficulty that county taxing authorities face assessing the value of severed oil and gas estates, these assets are typically assigned a nominal value (typically five dollars per acre). Such low valuations for oil and gas resources give the owners of those resources no incentive to list that property for taxation. North Carolina law provides sanctions for failure to list real property for taxation: It is a misdemeanor to fail to list real property (including severed oil and gas interests); hence owners who do so could be subject to prosecution. The county may attempt to collect taxes due through a civil tax foreclosure action as well. Neither of these events is remotely probable, however. No rational county taxing authority would expend the resources necessary to conduct a tax foreclosure of severed oil and gas interests, because the cost of foreclosure would exceed any possible recovery. And given the priority appropriately given more serious criminal matters, no district attorney is likely to bring criminal charges for a failure to list an oil and gas interest.

Anecdotally, it appears to be a common practice for owners of large tracts of oil and gas interests to decline to list those interests for taxation. This deprives counties of any revenue to which those counties might be entitled and leaves other property owners with the burden of providing the revenues needed to support county government.

Inability to Merge Split Interests

With costs of ownership that are essentially zero, owners of subsurface interests—particularly those in oil and gas—have no incentive to negotiate with surface owners who wish to reacquire the subsurface interests. While owners of oil and gas interests have the right to refuse to negotiate with surface owners who wish to merge split interests, the current situation is not in the public interest. Lack of ownership of the subsurface may impede the ability of the surface owner to develop the

surface. Property that cannot be put to productive use, cannot be sold, or cannot be used as security for debt undermines the tax base of local governments and impedes economic development and job growth. These impediments will be discussed in the next two sections.

Surface Use by the Subsurface Interest Holder

Split interests give rise to uncertainty as to the extent to which the holder of an interest in the subsurface may use the surface to extract the resource. If there is a lease of the oil and gas interest, its terms govern the relationship between the party with the right to extract the gas and the party with the right to use the surface. Laws enacted by the N.C. General Assembly also govern this relationship. N.C.G.S. § 113-420 requires notice to the owner of the surface of the commencement of both non-invasive and invasive oil and gas activities. N.C.G.S. §113-421 presumes that an “oil or gas developer or producer” is responsible for damage to water supplies within one-half mile of the wellhead. The presumption may be rebutted. Damages are available for harm to a water supply, personal property (including livestock and crops), and timber. No damages are available for damage to real property including buildings on the property that must be demolished to make way for oil and gas development and production. According to North Carolina judicial decisions, damages to real property (except for timber) are available only if the owner of the subsurface interest acted unreasonably. Unreasonable behavior is defined as that behavior that an average person in the industry, in this case the oil and gas industry, would find unreasonable. Unless the lease provides for compensation, there is no compensation available for the damage or demolition of buildings on the property. N.C.G.S. § 113-423.1(b) restates judicial decisions requiring reasonableness without adding additional requirements to pay for

reasonable damages to the surface interest. N.C.G.S. § 113-423.1(a) states that surface use agreements are legal in North Carolina, but provides no incentives for developers and producers of oil and gas to negotiate them with owners of surface interests.

By contrast, the law of some states either forces an accommodation or encourages an accommodation through surface use agreements. Surface use agreements allow both the surface and subsurface interest owners to know in advance which areas of the surface may have permanent improvements such as buildings, and which areas are available for the surface needs of oil and gas development. Surface use agreements allow surface interests to retain value. Subsurface interest owners also benefit through better relationships with surface owners, and by having statutory protection from costly and time-consuming litigation. Adoption of similar legislation in North Carolina would reduce uncertainty and thereby promote economic development.

Financing Sales and Improvements to the Surface Interest

Lenders are reluctant to lend money secured by real property whose value is uncertain. Severed interests thus make it difficult for owners of surface interests to finance construction of buildings because those buildings could be demolished without compensation.

Extinguishing Ancient (Dormant) Subsurface Interests

Many subsurface interests are quite old, even exceeding a century. Therefore, it is not unusual for owners of subsurface interests to be unaware that they own those interests. These interests pass automatically from one generation to the next via inheritance. Interest in minerals and oil and gas are an exception to the extinguishment provisions of the North Carolina Marketable Title Act. These provisions terminate unused interests in real property after

the elapse of 30 years without any activity. Some dormant mineral interests may have dozens or even hundreds of owners that hold fractional, undivided interests in those subsurface interests. Additionally, some of those owners may be minors, whose ownership makes reaching an agreement to consolidate interests very difficult.

Some decades ago, the N.C. General Assembly enacted legislation attempting to extinguish dormant mineral interests. For a variety of technical reasons, these efforts had limited success. First, this legislation required additional action on the part of counties. There is little evidence that many counties took the necessary action. Second, this legislation extinguished interests only at one point in time and does nothing to address interests that have become dormant over the 20 to 50 years that have elapsed since these laws were enacted.

The US Supreme Court has held that a properly drafted extinguishment statute that eliminates dormant mineral interests is constitutional. The US Supreme Court has also held that compensation is not required because it is the dormant mineral interests owner's own actions that have deprived them of the property interest rather than any governmental action. Given that North Carolina could adopt an

effective and constitutional extinguishment statute, there is little reason for it not to do so.

Conclusion

While current market conditions do not favor the large-scale development of natural gas in North Carolina, there are benefits to improving the system governing subsurface rights. There are other mineral interests in North Carolina in addition to oil and gas. Adding GPS coordinates to the property descriptions in newly filed deeds would greatly improve the accuracy of property descriptions. Although it would not correct old errors, those errors would be gradually eliminated as property changed hands and new deeds were filed.

An adequate extinguishment statute could accelerate this process by extinguishing interests that have seen no activity in decades. Developing better ways to accommodate surface and subsurface interests has the potential to improve the value of both sets of interests. This effort will enhance the value of real property in North Carolina, improved the tax base, and make North Carolina a more attractive place for investments that promote economic development and job growth.