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North Carolina Oil and Gas Study under Session Law 2011-276: Impacts on Landowners and Consumer Protection Issues

April 26, 2012

North Carolina Department of Justice
Consumer Protection Division

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Impacts on Landowners and Consumer Protection Issues

Introduction

This report addresses some legal and consumer protection issues relevant to shale gas extraction and the leasing process, including: (a) an examination of potential impacts on landowners, and particularly landowners on whose land oil and gas operations occur; (b) a description of the ownership of oil and gas rights, including an explanation of "split estates," and the challenges posed by such estates; (c) a description of existing legal protections for landowners in North Carolina, with particular focus on those protections enacted pursuant to Session Law 2011-276, and identification of gaps in existing protections; and (d) identification of issues needing further study.

Given the relatively short timeframe for the preparation of this study as well as the complexity of these issues, this report is not intended to be a comprehensive review or treatment of the issues. If North Carolina proceeds with developing a regulatory program to regulate hydraulic fracturing, some of these issues will require further detailed study, and additional legal and consumer protection issues are likely to be identified in the future.

Pursuant to the mandate of Session Law 2011-276, in studying these issues and in preparing this report, the Consumer Protection Division of the Department of Justice consulted with the Rural Advancement Foundation International (RAFI).

Section 1 – Impacts on Landowners

A. *Environmental Impacts*

As detailed by DENR in its report, shale gas extraction has the potential to cause significant environmental impacts, which in turn, directly affect landowners that own or live on the land where extraction occurs, and, in some instances, neighboring landowners as well. Because DENR has discussed many of these environmental impacts, they are only briefly noted here.

Surface disturbance. Normal drilling activities can cause considerable surface disturbance to the land where drilling occurs. As noted by DENR, in the process of natural gas extraction and production, land is graded and cleared to develop well pads, access roads, and utility corridors for water and electrical lines, gas gathering lines, and compressor facilities. The New York Draft Environmental Impact Statement notes that industry estimates of the average total land disturbance per well pad is 7.4 acres. A study conducted by The Nature Conservancy reported that nearly nine acres of land was disturbed per well pad, which included the well pad itself and associated roads, water impoundments, and utility corridors for pipelines. (DENR report, section 4.H., "Impacts due to land disturbance"). Because this land area is devoted to extraction activity, landowners are unable to use the affected surface area for other activities, such as farming, forestry, or grazing of livestock.

Impacts on soils and forestry resources. These surface disturbances can cause extensive damage to soils, resulting in immediate and future lost revenue for landowners engaged in agriculture production.[1] Among other impacts, the Penn State University Cooperative Extension Service ("CES") identified soil compaction as a particular problem for Pennsylvania farmers, leading CES to caution that "while Pennsylvania farmers have long understood the impact of increasingly heavier agricultural field equipment, this pales in comparison to the magnitude of size and weight of equipment commonly used by the natural gas industry."[2] Describing soil compaction from drilling activity as an "invisible thief" that "lowers soil productivity and environmental quality," the CES has instructed farmers that topsoil compaction can have an effect lasting from one year on sandy soils to five years on clay soils, but that deep subsoil compaction is "virtually permanent on all soil types and should be avoided at all costs."[3] According to the CES, in some instances, Pennsylvania landowners deliberately decided that certain affected areas were not worth the costs of restoration due to the extent of surface damage caused by natural gas extraction.[4]

In addition to soil compaction, shale gas extraction can result in soil erosion and sedimentation (DENR report, section 4.E., "Erosion and sedimentation issues") and removal of timber[5] (DENR report, section 4.E., "Habitat fragmentation and habitat loss"), which can cause particularly adverse impacts on landowners engaged in agriculture or forestry production activities.

Water contamination. As detailed by DENR, water contamination has been associated with oil and gas exploration and production, and some studies indicate that hydraulic fracturing has caused pollution of private water supplies (DENR report, section 4.C, "Potential releases to groundwater"). Some of these scientific studies have been widely debated, including whether contamination was caused by oil and gas extraction, and, if so, how contamination occurred. However, there is no doubt that water contamination, when it occurs, is one of the most serious adverse impacts that can be suffered by landowners as a result of shale gas activities, particularly where landowners depend on well water for their drinking water, irrigation, and for

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1 Penn State Cooperative Extension Marcellus Education Team, "Avoiding and Mitigating Soil Compaction Associated with Natural Gas Development." Penn State University, 2009. Retrieved from <http://pubs.cas.psu.edu/>. New York State Department of Agriculture and Markets, "Guidelines for Construction and Restoration at Natural Gas Well Drilling Sites in Agricultural Areas." Cornell University Cooperative Extension, 2010. Retrieved from <http://www.cce.cornell.edu/>.

2 Penn State Cooperative Extension Marcellus Education Team, "Avoiding and Mitigating Soil Compaction Associated with Natural Gas Development." Penn State University, 2009. Retrieved from <http://pubs.cas.psu.edu/> .

3 Ibid.

4 Ibid.

5 Penn State Cooperative Extension Marcellus Education Team, "Forest Landowners and Natural Gas Development: Timber Resources." Penn State University, 2009. Retrieved from <http://pubs.cas.psu.edu/>.

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their livestock.[6]

Air quality impacts. As observed by DENR in section 4.G. of its report ("Conclusions related to air quality impacts"), where shale gas production occurs on residential properties or farms, "the property owner or occupant may be exposed to unhealthy concentrations of toxic pollutants."

Additional environmental impacts. In addition to environmental impacts caused by normal drilling activity, accidents and spills do occur, which can cause serious damage to landowners' land. As stated by DENR, (section 4.H., "Potential impacts from spills, releases and air emissions"), "spills are extremely likely to occur with any natural gas drilling and production." These spills can affect landowners' land and livestock, as well as humans and pets. (DENR report, section 4.H., "Spills of fluids related to gas drilling operations"). For example, reports of the exposure of cattle to toxic drilling waste led to cattle quarantines in Pennsylvania in 2010, when 28 cows were believed to have been exposed to waste pools containing chemicals including chloride, magnesium, potassium, and strontium for three days.[7] According to local news reports, officials said that"[st]trontium, a heavy metal, [was] of particular concern because it can be toxic to humans, especially children."[8] The previous year, in 2009, 17 cows died in Louisiana, reportedly after drinking drilling fluid that leaked into a field.[9]

In addition to spills, well blowouts and explosions can occur, which can cause property damage and, in some instances, personal injury.[10] The *Calgary Herald* reported in January 2012 that "hydraulic fracturing of an oil well in southern Alberta could have caused an oil well blowout a

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[6] Wolf, Isaac, "At ground zero for fracking, residents say water has gone bad." Scripps Howard News Service, Nov. 18, 2010. Retrieved from <http://www.wcpo.com/>. Urbina, Ian, "A Tainted Water Well, and Concern There May Be More." The New York Times. Aug. 3, 2011. Retrieved from <http://www.nytimes.com/>. Associated Press, "Tests: Pa. gas drilling town's water still fouled." The Wall Street Journal, Oct. 15, 2011. Retrieved from <http://online.wsj.com/>

[7] Reuters, "Pennsylvania quarantine cattle over gas drilling fluid." July 1, 2010. Retrieved from <http://www.reuters.com/>

[8] Ibid.

[9] Lustgarten, Abraham, "16 Cattle Drop Dead Near Mysterious Fluid at Gas Drilling Site." ProPublica, April 30, 2009. Retrieved from <http://www.propublica.org/>. Bamberger, Michelle, New Solutions, Vol. 22(1) 51-77, 2012, "Impacts of Gas Drilling on Human and Animal Health."

[10] Eaton, Leslie, "Gas Blast Rocks Texan Town." The Wall Street Journal, Jun. 8, 2010. Retrieved from http://online.wsj.com/. Kidston, Martin, "5 years after gas well blowout, Clark residents vent frustrations." Gazette Wyoming Bureau, Aug. 4, 2011. Retrieved from <http://billingsgazette.com/>. wjactv.com, "Gas Well Blowout Under Control in Clearfield County." Cox Media Group, Jun. 4, 2010. Retrieved from <http://www.wjactv.com/>. Associated Press, "Gas explosion rocks small Ohio village." USA Today, Feb. 11, 2011. Retrieved from http://www.usatoday.com/. Casselman, Ben, "Pennsylvania Gas Well Blowout Forces Evacuation." The Wall Street Journal, April 20, 2011. Retrieved from <http://online.wsj.com/>. Lustgarten, Abraham, "Louisiana Well Blowout Forces Hundreds from Homes." ProPublica, April 20, 2010. Retrieved from <http://www.propublica.org/>. Associated Press, "2 Injured in Natural Gas Explosion in Seattle." Fox News, Sept. 26, 2011. Retrieved from <http://www.foxnews.com/>. Levy, Marc, Associated Press, "Talisman cited for gas well blowout." The Times-Tribune, Jan. 26, 2011. Retrieved from < http://thetimes-tribune.com/>.

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kilometre away ... spewing what appeared to be oil and chemicals onto [a] neighbour's field. Black fluid from the well sprayed 15 metres in the air."[11] In media reports, landowners have reported that these types of drilling accidents have had substantial impact on their property, including "places in the pasture where grass [will] not grow."[12]

B. *Financial Impacts*

In addition to environmental impacts caused by gas exploration and development, landowners' acts of entering into oil and gas leases may have certain adverse financial impacts, including impacts on landowners' existing mortgages and their ability to obtain new credit. These impacts have not been closely studied or documented, but it is clear that entering into leases may pose financial risks to landowners which they should carefully consider and ensure that they understand before entering into leases.

Potential Impacts on Existing Mortgages and Landowners' Ability to Obtain New Credit

As observed in section 6.B. of DENR's report ("Valuation and mortgage issues"), with the growing number of landowners entering into oil and gas leases, particularly in more densely populated areas such as New York and Pennsylvania, questions have been raised about the potential impact of leases on landowners' existing mortgages, their ability to refinance their mortgages, and their ability to obtain new credit.[13]

Potential violation of due-on-sale clause and risk of foreclosure. In most residential mortgages, the mortgage is secured by both the surface and subsurface portion of the land, as well as all buildings and fixtures on the land.[14] Most residential mortgages contain a clause prohibiting a borrower from selling any portion of the mortgaged property or any interest in the property without the prior approval of the lender; this clause, often called a "due-on-sale clause," protects the property interests that lenders acquire when they enter into a mortgage loan.[15]

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[11] O'Meara, Dina, "Regulators say hydraulic fracturing may have caused oil spill on farm near Innisfail." Calgary Herald, Jan. 17, 2012. Retrieved from <http://www.calgaryherald.com/>.

[12] Robertson, Campbell, "Bitter Twist in Louisiana Family's Long Drilling Fight." The New York Times, Dec. 29, 2011. Retrieved from <http://www.nytimes.com/>.

[13] Urbina, Ian, "Rush to Drill for Natural Gas Creates Conflicts with Mortgages." The New York Times, Oct. 19, 2011. Retrieved from <http://www.nytimes.com/>. Radow, Elisabeth, "Homeowners and Gas Drilling Leases: Boon or Bust?" New York State Bar Association, Nov./Dec. 2011.

[14] Congressional Research Service, Letter from David Carpenter, Legislative Attorney to Rep. Carolyn Maloney, dated September 15, 2011. Retrieved from http://maloney.house.gov/issue/hydraulic-fracturing-fracking .

[15] Ibid. *See also* the form Deed of Trust approved by Fannie Mae and Freddie Mac for use in North Carolina, at paragraph 18, which prohibits the sale or transfer of the mortgaged property or any interest in the property without the lender's prior written consent, and further provides that if the borrower violates the provision, the lender may require immediate payment in full. This form can be accessed at http://www.freddiemac.com/uniform/unifsecurity.html (North Carolina Deed of Trust).

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In a 2011 memorandum to a member of Congress, which discussed the practices of Fannie Mae and Freddie Mac in handling requests by borrowers to enter into gas leases,[16] the Congressional Research Service ("CRS") stated that a borrower's leasing of his or her rights to the subsurface minerals without the prior approval of the lender "generally will be in violation of this mortgage term" and could be considered an act of default under the mortgage.[17] CRS noted that such a violation could trigger the lender's rights pursuant to the mortgage "to demand the immediate payment of the full amount owed and the right to foreclose on the property if the borrower is unable to pay in full."[18]

CRS noted, however, that where borrowers' loans are owned or guaranteed by Fannie Mae or Freddie Mac, "[t]here may be circumstances under which Fannie Mae and Freddie Mac would be willing to relinquish the property rights that they hold in order for an oil, gas, or mineral lease to be duly executed on the same land," and that borrowers can make such a request to their mortgage loan servicer.[19] Fannie Mae has issued guidelines for servicers on how servicers should evaluate requests by borrowers to release a portion of the security, including the mineral rights, so that borrowers may enter into gas leases. The servicer guide allows servicers to approve the requested release on behalf of Fannie Mae if the lease "is customary in the area and the exercise of the lease will not have a material effect on the value of the property, prevent use of the property as a residence, or expose the residents to serious health or safety hazards."[20] The guide elaborates on how a servicer should make this determination.[21]

As discussed by DENR (section 1.D., "Leasing of mineral rights"), to date, only one company, Whitmar Exploration Company ("Whitmar"), is known to have entered into an appreciable number of leases with North Carolina landowners. As noted by DENR, Whitmar currently holds 63 leases covering 5,958.41 acres in Lee County. (Whitmar entered into two additional leases, but has subsequently released those leases and they are no longer in effect.) Another company, Tar Heel Natural Gas, LLC, entered into a single three-year lease, which expires in 2013. The remaining lease known to be in force is a single lease of 628 acres in Lee County, leased by Hanover NC, LLC; that lease was entered into in 2008 and expires in 2013. (DENR

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16 Fannie Mae (the Federal National Mortgage Association) and Freddie Mac (Federal Home Loan Mortgage Corporation) are government-sponsored enterprises (GSEs) that purchase or insure most mortgage loans made in the U.S. The GSEs' primary business is purchasing mortgages made by other financial institutions as a way of creating liquidity in the mortgage market so as to encourage lenders to originate more mortgages. The GSEs either hold these mortgages in their own portfolios or convert the income streams of pools of mortgages into mortgage-backed securities and guarantee the performance of these securities for investors. For those loans that are held by lenders or investors rather than Fannie or Freddie, the loans typically adhere to Fannie's and Freddie's guidelines.

17 Congressional Research Service, Letter from David Carpenter, Legislative Attorney to Rep. Carolyn Maloney, dated September 15, 2011. Retrieved from http://maloney.house.gov/issue/hydraulic-fracturing-fracking .

18 Ibid.

19 Ibid.

20 Ibid.

21 Ibid.

report, section 1.D., "Leasing of mineral rights").

A review of records recorded with the Lee County Register of Deeds shows that, out of the original 65 leases entered into by Whitmar, approximately 11 properties were subject to preexisting mortgages (or, more accurately, deeds of trust). The Consumer Protection Division is unaware of any instance either in North Carolina or elsewhere where a borrower's signing of a gas lease has caused a lender to declare the loan in default and request immediate repayment. However, as noted by CRS, lenders could potentially invoke that right under the terms of most mortgages, which, if it occurred, would have serious financial repercussions on landowners if they are unable to repay.[22] In most instances, landowners are not informed at the time they sign leases, that if they have a mortgage, they are required to obtain their lender's consent to enter into the lease, and if they do not do so, they risk being found in violation of the terms of the mortgage and being declared in default.[23]

Potential violation of hazardous substances clause. In addition to a due-on-sale clause, most residential mortgages contain a provision prohibiting the borrower from allowing (i) use or storage of hazardous substances beyond those used in normal residential activities; or (ii) activities that may require environmental cleanup under federal or state environmental laws, either of which may adversely impact the value of the property.[24] For borrowers seeking to refinance mortgages or obtain new mortgage loans, lenders may be hesitant to make the loans because it may be difficult for lenders to assess the potential impacts of shale gas extraction on the property, and on the property's value.[25] In addition, where shale gas extraction occurs, if the extraction causes serious environmental damage and requires environmental cleanup, then this could constitute a breach of the mortgage by the homeowner or landowner.[26]

The New York Times and the *New York State Bar Association Journal* have reported that, because of these concerns, some lenders will not issue new mortgage loans on homes with gas leases and that, as a result, some New York homeowners have had difficulty obtaining

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[22] Congressional Research Service, Letter from David Carpenter, Legislative Attorney to Rep. Carolyn Maloney, dated September 15, 2011. Retrieved from http://maloney.house.gov/issue/hydraulic-fracturing-fracking .

[23] Discussion with Harry Weiss. Mr. Weiss is a partner with the law firm of Ballard Spahr, LLC in Philadelphia, Pennsylvania. Mr. Weiss has represented numerous landowners in oil and gas lease transactions, and he was recently appointed by Maryland Governor Martin O'Malley to a task force studying shale gas issues in Maryland. *See also* Urbina, Ian, "Rush to Drill for Natural Gas Creates Conflicts with Mortgages." The New York Times, Oct. 19, 2011. Retrieved from <http://www.nytimes.com/>. Radow, Elisabeth, "Homeowners and Gas Drilling Leases: Boon or Bust?" New York State Bar Association, Nov./Dec. 2011.

[24] Fannie Mae/Freddie Mac Uniform Instrument (North Carolina), at paragraph 21, "Hazardous Substances," accessed from http://www.freddiemac.com/uniform/unifsecurity.html.

[25] Greg May, Vice President Residential Mortgage Lending Tompkins Trust Company, "Gas and Oil Leases Impact on Residential Lending," powerpoint presentation attached to CRS memorandum of September 15, 2011.

[26] Nathan Batts, Senior Vice President and Counsel, North Carolina Bankers' Association.

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mortgages or refinancing their existing mortgages.[27]

In some instances, lenders and gas companies have acted to attempt to address these concerns so that borrowers may obtain credit. Where there is sufficient acreage, lenders may require gas companies to release a certain amount of land around a residence before issuing a mortgage loan to the landowner.[28] Examination of Lee County records shows that Whitmar has released two of its leases. While Whitmar's reasons for releasing the leases are unknown, following at least one release, the landowner subsequently obtained a mortgage loan. In addition, it appears that at least five mortgage loans were made to four property owners after they had entered into gas leases. In one instance, where a subsequent mortgage loan was made, Whitmar entered into a deed of subordination, subordinating its lease to the lender's deed of trust.

Similarly, in New York, Visions Federal Credit Union reported in a newsletter to its members in September 2011 that some gas companies had agreed to enter into agreements with the credit union, allowing the credit union to maintain its priority of title, to obtain title insurance, and agreeing to indemnify the credit union if there was environmental damage. Visions cautioned members that "it may take several months for an oil and gas company to respond to a request to sign [an agreement]," which extended the loan process.[29] Further, Visions stated that some companies had refused to sign such agreements, which resulted in the credit union denying the mortgage.[30]

Because hydraulic fracturing has not been conducted in North Carolina, and because there have been relatively few gas leases entered into in North Carolina compared with other states, this is still an emerging issue for lenders in North Carolina.[31] However, due to the above concerns, at least two North Carolina lenders, the North Carolina State Employees' Credit Union,[32] and the North Carolina Housing Finance Agency,[33] have stated that they will not make or purchase

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27 Urbina, Ian, "Rush to Drill for Natural Gas Creates Conflicts with Mortgages." The New York Times, Oct. 19, 2011. Retrieved from <http://www.nytimes.com/>. Radow, Elisabeth, "Homeowners and Gas Drilling Leases: Boon or Bust?" New York State Bar Association, Nov./Dec. 2011.

28 Greg May, Vice President Residential Mortgage Lending Tompkins Trust Company, "Gas and Oil Leases Impact on Residential Lending," powerpoint presentation attached to CRS memorandum of September 15, 2011.

29 Visions Federal Credit Union, "Oil and Gas Leases Affect Mortgages," September/October 2011 newsletter.

30 Ibid.

31 Nathan Batts, Senior Vice President and Counsel, North Carolina Bankers' Association.

32 Press release issued by RAFI, "Lenders: Fracking Presents Mortgage Risk," April 11, 2012, retrieved from www.rafiusa.org.

33 Jennifer Percy, Counsel and Manager of Legal Services, North Carolina Housing Finance Agency ("NCHFA"). NCHFA is a self-supported public agency created by the General Assembly in 1973 to create affordable housing opportunities for North Carolinians. Among other lending activities, NCHFA offers low-cost mortgages and down payment assistance for first-time home buyers. It also finances affordable homes and apartments developed by local governments, nonprofit organizations, and private

mortgage loans on residential properties where the borrower does not own their mineral rights, or has leased their mineral rights. (The existence of "split estates" where mineral rights have been severed from surface rights is discussed in section 2.A, *infra*.)

Further, the Consumer Protection Division understands that landmen or gas companies rarely inform landowners that a lease may make it more difficult for landowners to refinance their mortgage loan or to obtain new credit.[34] As a result, landowners should exercise extreme caution in entering into gas leases if they anticipate refinancing their existing mortgage or seeking a new mortgage. Prior to entering into leases, landowners should consult with their lender to determine how the lease may impact their ability to obtain mortgage credit.[35]

Section 2 – Ownership of Oil and Gas Rights

A. *The Leasing Transaction Generally*

When oil and gas companies believe deposits containing oil or gas may exist in an area, the companies may approach private and public landowners with offers to lease their land. If a landowner decides to enter into a lease, the company pays the landowner for the right to access and use the landowner's land for exploration and extraction. The main forms of compensation that are paid to landowners who enter into leases are bonus payments, royalties, and rentals.

Primary Types of Compensation Paid to Landowners Who Lease

A *bonus payment* is a lump sum payment made to the landowner when the landowner executes the lease. Often, the bonus payment is paid on a per acreage basis. The amount of the bonus reflects the potential risks to the company, including the risk that there will be no oil and gas under the property leased, and the competition for leases in the area at the time.[36] The bonus payment is also affected by the prevailing market price of oil or gas; currently, the price of natural gas is very low, which has generally driven down bonus payments in shale gas areas over the last year. Other factors that affect the bonus payment price are the amount of acreage under the lease; whether the area has established oil and gas production or whether it is viewed to be a "wildcat" area; the availability of gathering pipeline infrastructure; whether competition exists for leases in the area; and the knowledge and negotiating skill of the

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owners.

[34] Harry Weiss.

[35] In addition, most mortgages will assert a lien on lease proceeds from bonus payments and royalties if the borrower fails to make the mortgage payments. Harry Weiss. Similarly, according to RAFI and the North Carolina Cooperative Extension Service, regulations of the U.S. Department of Agriculture Farm Service Agency's (FSA) direct loan program allow FSA to assert liens on all payments above $5,000 under an oil and gas lease and apply them to the loan if the loan is in default. 7 C.F.R. §§ 764.1 – 764.459.

[36] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 53.

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parties.[37]

In other parts of the country, bonus prices have varied widely, depending on the location and the date the lease was entered. As reported by the Congressional Research Service in 2009, bonus prices have ranged from a low of $5 per acre in West Virginia in 2007 and 2008, to a high of $20,000 per acre in Texas in 2009, with payments of between $1,000 and $3,000 reported in Pennsylvania, New York, and West Virginia in 2009.[38] With the continued downward trend of natural gas prices, particularly over the past year, generally bonus payments are lower now than they were in 2009. In North Carolina, the bonus price paid by Whitmar to landowners in Lee County in 2010 was very low, as it reportedly ranged between $1 and $10 an acre, with $25 per acre being the highest bonus payment reported.[39] The fact that hydraulic fracturing is illegal in North Carolina undoubtedly negatively impacted bonus prices, as a company would not know if it would be allowed to drill, and, if so, how long it would take before laws and regulations were established permitting production.

In addition to bonus payments, standard gas leases provide that gas companies will pay landowners a *royalty*, which is a share of the production, when and if there is oil or gas production on the property. Royalties are discussed in section 6, *infra*, but the general industry floor, which is set as a statutory minimum in some states, is a 12.5% share of production, or the value or proceeds of production, that is attributed to the leased acreage.[40] In some areas, when leasing activity has intensified, royalty rates have risen to 15-20% (New York in 2009), and as high as 28% (Texas in 2009).[41] Recently, the low price of natural gas has reduced royalty rates. In North Carolina, the Whitmar leases that have been examined by the Division provide for a 12.5% royalty rate without deductions for costs.

A third type of payment commonly found in leases is *delay rentals*, which are rentals that are paid to the landowner to maintain the lease during the initial or primary term before production begins. Lease agreements often roll signing bonuses into rents and call for rents to be "paid-up" or paid upfront at the time the lease is signed.[42] The Whitmar leases reviewed by the Division show that they were "paid-up" leases and therefore did not provide additional payments for rentals.

Kinds of Ownership Interests

It is critical to understand certain basic types of property ownership, because the type of

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37 Ibid. Harry Weiss.

38 Congressional Research Service, "Unconventional Gas Shales: Development, Technology, and Policy Issues," Oct. 30, 2009.

39 Jordan Treakle, RAFI. The two Whitmar leases examined by the Division provided for bonus payments of $20 per acre.

40 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 278-79, 461.

41 Congressional Research Service, "Unconventional Gas Shales: Development, Technology, and Policy Issues," Oct. 30, 2009.

42 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 227-228.

property interest held by the landowner determines, as a matter of law, what rights the landowner has to his or her property – including whether the landowner can lease the mineral rights for oil and gas development, and whether the landowner can control access to and use of the surface of the property.

Fee interest owner or unified surface owner. In property law, the term "fee simple absolute" means an estate in which the owner is entitled to the entire property interest with an unconditional power to convey it.[43] As a result, the term "fee interest" owner is often used in the oil and gas industry to describe a property owner who owns the entire property, including the surface of the property and the underlying mineral rights to the property.[44] However, because the term "fee interest" is not widely understood outside legal parlance, and because "surface owner" is used in Session Law 2011-242 to include a property owner that owns the entire property, for purposes of this report, the Division uses the term *"unified surface owner"* to mean a property owner that owns the entire property, namely, *both* the surface and the mineral rights.

Mineral interest owner. Under long-established principles of property law, the minerals in place underneath the surface of the earth, including oil and gas, can be owned separately and distinctly from the surface of the property.[45] Therefore, minerals and mining rights, including oil and gas rights, can be created and transferred separately from the surface rights, and those mineral rights constitute a separate and distinct property interest.[46] Thus, mineral rights can be transferred by a reservation in a deed, or by a direct grant, sale, or assignment of the mineral rights.[47] Other documents that are sometimes used to create and separately convey mineral interests are grants of right of way and deeds of trust (or mortgages).[48]

When the mineral rights are separately reserved or conveyed from the surface rights, the rights are said to have been severed, and the estate is called a severed or *split estate*. Both of the estates, the mineral estate and the surface estate, are distinct estates that are governed by the laws of real property.[49] Because they are governed by the laws of real property, mineral rights must be created and conveyed in writing to be valid,[50] and may be recorded with the county register of deeds' office where the property is located.

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43 Black's Law Dictionary (9th ed. 2009).

44 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 38-39.

45 Patrick K. Hetrick and James B. McLaughlin, Jr., *Webster's Real Estate Law in North Carolina* , § 1.07[3] (Matthew Bender, 6th Ed. 2011).

46 Ibid.

47 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 61-66.

48 Ibid.

49 Patrick K. Hetrick and James B. McLaughlin, Jr., *Webster's Real Estate Law in North Carolina*, § 1.07[3] (Matthew Bender, 6th Ed. 2011).

50 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 62. Patrick K. Hetrick and James B. McLaughlin, Jr., *Webster's Real Estate Law in North Carolina*, § 1.07[3] (Matthew Bender, 6th Ed. 2011).

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Oil and gas interests as distinct from mineral rights. It is not uncommon for mineral deeds to convey the rights to all minerals, and to specify the conveyance of oil and gas rights, in addition to mineral rights. It is important to note that in North Carolina, a mere reservation of "mineral rights" in a deed, or a mere conveyance of "mineral rights" alone may or may not convey oil and gas rights. The determination of whether a mineral rights conveyance alone would include oil and gas rights would be determined by the terms of the conveyance and the intent of the parties at the time of the conveyance. The Division is unaware of any North Carolina court decision on this issue. However, the Division notes that, in Pennsylvania, courts have held that a reservation or exception in a deed reserving only "minerals," without any specific mention of natural gas or oil, creates a presumption that the grantor did not intend for the "minerals" to include natural gas or oil.[51] Further, the Division notes that oil and gas is not included in the definition of "minerals" under the Mining Act of 1971.[52]

The Division notes that the common practice by oil and gas companies in leasing is to refer to oil and gas rights specifically in the lease. Because the case law of split estates typically refers to the "mineral estate" generally in distinguishing it from the surface estate, and because conveyances of minerals often include oil and gas, for ease of reference, the Division uses the term "mineral estate" and "mineral rights" in this report.

Surface owner. Finally, the third type of property owner in the context of a split estate is the surface owner, who owns the surface of the property (which includes any houses, buildings, crops, fields, timber and anything else on the surface), but does not own the mineral rights.[53]

Who has the right to lease? In order to lease mineral rights, one obviously has to own the mineral rights. Therefore, only the (i) unified surface owner, or (ii) mineral rights owner (in those situations where there is a split estate), have the right to lease the mineral rights. If a landowner is a surface owner only, then the landowner would not be a party to the oil and gas lease because he or she does not own the mineral rights.

Existence of Split Estates in North Carolina

In several western states such as Colorado and Texas, split estates are the rule rather than the exception.[54] In many instances, in the settlement of the West under numerous homestead

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51 *Dunham v. Kirkpatrick*, 101 Pa. 36 (1882). However, a Pennsylvania court recently held that a reservation of "minerals and petroleum oils" in an 1881 deed raised a factual issue as to whether the Marcellus shale constitutes a "mineral," and therefore, whether the shale and shale gas was covered by the 1881 deed reservation. *Butler v. Charles Powers Estate*, 29 A.3d 35 (Pa. Super. Ct., 2011). This decision is currently on appeal to the Pennsylvania Supreme Court, which granted an appeal petition on April 3, 2012.

52 N.C. Gen. Stat. § 74-49(6).

53 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 43. Patrick K. Hetrick and James B. McLaughlin, Jr., *Webster's Real Estate Law in North Carolina*, § 1.07[3] (Matthew Bender, 6th Ed. 2011).

54 It has been estimated that mineral rights are severed from surface rights for 85% of land in Colorado,

acts, the federal government reserved coal and mineral rights.[55] In addition, reservation of mineral rights has been practiced by individuals, land-grant railroads, lending institutions, and state governments.[56]

In North Carolina, most owners are unified surface owners and own their mineral rights.[57] However, split estates do exist and are not uncommon. As noted in a November 2011 *News & Observer* article, Lee County was active in coal mining decades ago, and "original owners, typically mining companies, were known to keep the mineral rights when selling land so they could keep the profits from coal mining later."[58]

According to the Lee County Tax Office, as of November 2011, officials had identified at least 36 parcels of severed mineral rights containing approximately 5,800 acres in the county. Lee County's tax administrator Dwane Brinson stated that this list of split estates was "incomplete," and would likely expand as more research was done, as the office was continuing to update older property information online in an effort to give landowners access to documents relating to mineral rights.[59] One large severed estate is a 2,700 acre mineral tract that the owner purchased from Weyerhaeuser in 1975. Since that time, Weyerhaeuser has subdivided and sold multiple tracts from the surface estate, including the entire Riverside subdivision, which sits in a bend of the Deep River.[60] The subdivision has resold lots to individual owners. In 2010, the mineral rights owner entered into a gas lease with Whitmar for the entire 2,700 acre tract. Some of these surface owners may not realize that they do not own gas rights under their properties, and that the rights have been leased.[61] In *The News & Observer* article, the mineral rights owner stated that he did not know who the surface owners were, and it appears it would take some research to identify them.[62]

In an effort to provide greater certainty with regard to ancient mineral rights in severed estates, the General Assembly has enacted a series of laws known as "dormant minerals" statutes.[63]

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and 90% of land in Texas, while it has been stated that in Kansas, the landowner usually owns both the mineral and surface rights. *See* Arkansas Public Policy Panel, "Model Oil and Gas Laws, Regulations, and Ordinances," March 2011, at 5. Oil and Gas Accountability Project, "Oil and Gas at Your Door? A Landowner's Guide to Oil and Gas Development," Second ed. (2005), at II-3, II-4.

55 Montana Department of Natural Resources and Conservation, "A Guide to Split Estates in Oil and Gas Development." Retrieved from http://dnrc.mt.gov/trust/MMB/OG/splitestatesguide.asp

56 Oil and Gas Accountability Project, "Oil and Gas at Your Door? A Landowner's Guide to Oil and Gas Development," Second ed. (2005), at II-3, II-4.

57 Murawski, John, "Ownership of Lee County natural gas rights muddled." *The News & Observer*, Nov. 18, 2011. Retrieved from < http://www.newsobserver.com/

58 Ibid.

59 Ibid.

60 Jordan Treakle. Murawski, John, "Ownership of Lee County natural gas rights muddled." *The News & Observer*, Nov. 18, 2011. Retrieved from < http://www.newsobserver.com/

61 Ibid.

62 Ibid.

63 N.C. Gen. Stat. § 1-42.1 -- § 1-42.9.

Initially, the statutes only covered certain designated counties, but a law enacted in 1983 applies to all remaining North Carolina counties that were not the subject of prior statutes.[64] The laws extinguish ancient oil, gas, and mineral rights in severed estates where the holder of such mineral rights has not been listing them for tax purposes.[65]

Nonetheless, because of the way in which land records are kept, the age of some records, and because the conditions of the statutes must be strictly satisfied before mineral rights can be extinguished, for some landowners, it may take comprehensive title searches to determine whether they own their mineral rights, which can be very expensive.[66] In *The News & Observer* article noted above, Lee County officials stated that it would take extensive research to identify the corresponding surface owners of severed mineral tracts, because the mineral tracts involved thousands of acres and some of the surface parcels had been subdivided and could involve hundreds of properties.[67]

Further, beginning around 2007, national homebuilder D.R. Horton, Inc. began severing the mineral rights to properties it sold in subdivisions in Wake, Chatham, and other counties in North Carolina. Before selling these properties to homeowners, D.R. Horton severed the mineral rights and deeded those mineral rights to a D.R. Horton affiliate, DRH Energy, Inc. The sales contracts disclose that the mineral rights are being reserved by D.R. Horton. However, it is unknown whether purchasers of homes in those subdivisions fully understood the potential consequences of such reservations. On April 24, 2012, D.R. Horton issued a statement that it was suspending its practice of retaining mineral rights to properties sold to home buyers in North Carolina.

Based on the Division's research, including discussions with the North Carolina Real Estate Commission, there are no current statutes in North Carolina that specifically mandate a seller to disclose, at the time of a purchase offer, the seller's reservation of mineral rights or its

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64 N.C. Gen. Stat. § 1-42.9. Patrick K. Hetrick and James B. McLaughlin, Jr., *Webster's Real Estate Law in North Carolina*, § 25.06 (Matthew Bender, 6th Ed. 2011).

65 Ibid. More specifically, N.C. Gen. Stat. § 1-42.9, the most recent statute, creates "marketable title" in a surface owner free and clear of oil, gas or mineral interests in a previously severed subsurface estate subject to certain prerequisites. The prerequisites for establishing "marketable title" under the statute are: (1) the title to any oil, gas, or mineral interests must have been severed or separated from the surface estate; (2) the mineral interest must not be in the actual course of being mined, drilled, worked or operated, or in the adverse possession of another; (3) the record title holder of the oil, gas, or mineral interest must not have listed the property for tax purposes in the county of location for five years prior to January 1, 1986; and (4) the surface owner must have a legal capacity to own land, and must be able to establish an unbroken thirty-year chain of title of record (either through himself or previous owners) as of September 1, 1986.

66 Murawski, John, "Ownership of Lee County natural gas rights muddled," quoting Professor Ted Feitshans, an attorney and associate professor at N.C. State University with N.C. State's Cooperative Extension Service. *The News & Observer*, Nov. 18, 2011. Retrieved from <http://www.newsobserver.com/,

67 Ibid.

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conveyance only of surface rights. The Residential Property Disclosure Act, N.C. Gen. Stat. § 47E-1, *et seq.*, mandates that, at the time a purchaser makes an offer to purchase, the seller must make certain written disclosures to the purchaser, including disclosures regarding the condition of the property. Section 47E-4(b) requires that the seller disclose the existence of any "zoning laws, restrictive covenants, building codes and other land-use restrictions affecting the real property," as well as any existing environmental contamination. However, the provision does not specifically require disclosure of the seller's reservation of mineral rights.[68] Moreover, the Act applies only to sales of previously-inhabited homes, and does not apply to the sale of new homes; therefore, a builder or developer is not required to make the disclosures set forth in Chapter 47E.[69]

Prior to closing, a buyer's lender or title insurance company will require a title search which should disclose any defects or limitations to the title, including a mineral rights deed (assuming the deed was conveyed within the past 30 years). However, the title search information may not be provided to the buyer until closing – which, as a practical matter, may be too late for the buyer to back out of the home sale, particularly if the buyer has already sold his or her existing home.

Because property sales in North Carolina have traditionally involved unified surface and mineral rights, the Division believes North Carolina homebuyers are unlikely to be alert to the possibility that they may be buying surface rights only. Homebuyers are even less likely to be aware of the ramifications of severed mineral rights. If hydraulic fracturing is allowed in North Carolina, the existence of severed mineral rights will be an important disclosure and consumer education issue for homebuyers.

B. The Dominance of the Mineral Estate and Its Right to Use the Surface for Extraction

Under the common law (which is the case law as determined by the courts) and the statutory law of all states, the mineral rights holder "has the right to the surface in such ways and to such an extent as is reasonably necessary to obtain the minerals under the property."[70] As such, in oil and gas extraction cases, the mineral rights owner's interest is referred to as the "dominant" estate, and the surface of the land is deemed "servient" to the mineral owner's right of use.[71]

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[68] In addition, the Division has reviewed the form property disclosure statement and form offer to purchase, which have been approved by the North Carolina Bar Association and the North Carolina Association of Realtors. The forms do not contain a provision concerning mineral rights.

[69] N.C. Gen. Stat. § 47E-4(b).

[70] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 39.

[71] Ibid. at 179-180. For detailed discussions of the principles set forth in this section, *see also* the following: Bruce M. Kramer, "The Legal Framework for Analyzing Multiple Surface Use Issues," Rocky Mountain Mineral Law Foundation: Severed Minerals, Split Estates, Rights of Access and Surface Use in Mineral Extraction Operations, Feb. 17-18, 2005, Paper 2; Rick D. Davis, Jr., "Private Lands -- Surface Access and Use," Rocky Mountain Mineral Law Foundation: Severed Minerals, Split Estates, Rights of Access and Surface Use in Mineral Extraction Operations, Feb. 17-18, 2005, Paper 9A; Patrick H. Martin

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As noted in one legal treatise, if the mineral rights owner does not have the right to access and use the surface for purposes of mineral extraction, then the mineral rights may be worthless:

> "Of necessity, mineral ownership implies a right to use the land surface over the minerals because mineral ownership would be valueless without access to the minerals. Courts recognize an implied easement burdening the surface and benefiting the minerals on the basis either that it is the intention of the parties to the severance or that there is a public policy in favor of making the property economically useful."[72]

In applying these principles, following are examples of some of the specific rights that courts have held belong to mineral owners, and therefore, oil and gas operators, where mineral owners have leased their mineral rights: (a) the right to enter the surface for exploration and production;[73] (b) the right to construct roads to drill sites; (c) the right to take or use a reasonable amount of water, but not to take water off the leased premises; (d) the right to construct production and storage facilities, such as pipelines, storage tanks, power stations, and other structures; (e) the right to select drilling sites; (f) the right to select the timing of drilling operations; (f) the right to conduct geophysical exploration and seismic operations; and (g) the right to enter premises with growing crops.[74]

Notably, courts have expressly held that if a surface owner denies a mineral owner access to the surface, then that action can make the surface owner liable to the mineral owner for damages. If the surface owner is a public entity, then restrictions on access can be an unlawful taking of the mineral owner's property rights, entitling the mineral owner to compensation. This principle is illustrated in a recent decision in 2009 by the Pennsylvania Supreme Court in *Belden & Blake Corp. v. Commonwealth of Pennsylvania*.[75] In that case, Belden & Blake, a gas company, owned oil and gas leases (which it had leased from private mineral owners) on parcels in a state park, and sought to develop gas wells in the park. The Commonwealth of Pennsylvania owned the surface rights to the parkland. Pennsylvania's Department of Conservation and Natural Resources (DCNR) refused to permit surface access unless Belden agreed to a surface coordination agreement that increased the amount of the existing bond to

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and Bruce M. Kramer, 3 Williams & Meyers, *Oil and Gas Law*, § 218, Express and Implied Easements in Mineral and Royalty Deeds and Leases (LexisNexis Matthew Bender 2011).

72 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 39-40.

73 *See, e.g., Young v. Pittman*, 224 N.C. 175, 29 S.E.2d 551 (1944) (The North Carolina Supreme Court held that the defendant surface rights owner was prohibited from interfering with the plaintiff mineral rights owner's operation to mine mica and feldspar; however, where there was a dispute regarding whether the surface owner had come to own the mineral rights through "adverse possession," and the trial court had not yet ruled on that issue, the mineral rights owner was prohibited from using explosives within 200 yards of the defendant surface owner's home and spring that supplied his home with water.).

74 Rick D. Davis, Jr., "Private Lands -- Surface Access and Use," Rocky Mountain Mineral Law Foundation: Severed Minerals, Split Estates, Rights of Access and Surface Use in Mineral Extraction Operations, Feb. 17-18, 2005, Paper 9A.

75 969 A.2d 528 (2009).

$10,000 per well, and Belden paid stumpage fees for the timber to be removed. DCNR maintained that these conditions were reasonable as it was a trustee for the Commonwealth's public natural resources, and had the right to prohibit access until Belden complied with its conditions. Belden filed suit seeking to enjoin DCNR from interfering with its implied easement to enter on the land to exercise its ownership of the natural gas rights.

The Pennsylvania Supreme Court, in a 4-2 decision, ruled in favor of Belden, holding that "the law recognizes [Belden's] right to enter upon the land to exercise its oil and gas rights."[76] Belden had a duty to exercise its rights "in a reasonable manner" but the mineral owner's rights "cannot be diminished because the surface comes to be owned by the government."[77] Therefore, under this case, a mineral owner is required to exercise "due regard" for a surface owner's rights, but a surface owner cannot prohibit the property's mineral owner (or his lessee) from accessing the land for extraction purposes.

Notwithstanding the dominance of the mineral estate, many courts, including the *Belden* court, have held that there are some limitations to the mineral owner's (or operator's) use of the surface: (a) the operator may only use so much of the surface as is "reasonably necessary" for the exploration and production of the minerals; (2) the operator must use the surface and conduct its exploration and production operations in a non-negligent manner; (3) the operator must conduct activities with due regard for the surface; and (4) the operator must comply with statutory limitations.[78]

Thus, under common law principles, if a gas operator acts negligently in drilling or in other activities, then the operator will be responsible to the surface owner for money damages. But if the operator has not acted negligently (which is generally defined as failing to act with reasonable care, or in a way that is unreasonable by industry standards), then the company will not be required to compensate the surface owner for damages caused to the surface of the property.[79]

The Reasonable Accommodation Doctrine

In an effort to balance the interests of surface owners with mineral rights owners, courts in numerous states have adopted a "reasonable accommodation" doctrine.[80] The doctrine was first stated as a separate principle by the Texas Supreme Court in 1971 in the seminal case of

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76 Ibid., 969 A.2d at 530.

77 Ibid., 969 A.2d at 532. The United States District Court for the Western District of Pennsylvania issued a similar ruling in a 2012 case involving federal park land where the mineral rights were held by private owners, but the U.S. Forest Service managed the surface; *see Minard Run Oil Co. v. U.S. Forest Service*, 2012 U.S. Dist. LEXIS 39978 (W.D. Pa. 2012).

78 Ibid. Bruce M. Kramer, "The Legal Framework for Analyzing Multiple Surface Use Issues," Rocky Mountain Mineral Law Foundation: Severed Minerals, Split Estates, Rights of Access and Surface Use in Mineral Extraction Operations, Feb. 17-18, 2005, Paper 2.

79 Ibid.

80 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 182.

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Getty Oil Co. v. Jones.[81] In that case, Jones, the owner of severed surface rights, sought damages for Getty's interference with his irrigation farming. Jones had drilled water wells and installed rolling irrigators that were elevated approximately 8 feet off the ground and pivoted in a circle. Subsequently, Getty drilled two wells on Jones' property under the authority of a lease from the severed mineral owners. Getty's wells required pumping units. The pumping units installed were substantially higher than the irrigators, so that the irrigators could not function. Jones contended that Getty's use was beyond the scope of its right because it effectively precluded him from farming his land. Getty countered that its pumping units were reasonably necessary to produce the oil.

The Texas Supreme Court held in favor of Jones, concluding that where a severed mineral interest owner or lessee asserts rights to use of the surface that will substantially impair existing surface uses, the mineral owner or lessee must accommodate the surface uses if he can reasonably do so. The court found that Getty could have afforded to sink its pumping units below the surface of the ground to avoid interference with Jones' irrigators, and therefore Getty was required to do so.

Therefore, in Texas, and in other states that have adopted the reasonable accommodation doctrine,[82] a surface owner may prevail or require a gas operator (as the lessee of the mineral rights) to accommodate the surface owner's uses if the surface owner can prove: (1) the surface use was in existence prior to the operator's conflicting use; (2) the surface owner has no reasonable means to develop his land other than with the pre-existing use; (3) the operator has other options which are (i) usual, customary, and reasonable methods; (ii) practiced in the industry; (iii) would not interfere with the surface owner's preexisting use; and (iv) are available on the premises. If the surface owner cannot prove these elements, under the reasonable accommodation doctrine, the surface owner must yield to the operator. In other words, "if there is but one means of surface use by which to produce the minerals, the mineral owner has the right to pursue that use, regardless of surface damages. On the other hand, if the operator has reasonable alternative means, one of which permits the surface owner to continue to use the surface in the manner intended, then the operator must use the alternative that allows continued use of the surface."[83]

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81 470 S.W.2d 618 (Tex. 1971).

82 Other states that have incorporated "reasonable accommodation" or "due regard" language when resolving issues relating to the mineral estate's implied easement over the surface and the balancing of interests of the surface estate and the mineral estate include: Arkansas, Colorado (which codified the doctrine in 2007 at Colo. Rev. Stat. § 34-60-127), North Dakota, Utah and West Virginia. In addition, decisions by courts in a number of other states, including Mississippi, New Mexico, Pennsylvania, and Wyoming, indicate that those states may be leaning toward a "reasonable accommodation" doctrine. *See* discussion in Patrick H. Martin and Bruce M. Kramer, Williams & Meyers, *Oil and Gas Law*, § 218.8, "Accommodation doctrine", and cases cited in text and footnotes 17-30 (LexisNexis Matthew Bender 2011).

83 Rick D. Davis, Jr., "Private Lands -- Surface Access and Use," Rocky Mountain Mineral Law Foundation: Severed Minerals, Split Estates, Rights of Access and Surface Use in Mineral Extraction Operations, Feb.

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Representative Mining Cases in North Carolina

As noted by DENR, there has been virtually no oil or gas development in the state, so unlike states such as Texas and Oklahoma, North Carolina does not have a developed body of law dealing with oil and gas extraction. In addition, there are relatively few reported cases in North Carolina dealing with mineral extraction; and the mineral cases that do exist tend to be older cases. North Carolina courts have not adopted a reasonable accommodation doctrine. Instead, North Carolina courts have held that mining operators may engage in activities that are "reasonably necessary" to extract the minerals and are only liable for damages that are caused by negligent activity. Two examples of this principle are decisions by the North Carolina Supreme Court in *English v. Harris Clay Co.*[84] and *Bayer v. Nello Teer Co.*[85]

In *English*, the plaintiffs owned the surface estate to a parcel of land, containing two houses (which were not occupied), a well, an orchard, and a fenced garden. Defendant Harris Clay Company obtained the mineral rights and mined kaolin from the property. In the process of recovering the kaolin, Harris removed a large quantity of the topsoil, took down the houses "piece by piece," and stacked and stored the materials on the premises. The Supreme Court held that Harris did not act negligently, and the plaintiffs could not recover damages, where Harris used the prevailing and accepted method of mining kaolin and used "due care in recovering the mineral so as not to injure any more of the surface than necessary."[86]

In *Bayer*, the defendant Teer Company engaged in open pit mining at a rock quarry, which was adjacent to the plaintiff's property. The company pumped a large quantity of water out of the quarry as part of its operations, and disposed of the water into a nearby creek. The mining operations caused the neighboring landowner's well to become undrinkable as the water became salty and had a petroleum odor. The neighbor contended that the value of his property was seriously impaired. The mining company introduced evidence that it had operated the quarry in accordance with the best industry practices at the time, and that the neighboring landowner could probably drill a well in a new location to obtain water.

17-18, 2005, Paper 9A, at § 3.03[3].

84 225 N.C. 467, 35 S.E.2d 329 (1945).

85 256 N.C. 509, 124 S.E.2d 552 (1962).

86 *English*, 225 N.C. at 471, 35 S.E.2d at 332. In *dicta*, the Court noted the well-established principle that the surface estate is "dominant" in split estates where the surface owner contends that a mineral owner has damaged the "subjacent support" to the property. In property law, "subjacent support" is support of the surface by the underlying strata of the earth. *See* 1 Am. Jur. 2d *Adjoining Landowners* § 82. Therefore, where mining operations (or any other activity) cause the surface of the property to sink or collapse, generally, the surface owner can recover damages under the doctrine of subjacent support. The *English* court held that the doctrine of subjacent support, however, did not apply in that case because the mining method used did not cause the ground to collapse. The Court's iteration of the "dominance" of the surface estate is restricted to the context of subjacent support. Because shale gas extraction typically occurs in rock deep beneath the surface, it would not normally be expected to threaten a surface owner's subjacent support, and the Division is unaware of cases brought by surface owners asserting that claim in the context of hydraulic fracturing.

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The North Carolina Supreme Court ruled for the mining company, stating that the company was not responsible for damage to the neighbor's water where the company had operated "in accordance with the best practices of open pit mining," had pumped no more water "than was necessary for the operation," and the company had not acted negligently.[87] In so ruling, the Court summarized the common law "reasonable use" rule for groundwater as it applies to mining operations:

> "Mining operations, being a reasonable use of land, do not, in general, make one carrying on such operations liable because percolating waters are intercepted or drawn away so as to destroy or injure springs or wells belonging to the owner of the surface or of adjoining lands..... Where the right to mine is separated from the ownership of the surface, the owner of the minerals is not liable to the surface owner because of the incidental loss of waters supplying springs or wells when caused by the ordinary working of the mine."[88]

Therefore, under the *Bayer* decision and, therefore, the common law of North Carolina – absent any statutory provisions to the contrary – a mining company that uses water in mining operations will not be liable for reducing or damaging the water supply of the surface owner or neighboring land owners. It should be noted, however, that *Bayer* states the previous common law in North Carolina, and that S.L. 2011-276 makes some important changes to this common law rule by requiring an operator to pay a surface owner compensation for damage to an existing water supply (N.C. Gen. Stat. § 113-421(a)(1)). This provision will be discussed in further detail in section 3.E. below.

Adoption of a Reasonable Accommodation Doctrine

As noted above, many state courts have moved to a "reasonable accommodation" standard in order to better protect surface owners. In addition, several states, most notably Colorado, have enacted statutes expressly requiring that oil and gas operators "reasonably accommodate" existing surface uses.[89] For example, Colorado's statute provides that an operator "shall conduct oil and gas operations in a manner that accommodates the surface owner by minimizing intrusion upon and damage to the surface of the land."[90] The statute goes on to define "minimizing intrusion upon and damage to the surface" as meaning "selecting alternative locations for wells, roads, pipelines, or production facilities, or employing alternative means of operation, that prevent, reduce, or mitigate the impacts of the oil and gas operations on the surface, where such alternatives are technologically sound, economically practicable, and reasonably available to the operator."[91]

In addition to some courts' and state legislatures' adoption of a "reasonable accommodation"

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87 *Bayer*, 256 N.C. at 519, 124 S.E.2d at 559.

88 Ibid., 256 N.C. at 518, 124 S.E.2d at 558.

89 *See, e.g.*, Colo. Rev. Stat. § 34-60-127; Wyo. Stat. Ann. § 30-5-402(a).

90 Colo. Rev. Stat. § 34-60-127.

91 Ibid.

standard, there is some indication that the industry, in some instances, has made efforts to accommodate surface owners. For example, the Whitmar leases reviewed by the Division provide that the lessor may submit written objections to the company's proposed locations for work, and that the company will "make every reasonable attempt to abide by Lessor's requests, subject to the understanding that geological considerations ... shall be the overriding consideration on the location of any well site(s) on the leasehold premises." However, if the mineral rights have been severed, then the surface owner would not be a party to the lease and would not be afforded this consideration unless the mineral rights owner asserted objections on behalf of the surface owner.

Section 3 – Protection of Landowners from Surface Impacts

A. State Surface Damages Acts

In an effort to provide greater protections for surface owners than those afforded by common laws, a growing number of states have enacted surface damages acts.[92] Indiana was the first state to enact a surface damages act in 1951, and it was followed by North Dakota in 1979, with a number of states enacting their statutes in the 1990s.[93] The most recent state that enacted a surface damage act was New Mexico in 2007, and West Virginia enacted a revised surface damage act applying to horizontal wells in 2011.[94] While these statutes differ from state to state, the statutes typically contain provisions requiring some type of notice be given to surface landowners prior to the commencement of exploration and development activity, and requiring that surface owners be compensated for damages to their property.

In 2011, the North Carolina General Assembly enacted some landowner protections as part of Session Law 2011-276. These provisions provide some measure of protection for surface owners, but in some instances, these protections are limited. The remainder of this section will

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[92] To date, the states that have enacted surface damages acts are: Arkansas (Ark. Code Ann. §§ 15-72-214 to 15-72-219), Colorado (Colo. Rev. Stat. § 34-60-127), Illinois (765 Ill. Comp. Stat. 530/1 to 530/7), Indiana (Ind. Code § 32-5-7-2), Kentucky (Ky. Rev. Stat. Ann. §§ 353.595, 393.597), Montana (Mont. Code Ann. §§ 82-10-501 to 82-10-511), New Mexico (N.M. Stat. Ann. §§ 70-12-1 *et seq.*), North Dakota (N.D. Cent. Code §§ 38-11.1-01 to 38-11.1-10), Oklahoma (52 Okla. Stat. §§ 318.2 to 318.9), South Dakota (S.D. Codified Laws §§ 45-5A-1 to 45-5A-11), Tennessee (Tenn. Code Ann. §§ 60-1-601 to 60-1-608), West Virginia (W. Va. Code §§ 22-6B-1, *et seq.* (provisions enacted in 2011 that apply to horizontal wells), and §§ 22-7-1 to 22-7-8), and Wyoming (Wyo. Stat. Ann. §§ 30-5-401 *et seq.*). *See* discussion in Patrick H. Martin and Bruce M. Kramer, Williams & Meyers, *Oil and Gas Law*, § 218.15, "State Surface Damages Acts" (LexisNexis Matthew Bender 2011). *See also*, Bruce M. Kramer, "The Legal Framework for Analyzing Multiple Surface Use Issues," Rocky Mountain Mineral Law Foundation: Severed Minerals, Split Estates, Rights of Access and Surface Use in Mineral Extraction Operations, Feb. 17-18, 2005, Paper 2, at VII.

[93] Bruce M. Kramer, "The Legal Framework for Analyzing Multiple Surface Use Issues," Rocky Mountain Mineral Law Foundation: Severed Minerals, Split Estates, Rights of Access and Surface Use in Mineral Extraction Operations, Feb. 17-18, 2005, Paper 2, at VII.

[94] N.M. Stat. Ann. §§ 70-12-1 *et seq.;* W. Va. Code §§ 22-6B-1, *et seq.*

discuss existing protections for surface owners in North Carolina under S.L. 2011-276; identify limitations to existing statutory protections for surface owners; and discuss ways in which North Carolina's laws can be strengthened to provide greater protection for surface owners.

S.L. 2011-276 added a new part to North Carolina's Oil and Gas Conservation Act[95] to provide some protections for surface owners when oil and gas operations and activities occur. These new provisions are set out at N.C. Gen. Stat. §§ 113-420 -- 113-423. Pursuant to N.C. Gen. Stat. § 113-424, these provisions in the new part expressly apply to "leases or contracts, and amendments to leases or contracts, entered into on or after June 15, 2011." Therefore, pursuant to this section, if a lease was entered into prior to June 15, 2011, the protections of S.L. 2011-276 (N.C. Gen. Stat. §§ 113-420 -- 113-423) would not appear to apply.

B. Notice to Surface Owners Prior to Entry and Operations on the Property

Operations that Do Not Disturb the Surface

N.C. Gen. Stat. § 113-420(a) provides that an oil and gas operator must give a surface owner at least 7 days' written notice before entering the property for oil and gas operations "that do not disturb the surface,"[96] such as inspections, staking, surveys, and measurements. Notice must be given by certified mail, and must include, at a minimum, the following information: (1) the identity of person(s) requesting entry on the property; (2) the purpose for entry on the property; and (3) the dates, times, and location on which entry to the property will occur, including the estimated number of entries. If the operator fails to give the required notice, then the surface owner "may seek appropriate relief in the superior court for the county in which the oil or gas well is located and may receive actual damages."[97]

Operations that Disturb the Surface

N.C. Gen. Stat. § 113-420(b) provides that an oil and gas operator must give a surface owner at least 14 days' written notice prior to entering the property for "operations that disturb the surface." Notice must be given by certified mail, and must include, at a minimum, the following information:

(1) A description of the exploration or development plan, including, but not limited to (i) the proposed locations of any roads, drill pads, pipeline routes, and other alterations to the surface estate and (ii) the proposed date on or after which the proposed alterations will begin.

(2) An offer of the oil and gas developer or operator to consult with the surface owner to review and discuss the location of the proposed alterations.

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95 N.C. Gen. Stat. § 113-381, *et seq.*

96 N.C. Gen. Stat. § 113-420(a).

97 N.C. Gen. Stat. § 113-420(c).

(3) The name, address, telephone number, and title of a contact person employed by or representing the oil or gas developer or operator who the surface owner may contact following the receipt of notice concerning the location of the proposed alterations.[98]

Again, if the operator fails to give the required notice, then the surface owner may seek relief in superior court in the county where "the oil or gas well is located and may receive actual damages."[99]

These are relatively short notice periods. Several states, including Colorado,[100] New Mexico,[101] South Dakota,[102] and Wyoming,[103] require that at least 30 days' notice be given to surface owners prior to operations that disturb the surface. Montana[104] and North Dakota[105] require that 20 days' notice be given prior to operations that disturb the surface.

Particularly for those operations that disturb the surface, after notice is given, surface owners may need ample time to evaluate the operator's development plans, to confirm that water baseline samples have been taken (assuming that these will be required as recommended by DENR), and to secure or move property resources, such as crops, livestock, fences, equipment, and buildings. Further, because there has been virtually no oil or gas development in North Carolina -- and especially in those instances where the mineral rights have been severed, and the surface owner is not a party to the lease and may be unaware that the mineral rights have been leased -- the surface owners initially may not know what to expect and how best to ameliorate negative impacts from gas operations.

The Division has reviewed two Whitmar leases entered into with landowners in North Carolina.[106] The leases are virtually identical and appear to be a form lease used by Whitmar in North Carolina. The leases provide for a notice period of at least 30 days to the lessor (who will be either the unified surface owner or, where the mineral rights have been severed, the mineral rights owner) before entering the property for operations that disturb the surface. This further indicates that a minimum period of at least 30 days' advance notice to surface owners is a reasonable requirement. However, as written, this provision in Whitmar's leases (and, presumably, in any other leases that contain similar provisions) will *not* require Whitmar's

[98] N.C. Gen. Stat. § 113-420(b).
[99] N.C. Gen. Stat. § 113-420(c).
[100] Colo. Rev. Stat. § 34-60-106.
[101] N.M. Stat. Ann. § 70-12-5.
[102] S.D. Codified Laws § 45-5A-5.
[103] Wyo. Stat. Ann. § 30-5-402.
[104] Mont. Code Ann. § 82-10-503.
[105] N.D. Cent. Code § 38-11.1-04.1.
[106] As explained in section 4.E. below, Whitmar has recorded summary memoranda of its leases, but it has not recorded the entire leases with registers of deeds' offices. One of the leases reviewed by the Division was provided to RAFI by a landowner. The second lease reviewed by the Division was recorded by a lender when the lease was assigned to the lender following the lender's acceptance of a deed in lieu of foreclosure from the landowner.

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notification of surface owners where the surface owner does not own the mineral rights and has not entered into the lease. Further, because all of the Whitmar leases appear to have been entered into in 2010, well prior to June 15, 2011, given the existing language of N.C. Gen. Stat. § 113-424, under current statutory law, Whitmar (and any other companies that entered into leases prior to June 15, 2011) arguably would not be required to give split estate surface owners (who only own the surface rights) prior notice of their operations.

C. *Input of Surface Owners on the Development Plan*

As set forth above, N.C. Gen. Stat. § 113-420(b) requires an operator to include, as part of the notice, an "offer… to consult with the surface owner to review and discuss the location of the proposed alterations." However, the section does *not affirmatively require* the operator to take the surface owner's concerns or objections into account if the surface owner raises objections or concerns, nor does the section require the operator to reasonably accommodate the surface owner's uses of the surface.

Several states, including Colorado,[107] New Mexico,[108] Oklahoma,[109] Utah,[110] West Virginia,[111] and Wyoming,[112] affirmatively require oil and gas operators either to enter into, or to offer, surface use agreements prior to beginning operations on the surface. New Mexico's statute, which was enacted in 2007, sets forth particularly detailed requirements for surface use agreements, as it requires that, with its notice, the operator include a proposed surface use and compensation agreement that addresses "at a minimum and to the extent known," the following issues:

> "(a) placement, specifications, maintenance and design of well pads, gathering pipelines and roads to be constructed for oil and gas operations;
>
> (b) terms of ingress and egress upon the surface of the land for oil and gas operations;
>
> (c) construction, maintenance and placement of all pits and equipment used or planned for oil and gas operations;
>
> (d) use and impoundment of water on the surface of the land;
>
> (e) removal and restoration of plant life;
>
> (f) surface water drainage changes;

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107 Colo. Rev. Stat. § 24-65.5-103.3.
108 N.M. Stat. Ann. § 70-12-5.
109 52 Okla. St. § 318.3.
110 Utah Admin. Code R649-3-34(6).
111 W. Va. Code § 22-6A-16(c)(3).
112 Wyo. Stat. Ann. § 30-5-402.

(g) actions to limit and effectively control precipitation runoff and erosion;

(h) control and management of noise, weeds, dust, traffic, trespass, litter and interference with the surface owner's use;

(i) interim and final reclamation;

(j) actions to minimize surface damages to the property;

(k) operator indemnification for injury to persons caused by the operator; and

(l) an offer of compensation for damages to the surface affected by oil and gas operations."[113]

In some states, a drilling permit will not be issued until the operator can show that it has reached agreements with surface owners, or alternatively, has posted a bond to cover surface damages.[114] If the parties cannot agree, then most states' surface damages acts require one party or the other to bring a court action, or allow the parties to submit the matter to private mediation or arbitration. In at least two states, Kentucky and Wyoming, mediation is available through state agencies if the parties cannot agree on a surface use and compensation agreement.[115]

Additionally, in an effort to incentivize operators to make fair settlement offers to surface owners, numerous state statutes provide that, if the surface owner rejects the operator's offer as inadequate and brings suit, and the court awards the surface owner more in damages than the operator offered in settlement, then the surface owner may recover attorneys' fees and costs.[116]

D. Compensation for Surface Damages

Existing law. N.C. Gen. Stat. § 113-421(a)(2) provides that an oil and gas operator is obligated to pay the surface owner compensation for "[t]he cost of repair of personal property of the surface owner, which personal property is damaged due to activities of the developer or

[113] N.M. Stat. Ann. § 70-12-5.

[114] N.M. Stat. Ann. § 70-12-6; 52 Okla. St. §§ 318.3, 318.4; Wyo. Stat. Ann. § 30-5-402.

[115] In Wyoming, if the operator and surface owner cannot reach agreement on a surface use agreement, either of the parties may request mediation through the Wyoming agriculture and natural resource mediation board, which is a board that has been established to resolve disputes involving agriculture or natural resources. In Kentucky, if the operator and surface owner cannot reach agreement, and the mineral estate has been severed, the operator may request mediation by Kentucky's Department for Natural Resources. Ky. Rev. Stat. Ann. § 353.5901; Wyo. Stat. Ann. §§ 305-402(f); Wyo. Stat. Ann. §§ 11-41-101, *et seq.*

[116] N.D. Cent. Code § 38-11.1-09; § 765 Ill. C.S. 530/6; Kentucky § 353.595; Tenn. § 60-1-607.

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operator, up to the value of replacement by personal property of like age, wear and quality."[117]

While this section provides for some compensation to surface owners, the compensation is limited to damage to personal property. (N.C. Gen. Stat. § 113-421 also provides for compensation for damage to an existing water supply, which will be discussed in section 3.E., *infra*.) Therefore, many other types of foreseeable damages are not covered by this section, such as damage to real property, damage to growing crops, subsequent agricultural production, timber, and diminution in the value of the land. If the surface owner sustains these damages, he would not be able to recover under section 113-421.

Laws in other states. Numerous states require operators to compensate surface owners for a considerably broader range of damages than those provided for under existing North Carolina law.[118] Some of these statutes cover damages to real property; personal property; and loss of agricultural production, including damage to crops, timber or livestock.[119] In addition, some statutes require the operator to compensate the surface owner for damages for lost income or expenses, and for the diminution in value of the land, if the operator's activities cause the value

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[117] N.C. Gen. Stat. § 113-421(c).

[118] *See, e.g.*, § 765 Ill. Comp. Stat. 530/6 (Requiring compensation for damage "to growing crops, trees, shrubs, fences, roads, structures, improvements, personal property, and livestock," as well as compensation for "subsequent damages" and "for the loss of the value of a commercial crop taken out of production."); Ind. Code Ann § 32-23-7-6 (Requiring compensation for "actual damage" to "the surface of the land; improvements to the land; or growing crops on the land."); Ky. Rev. Stat. Ann. § 353.595 (Requiring compensation for damage "to growing crops, trees, shrubs, fences, roads, structures, improvements, personal property, and livestock".); Mont. Code Ann. § 82-10-504 (Requiring compensation for "damages to real or personal property caused by oil and gas operations and production."); N.M. Stat. Ann. § 70-12-4 (Requiring compensation for "loss of agricultural production and income, lost land value, lost use of and lost access to the surface owner's land and lost value of improvements caused by oil and gas operations."); N.D. Cent. Code §§ 38-11.1-04, 38-11.1-08.1 (Requiring compensation for "lost land value, lost use of and access to the surface owner's land, and lost value of improvements caused by drilling operations," as well as for "loss of agricultural production and income".); 52 Okla. St. § 318.5 (Requiring compensation for "any damages which may be caused by the drilling operation."); S.D. Codified Laws § 45-5A-4 (Requiring compensation for "loss of agricultural production, lost land value, and lost value of improvements."); Tenn. Code Ann. § 60-1-604 (Requiring compensation for "lost income or expenses incurred as a result [of being unable to use the land];" "the market value of crops destroyed, damaged or prevented from reaching market;" "the costs of repair of personal property up to the value of replacement by personal property of like age, wear and quality;" and "the diminution in value, if any, of the surface lands and other property after completion of the surface disturbance".); W.Va. Code § 22-6B-3 (Requiring compensation for "lost income or expenses"; "the market value of crops, including timber, destroyed, damaged or prevented from reaching market;" "the costs of repair of personal property up to the value of replacement by personal property of like age, wear and quality;" and "the diminution in value, if any, of the surface lands and other property after completion of the surface disturbance".); Wyo. Stat. Ann. § 30-5-405 (Requiring compensation for "damages sustained by the surface owner for loss of production and income, loss of land value and loss of value of improvements".).

[119] *See* footnote 119, *supra*.

of the land to decrease.[120]

Increased property taxes. For landowners engaged in agricultural production activities, oil and gas operations may cause the landowner to incur substantial additional property taxes. Under North Carolina law and some federal conservation programs, land that is currently used for agricultural, horticultural, or forestry purposes may qualify for the present-use value tax program.[121] Under this program, the property is assessed for tax purposes at its present-use value, which is the value of the land based on its ability to produce income, rather than its market value, which is usually much higher than the present-use value.[122] If land becomes disqualified under the program, for example, by no longer being used for agricultural, horticultural or forestry purposes, the property owner becomes responsible for deferred taxes, often called "rollback taxes," for the current year, as well as taxes for the preceding three years, plus interest.[123] Further, if the land is disqualified, the surface owner will pay higher property taxes in subsequent years. In recognition that oil and gas activities may cause surface owners' property taxes to increase, at least one state, West Virginia, requires operators to make a one-time payment to surface owners of $2,500 solely for property taxes, in addition to payment for other surface damages.[124]

Applicable provisions of Whitmar leases. Two Whitmar leases reviewed by the Division indicate that Whitmar agreed, if and when operations commenced, to pay the lessor (who, as the mineral owner, may not necessarily be the surface owner) a onetime payment of $10,000 "per drill site location" for surface damages for the "location of the well site, an access road thereto and/or a pipeline right of way." In addition to this onetime payment, Whitmar agreed to pay compensation for any damage caused to "crops, trees, shrubs, structures, and existing roads." Further, Whitmar also agreed to reimburse the lessor for any tax penalties, including any rollback taxes, interest, or other increase in ad valorem, severance, real estate or mineral taxes that are subsequently levied against the property as a result of its operations.

At this time, the Division does not have sufficient information to state whether these provisions in Whitmar's leases are representative of other leases in the industry generally. However, following a review of more than 110,000 gas leases, addenda and related documents by *The New York Times* – most of which were from Texas, but some were from Maryland, New York, Ohio, Pennsylvania and West Virginia – the *Times* reported that only about half the documents

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[120] *See* footnote 119, *supra*.
[121] North Carolina Department of Revenue, "Present Use Value Program Guide," Second edition, Oct. 18, 2011. North Carolina Cooperative Extension Service, "Frequently Asked Questions about Oil and Gas Leasing and Production in North Carolina: What Every Landowner Should Know." Retrieved from <http://www.rafiusa.org/docs/gasleasingncsufaq.pdf>
[122] North Carolina Department of Revenue, "Present Use Value Program Guide," Second edition, Oct. 18, 2011.
[123] Ibid.
[124] W. Va. Code § 22-6A-17.

required payment for damages to livestock or crops.[125]

It is well established that oil and gas operations cause extensive damage to the surface, prevent landowners from using the land that is being used for gas operations, and can cause landowners to incur significant losses and expenses, including loss in land value and tax liabilities.

E. *Damage to Water Supply*

Existing law. N.C. Gen. Stat. § 113-421(a)(1) obligates an operator to pay the surface owner compensation for "any damage to a water supply in use prior to the commencement of the activities of the developer or operator which is due to those activities." While this provision provides some measure of protection for landowners for damage to their water supply, it has significant limitations, including the following: (1) the provision does not require the operator to restore or replace the surface owner's water at the time of contamination, but instead only requires compensation after the damage occurs; (2) the provision does not require the operator to conduct baseline tests of water; unless baseline tests are conducted prior to operations, the surface owner will likely have considerable difficulty in proving that the operator's activities caused the damage; (3) the provision applies only to a water supply in use prior to the commencement of the gas activities and does not cover a well or water supply that the surface owner may drill or access later, even if the surface owner can show that the subsequent water supply was contaminated by the operator's activities; and (4) under N.C. Gen. Stat. § 113-424, this provision arguably only applies to activities pursuant to leases entered into on or after June 15, 2011.

Because water supply is a critical issue for landowners, and because shale gas extraction has been linked with water contamination, several states, including Pennsylvania and West Virginia, have recently adopted provisions requiring operators to immediately restore or replace damaged water supplies of affected surface owners and other users with an alternate source of water of adequate quality and quantity.[126] In Pennsylvania, a landowner suffering pollution or diminution of a water supply due to oil and gas operations may notify Pennsylvania's Department of Environmental Protection and request that an investigation be conducted.[127] The Department is required to investigate the claim within ten days of notification and make a determination within 45 days. If the Department finds that the contamination or diminution was caused by the operations, the Department must issue orders to the operator to require the operator to restore or replace the water supply. Additionally, the Department is required to publish on its Internet website confirmed cases of water supply contamination resulting from hydraulic fracturing.[128]

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[125] Urbina, Ian, "Learning Too Late of Perils in Gas Well Leases." The New York Times, Dec. 1, 2011. Retrieved from <http://www.nytimes.com/>

[126] 58 Pa. Stat. § 3218; W. Va. Code § 22-6A-18. *See also* N.D. Cent. Code § 38-11.1-06.

[127] 58 Pa. Stat. § 3218.

[128] Ibid.

Presumption of causation. Pennsylvania and West Virginia also have established statutory rebuttable presumptions of causation where contamination occurs.[129] In Pennsylvania, an operator is presumed to be responsible for contamination of a water supply if the water supply is within 2,500 feet of the well, and the contamination occurred within one year of the operations.[130] The operator can rebut the presumption if the operator shows that the contamination existed prior to the operations; or the contamination was not caused by the operator; or that the landowner refused to allow the operator to conduct pre-drilling tests of the water.[131] West Virginia's statutory presumption of causation is similar, and it recognizes a presumption of causation for water contamination occurring within 1,500 feet of a well and within six months of operations.[132]

Applicable provisions of Whitmar leases. The two Whitmar leases reviewed by the Division contain provisions regarding water use by Whitmar. The provisions provide that Whitmar will test the lessors' water wells prior to drilling operations, that a report of the testing will be provided to the lessors at no cost, and that if its operations adversely affect the lessors' water supply, Whitmar will be liable "at its own expense, to make every effort to return said water supply to as equal a condition as possible to pre-drilling conditions." In addition, the leases provide that Whitmar will not use water from the lessors' wells without prior written consent from the lessors. The leases allow Whitmar to drill its own water well and use water from that well for drilling operations, but state that Whitmar will not damage the lessors' water wells and will not operate in such a way as to "interfere with or restrict" the lessors' water supply.

Thus, the Whitmar leases contain provisions that provide some protection for landowners for damage to their water supply, which indicates that at least some gas companies voluntarily agree to assume such liability. However, it is reported that many companies do not assume such liability. Based on its review of more than 110,000 gas leases, *The New York Times* reported that "[f]ewer than half the leases require companies to compensate landowners for water contamination after drilling begins."[133] In addition, in the same article, a lease lawyer in Denver, Colorado, stated that in his experience, leases often lacked a clause requiring drillers to pay for a test of the property's well water before drilling started, and that "landowners often do not think to do the tests themselves." The attorney further observed that, if no baseline tests have been conducted, "landowners have few options if they want to prove that their water was fine before drilling started."[134]

F. *Restoration of the Surface*

Current law in North Carolina does not require that the operator restore or reclaim the surface

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[129] 58 Pa. Stat § 3218; W.Va. Code § 22-6A-18.
[130] 58 Pa. Stat § 3218.
[131] Ibid.
[132] W. Va. Code § 22-6A-18.
[133] Urbina, Ian, "Learning Too Late of Perils in Gas Well Leases." The New York Times, Dec. 1, 2011. Retrieved from <http://www.nytimes.com/>
[134] Ibid.

following the completion of drilling operations, and existing law does not give the surface owner a right of action if the surface is not restored. Further, as noted by DENR, under existing North Carolina law, bonds collected for oil and gas wells "can only be used to plug abandoned wells," and do not cover reclamation and remediation of the surface. (DENR report, section 9, "Recommendations and limitations," recommendation no. 11.) Numerous other states obligate an oil and gas operator to reclaim or restore the land surface to its original condition, or to as near as practicable to its original condition,[135] following the completion of operations, and allow a surface owner to bring a legal action for restoration or remediation if the site is not restored.[136] Further, some states require operators, prior to the commencement of activities, to post a bond to cover reclamation of the property.[137] In addition, some states mandate that, following the plugging of a well, the operator remove all production or storage facilities, supplies and equipment from the well site within a certain period of time.[138]

A review of two Whitmar leases indicates that Whitmar agreed "on completion of any operation, [to] restore the ... premises to predrilling conditions, remove all debris, equipment, and personal property which [Whitmar] placed on the ... premises (except for equipment needed for the operation of producing wells, which shall be removed within six (6) months after a well permanently ceases to produce)." Therefore, in addition to many states' statutory requirement of restoration or reclamation, some operators have contractually agreed to such restoration or reclamation.

In its recommendations, DENR has recommended broadening existing law to allow bonds to be used for "reclamation and remediation of sites contaminated by oil and gas activities," and has recommended that revenues collected from severance taxes and program fees be used in part for restoration and reclamation "for lands adversely by oil and gas exploration and production." (DENR report, section 9, "Recommendations and limitations," recommendation nos. 11, 14) The Division fully supports those recommendations.

G. *Indemnification*

N.C. Gen. Stat. § 113-422, titled "Indemnification," provides: "An oil or gas operator shall indemnify a surface owner for damage to property that is adjacent to property on which drilling occurs, as well as adjacent infrastructure, and wells." While not defined in the statute, as set forth in *Black's Law Dictionary*, which is often cited by courts, "indemnify" means, in part, "to reimburse (another) for a loss suffered because of a third party's or one's own act or default; [to] hold harmless."[139] In turn, a "hold harmless agreement" is a "contract in which one party

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135 *See, e.g.*, Ark. Code Ann. § 15-72-219; § 765 Ill. Comp. Stat. 530/6; Ky. Rev. Stat. Ann. § 353.595(7); La. Rev. Stat. Ann. § 31:22; N.M. Stat. Ann. § 70-12-4; Ohio Rev. Code Ann. § 1509.072; 58 Pa. Cons. Stat. § 3216; W. Va. Code § 22-6A-14.

136 *See, e.g.*, Ark. Code Ann. § 15-72-219; § 765 Ill. Comp. Stat. 530/6; Ky. Rev. Stat Ann. § 353.595(7); La. Rev. Stat. Ann. § 31:22; N.M. Stat. Ann. § 70-12-4; Ohio Rev. Code Ann. § 1509.072.

137 S.D. Codified Laws § 45-9-15.1; Wyo. Stat. Ann. § 30-5-104(d).

138 *See, e.g.*, Ohio Rev. Code Ann. § 1509.072; 58 Pa. Stat. § 3216.

139 Black's Law Dictionary (9th ed. 2009).

agrees to indemnify the other," by assuming the liability inherent in a situation, thereby relieving the other party of responsibility."[140]

As previously noted, N.C. Gen. Stat. § 113-421(a)(2) obligates an operator to pay the surface owner compensation for "[t]he cost of repair of personal property of the surface owner." N.C. Gen. Stat. § 113-422 requires indemnification of the surface owner for "damage to property that is adjacent to property on which drilling occurs." Unlike N.C. Gen. Stat. § 113-421(a), which is limited to "repair of personal property," N.C. Gen. Stat. § 113-422 does not specify whether it is intended to cover real property, personal property, or both. Presumably, the term is intended to include both. Therefore, by their terms, the statutes appear to give broader protection for adjacent lands of surface owners than property where drilling occurs. Because this construction seems illogical, and by its use of the term "indemnify," which often is used in the context of claims by third parties, the Division presumes that the intent of N.C. Gen. Stat. § 113-422 is to require the operator to indemnify the surface owner for any claims brought against the surface owner by adjacent landowners for damages to their property caused by the operator's activities. However, as this section refers only to damage to "property," it would not cover claims of personal injury.

As a general principle of tort law, the party that caused a harm or injury is held to be liable for compensation to the injured party. In recognition of this principle, and to assure landowners who enter into leases that they will not be at personal financial risk if an accident or damage occurs, some operators contractually indemnify surface owners against any third party claims that may be brought against the surface owner as a result of the operator's activities.

Notably, Whitmar's leases provide for indemnification for lessors (namely, the person giving the lease, who is either the unified surface owner, or the mineral rights owner if the mineral rights are severed), as the leases provide that Whitmar will pay for any claims of any kind, whether relating to property damage or personal injury, that may be asserted against the lessor relating to Whitmar's operations:

> Indemnification/Environmental: Lessee [Whitmar] agrees to hold Lessor harmless from any claims, which may arise as a result of Lessee's operations on the Leasehold Premises. Lessee shall indemnify and hold Lessor harmless from any and all liability, liens, demands, judgments, suits, and claims of any kind or character arising out of, in connection with, or relating to Lessee's operations under the terms of this lease, including, but not limited to, environmental issues, claims for injury to or death of any persons, or damage, loss or destruction of any property, real or personal, under any theory of tort, contract, or strict liability. Lessee further covenants and agrees to defend any suits brought against Lessor on any claims, and to pay any judgment against Lessor resulting from any suit or suits, together with all costs and expenses relating to any claims, including reasonable attorney's fees, arising from Lessee's operations under the terms of this lease.

[140] Ibid.

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H. *Remedies Are Intended to Be Cumulative*

A common feature of at least nine states' surface damages acts is the acts' express statement that the remedies afforded by the acts are intended to be cumulative, and do not preclude any person from seeking other remedies allowed by law.[141] For example, New Mexico's Act provides: "The remedies provided by the Surface Owners Protection Act are not exclusive and do not preclude a person from seeking other remedies allowed by law."[142] While courts generally treat statutory enactments as cumulative of common law remedies, in some situations courts have held that where statutes specifically address a particular subject, then that statute affords the exclusive remedy. In light of many states' pronouncements that their surface owner protection acts are not intended to afford exclusive remedies to landowners, the General Assembly may wish to adopt similar legislation making its intent clear.

Section 4 – Challenges Posed by the Leasing Process

A. *Lack of Knowledge and Imbalance of Bargaining Power*

Oil and gas leases are offered by a wide variety of entities, including major oil companies, smaller oil and gas exploration companies, and independent entities that broker deals between landowners and drilling companies. Oftentimes, these leases are purveyed by "landmen" who go door-to-door and solicit landowners in oil or shale-rich areas to sign leases. In other instances, leases may be mailed to landowners.[143] Some landmen work for oil and gas companies; others are employed by independent landman companies, and others are self-employed contractors. Once an area is identified as having potential for oil or gas development, the landman's job is to research property titles in the area to identify mineral rights owners, and to offer leases to those owners.

Landmen are not licensed, and there does not appear to be any official regulation of the industry by any state. Some landmen belong to the American Association of Professional Landmen (AAPL), which is based in Fort Worth, Texas and is recognized as the leading association in the industry. AAPL has education programs and certifies landmen who meet certain educational and professional requirements, and has a code of conduct for its

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141 § 765 Ill. Comp. Stat. 530/7; Ky. Rev. Stat. Ann. § 593.595(8); Mont. Code. Ann. § 82-10-511; N.M. Stat. Ann. § 70-12-8; N.D. Cent. Code § 38-11.1-10; S.D. Codified Laws § 45-5A-10; Tenn. Code Ann. § 60-1-608; W. Va. Code § 22-6B-4; Wyo. Stat. Ann. § 30-5-407.

142 N.M. Stat. Ann. § 70-12-8.

143 The Division understands that some landowners in Lee County received leases in the mail in 2010, which were accompanied by a check. At a Cooperative Extension Service meeting in Pittsboro for landowners in the fall of 2011, which the Division attended, a landowner reported receiving such a lease in the mail, but stated that he had thrown away the mailing and did not remember the name of the company that had sent it.

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members.[144] However, landmen are not required to belong to AAPL.

When an area is identified as having potential oil or shale gas reserves, the goal of oil and gas companies is to lease as much acreage in a given area as possible, in the shortest amount of time, and at the lowest possible price. As a result, pressure sales are not uncommon. According to interviews with more than two dozen landowners in Ohio, Pennsylvania and Texas by *The New York Times*, landowners were encouraged to sign leases immediately, as the landmen told them they were "in town until tomorrow," and they had "already signed up all your neighbors."[145] The landowners also reported being told that "if you do not sign right away you will miss out on easy income because other drillers will simply pull the gas from under your property using a well nearby."[146] *The New York Times* article reported that some landmen "show up in poorer areas shortly before the holidays, offering cash on the spot for signing a lease."[147]

A similar news article reported on sales practices used by representatives of an oil and gas producer at a leasing open house at Ohio University in October 2011.[148] According to the article, a representative told one landowner, who recorded the conversation, that the company just used "sand, water, and household chemicals like Dawn dishwashing detergent" in the drilling process and failed to disclose that some of the chemicals used are carcinogenic. The representative also implied that the landowner had a choice as to whether to renew the lease after a five-year term, when the lease actually allowed the company to renew at its option, but did not permit the landowner to cancel. Finally, the representative quoted the landowner a vastly below-market price as a bonus payment, offering him $200 an acre; a local real estate broker who commented for the article stated that the going price for leases in the area at the time was between $2,500 and $3,000 an acre.[149]

A 2011 report issued by the Environmental Working Group, a Washington-based advocacy group which studied leasing practices in five states, found that the risks of shale gas development, including leaks, spills, explosions and blowouts are rarely disclosed to landowners.[150] The report noted that these same risks are routinely disclosed to shareholders and potential investors in disclosure forms filed with the Securities and Exchange

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[144] Website of American Association of Professional Landmen, retrieved from www.landman.org; John McFarland, Esq., attorney with Graves, Dougherty, Hearon & Moody, of Austin, Texas, and who represents landowners, "Dealing with landmen," posting Dec. 11, 2011, retrieved from www.oilandgaslawyerblog.com.
[145] Urbina, Ian, "Learning too late of perils in Gas Well Leases," The New York Times, Dec. 1, 2011, retrieved from www.nytimes.com .
[146] Ibid.
[147] Ibid.
[148] Eichelberger, Erika, "As Fracking Boom Hits Ohio, Deceptive Industry Practices Squeeze Landowners," EcoWatch, Feb. 26, 2012, retrieved from www.alternet.org.
[149] Ibid.
[150] Horwitt, Dusty, "Drilling Doublespeak: Gas Drillers Disclose Risks to Shareholders – But Not to Landowners," Environmental Working Group, December 2011, retrieved from www.ewg.org .

Commission.[151] Some of the landowners interviewed for the report stated that they would not have leased their land if they had been informed of the risks of hydraulic fracturing.[152]

Because of the complexity of most oil and gas leases, and because most landowners have never negotiated an oil and gas lease, a researcher at the Massachusetts Institute of Technology commented, "When it comes to negotiation skills and understanding of lease terms, there is a gaping inequality between the average landman and the average citizen sitting across the table."[153] Additionally, the consequences of signing such a lease can be far reaching and long lasting. As noted by a lawyer in West Virginia who represents landowners, "[W]ith a gas lease, you're permitting industrial activity in your backyard, and you're starting a relationship that will affect the quality of living for you and your grandchildren for decades."[154]

Leasing practices in North Carolina. As set forth in DENR's report, (section 1.D, "Leasing of mineral rights"), only one company, Whitmar Exploration Company, is known to have entered into an appreciable number of leases with landowners in North Carolina. The company currently holds 63 leases covering a total acreage of 5,958.41 acres in Lee County. The remaining two companies, Tar Heel Natural Gas, LLC and Hanover, LLC, each hold one lease, and both of those leases expire in 2013. To the knowledge of the Division, other than Whitmar, no other oil or gas company has made substantial efforts to offer leases to North Carolina landowners.

It appears that leasing activity halted after 2010. The reasons for the cessation are unclear, but one reason may be the Cooperative Extension Services' and RAFI's extensive efforts to provide information to landowners through numerous community information sessions on leasing from 2010 to the present.[155] Other likely reasons are that hydraulic fracturing is illegal in North Carolina, there is no established production of oil or gas in the State, and there has been a decline in the price of natural gas.

While the Division has not received any complaints from North Carolina consumers regarding oil and gas leasing practices by Whitmar or by any other entity, the Division believes that the oil and gas leasing process generally raises consumer protection concerns.

B. Need for Consumer Education and a "Cooling-Off" Period

As set out in section 1 above, oil and gas leases can have long-lasting and profound impacts on landowners. Among negative impacts, oil and gas leases have the potential to prevent or restrict landowners from refinancing their residential mortgage or obtaining new credit; and leases can reduce the value and available market for landowners' land. Further, if oil and gas

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151 Ibid.

152 Ibid.

153 Urbina, Ian, "Learning too late of perils in Gas Well Leases," The New York Times, Dec. 1, 2011, retrieved from www.nytimes.com .

154 Ibid.

155 Susan Condlin; Jordan Treakle.

extraction occurs, landowners will lose the ability to use a portion of their land, and the land surface will be damaged. In addition, particularly if accidents occur, landowners may be exposed to substantial environmental and health hazards.

Provision of Information to Landowners

Based on information available to the Division, it appears that very few, if any, landowners are informed of these risks at the time they enter into a lease. In North Carolina, where there has been virtually no oil and gas exploration and development, landowners are likely to know even less about leasing and about oil and gas development than landowners in other states with long histories of oil and gas extraction. Even for educated landowners, gas leases are extremely complex legal documents that contain terms that are unfamiliar to most people, which can present major challenges for landowners in the negotiation process. As noted by one Pennsylvania landowner, "If you've never seen a good lease, or any lease, how are you supposed to know what terms to try to get in yours?"[156]

As recommended by North Carolina's Cooperative Extension Service and landowner advocacy organizations, landowners should not be rushed into signing when approached with a lease offer.[157] Before signing a lease or any documents, landowners should consult with an attorney to be sure they understand the lease's terms. Further, landowners should contact their lender if they have a mortgage loan, or anticipate seeking a mortgage, to ensure that the lease will not jeopardize their mortgage, and that they will be able to obtain new credit in the future. Also, landowners should talk with their neighbors to compare lease terms and, if they decide to lease, landowners should consider joining together with their neighbors as a group to increase their bargaining power.

North Carolina's Cooperative Extension Service has made extensive efforts to hold numerous landowner education meetings in Lee, Chatham, and Moore counties, among others, to inform landowners in these areas about shale gas extraction and leasing issues. However, it is unknown what percentage of affected landowners attended the meetings.

C. Bonus Payments

As previously explained in section 2.A. above, a bonus payment is a lump sum payment made to the landowner when the landowner executes the lease, and it is often paid on a per acreage

[156] Urbina, Ian, "Learning too late of perils in Gas Well Leases," The New York Times, Dec. 1, 2011, retrieved from www.nytimes.com .

[157] *See, e.g.*, North Carolina Cooperative Extension Service, "Frequently Asked Questions about Oil and Gas Leasing and Production in North Carolina: What Every Landowner Should Know." Retrieved from <http://www.rafiusa.org/docs/gasleasingncsufaq.pdf>. Emmett Environmental Law and Policy Clinic, "An Ohio Landowner's Guide to Hydraulic Fracturing." Harvard Law School, Jun. 16, 2011. Retrieved from <http://www.law.harvard.edu/>. Weidner, Krista, "Natural Gas Exploration – A Landowner's Guide to Leasing Land in Pennsylvania." Penn State Cooperative Extension, 2008. Retrieved from <http://pubs.cas.psu.edu/FreePubs/pdfs/ua448.pdf>.

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basis. The amount of the bonus payment in gas leases is determined by market factors and lease-specific conditions, including the market price of natural gas; whether oil and gas production has been established in the area; the availability of gathering pipeline infrastructure; whether competition exists for leases in the area; the amount of acreage under the lease; and the knowledge and negotiating skill of the parties.[158]

Low Bonus Payments Made in North Carolina

Some public comments have expressed concern that in 2010, North Carolina landowners leased their land in exchange for very low bonus prices – with typical prices ranging between $1 and $10 an acre, with some up to $25 an acre.[159] As observed in section 2.A., in 2009, the Congressional Research Service reported that bonus prices ranged from a low of $5 per acre in West Virginia in 2007 and 2008, to a high of $20,000 per acre in Texas in 2009, with payments of between $1,000 and $3,000 reported in Pennsylvania, New York, and West Virginia in 2009.[160] With the continued downward trend of natural gas prices, particularly over the past year, generally bonus payments are lower now than they were in 2009.

Based on the Division's legal research, there do not appear to be any reported cases from any jurisdiction, either state or federal, where a court has held a particular bonus payment in an oil or gas lease to be *per se* illegal, or where a court has invalidated a bonus payment on the ground that it was too low in comparison with other bonus payments paid. Additionally, unlike the numerous state statutes regulating the payment of royalties (namely, the mineral owner's share of production), the Division is unaware of any state statutes addressing the amount of bonus payments in oil and gas leases. To date, legislatures and courts have left the amount of bonus payments to the market.

Timing and Manner of Bonus Payment

In some instances, bonus payments are made at the time the landowner signs the lease. However, it is not uncommon for leases to provide that the bonus payment will be deferred to a future date, so as to allow the gas company time to complete its title research and verify the landowner's ownership of the mineral rights. Whitmar's leases entered into in 2010 with North Carolina landowners exemplify this practice. The leases include a separate payment agreement which allows Whitmar 90 banking days to verify that the landowner has full ownership of the mineral estate, and allows Whitmar to extend the payment period for an additional 30 banking days for the purpose of completing title work. The Division is unaware of any complaints by North Carolina landowners that Whitmar failed to pay them the bonus payments specified in their leases.

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158 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 53.
159 Jordan Treakle, RAFI. Both of the payment agreements reviewed by the Division provided for bonus payments in the amount of $20 per acre.
160 Congressional Research Service, "Unconventional Gas Shales: Development, Technology, and Policy Issues," Oct. 30, 2009.

However, recent news reports and lawsuits filed by landowners in other parts of the country allege that, due to economic factors or drilling prospects, some oil and gas companies have systematically failed to pay bonus payments after signing up landowners for leases.[161] For example, a lawsuit filed in federal court in Texas against Chesapeake Exploration, LLC and its affiliates alleged that, because of adverse economic conditions that had nothing to do with the leases, Chesapeake attempted to renegotiate agreed lease bonuses at a lower price and delayed or refused to pay agreed full lease bonuses on over 500 leases in Texas.[162] News reports indicate that Chesapeake has engaged in similar activity in Colorado, North Dakota, and Michigan, where, according to one report, approximately 140 lawsuits are pending against Chesapeake and a Chesapeake subsidiary.[163]

An analogous lawsuit was filed by landowners in federal court in West Virginia against Range Resources-Appalachia, LLC, a subsidiary of Range Resources Corp.[164] In their complaint, the plaintiffs alleged that, beginning in early 2008, as oil and natural gas reserves in the Marcellus shale formation became highly sought after, Range offered leases with higher royalties and bonuses than paid by its competitors, in an effort to lock up leases in the area. The bonus contracts stated that the payments would be subject to a 180-day approval period during which Range would confirm the landowner's title to the property. The plaintiff landowners alleged that, despite the representations of Range's landmen that the title searches were "mere formalities," Range spent the approval period monitoring the spot markets for oil and natural gas in order to determine the profitability of the leases and bonus contracts. When oil and gas prices began to plummet in the fall of 2008, Range refused to honor most of the contracts and failed to pay the bonus payments, returning the leases to plaintiffs stamped "void."[165]

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[161] Jaffe, Mark, "Chesapeake Energy cancels some mineral leases in two Colorado counties," The Denver Post, April 4, 2012, retrieved from www.denverpost.com. Donovan, Lauren, "Chesapeake Energy pulling back, won't honor lease agreements," Bismarck Tribune, Feb. 7, 2012, retrieved from www.bismarcktribune.com. Reuters, "Energy giant hid behind shells in 'land grab,'" Dec. 28, 2011, retrieved from www.reuters.com.

[162] *Witt v. Chesapeake Exploration, LLC, et al.*, 276 F.R.D. 458 (E.D. Tx. 2011) (denying class certification to the plaintiffs on their claims).

[163] Jaffe, Mark, "Chesapeake Energy cancels some mineral leases in two Colorado counties," The Denver Post, April 4, 2012, retrieved from www.denverpost.com . Donovan, Lauren, "Chesapeake Energy pulling back, won't honor lease agreements," Bismarck Tribune, Feb. 7, 2012, retrieved from www.bismarcktribune.com. Reuters, "Energy giant hid behind shells in 'land grab,'" Dec. 28, 2011, retrieved from www.reuters.com .

[164] *Backwater Properties, LLC v. Range Resources-Appalachia, LLC, et al.*, 2011 U.S. Dist. LEXIS 48496; 2011-1 Trade Cas. (CCH) P77,479 (N.D. W.Va. 2011) (denying defendants' motion to dismiss the plaintiffs' claims for breach, specific performance, and fraud, among other claims).

[165] Ibid. The Division notes that most standard oil and gas leases place the risk of title on the landowner, although the Division understands that there generally appears to be an absence of actions by lessees for breach of warranties of title. One reason for this may be due to gas companies' practice of performing some amount of title research *before* seeking to enter into leases. (Harry Weiss)

D. *Term of Leases*

Most modern oil and gas leases contain a term clause that provides for a primary term and a secondary term. The *primary term* of an oil and gas lease is a fixed term of years during which the lessee (namely, the oil and gas operator), has the option, but not the obligation, to explore for and produce oil and gas. Essentially, the lease primary term sets the maximum period of time for which the operator can maintain its lease rights without drilling.[166] The purpose of the lease primary term is to give the operator time to acquire additional leases in the area, to do geological and geophysical tests to evaluate whether to drill a test well, and to arrange for financing and support services to drill.[167] The length of the primary term is determined by the market and by the bargaining leverage of the parties. According to one legal treatise, ten years was once a common primary term, and ten-year leases are "still frequently seen in leases in unproven and marginally producing areas."[168] In areas with established oil and gas production, the primary term is typically from one to five years.[169]

Under the common law of most states, and the language of most leases, prior to the expiration of the primary term, the operator has an obligation to complete a well and establish actual production. Once actual production is established, then the lease typically transitions to its secondary term. The *secondary term* is for an indefinite period of time, and is typically for as long as oil or gas is produced.[170] The purpose of the secondary term is to give the operator the right to hold a producing lease as long as it is profitable or economically viable.[171]

Existing Whitmar leases. Most of the leases entered into by Whitmar with North Carolina landowners in 2010 provide for an initial primary term of ten years. However, most of the leases alllow Whitmar, at its sole option, to extend the primary term for another ten years, provided that Whitmar makes a second bonus payment to the landowner in ten years in the same amount as the first bonus payment. As a result, most of the existing Whitmar leases extend for an extremely long term, allowing Whitmar up to twenty years to drill. If a well is drilled, the leases provide that they will extend indefinitely so long as Whitmar is producing oil or gas "in paying quantities." The term "paying quantities" is very commonly used as a standard in the oil and gas industry. In a widely-followed case, the Texas Supreme Court in 1959 held that "the standard by which paying quantities is determined is whether or not under all the relevant circumstances a reasonably prudent operator would, for the purpose of making a profit and not merely for speculation, continue to operate a well."[172]

North Carolina law. Pursuant to Session Law 2011-276, new General Statute section 113-423 restricts the term of oil and gas leases to a maximum of ten years, unless, at the end of the ten-

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[166] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 193.

[167] Ibid., at 192.

[168] Ibid., at 193.

[169] Ibid.

[170] Ibid.

[171] Ibid.

[172] *Clifton v. Koontz*, 325 S.W.2d 684 (Tex. 1959).

year period, "oil or gas is being produced for commercial purposes." In addition, if, after the ten-year period "commercial production" is terminated for six months or more, then the lease expires. Specifically, the section provides:

> § 113-423. Maximum lease terms.
>
> Any lease of oil or gas rights or any other conveyance of any kind separating rights to oil or gas from the freehold estate of surface property shall expire at the end of 10 years from the date the lease is executed, unless, at the end of the 10-year period, oil or gas is being produced for commercial purposes from the land to which the lease applies. If, at any time after the 10-year period, commercial production of oil or gas is terminated for a period of six months or more, all rights to the oil or gas shall revert to the surface owner of the property to which the lease pertains. No assignment or agreement to waive the provisions of this subsection shall be valid or enforceable. As used in this subsection, the term "production" includes the actual production of oil or gas by a lessee, or when activities are being conducted by the lessee for injection, withdrawal, storage, or disposal of water, gas, or other fluids, or when rentals or royalties are being paid by the lessee.

Section 113-423 applies to all leases entered into on or after June 15, 2011.[173] Thus, it does not apply to leases that North Carolina landowners entered into with Whitmar in 2010, and the primary terms of those leases will remain at least ten years, and possibly twenty years, if Whitmar decides to extend them with the payment of second bonus payments.[174]

The goal of landowners who lease their oil and gas rights is to obtain development of their property as soon as possible. The salutary intent of section 113-423 is to require that an operator attain "commercial production" within ten years, or the lease will expire. However, the definition of "production" in the statute is broad and could include relatively minimal activities by an operator, as production is expressly defined to include "activities ... for injection, withdrawal, storage, or disposal of water, gas, or other fluids, or when rentals or royalties are being paid by the lessee." Thus, under this definition, the mere payment of rental payments

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[173] N.C. Gen. Stat. § 113-424.

[174] Some comments have raised concerns regarding the long term of the Whitmar leases and have queried whether legislative action can be taken to shorten the terms of these existing leases. It is a well-established principle of law that legislation is presumed to have a prospective, and not retroactive, effect. *See, e.g., Wilson Ford Tractor, Inc. v. Massey-Ferguson, Inc.*, 105 N.C. App. 570, 414 S.E.2d 43 (1992). Additionally, the contract clause of the U.S. Constitution, Art. I, sec. 10, forbids the enactment of any law that impairs the obligations of existing contracts, as doing so may constitute an unconstitutional taking of property. Therefore, the General Assembly properly provided that G.S. § 113-423 applied to leases entered into on or after June 15, 2011; any attempt to retroactively limit the terms of existing leases would likely be subject to challenge as being unconstitutional. *See, e.g., Bank of Pinehurst v. Derby*, 218 N.C. 653, 12 S.E.2d 260 (1940) (invalidating retroactive application of statute imposing additional assessment on the sale of stock, as the result would be to impair the obligations of existing contracts and deny due process).

could obviate the ten-year limitation and extend the lease.

A ten year primary term is a long term, even by industry standards, and it gives an operator ample time to establish production.

E. *Recording of Leases*

As discussed in section 2.A. *supra*, mineral rights are interests in real property. Therefore, transfers, assignments and leases of mineral rights are customarily recorded with the register of deeds of the county where the property is located. By recording a lease, or at least a memorandum of lease, a gas operator places third parties on notice, including creditors and other claimants, that the operator has leased the mineral rights of the landowner, and therefore possesses the legal right to enter the property and extract the minerals specified in the lease for the lease's duration. North Carolina law does not require that a mineral lease be recorded, although a provision of the 1945 Oil and Gas Conservation Act requires any person "holding petroleum leases" to file in the register of deeds of the county where the land is located, "a list showing the leases which have been renewed for the ensuing year."[175] A mineral lease is valid even if it is not recorded. However, because leases are valuable assets, prudent gas operators will record at least a notice or memorandum of lease in order to protect their mineral rights against third parties.

Based on statements from several officials in county register of deeds and tax offices, the Division understands that, as a general practice in North Carolina, lessees of mineral rights have recorded leases in their entirety.[176] When it entered into oil and gas leases with North Carolina landowners in 2010, Whitmar did not record the actual leases. Instead, Whitmar recorded a summary "Memorandum of Lease" for each lease, which served as notice that Whitmar had entered into a mineral lease with the landowner. Each memorandum identifies only the date of the lease; the land covered by the lease; the landowner from whom Whitmar leased the mineral rights; the minerals covered by the lease; and the duration of the lease.

When only memoranda of leases are recorded, other affected or interested parties, such as creditors, other owners or claimants to the mineral rights, tenants on the land, neighboring landowners, potential purchasers of the property or of neighboring properties, and the local community, including municipalities, are unable to determine how the lease may affect their rights and interests. For example, these affected third parties may have an interest in, among other lease terms, whether the lease specifies where wells, pipelines and other infrastructure will be located; whether the lease contains provisions for the use of water on the property; whether storage facilities will be allowed on the property; whether the lease indemnifies the landowner and others for damage to the property and/or surrounding properties; whether the property will be reclaimed or restored following operations, and, if so, how.

Further, if the landowner dies, or the lease is lost or destroyed, it may be difficult for heirs or

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175 N.C. Gen. Stat. § 113-414.

176 Jordan Treakle, RAFI.

subsequent property holders to review the lease unless the lease has been recorded. As noted in section 4.D., *supra*, most of Whitmar's leases provide for an initial or primary term of ten years. If a well has not been drilled, or Whitmar is not engaged in efforts to drill, the leases allow Whitmar, at its sole option, to extend the lease for another ten years if it pays the landowner a second bonus payment. If a well is drilled at any point, then the lease automatically transfers to its "secondary" term, and the leases extend indefinitely, as long as the well is producing. Therefore, most of Whitmar's leases could be effective for twenty years, and could extend longer, if a producing well is drilled on the property.

G. *Notice of Assignment*

Leases are frequently transferred. As noted by one oil and gas treatise, "leases are considered by oil companies to be inventory, and oil companies frequently trade leases to put together `blocks' that can be more efficiently explored and developed."[177] In addition, as with other assets, oil and gas companies may sell blocks of leases in an effort to raise capital.

Because leases are often assigned, most leases contain a clause expressly permitting the lessee (namely, the oil and gas company) to assign or transfer the lease.[178] Even if leases do not contain a provision specifically permitting assignment, courts generally treat leases as real property interests, and therefore as freely assignable, unless the lease provides otherwise.[179] When a lease is assigned or transferred, the terms of the lease do not change, and therefore the new gas company that purchased the lease is bound by the lease's terms.

Many leases require landowners to notify the lessee/gas company if the landowner sells or transfers the land, or any interest in the land. However, leases often do not require the gas company to notify the landowner if it sells or assigns the lease. The Whitmar leases do not require Whitmar to notify the lessor (namely, the landowner or, if the mineral rights have been severed, the mineral rights owner) if Whitmar sells or assigns the lease. Therefore, under the terms of many leases, the lease could be sold multiple times, but the landowner may be unable to determine who owns his or her lease at any given point in time. In some situations, this lack of information could create a serious hardship for landowners. For example, if the landowner applies for a loan, and the lender needs to contact the gas company to obtain a subordination agreement, the landowner may be unable to get a loan if the company that holds the lease cannot be identified.

Section 5 – Oil and Gas Conservation Acts and Pooling

"Pooling" is the voluntary or compelled combination of tracts for drilling and extraction purposes. Pooling laws were first enacted in the late 1920s, when Oklahoma City enacted an ordinance in 1929, and oil and gas producing states followed.[180] As explained below, pooling

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[177] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 353.
[178] Ibid. at 354.
[179] Ibid. at 353.
[180] Bruce M. Kramer & Patrick H. Martin, *The Law of Pooling and Unitization* § 3.02, n.21 (LexisNexis

was instituted for a variety of purposes, including equity in landowners' access to royalties, conservation of resources, and efficiency of drilling operations. However, when pooling can be forced through an eminent domain type process to facilitate oil and gas development, it is understandably controversial, particularly in the context of hydraulic fracturing. A review of the background and regulation of pooling is important to the understanding of this complex issue.

A. *Common law "rule of capture"*

Virtually all states, including North Carolina, have an oil and gas conservation act, although the terms of each state's statute vary. One of the primary reasons such acts were passed was to ameliorate against the common law doctrine of the "rule of capture." Essentially, the doctrine holds, because oil and gas are fluid and move from areas of high pressure to low pressure, they are owned by the person that "captures" them, regardless of where the oil and gas was drained from.[181] A widely cited decision by the Pennsylvania Supreme Court in 1889 sets out the doctrine:

> "Water and oil, and still more strongly gas, may be classed by themselves, if the analogy be not too fanciful, as minerals *ferae naturae*. In common with animals, and unlike other minerals, they have the power and the tendency to escape without the volition of the owner.... They belong to the owner of the land, and are part of it, so long as they are on or in it, and are subject to his control; but when they escape, and go into other land, or come under another's control, the title of the former owner is gone. Possession of the land, therefore, is not necessarily possession of the gas. If an adjoining, or even a distant, owner, drills his own land, and taps your gas, so that it comes into his well and under his control, it is no longer yours, but his."[182]

The rule of capture is a rule of nonliability. As noted by a legal treatise, "[s]o long as a mineral owner conducts operations without trespassing or interfering with the rights of neighboring owners to drill to the same formation under their lands, a mineral owner will not be liable. All the oil or gas the well produces will belong to the mineral owner, even if it drains from beneath

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Matthew Bender 2011).

181 *See, e.g., Northwest Cent. Pipeline Co. v. State Corp. Comm'n*, 489 U.S. 493, 497-98 (1989); *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W. 3d 1, 13 (Tex. 2008).

182 *Westmoreland & Cambria Nat. Gas Co. v. DeWitt*, 18 A. 724, 725 (Pa. 1889). *See also* discussion by the following: Bailie, John K. "Pooling and Unitization in Pennsylvania," Feb. 10, 2011, accessed from http://law.psu.edu/_file/aglaw/Marcellus_Shale/Pooling_and_Unitization_in_Pennsylvania_Baillie.pdf; Sharon O. Flanery and Ryan J. Morgan, Steptoe & Johnson, PLLC, "Overview of Pooling and Unitization Affecting Appalachian Shale Development," (2011) at 5, retrieved from http://www.steptoe-johnson.com; John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 11-30, 92-93; Blackwell, Ronnie, "Forced Pooling Within the Barnett Shale: How Should the Texas Mineral Interest Pooling Act Apply to Units With Horizontal Wells?," 17 Tex. Wesleyan L. Rev. 1 (Fall 2010).

others' lands."[183]

Hence, once a producing well has been drilled, the rule of capture motivates landowners in the area to protect their potential oil and gas assets by rushing to drill on their own land. Because oil and gas naturally exist in underground reservoirs or pools that often underlie numerous separately owned tracts, the traditional rule of capture left a landowner with two options: he could either drill on his own land to take possession of the oil and gas in the underlying pool; or, he could sit by while neighbors drilled wells that would likely drain those resources.[184]

The result of the rule of capture was a race to produce, which caused "excessive well density, substantial over-drilling, and waste, which led to undue surface waste, waste of economic resources, and waste of oil and gas reserves through premature depletion."[185] The epitome of the "race to drill" to avoid the rule of capture was illustrated at the Spindletop salt dome near Beaumont, Texas when oil was discovered in January, 1901. A wave of speculators followed, and by the end of 1901, there were 440 wells on the 125-acre hill where Spindletop sat.[186] New wells continued to be drilled as close together as possible, and by 1904, 1,000 wells had been drilled around Spindletop. However, the gross over-drilling greatly diminished the productivity and efficiency of the wells that were drilled; and only 100 of the wells produced oil at a rate of 10,000 barrels a day.[187]

In response to the effects of the rule of capture, many states enacted oil and gas conservation acts. The primary purposes of these acts are to avoid physical and economic waste of oil and gas resources. As stated by one legal commentator, whose observations are widely reflected throughout treatises, cases, and statutes:

> "Oil and gas conservation laws are concerned not only with saving resources, but with encouraging their rational development. Rational development prevents waste because it maximizes ultimate recovery. Thus, oil and gas conservation laws seek to further the public's interest in conservation and rational development. They also seek to protect owners' correlative rights by providing a structure to make it possible for each owner to get his or her fair share of the oil or gas present."[188]

B. North Carolina's Oil and Gas Conservation Act

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[183] Ibid.

[184] Sharon O. Flanery and Ryan J. Morgan, Steptoe & Johnson, PLLC, "Overview of Pooling and Unitization Affecting Appalachian Shale Development," (2011) at 5, retrieved from http://www.steptoe-johnson.com.

[185] Ibid. at 6.

[186] Ibid. at 6, citing Walter Rundell, Jr., *Early Texas Oil: A Photographic History* 1866-1936 (1977), and Richard O'Connor, *The Oil Barons: Men of Greed and Grandeur* (1971).

[187] Ibid.

[188] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 20.

North Carolina's Oil and Gas Conservation Act, which was enacted in 1945, reflects these principles.[189] The purposes of the Act are to prevent economic waste of oil and gas caused by excessive or inefficient drilling, to protect the environment, and to ensure that landowners receive their fair share of compensation when oil or gas is extracted from their land. Specifically, the Act's declaration of policy states: "In recognition of imminent evils that can occur in the production and use and waste of natural oil and/or gas in the absence of equal or correlative rights of owners of crude oil or natural gas in a common source of supply to produce and use the same, and in the absence of adequate measures for the protection of the environment, this law is enacted for the protection of public interests against such evils by prohibiting waste and compelling ratable production and authorizing regulations for the protection of the environment."[190] DENR's regulations define "protection of correlative rights" to mean "that action or regulation by the Department which affords a reasonable opportunity to each person entitled thereto to recover or receive the oil or gas under his tract or tracts without being required to drill unnecessary wells or incur unnecessary expenses to recover such oil or gas."[191]

"Waste," which is expressly prohibited under the Act, includes "physical waste" and the following acts, among others:

a. The inefficient, excessive or improper use or dissipation of reservoir energy; and the locating, spacing, drilling, equipping, operating or producing of any oil or gas well or wells in a manner which results, or tends to result, in reducing inefficiently the quantity of oil or gas ultimately to be recovered from any pool in this State.

b. The inefficient storing of oil, and the locating, spacing, drilling, equipping, operating or producing of any oil or gas well or wells in a manner causing, or tending to cause, unnecessary or excessive surface loss or destruction of oil or gas.

c. Abuse of the correlative rights and opportunities of each owner of oil and gas in a common reservoir due to nonuniform, disproportionate, and unratable withdrawals causing undue drainage between tracts of land.

. . .

i. The escape into the open air, from a well producing both oil and gas, of gas in excess of the amount which is necessary in the efficient drilling or operation of the well.

j. Permitting gas produced from a gas well to escape into the air.

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189 N.C. Gen. Stat. §§ 113-381, *et seq.*

190 N.C. Gen. Stat. §§ 113-382.

191 15A N.C. A.C. 05D.0103(4).

Under the Act, DENR has the authority to regulate oil and gas production, and the concomitant "duty ... to determine whether or not waste over which it has jurisdiction exists or is imminent."[192] Pursuant to waste prevention, DENR may collect data; investigate, inspect, and examine properties and records; test oil and gas wells; hold hearings; require the maintenance of records and reports; and take any other action as may be reasonably necessary to enforce the Act.[193] In particular, DENR may enact and enforce regulations to govern proper drilling and operating methods, limitation and proration of oil and gas production, spacing of wells, establishment of drilling units, and the pooling of oil and gas interests.[194]

Process for Pooling in North Carolina

In order to prevent waste and avoid the drilling of excessive wells, the Act provides that DENR may, after notice and a hearing, establish a drilling unit or units for each pool. As defined by the Act, "pool" means "an underground reservoir containing a common accumulation of crude petroleum oil or natural gas or both."[195] A "drilling unit" is that "area which can be efficiently and economically drained by one well."[196] DENR has discretion as to the size and shape of each drilling unit and may set dimensions as necessary to prevent any producer or owner within the pool from procuring "more than his just and equitable share of oil and gas."[197]

The Act defines a producer's or owner's "just and equitable share" as "that part of authorized production from the pool . . . which is substantially in the proportion that the quantity of recoverable oil and gas in the developed area of his tract . . . bears to the recoverable oil and gas in the total developed area in the pool."[198] These well spacing requirements must be established after a notice and hearing. To ameliorate against the rule of capture, among other things, the well must be drilled "approximately in the center" of the drilling unit, and DENR is required to adopt rules determining the minimum distance from separate leaseholds or pooled units and between wells producing from the same reservoir.[199]

North Carolina's Act provides for both voluntary and compulsory pooling. Pooling is simply the grouping together of tracts or interests to form a drilling or production unit in compliance with applicable spacing standards.[200] The Act states: "When two or more separately owned tracts of land are embraced within an established drilling unit, the owners thereof may agree validly to

192 N.C. Gen. Stat. § 113-391(a), (b).
193 Ibid.
194 N.C. Gen. Stat. § 113-391.
195 N.C. Gen. Stat. § 113-389(10).
196 15A N.C.A.C. 05D.0103(2).
197 N.C. Gen. Stat. § 113-392(c).
198 N.C. Gen. Stat. § 113-392(d).
199 N.C. Gen. Stat. § 113-392(c); 15A N.C.A.C. 05D.0106(b).
200 Sharon O. Flanery and Ryan J. Morgan, Steptoe & Johnson, PLLC, "Overview of Pooling and Unitization Affecting Appalachian Shale Development", (2011) at 8, retrieved from http://www.steptoe-johnson.com.

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integrate their interests and to develop their lands as a drilling unit."[201] As the name indicates, voluntary pooling involves private arrangements to allow for joint development of the separately owned oils and gas interests within a spacing unit. Most oil and gas leases contain clauses allowing operators to pool separate leases together in order to form a drilling unit; and the Whitmar leases executed in North Carolina contain such a pooling clause.

If adjoining acreage is pooled together, the contractual terms of each individual lease remain in effect; pooling simply allows the operator to join adjacent leased acreage for purposes of obtaining a permit and meeting statutory spacing requirements. In some instances, landowners negotiate a community lease which constitutes a pooling of the respective individual interests. Another way to accomplish pooling is for mineral owners to execute pooling agreements that are separate from the leasing agreements.[202]

In the absence of voluntary pooling, the Act and regulations promulgated by DENR under the Act, provide that "for the prevention of waste or to avoid drilling unnecessary wells, [DENR] may order pooling of all interests."[203] DENR orders mandating integration for the purpose of establishing a drilling unit may be made only after notice and hearing, and be upon "terms and conditions that are just and reasonable, and will afford to the owner of each tract the opportunity to recover or receive his just and equitable share of the oil and gas in the pool ... [and] prevent or minimize reasonably avoidable drainage."[204] The Act further provides that the operator designated by DENR to develop and operate the unit has the right to reimbursement of the operator's "actual expenditures" incurred during the drilling operations, before paying the owner of each tract his or her ratable share of the production which is to be calculated "at the market price in the field" at the time of production. In the event there is a dispute relating to costs, DENR must determine the proper costs.[205]

C. *Pooling in other states*

The stated rationale for compulsory pooling laws is that they serve to maximize oil and gas recovery, prevent excessive waste, including the drilling of unnecessary wells, and ensure that landowners receive fair compensation for any drainage or extraction of oil or gas from their land.[206] Approximately forty states have some form of compulsory pooling law,[207] and virtually

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201 N.C. Gen. Stat. § 113-393(a).

202 Vaughn, Lisa, "New Facets of Old Alternatives for Unleased Mineral Interests," 16 Tex. Wesleyan L. Rev. 113 (Fall 2009). Sharon O. Flanery and Ryan J. Morgan, Steptoe & Johnson, PLLC, "Overview of Pooling and Unitization Affecting Appalachian Shale Development," (2011) at 8, retrieved from http://www.steptoe-johnson.com.

203 N.C. Gen. Stat. § 113-393; 15A N.C.A.C. 05D.0106.

204 N.C. Gen. Stat. § 113-393.

205 Ibid.

206 Bruce M. Kramer & Patrick H. Martin, *The Law of Pooling and Unitization* § 10.01 (LexisNexis Matthew Bender 2011).

207 Marie C. Baca, "Forced Pooling: When Landowners Can't Say No to Drilling," *Pro Publica*, May 19, 2011, retrieved from www.propublica.org. (The article states that thirty-nine states have compulsory

all oil and gas producing states allow compulsory pooling.[208] With the recent growth of hydraulic fracturing, some landowners have voiced opposition to compulsory pooling, viewing it to be eminent domain for private interests, and it has become a subject of considerable controversy in some states.[209] For example, in Pennsylvania and West Virginia, existing compulsory pooling laws (which were enacted before the widespread use of hydraulic fracturing), apply to deep wells and do not apply to the Marcellus Shale, where large shale deposits have recently been discovered. Several bills have been introduced in both states to extend the scope of the states' pooling laws, but there was insufficient consensus on the terms of the bills, and they did not pass.[210] Media reports indicate that the West Virginia legislature is expected to take up the issue of pooling in the near future, but it is less clear whether the Pennsylvania legislature will do so, as Pennsylvania's Governor Tom Corbett, who has otherwise voiced strong support of drilling, has voiced opposition to forced pooling.[211]

D. Recommendations for Further Study

The Division has carefully examined North Carolina's Oil and Gas Conservation Act and regulations regarding pooling, as well as numerous legal treatises on the subject, and the laws of numerous other states. Based on this review, it is manifest that regulation of pooling and unitization is highly complex, as it involves the determination of whether "waste" exists; the proper spacing of wells; the appropriate density of wells; the appropriate allocation of production; and the appropriate allocation of costs and revenues among different classes of mineral rights owners, among other issues. These are specialized environmental and production issues specific to oil and gas extraction that are beyond the expertise of the Consumer Protection Division.

DENR Should be Allowed to Review and Provide Input

As noted herein, DENR has been granted statutory authority under the Oil and Gas Conservation Act to regulate pooling and, to that end, has promulgated regulations concerning pooling. It is the understanding of the Division that, due to the relatively short time frame for this study, DENR has not had an opportunity to evaluate -- with a focus on the process of hydraulic fracturing -- the pooling provisions of the Act, DENR's regulations, or the pooling acts

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pooling laws, but the article does not count North Carolina among those states. As observed above, North Carolina law does provide for compulsory pooling.)

208 Bruce M. Kramer & Patrick H. Martin, *The Law of Pooling and Unitization* § 10.01 (LexisNexis Matthew Bender 2011). According to Messrs. Kramer and Martin, Kansas is the only producing state that does not have a compulsory pooling law, but Kansas does grant municipalities the authority to force pool, and the state has a field-wide compulsory integration statute, which applies to larger-scale operations.

209 Marie C. Baca, "Forced Pooling: When Landowners Can't Say No to Drilling," *Pro Publica*, May 19, 2011, retrieved from www.propublica.org.

210 Michael K. Bolton and Erick S. Wang, DLA Piper, LLC, "Forced pooling statutes in the Marcellus Shale," Feb. 1, 2012, retrieved from www.dlapiper.com .

211 Ibid.

and regulations of other states, and particularly oil and gas producing states. Because DENR is the agency charged with administering the Act and with making pooling determinations under the Act, the Division recommends that DENR should be given the opportunity to consider, and, in particular, to consult with regulators in other states with developed oil and gas regulatory programs, with regard to the following: (i) whether, as part of any modernization of North Carolina's oil and gas regulatory program to regulate hydraulic fracturing, the State's pooling and unitization laws and regulations should be modified; (ii) if so, how those laws and regulations should be modified to best address the statutory goals of environmental protection, prevention of waste, and protection of correlative rights; (iii) the extent to which hydraulic fracturing creates less drainage than conventional drilling methods; (iv) to the extent less drainage is created by hydraulic fracturing, to what extent reduced drainage ameliorates against the rule of capture, and, therefore, one of the underlying rationales of compulsory pooling.

If DENR and the General Assembly conduct further review, the Division observes that some states' laws contain provisions intended to provide enhanced protections for landowners in the context of compulsory pooling. The list of various protections below is not at all comprehensive or exhaustive, but the Division recommends that DENR and the General Assembly consider them as a starting point in any efforts to enhance landowner protections in the context of pooling.

Consent of Majority or Super-Majority of Landowners to Drilling

In many states, a certain percentage of the acreage in the proposed drilling unit must agree to lease or pool their land before the state's environmental regulator or oil and gas commission will consider an application for compulsory pooling. For example, New York requires the owners of at least 60 percent of the acreage in the proposed unit to have agreed to a lease.[212] According to a legal analysis of state pooling and unitization laws, where majority or super-majority consent is required, the percentages range from 50 percent of proposed pooled interests to 75 or 80 percent.[213] This legal analysis notes that "[a] minimum operator control threshold requiring 75 percent approval on a net acreage basis … provides substantial protection to owners of unleased tracts and smaller independent producers who may have acreage within a proposed unit."[214] Therefore, the Division recommends that DENR and the General Assembly consider adopting some type of requirement that a majority or supermajority

212 N.Y. Env. Conservation Law § 23-0501(2.).

213 Sharon O. Flanery and Ryan J. Morgan, Steptoe & Johnson, PLLC, "Overview of Pooling and Unitization Affecting Appalachian Shale Development," (2011) at 51, accessed from http://www.steptoe-johnson.com . In addition, the Division observes that Section 18 of the 2004 Model Oil and Gas Conservation Act promulgated by the Interstate Oil and Gas Compact Commission requires consent by at least 60 percent of royalty owners before the regulator may issue an order for compulsory unitization. Retrieved from http://www.iogcc.state.ok.us/Websites/iogcc/docs/ModelAct-Dec2004.pdf .

214 Sharon O. Flanery and Ryan J. Morgan, Steptoe & Johnson, PLLC, "Overview of Pooling and Unitization Affecting Appalachian Shale Development," (2011) at 51, retrieved from http://www.steptoe-johnson.com.

of landowners or interests, based on net acreage, consent to drilling before an operator is allowed to file an application for compulsory pooling.

"Fair and reasonable" Offer to Landowners Prior to Compulsory Pooling

Texas law requires an operator to demonstrate that it has made a "fair and reasonable" offer to landowners within the proposed unit before applying for a compulsory pooling order.[215] This provision "separates the Texas forced pooling statute from all other states and ... has led commentators to label [the Texas] Act as an act to encourage voluntary pooling rather than a forced pooling statute."[216] If operators are mandated to seek voluntary pooling, and to offer landowners in the affected area leases with "fair and reasonable" compensation, this requirement would likely reduce the incidence of compulsory pooling. Therefore, the Division recommends that DENR and the General Assembly review and consider this aspect of Texas law.

Require the Consent of the Surface Owner of Unleased Land for Any Operations on the Surface

Where a landowner has not agreed to a lease, but the land is included in the drilling unit under the state's compulsory pooling law, West Virginia prohibits the operator from conducting any surface operations on the property without the landowner's consent.[217] Legislation recently introduced in Pennsylvania (but which did not pass) contained a similar provision.[218] Such a provision protects landowners from surface operations on their property where they have not agreed to lease their mineral rights. As noted by one commentator, "[T]raditional standards of equity suggest that [an unleased landowner] should have some level of control over whether a horizontal well pad is located on the surface overlying unleased acreage, which was statutorily pooled."[219] North Carolina's pooling statute and regulations do not contain this protection; therefore, the Division recommends that DENR and the General Assembly adopt such a provision.

Statutory "Pugh" Clause

When gas production occurs, under all gas leases, that production serves to extend the lease indefinitely so long as production continues.[220] Therefore, where a landowner's lease is pooled with other leases to create a drilling unit, and production occurs, the lease can serve to tie up

[215] Tex. Nat. Res. Code Ann. § 102.013.
[216] Blackwell, Ronnie, "Forced Pooling Within the Barnett Shale: How Should the Texas Mineral Interest Pooling Act Apply to Units With Horizontal Wells?" 17 Tex. Wesleyan L. Rev. 1, 7-8 (Fall 2010).
[217] W. Va. Code § 22C-8-11.
[218] Bailie, John K. "Pooling and Unitization in Pennsylvania," Feb. 10, 2011, at 11, retrieved from http://law.psu.edu/_file/aglaw/Marcellus_Shale/Pooling_and_Unitization_in_Pennsylvania_Baillie.pdf.
[219] Sharon O. Flanery and Ryan J. Morgan, Steptoe & Johnson, PLLC, "Overview of Pooling and Unitization Affecting Appalachian Shale Development," (2011) at 52, retrieved from http://www.steptoe-johnson.com.
[220] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 192-98.

the landowner's entire property, even though the drilling or production unit may only cover a portion of the landowner's land. For example, if gas development takes place on only one acre of a landowner's 100-acre leased property, the drilling would tie up the other 99 acres indefinitely but only provide the landowner with royalty compensation from the gas being extracted on one acre. As a result, many experts recommend that landowners request a "Pugh clause" (named for the attorney who first used it) in their leases in order to give landowners control over their land that is not in the drilling unit, and allow the landowner to sign a new lease with a different company.[221] Essentially, a Pugh clause provides that drilling or production on leased land that is pooled will not maintain the lease as to leased land that is not in the pooled unit. Several states, including Arkansas, Oklahoma, Mississippi, and North Dakota have enacted statutes or promulgated regulations that have the effect of a Pugh clause, by providing that production does not extend leases of lands within the production unit where there is no production.[222] Similarly, the 2004 Model Oil and Gas Conservation Act promulgated by the Interstate Oil and Gas Compact Commission contains a statutory Pugh clause.[223] The Division recommends that DENR and the General Assembly consider the adoption of a similar provision.

Section 6 – Royalties

The royalty clause is the main provision in an oil and gas lease for compensation to the landowner. If production occurs, the landowner is paid a royalty, which is usually stated in leases as a percentage of production, or the value, or proceeds of its sale, free of the costs of production.[224] Both the existence and the quantity of oil and gas that may be produced from a lease are uncertain until someone drills a well. If there is no production, the percentage royalty is worthless; if there is prolific production, the percentage royalty will be extremely valuable. Therefore, a percentage royalty is generally viewed to balance the interests of the landowner and the gas company against the inherent risks of exploration.[225]

Generally, royalty provisions in leases are construed as being free of all costs incurred in bringing about production of oil and gas, and are payable either "in kind" or "in cash." Oil is often paid "in kind" and gas is almost always payable "in cash."[226] The reason for this practice

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[221] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 254-55. Harrison, Gerald A., "Negotiating Oil and Gas Leases on Indiana Farmland." Purdue University Cooperative Extension, October, 1997. Retrieved from <http://www.extension.purdue.edu/extmedia/ec/ec-564.html>.

[222] Ark. Code Ann. § 15-73-201; Miss. Code Ann. § 53-3-111; Okla. Stat. 52 § 87.1(b); N.D. Cent. Code § 38-08-9.8.

[223] Section 10(h) of the Model Act provides: "In case of a spacing unit of 160 acres or more, no oil and gas leasehold interest outside the spacing unit involved may be held by production from the spacing unit more than ninety (90) days beyond the expiration of the primary term of the lease." Retrieved from http://www.iogcc.state.ok.us/Websites/iogcc/docs/ModelAct-Dec2004.pdf .

[224] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 278.

[225] Ibid.

[226] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 280. Kirk, Rachel M., "Variations in the Marketable-Product Rule from State to State," 60 Okla. L. Rev. 769, 771-72 (Winter

stems from the physical and economic differences between oil and gas. Oil, being a liquid, can be separated at the well site, and the royalty owner can physically receive her share. Additionally, it is generally feasible to store oil on the leased premises and sell it periodically. Gas, in contrast, is more effectively marketed in bulk, and is not as easily stored at the well as oil, making it more difficult for the royalty owner to take his share "in kind" at the wellsite. Therefore, gas royalty provisions in oil and gas leases commonly provide the lessor will receive royalty in cash.[227]

North Carolina Law

North Carolina has not been an oil and gas producing state. Therefore, not surprisingly, North Carolina has no statutes or regulations that regulate the payment of royalties on oil and gas production. The only statutory provision in North Carolina law that addresses royalties is N.C. Gen. Stat. § 113-421(c), which provides that, if a "surface owner" is the prevailing party in an action "to recover unpaid royalties, the court shall award any court costs and reasonable attorneys' fees to the surface owner or the surface owner's assignee." This provision therefore allows a unified surface owner to recover his costs and attorneys' fees if he is forced to sue a gas company for its failure to timely pay royalties, and the mineral owner prevails in the action. The Division notes, as discussed in section 2.A. *supra*, the surface owner may or may not own the mineral rights to her property; if she does not, then she would not be entitled to royalty payments. Therefore, the Division recommends that the General Assembly change the reference to "surface owner" in N.C. Gen. Stat. § 113-421(c) to "royalty owner."

States that are major oil and gas producers tend to have detailed statutes involving royalties. Royalties are intrinsic to production; thus, these statutes are closely tied to gas production. If the State proceeds with allowing shale gas extraction, then appropriate statutes regulating the payment of royalties will need to be enacted in order to provide protection to royalty owners and to establish clear rules, which will, in turn reduce uncertainty and litigation over payment of royalties. Because the Division's expertise does not extend to oil and gas production, the Division believes that this is an area that DENR and the General Assembly should review more closely if a regulatory program is adopted.

Numerous states have undertaken efforts to provide for prompt payment of royalties to mineral owners, and to provide other, related protections to mineral owners in the context of royalties. The list below is not at all a comprehensive list of items covered by oil and gas royalty statutes. Nonetheless, if the State proceeds with allowing shale gas extraction, the Division recommends that DENR and the General Assembly consider adopting laws or regulations addressing, at a minimum, the following aspects of the payment of royalties:

Minimum Royalty

By common practice for many years, the industry-wide minimum lease royalty has been 12.5%,

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2007).
[227] Ibid.

although higher royalties have often been paid in major production areas.[228] As a result, several state statutes mandate that a minimum lease royalty of 12.5% be paid; [229] in addition, in the context of pooling statutes, numerous states require that a minimum royalty of 12.5% be paid on proceeds.[230]

Payment of Royalty on Gross Proceeds

The sale of natural gas may involve substantial costs after the gas comes out of the well. A lessee will often transport gas produced to a pipeline, to a market center, or even to an end user. In addition, natural gas often must be dehydrated, cleaned, processed, or compressed before it can be sold. These operations may be very expensive, but they may also substantially increase the value of the natural gas.[231]

Virtually all courts hold that the operator-lessee is responsible for all costs of exploration and production. This is because the lessee assumes the risk involved in developing the lease, including all costs incurred in the production of oil or gas from the leased premises. On the other hand, most courts agree that the landowner-lessor shares proportionately in costs *subsequent* to production since they are incurred after production and ordinarily increase the value of production.[232]

These principles have led to much litigation and diverse case law over when "production" has occurred for purposes of calculating royalty, and over which post-extraction costs may be deducted from the landowner-lessor's royalty. As a result, in most states, whether certain post-extraction costs – such as compression and long distance transportation – can be deducted from landowners' royalties turns on an interpretation of that state's case law, and an interpretation of the language of the lease.[233]

In an effort to provide greater certainty on this important question, and to provide greater protection to lessors, several states including Michigan, Nevada and Wyoming, have adopted statutes defining the costs of production that cannot be assessed against lessors, or, alternatively, expressly prohibiting the assessment of certain post-production costs against lessors, unless the lease explicitly provides for the deduction of such costs.[234]

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228 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 278.

229 58 Pa. Stat. § 33.

230 *See, e.g.*, Ark. Code Ann. § 15-72-305.

231 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 294-95. Kirk, Rachel M., "Variations in the Marketable-Product Rule from State to State," 60 Okla. L. Rev. 769, 772-74 (Winter 2007).

232 John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 294-95. Kirk, Rachel M., "Variations in the Marketable-Product Rule from State to State," 60 Okla. L. Rev. 769, 771-72 (Winter 2007).

233 Ibid.

234 Mich. Comp. Laws § 324.61503b; Nev. Rev. Stat. § 522.115; Wyo. Stat. Ann. § 30-5-304. In addition, the Federal Oil and Gas Royalty Management Act, 30 U.S.C. §§ 1701-1758; 30 C.F.R. §§ 1201.102, -.103,

Mandating Payment within a Certain Time Period

Numerous state statutes require royalties to be paid within a set time after the first production (the statutory range tends to be from four to six months from first production), and then monthly thereafter.[235] The benefit of requiring payment by a certain timeframe is that all parties know when royalties must be paid.

Penalty for Failure to Pay

Virtually all states with royalty payment statutes allow for the recovery of interest on past due royalties.[236] Most state statutes provide for fixed rates, from a low of 8% per annum (Mississippi) to a high of 18% per annum (Nevada, New Mexico, North Dakota, and Wyoming). Colorado, Illinois and Texas use variable rates tied to the discount rate at various federal reserve banks. Montana sets the rate as the maximum rate authorized under its legal interest statute.[237] In addition to interest, several states expressly authorize the assessment of penalties by their oil and gas regulators if royalties are not timely paid.[238]

Statement to Accompany Royalty Payment

Many oil and gas states have detailed reporting or "check stub" requirements, which must accompany payments to those receiving royalties, and typically detail, among other items, the quantity of product sold, the price received, the amount of severance taxes and other taxes levied, and the royalty owner's interest in the sale, among other items.[239] The purpose of these "check stub" statutes is to provide landowners (or royalty owners) with information detailing how their royalties were calculated so that they can determine if royalties were appropriately paid.

Division Order Should not Change the Lease Terms

A division order is a statement entered into by royalty owners and all others entitled to

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.152-.154, adopts a similar principle by requiring that royalties be paid on gross proceeds and prohibiting the deduction of certain costs.

[235] *See, e.g.*, Ark. Code Ann. § 15-74-601; Colo. Rev. Stat. § 34-60-118.5; Kan. Stat. Ann. § 55-1614; Mich. Comp. Laws § 324.61503a; Mont. Code Ann. § 82-10-103; N.M. Stat. Ann. § 70-10-3; N.D. Cent. Code § 47-16-39.1; Miss. Code Ann. § 53-3-39; 52 Okla. Stat. § 570.10; Tex. Nat. Res. Code § 91.402; Utah Code Ann. § 40-6-9; Wyo. Stat. Ann. § 30-5-301.

[236] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 305.

[237] *See, e.g.*, Ark. Code Ann. § 15-74-601; Colo. Rev. Stat. § 34-60-118.5; Kan. Stat. Ann. § 55-1614; La. Rev. Stat. § 31:212.23; Miss. Code Ann. § 53-3-39; Mont. Code Ann. § 82-10-103; N.D. Cent. Code § 47-16-39.1; N.M. Stat. Ann. § 70-10-5; 52 Okla. Stat. § 570.10; Tex. Nat. Res. Code § 91.403; Wyo. Stat. Ann. § 30-5-302.

[238] *See, e.g.*, Ark. Code Ann. § 15-74-709; Utah Code Ann. § 40-6-9.1.

[239] Ala. Code § 9-17-33; Ark. Code Ann. § 15-74-707; Colo. Rev. Stat. § 34-60-118.5; Kan. Stat. Ann. § 55-1620; La. Rev. Stat. § 31:212.31; Mont. Code Ann. § 82-10-104; N.D. Cent. Code § 38-08-06.3; Utah Code Ann. § 40-6-9.1; Wyo. Stat. Ann. § 30-5-305.

proceeds of production sales, stipulating how moneys are to be distributed. Division orders protect purchasers of production and those who distribute proceeds by requiring those who are paid to warrant title to production transferred and indemnify those who make the payments.[240] Generally, courts have held that lessors' or landowners' royalty rights are based on the underlying lease and cannot be changed by a division order. Nonetheless, to ensure that lease royalty terms are upheld, many states have statutes barring enforcement of division-order terms that conflict with lease terms.[241]

Royalty Owner's Right to Inspect Records

A number of states expressly provide that lessors or royalty owners are entitled, upon request, to examine the production records or royalty payment records of the lessee, or to obtain copies of such records.[242] The Division notes that the Whitmar leases grant landowners the right to examine, audit, or inspect Whitmar's books, accounts, contracts, or any other records affecting the landowner's revenue for the purpose of verifying the accuracy of the reports and statements provided to the landowner.

Royalty Owners as Secured Creditors

Except in a few states, the landowner's (or lessor's) royalty interest under a lease is classified as an interest in real property. After they are taken from the ground, however, both oil and gas are personal property.[243] Recognizing this real property interest, many states have legislation intended to make those entitled to oil and gas royalties secured creditors under the Uniform Commercial Code.[244] In the event that royalties go unpaid, when royalty owners are secured creditors, rather than unsecured creditors, they have considerably enhanced rights to recover their unpaid royalties.

Assessment of Royalty on Flared Gas

In the production process, the methane (or natural gas) portion of production is much less valuable than any natural gas liquids that the gas may contain. As a result, operators often recover the natural gas liquids and flare or vent the methane. However, if the gas is flared or vented, that gas is wasted, and a landowner's income is reduced. This is particularly the case with gas in return fluids from the hydraulic fracturing process. For recovery of gas from return flows and a variety of other production processes, the EPA has concluded that the natural gas can be profitably recovered.[245] Methane is a highly potent greenhouse gas. (*See* DENR report,

[240] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 301, 407-08.
[241] Ibid. at 301. Mich. Comp. Laws § 324.61503(b)(4); Mont. Code Ann. § 82-10-110; N.D. Cent. Code § 47-16-39.3; Tex. Nat. Res. Code § 91.402(h); Wyo. Stat. Ann. § 30-5-305(a).
[242] *See, e.g.*, Kan. Stat. Ann. § 55-1622; N.D. Cent. Code § 47-16-39.2.
[243] John S. Lowe, *Oil and Gas Law In a Nutshell*, West Nutshell Series (2009), at 280-81.
[244] Ibid. *See, e.g.*, Ark. Code Ann. § 15-74-640; Miss. Code Ann. § 53-3-41; 52 Okla. Stat. § 549.3.
[245] U.S. Environmental Protection Agency, "Recommended Technologies and Practices." Retrieved from http://www.epa.gov/gasstar/tools/recommended.html .

section 4.G. "Emission sources associated with natural gas extraction and production.") Because of environmental concerns, and to prevent undue waste caused by flaring, some states have adopted restrictions on excessive flaring by gas operators.[246] Further, some states, including North Dakota, have expressly provided that flared gas in excess of the allowable amount is subject to production taxes, and is subject to the lease and on which royalties must be paid.[247]

Data Tracking

As observed by DENR in its report (section 9, recommendation 9), it will be important to have a robust data management system in order to track the production of oil and gas activities for royalties and severance tax purposes. According to a Congressional Research Services report from 2009, it is common for states to require the metering of production, and, in some instances, states require the auditing of production.[248] The state of Pennsylvania audits production from the top 100 wells using an independent auditor, or "meter truck companies" that work for the shale gas producers. The state of New York requires that natural gas producers meter production and make that information available upon request.[249] The West Virginia Department of Environmental Protection, Office of Oil and Gas, requires an annual production report from all oil and gas producers in the state.[250]

In summary, because the Division's expertise does not extend to oil and gas production, the Division recommends that DENR and the General Assembly review this area more closely as detailed statutes will be required. In conducting this review, the Division recommends that DENR and the General Assembly consider the adoption of royalty statutes providing, at a minimum, the above protections to royalty owners.

Section 7 – Additional Comments

In this section, the Division notes several remaining items relating to landowner and consumer protection issues that have not been addressed in prior sections of the Division's report:

Setbacks

In its recommendations, DENR has observed: "Further work is needed to establish setbacks and areas where oil and gas activities should be prohibited in order to protect public health, public

[246] For example, the Division understands that Ohio's environmental laws prohibit venting or flaring for more than 30 days. Harry Weiss.
[247] *See, e.g.*, N.D. Cent. Code § 38-08-06.4; Alaska Stat. § 43.55.020(e).
[248] Congressional Research Service, "Unconventional Gas Shales: Development, Technology, and Policy Issues," Oct. 30, 2009, at p. 30.
[249] N.Y. Energy Cons. Law, § 23-0301, -0305, Part 556.
[250] Congressional Research Service, "Unconventional Gas Shales: Development, Technology, and Policy Issues," Oct. 30, 2009, at p. 30.

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safety and sensitive natural environments" and that "[s]etbacks may include provisions to [p]rotect neighbors and surface owners from safety, hazards, noise and other impacts." (DENR report, section 9, recommendation no. 4). The Division agrees with DENR's recommendation that setbacks should be established and believes that setbacks should be substantial in order to protect landowners and the public from adverse impacts of oil and gas activities.

Full Chemical Disclosure

DENR has recommended that the General Assembly require "full disclosure of hydraulic fracturing chemicals and constituents to the state regulatory agency and to local government emergency response officials.... [And that] the General Assembly ... require the industry to disclose all hydraulic fracturing chemicals and constituents – except for information protected under North Carolina law as a trade secret – to the public through the FracFocus website or a state agency website." (DENR report, section 9, recommendation no. 7). The Division agrees with DENR's recommendation and believes that it is important that there be full disclosure of chemicals used in the hydraulic fracturing process.

Public Disclosure of Violations

In at least several states, when oil and gas operators have been cited for violations, regulators post that information on a website that is accessible to the public. For example, Ohio law requires the chief of the division of oil and gas resources management to maintain a database "that is accessible to the public...[and that] list[s] each final nonappealable order issued for a material and substantial violation.... The list shall identify the violator, the date on which the violation occurred, and the date on which the violation was corrected."[251] Pennsylvania's Department of Environmental Protection posts cited violations by oil and gas operators on its website as well. The Division recommends that DENR and the General Assembly consider a adopting a similar requirement so that North Carolina landowners may determine if an operator has engaged in material or substantial violations of environmental or production laws that may impact their land or their lease.

Penalties

The Oil and Gas Conservation Act allows DENR, through the Attorney General, to obtain civil penalties against violators of up to $1,000 per day,[252] and the making of any false statement of fact in any required report is a class 2 misdemeanor.[253] A number of states have considerably higher penalties. For example, North Dakota, a significant gas production state, allows for civil penalties of up to $12,500 per day for violations of the oil and gas laws.[254] In addition, a person who engages in a willful violation of law that "pertains to the prevention or control of pollution

[251] Ohio Rev. Code Ann. § 1509.041.
[252] N.C. Gen. Stat. §§ 113-408, -410.
[253] N.C. Gen. Stat. § 113-409.
[254] N.D. Cent. Code § 38-08-16.

or waste" is guilty of a felony.[255] Other states that impose higher penalties for violations of oil and gas laws include Virginia, West Virginia, and Wyoming.[256] Accordingly, the Division recommends that DENR and the General Assembly consider increasing the maximum penalties allowable under North Carolina law.

[255] Ibid.

[256] Va. Code Ann. § 45.1-361.8; W. Va. Code § 22-6-34; Wyo. Stat. Ann. § 30-5-119.