Units for Horizontal Wells: Is the Law Keeping Pace with Technology?

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Units for Horizontal Wells: Is the Law Keeping Pace with Technology?

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I. Introduction

One of the great qualities of our legal system is its ability to adapt to changing circumstances. In this era of advancing oil and gas technologies, the legal system must adapt again. Modern technologies are helping oil and gas companies develop vast quantities of oil and gas reserves that only a few decades ago were considered unrecoverable, at least economically. Some would argue that the hidden cost of horizontal drilling and hydraulic fracturing are far too high: the trampling of the individual’s property rights. While our legal system must continue to balance these two competing interests of new technology and property rights, courts should do it in a way that encourages development, even if our traditional notions of property rights are slightly diminished in the process. On the other hand, in today’s world of sophisticated property owners, all parties—operators and landowners alike—on most occasions, can rely on contractual and regulatory protections of their interests.

This paper will discuss some of the legal aspects of horizontal drilling, focusing specifically on the laws of Texas and Oklahoma. It will set out the current status of the law, and point out some circumstances where the current law might be insufficient or just plain unknown. Each of the issues discussed could be a paper itself. Accordingly, out of necessity, this paper will be more of a survey than an in-depth analysis of these issues. The paper also focuses primarily on issues involving privately owned real property rather than government owned lands or offshore and international issues. Sincere appreciation goes out to the many legal scholars, commentators and practitioners whose work I have heavily relied on in preparing this paper. Some of the many articles dealing with the various topics addressed in this paper are listed in the attached bibliography.

The paper will start with some basic property law concepts that affect or are affected by horizontal drilling, give a brief overview of the regulatory schemes for horizontal wells in Texas and Oklahoma, and then address some of the unique legal issues related to horizontal wells.

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1 I am licensed to practice law in Texas but not Oklahoma. Accordingly, the paper is weighted toward Texas law. While I tried to make the discussions of Oklahoma law as complete and as accurate as possible, I fear I have not always been successful in that regard.

2 The statements and opinions set forth in this paper are exclusively mine and not those of XTO Energy Inc., Exxon Mobil Corporation, or any other entity or organization. While the paper tries to present an objective picture of the current state of the law, my bias clearly favors the oil and gas operator.
including: (1) express and implied clauses and covenants in oil and gas leases, (2) surface and subsurface trespass issues, including hydraulic fracturing as an actionable trespass, and (3) the distribution of royalties and other proceeds from production from a horizontal well.

II. Some Basic Property Law Concepts

Oil and gas law is primarily real property law, as modified by courts and regulatory agencies to deal with the unique nature of oil and gas, or as modified by the parties themselves through contracts. Some of the more important basic principles of property law in the oil and gas realm that impact or are impacted by horizontal drilling include the following:

A. The ownership of a tract of land includes the sky above and the depths below, and such ownership can be segregated among different owners. The law considers a person owning real property to own not just the surface of the property but from the surface to all depths and even the air above the surface. Of course, as many of us learned in law school, real property ownership consists of a “bundle of sticks” that can be given to others in whole or in part. Thus, for example, the surface can be severed from the minerals, the minerals can be divided into various rights, and the owner of the surface can grant to others limited rights to use the property through an easement or a lease.

B. Real property owners have the right to protect their property. Historically, a real property owner protected his or her interest against the competing interests of those having a relationship with that owner through contracts, and against the competing interests of those having no contractual relationship with the owner through claims of trespass. Trespass has been defined as: (1) a form of action to recover damages for an injury to one’s property; and (2) an unauthorized intrusion or invasion of the private premises of another. Trespass is an intentional tort that, under the right circumstances, may impose upon the trespasser punitive or

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4 A real property owner has potentially other causes of action to protect his or her property against the claims of strangers such as a quiet title action, assumpsit, loss of speculative value, misappropriation, conversion, private nuisance, invasion of privacy and inverse condemnation. See generally, Anderson, “Geophysical ‘Trespass’ Revisited,” 5 Tex. Wesleyan L. Rev. 137 (1999). Trespass, however, appears to be the most popular cause of action. Ragsdale, “Hydraulic Fracturing: The Stealthy Subsurface Trespass,” 28 Tulsa L.J. 311, 313 (1993) [hereinafter “Ragsdale”].

exemplary damages. In most states, this is not true if the cause of action is based on a breach of contract. Where the trespass involves drilling an oil and gas well, a good faith trespasser is allowed to recover its drilling costs from production where a bad faith trespasser is not.

C. Because of the unique nature of oil and gas, its ownership can be captured by an adjoining property owner. The law had to develop a limited exception to the general notion of trespass because oil and gas can migrate from property to property. States developed two approaches to the nature of the ownership of oil and gas. Some states, including Texas, consider the ownership of minerals to include the ownership of the oil and gas in place. The oil and gas beneath the soil are considered part of the realty, and the owner has a possessory right in that realty. The owner of the oil and gas in place, however, can lose its ownership to adjoining mineral owners through “capture.” The rule of capture developed as a doctrine of non-liability for drainage rather than a rule of real property law. As long as the adjoining property owner does not physically invade the property of another, he or she cannot be held liable if a well legally drilled on his or her property captured oil and gas from another’s property. The adjoining property owner can protect its rights by drilling its own well.

Other states, including Oklahoma, have taken the position that ownership of minerals does not include ownership of the any of the subsurface itself. In other words, the owner of oil and gas does not own a possessory right in the minerals. Instead, the owner owns only the

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7 Some contracts, however, impose a special relationship between the contractual parties, such as a fiduciary duty, which if breached, could result in punitive damages.
9 E.g., White v. Conoco Inc., 710 F.2d 1442 (10th Cir. 1983); Ragsdale, supra, Note 4 at p. 321. One possible exception to this rule is where a plaintiff landowner has acted in bad faith by knowingly permitting the trespasser to complete operations prior to asserting her rights. Ragsdale, supra, Note 4 at pp. 322-23, citing Kuntz, A Treatise on the Law of Oil and Gas §11.3(c), 310 (1987).
11 States adopting the ownership of oil and gas in place theory include Alabama, Arkansas, Colorado, Kansas, Maryland, Michigan, Mississippi, Montana, Ohio, Pennsylania, Tennessee, Texas, Utah and West Virginia. Hemingway, The Law of Oil and Gas 12 (1979); Bennett, supra, Note 10 at p. 351.
12 Elliff v. Texon Drilling Co., 210 S.W.2d 558, 561 (Tex. 1948).
14 Barnard v. Monogahela Nat’l Gas Co., 65 A. 801 (Pa. 1907); Elliff v. Texon Drilling Co., 210 S.W.2d 558, 562 (Tex. 1948); Ragsdale, supra, Note 4 at pp. 313-14.
15 States adopting the non-ownership theory of oil and gas in place include California, Illinois, Indiana, Kentucky, Louisiana, New Mexico, New York, Oklahoma and Wyoming. Hemingway, The Law of Oil and Gas 13 (1979); Bennett, supra, Note 10 at p. 359.
right to go on the premises to “capture” the minerals, even though a part of the captured minerals may have migrated from adjoining land.\(^{16}\) Early decisions analogized this right to a license to hunt or fish on another’s property, with all other rights remaining in the fee owner.\(^{17}\) Regardless of the ownership theory, practically speaking, the result is the same:\(^{18}\) ownership of oil and gas in a particular tract of land is really the right to explore and produce oil and gas from that tract, regardless of where the oil and gas comes from originally.\(^{19}\)

**D. The rule of capture is limited.** Although a property owner can capture the oil and gas underlying an adjoining owner’s property, the principles of trespass still apply if there is a physical invasion of another’s property without consent.\(^{20}\) A property owner cannot physically invade the surface\(^{21}\) or the subsurface\(^{22}\) of another’s land without the other owner’s consent. In addition, the operator’s right to capture another’s oil and gas is limited by state conservation laws,\(^{23}\) and by the legal theory of correlative rights, which recognizes the opportunity of each landowner making up a common source of supply of oil and gas to

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\(^{16}\) Nunez v. Wainoco Oil & Gas Co., 488 So.2d 955 (La. 1986); Wright v. Carter Oil Co., 223 P. 835, 836 (Okla. 1923); Rich v. Doneghey, 177 P. 86 (Okla. 1918). See also, Sunray Oil Company v. Cortez, 112 P.2d 792 (Okla. 1941), involving a saltwater disposal well, where the court concluded that the surface owner owned the subsurface formations into which the saltwater was being injected.


\(^{18}\) For example, since the tort of trespass is the “intentional and unprivileged use or other invasion of another’s property,” [Reynolds, supra, Note 3 at p. 227] in non-ownership states, like Oklahoma, the owner of oil and gas does not own a possessory right in real property and so logically could not be the victim of a trespass. Courts in non-ownership states, however, have not been burdened by such legal distinctions. See, e.g. Gliptis v. Fifteen Oil Co., 16 So.2d 471 (La. 1943); Ragsdale, supra, Note 4 at pp. 327-36.

\(^{19}\) One commentator described trying to distinguish the results of cases from ownership states and non-ownership states as trying to describe a zebra as being white with black stripes versus black with white stripes. Bennett, supra, Note 10 at p. 349. See also, Kuntz, Vol. 1, A Treatise on the Law of Oil and Gas §2.4 (Anderson ed. 1987); Lear, Mitchell & Richards, supra, Note 10 at p. 17-9.

\(^{20}\) E.g. Mayfield v. de Benavides, 693 S.W.2d 500 (Tex. App.—San Antonio 1985) (where well drilled on tract not under lease); Humble Oil & Refining Co. v. Kishi, 276 S.W. 190 (Tex. Comm’n App. 1925) (where lease expired before drilling commenced).

\(^{21}\) E.g. Swiss Oil Corp. v. Hupp, 69 S.W.2d 1037 (Ky. 1934).


produce an equitable share of those minerals. Texas first recognized correlative rights in *Elliff v. Texon Drilling Co.*, stating:

The term ‘correlative rights’ is merely a convenient method of indicating that each owner of land in a common source of supply of oil and gas has legal privileges as against other owners of land therein to take oil or gas therefrom by lawful operations conducted on his own land; that each such owner has duties to the other owners not to exercise his privileges of taking so as to injure the common source of supply; and that each such owner has rights that other owners not exercise their privilege of taking so as to injure the common source of supply.

For the mineral owner to recover for a violation of correlative rights, though, there must be a showing of negligence or violation of a statute or regulation. In other words, the opportunity of each landowner making up a common source of supply of oil and gas to produce an equitable share of those minerals does not mean that party may not lose some or all of its minerals through legal drainage.

E. In a particular tract, the owner of the minerals can use as much of the surface as is reasonably necessary to explore and develop the minerals. In that event, no trespass is committed, even if the mineral owner does so without permission from the surface owner. But this right of the mineral owner has limitations. Texas courts have adopted the so-called “accommodation” or “due regard” doctrine, which allows an operator to use as much of the surface as is reasonably necessary, but requires the operator to accommodate the surface owner’s use of the surface if there are other usual, customary and reasonable methods available.

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24 *Ohio Oil Co. v. State of Ind.*, 177 U.S. 190 (1900); Symonds & Jefferis, supra, Note 17 at pp. 425-26.
25 210 S.W.2d 558 (Tex. 1948).
26 *Id.* at 582-83, citing 1 W. L. Summers, The Law of Oil and Gas §63 (perm. Ed. 1954).
28 *Yates v. Gulf Oil Corp.*, 186 F.2d 286 (5th Cir. 1950); *Wemple v. Nabors Oil & Gas Co.*, 97 So. 666 (La. 1923); *Ball v. Dillard*, 602 S.W.2d 521 (Tex. 1980); *Harris v. Currie*, 176 S.W.2d 302 (Tex. 1943). Other cases: federal lands: *Kinney v. Coastal Oil Company v. Kieffer*, 277 U.S. 488 (1928) (dealing with minerals reserved to the United States in agricultural patents); *United States v. Union Oil Co. of Calif.*, 549 F.2d 1271 (9th Cir. 1977) (dealing with geothermal resources); *Occidental Geothermal, Inc. v. Simmons*, 543 F. Supp. 870 (N.D. Cal. 1982) (extending this principle to the right to build power plants on the surface to exploit geothermal resources); *Visintainer Sheep Co. v. Centennial Gold Corp.*, 748 P.2d 358 (Colo. App. 1987) (no permission necessary from the surface owner under the Mining Law of 1872 to enter property for the purpose of prospecting and staking a mining claim); *Stock-Raising Homestead Act of 1916*, 43 U.S.C. §§291-301 (grants the right of access to the property by the mineral owner or lessee subject to the payment of surface damages); Private lands: *Amoco Prod. Co. v. Carter Farms*, 703 P.2d 894 (N.M. 1985) (an oil and gas lessee or operator developing private minerals, unless the lease provides otherwise, may use so much of the surface of the leased premises as is reasonably necessary, but its surface use must be exercised with due regard for the rights of the surface owner).
to develop the minerals. Oklahoma has addressed an operator’s rights and obligations to use the surface, and the obligation to pay resulting damages, in the Oklahoma Surface Damages Act (the “Surface Act”). Briefly, the Surface Act requires the operator to give notice to the surface owner of its intent to drill a well on the affected surface. The parties then attempt to negotiate the payment of surface damages. If the parties agree, a surface use agreement is entered into. If the parties cannot agree, then the operator may proceed with its operations if the operator petitions the district court for an appraisal of any damages incurred to the surface, which are then paid to the surface owner. The Surface Act seems to be an expansion of the operator’s obligations, as it requires the payment of surface damages regardless of any accommodation the operator might make to the surface owners existing use of the surface.

III. The Regulatory Schemes of Texas and Oklahoma for Horizontal Wells and Units

A. Horizontal Drilling. Early horizontal drilling technology dates back to 1919, when a horizontal drilling apparatus was patented. The first horizontal well was drilled in 1929 in Texan, Texas. Horizontal drilling began in earnest in the 1980s due to improved technology of downhole drilling motors, which gave the driller the ability to steer a drill bit as it

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29 Getty Oil Co. v. Jones, 470 S.W.2d 618 (Tex. 1971) (requiring a mineral lessee to bury its oil pumping units in cellars so the surface owner could operate its automatic irrigation system). See also, Hunt v. Kerbaugh, 283 N.W.2d 131 (N.D. 1979) (where reasonable alternatives to an operation exist, the court must weigh the different alternatives against the inconvenience to the surface owner. In this case, involving geophysical operations, the court upheld the trial court’s decision enjoining the surface owner from interfering with the explorer’s operations because the surface owner had failed to demonstrate a reasonable alternative); Flying Diamond v. Rust, 551 P.2d 509 (Utah 1976) (a mineral lessee violated the accommodation doctrine where it reasonably could have built an access road at the location requested by the surface owner but did not and thereby damaged the surface owner’s crops); But cf. Vest v. Exxon Corp., 752 F.2d 959 (5th Cir. 1985) (the accommodation doctrine applies only to the method of operation; as long as the operator is using proper industry methods, it can drill up the entire leased premises even if that results in substantial impairment of the surface for ranching purposes); Ottis v. Haas, 569 S.W.2d 508 (Tex. Civ. App.—Corpus Christi 1978) (accommodation doctrine not applicable where the operator completely fenced its surface facilities and did not materially interfere with the surface owner’s grazing activities; mere inconvenience is not enough). See also, Northern Cheyenne Tribe v. Hollowbreast, 349 F. Supp. 1302 (Mont. 1972); Gerrity Oil & Gas Corp. v. Magness, 946 P.2d 913 (Colo. 1997); Bell v. Cardinal Drilling Co, 85 NW.2d 246 (N.D. 1957); Tarrant County Water Control & Improvement Dist. No. One v. Haupt, 854 S.W.2d 909 (Tex. 1993); Sun Oil Co. v. Whitaker, 483 S.W.2d 808 (Tex. 1972). See generally, Davis & Strange, “Surface Access Problems, Subsurface Trespass and Litigation,” Vol. 9, No. 1 Texas Oil and Gas L.J. 77 (1995).

33 Schweikhardt, supra, Note 3 at p. 330.
34 Id. at n.1.
bores through the earth, and downhole telemetry equipment.\textsuperscript{35} The first shale formation developed using horizontal drilling was the Barnett Shale. The initial Barnett Shale horizontal well was drilled in 1992.\textsuperscript{36} The regulatory agencies of both Texas and Oklahoma have promulgated rules in an attempt to keep pace with this expanding technology.

\textbf{B. Texas.} Over 100 years ago, the Texas legislature charged the Texas Railroad Commission ("TRRC") with regulation of oil and gas drilling and production. One important aspect of that regulation is proration, or the daily rate of production from wells within a given field or reservoir.\textsuperscript{37} The TRRC requires operators to designate a proration unit for each well in the field, with the size of the proration unit affecting its production allowable. The number of acres assigned to a well for the purpose of allowable production depends on the density rule for the field in question.\textsuperscript{38} The larger the acres assigned, the greater the allowed production.\textsuperscript{39}

The TRRC has enacted both statewide rules and special field rules for individual producing fields. The statewide rules govern unless a specific field rule applies. The TRRC first held hearings for field rules for horizontal drilling in 1989 for the Flying W (Wolfcamp) Field in Winkler County, and the Pearsall (Austin Chalk) Field in a five-county area of South Texas.\textsuperscript{40}

The TRRC promulgated statewide Rule 86\textsuperscript{41} on June 1, 1990, to regulate horizontal wells.\textsuperscript{42} Rule 86 applies to all horizontal wells drilled in the state other than those that are drilled pursuant to special field rules for the field in which the horizontal well is located.\textsuperscript{43} For proration unit or production allowable purposes, Rule 86 provides that the maximum allowable is determined by multiplying the applicable allowable for a vertical well in a field by a fraction, the numerator of which is the acreage assigned to the well for proration purposes, and the denominator of which is the maximum acreage authorized by the applicable field rules.\textsuperscript{44} There are two tables attached to the rule setting forth the number of acres that can be added to the

\begin{itemize}
  \item \textsuperscript{36} Whitworth & McGinnis, supra, Note 35 at p. 181.
  \item \textsuperscript{37} Tex. Nat. Res. Code Ann. §§85.053, 86.081 (West 2013).
  \item \textsuperscript{38} 16 Tex. Admin. Code §3.38 (2014); Martin & McGinnis, “All for One and One for All: A Primer on Pooling in Texas,” 31st Annual Ernest L. Smith Oil, Gas and Min. L. Inst. (April 1, 2005) [hereinafter “Martin & McGinnis”].
  \item \textsuperscript{39} 16 Tex. Admin. Code §3.86 (2014); Whitworth & McGinnis, supra, Note 35 at p.183.
  \item \textsuperscript{41} 16 Tex. Admin. Code §3.86 (2014).
  \item \textsuperscript{42} Whitworth & McGinnis, supra, Note 35 at pp. 183-84.
  \item \textsuperscript{43} Whitworth & McGinnis, supra, Note 35 at p. 184; Sanders, “Turning the Law on its Side: A Review of Developments in State Spacing and Pooling Regulation to Accommodate Horizontal Drilling,” CAIL Third Annual Law of Shale Plays Conference 2 (June 6 and 7, 2012) [hereinafter “Sanders”].
  \item \textsuperscript{44} Whitworth & McGinnis, supra, Note 35 at p.184.
\end{itemize}
standard proration unit size allowed under a field’s vertical rules, one for fields of 40 acres or less (Table 1) and one for fields of more than 40 acres (Table 2).

Here is an example of how Rule 86 works. An operator of a vertical well in the Sprayberry (Trend Area) Field can assign 80 acres plus 80 additional “tolerance acres” for a total proration acreage assignment of 160 acres. Those 160 acres are the starting point for using the Rule 86 tables. An operator that drills a horizontal well with a lateral length of 827 feet could assign the 160 acres for a vertical well, plus 40 additional Rule 86 acres for a total proration unit size of 200 acres. For every additional 827 feet of lateral length, an operator may assign an additional 40 acres. A horizontal well with a lateral of 5000 feet, then, would qualify for a total of 440 acres proration assignment. Every 80 acres assigned to a Sprayberry (Trend Area) Field oil well will qualify for a 515 BOPD allowable, so for a horizontal well assigned 440 acres, the allowable would be 2575 BOPD.

Rule 86 also incorporates the default well-spacing requirements of Rule 37, namely that no well can be drilled nearer than 467 feet from a property line, and no closer than 1200 feet to another well completed on the same tract. Under Rule 86, every part of a horizontal drainhole (but not necessarily the surface location, or the portion of the wellbore outside of the productive formation) must satisfy the applicable property line and between well requirements. These requirements, however, are often modified by special field rules.

Some of the special field rules adopted by the TRRC to accommodate the drilling of horizontal wells include:

1. **The Zero-Foot-Between-Well Spacing Rule**: In 2005, the TRRC adopted this rule as part of the Barnett shale special field rules. The rule eliminates the well spacing requirement in the Barnett shale both between two horizontal wells and between a horizontal well and a vertical well.

2. **The Take Point Rule**: Rather than requiring every part of a horizontal lateral to comply with the applicable spacing requirement, the Take Point Rule, adopted in 2005 for the Barnett shale, requires that only those portions of the horizontal drainhole that are actually open to the formation be in compliance.

3. **The Off-Lease Penetration Point Rule**: Rule 86 requires that the drilling and proration unit for a horizontal well include the horizontal lateral from the penetration point (the point where the horizontal drainhole intersects the top of the productive reservoir) to the

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46 Sanders, supra, Note 43 at p. 3.
47 Oil and Gas Docket No. 09-0242843; Application of Devon Energy Operating Co., LP to Consider Amending the Field Rules of the Newark, East (Barnett Shale) Field, Wise, Bosque, Cooke, Denton, Erath, Hood, Jack, Johnson, Montague, Palo Pinto, Parker, Tarrant and Young Counties, Texas (Final Order signed August 2, 2005); Sanders, supra, Note 43 at pp. 3-4; Whitworth & McGinnis, supra, Note 35 at p. 192.
48 Sanders, supra, Note 43 at pp. 3-4; Whitworth & McGinnis, supra, Note 35 at p. 192-93.
terminus (the farthest point along the horizontal drainhole from the penetration point and within the productive reservoir). On June 29, 2008, the TRRC adopted its first Off-Lease Penetration Point Rule for the Barnett shale, which requires an operator, when seeking to drill a well with an off-lease penetration point (but not a take point), to provide notice and an opportunity to protest before penetrating the productive formation at a point outside the applicable drilling and proration unit.49

4. **The Stacked Lateral Rule**: Since Rule 86(e) considers multiple horizontal laterals drilled from a single vertical wellbore to be drilled as a single well for regulatory purposes, the stacked Lateral Rule adds to the flexibility of operators in certain fields, including the Barnett shale and Haynesville shale, by treating horizontal laterals drilled from different surface locations to be treated as a single well for density and allowable purposes where those laterals are on top of each other within the same producing formation.50 For a multilateral (non-stacked lateral) well, assignment of acreage is based on the surface acreage it traverses. But for a stacked lateral, if each lateral was assigned the surface acreage it traversed, that acreage would be assigned twice or more, which is not allowed under the proration rules. Accordingly, one or more of the laterals could not be assigned an allowable. To avoid this, the TRRC created the stacked lateral rule that treats all of the wellbores comprising a stacked lateral as a single well.51

5. **The Box Rule**: Adopted in 2009 in connection with Carthage (Haynesville shale) Field, the Box Rule provides that a well is in compliance with its permit as long as it remains within an imaginary box extending a certain number of feet on each side of a horizontal lateral’s permitted location.52

6. **The Horizontal Severance Rule**: For the Sprayberry (Trend Area) Field in the Permian Basin, the TRRC has implemented a rule allowing shallow rights and deep rights to be treated as separate leases (although the TRRC has not specified the difference between a shallow right and a deep right). Under this rule, where the ownership of oil and gas is horizontally divided, the allocation rules will apply separately to wells drilled as shallow wells

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49 Oil & Gas Docket No. 09-0253880, *The Application of Chesapeake Oil and Gas Operating, Inc. to Amend the Field Rules of the Newark, East (Barnett Shale) Field* (Final Order signed July 29, 2008); Sanders, *supra*, Note 43 at p. 3; Whitworth & McGinnis, *supra*, Note 35 at pp. 194-95.
50 Oil & Gas Docket No. 09-0242054; *Final Order Amending the Field Rules for the Newark, East (Barnett Shale) Field, Various Counties* (signed May 10, 2005): Oil & Gas Docket No. 06-0260774; Sanders, *supra*, Note 43 at p. 5; Whitworth & McGinnis, *supra*, Note 35 at pp. 196-97.
from wells drilled as deep wells. Applying this rule, if an operator owning leases covering all depths in the field has fully developed the shallow rights, it could not drill and produce deep horizontal wells because no acreage could be assigned to those wells and so those wells would not be granted any allowable. If a different operator owns the deep rights, however, the lease is treated as two separate leases, and so two separate allowables can be assigned. This rule has resulted in at least one operator, when acquiring leases covering the Sprayberry (Trend Area) Field, to have its assignor retain a narrow strip of a formation for the sole purpose of taking advantage of this rule. Currently, the TRRC only looks for the severance, not for the motivation behind it.

C. Oklahoma. The regulation of horizontal wells in Oklahoma is accomplished primarily pursuant to the 2011 Shale Reservoir Development Act (the “Shale Act”). Amazingly, the Shale Act, signed into law on April 13, 2011, passed the Oklahoma House by a vote of 87-0, and the Senate by a 45-0 vote. The Shale Act grants the Oklahoma Corporation Commission (the “OCC”) jurisdiction over the permitting of horizontal wells in existing drilling and spacing units, new spacing and drilling units for horizontal wells, and multiunit horizontal wells that will traverse more than one drilling and spacing unit and the unitization of shale reservoirs. Thus Oklahoma, by statute, generally has authorized the OCC to develop a statewide regulatory scheme for horizontal wells rather than creating special rules on a field-by-field basis. The Shale Act, though, applies only to shale reservoirs and associated common sources of supply. Since the Shale Act is relatively new, the OCC’s practices and procedures are still evolving.

The Shale Act allows the OCC to grant two forms of relief not previously available. First, the OCC may permit the drilling and completion of horizontal wells that traverse more than one unit. Second, the Shale Act authorizes the OCC to create horizontal well unitizations, even where no secondary recovery operations are intended.

The OCC’s Rule 165:10-3-28 governs horizontal wells drilled within a single unit. Under this rule, the entire completion interval must be at a permitted location. A horizontal well may be drilled within any pre-existing drilling and spacing unit, or alternatively, a new horizontal unit may be created after notice and hearing, the same as any other drilling and spacing unit would be created. For example, if the OCC has created a non-horizontal drilling

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53 Oil & Gas Docket No. 7C-0283443, Final Order Amending Field Rules for the Sprayberry (Trend Area) Field, Various Counties, Texas (December 13, 2013).
55 Sanders, supra Note 43 at p. 6. Some special field rules do, however, exist. See Notes 68-69, infra, and accompanying text.
60 Okla. Admin. Code §165:5-7-6(g) (2014).
and spacing unit for the Morrow formation, the operator may drill either a horizontal well or a non-horizontal well on that tract. If a horizontal well is drilled, that does not automatically convert the unit from a non-horizontal well unit into a horizontal drilling and spacing unit. Thus, a horizontal well unit may exist concurrently with producing non-horizontal drilling and spacing units, although an order for a horizontal unit may not cover an existing unit producing from the same common source of supply unless the owners of at least 50 percent of the working interest consent to it. Upon the formation of a horizontal well unit that includes within its boundaries a non-horizontal drilling and spacing unit, the OCC may provide that such horizontal well unit supersedes the non-horizontal unit(s) or may provide that the horizontal unit and the non-horizontal unit(s) exist concurrently. For a new drilling and spacing unit for a horizontal well, the OCC may create a non-standard horizontal well unit covering contiguous lands in any configuration or shape deemed by the OCC to be necessary for the development of the reservoir.

Well spacing requirements in horizontal drilling and spacing units are different from those in non-horizontal units. For a horizontal well drilled in a common source of supply in which the OCC has not established any drilling and spacing units or horizontal well units, the completion interval of a horizontal well may not be located closer to a boundary line than 165 feet when the top of the common source of supply is less than 2,500 feet beneath the surface, or closer than 330 feet when the top of the common source of supply is 2,500 feet or more below the surface. For existing drilling and spacing units, a horizontal well, through its entire completion interval, must be at least 165 feet from the boundary of any 10, 20 or 40 acre horizontal unit, at least 330 feet from the boundary of any 80, or 160 acre horizontal unit, and not less than 660 feet from the boundary of any 320 or 640 acre horizontal unit, for conventional reservoirs, and not less than 165 feet from the boundary of any 10, 20, or 40 acre horizontal unit, and not less than 330 feet from the boundary of any 80, 160, 320 or 640 acre horizontal unit for unconventional reservoirs. The OCC has established special rules for horizontal wells drilled in the Woodford shale in certain counties. For horizontal wells completed in horizontal drilling and spacing units in those counties, the completion interval must be not less than 330 feet from an east or west unit boundary, and not less than 165 feet from a north or south unit boundary.

With horizontal laterals increasing in length, the Shale Act authorized a method where a single lateral may cross existing unit boundaries. The statute continues to treat each drilling and spacing unit separately, but allows the drilling of a single well across more than one unit.

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62 Sanders, supra, Note 43 at p. 7.
69 Those counties are Atoka, Blaine, Caddo, Canadian, Cole, Dewey, Grady, Haskell, Hughes, Kingfisher, Le Flore, Latimer, McIntosh, Pittsburg, and Sequoyah.
To accomplish this, the operator must space each section affected by the multiunit well if this has not already been done, obtain location exceptions for each unit (which will allow the completion interval to be zero feet from the common unit boundary), obtain authorization for increased density if existing wells are producing from the targeted formation, pool each unit if not done so previously, and provide the percentages for the allocation of costs and production from each unit, keeping in mind that the working interests in each of the affected units will not be affected. And since each of the units affected by the multiunit well might have separate operators, the OCC’s order will also name the operator for the multiunit well. The allocation of drilling, completion and production costs to each of the affected units of a multiunit horizontal well are calculated by dividing the length of the completion interval within each affected unit by the entire length of the completion interval in the multiunit well. The OCC, however, can adjust those allocations if the evidence supports it.71

The Shale Act also provides for horizontal unitization of shale reservoirs. Generally, the unitization will cover two governmental sections, but the OCC may combine up to four sections.72 The operator must also file with the OCC a plan of development, which must also address the conditions upon which the unit shall terminate.73 The OCC is authorized to create a unit for a multiunit well only with the written consent of the owners of 63 percent or more of both the working interest and the royalty interest in the reservoir area to be included in the unit.74

IV. Express and Implied Clauses and Covenants in Oil and Gas Leases

A. The Pooling Clause. Historically, oil and gas leases were not designed for horizontal drilling.75 In connection with a lease’s pooling clause, typically the lease allows only pooled units for oil of 40 acres, and 160 acres to 640 acres for gas. The lease will often allow larger pooled units if the applicable regulatory authority adopts a larger unit size. These provisions, though, often include some condition or requirement before the government pooling portion of the pooling clause may be used.76 Clauses that authorize larger unit sizes if they are prescribed by government authority should be read as meaning that the larger unit must be required, not just allowed. In Jones v. Killingsworth,77 for example, the TRRC adopted 80-acre oil proration units and a tolerance allowing the assignment of an additional 80-acres per well in the Fairway (James Lime) Field. The court ruled that the operator was limited to pooling 80

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70 Defined as the interval from the point of entry into the common source of supply to the terminus within the common source of supply for open hole completions and from the first perforations to the last perforations in cased and cemented completions. Okla. Admin. Code §165:10-3-28 (2014).
75 Wright, supra, Note 3 at p. 424.
76 Whitworth & McGinnis, supra, Note 35 at p. 205-06.
77 403 S.W.2d 325 (Tex. 1965).
acres since, although the TRRC allowed 160-acre units, it required only 80 acres. In connection
with horizontal wells, although Rule 86 in Texas permits additional acreage to be assigned to a
proration unit based on the length of the lateral, the Rule does not require it. Thus, if the
pooling clause of the applicable lease form requires the larger unit to be prescribed by the
governmental authority, the operator will not be able to increase the size of the unit pursuant to
the pooling clause. Presumably, Oklahoma would take a similar position.

Often an operator will enter an existing well and convert it to a horizontal well. Assuming a larger unit is not prohibited by the applicable leases, can the operator expand the existing unit? Sometimes the lease, especially if it is recent, will explicitly allow the operator to expand the existing unit. Where the pooling provision is silent on the issue, in Texas, in Expando Production Co. v. Marshall, the court held that the lessee had the implied authority to expand an existing unit, provided the lessee’s enlargement is done in good faith.

B. The Retained Acreage Clause. A common characteristic of modern leases is a clause that provides that all undeveloped acreage terminates either at the end of the primary term or the end of a continuous development period. These clauses, when stating what acreage is maintained, often contain language similar to the governmental authority language of the pooling clause. Thus, the same issue exists in connection with the retained acreage clause as the pooling clause with regard to horizontal wells. The operator should make certain that the pooling clause and the retained acreage clause do not conflict. If a retained acreage clause does not allow the lessee to retain all of the acreage included in a validly pooled unit, the lease could potentially terminate as to a portion of the pooled unit.

C. Express and Implied Covenants. Courts have developed several implied covenants that apply to every oil and gas lease unless they are negated by specific language in the lease. Texas recognizes three, including the implied covenant to: (1) reasonably develop the leased premises, (2) protect the leased premises from drainage by offsetting wells, and (3) to manage, operate and administer the lease, including the duties to market, to operate with reasonable care, to use modern methods of development and production, and to seek favorable administrative actions. Oklahoma appears to have adopted the same or similar implied covenants. Horizontal wells might be affected by each of these implied covenants.

1. The Implied Covenant to Develop. The implied covenant to develop imposes a duty on the lessee to reasonably develop the lease once production is established.

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78 See also, Hunt Oil Co. v. Moore, 656 S.W.2d 634 (Tex. App – Tyler 1983).
80 Id. at 259-60.
81 Whitworth & McGinnis, supra, Note 35 at p. 209.
from the drilling of an initial well. The required development is limited to the same formation from which the initial well or any subsequent wells are producing. In other words, if an operator completes a productive well in the Woodford shale formation, the development covenant would potentially require only additional Woodford shale wells. But if the operator later completes a productive well in the Caney formation, the covenant would extend to that formation as well.

The standard both the courts of Oklahoma and Texas apply is a reasonably prudent operator standard. Said another way, “Whatever in the circumstances, would be reasonably expected of operators of ordinary prudence, having regard to the interests of both lessor and lessee, is what is required.” The court will not consider matters related to a particular operator such as whether the operator is short of cash, overcommitted on drilling programs, has no need for more production, or prefers to spend its budget on other plays.

The projected profitability of the additional well is the key factor a court would look at when determining if the covenant has been breached. A court will not require an operator to drill a well that would not be profitable, even if some benefit to the lessor would result. For a well to be profitable in the eyes of a court, there must be a reasonable expectation that the well will return a reasonable profit over the cost of drilling, testing, completing, and operating the well. The reasonable profit standard here is a true profit and not the standard of determining whether a well is producing in paying quantities for lease term extension purposes, which only requires sufficient proceeds from production to cover lifting costs or operating expenses.

A court will look at various types of evidence to determine what is a reasonable expectation of profit such as time to payout, return on investment and net present value of the reserves related to an additional well. Normally, the lessor has the burden of proving the reasonable expectation of a profit of any potential additional well. In Oklahoma, though, where there has been “an unreasonable delay” in drilling additional wells after discovery of oil and gas in paying quantities, a prima facie case for lease cancellation has been made by the

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83 Sun Exploration and Production Corp. v. Jackson, 783 S.W.2d 202, 204 (Tex. 1989).
86 Kyle v. Wadley, 24 F. Supp. 884, 887 (W.D. La. 1938); Williams & Meyers, Vol. 5 Oil and Gas Law §806.3 (2011).
88 Sparks v. Midstates Oil, 251 F.2d 73 (10th Cir. 1958); Trust Co. of Chicago v. Samedan Oil Corp., 192 F.2d 282, 284 (10th Cir. 1951).
90 Clifton v. Koontz, 325 S.W.2d at 695.
Lessor, and the burden of proof shifts to the lessee.\textsuperscript{91} The Oklahoma Supreme Court has gone so far as to hold that the “possibility, or even the probability, that further drilling may prove unprofitable does not constitute an absolute bar to cancellation from breach of the implied covenant to properly develop when the delay in development is of unconscionable duration.”\textsuperscript{92} This problem is compounded by the fact that what constitutes an unreasonable delay under the specific facts of a given circumstance rests in the opinion of the judge or jury, and is unknown until litigation has been concluded.

There are few reported cases that offer objective guidance on what constitutes a reasonable expectation of a profit. For example, how much of a rate of return must be shown before the profit becomes a reasonable one? What is the period of time in which that rate of return must be reached? The cases are all over the board, with one case finding as little as a 10 percent return on investment to be sufficient,\textsuperscript{93} while another finding at least a 300 percent rate of return is required.\textsuperscript{94} When looking at the time period in which a well must reach that rate of return before the implied covenant of reasonable development is triggered, courts have held it must payout within a reasonable time,\textsuperscript{95} with that ranging from 18 months\textsuperscript{96} to ten years.\textsuperscript{97}

Horizontal well technology may affect the development of the law related to this implied covenant in a several ways. For example, suppose an operator has leased a section of land covering the Woodford shale. Suppose that the operator has drilled three horizontal wells in this section, but to fully develop the property, at least three more horizontal wells could be drilled. Each of the three existing wells costs $10 million to drill, so the lessee has invested $30 million in the leased acreage. All of the wells are producing, but none of the wells have paid out, and another $12 million in proceeds will need to be recovered before payout on the current development of the leased premises is reached. Under these circumstances, at what point is the implied covenant of reasonable development triggered? Must all the wells be in payout status? Does the answer change if the operator reasonably believes that six wells are needed to drain all of the leased premises and that ultimately each of the six wells will reach payout? What if the

\begin{itemize}
\item \textsuperscript{91} Union Oil Co. of Calif. v. Jackson, 489 P.2d 1073, 1078 (Okla. 1971); Lyons v. Robson, 330 P.2d 593, 596 (Okla. 1958); Doss Oil Royalty Co. v. Texas Co., 137 P.2d 934, 938 (Okla. 1943).
\item \textsuperscript{92} Wolfson Oil Co. v. Gill, 309 P.2d 282 (Okla. 1957).
\item \textsuperscript{93} Burlington Resources Oil and Gas Co., 146 IBLA 335 (Inter. Bd. of Land Appeals 1998).
\item \textsuperscript{94} The Jicarilla Apache Tribe v. Supron Energy Corp., 479 F. Supp. 536 (D.N.M. 1979) (“Expert testimony at trial revealed a general consensus that a well may be considered economical to drill if preliminary studies indicate a three to one return on investment within three to four years of commencement of the well.”); Stamper v. Jones, 364 P.2d 972 (Kan. 1961) (“Testimony said it was generally recognized in the industry that an operator should get three times his investment cost back in nine to ten years.”); Midland Gas Corp. v. Reffitt, 149 S.W.2d 537 (Ky. Ct. App. 1941) (“If said property is productive of gas in paying quantities that a profit of between $6,000 and $7,000 on an investment of $20,000, realized over a seven and one-half year period, demonstrates conclusively that gas was found in paying quantities and that appellant was therefore called on to drill additional wells.”).
\item \textsuperscript{95} Schnell v. Hudson, 490 N.E.2d 1052 (Ill. App. Ct. 1986).
\item \textsuperscript{96} Temple v. Continental Oil Co., 320 P.2d 1039 (Kan. 1958).
\end{itemize}
operators of all the surrounding sections in the area are rapidly drilling at least six wells per section? There appears to be no reported case in any jurisdiction that would directly answer these questions.

The drilling of horizontal wells in connection with the implied covenant of reasonable development is even more complicated than just economics. The horizontal wells now being drilled have lengthy laterals that might extend over 10,000 feet, or as much as the length of two governmental 640-acre sections. Despite such long laterals, these wells generally drain only a few hundred feet around the wellbore. In addition, the thickness of shale formations can be as much as 600 feet. Again, since the drainage pattern of most horizontal wells extends only a few hundred feet beyond the wellbore, the entire vertical extent of the shale formation might not be drained by a single horizontal well. A lessor, then, will want its lessee to develop its minerals both horizontally and vertically. On the other hand, lessees now invest millions of dollars in acquiring lease positions large enough to accommodate horizontal drilling, with each well costing anywhere from $3 million to $15 million. Thus, an operator, when planning the development of its lease position by horizontal drilling, typically will not focus on individual leases, but will schedule wells throughout the play in a way to hold by production as many leases as possible. The operator and its various lessors each have legitimate interests, but under the current state of the law, in both Texas and Oklahoma, it is unclear how many wells will be required to satisfy the implied covenant to further develop.

Similar positions of the lessor and lessee exist in a situation where the operator drills a single wellbore into the lower portions of a shale formation. If that well does not drain the upper portions of the formation, again the operator might be leaving itself open to a claim of a breach of the implied covenant to develop. Perhaps the operator intends to wait until the existing well is depleted, then plug back the well and recomplete it in the upper portion of the shale formation, saving a significant amount in costs over drilling two horizontal wells. But it could be years, even decades before the initial well is fully depleted. Under the current state of the development covenant, there is at least a probability that the operator would be required to drill stacked laterals within the applicable formation unless the operator can show that drilling the additional well would not be profitable. While some of the issues surrounding the implied covenant to develop are addressed by a retained acreage clause, that clause will not generally address the issue of the development of all depths within a shale formation.

Perhaps the best way for an operator to deal with these issues related to the covenant of reasonable development is to clarify what is expected of it in the lease, such as including a continuous drilling commitment requiring the operator to commence a new well within a certain number of days following payout of the previous well. Such a commitment seems reasonable to both the lessor and the lessee, as it insures the entire leased premises will ultimately be developed or released, but the lessee is able to recoup its investment well-by-well.

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98 See, e.g., Sparks v. Midstates Oil Corp., 251 F.2d 71 (10th Cir. 1958) (construing Oklahoma law).
During this period of extended development, the lessor will continue to be protected against the loss of its minerals through the covenant to protect against drainage.

2. The Covenant to Protect Against Drainage. In 1928, the Texas Supreme Court held that lessees owed a duty to protect the leased premises from drainage from offset wells. 99 By 1940, it was “unquestionably the law that where a lease is silent as to the duty of a lessee to drill offset wells to prevent drainage that an implied covenant will be presumed and such implied covenant would require the drilling of such offset wells as a reasonably prudent operator would have drilled under the same or similar circumstances.” 100 Oklahoma has also imposed an implied duty on oil and gas lessees to protect their leases from drainage by offset wells. 101

To be successful in a case claiming a breach of the implied covenant to protect against drainage, a lessor must prove: (1) that substantial drainage has taken place on the leasehold, and (2) that a reasonably prudent operator would have acted to prevent the substantial drainage. 102 This second element includes a showing that the amount of oil or gas to be recovered by a productive well would cover the cost of drilling the well, developing and marketing the production, as well as create a reasonable expectation of profit. 103

This is a difficult burden of proof on a lessor, as any suit brought by a lessor would be fact intensive, requiring extensive use of expert testimony, which would make the litigation expensive. Moreover, spacing and density rules of the TRRC and OCC are based on likely drainage patterns of a particular area. Accordingly, litigation costs, coupled with regulatory schemes that, if followed, make proving drainage unlikely, has caused many lessors to move from relying on the courts to enforce the implied covenant to protect against drainage to including an express lease clause requiring protection against drainage. The more sophisticated of these express clauses would deem that drainage occurs if a well on an adjoining tract is drilled within a certain number of feet from the lease line rather than requiring the lessor to prove actual drainage. If a well on adjoining property were drilled that triggered this lease clause, the lessee usually has three options: (1) to commence an offset well within a certain number of days of the completion of the offset well; (2) to release that portion of the lease affected by the offset well; or (3) to pay a compensatory royalty.

These offset clauses, however, were designed for a world of vertical wells and do not always make sense in connection with horizontal wells. The deemed drainage portion of

99 Tex. Pac. Coal & Oil Co. v. Barker, 6 S.W.2d 1031, 1036 (Tex. 1928).
the clause might not have any basis in reality, as a horizontal well drains commercial amounts only as far as the shale is effectively fractured. Said another way, a horizontal well near a lease line might drain little or nothing from a neighboring lease depending on the permeability of the rock and the size of the fracture stimulation. Moreover, the deemed drainage technically would be triggered when a non-perforated horizontal lateral crossed or neared the boundaries of the adjacent land, even though no oil or gas is being produced from the non-perforated and non-fractured portion of the lateral.104

Even if the deemed drainage provision makes sense in a given circumstance, the remedies are difficult to apply to horizontal wells. For example, what constitutes an offset well compared to a well drilled in the ordinary course of development? What acreage must be released, if that is the chosen remedy, particularly in a situation where only part of the horizontal lateral is currently producing? In connection with the payment of a compensatory royalty, since the entire horizontal lateral might not be within the minimum distance from the lease line, how does the operator determine how much production is deemed to be coming from the offset well?105 These are issues that courts will need to wrestle with in future litigation, although the answers may be easier in Oklahoma where units are based on square governmental sections. One thing we know, however, is that the result of Coastal Oil Corp. v. Garza Energy Trust106 will cause lessors to look at enforcing the covenant to protect against drainage (either express or implied) as one of their few protections against drainage from offset wells.

Finally, generally speaking, an explicit clause in a lease will take precedence over the inconsistent requirements of an implied covenant.107 In connection with the covenant to protect against drainage, Texas courts have held that an express clause that limits the obligation to drill offset wells is effective for a limited time only. One case held that the express provision governed only during the primary term of the lease, with the implied covenant governing the obligation in leases that are extended beyond the primary term by production.108 Another case held that the express clause governed only until the first well is drilled.109 A third case seems to adopt both positions, without recognizing the inconsistency.110 There appears to be no similar case in Oklahoma, but in one federal case coming out of Oklahoma, the court held that the provisions of a settlement agreement of a dispute between the lessor and lessee regarding the

105 See, Newman & Layrisson, supra, Note 104 at pp. 22-30.
106 268 S.W.3d 1 (Tex. 2008). See Notes 153 to 181, infra, and the accompanying text for a more detailed discussion of this case.
drilling of protection wells on part of the leased acreage did not relieve the lessee of its obligations to protect the rest of the leased premises.\textsuperscript{111}

3. \textbf{The Implied Covenant to Manage, Operate and Administer the Lease.} Under this implied covenant, several issues might arise related to horizontal wells. For example, this covenant would require a lessee to use modern drilling and production techniques to maximize recovery under the lease.\textsuperscript{112} If, for example, a particular lessee specializes in drilling vertical wells or does not have the financial capability to drill horizontal wells, this implied covenant might force the lessee to farmout or sell its interest to someone who could drill a horizontal well. In similar fashion, if a lessee does not have sufficient acreage under lease to drill a horizontal well, this covenant might still require the lessee to take action to protect the lease such as pooling the leased premises.\textsuperscript{113}

In a perfect world, lessors and lessees would protect their interests through explicit lease provisions dealing with each of the implied covenants. The world, though, is far from perfect, as it is essentially impossible to foresee and draft provisions covering all possible scenarios. In addition, many leases covering shale plays are old, being held by production from shallow vertical wells. An operator would not be anxious to renegotiate these old leases, as that would invariably lead to the payment of new bonuses and increased royalty rates. Ultimately, these issues must be resolved by the courts. Hopefully, courts will adequately balance the interests of both lessors and lessees in a way that makes practical sense in the new world of horizontal drilling.

\section*{V. Using the Surface of an Adjacent Tract}

\textbf{A. Surface Use Agreements and Easements.} Since the owner or lessee of the minerals of a tract of land has the right to use as much of the surface of that tract as is reasonably necessary to conduct oil and gas operations, if the surface location and all of the horizontal lateral are located entirely within the leased tract of land, neither a surface easement nor a subsurface easement is required.\textsuperscript{114} Often, however, when drilling a horizontal well, to locate the entire horizontal lateral within the leased tract, an operator will put the surface location on an adjoining tract. Although a mineral owner or lessee of the adjoining surface location tract can use the surface of that tract to explore and develop the minerals under the surface location tract, the operator, in this situation, cannot use the surface of that adjacent tract without permission from the surface owner of that tract even if the operator has leased the minerals under the adjacent tract.\textsuperscript{115} When drilling such a horizontal well, step one for the

\textsuperscript{111} Devine \textit{v. Ladd Petrol. Corp.}, 743 F.2d 745 (10th Cir. 1984).
\textsuperscript{112} See \textit{e.g.}, Clifton \textit{v. Koontz}, 325 S.W.2d 684 (Tex. 1959); Rhoads Drilling Co. \textit{v. Allred}, 70 S.W.2d 576 (Tex. 1934).
\textsuperscript{114} Schweikhardt, \textit{supra}, Note 3 at p. 350; Wright, \textit{supra}, Note 3 at p. 433.
\textsuperscript{115} Russell \textit{v. The Texas Company}, 238 F.2d 636 (9th Cir. 1956).
operator, then, is to get permission from the surface owner of the surface location to use that location.

In Oklahoma, it is unclear whether the Surface Act would apply under this circumstance. While it could be argued that the operator only needs to hold a lease covering the tract under which the horizontal lateral is to be located to have standing to file a petition in district court under the Surface Act, and gain access to the adjacent surface location, the purpose of the Surface Act, as interpreted by Oklahoma courts, suggests otherwise. The Oklahoma courts have stated that the general purpose of the Surface Act is to provide a mechanism to balance the conflicting interests of the surface owner and the mineral owner of a particular tract. That general purpose, then, would not trigger use of the Surface Act by an operator to gain access to an adjacent surface tract.

One way to eliminate this step is through pooling the surface location tract with the tract in which the horizontal lateral is located. If the two tracts are pooled, then arguably operations on any pooled tract are deemed to be operations on all the pooled tracts. Thus, with pooling, the argument goes, the operator can use as much of the surface of any portion of the pooled unit as is reasonably necessary to explore and develop the minerals underlying any portion of the pooled unit.

But pooling in this manner raises two issues. First, if the operator knows, due to the nature of the formation being pooled and the design of the horizontal well, that there will be no perforations in that portion of the wellbore underlying the surface location, resulting in no hydrocarbons being produced from that tract, is the operator liable for bad faith pooling? Under court decisions of both Texas and Oklahoma, an operator has a duty to exercise its pooling power in good faith. The pooling of lands that are clearly unproductive arguably would be considered bad faith pooling. There is no Texas case directly on point, but the expectation of productivity of a pooled tract is a reasonable standard to assume. At least one Oklahoma has indicated that including in a joint venture acreage known to be non-productive

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116 Grimes, “Horizontal Drilling and Surface Damage,” The Eugene Kuntz Conference on Natural Resources Law & Policy, pp. 4-5 (November 7, 2008) [hereinafter “Grimes”].
118 Grimes, supra, Note 116 at p. 5.
119 The standard is one of good faith rather than a fiduciary duty, meaning the operator may consider its own interests as well as those of the royalty owners. Pickens v. Hope, 764 S.W.2d 256 (Tex. App. – San Antonio 1988, writ requested); Circle Dot Ranch, Inc. v. Sidwell Oil & Gas, Inc., 891 S.W.2d 342 (Tex. App. – Amarillo 1995, writ denied); Vela v. Pennzoil Producing Co., 723 S.W.2d 199 (Tex. Civ. App. – San Antonio 1986, writ ref’d n.r.e.); Elliott v. Davis, 553 S.W.2d 223 (Tex. Civ. App. – Amarillo 1977, writ ref’d n.r.e.). The good faith standard may even mean that the pooled unit need not have the best interests of a lessor if another good faith purpose was achieved. Boone v. Kerr-McGee Oil Industries, 217 F.2d 63 (10th Cir. 1954). See also, Martin & McGinnis, supra, Note 38; 1 Smith and Weaver, Texas Law of Oil and Gas §4.8[C][1] (2010).
constitutes bad faith.\textsuperscript{121} There is little case law concerning the result of a bad faith pooling. The only case directly on point is \textit{Amoco Production Co. v. Underwood},\textsuperscript{122} where the court indicated that the leases covering all the non-drillsite tracts terminated as beyond their primary terms without production.\textsuperscript{123}

Second, pooling the two tracts is no sure bet that the operator has secured the rights to use the surface of every tract within the unit—at least in Texas. While Texas courts have ruled that surface rights that are appurtenant to a mineral interest may be used for the entire pooled unit to the same extent as if the pooled unit were a single tract,\textsuperscript{124} these cases are not necessarily consistent with \textit{Robinson v. Robbins Petroleum Corp.},\textsuperscript{125} where the Texas Supreme Court held that the surface of one tract within a unit could not be used for oil and gas operations on adjacent lands within the unit without permission from the surface owner. In \textit{Robinson}, the unit operator of a secondary recovery unit took saltwater from a well located on the surface owner’s land (also within the unit) and injected it into wells located within the unit (but not on the surface owner’s land) to re-pressure the oil-bearing formation. The Texas Supreme Court held that saltwater was part of the surface estate,\textsuperscript{126} and that the owners of the minerals had an implied easement to use the saltwater to the extent reasonably necessary to develop and produce minerals under the surface owner’s tract. The mineral owners could not, however, use the saltwater to benefit tracts other than the surface owner’s tract.\textsuperscript{127} The minerals were leased in 1943. The surface owner, Robinson, did not acquire his surface interest in the tract until 1964, after oil production from the tract was obtained, but before any of the secondary recovery units were formed.\textsuperscript{128} The court found that Robinson took title subject to the oil and gas lease, but not necessarily to future secondary recovery unitization, stating, “Nothing in the Wagoner lease or the reservation contained in Robinson’s deed authorized the mineral owner to increase the burden on the surface estate for the benefit of additional lands.”\textsuperscript{129}

\begin{itemize}
\item \textsuperscript{121} \textit{Imes v. Globe Oil & Refining Co.}, 84 P.2d 1106 (Okla. 1938).
\item \textsuperscript{122} 558 S.W.2d 509 (Tex. Civ. App. – Eastland 1977, writ ref’d n.r.e.)
\item \textsuperscript{123} \textit{See also, Grimes v. La Gloria Corp.}, 251 S.W.2d 755 (Tex. Civ. App. – San Antonio 1953, no writ), where the court set aside a pooled unit that was established by the trial court on the ground that no agreement of the parties authorized a unit as the court had created. \textit{See also, Martin & McGinnis, supra, Note 38 at p. 26.}
\item \textsuperscript{125} 501 S.W.2d 865 (Tex. 1973).
\item \textsuperscript{126} \textit{Id.} at 867.
\item \textsuperscript{127} \textit{Id.} at 867.
\item \textsuperscript{128} At the time of the suit, three separate secondary recovery units had been formed that included Robinson’s tract, but at three separate depths. \textit{Id.} at 866.
\item \textsuperscript{129} \textit{Id.} at 867. In trying to make sense of \textit{Robinson} when compared to the cases listed in Note 124, \textit{supra}, timing of the issuance of the oil and gas lease or commencement of unitization in relation to the mineral severance seems to be important. When Robinson acquired his interest in the surface, the oil and gas lease was in place, but it did not authorize secondary recovery operations, which commenced after the severance. Robinson, then, took title without being subject to secondary recovery operations, and
\end{itemize}
The only analogous Oklahoma case takes a position opposite to Robinson. In *Holt v. Southwest Antioch Sand Unit*, on facts almost identical to Robinson, the Oklahoma Supreme Court held that the surface owner had no cause of action against the unit operator when the unit operator, without the knowledge of or consent from the surface owner, converted a producing oil well to a well producing saltwater, and used that saltwater to re-pressure the producing formation so as to produce oil from wells located on other tracts within the unit.

**B. Subsurface Easements.** In addition to getting permission from the surface owner to use the surface of a tract outside the pooled unit, since the operator will be drilling under the surface of the surface location, and perhaps through additional intervening tracts as well, into the tract or tracts under which the horizontal lateral is located, the operator needs a subsurface easement. But from whom should the operator get that easement? The surface owner? The mineral owner of the surface tract? Or the mineral owner’s lessee? Generally, surface owners, not mineral owners, grant easements. Of course, easements usually are for the use of the surface (or just beneath the surface in case of a pipeline). As will be more fully explained below, in a horizontal well, the operator must get an easement from the surface owner or owners, and should get a subsurface easement from the mineral owner (or its lessee) of any tract through which the wellbore passes before entering the pooled unit.

In connection with the issue of who must grant a subsurface easement for a horizontal well, courts have looked at analogous situations such as the right to grant gas storage rights or the right to inject saltwater into a subsurface formation, and determined that the surface owner, rather than the mineral owner, has the right to grant those rights. For example, in *Humble Oil and Refining Company v. West*, the Texas Supreme Court held that ownership of the fee simple interest in property (as opposed to a royalty interest) includes the “matrix of the underlying earth, i.e. the reservoir storage space.” Humble owned both the surface and the minerals, but the court cited with approval the case of *Emeny v. United States*, a case from the U.S. Court of Claims involving Texas property. In *Emeny*, a group of plaintiffs sued the federal government claiming that the government, under the power of eminent domain, had taken a subterranean geological structure known as the Bush Dome for helium storage without granting the plaintiffs just compensation. The government claimed no compensation was due these plaintiffs since the government succeeded to the rights of the gas lessees pursuant to leases previously granted by the owners of the subject property. The court stated:

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therefore, the mineral lessee’s rights to conduct secondary operations were subject to the surface owner’s interest. In the Woolf and Miller cases, dealing with pooling rather than unitization, the oil and gas leases were in place at the time of the mineral severance so the acquirer of the surface rights were subject to the existing oil and gas leases and the their respective pooling provisions. This analysis, though, breaks down in connection with the Delhi case, as the oil and gas lease containing the pooling provisions was issued after the surface/mineral severance.

130 292 P.2d 998 (Okla. 1956).
131 508 S.W.2d 812 (Tex. 1974).
132 412 F.2d 1319 (Ct. Cl. 1969).
The surface of the leased lands and everything in such lands, except the oil and gas deposits covered by the leases, were still the property of the respective landowners [citations omitted.] This includes the geological structures beneath the surface, including any such structure that might be suitable for the underground storage of ‘foreign’ or ‘extraneous’ gas produced elsewhere.\textsuperscript{133}

While in the \textit{Emeny} case the plaintiffs were owners of both the surface and the minerals, the language quoted above indicates an oil and gas grantee or lessee is only entitled to remove the minerals specifically covered by the grant or lease, and gains no ownership interest in the subterranean geological structures themselves.

The Oklahoma Supreme Court came to a similar conclusion in \textit{Sunray Oil Company v. Cortez Oil Company},\textsuperscript{134} where the minerals were partially severed from the surface and the issue was who owned the right to inject saltwater into a subsurface formation, the surface owner or the mineral owner. In finding for the surface owner, the court stated:

\begin{quote}
The right granted [by a mineral deed] is that of ingress and egress, together with the right to use so much of the surface as may be necessary to explore for oil and gas, and if either be discovered, to reduce same to possession, whereupon such part of the oil as the grant may provide becomes the personal property of the grantee. . . . This right of the [oil and gas lessee] is not exclusive. The same right is shared by the owner of the land. All other rights to the land and the use thereof remain in the owner. . . . So in this case, . . . the owner of the land, subject only to the oil and gas lease, . . . has the right to use the surface and substrata of her land as she sees fit, or permit others to do so, so long as such use does not injure or damage other persons.\textsuperscript{135}
\end{quote}

Thus, although not entirely free from doubt, when faced with the issue of who has the right to grant subsurface easements, courts in both Oklahoma and Texas most likely will conclude that the surface owner owns the substrata of the property (and the corresponding right to grant easements through it), subject only to the mineral owner’s right to extract the applicable minerals.

\textbf{C. Ownership as Cotenants.} What if the surface of the tracts the operator needs to drill through is owned in cotenancy? Must each cotenant sign the easement? Under the laws of most states, the answer is yes. The case of \textit{Texas Mortgage Company v. Phillips Petroleum Company},\textsuperscript{136} illustrates the general rule that, absent consent or subsequent ratification by the

\textsuperscript{133} \textit{Id.} at 1323.
\textsuperscript{134} 112 P.2d 792 (Okla. 1942).
\textsuperscript{136} 470 F.2d 497 (5th Cir. 1972).
other cotenants, one cotenant cannot impose an easement on the common property in favor of third persons. In *Phillips*, one group of cotenants (the Korge group) owned an undivided one-half interest in a tract of land. They granted Phillips Pipeline the right to construct a *single* pipeline across the land. Two days later, the owners of the other half of the undivided interest (the Turner group) granted Phillips Pipeline the right to lay a pipeline or *pipelines* across the land. Pursuant to these grants Phillips built the first pipeline across the land. That pipeline was not in dispute in the case. The Korge group then conveyed their interests to Texas Mortgage Company. Ten years later, over Texas Mortgage’s objection, Phillips Pipeline built a second pipeline across the property. Texas Mortgage filed suit for trespass, seeking damages from, and ouster of, Phillips. The Fifth Circuit, analyzing Texas law, stated the general rule that one cotenant cannot impose an easement on the common property in favor of a third party, concluding:

In sum, as defendants failed to receive a multiple-line grant from the Korge cotenants, the multiple line grant which Phillips Pet did receive from the Turner group was ineffective to bind the joint estates of the two sets of grantors. For all practical purposes the Turner grant was of no benefit to Phillips Pet at the time it installed the second line upon plaintiffs’ land.\(^{137}\)

Oklahoma follows a similar rule. In *Cooperative Refinery Association v. Young*,\(^{138}\) ten brothers and sisters each owned an undivided 1/10 interest in a 40 acre tract of land in McClain County, Oklahoma, as tenants in common. In February 1955, Cooperative acquired a lease thereon for oil and gas purposes and drilled a well on the property. Production from the well ceased in 1959 and Cooperative began negotiations with the ten tenants in common to secure an agreement giving Cooperative the right to use the well for the disposal of saltwater from other wells it operated in the area. Four of the ten tenants in common executed an agreement giving Cooperative the right to use the well for such purposes. The agreement recited that it would be effective as to those executing the agreement and their respective undivided interests irrespective of whether executed by all the tenants in common. Cooperative also secured a permit for the disposal well from the OCC. The Oklahoma Supreme Court held that Cooperative had an easement granted by the four consenting cotenants, but without the agreement of the other six cotenants, Cooperative was trespassing.

An operator, then, must obtain a subsurface easement from each of the cotenants of the surface of every tract in which the operator intends its wellbore to pass through before reaching the boundaries of a pooled unit or run the risk of being a trespasser, and potentially have its operations shut down through an injunction.\(^{139}\)


\(^{138}\) 393 P.2d 537 (Okla. 1964).

\(^{139}\) *See Hastings Oil Co. v. Texas Co.*, 227 S.W.2d 317 (Tex. Civ. App.—Galveston 1950), aff’d 234 S.W.2d 389 (Tex. 1950).
Although the law is clear that an effective easement requires the consent of all co-owners, a public policy encouraging oil and gas exploration and development would modify existing law, allowing a single co-owner the right to grant a subsurface easement for these purposes. Similar exceptions to the general rule already exist. A single cotenant of the mineral estate can drill and produce an oil and gas well without the consent of the other cotenants (subject to an accounting to the other owners for the net profits obtained). The policy behind this exception is, since oil and gas under a particular tract is subject to the rule of capture by operators of other tracts, a single cotenant should have the right to timely explore and develop the minerals before they are lost to others through capture. Another exception exists in connection with geophysical operations, where, at least in Oklahoma, the consent of less than all cotenants is sufficient.

Is the granting of a subsurface easement to drill a well really any different from the exceptions set forth above? Perhaps so, since the operator seeking the subsurface easement is attempting to exploit the minerals of the adjoining property owner, not protecting the minerals or other property interest of the cotenant granting the subsurface easement. On the other hand, perhaps the adjoining mineral owner is attempting to protect its minerals from capture by the cotenant from whom the subsurface easement is being sought. Should that cotenant be allowed to block the exploration and development of his or her neighbors’ minerals by refusing to grant an easement, particularly if there is a well on the cotenant’s land that is draining the adjoining property? The oil and gas lessee of the adjoining property would also be in a precarious position, being subject to attack for failure to protect against drainage from its lessor, at the same time being vulnerable to a trespass claim if he or she drills a deviated or horizontal well without obtaining an easement from all the cotenants of the surface location.

The general rule requiring the consent of all cotenants in connection with using property is founded on the policy of preventing a single owner from committing waste on the property. A drill hole, generally less than a foot or two in diameter, traversing the co-owned property hardly reaches the level of waste that courts should be concerned about. If the non-consenting cotenants can prove actual damages from the wellbore, most operators would gladly pay them rather than lose the opportunity to explore and develop the adjoining property altogether, risk a claim of trespass, or be enjoined from development by a non-consenting co-owner. In the area of subsurface easements, like other areas involving oil and gas, courts should favor a policy that

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encourages development.

One possible way to accomplish this public policy of encouraging oil and gas development would be to expand the concepts of the Surface Act to subsurface easements. In other words, an operator would be required to notify all cotenants from whom a subsurface easement is required and make a good faith attempt to enter into an agreement for the use of the subsurface and to compensate for any damages the intended drilling would cause. If agreement with each cotenant cannot be reached, the operator could file a petition in the district court and an appraiser appointed to value any damages caused, but the operator could not be prevented from proceeding with its proposed operation. Perhaps the standard of damages that the non-consenting co-owner would be entitled should be the proportionate amount of the reasonable market value of a subsurface easement in the area.

D. Subsurface Easements from Mineral Owners or Their Lessees. Suppose an operator of a horizontal well is successful in getting the required subsurface easements from each of the necessary surface owners. Is that enough? Legally, the answer should be “yes,” but practically, the answer is probably “no.” Where minerals have been severed from the surface location, the mineral owner of that location (or its lessee) could attempt to prevent operations on two grounds, even where the operator has the consent of the surface owner to use the surface: first, the operations interfere with the rights of the mineral owner (or its lessee) to such an extent that the mineral owner or lessee is unable to use the surface for its own oil and gas development; and second, the operator’s horizontal well has damaged the minerals underlying the surface location.

The case of Mid-Texas Petroleum Co. v. Colcord illustrates the first contention. Colcord secured a lease from the State of Texas covering the river bottom of a portion of the Brazos River. Intending to drill a deviated well, Colcord also obtained a surface lease of 40 acres adjacent to the Brazos River, from which it planned to locate drilling rigs, pipelines and storage tanks for the exploration and production of oil and gas from beneath the river bottom. Mid-Texas Petroleum Co., the owners of a mineral lease covering the proposed surface location, filed suit to enjoin Colcord from using the surface of its leased tract. In upholding the injunction entered by the trial court, the Texas Court of Appeals relied on the longstanding rule that a grant of an oil and gas lease included the right to use as much of the surface as was reasonably necessary to explore and develop the minerals under the leased tract. In addition, the lease to Mid-Texas required it to drill offset wells to protect the tract from drainage. The court concluded that to allow Colcord the right to use the surface of the adjacent tract would interfere with Mid-Texas’ right to use the surface and prevent it from drilling any required offset well.

A subsequent case limited the application of Colcord to situations where the lessee of the minerals under the surface tract needs the surface at the precise moment the operator of the

143 If the minerals have been leased, the lessee has the right to explore and develop those minerals, so the operator should obtain any subsurface easements in that case from the lessee.

directionally drilled well needs it and to where there is insufficient leased acreage other than the operator’s surface location for the mineral lessee to drill its own wells. In *Atlantic Refining Company v. Bright & Schiff*, Atlantic Refining obtained a mineral lease covering a certain tract of land. Bright & Schiff obtained an oil and gas lease covering an adjacent tract of land. Bright & Schiff’s tract was so small that it needed additional surface area to locate its pits, pumps, tanks and equipment. It obtained a surface lease from the owner of the surface and minerals covering part of the lands leased to Atlantic Refining. Atlantic Refining sought a temporary injunction to prevent Bright & Schiff from using the surface of the land it had leased from Atlantic Refining’s lessor. In holding for Bright & Schiff, the Texas Court of Appeals acknowledged that, while a mineral lessee is entitled to use so much of the surface as is reasonably necessary, the lessor may use his land in any manner as long as that use is consistent with the mineral lessee’s right to drill and produce oil and gas. A lessee seeking to enjoin surface use by its lessor, then, must prove that it needs the surface at the time and place then being used by the lessor or its surface lessee. The court found that Atlantic Refining failed to do that in this case, as Atlantic Refining had leased other ample and suitable acreage from which it could drill.

The case of *Chevron Oil Company v. Howell*, illustrates the mineral owner’s or its lessee’s second ground, that the operations to develop adjacent lands have damaged its minerals (or would damage those minerals in a case for an injunction). Chevron began operations to drill a well from a location on the west bank of Lake Texoma. The well was to be directionally drilled, with the bottom hole to be located in lands beneath the waters of Lake Texoma, which had been leased to Chevron. Chevron claimed the right to use the surface of its surface location under a license granted by the U.S. Corps of Engineers. Howell owned an agricultural lease covering the surface location of Chevron’s well and other lands. Magna Oil owned an oil and gas lease under the tract of land covered by the agricultural lease. Chevron did not get consent from either Howell or Magna (although it attempted to obtain a subsurface easement from Magna). Howell and Magna filed suit and the trial court granted a temporary injunction against Chevron prohibiting it from using any of the surface of the land covered by the agricultural lease and from penetrating subsurface formations of the land. Chevron appealed on three bases: (i) Howell’s surface lease required Howell to grant ingress and egress to licensees of the United States; (ii) Chevron’s directional drilling did not in any way interfere with Magna’s rights under its mineral lease; and (iii) there was no competent evidence of damage either to the surface or to any oil, gas or mineral formation. The court found no merit to any of Chevron’s arguments. As to the third basis of appeal, the court relied on the testimony of Chevron’s own witness who stated that “any time you drill into something there is bound to be some damage.”

Conversely, then, an operator might be able to avoid any liability to the mineral owner or its lessee of the surface location if it can show that its operations did not (or would not) cause

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147 Id. at 528.
any damages to the minerals under the surface location, such as designing a well that goes through the surface location only at depths that are not capable of producing oil and gas.

Damage to the minerals in these types of cases is not necessarily limited to physical damage. The operator could also be liable for the loss of the speculative value of the minerals. Consider the analogous Colorado case of Grynburg v. City of Northglenn. In 1977, the City of Northglenn investigated potential sites for a wastewater treatment reservoir. With the surface owner’s consent, the city drilled a test hole 600 feet to check for recoverable coal reserves, as required by Colorado law. Results from the test hole concluded that coal deposits underlying the proposed site were not commercial. These results, filed with the state engineer’s office, became public information. The City, however, never obtained consent from the mineral owner, or its lessee, Jack Grynburg. Grynburg sued for damages resulting from the publication of the test hole results condemning the economic viability of the coal reserves. The court held that the City had improperly drilled the test hole as only the mineral owner or its lessee could authorize it. Accordingly, in a horizontal well situation, if the operator does not get a subsurface easement or other form of consent from the mineral owners (or their lessees) of all tracts other than the bottom hole location, it should refrain from logging the hole or otherwise gathering information regarding the minerals of those tracts.

All the cases discussed above except Grynberg are Texas decisions. There appears to be no reported case in Oklahoma involving the need to get subsurface easements from mineral owners or their lessees, but the general property law concepts in Oklahoma would suggest similar results by the Oklahoma courts.

To be fully protected, then, an operator would obtain easements from every owner, both surface and mineral, of each tract in which the proposed horizontal well will penetrate before it reaches the pooled tracts of land under which the horizontal lateral will be located. Those easements are necessary from the surface owner to prevent a claim of trespass. To be totally safe from potential liability, easements also should be obtained from all owners of minerals (or their lessees) to prevent claims that the operator is interfering with those mineral owners’ or lessees’ right to use the surface of their respective tracts or claims that the proposed well will damage those minerals, either physically or economically. The decision by an operator of whether to get an easement from the mineral owner(s) can reasonably be based on the specific

149 Id. at 235. In a subsequent case, City of Northglenn v. Grynburg, 846 P.2d 175 (Colo. 1993), Grynburg claimed the publication of the results from the City’s unauthorized exploration constituted a taking of his property without just compensation. The court rejected Grynburg’s claim on the basis that previous public studies had already reached the conclusion that the coal deposits were uneconomical. See generally, Comment (Griffin), “Protectable Property Rights, Trade Secrets and Geophysical Data After City of Northglenn v. Grynberg,” 71 Denv. U. L. Rev. 527 (1994).
150 See Phillips Petroleum Co. v. Cowden, 241 F.2d 586 (5th Cir. 1957).
151 See Grimes, supra, Note 116 at p. 9.
situation, and depending on the planned use and likely impact, in at least some cases, the operator might conclude that proceeding without the easement from the mineral owner is an acceptable risk.

VI. Hydraulic Fracturing as Trespass

A. Hydraulic Fracturing. Hydraulic fracturing is “a method of increasing the permeability of rock, and thus increasing the amount of oil or gas produced from it.” The method is accomplished by pumping fracturing fluid down the wellbore at high pressure and into the target formation. The force of the fluid opens fractures in the rock surrounding the wellbore. To keep those fractures from closing again, sand or ceramic beads called proppant is placed in the frac fluid and becomes lodged in the fractures, propping them open against the enormous subsurface pressure that normally would shut the fractures as soon as the fluid was gone. The fluid is then drained, leaving the cracks open for the oil or gas to flow through these fractures and between the holes within the proppant and into the wellbore.

B. Coastal Oil and Gas Corporation v. Garza Energy Trust. In Coastal Oil and Gas Corporation v. Garza Energy Trust, the Texas Supreme Court considered whether the fluids and proppant used in hydraulic fracturing that crossed property lines constitute a subsurface trespass. In that case, Garza and others owned minerals in a certain tract they had leased to Coastal, who also had leased adjacent tracts. Significantly, Coastal had a much greater net revenue interest in the wells on the adjacent lands than it did on Garza’s lands. Coastal drilled wells on the adjoining tracts much faster than on the Garza’s tract. Garza claimed the offsetting wells were hydraulically fractured, which resulted in proppant from the offsetting wells entering Garza’s tract, and allowing production from Garza’s tract to migrate to an adjoining tract and be produced through the offset wells at a greater net revenue interest to Coastal. The trial court found Coastal liable for trespass and other causes of action. It awarded actual damages for the trespass in an amount over $500,000, and punitive damages in the amount of $10,000,000 (the jury awarded total damages of almost $14 million from all claims).

Before Garza, there were a few cases in Texas and elsewhere that suggested that cross-boundary migration of injected fluids and proppants would constitute an actionable trespass. In Gregg v. Delhi-Taylor Oil Corp., Gregg owned the leasehold in a tract about 75 feet wide. Delhi-Taylor owned leasehold in the surrounding acreage. Gregg drilled a well 37.5 feet from the Delhi-Taylor lease line, and planned to fracture stimulate it. Delhi-Taylor sought to enjoin Gregg from fracturing the well, alleging the fracture would extend onto Delhi-Taylor’s lease and constitute a subsurface trespass. Gregg claimed the case should be dismissed on the basis

153 Williams & Meyers, Manual of Oil and Gas Terms 474 (Fifteenth ed. 2012).
154 Coastal Oil and Gas Corporation v. Garza Energy Trust, 268 S.W.3d 1, 6-7 (Texas 2008).
155 Id.
157 344 S.W.2d 411 (Tex. 1961).
that the TRRC had primary jurisdiction of the dispute.\textsuperscript{158} The Texas Supreme Court held that the courts, not the TRRC, have jurisdiction to determine whether a hydraulic fracture constitutes a subsurface trespass, as trespass is inherently judicial in nature. In upholding the court of appeals decision to reinstate the case for trial, the Texas Supreme Court, in dicta, stated that Delhi-Taylor’s contentions were enough to raise an issue of whether there was a trespass:

While the drilling bit of Gregg’s well is not alleged to have extended into Delhi-Taylor’s land, the same result is reached if in fact the cracks or veins [resulting from the hydraulic fracture] extend into its land and gas is produced therefrom by Gregg. To constitute a trespass, entry upon another’s land need not be in person, but may be made by causing or permitting a thing to cross the boundary of the premises.\textsuperscript{159}

While the court in Gregg clearly indicated that Delhi-Taylor may be able to prove a subsurface trespass, the following year in Railroad Commission of Texas v. Manziel,\textsuperscript{160} a case determining whether enhanced recovery fluids pumped into an injection well that crossed property lines constituted a subsurface trespass, the Texas Supreme Court indicated that Gregg did not decide that hydraulic fracturing constituted a subsurface trespass,\textsuperscript{161} stating:

Secondary recovery operations are carried on to increase the ultimate recovery of oil and gas, and it is established that pressure maintenance projects will result in more recovery than was obtained by primary methods. It cannot be disputed that such operations should be encouraged. . . .

The orthodox rules and principles applied by the courts as regards surface invasions of land may not be appropriately applied to subsurface invasions as arise out of the secondary recovery of natural resources. If the intrusions of salt water are to be regarded as trespassory in character, then under common notions of surface invasions, the justifying public policy considerations behind secondary recovery operations could not be reached in considering the validity and reasonableness of such operations. . . . Certainly it is relevant to consider and weigh the interests of society and the oil and gas industry as a whole against the interests of the individual operator who is damaged; and if the authorized

\textsuperscript{158} On appeal, this case was joined with a related case involving the same parties, (Delhi-Taylor v. Gregg, 337 S.W.2d 222 (Tex. Civ. App.—Austin 1960), aff'd 344 SW2d 419 (Tex. 1961) and another similar case, Holmes v. Delhi-Taylor Oil Corp., 337 S.W.2d 479 (Tex. Civ. App.—San Antonio 1960) rev’d 344 S.W.2d 420 (Tex. 1961).

\textsuperscript{159} 344 S.W.2d at 34.

\textsuperscript{160} 361 S.W.2d 560 (Tex. 1962).

\textsuperscript{161} Concerning its decision in Gregg, the Court stated, “The question of trespass by authorized sand fracturing on adjoining property was posed but not decided.” 361 S.W.2d at 567, n.3.
activities in an adjoining secondary recovery unit are found to be based on some substantial, justifying occasion, then this court should sustain their validity.\textsuperscript{162}

The court then concluded that, in a secondary recovery project authorized by the Railroad Commission, a trespass does not occur when the injected fluids move across lease lines.\textsuperscript{163}

Subsequently, in \textit{Geo-Viking, Inc. v. Tex-Lee Operating Co.},\textsuperscript{164} an operator, (Tex-Lee) filed a Deceptive Trade Practices Act claim against Geo-Viking, claiming it improperly fracture stimulated a well drilled by Tex-Lee. Because of the mechanical breakdown of Geo-Viking’s equipment, the fracturing operation failed and the well never produced in paying quantities and was plugged. The jury concluded that Geo-Viking did not perform the fracturing procedure in a workmanlike manner, and awarded damages to Tex-Lee. On appeal, Geo-Viking attempted to reduce its damages by claiming, if the fracture stimulation had been successful, it would have extended beyond the boundaries of the unit and unlawfully recovered hydrocarbons from adjoining properties. Therefore, those hydrocarbons should have been reduced from the damage award. The court dismissed this argument as being in direct opposition to the rule of capture.\textsuperscript{165} The Texas Supreme Court initially reversed, stating that even under the rule of capture an adjoining owner is accorded the usual remedies against trespassers who appropriate the minerals or destroy their market value.\textsuperscript{166} The court, however, subsequently withdrew its opinion, leaving the court of appeals opinion intact.\textsuperscript{167}

\textbf{C. Other States.} Outside of Texas, in \textit{Zinke & Trumbo, Ltd. v. State Corporation Commission},\textsuperscript{168} Zinke & Trumbo and Sho-Bar were operators within the same field. Sho-Bar fracture stimulated one of its wells, increasing its production over five times the well’s natural flow rate. Because Sho-Bar’s well was located only 330 feet from Zinke & Trumbo’s lease line, the Kansas Supreme Court concluded that Sho-Bar’s fractures “obviously penetrated Zinke’s lease.”\textsuperscript{169} But the real issue before the court was not trespass. Zinke & Trumbo challenged the regulatory agency’s proration formula that allocated 50 percent of the total pool allowable to the open flow of each well. By allowing Sho-Bar to conduct its fracture stimulation, Zinke & Trumbo argued that Sho-Bar’s well would receive a disproportionate share of the allowable.

\begin{footnotesize}
\begin{enumerate}
\item[\textsuperscript{162}] Id. at 568.
\item[\textsuperscript{163}] Id. at 569. See also, Baumgartner \textit{v. Gulf Oil Corp.}, 168 N.W.2d 510 (Neb. 1969). But cf. Greyhound Leasing & Financial Corp. \textit{v. Joiner City Unit}, 444 F.2d 439 (10th Cir. 1971) (under Oklahoma law, lessees of a tract adjacent to a secondary recovery unit could maintain a private nuisance cause of action based on encroachment of saltwater from the unit); \textit{Jameson v. Ethyl Corp.}, 609 S.W.2d 346 (Ark. 1980) (where the Arkansas Supreme Court reached a similar conclusion on public policy grounds, subject to the operator acting in good faith, but imposed an obligation to compensate the owner of the depleted lands for the minerals extracted in excess of natural depletion, if any); and \textit{Snyder Ranches, Inc. v. Oil Conservation Comm.}, 798 P.2d 587 (N.M. 1990) (a license to dispose saltwater does not authorize trespass).
\item[\textsuperscript{164}] 817 S.W.2d 357 (Tex. App.—Texarkana 1991), \textit{writ denied per curiam}, 839 S.W.2d 979 (Tex. 1992).
\item[\textsuperscript{165}] Id. at 364.
\item[\textsuperscript{166}] 1992 WL 80263 (Tex. 1992).
\item[\textsuperscript{167}] \textit{Geo-Viking, Inc. v. Tex-Lee Operating Co.}, 839 S.W.2d 797 (Tex. 1992).
\item[\textsuperscript{168}] 749 P.2d 21 (Kan. 1988).
\item[\textsuperscript{169}] Id. at 27.
\end{enumerate}
\end{footnotesize}
The court agreed, holding that the commission had an obligation to protect correlative rights, and that obligation required it to consider evidence of fracture stimulation as a factor in issuing a proration order.\footnote{Id. at 28.} It did not, however, directly address whether hydraulic fracturing constituted a subsurface trespass.

In \textit{ANR Production Co. v. Kerr-McGee Corp.},\footnote{893 P.2d 698 (Wyo. 1995).} the Wyoming Oil and Gas Conservation Commission had approved the creation of a unit producing from the First Bench sand of the First Frontier formation. Kerr-McGee’s predecessor in interest operated the Unit, and ANR owned a working interest in it. The Unit Agreement and Unit Operating Agreement provided that individual oil and gas lessees, with permission, could explore and develop zones other than the First Bench sand within the geographical boundaries of the Unit. ANR received such permission and completed a well in the Second Bench sand located below the First Bench sand. Because of the lower quality of the Second Bench sand, operators generally fraced wells producing from it, and ANR conducted a hydraulic frac in its well, but used a different fracing material than typically used in other Second Bench wells. The fracture stimulation was successful; the well far surpassed the production rates of other Second Bench wells in the area, which caught the attention of the unit operator. The unit operator concluded the Second Bench well was in communication with the First Bench well and reported that to the Oil and Gas Conservation Commission, who, after an investigation, ordered the shutting in of the well. Kerr-McGee then filed suit against ANR on various claims. The trial court concluded ANR had trespassed against Kerr-McGee, had converted First Bench hydrocarbons for its own use, and breached the Unit Agreement. The trial court, though, refused to award punitive damages. On appeal to the Wyoming Supreme Court, ANR did not challenge liability under any of the causes of action (including trespass); it only questioned the damages imposed. Accordingly, we are left to speculate whether the Wyoming Supreme Court would have upheld the finding of trespass caused by ANR’s hydraulic fracture.

\textbf{D. The Basis of the Garza Opinion.} Despite these precedents, the Texas Supreme Court, based on the rule of capture and four public policy arguments, decided that cross-boundary migration of fluids and proppant is not an actionable trespass in the absence of a showing of damages by the owner of the mineral estate so invaded. In its reasons for its decision, the court stated: First, an aggrieved mineral owner is already provided full recourse under the law by drilling his or her own wells to offset the drainage, by seeking drainage prevention regulation from the TRRC, suing the lessee for violating the implied covenant to prevent drainage, or seeking to pool.\footnote{Garza, 268 S.W.3d at 14.} Second, allowing recovery for drainage induced by hydraulic fracturing “usurps to courts and juries the lawful and preferable authority of the TRRC to regulate oil and gas production.”\footnote{Id. at 14-15.} Third, the court reasoned that the judicial system is ill equipped in making determinations concerning the value of the hydrocarbons drained.\footnote{Id.at 16.}
Fourth, the court found the many industry participants opposed to hydraulic fracturing liability to be persuasive from a public policy point of view.\textsuperscript{175} It appears that Garza, however, is not the end of the issue. There have been other cases in other states since Garza that raises the issue of how many other states will adopt a position similar to Texas. For example, in Tucker v. Southwestern Energy Co.,\textsuperscript{176} the federal district court in Arkansas refused to dismiss a surface owner's trespass claim that frac fluids had migrated across property lines and rendered its water well unusable. In Stone v. Chesapeake Appalachia, LLC,\textsuperscript{177} the West Virginia Supreme Court refused to follow Garza, holding that the rule of capture did not insulate an operator from trespass liability if frac fluids and proppants crossed lease lines. The case was before the court on a motion for summary judgment so the issue of whether the plaintiff could show a physical invasion of its property resulting in damages was left to the trial court to determine.

Even the Garza case leaves open the possibility of a trespass claim if the fluids and proppant actually damage the well or other property of the adjoining owner or operator.\textsuperscript{178} A common practice of operators in shale plays is to provide notice to offset operators of its intention to fracture stimulate a well. Most offset operators, upon receiving such a notice, will shut in their wells while the scheduled frac takes place. Sometimes, even if an offset well is shut-in, the frac will affect production from the offset well. Fortunately, over time, production from most of these offset wells is restored to the pre-fracturing rates, and in some cases, the production actually improves. But if permanent damage occurs, arguably, the offset operator has an actionable claim for damages. Such a claim could be based on trespass, negligence, or perhaps even strict liability.\textsuperscript{179} 

E. Oklahoma and the Future. It appears that Oklahoma would take a position similar to what Texas did in Garza. As yet there is no Oklahoma case with facts similar to Garza, but the Oklahoma courts, in secondary recovery operations, have held that there is no trespass when injected water crosses lease lines, unless actual damage can be shown.\textsuperscript{180} But if damages to the adjoining property can be shown, a plaintiff is entitled to recover those damages even though the operator had secured a permit for the secondary recovery operations from the OCC.\textsuperscript{181}

\begin{footnotes}
\footnote{175}{Id. at 16-17.}
\footnote{176}{2012 WL 2050420 (E.D. Ark. 2012).}
\footnote{177}{2013 WL 2097397 (N.D.W.Va. 2013), order vacated by 2013 WL 7863861 (N.D.W.Va. 2013).}
\footnote{178}{In Garza, the court stated that “misconduct that is illegal, malicious, reckless or intended to harm another without commercial justification” could result in a viable claim of trespass. Garza, 268 S.W.3d at 17.}
\footnote{179}{Kramer, supra, Note 156 at pp. 309-14.}
\footnote{180}{See, e.g., W. Edmond Hunton Lime Unit v. Lillard, 265 P.2d 730 (Okla. 1971); W. Edmond Salt Water Disposal Ass’n v. Rosecrans, 226 P.2d 965 (Okla. 1950).}
\footnote{181}{Greyhound Leasing & Fin. Corp. v. Joiner City Unit, 444 F.2d 439 (10th Cir. 1971).}
\end{footnotes}
Looking to the future, public policy (and cases affecting it) should encourage development of oil and gas through horizontal wells and hydraulic fracturing, but at the same time attempt to protect the property interests of offset operators. One approach might be a regulatory procedure that required operators to give notice to offset operators of its intended fracture stimulation and that established parameters of how large the frac could be based on the distance from offset wells, the formation to be stimulated and other objective criteria. If followed, these parameters would be deemed a safe harbor against liability for subsurface trespass and similar causes of action.

VII. Royalty and Distribution of Proceeds Issues:

A. The Non-Apportionment Rule. Historically, Texas has followed the non-apportionment rule, which states that, when a lease is subsequently divided into two tracts, and the lease does not have an entireties clause, the royalty belongs exclusively and entirely to the owner of the tract upon which the well is located. In other words, in a vertical well, in the absence of pooling, or some other agreement by the royalty owners, the owners of the royalty in the drillsite tract are entitled to be paid the royalty on the full amount of the production from a well located on the surface of that tract. This rule is based on the rule of capture.

What happens, then, when an operator drills a horizontal well that crosses multiple tracts? Under the non-apportionment rule, the royalty owner of the surface drillsite tract could argue that it is entitled to all royalties on production from that horizontal well. This result would be especially unfair in light of the frequent scenario where no oil or gas is being produced from the surface location tract. But the general rule in Texas is that, absent a pooling or other agreement apportioning production from a well, the production is allocated according to the ownership of the minerals at the location from which the production is obtained, as each tract penetrated is considered a drillsite tract. The surface location is irrelevant in this determination, meaning, in a horizontal well situation, the owners under each tract traversed by the lateral are entitled to the minerals produced from their individual tract, as if the lateral was a series of vertical wells drilled along a linear path with each take point of the lateral being the equivalent of the bottomhole of a vertical well.

B. Confusion of Goods. What if the operator cannot demonstrate which tracts the production is coming from in a horizontal well? In this case, the operator may be required to account to the owners of each tract as if all the production had come from that tract. This

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182 Japhet v. McCrae, 276 S.W.2d 669 (Tex. Comm. 1925, opinion adopted); Schweikhardt, supra, Note 3 at p. 339.
183 Sanders, supra, Note 43 at p. 14; Schweikhardt, supra, Note 3 at pp. 339-341; Wright, supra, Note 3 at pp.11-12.
184 Squibb, “The Age of Allocation: The End of Pooling as We Know it?” Tex. Tech. L. Rev. 929, 934 (Summer 2013) [hereinafter “Squibb”].
185 Browning Oil Co. v. Luecke, 38 S.W.3d 625, 634 (Tex. App. – Austin 2000, pet. denied).
186 Martin and McGinnis, supra, Note 38 at p. 35.
187 Luecke, supra, at 634; Squibb, supra, Note 184 at p. 935.
potential result is based on the “confusion of goods” theory as applied in the case of *Humble Oil and Refining Co. v. West*. That case involved land that Humble was using for a gas storage project. Humble owned the surface but West owned a royalty interest in gas produced from the land. The Texas Supreme Court ruled that West was only entitled to be paid royalty on native gas that was produced from the land, but was not entitled to royalty on gas that had been injected into the gas storage and later produced by Humble. Since Humble had commingled the native gas with the injected gas, the court determined that Humble had to pay royalty on all gas that it could not prove “with reasonable certainty” was injected gas.

Arguably, then, when an operator completes a horizontal well that crosses lease lines and there is no agreement as to how royalties are to be allocated, since the operator is commingling the production from more than one tract, the royalty owner of each tract is entitled to royalties as if 100 percent of the production came from that royalty owner’s tract, unless the operator can otherwise demonstrate with reasonable certainty.

C. Pooling and Production Sharing Agreements. Traditionally, pooling has been used to fix the unfairness of the non-apportionment rule or results stemming from the confusion of goods theory. But under most lease clauses, pooling in connection with a horizontal well might be an inadequate remedy as well. Typically, a pooling clause will provide that royalties are to be divided among the mineral owners of the tracts within the pooled unit on a surface acreage basis. The working interest portion of the proceeds is divided among those owners in the same manner. But this means of dividing proceeds may not be any fairer than the non-apportionment rule or the confusion of goods theory, as the apportionment of proceeds based on surface acreage within a pooled unit may not accurately reflect the source of production below the surface. Very early in the history of horizontal drilling, to avoid this problem, one author suggested the operator either allocate based on the relative length of the horizontal lateral underlying each tract, with the royalty owners’ agreement through division orders, or if all royalty owners do not agree, suspend the royalty pending judicial determination.

A common way of dealing with this issue in Texas is to have the owners of the proceeds from each unit enter into an agreement, typically called a production sharing agreement. Instead of allocating production based on surface acreage, as in a conventionally pooled unit, under a production sharing agreement, production is allocated based on some aspect of the horizontal well such as the length of the entire lateral under each unit, but more often, the length of the lateral from the first perforation to the last perforation. For example, if the

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188 508 S.W.2d 812 (Tex. 1974).
189 Martin and McGinnis, supra, Note 38 at pp. 35-36.
190 Schweikhardt, supra, Note 3 at pp. 341-342; Wright, supra, Note 3 at pp. 428-29.
operator drills a horizontal well in which the lateral section of the well is located in two existing units and/or other separately owned tracts, and if 25 percent of the distance from the first perforation to the last perforation is in Unit A and 75 percent is in Unit B, then 25 percent of the production would be allocated to Unit A, and 75 percent to Unit B. The amount allocated to each unit would then be further allocated among the interest owners in each unit. Let’s put some number to this example. Suppose in a given period 100 barrels are produced from this horizontal well. Twenty-five barrels of that production would be allocated to Unit A, and 75 barrels to Unit B. The 25 barrels allocated to Unit A would then be further allocated among the owners of Unit A on a surface acreage basis, so if Party X owed a 40 percent net revenue interest in Unit A, Party X would be allocated a total of 10 barrels of the total production from the horizontal well. A similar allocation would be made among the owners of Unit B.

Production sharing agreements in Texas have not been particularly controversial because all the interest owners of both units execute the agreement, and so all owners have agreed upon the allocation. Oklahoma allocates in a similar manner, but such allocation is pursuant to the Shale Act, and so mandated by statute. One benefit for operators under the Shale Act is there is no requirement that all owners agree. If the operator can obtain consent from the owners of 63 percent of each of the affected units, the allocation is forced upon all owners, even the ones from whom consent is not obtained.

D. Allocation Wells. In Texas, what happens when an operator crosses the boundary between two or more leases and the operator cannot rely on the pooling clauses in the leases and cannot get complete agreement among all the owners as to the allocation of production? Despite the lack of agreement among owners as to the allocation of production, Texas operators began drilling horizontal wells that traversed multiple tracts. These wells have become to be known as “allocation wells.” The TRRC routinely now grants drilling permits for allocation wells, but the TRRC is only granting the operator a permit to drill the well; it is not force pooling the interests, and the operator is left to deal with the other interest owners. The legal authority for allocation wells turns on two issues: (i) is an allocation well really just a way to force pool without the requisite authority; and (ii) is the allocation of production established by the operator appropriate.192

The legal basis for allocation wells in Texas began with Browning Oil Co. v. Luecke.193 In Browning, the Lueckes had executed three oil and gas leases containing pooling clauses with anti-dilution provisions that required any pooled unit to be substantially made up of lands owned by the Luecke. Browning requested amendments to the leases to allow for the drilling of horizontal wells within units that would include substantially smaller amounts of acreage from the Luecke leases than required by these anti-dilution provisions. The Lueckes refused to sign the amendments, but Browning drilled two horizontal wells anyway. The Lueckes sued Browning, claiming that the pooled units Browning had formed for the horizontal wells were invalid because they did not comply with the specific requirements of the pooling provisions of

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192 Squibb, supra, Note 184 at p. 931.
193 38 S.W.3d 625 (Tex. App. – Austin 2000, pet. denied).
the leases. The Texas appellate court affirmed the trial court’s ruling that the pooled units were invalid. But since the units were invalid, the Lueckes were not entitled to any production from lands other than their own leases. The Lueckes argued that they should be entitled to their royalty share on 100 percent of all production from each of the wells, since at least a part of each wellbore traversed their acreage.

The appellate court, however, considered the Lueckes’ suggested measure of damages to be punitive, especially in light of undisputed testimony that, due to the nature of the formation being produced, the value of the production that came from the Lueckes’ tracts could be accurately calculated. The court concluded that, “The better remedy is to allow the offended lessors to recover royalties as specified in the lease, compelling a determination of what production can be attributed to their tract with reasonable probability.” The court, though, did not address the question of what the proper method of allocation should be, but noted the importance of a policy that encouraged horizontal drilling:

We recognize the immense benefits that have accompanied the advent of horizontal drilling, including the reduction of waste and the more efficient recovery of hydrocarbons. Draconian punitive damages for a lessee’s failure to comply with applicable pooling provisions could result in the curtailment of horizontal drilling. We decline to apply legal principles appropriate to vertical wells that are so blatantly inappropriate to horizontal wells and would discourage the use of this promising technology.

A recent case may give us some guidance in the area of proper allocation. In Springer Ranch, Ltd., v. Jones, the San Antonio appellate court held that, in interpreting an agreement between private landowners entered into before horizontal drilling became commonplace, an allocation formula based on productive wellbore length under each tract could be read into the agreement even though the agreement only mentioned vertical wells.

On July 16, 2012, EOG Resources, Inc. submitted to the TRRC an application to drill an allocation well known as the Klotzman (Allocation) #1H Well to be located in the Eagleford shale in DeWitt County, Texas. The proposed well would cross the boundary between two tracts, and since it would produce from points within each lease near the boundary separating the two tracts, EOG needed a Rule 37 spacing exception. Normally, royalty owners, as non-possessory interest owners, are not entitled to notice of a spacing exception application. EOG, as the working interest owner under each lease, could waive objection and receive the permit administratively. Nonetheless, the royalty owners apparently learned about the Klotzman well application and sought a hearing on their own initiative.

194 Id. at 645.
195 Id. at 647.
196 Id.
198 Squibb, supra, Note 184 at pp. 931-32.
The central legal issue of allocation wells is whether such a well amounts to an unlawful pooling since production from various tracts will be commingled and then allocated back to each affected tract. In short, for a lessor, the question is less about how production should be allocated and more about whether an operator has the legal right to drill and produce such a well in the first place.\textsuperscript{199}

The case of \textit{Magnolia Petroleum Co. v. Railroad Commission}\textsuperscript{200} addressed the standard for issuing well permits by the TRRC, which held that the TRRC cannot issue a drilling permit unless the operator reasonably appears to have a good-faith claim in the affected property.\textsuperscript{201} But the TRRC recognized that its role is not to adjudicate title or rights of possession, as the issuance of a permit “merely removes the conservation laws and regulations as a bar to drilling.”\textsuperscript{202} Historically, the TRRC has approved applications for allocation wells if 100 percent of the affected tracts are under lease.\textsuperscript{203}

On June 25, 2013, the examiners for the TRRC issued a Proposal for Decision, recommending dismissal of EOG’s application to drill its horizontal allocation well, stating that EOG’s actions would constitute an unauthorized pooling of the adjacent tracts and effectively strip the mineral owners of their retained property right to pool (or not pool) their lands. The examiners argued that there is nothing in any Texas statute, rule or TRRC final order that authorized an allocation well, and that allocation without the agreement of the royalty owners was the legal equivalent of forced pooling. Since EOG did not have the authority to pool the subject tracts, it lacked a good faith claim to title in the well. Despite the examiners position, in a unanimous decision, on September 10, 2013, the TRRC approved EOG’s application, finding that EOG had made a reasonably satisfactory showing of a good faith claim of ownership, and that the lack of pooling authority in the underlying leases was inconsequential to issuing the drilling permit. The TRRC considered pooling authority and the methods of allocation of production to be private contract matters and thus outside the jurisdiction of the TRRC.

Earlier this year the mineral owners in Klotzman application filed a case in the Travis County district court challenging the TRRC order approving the drilling permit. The mineral owners are asking for two things: (1) to reverse the TRRC’s order that approved the drilling permit, and (2) to declare that EOG lacks the necessary good faith claim of the right to drill across all of the tracts and produce all of such tracts from that well. The result of this decision will have lasting impact on an operator’s ability to drill allocation wells.

\textbf{E. Oklahoma.} While, in Texas, the legal basis for the allocation of production from horizontal wells is far from decided, Oklahoma has resolved the issue by statute and regulation. The Shale Act established procedures for the permitting of horizontal wells, and in multiunit

\textsuperscript{199} Squibb, \textit{supra}, Note 184 at pp. 938-39.
\textsuperscript{200} 170 S.W.2d 189 (Tex. 1943)
\textsuperscript{201} Id. at 191.
\textsuperscript{202} Id.
\textsuperscript{203} Application of EOG Resources, Inc. for its Klotzman Lease (Allocation) Well No. 1H, Railroad Commission of Texas, Oil & Gas Docket No. 02-0278952.
situations, provides an allocation of proceeds calculation generally based on the length of the completion interval in each of the affected units. Again, Oklahoma got it right. Interestingly, in light of Texas’ battle over whether an allocation well is in effect forced pooling by the TRRC, Oklahoma statutes and rules are careful to distinguish the pooling of each of the affected units from the multiunit horizontal well. The interests in the horizontal well are not pooled, and do not affect the pooling of the affected units, but statute and regulations merely allocate production and costs related to the horizontal well between the affected pooled units.

VII. Conclusion

The oil and gas industry continues to be helped by developments in technology. Hopefully, the courts and regulatory agencies in Texas and Oklahoma will continue to come up with reasonable solutions that will encourage development of oil and gas resources using these technologies without destroying individual property rights.
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