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TRESPASS ISSUES IN A SHALE PLAY

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I. INTRODUCTION

Trespass claims in a shale play can occur when activities designed to recover hydrocarbons cross either a property boundary or a designated drilling window established by an oil and gas conservation authority. The first category of trespass claims deals with traditional private boundary lines; the second category deals with regulatory boundary lines created by an oil and gas conservation commission to achieve orderly development that prevents "waste" and protects "correlative rights."

The hydrocarbon recovery activities that give rise to potential trespass claims include the creation of the wellbore and fractures radiating from the wellbore. Because horizontal drilling and formation fracturing are essential to any shale play, every jurisdiction where commercial shale formations are found will, of necessity, have to address these trespass issues at some point in time. This article analyzes existing case law and commentary that assist in defining possible approaches to the trespass issue associated with a shale play.\(^1\) The author also offers his views on how the law

in this area should evolve to address intra-reservoir development disputes.

II. TRESPASS ANALYSIS USING THE “PROPERTY” SURFACE DIMENSION

The most compelling argument that will be made concerning horizontal drilling and formation fracturing is what I will call the surface dimension argument: “if the activity physically enters the reservoir within my surface boundaries extended downward, a trespass has occurred.” This argument relies upon the what I will refer to as the “ad coelum” concept that an owner of the surface owns all that lies above and below their land, defined by extending the surface boundaries upward and downward. This is the “Heaven and Hell” concept of private ownership which, at least in theory, gives the fee owner a property right in the spatial areas above and below the land itself.

A. The Physical Intrusion

The elegance of a trespass claim is generally unmatched by most legal doctrines. If a physical invasion can be identified, it establishes the foundational element for the tort of trespass. However, the analysis is not so elegant as it first seems because the “tort” of trespass is always dependent upon a “property” analysis. Only after the “property” interests of each party are properly defined can the “tort” analysis take place. This gives courts, when they are so inclined, an


2The full statement of the maxim as posited by Lord Coke is: Cujus est solum, ejus est usque ad coelum et ad inferos; translated: “To whomsoever the soil belongs, he owns also to the sky and to the depths.” BLACK’S LAW DICTIONARY 341 (5th ed. 1979).

3Professors Stoebuck and Whitman, in their property law treatise, observe that from a “property” perspective the focus is on “rights” of the possessor while from the “tort” perspective the focus is on “duties” not to invade a possessor’s rights. WILLIAM B. STOEBUCK & DALE A.
opportunity to manipulate the tort of trespass by defining the nature of the underlying property interest. This was forthrightly acknowledged by Justice Willett in *Coastal Oil & Gas Corp. v. Garza Energy Trust* where he commented on the relationship between property rights and the tort of trespass by stating:

To many people, a subsurface intrusion of fissures, fluid, and propant invites a simple application of rudimentary trespass principles. Why not call a tort a tort? Well, we affix that common-law label, and not every technical intrusion, no matter how small, warrants damages, no matter how large. Trespass is a court-defined doctrine, and it falls squarely on this Court’s shoulders to decide what is actionable.\(^5\)

Justice Willett indicated how he would address the trespass problem: “I would confront Lord Coke’s maxim directly and decide whether land ownership indeed ‘extends to the sky above and the earth’s center below,’ or alternatively, whether that ancient doctrine ‘has no place in the modern world.’”\(^6\)

Justices joining in the majority opinion in the *Garza* case also took aim at Lord Coke’s maxim noting he did not “imagine oil wells” and in any event: “The law of trespass need no more be the same two miles below the surface than two miles above.”\(^7\)

Analytically, the law of trespass cannot be properly applied until the property interest at issue is clearly defined.\(^8\) The jurisprudential issue is whether a court will choose to manipulate property law or tort law to achieve its desired outcome. I submit that the jurisprudential adjustments (manipulation) should occur in defining the property interest since trespass is merely a device to protect a defined property interest. If the complaining party lacks the property “stick” necessary to give rise to a trespass claim, then trespass ceases to be an issue. Perhaps the most shocking aspect of the *Garza* case was the apparent readiness of a majority of the court to give up part of the “stick”

\(^4\)268 S.W.3d 1 (Tex. 2008).

\(^5\)Id. at 36 (Willett, J., concurring) (emphasis in original).

\(^6\)Id. at 29 (footnotes omitted).

\(^7\)Id. at 11 (footnotes omitted) (citing United States v. Causby, 378 U.S. 256, 260-61 (1946)).

associated with Lord Coke’s maxim. As it turns out some awkward use of the rule of capture, equally awkward trespass damage analysis, and a trip through the forms of action allowed the court to avoid a direct assault on subsurface ownership concepts in Texas. However, the court has clearly indicated it is open to redefining basic subsurface ownership rights in Texas.

The Supreme Court of Ohio, in 1996, took the step the Texas court only approached in Garza, by expressly limiting the ad coelum concept when applied to “deepwell injection.” BP had obtained a permit pursuant to state and federal law to inject industrial wastes into a geological formation containing brine located 2,430 feet below the surface. BP was sued by area landowners who asserted that BP’s injectant was migrating under their lands; the court ultimately limits its review to the plaintiffs’ trespass claim. The court begins its analysis by noting that BP’s compliance with its state-issued injection permit would not limit its trespass liability. The court was also invited to decide the issue applying water law by focusing on ownership of the receiving water. Although it noted that the state owns the water, the court declined to make that fact determinative, merely noting such ownership “underscores that their subsurface ownership rights are limited.” Therefore, the court had to address the trespass issue based upon ad coelum concepts. The court began by defining – some would say redefining – the plaintiffs’ property interest in the geological formation filled with brine water 2,430 feet below their land.

The court first noted that Ohio, like the federal government, has recognized limitations on ownership of the “Heavens” above land; now it is called upon to address the “Hell” component of the maxim. As the court stated the issue: “ownership rights in today’s world are not so clear-cut as they were before the advent of airplanes and injection wells.” The court defined the landowner’s property in the subsurface geologic structure as follows:

"We do not accept appellants’ [plaintiffs’] assertion of absolute ownership of everything below the surface of their properties. Just as a property owner must

9A majority of the justices were clearly seeking a way to legally accommodate hydrofracturing by insulating it from trespass claims when a fracture fissure crosses a boundary line. Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1, 13 (Tex. 2008).

10The court’s failure to address the issue before it demonstrates, however, a desire to delay what it views as a necessary confrontation with Lord Coke’s maxim.


12Id. at 989.

13Id. at 990.

14Id. at 992.

15Id.
accept some limitations on the ownership rights extending above the surface of the property, we find that there are also limitations on property owner’s subsurface rights. . . . [A]ppellants’ subsurface rights in their properties include the right to exclude invasions of the subsurface property that actually interfere with appellants’ reasonable and foreseeable use of the subsurface. 16

Although the court held the plaintiffs failed to prove that BP’s activities interfered with their “reasonable and foreseeable use of the subsurface,” it noted that one plaintiff indicated it had abandoned plans to drill an oil and gas well because of BP’s activities.17 Although the oil and gas development use was not adequately proven in this case, the court noted it was the sort of “reasonable and foreseeable use” that might give rise to liability – assuming BP’s injectant was proven to reside beneath the land at issue.

B. The Damaging Intrusion

The absolute nature of trespass has traditionally been mitigated by the remedy a court allows. This too reduces the elegance of the trespass remedy. For example, the Ohio Supreme Court in the BP Chemicals case also used remedy as an alternative means for mitigating any trespass than might have occurred by classifying the trespass as “indirect.” 18 When the trespass is indirect the plaintiff must prove “some type of physical damages or interference with use . . . .”19 To ensure this burden remained with the complaining party, the court also rejected plaintiffs’ argument that BP, because of its waste disposal activities, had the burden to prove its injectant did not migrate under the plaintiffs’ land.20 The Texas Supreme Court in the Garza case similarly relies upon the rule of capture to limit the plaintiffs’ remedy to actual reservoir or well damage they could prove.21

A court’s willingness to grant injunctive relief in subsurface trespass situations will often determine whether the development activity, whether it be underground injection, enhanced recovery, horizontal drilling, or hydraulic fracturing, will occur. Imposing on the complaining owner an obligation to prove real and substantial monetary damages to their property interest, when

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16 Id.
17 Id. at 993-94, n.1.
18 Id. at 992.
19 Id. at 993.
20 Id. at 990 (“[W]e affirm the holding of the court of appeals regarding appellants’ argument that appellee [BP] should have borne the burden of proving that no trespass occurred.”).
21 Coastal Oil & Gas Corp. v. Gaza Energy Trust, 268 S.W.3d 1, 17 (Tex. 2008) (“[W]e hold that damages for drainage by hydraulic fracturing are precluded by the rule of capture.”).
a trespass is found to exist, will promote socially beneficial activities by commercial entities while recognizing a landowner interest in the subsurface. Without some sort of failsafe that mitigates absolute ownership, the jurisprudential alternative may be to deny landowners any ownership of "deep" subsurface structures the way the U.S. Supreme Court has denied any ownership to the "deep" atmosphere above land.

Manipulating the damage aspect of trespass in the oil and gas context is particularly important when there is merely a "physical" intrusion as opposed to a "damaging" intrusion. Often a physical intrusion exists without causing damage. For example, assume a horizontal wellbore that passes through a tract of land but does not drain hydrocarbons from the land because the completions are far removed from the tract at issue. Consider a fracture fissure that extends into neighboring lands but the effective portion of the frac which drains the reservoir is located solely on the developer's land. In each case although there is a physical intrusion, it may be difficult or impossible to prove damages. Placing, and keeping, the burden of proof with the complaining party also supports the damage-only limitation on the trespass remedy.

III. TRESPASS ANALYSIS USING THE "REGULATORY" DRILLING WINDOW

Commentators to date have focused on wellbores or fractures crossing boundary lines. What about the wellbore, or frac fissure, that remains within property boundary lines but crosses the regulatory drilling window established by the conservation commission? My use of the term "regulatory drilling window" refers to the square or rectangular area created by minimum set-back distances and minimum distances between wells to establish well spacing and well density requirements. The resulting square or rectangle will always be within a larger block of acreage so the potential exists for a wellbore or a frac fissure to travel beyond the square or rectangle but still be within the boundaries of the lease or pooled area.

The problem can occur with vertical wells where the bottom hole drifts away from the surface location as various types of rock are encountered and with the natural torque of the drilling process. Horizontal wells generally enjoy more control and positional surveying than traditional vertical wells. Wellbores moving beyond the regulatory drilling window apparently have not been a problem. Regarding frac fissures, there has been no regulatory effort to try and contain the frac within boundary lines much less any sort of regulatory drilling window. However, the potential

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24 Note that this is only necessary once a court has determined that "property" rights have been violated giving rise to a trespass.

exists for a claim that fissures outside the window violate common law correlative rights, and perhaps regulatory correlative rights.

The common law correlative rights theory would be similar to that asserted by the operator in Wronski v. Sun Oil Co.\(^\text{26}\) where Sun was ordered to pay damages for violating a proration order by producing more than its 75 barrel per day per well limit.\(^\text{27}\) The same sort of liability could be imposed for violating other conservation laws, such as well spacing requirements. The regulatory correlative rights theory is demonstrated by the Kansas Supreme Court’s holding in Zinke & Trumbo, Ltd. v. State Corporation Commission.\(^\text{28}\) The court found that when the state’s oil and gas conservation authority establishes an allowable for a well, one of the factors that must be considered is the extent of any fracture treatment which may affect the adjusted open flow potential of the well.\(^\text{29}\) The evidence suggested that frac fissures crossed into nearby lands causing substantial drainage to the fracture treated well that was located on the edge of the reservoir. The nearby lands contained wells where the reservoir was most productive.\(^\text{30}\)

**IV. SURVEY OF OIL & GAS TRESPASS ISSUES**

The migration of natural gas that had been previously captured and then injected into an underground storage reservoir was the subject of a trespass claim in Hammonds v. Central Kentucky Natural Gas Co.\(^\text{31}\) The court’s response was to hold that the injected gas that escapes into parts of the reservoir owned by others becomes subject to the rule of capture and is therefore the property of no one until it is again captured. Although the Hammonds case has been criticized for years by commentators,\(^\text{32}\) the court’s response in 1934 was logical considering the nature of the plaintiff’s claim – trespass – and the court’s desire to protect the gas storage industry. Had the suit been


\(^{27}\)Id. at 567, 571.

\(^{28}\)749 P.2d 21 (Kan. 1988).

\(^{29}\)Id. at 23.


\(^{31}\)75 S.W.2d 204 (Ky. Ct. App. 1934), *partially overruled by* Texas American Energy Corp. v. Citizens Fidelity Bank & Trust, 736 S.W.2d 25, 28 (Ky. 1987).

\(^{32}\)Most recently by Professor Owen Anderson who states: “The court foolishly reasoned that natural gas injected for storage was really released back into nature – in essence, abandoned.” Anderson, *supra* note 22, at 278.
brought by the gas storage operator to recover the migrating gas from a nearby producer, the court may have been more inclined to hold that the rule of capture does not apply. Therefore, *Hammonds* is merely an example of a court creatively manipulating ownership concepts to avoid applying trespass to an activity the court does not desire to shut down. This sounds a lot like what the Texas Supreme Court did in *Coastal Oil & Gas Corp. v. Garza.* It is the common law at its best, or worst, depending on how well it is done; realizing not every jurist is a Benjamin Cardozo who can make even the illogical sound so right.34

Enhanced recovery operations, where water or other substances are injected into a reservoir to increase the ultimate recovery of oil and gas, have generated several trespass cases. The trespass issue arises when there are property owners who refuse to participate in the operation and their producing wells are negatively impacted by the artificial movement of substances within the reservoir.35 The law in this area is also influenced by a recognition that the operations are beneficial to the public and that a strict application of trespass law would curtail desirable enhanced recovery activities. For example, the Texas Supreme Court, in *Railroad Commission v. Manziel,*36 takes a most accommodating approach to the trespass issue by relying upon the Railroad Commission's active involvement in issuing a permit authorizing the secondary recovery project.37 In *Manziel* the court, after chronicling the importance to society of enhanced recovery operations, observed:

> It is obvious that secondary recovery programs could not and would not be conducted if any adjoining operator could stop the project on the ground of subsurface trespass... [I]f the Manziels' theory of subsurface trespass be accepted, the injection of salt water in the East Texas field has caused subsurface trespasses of the greatest magnitude.

> . . . 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 activities in an adjoining secondary recovery unit are found to be based on some substantial, justifying occasion, then this could should sustain their validity.38

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33 268 S.W.3d 1 (2008).


35 The cases on this aspect of oil and gas trespass law are fully analyzed in: Broomes, *supra* note 30, at 20-8 to 20-12; and Anderson, *supra* note 22, at 272-78.

36 361 S.W.2d 560 (Tex. 1962).

37 *Id.* at 561-62, 565.

38 *Id.* at 568 (footnote omitted).
Similar policy arguments can be made for the much more essential, and less disruptive, horizontal drilling and hydraulic fracturing techniques. As already noted, deepwell injection operations have given rise to trespass issues.

The oil and gas trespass issues in which courts have been most willing to apply an unmitigated trespass analysis concern slant drilling where a vertical well deviates, crosses a property boundary, and is completed without authorization in an adjoining tract. In those cases there is no overriding public benefit to be derived from allowing the activity to occur without liability.

V. AN ALTERNATIVE ANALYSIS: “CORRELATIVE RIGHTS”

This section offers an alternative analysis that can be used to address the trespass issues discussed in this article: a “correlative rights” analysis. Because correlative rights have traditionally been viewed as an adjunct to oil and gas ownership, it does not require a modification of the ad coelum doctrine. Instead, correlative rights coexist with the rule of capture, and conservation regulation, to marshal rights within an oil and gas reservoir.

A. Defining What is Meant by “Correlative Rights”

Correlative rights exist because it is not possible for any owner within an oil and gas reservoir to prevent its activities from impacting, or being impacted by, other owners in the reservoir. This is the “common law” aspect of the concept that arises out of the owners’ community of interests in a physically interconnected reservoir. The “regulatory” aspect of the correlative rights concept only arises when there is government intervention that impacts owners in a reservoir – typically a regulation limiting an owner’s ability to make full use of the rule of capture. In those situations the governmental intervention must be administered fairly so that all owners in the reservoir are treated equally. In this article the focus is on each oil and gas owner’s common law correlative rights.

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39 Broomes, supra note 30, at 20-23 to 20-25 (hydraulic fracturing).


41 E.g., Hastings Oil Co. v. Texas Co., 234 S.W.2d 389, 398 (Tex. 1950) (adjacent operator enjoined from completing well until directional survey could be completed to determine whether it was completed within the complaining operator’s lease boundaries). See also Anderson, supra note 22, at 256-58; Broomes, supra note 30, at 20-7 to 20-8.
B. Developing a Workable Correlative Rights Analysis for Subsurface Activities

It may be useful to conceptualize correlative rights in a reservoir as a sort of cotenancy. The hallmark of cotenancy is each cotenant’s non-exclusive right to possession of the whole. Each cotenant has the ability to possess and use the property so long as they do not commit waste or deny other cotenants their co-equal rights of possession. The presence of a cotenant on co-owned property is not a trespass so long as they are making proper use of the property and respecting the rights of other cotenants to do likewise.

The oil and gas reservoir has elements of separate property and co-owned, or “community” property. Surface boundaries extending downward divide the reservoir into compartments for certain legal purposes; this is the “separate” property of each owner within the reservoir. However, in addition to this separate property, each owner within the reservoir also has a “community” property interest which is comprised of rights and duties to be enjoyed and respected by all. Once these basic precepts of correlative rights are recognized, issues such as hydraulic fracturing that crosses boundary lines can be evaluated by asking whether it implicates a “separate” or a “community” property right. If it is found to be a “community” property right the next inquiry is whether it falls into the “rights” category – such as the right to efficiently develop the reservoir, or the “duties” category – such as an activity that must be prohibited to protect the reservoir community. Even something that falls into the “rights” category may trigger a “duty” when the right is exercised in bad faith or negligently. This sets up the basic rights/duties construct for evaluating an operator’s conduct that impacts more than their separate property in the reservoir.

For example, assume: (1) hydraulic fracturing is an activity required to efficiently develop a shale reservoir; and (2) efficient hydraulic fracturing necessitates fissures that may extend beyond property boundaries. Since the activity will impact areas beyond property boundaries, the activity is one implicating community property. In this situation, hydraulic fracturing – even when fissures extend beyond property boundaries – is a right that each operator in the reservoir possesses as part of their community rights in the reservoir. It is as much an ownership right in the reservoir as the right to drill a vertical well on their separate property. This means every reservoir owner has rights in the reservoir that will often extend beyond the boundaries of their land.

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42STOEBUCK & WHITMAN, supra note 3, at 203 (“Possession and use of realty subject to concurrent ownership by one cotenant is subject to the equal rights of possession and use of all the other cotenants: all are entitled to possession of all parts of the land at all times.”).

43Id. at 203-04, 206-07.

44Professor Kuntz uses a “special community” analogy to describe the prohibitive aspects of correlative rights by evaluating the “social acceptability of conduct within such community.” 1 EUGENE KUNTZ, A TREATISE ON THE LAW OF OIL AND GAS 120 (1987).

45This is the same as a cotenant-like property interest.
This affirmative right to conduct, for example, hydraulic fracturing, presents correlative rights in a context that has not been articulated by the courts. Instead, most of the cases have viewed correlative rights in the context of a right to restrain another member of the community from doing something that will injure the reservoir; or to compensate for another member’s damage to the reservoir impacting the community. When viewed as an affirmative right, the focus shifts to the real issue: the community-impacting activity the operator desires to pursue. If it is “good” for the community, it is permissible; if it is “bad” for the community, it can be enjoined.

As I have written before: “The most important aspect of correlative rights are the extraterritorial rights created in each owner in the reservoir.” In describing the affirmative aspect of correlative rights, I have previously offered the following:

For example, if A is engaging in acts totally within the boundaries of A’s property, but the activity negatively impacts the reservoir in some way, B and others owning rights in the reservoir may be able to enjoin A to protect their property interests in the reservoir. Similarly, B may have the affirmative right to impact A’s property to the extent it positively impacts the reservoir in some way. This second observation my appear to be a bit radical, but it is the logical corollary of the first principle. Parties owning property in a reservoir must be cognizant of the rights of all parties to effectively maximize their rights in the reservoir, so long as it does not injure the reservoir. This prevents one party from trying to artificially fence-off their connected tract when they do not agree with what is best for the collective owners of the reservoir. There are individual rights and collective rights that must be evaluated to define each party’s precise rights and duties under a given set of circumstances.

These same principles can be applied to resolve the more intrusive community rights situations, such as enhanced recovery operations. Although the issue in Trees Oil Co. v. State Corp. Comm’n concerned a compulsory unitization order, discussions before the Kansas Corporation Commission regarding correlative rights are instructive. The unitization order authorizing a

46This is a major failing of the Texas Supreme Court’s analysis in Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1 (Tex. 2008). See Poindexter, supra note 8, at 779.
47E.g. Elliff v. Texon Drilling Co., 210 S.W.2d 558 (Tex. 1948) (duty not to negligently conduct operations that damage the reservoir and the ability of adjacent landowner to exercise their capture rights).
49Id. at 768-69 (footnote omitted).
50105 P.3d 1269 (Kan. 2005).
 watering flood operation required a non-consenting working interest owner, Trees Oil Company, to shut
down a well which was currently generating a positive cash flow. During a “fairness hearing” the
author testified regarding the role correlative rights should play in the Commission’s analysis. What
follows is a description of what transpired at the hearing:

Although not addressed in the justices’ opinions, one of the more interesting
discussions during the hearing before the Commission was the essence of Trees’
working interest “ownership” in a pressure-connected reservoir. During the hearing
I noted that the concept of “correlative rights” consists of two elements: “rights” that
are “correlative.” This is best demonstrated by Trees’ major objection: they have a
well producing on their leased land that is generating a positive cash flow for the
company. How can they be forced to give up this cash flow for potential income in
the future? The answer concerns the “connected” nature of their lease. Because they
are part of a reservoir, and actions on their land can impact the rights of the owners
of 16 other wells in the proposed unit (and those well owners can, in turn, impact the
Trees well), the correlative nature of their interest is a limitation on their rights. The
correlative nature of the interest also gives them rights in the reservoir as a
whole—these are reciprocal rights being exercised by the other owners to make Trees
go along with decisions that have been reviewed and approved by the Commission.
The Commission is concerned with protecting the correlative rights of all owners in
the reservoir while also seeking to conserve the oil and gas resource through the
prevention of “waste.”

VI. CONCLUSION

Horizontal drilling and hydraulic fracturing will create trespass issues in shale plays. The
first step in evaluating a trespass claim will be to clearly define the property interest. When defining
the property interest, be cognizant that in the subsurface environment the ad coelum concept has
been limited in many contexts. More importantly, consider whether the complete bundle of sticks
has been identified when dealing with rights within a reservoir. The potential exists that correlative
rights will confer on operators affirmative community rights that authorize development techniques,
such as hydraulic fracturing, that transcend intra-reservoir boundary lines.

51Discussion Notes, 162 OIL & GAS RPTR. 498, 499-500 (2007); also reproduced in JOHN