

MINIMIZING THE ENVIRONMENTAL IMPACT
OF OIL AND GAS DEVELOPMENT BY
MAXIMIZING PRODUCTION CONSERVATION

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ABSTRACT

One oil and gas well results in less environmental impact and surface disruption than two wells. The number of wells required to efficiently develop an oil and gas reservoir can be significantly reduced, while increasing the ultimate recovery of the oil and gas resource, if the reservoir can be developed without regard for the rule of capture. Current oil and gas “conservation” regulation is built around the rule of capture, which creates the legal necessity to be associated with an oil and gas well in order to secure rights in the oil and gas. By shifting the focus of rights in oil and gas reservoirs away from capture rights and toward correlative rights, state oil and gas conservation commissions can better manage development of the oil and gas resource, allowing all interested parties to maximize recovery of their oil and gas resources while minimizing the impact on surface and other natural resources.

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I. INTRODUCTION

American property law has conspired against the oil and gas industry since the first wells were drilled and courts were called upon to define rights in the oil and gas resource. The “rule of capture” was initially a rule of necessity that quickly became the foundational principle for defining rights in oil and gas.¹ The rule simply provides that in order to perfect ownership in oil and gas, you must associate yourself with a well that extracts the oil and gas from beneath your land.² Unfortunately, the venerable rule of capture continues as the foundation of property in oil and gas.

Although the rule of capture spawned the oil and gas production conservation movement,³ the promise of production conservation has never been fully realized.⁴ Today, every state’s system of oil and gas conservation regulation, including that of North Dakota, has the rule of capture at its

1. See, e.g., *Hail v. Reed*, 54 Ky. 383, 383-84 (1854) (explaining that when courts began defining oil and gas rights, it was believed that oil and gas flowed in underground streams and would be forever lost unless immediately reduced to possession); see also 1 EUGENE KUNTZ, A TREATISE ON THE LAW OF OIL AND GAS 111 (1987) (“From the early opinions, it is apparent that it was believed that oil and gas were migratory in the [same] sense that they flowed in underground streams or were otherwise capable of lateral migration even when there had been no artificial interference with the structures containing them.”) (citations omitted); *Continental Resources, Inc. v. Farrar Oil Co.*, 559 N.W.2d 841, 844 (N.D. 1997) (“It was thought that oil, like water, flowed in underground streams, and the law analogized the ownership of oil to the ownership of water and wild animals that could be captured when they crossed one’s property.”) (citing 1 BRUCE M. KRAMER & PATRICK H. MARTIN, THE LAW OF POOLING AND UNITIZATION § 2.01 (3d ed. 1996)).

2. *Barnard v. Monongahela Natural Gas Co.*, 65 A. 801, 802 (1907) (reciting a classic statement of the rule where an owner’s sole protection from drainage toward producing wells on other lands is to “do likewise” by drilling wells to capture oil and gas within the owner’s land).

3. ROBERT E. SULLIVAN, HANDBOOK OF OIL AND GAS LAW 253-54 (1955) (citations omitted). Professor Sullivan traces the development of conservation regulation in his treatise, noting, “The transition has been from unrestrained production necessitated by the Rule of Capture and judicial recognition of the right to commit waste to regulated production and the prohibition of waste.” *Id.*

4. See David Edward Pierce, *Coordinated Reservoir Development—An Alternative to the Rule of Capture for the Ownership and Development of Oil and Gas: Part I*, 4 J. OF ENERGY L. & POL’Y 1, 4 (1983). The author observed twenty-seven years ago, “Although the benefits of production conservation are readily recognized, the American oil and gas property system has evolved into the single major obstacle to realizing the great potential of production conservation.” *Id.* Interestingly, nothing has changed in twenty-seven years to alter the accuracy of this statement; it is as relevant today as it was in 1983.

core.⁵ Until this is changed, waste in the form of unnecessary drilling, and the associated environmental degradation, will continue; the inability to maximize recovery of the available oil and gas resource will continue. The capture regime will also haunt technological advances that require cooperation instead of competition in the subsurface porous and permeable rock structures where oil and gas reside. Whether contemplating hydraulic fracturing or carbon sequestration, a capture-based property regime will continue to create conceptual, practical, and artificial hurdles for developers.⁶

The quick-fix common law solution to the historical capture-based property regime is to embrace the connected nature of the common reservoir instead of competing with it.⁷ This can be done by elevating “correlative rights” principles to the position now held by the rule of capture.⁸ Elevating correlative rights to this position can be accomplished by motivated oil and gas conservation commissions and a public that demands

5. This means owners must have a well associated with their land in order to protect their oil and gas interests through production. The reference to a well “associated with their land” means the owners either have a well physically on their land or within a pooled area in which their land participates.

6. *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 9-17 (Tex. 2008) (discussing the Texas Supreme Court’s recent attempt to address the propriety of hydraulic fracturing under the rule of capture and traditional property ownership concepts). The court, in a 5-4 decision, applied the rule of capture to avoid determining whether a fracture that crossed a property boundary constituted a trespass. *Id.* at 17 (“[W]e hold that damages for drainage by hydraulic fracturing are precluded by the rule of capture.”).

7. See generally AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, PETROLEUM CONSERVATION 248-51 (Stuart E. Buckley ed., 1951) (discussing the damage caused to reservoirs by the rule of capture).

8. The term “correlative rights” is commonly used in two different contexts. The first is in conjunction with the rule of capture and oil and gas conservation legislation. If an owner’s capture rights are restrained by conservation regulation, other owners in the common reservoir must be similarly restrained to protect each owner’s correlative rights. Prior to any regulatory restraint, each owner can, and must, rely upon their self-help capture rights. However, once an owner’s capture rights are limited by regulation, the regulatory body must ensure the owner’s correlative rights are protected in other ways. Generally this is done through limitations placed on all owners in the common reservoir to achieve a greater conservation good, such as the “prevention of waste” with the resulting “protection of correlative rights.” See, e.g., *Hystad v. Indus. Comm’n*, 389 N.W.2d 590, 597 (N.D. 1986). The court also stated that

[e]ven if a pool is in the early stages of development, the Commission’s focus in establishing spacing units must consider the right of each owner to recover a just and equitable share of the common source of supply within the context of the other owners’ interest in that common source of supply.

Id. The second context in which the term “correlative rights” is used is to describe each owner’s basic property right in the common reservoir. The court in *Hystad* describes the rights as follows:

[C]orrelative rights includes [sic] interdependent rights and duties of each landowner in the common source of supply. Each landowner is entitled to a just and equitable share of oil or gas in the pool; however, that right is limited by the landowner’s duty to all the other owners of interests in the common source of supply not to damage or take an undue proportion of the oil or gas from that common source of supply.

Id. at 596.

more from the commissions than the commissions have been willing to deliver to date. Perhaps the Sierra Club and other environmental groups can pick up where Henry Doherty left off by moving the industry the next mile toward true production conservation.⁹ It is ironic that it may take, at this late date, outside environmental forces to accomplish what the visionaries of the oil and gas industry have been unable to accomplish during its 150 years of existence.

II. RULE OF CAPTURE AND “WASTE”

Regardless of the conceptual ownership regime a state adopts to define rights in oil and gas, oil and gas ownership and development in all states is ultimately governed by the rule of capture.¹⁰ Under the rule of capture, you must have rights in a well to secure your opportunity to perfect a property interest in oil and gas; no well means no property rights in the in oil and gas.¹¹ Extraction of oil and gas is the defining event when inchoate ownership becomes property. The more you can extract, the more you convert from conceptual ownership to actual ownership. More wells, operated at their maximum rates of production, yield more real ownership of oil and gas. Although this may result in unnecessary damage to the environment, excessive occupancy and use of surface resources, and tremendous waste of the oil and gas resource itself, it is all justified by a simple common law reality: if you do not produce the oil and gas and reduce it to property, someone else will.¹²

9. DANIEL YERGIN, *THE PRIZE: THE EPIC QUEST FOR OIL, MONEY & POWER* 220 (1992). Henry Doherty controlled the Cities Service group of companies and, as one scholar on the oil industry noted, “He was insistent, tiresomely so, on one theme: The ‘rule of capture’ had to be eliminated.” *Id.* Doherty called for unitization of all oil and gas fields through federal mandate. *Id.* at 221.

10. 1 EUGENE KUNTZ, *A TREATISE ON THE LAW OF OIL AND GAS* 116 (1987) (“As to the matter of ownership of the extracted substances, it is uniformly recognized or assumed by the courts that the landowner who extracts the oil or gas from beneath his land acquires absolute ownership of the substances extracted, without regard to the manner of extraction.”) (citations omitted).

11. Professors Anderson and Smith refer to the rule of capture, and conservation regulation that has evolved to deal with the rule, as “well-by-well regulation.” Owen L. Anderson & Ernest E. Smith, *Exploratory Unitization Under the 2004 Model Oil and Gas Conservation Act: Leveling the Playing Field*, 24 J. LAND RESOURCES & ENV’T L. 277, 278, 280 (2004) [hereinafter Anderson & Smith, *Exploratory Unitization*]; Owen L. Anderson & Ernest E. Smith, III, *The Use of Law to Promote Domestic Exploration and Production*, 50 INST. ON OIL & GAS L. & TAX’N 2-1, 2-65 (1999) [hereinafter Anderson & Smith, *Domestic Exploration and Production*] (referring to the conservation regulation that has evolved to deal with the rule of capture as “well-by-well regulation”).

12. See Howard R. Williams, *Conservation of Oil and Gas*, 65 HARV. L. REV. 1155, 1156 (1952). Professor Williams observed over fifty years ago, “The impact of the rule of capture upon the fact of divided interests in minerals presents the major obstacle to scientific development of petroleum-producing formations.” *Id.* His observation is as accurate today as it was in 1952.

All of the losses associated with the rule of capture are measured against the alternative measure of zero, which is what you get if you do not associate with a well and engage in capture of the resource. Because the negative aspects of the rule are shared with others in the reservoir and society at large, seldom will the negatives of engaging in the practice yourself be less than zero. This means that so long as the projected volume and value of captured oil and gas exceed the cost of drilling wells and the required return on investment, wells will be drilled even though the “cost” to others in the reservoir and society at large may far exceed any one individual’s return on investment. This is the oil and gas industry’s “tragedy of the commons.”¹³

The industry has been cognizant of this tragedy and has fought to mitigate it since the inception of the industry. Major strides had been made by 1960,¹⁴ but even today the promise of oil and gas conservation has not

13. See generally Garrett Hardin, *The Tragedy of the Commons*, 162 *SCIENCE* 1243, 1244-45 (1968). Although Professor Hardin focuses on the “commons” associated with grazing lands and the use of air and water for the discharge of pollutants, the same sort of “tragedy” occurs in the oil and gas setting where a rule of property—the rule of capture—dictates behavior that is antithetical to public rights and private community rights in the oil and gas resource. The rule dictates conduct that would not normally be pursued but for the incentives created by an imperfect capture-based property regime.

14. ROBERT E. HARWICKE ET AL., CONSERVATION OF OIL & GAS ix-x (Robert E. Sullivan ed. 1960). The Section of Mineral and Natural Resources Law of the American Bar Association, as well as a committee of oil and gas law experts, assembled materials assessing the status of oil and gas conservation regulation as of 1958. *Id.* In his *Report on Progress in Conservation, 1948-1958*, Robert E. Hardwicke observed:

A fine job of waste prevention has been done, partly by state regulation, partly by voluntary practices of operators, and partly by the aid given by the federal government, especially by enforcement of the Connally Hot-Oil Act and through research and reports by scientists in the United States Bureau of Mines.

Id. at 4. In 1964, the Interstate Oil Compact Commission published a study of oil and gas conservation that summarizes accomplishments in the area since the 1930s as follows:

The transition of the petroleum industry and the concurrent evolution of conservation laws and regulations that have occurred during the past 35 years have been truly remarkable. From the highly individualistic oil producers of a few decades ago has emerged, with incredible speed, a branch of a major industry that is comprehensively and constructively regulated by the states to attain the most efficient exploration for, development of, and recovery of the oil and gas reserves, and to protect the rights of all whose interests are involved.

INTERSTATE OIL COMPACT COMM’N, A STUDY OF CONSERVATION OF OIL AND GAS IN THE UNITED STATES xxiii (Robert E. Hardwicke et al. eds., Interstate Oil Compact Comm’n 1964). The major accomplishments as of 1965 included spacing, pooling, and prorating production to a projected market demand. *Id.* at 176-82. Unitization to allow development of a common reservoir without regard for the rule of capture remained, as it does today, a mere aspiration. *Id.* at 185-86.

been realized.¹⁵ The failure of conservation regulation is simple: the statutes in every state operate on a capture-based property model.¹⁶

A. THE FAILURE OF STATE CONSERVATION LAWS

All states unnecessarily tolerate environmental degradation, excessive surface use, and other forms of “waste” of the oil and gas resource.¹⁷ This is because all state oil and gas “conservation”¹⁸ statutes have the rule of

15. Anderson & Smith, *Domestic Exploration and Production*, *supra* note 11, at 2-76 to 2-81 (discussing the many significant problems associated with existing compulsory unitization statutes).

16. Professors Anderson and Kramer note the rule of capture is essential for the efficient operation of the existing conservation laws. Bruce K. Kramer & Owen L. Anderson, *The Rule of Capture—An Oil and Gas Perspective*, 35 ENVTL. L. 899, 899 (2005) (“[C]ontinued recognition of the rule [of capture], together with recognition of correlative rights, is essential to the efficient administration of conservation laws.”). Kramer and Anderson state:

Although the rule of capture is constrained by conservation legislation aimed at minimizing, if not eliminating, many of the ‘social costs’ of the rule, the rule is actually at the heart of much conservation legislation—making it possible to further the goals of preventing waste, protecting correlative rights, and conserving oil and gas.

Id. at 901. Their position is explained further by observing, “The rule of capture remains important to efficient conservation law because, without it, conservation regulations would be much more complicated, more time consuming, and more costly to administer . . .” *Id.* at 951. In other words, Anderson and Kramer are stating that, given the conservation system that has evolved and exists today, recognition of the rule of capture is necessary to make it work. That is, the rule of capture is at the core of existing conservation regulation. The policy issue is whether that status quo is acceptable. After making their observations about what “is” regarding oil and gas conservation, Professors Anderson and Kramer note that they too aspire for something better than the status quo by supporting “early unitization of oil and gas reservoirs.” *Id.* at 954. Compared to unrestrained capture, the conservation glass is “half full;” compared to conservation gains associated with negating the rule of capture, the glass is “half empty.”

17. *See, e.g.*, N.D. CENT. CODE § 38-08-03 (2004). North Dakota’s oil and gas conservation act provides, “Waste of oil and gas is prohibited.” *Id.* “Waste” is defined broadly to include:

- a. Physical waste, as that term is generally understood in the oil and gas industry.
- b. The inefficient, excessive, or improper use of, or the unnecessary dissipation of reservoir energy.
- c. The locating, spacing, drilling, equipping, operating, or producing of any oil or gas well or wells in a manner which causes, or tends to cause, reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations, or which causes or tends to cause unnecessary or excessive surface loss or destruction of oil or gas.
- d. The inefficient storing of oil.
- e. The production of oil or gas in excess of transportation or marketing facilities or in excess of reasonable market demand.

Id. § 38-08-02(16).

18. Even the term “conservation” regulation has a somewhat checkered past. The term “conservation” was chosen because it sounds much better than state-sanctioned “price fixing.” *See Pierce, supra* note 4, at 62-63 (quoting Marshall & Myers, *Legal Planning of Petroleum Production*, 41 YALE L.J. 33, 65 (1931) (“Conservation even to the statesman is more a matter of price levels than the elimination of wastes.”)).

capture as their foundation.¹⁹ To protect your “correlative rights” in the oil and gas in place, you need a well. The oil and gas conservation authority will issue a drilling permit if the applicant can show compliance with, among other requirements, “spacing” regulations.²⁰ Spacing regulations are premised on either a state-wide rule²¹ or a special rule that seeks to define the maximum area that can be efficiently drained by a single well.²² This is a capture model. To perfect ownership in the oil and gas beneath your property, you need to be associated with a well. Spacing requirements merely specify that the rule of capture must be played using squares and rectangles. Pooling adds nothing to the mix, except to provide a mechanism to combine separate properties within the designated square or rectangle with which the capture game must be played.²³ Although no one would deny that conservation laws have averted a substantial amount of waste, they have done so by tacitly accepting a substantial amount of waste through the preservation of a capture-based regulatory regime.

19. Instead of seeking to alter the rule of capture, which precipitated the need for conservation regulation, regulation has been designed around the rule to accommodate its core concept: you must have a well and extract oil and gas from your land in order to perfect ownership of the resource. The resulting conservation regulation merely sets ground rules for playing the capture game. *Id.* at 62 (“All producing states, by adopting conservation measures which fail to eliminate capture concepts, have accepted and continue to accept, substantial waste of the oil and gas resource.”).

20. *E.g.*, N.D. CENT. CODE § 38-08-05 (Supp. 2009) (“It is unlawful to commence operations for the drilling of a well for oil or gas without first obtaining a permit from the industrial commission under such rules as may be prescribed by the commission . . .”). This statute has been implemented by rule 43-02-03-16 of the North Dakota Administrative Code which requires an application for a permit to drill and provides, “No drilling activity shall commence until such application is approved and a permit to drill is issued by the director.” N.D. ADMIN. CODE 43-02-03-16 (2008). This allows the Oil & Gas Division of the North Dakota Industrial Commission to review the application and ensure it complies fully with all legal requirements, including Rule 43-02-03-18 concerning “Drilling Units—Well Locations.” *Id.* 43-02-03-18. The relevant oil and gas regulations, forms, orders, and other regulatory direction can be found at the North Dakota Industrial Commission, Department of Mineral Resources, Oil and Gas Division website, <https://www.dmr.nd.gov/oilgas/>.

21. *E.g.*, *Id.* 43-02-03-18(1). North Dakota establishes default “drilling units” for vertical or directional oil wells by requiring a governmental quarter-quarter section for completions “not deeper than the Mission Canyon formation” and a governmental quarter section for wells projected to a depth “deeper than the Mission Canyon formation[.]” *Id.* This rule also specifies drilling units for horizontal wells and gas wells. *Id.* 43-02-03-18(1)(a)-(b).

22. The default drilling unit will be replaced by a commission order “prescribing a temporary spacing pattern for the development of the pool.” *Id.* 43-02-03-18(4). The rule contemplates that a hearing to establish a temporary spacing pattern will take place within thirty days following a discovery of oil or gas. *Id.* Within eighteen months from the time a temporary order is issued, the commission will adopt a final spacing order for the pool. *Id.* The commission must follow section 38-08-07 of the North Dakota Century Code when establishing spacing units. N.D. CENT. CODE § 38-08-07 (2009).

23. *E.g.*, N.D. CENT. CODE § 38-08-08(1) (“When two or more separately owned tracts are embraced within a spacing unit, or when there are separately owned interests in all or a part of the spacing unit, then the owners and royalty owners thereof may pool their interests for development and operation of the spacing unit.”).

B. MODEL OIL AND GAS CONSERVATION ACT

The latest version of the Model Oil and Gas Conservation Act (2004 Model Act), offered in 2004 by the Interstate Oil and Gas Compact Commission (IOGCC),²⁴ continues a capture-based regulatory regime. Although the 2004 Model Act offers up the laudable improvement of exploratory unitization,²⁵ it retains at its core the basic right to go-it-alone on a capture basis unless you can assemble a super-majority of like-minded working interest owners and royalty owners.²⁶ This means that most oil and gas fields will continue to be developed on a capture basis governed by a regime of spacing,²⁷ density regulation,²⁸ and pooling.²⁹ Field-wide unitization, and the newly proposed exploratory unitization, each require a working interest owner to take the initiative to seek unitization followed by a campaign to sell the concept to not less than sixty percent of the working interest and royalty interest owners.³⁰ This scheme ensures that the rule of

24. INTERSTATE OIL AND GAS COMPACT COMM'N, 2004 MODEL OIL AND GAS CONSERVATION ACT, available at <http://www.iogcc.state.ok.us/Websites/iogcc/docs/ModelAct-Dec2004.pdf> [hereinafter 2004 Model Act]. The IOGCC was formerly the Interstate Oil Compact Commission (IOCC). *Id.* at xiv-xv (summarizing the purpose and early work of the IOCC). The current mission and works of the IOGCC are described in its website. IOGCC, <http://www.iogcc.state.ok.us/> (last visited Mar. 8, 2010).

25. 2004 Model Act, *supra* note 24, §§ 22-28; see Anderson & Smith, *Exploratory Unitization*, *supra* note 11, at 286. Professors Anderson and Smith convincingly make the case for exploratory unitization, and provide an outline of how it can be implemented. Anderson & Smith, *Domestic Exploration and Production*, *supra* note 11, at 2-86 to 2-94.

26. 2004 Model Act, *supra* note 24, § 24. The Model Act contemplates the consent of sixty percent of the working interest owners and royalty owners before an exploratory unit can become effective. *Id.*

27. *Id.* § 10.

28. *Id.* § 10(a), lines 37-39. Density regulation is achieved under the 2004 Model Act by requiring that “a spacing unit must consist of the maximum area of a reservoir that may be efficiently and economically drained by one well . . .” *Id.*

29. *Id.* § 11.

30. Under the 2004 Model Act, a state’s regulatory commission is given, at most, very limited authority to initiate unitization. The 2004 Model Act begins by identifying those things the commission can “require” and those things it can “regulate.” Section 5 identifies those things the commission can “require” such as “the testing of wells used in oil and gas production . . .” *Id.* § 5(f). Unit operations are not included under any of the “require” categories. Instead, the commission is given the authority to “regulate,” as opposed to “require,” a “unit operation of any kind.” *Id.* § 7(g). However, for non-exploratory units the 2004 Model Act provides the commission, “upon its own motion. . . shall conduct a hearing to consider the need for unit operation of an entire reservoir or portion thereof, to increase ultimate recovery of oil or gas from that reservoir or portion thereof.” *Id.* § 13, lines 7-9. If the commission finds that unit operation is “reasonably necessary to prevent waste or to protect correlative rights[,]” then the commission “shall issue an order requiring unit operation . . .” *Id.* at lines 9-17. Although this seems to provide the commission with the authority to unitize, the 2004 Model Act still requires that any “order requiring a unit operation” be approved by at least sixty percent of the working interest and royalty interest owners. *Id.* § 17, lines 30-38 (emphasis added). The new exploratory unitization provisions require “application of an owner” to begin the process. *Id.* The commission cannot order a hearing on its own motion. *Id.* § 22, lines 15-17.

capture will determine the future development of oil and gas fields even in states that adopt the most recent version of the Model Act.

C. NORTH DAKOTA'S OIL AND GAS CONSERVATION ACT

The North Dakota Oil and Gas Conservation Act³¹ is patterned after earlier versions of the Model Oil and Gas Conservation Act.³² As with the model acts, North Dakota's act places primary reliance on spacing³³ and pooling³⁴ to moderate the rule of capture. The North Dakota provisions on unitization are, on balance, generally better than in many states because a field can be unitized with the approval of sixty percent of working interest and royalty interest owners, "excluding overriding royalties, production payments, and other interests carved out of the working interest . . ." ³⁵ However, the statute still contemplates a passive role for the state regulatory commission in evaluating and approving a unitization petition submitted by a working interest owner,³⁶ and any commission order requires approval by at least sixty percent of the affected working interest and royalty interest owners.³⁷ The bottom line is that in North Dakota, as in other states, the rule of capture guides development of the oil and gas resource. The operative conservation technique, as in all other states, is essentially the spacing unit.

31. N.D. CENT. CODE §§ 38-08-01 to -23 (2004 & Supp. 2009).

32. See Kemp Wilson, *Conservation Acts and Correlative Rights: Has the Pendulum Swung Too Far?*, 35 ROCKY MTN. MIN. L. INST. 18-1, 18-10 n.19 (1989) ("North Dakota embraced the 1940 model provisions nearly before the ink was dry on the same, adopting them in toto during the 1941 legislative session and at a time when there were no producing oil wells in the state!"). North Dakota has long been recognized as a leader in adopting conservation legislation in a timely manner. See BLAKELY M. MURPHY, CONSERVATION OF OIL AND GAS, A LEGAL HISTORY, 1948 348-58 (1949) (detailing legislative history from 1907 to 1948); CONSERVATION OF OIL AND GAS, A LEGAL HISTORY—1958 171-81 (Robert Sullivan ed., 1960) (detailing legislative history from 1951 to 1958).

33. N.D. CENT. CODE § 38-08-07 to -08 (2004 & Supp. 2009). "When necessary to prevent waste, to avoid the drilling of unnecessary wells, or to protect correlative rights, the commission shall establish spacing units for a pool . . ." § 38-08-07.

34. *Id.* § 38-08-08 ("In the absence of voluntary pooling, the commission upon the application of any interested person shall enter an order pooling all interests in the spacing unit for the development and operations thereof . . .").

35. *Id.* § 38-08-09.5. Generally, the approval percentages are higher in other states. See Anderson & Smith, *Domestic Exploration and Production*, *supra* note 11, at 2-78 (citing states with percentages ranging from 63% to 80%).

36. N.D. CENT. CODE § 38-08-09.3 (2004 & Supp. 2009). It is not clear under the North Dakota statute whether the commission can file a "petition" or whether the commission must wait for action by a working interest owner. Section 38-08-09.3 states, "If upon the filing of a petition . . ." *Id.* There is nothing to indicate who can file the petition, but subsequent sections assume it will be a working interest owner. *Id.* §§ 38-08-09.3 to -09.11.

37. *Id.* § 38-08-09.5.

III. CORRELATIVE RIGHTS: THE FORGOTTEN CORNERSTONE OF OIL AND GAS PROPERTY LAW

Correlative rights recognize that each owner overlying an oil and gas reservoir has rights and duties with regard to other owners above the reservoir. The connected nature of the reservoir rock structure³⁸ makes it possible for any owner conducting operations within the reservoir to impact other owners.³⁹ Conceptually, this initially appears to be a nuisance-based right: one owner cannot use its land so as to unreasonably interfere with the use of surrounding lands. At the surface, the common medium being fouled is often air, water, or land. Beneath the surface, the common medium, regarding oil and gas, is the porous and permeable rock structure where the oil and gas reside.⁴⁰ Correlative rights, however, are more “property” than “tort.” Nuisance is a tort remedy to protect property; it does not define the property itself. Therefore, ownership of the oil and gas gives rise to the associated correlative rights that define what can and cannot be done in the reservoir. Correlative rights are part of the bundle of sticks comprising ownership of the oil and gas, much like the rights to lateral and subjacent support are part of the bundle of sticks comprising land ownership.

The most important aspect of correlative rights are the extra-territorial rights created in each owner in the reservoir. 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

38. The connection may exist due to the porosity and permeability of the rock structure, the effective communication of minute fractures that comprise the rock structure, or a combination of the two.

39. *E.g.*, *Elliff v. Texon Drilling Co.*, 210 S.W.2d 558, 563 (Tex. 1948) (noting the existence of a landowner’s duty not to negligently conduct operations that damage the reservoir and the ability of adjacent landowners to exercise their capture rights). Generally this ability to impact others in the reservoir has been viewed as imposing *duties* on owners not to injure the reservoir. *Id.* However, it can also be viewed as conferring *rights* on owners to engage in prudent conduct within the reservoir even though it will impact others. *E.g.*, *Trees Oil Co. v. State Corp.* Comm’n, 105 P.3d 1269, 1287 (Kan. 2005) (discussing landowners’ correlative rights to conduct secondary recovery operations, pursuant to compulsory unitization statutes, even though it will interrupt non-consenting working interest owner’s current cash flow from a well within the unit boundary). This is the proper ownership context in which to address hydraulic fracturing issues. Due to the connected nature of the reservoir, and the availability of accepted hydraulic fracturing techniques to maximize recovery, each owner has the right to engage in the activity without liability to other owners in the reservoir. It is one of the correlative rights of being an owner within a common reservoir. See Theresa D. Poindexter, *Correlative Rights Doctrine, Not the Rule of Capture, Provides Correct Analysis for Resolving Hydraulic Fracturing Cases* [*Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1 (Tex. 2008)], 48 WASHBURN L.J. 755, 779 (2009).

40. See AM. PETROLEUM INST., INTRODUCTION TO OIL AND GAS PRODUCTION 1-6 (1983) (describing the basic principles of petroleum geology).

property to the extent it *positively impacts* the reservoir in some way. This second observation may 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 they do not injure the reservoir. This prevents parties 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.⁴¹

Individual rights and collective rights must be evaluated to define each party's precise rights and duties under a given set of circumstances. Correlative rights have been a recognized adjunct to oil and gas ownership for over 100 years.⁴² When courts were tentative regarding a state's right to control oil and gas development to protect the public against "waste," courts relied primarily on a private basis for state action: the protection of correlative rights.⁴³ Once state action for the prevention of waste became

41. In *Trees Oil Co. v. State Corp. Commission*, the Kansas Supreme Court upheld the Kansas Corporation Commission's compulsory unitization order, which required a non-consenting working interest owner to shut down a well that was currently generating a positive cash flow. 105 P.3d 1269, 1287 (Kan. 2005). Trees objected to unitization and just wanted to be left alone to produce its well. In the following excerpt, a witness for the unitization proponent (the author) describes the correlative rights discussion that took place during the "fairness hearing" before the commission:

Although not addressed in the justices' opinions, one of the more interesting discussions during the hearing before the Commission is 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 the 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."

Discussion Notes, 162 OIL & GAS RPTR. 498, 499 (2007), reproduced in JOHN S. LOWE ET AL., CASES AND MATERIALS ON OIL AND GAS LAW 291 (5th ed. 2008).

42. See *Mfrs' Gas & Oil Co. v. Indiana Natural Gas & Oil Co.*, 57 N.E. 912, 917 (Ind. 1900) (holding that the gas company could not use pumps that would accelerate the reduction of gas pressure of reservoir because it would accelerate salt water intrusion, adversely affecting other gas producers).

43. *Ohio Oil Co. v. Indiana*, 177 U.S. 190, 210 (1900). The United States Supreme Court explained:

Viewed, then, as a statute to protect or to prevent the waste of the common property of the surface owners, the law . . . in substance, is a statute protecting private property and preventing it from being taken by one of the common owners without regard to the enjoyment of the others.

ensconced in American jurisprudence,⁴⁴ the protection of correlative rights became a secondary basis for state action.⁴⁵ Too often courts have failed to recognize the important correlative rights component of oil and gas ownership, focusing instead on ill-fitting concepts such as the rule of capture. This seemingly “unseen” nature of correlative rights was recently illustrated by the Texas Supreme Court, which used the rule of capture to try to solve a problem that was, in essence, a correlative rights problem.⁴⁶

The rule of capture was used in *Coastal Oil & Gas Corp. v. Garza Energy Trust*⁴⁷ to avoid liability for hydraulic fracturing operations that sent a fracture through the reservoir underlying the operator’s property and into a portion of the reservoir underlying the land of an adjacent landowner.⁴⁸ Instead of evaluating the nature of the physical intrusion into the adjacent landowner’s portion of the reservoir, the court held liability did not exist because the only injury alleged was the loss of hydrocarbons through drainage.⁴⁹ The court concluded that because the drainage was encompassed by the rule of capture, no damage existed and, therefore, no liability resulted.⁵⁰ The obvious flaw in this analysis was the failure to address the lawfulness of the event giving rise to the drainage.⁵¹ If the event was

Id.

44. *Henderson Co. v. Thompson* has been identified as the first case where the United States Supreme Court relied upon a pure “waste” prevention rationale to uphold state action. 300 U.S. 258, 258-59, 262-64 (1937). Cases prior to *Henderson* mentioned waste prevention but were quick to also support the state’s action using a correlative rights rationale. See Pierce, *supra* note 4, at 58-62.

45. In *Burford v. Sun Oil Co.*, the United States Supreme Court volunteered the observation that the public’s interest in preventing waste can require “that the speculative interests of individual tract owners will be put aside when necessary to prevent the irretrievable loss of oil in other parts of the field.” 319 U.S. 315, 324 (1943).

46. See Poindexter, *supra* note 39, at 756-57.

47. 268 S.W.3d 1 (Tex. 2008).

48. *Coastal*, 268 S.W.3d at 13.

49. *Id.* at 1. The court first took a trip down the common law forms of action, noting that because the complaining party, the leased mineral interest owner, presently owned only a possibility of reverter in the leased land, the owner lack the necessary possessory interest to sue for trespass caused by the physical invasion. *Id.* at 9-11. Although “trespass on the case” provides a cause of action for injury to a non-possessory interest, the owner of the reversion could not rely upon a mere trespass on the land—which right resides with the possessory interest owner—but rather must have proved “actual permanent harm to the property of such sort as to affect the value of his interest.” *Id.* at 9-10.

50. *Id.* at 17 (“[W]e hold that damages for drainage by hydraulic fracturing are precluded by the rule of capture.”).

51. Concurring Justice Willett, along with the three dissenting justices, would have addressed the trespass issue. *Id.* at 29 (“Such encroachment isn’t just ‘no actionable trespass’; it’s no trespass at all.”) (Willett, J., concurring); *id.* at 42 (“I would not address whether the rule of capture precludes damages when oil and gas is produced through hydraulic fractures that extend across lease lines until it is determined whether hydraulically fracturing across lease lines is a trespass.”) (Johnson, J., dissenting).

lawful, the drainage would have been legitimate under the rule of capture. If the event was not lawful, the drainage would not have been legitimate and, therefore, the draining party would not have been exempt from liability. The legitimacy of the drainage depends upon whether the fracture crossing a boundary line is more like slant drilling, as opposed to legitimate completion operations of a well properly bottomed on the developer's property.

Addressing the issue in a surface-oriented context suggests that any entry into the adjacent lands is a trespass.⁵² But addressing the issue in a correlative rights context requires that the conduct itself be evaluated to determine whether it is appropriate behavior within the reservoir community.⁵³ Under a correlative rights analysis, if the hydraulic fracturing is held to be "appropriate behavior within the reservoir community," the resulting drainage will be protected by the rule of capture. On the other hand, if the hydraulic fracturing is held to violate correlative rights of others within the reservoir community, drainage will not be protected by the rule of capture.

Using a correlative rights analysis requires that the true nature of all owners' rights in the reservoir be defined before the conduct at issue is evaluated. It is not a simple trespass issue because each owner overlying the reservoir in fact has rights in the reservoir beneath every other owners' land. This creates a sort of cotenant-like relationship throughout the common reservoir, where no single owner has exclusive rights or an absolute say as to what can or cannot take place within the reservoir. When it is recognized that each owner possesses certain undivided rights within the

52. The court in *Coastal* acknowledges this, stating, "Had Coastal caused something like proppants to be deposited on the surface of Share 13 [the adjacent land], it would be liable for trespass . . ." *Id.* at 11. "Proppants" are the material left behind to prop open the fissures created in the reservoir rock by the hydraulic fracturing fluid. See John W. Broomes, *Wrestling with a Downhole Dilemma: Subsurface Trespass, Correlative Rights, and the Need for Hydraulic Fracturing in Tight Reservoirs*, 53 ROCKY MTN. MIN. L. INST. § 20-1, § 20-5 (2007) (describing the hydraulic fracturing process).

53. KUNTZ, *supra* note 10, at 120. Professor Kuntz observed:

The owners in the common source of supply operate in a special community and the social acceptability of conduct within such community must be determined, not only by applying the standards applicable to conduct generally, but by also considering the utility of the conduct in the light of the peculiar consequence to others operating in the same community.

Id. Professor Kuntz was conceptualizing this "special community" standard as a limitation on what owners can do on their land. He prefaced his comment with the statement, "It is a simple doctrine that owners of rights in a common source of supply may not inflict loss upon one another by conduct which is considered to be socially undesirable." *Id.* *Coastal* provides an opportunity to refine Professor Kuntz's observations by finding that each owner in the "special community" possesses an affirmative right to engage in conduct deemed socially desirable in the community—such as hydraulic fracturing that increases recovery from the reservoir comprising the special community.

reservoir, it becomes apparent that intra-reservoir issues lack the basic exclusivity required for the application of trespass concepts. This is what the court missed in *Coastal*. Although the court purported to depart from traditional *ad coelum* concepts,⁵⁴ a departure was not necessary because the exclusivity contemplated by *ad coelum* concepts simply does not exist regarding issues among owners within a common reservoir. Similarly, the rule of capture does not come into play until the underlying property rights of the parties are defined. The property model the court operated under was a single landowner that had total dominance over his or her property—another classic *ad coelum* concept.⁵⁵ However, this was not an accurate model because no single landowner has total dominance over a common reservoir that underlies lands owned by others.⁵⁶ Instead, an owner's rights are correlative.

Correlative rights are the essence of oil and gas ownership in a common reservoir. An owner's capture rights are limited by the correlative rights of other owners that impose reciprocal duties on each owner not to exercise their capture rights, or any other rights, that could impair maximum efficient recovery of the oil and gas resource from the reservoir. Correlative rights, consistent with the public interest in preventing waste, focus on maximizing the resource benefits for all reservoir co-owners as opposed to merely maximizing an individual owner's capture rights. Once conservation statutes and oil and gas ownership are properly oriented around correlative rights as opposed to capture rights, courts and administrative agencies can, for the first time, truly approach the effective prevention of waste and protection of correlative rights.

54. *Coastal*, 268 S.W.3d at 11. The Texas Supreme Court observed in *Coastal*:

[F]rom the ancient common law maxim that land ownership extends to the sky above and the earth's center below, one might extrapolate that the same rule should apply two miles below the surface. But that maxim—*cujus est solum ejus est usque ad coelum et ad inferos*—"has no place in the modern world." Wheeling an airplane across the surface of one's property without permission is a trespass; flying the plane through the airspace two miles above the property is not. Lord Coke, who pronounced the maxim, did not consider the possibility of airplanes. But neither did he imagine oil wells. The law of trespass need no more be the same two miles below the surface than two miles above.

Id. (footnotes omitted).

55. *Id.* at 11.

56. *E.g.*, *Elliff v. Texon Drilling Co.*, 210 S.W.2d 558, 559-63 (Tex. 1948) (observing that gas and distillate migrating from adjacent lands and produced from out-of-control well were not subject to the rule of capture because the operator negligently allowed the well to blow out).

IV. IMPLEMENTING A CORRELATIVE RIGHTS-BASED SYSTEM FOR DEVELOPING OIL AND GAS

A. A CALL FOR ACTION—WHERE IS THE SIERRA CLUB?

The oil and gas industry, and the governments that regulate it, have been content with an imperfect capture-based system for preventing waste and protecting correlative rights. This means the catalyst for change to a more effective system for preventing waste and protecting correlative rights will most likely have to come from forces outside the industry and its regulators. “Waste” associated with the development of oil and gas resources is a subject that should be on the list of every public interest organization interested in sustainable development, conservation, alternative sources of energy, and environmental protection. Once environmental groups acknowledge that oil and gas development will take place, they have an interest in seeing that it is pursued so as to maximize recovery of the resource with minimal environmental impact.⁵⁷

Most of the efforts of public interest environmental organizations are directed toward preventing or at least obstructing development. Environmental organizations’ ideal world is one in which no oil or gas is consumed.⁵⁸ One way to prevent consumption is to prevent development of the resource, or at least make it more expensive to develop thereby making alternative energy resources more competitive. When the climate change card is played, it provides environmental organizations with the moral imperative for eliminating the oil and gas industry altogether.⁵⁹ It is hard

57. See Ben Casselman, *Sierra Club’s Pro-Gas Dilemma, National Group’s Stance Angers On-the-Ground Environmentalists in Several States*, WALL ST. J., Dec. 22, 2009, at A6, available at <http://online.wsj.com/article/SB126135534799299475.html> (noting that the national Sierra Club has endorsed the development and use of natural gas as a bridge fuel to wean the country off of coal and oil as it moves towards renewable energy sources such as wind and solar power).

58. See, e.g., Center for Biological Diversity, http://www.biologicaldiversity.org/programs/public_lands/energy/dirty_energy_development/ (under the heading “Dirty Energy Development”) (last visited Mar. 8, 2010) (noting that “the ultimate result of oil and gas development is fossil fuel consumption, which pollutes our air and water and contributes to the global warming that threatens us all”).

59. John Dickerson, “*What in the Hell Do They Think is Causing It?*”: *Al Gore Talks About Global Warming, Those E-mails, and His New Book*, SLATE, Dec. 8, 2009, available at <http://www.slate.com/id/2237789/>. If you build your organization’s reason for existing around a specific problem, such as water pollution, and a regulatory system develops to solve or at least effectively manage the problem, the organization ceases to be relevant. However, if the problem is much more generic, like carbon emissions, relatively unsolvable in the short term, and associated with consequences of biblical proportions, the organization will remain relevant so long as the public believes in the looming threat posed by the problem. The only risk to such a program is with information that: (1) raises doubt as to the theory on which the problem is based; (2) raises doubt about government’s ultimate ability to solve or mitigate the problem; or (3) accurately identifies the real costs to the citizenry to address the threat. Environmental strategists must also

for the public to ignore a real, looming, global catastrophe in the making—unless, of course, responding to it will require significantly increasing a consumer’s electric bill—then all bets are off; bring on Armageddon!

Until that glorious day when oil and gas are no longer important to the world and the American people, it will be extracted from the ground in North Dakota and elsewhere.⁶⁰ Therefore, it becomes important for the task to be accomplished in the most efficient and effective manner possible while minimizing adverse environmental impacts. This should be a concern to all environmental groups, even those with the mission of ultimately shutting down the oil and gas industry. In the meantime, significant environmental benefits can be obtained by simply advocating for a more demanding regulatory program of preventing waste and protecting correlative rights. Such a program is possible by pursuing regulatory and development policies that treat correlative rights as the foundational property principle instead of the rule of capture. The required program of public

be careful not to place a precise time line for Armageddon or suggest that it is too late to solve the problem. Al Gore, in January 2006, suggested we may have only ten years to act. William Booth, *Al Gore, Sundance’s Leading Man, “An Inconvenient Truth” Documents His Efforts To Raise Alarm on Effects of Global Warming*, WASH. POST, Jan. 26, 2006, available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/01/25/AR2006012502230.html> (“[Al Gore] is also a very serious guy who believes humans may have only 10 years left to save the planet from turning into a frying pan.”). Mr. Gore has, more recently, focused less on a time line and more on the impact of failing to act. In a recent interview for *Slate*, Al Gore observed: We face the gravest threat that civilization has ever confronted. It’s global in nature and requires a global solution. Increased CO₂ emissions anywhere, whether from China or the United States or from one of the countries that is burning its forests like Brazil or Indonesia—from wherever the emissions come, they have the same effect: They trap much more heat from the sun, melt the ice, raise the sea level, cause stronger storms, floods, drought, bigger fires, generate millions of climate refugees, destabilize political systems, threaten the growing of food crops and cause a number of other catastrophic consequences which, taken together, threaten the basis for the future of human civilization on the Earth. Because these consequences are distributed globally, the problem masquerades as a distraction. Because the length of time between causes and consequences stretches out longer than we’re used to dealing with, it gives us the illusion that we have the luxury of time. Neither of those things is true. The crisis is a concrete threatening reality today. It stands to get catastrophically worse unless we take action before the accumulation [of] this global warming pollution reaches such toxic levels that the problem becomes bigger than we can solve.

John Dickerson, “*What in the Hell Do They Think is Causing It?*”: *Al Gore Talks About Global Warming, Those E-mails, and His New Book*, SLATE, Dec. 8, 2009, available at <http://www.slate.com/id/2237789/>.

60. The latest forecast of United States energy consumption into the year 2035 projects that fossil fuels will continue to provide 78% of all the energy used in 2035. Total energy consumption is predicted to grow by 14% between 2008 and 2035. United States crude oil production is predicted to increase from 5 million barrels per day in 2008 to over 6 million barrels per day in 2027 and continuing at that level through 2035. Press Release, U.S. Energy Info. Admin., EIA Energy Outlook Projects Moderate Growth in U.S. Energy Consumption, Greater Use of Renewables, and Reduced Oil and Natural Gas Imports (Dec. 14, 2009), available at <http://www.eia.doe.gov/neic/press/press334.html>.

interest intervention into the actual development of oil and gas can be pursued at several levels.

B. A PLAN FOR ACTION

To effectively attack the entrenched capture-based approach to conservation regulation, an appropriate coalition of industry, environmental, and consumer interests must prepare to make its case before each state's oil and gas conservation agency, reviewing courts, and the state legislature.⁶¹ The coalition's goal should be to shift the capture-based well-by-well regulatory systems to a correlative rights-based reservoir regulatory system.

First, environmental groups should seek out industry support for the concept of developing oil and gas resources in the state on a reservoir basis as opposed to a well-by-well basis. Although it is doubtful support will come from any of the industry associations,⁶² there are probably a few enlightened engineer-dominated companies in each state that would readily appreciate the benefits of reservoir development.⁶³ Many of these same companies would most likely welcome the opportunity to work with environmental groups that advocate any sort of constructive form of oil and gas development.⁶⁴ Consumer groups are likely to join any campaign that promises to reduce the ultimate cost of producing oil and gas. In many states, there may be state-sanctioned consumer advocacy groups that traditionally focus their efforts on utility rate-making issues.⁶⁵ When consumer

61. An alternative plan would involve federal legislation that requires all states to adopt oil and gas conservation practices that maximize production conservation while minimizing environmental impacts.

62. Industry associations typically have too diverse a mix of membership to take on controversial issues. This would certainly qualify as a controversial issue. The most likely opponents to abandoning well-by-well development of a reservoir will be the smaller operators who would fear, legitimately in many cases, that development will become dominated by the larger operators.

63. The oil and gas industry is steeped in tradition and predictability. Therefore, any major change in the development process will be opposed because it is new and the risks and rewards cannot be definitively evaluated on an individual company basis. The major concern will be that the larger, more technically sophisticated or better capitalized operators will dominate development on a reservoir basis. Individual operators would no longer have the rule of capture to protect their ability to go-it-alone on a well-by-well basis. This is probably an accurate observation, but it would seem to support reservoir development as opposed to argue against it. Prevention of waste and the protection of correlative rights of all owners in the reservoir counsels in favor of allowing the best operator—however that is defined by the conservation agency—to direct operations.

64. *See, e.g.*, Casselman, *supra* note 57, at A6 (observing that Chesapeake Energy Corporation's president has made appearances with the Sierra Club's executive director to promote the use of natural gas to replace coal).

65. *See, e.g.*, KAN. STAT. ANN. § 66-1222 to 1223 (2002) (stating the Kansas Legislature has authorized a citizens' utility ratepayer board to advocate for consumer interests before the Kansas Corporation Commission). In Kansas, the corporation commission has jurisdiction over public utility issues, oil and gas conservation issues, and all environmental issues associated with oil and gas development. *See generally* Kansas Corporation Commission, <http://www.kcc.state.ks.us/>

groups are properly educated on the economic benefits of reservoir development versus well-by-well development, they should be willing to join with a coalition advocating an end to capture-based conservation regulation.

Second, armed with, or without, industry support, environmental groups must enter the trenches of oil and gas conservation law by participating in seemingly mundane well spacing and related conservation proceedings before the state agency charged with regulating the industry.⁶⁶ This is where the process of changing the capture-based model must begin.⁶⁷ State regulatory commissions will typically have broad, aspirational policy mandates. For example, the North Dakota Industrial Commission operates under the following statutory mission statement:

It is hereby declared to be in the public interest to foster, to encourage, and to promote the development, production, and utilization of natural resources of oil and gas in the state in such a manner as will prevent waste; to authorize and to provide for the operation and development of oil and gas properties in such a manner that a greater ultimate recovery of oil and gas be had and that the correlative rights of all owners be fully protected; and to encourage and to authorize cycling, recycling, pressure maintenance, and secondary recovery operations in order that the greatest possible economic recovery of oil and gas be obtained within the state to the end that the landowners, the royalty owners, the producers, and the general public realize and enjoy the greatest possible good from these vital natural resources.⁶⁸

The challenge in many cases will be to convince the commission to focus on this broader policy directive when carrying out the more specific statutory directives regarding the prevention of waste and protection of

(last visited Mar. 8, 2010) (providing information on the Kansas Corporation Commission); Citizens' Utility Ratepayers Board, <http://curb.kcc.state.ks.us/about.htm> (last visited Mar. 8, 2010) (providing information on the Citizens' Utility Ratepayer Board).

66. In North Dakota, the relevant agency is the Industrial Commission. N.D. CENT. CODE § 38-08-02(2) (2004) (defining "commission" to mean "industrial commission"). "The commission has continuing jurisdiction and authority over all persons and property, public and private, necessary to enforce effectively the provisions of this chapter." *Id.* § 38-08-04. The chapter referred to in section 38-08-04 is chapter 38-08, Control of Gas and Oil Resources, which contains all the North Dakota oil and gas conservation statutes. *Id.* §§ 38-08-01 to -23.

67. A more efficient manner to address the issue may be through a generic proceeding initiated by the commission at the request of the interested parties. However, important ground work can be laid by seeking to participate in spacing hearings to ensure that more than just the competing positions of the developers are considered by the commission. This process would force the commission to focus on the rights of the public and all owners in the affected reservoir.

68. *Id.* § 38-08-01.

correlative rights. Ironically, the major impediment to a broad application of these policy directives will be found within the conservation laws themselves. Because the existing laws are built around the rule of capture, their specific terms will often be artificially restrictive. This is particularly the case when it comes to the potentially most effective conservation tool in most state's existing conservation statutes: compulsory unitization.⁶⁹ Unless the commission is willing to engage in considerable arm-twisting to facilitate the necessary voluntary agreement among the parties,⁷⁰ improvements in compulsory unitization will have to come from the legislature.

The third level of attack derives from the second. In those situations where conservation commissions assert, or are held, to lack the authority to take meaningful action, this should be followed-up with the necessary legislative campaign to modernize conservation laws to truly maximize the prevention of waste and protection of correlative rights. Professors Anderson and Smith have laid out a detailed approach for pursuing exploratory unitization.⁷¹ However, their program, although properly characterized as "ambitious" and "controversial,"⁷² is not nearly ambitious enough because it still functions under a capture-based model requiring some level of owner approval.⁷³

To effectively abandon the capture-based model, a conservation regulatory program must first grant the commission authority, coupled with the affirmative obligation, to ensure all oil and gas development within the state takes place so as to maximize recovery of the oil and gas resource in the most economically efficient and environmentally benign manner possible.

69. *But see* TEX. NAT. RES. CODE ANN. § 85.046(a)(7) (Vernon 2001). Notably, Texas lacks any sort of compulsory unitization authority and even has language in its statute defining "waste" to ensure it cannot be interpreted to require unitization. *Id.*

70. "Arm-twisting" could take the form of ordering a field shut-in because uncoordinated production is causing waste. The implicit solution to this problem would be for the owners in the field to enter into "voluntary" unitization agreements. Texas, the state with the most to gain from unitized development, is hopelessly stuck in a political quagmire between small tract owners and large tract owners. See Jacqueline Lang Weaver, *The Politics of Oil and Gas Jurisprudence: The Eighty-Six Percent Factor*, 33 WASHBURN L.J. 492, 503-06 (1994). This highlights the political realities when seeking to change an existing system that, in effect, allocates wealth. To the extent the current system favors one group over another, the favored group will, of course, lobby against any change. This state of affairs in Texas has ensured the status quo, once established, will not change, regardless of the waste it may cause or the correlative rights it may trammel.

71. Anderson & Smith, *Domestic Exploration and Production*, *supra* note 11, at 2-86 to 2-94.

72. *Id.* at 2-94. Professors Anderson and Smith constrain themselves by focusing on what they view as being generally acceptable to the regulated community. I have not so constrained myself because the issues are much broader than what the regulated community believes is acceptable. There are other important constituencies besides royalty owners and their lessees.

73. Although they do not offer a specific percentage, they suggest that anything in excess of fifty percent may be too high. *Id.* at 2-88 n.345.

To accomplish this goal, the commission must assume an active role in determining how development will transpire in each reservoir, from the initial wildcat well through completion of enhanced recovery operations.⁷⁴ For example, the commission should require that exploration and development wells are drilled not to conform to a pattern of acreage squares and rectangles, but rather that each well is justified to properly develop the oil and gas reservoir.⁷⁵ Developers must coordinate their efforts to obtain the information required to determine the probable limits of a reservoir and thereby identify those who have an ownership interest in the development.

All owners' rights would be protected by ensuring their correlative rights in the reservoir are identified, quantified, and recognized in an appropriate manner. Instead of going-it-alone under a capture-based regime, they would be forced to participate as a member of the emerging reservoir community.⁷⁶ With regard to existing reservoirs, the commission should be able to order unitized development whenever the facts indicate it makes sense technically and economically. The key to all these proposals is a conservation commission that is proactive at ensuring the maximum amount of oil and gas is recovered with the fewest number of wells and that the risks and rewards of exploration and development are properly allocated among all who have a property interest in the reservoir.

V. CONCLUSION

The rule of capture has dominated American oil and gas law in an unnecessarily wasteful manner for over 150 years. Throughout this same period, courts have recognized correlative rights as an important component of oil and gas ownership. Unfortunately, oil and gas conservation regulatory regimes have developed around the capture theme of oil and gas law instead of around correlative rights. This can, and should, be changed. Adopting a correlative rights focus for oil and gas conservation, as opposed to a capture focus, allows states to maximize the conservation of oil and gas in the production process while minimizing environmental impacts

74. This will require that the commission have access to the same level of technical expertise and information available to oil and gas developers.

75. To achieve the necessary level of coordination between developers, the commission would have to function as the broker by setting the terms on which drilling permits are granted. The commission's power to grant, deny, and condition drilling permits should allow it to effectively control the development process.

76. The community may change as additional information becomes available and boundaries are expanded and contracted. The commission, assuming an active role in this process, should be able to ensure a more perfect identification and allocation of rights in the reservoir.

associated with the drilling of unnecessary wells under a capture-based regime.

History, or inertia, has proven that the industry and state regulatory agencies have been unable to move away from their capture-based world. It will require new public constituencies to accomplish the shift away from capture toward correlative rights and real waste prevention. These new constituencies should come from consumers, surface owners, and environmental groups as they actively seek to minimize the number of wells required to efficiently develop the oil and gas resource.