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Caleb Madere

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Covert Capture: Hydraulic Fracturing and Subsurface Trespass in Louisiana

INTRODUCTION

Suppose there are two adjacent tracts of land. On one of the tracts, the landowner wishes to maintain an apple orchard. The apple farmer plants a row of apple trees within feet of the property line separating the two adjacent tracts of land. As the apple trees continue to grow, their roots slowly enter the subsurface of the adjacent tract. Although the tree roots are not causing damage to the land itself, they are absorbing water from the adjacent tract, aiding the crop of apples produced by the apple tree. Without question, if the roots themselves cause any damage to the property or lead to a loss of enjoyment by the neighboring landowner, the neighboring landowner will have remedies.¹ The more intriguing question is whether the adjacent landowner may recover the value of the water drained from his land. Although the value of the water absorbed by the roots of the apple tree in this hypothetical may be insignificant, a similar situation often arises with modern oil and gas production where substantial monetary interests are at stake.²

Oil and gas are found in rock formations miles below the earth's surface.³ These rock formations are sometimes so dense that the oil or gas does not easily flow through the rock.⁴ Hydraulic fracturing, or "fracking," is the process by which the dense rock formation is fractured to release the trapped minerals.⁵ The recent boom in the natural gas industry owes much of its existence to

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1. See *Michalson v. Nutting*, 175 N.E. 490, 490 (Mass. 1931) (discussing the rule of self help in which a landowner has a "right to cut off the intruding boroughs and roots"). Louisiana Civil Code article 688 provides:

A landowner has the right to demand that the branches or roots of a neighbor's trees, bushes, or plants, that extend over or into his property be trimmed at the expense of the neighbor. A landowner does not have this right if the roots or branches do not interfere with the enjoyment of his property.

LA. CIV. CODE art. 688 (2015).

2. In one case, discussed in greater detail below, it was estimated that the value of the gas at issue was between \$388,000 and \$544,000. See *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 8 (Tex. 2008).

3. Travis Zeik, Comment, *Hydraulic Fracturing Goes to Court: How Texas Jurisprudence on Subsurface Trespassing Will Influence West Virginia Oil and Gas Law*, 112 W. VA. L. REV. 599, 602 (2010).

4. GROUND WATER PROTECTION COUNCIL & ALL CONSULTING, MODERN SHALE GAS DEVELOPMENT IN THE UNITED STATES: A PRIMER 56 (Apr. 2009) [hereinafter PRIMER].

5. *Id.* See discussion *infra* Part I.B.

hydraulic fracturing.⁶ Hydraulic fracturing has resulted in a substantial increase in the amount of recoverable gas, but it has also raised new legal issues.⁷ The issue taken up in this Comment is whether there has been an actionable subsurface trespass when fractures created by hydraulic fracturing extend beyond subsurface property lines.⁸

The circumstances that generally give rise to such a question are as follows: landowner⁹ *A* drills a well, which is subsequently hydraulically fractured, whereby the fractures extend across subsurface property lines beneath landowner *B*'s property.¹⁰ The fractures, like the roots of the apple tree, extend across the subsurface property line even though the wellbore—like the tree trunk itself—does not. Due to the fractures extending across the subsurface property line, the gas located beneath *B*'s property is able to travel through the fractures to the wellbore located on *A*'s property much like water will travel through the roots of the apple tree to the tree itself located on the adjacent land. As a result, *B* sues *A* for damages amounting to the estimated value of the minerals drained from beneath his property due to the hydraulic fracturing.¹¹ Similar factual scenarios have come before two different courts in the last five years, with both courts reaching different conclusions.¹²

6. PRIMER, *supra* note 4, at 11.

7. See Keith B. Hall, *Hydraulic Fracturing: What Are The Legal Issues?*, 59 LA. B.J. 250 (2012).

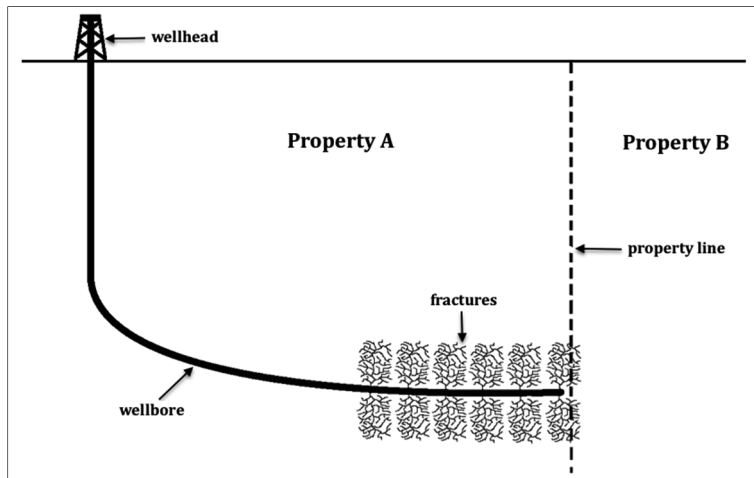
8. *Id.* at 252.

9. For simplicity, the parties will be referred to as “landowner” throughout this Comment. The author is aware that, in reality, the landowner is often not the party that actually conducts the operations or even has rights to the minerals. However, for purposes of this Comment, assume that the landowner is also the owner of the mineral rights and has not leased the mineral rights or issued a mineral servitude to another individual unless indicated otherwise.

10. See Figure 1 for an illustration.

11. This Comment does not contemplate the law of property between landowners within a drilling unit. For purposes of this Comment, assume all drilling activity occurs outside of a drilling unit unless indicated otherwise.

12. *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 17 (Tex. 2008) (holding that the neighboring landowner could not recover); *Stone v. Chesapeake Appalachia, L.L.C.*, No. 5:12-CV-102, 2013 WL 2097397, at *8 (N.D. W. Va. Apr. 10) (holding that the neighboring landowner could recover), *vacated on other grounds*, 2013 WL 7863861 (N.D. W. Va. July 30, 2013).

FIGURE 1. HYDRAULICALLY FRACTURED WELL¹³

In 2009, the Texas Supreme Court in *Coastal Oil & Gas Corp. v. Garza Energy Trust* decided that landowner *B* could not recover the value of the gas drained due to landowner *A*'s fracking operation.¹⁴ In finding that *B* could not recover, the court held that the rule of capture¹⁵—a rule that allows landowners to capture fugacious minerals beneath their land even if the minerals have migrated from beneath another's land—precludes recovery.¹⁶ In 2013, a West Virginia federal district court sitting in diversity was faced with the same issue in *Stone v. Chesapeake Appalachia, L.L.C.*¹⁷ The district court reviewed the Texas Supreme Court's decision in *Garza* and declined to adopt its holding.¹⁸ In doing so, the court held that the rule of capture does not apply if the drainage of the gas results from a trespass, effectively allowing *B* to recover from *A* the value of the gas drained due to the fracking.¹⁹

With the Haynesville Shale²⁰ located in Louisiana and the expansive use of fracking,²¹ it is only a matter of time before the

13. Notice that the wellbore does not extend across the property line. Only the fractures extend across the property line.

14. *Garza*, 268 S.W.3d at 17.

15. See discussion *infra* Part II.A.1.

16. *Garza*, 268 S.W.3d at 17.

17. See generally *Stone*, 2013 WL 2097397.

18. *Id.* at *4–8.

19. *Id.* at *8.

20. The Haynesville Shale is a large natural gas reservoir located in Northwest Louisiana. See PRIMER, *supra* note 4, at 20.

issues litigated in *Garza* and *Stone* appear before Louisiana courts. Accordingly, this Comment proposes the solution Louisiana courts should take when these issues inevitably arise. Part I of this Comment provides the historical and technical background of fracking and explains the importance of fracking for future oil and gas production. Next, Part II provides an overview of the theories of mineral ownership both in Louisiana and in other states, including a discussion of the rule of capture. Part III then reviews the approaches taken by the Texas and West Virginia courts in dealing with this issue and analyzes the reasoning each court used in reaching their respective positions. Part IV examines the relevant Louisiana Mineral Code statutes and highlights the ambiguities these statutes create—using Louisiana jurisprudence to aid in interpretation. Recognizing the ambiguity in Louisiana law, Part V stresses that because Louisiana law does not provide a clear solution when fracking occurs across subsurface property lines, Louisiana courts need to weigh and balance the potential negative impacts on landowners as well as the Louisiana oil and gas industry to reach an equitable solution. After analyzing the potential negative impacts an adverse ruling would have on both landowners and the Louisiana oil and gas industry, Part V concludes that the equitable solution is to prohibit recovery by landowners of the value of the oil or gas drained due to fracking. To provide clarity, the Mineral Code should be amended to make clear that operators will not be liable to neighboring landowners for fracking in the event that only the fractures extend across the subsurface,²² while preserving liability for deviated wells.²³

I. HYDRAULIC FRACTURING: AN EMERGING TECHNOLOGY

Hydraulic fracturing is a technology used to recover oil and gas by pumping fluid into the wellbore—the main shaft of the well—at a high pressure to fracture the rock that contains the trapped oil or

21. See Robin Beckwith, *Hydraulic Fracturing: The Fuss, The Facts, The Future*, J. PETROLEUM TECH., Dec. 2010, at 34.

22. There are two distinct situations: One in which only the fractures extend across the subsurface, and one in which the fractures, as well as the wellbore, extend across the subsurface. The proposed solution prohibits liability for the first, while preserving liability for the second. Compare *supra* Figure 1, with *infra* Figures 2, 3.

23. See *infra* Part V.B.2.

gas.²⁴ Without fracking, some forms of oil or gas would remain trapped in the rock and thus unrecoverable.²⁵

A. Why Hydraulic Fracturing is a Necessary Technology

Ideally, oil and gas would flow in large underground rivers or pool in huge underground caverns, waiting to be tapped by the next drilled well; unfortunately, this is almost never the case.²⁶ Much of the oil and gas produced today is instead trapped in small pores within rock formations.²⁷ These pores are sometimes connected by small fractures in the rock, which allow the gas to move from pore to pore.²⁸ The degree with which a fluid flows through the rock, which is based in part on the interconnectivity of the pores, is referred to as permeability.²⁹ Shale is one type of rock formation that generally has low permeability.³⁰ Thus, shale formations, such as the Haynesville Shale located in northern Louisiana,³¹ do not have the permeability needed for gas to be produced at economical levels using traditional recovery methods.³²

Fracking provides a cost-effective solution to this geological problem by allowing the once-trapped gas to flow through the formation.³³ With the introduction of fracking, gas that was once thought to be economically unrecoverable can now be produced at economical levels.³⁴ Notably, some estimates indicate that the amount of recoverable gas in the United States has increased by 90% due to fracking.³⁵

24. PRIMER, *supra* note 4, at 56.

25. Carl T. Montgomery & Michael B. Smith, *Hydraulic Fracturing: History of an Enduring Technology*, J. PETROLEUM TECH., Dec. 2010, at 26, 27.

26. *See* PRIMER, *supra* note 4, at 14.

27. *Id.* at 8 (indicating that unconventional gas has increased 65% from 1998 to 2007).

28. *See id.* at 14.

29. Zeik, *supra* note 3, at 602, 603.

30. PRIMER, *supra* note 4, at 14.

31. *Id.* at 20.

32. LA. DEP'T OF NATURAL RES., LOUISIANA HYDRAULIC FRACTURING STATE REVIEW 8 (Mar. 2011) [hereinafter LA. DEP'T OF NATURAL RES.], available at <http://strongerinc.org/sites/all/themes/stronger02/downloads/Final%20Louisiana%20HF%20Review%203-2011.pdf>, archived at <http://perma.cc/W5UY-ETT2>.

33. Montgomery & Smith, *supra* note 25, at 27.

34. *Id.*

35. *Id.* at 27–28.

B. How Hydraulic Fracturing Works: Technical Aspects

Fracking, as the name indicates, involves pumping fluids, called fracking fluids,³⁶ down into an oil or gas well at extremely high pressures for the purpose of fracturing the rock formation in which the oil or gas is trapped.³⁷ First, the fracking fluid is pumped down the well into the reservoir at immense pressures.³⁸ The pressure of the fluid fractures the rock formation.³⁹ At this point, if the fluid were to be pumped back out of the well, the fractures would immediately close due to the massive weight of the miles of earth above the rock formation.⁴⁰ To prevent this, a mixture of water and proppants, often sand, is pumped down the well.⁴¹ The water carries the sand deep into the fractures, allowing the sand particles to lodge themselves in the fractures.⁴² The water then flows back out of the well leaving behind the sand wedged in the fractures to keep them open.⁴³ Fracking was once a relatively unpredictable process.⁴⁴ However, current technology is such that the length and direction of the fractures are somewhat predictable; nevertheless, due to uncertainties that exist in the formation itself, the fractures are not completely controllable.⁴⁵ Thus, even if the operator does not intend to fracture beneath an adjacent landowner's property, he cannot be certain that the fractures will not extend further than anticipated, possibly ending up beneath an adjacent landowner's property.⁴⁶

C. Origins of Hydraulic Fracturing and Its Current Use

Halliburton Oil Well Cementing Company was the first to use fracking commercially in 1949 on two wells: one in Oklahoma and one in Texas.⁴⁷ Within the first year, Halliburton was able to achieve an average production increase of 75% on the 332 wells

36. Generally, the fracking fluid is made up of 98% to 99.5% water/sand and 2% to 0.5% chemicals. This may change slightly depending on the geological formation. PRIMER, *supra* note 4, at 61–62.

37. Zeik, *supra* note 3, at 603.

38. *Id.*

39. *Id.*

40. *Id.* at 603–04.

41. *Id.* at 604.

42. *Id.*

43. *Id.*

44. See Montgomery & Smith, *supra* note 25, at 31.

45. See *id.* at 31–32; Zeik, *supra* note 3, at 604.

46. See Zeik, *supra* note 3, at 604.

47. See Montgomery & Smith, *supra* note 25, at 27.

that were fracked.⁴⁸ This new technology spread rapidly across the industry, and by the 1950s fracking operations were being conducted on more than 3,000 wells per month.⁴⁹

Today, nearly 90% of new wells in the United States use fracking as a recovery method.⁵⁰ The major natural gas reservoir in Louisiana, the Haynesville Shale, is located in North Louisiana, East Texas, and South Arkansas.⁵¹ The shale formation is located more than 10,000 feet below the surface and requires fracking to be economically viable.⁵² Therefore, fracking is an essential recovery method for the Louisiana natural gas industry. One study conducted in 2009 estimated that without fracking, national natural gas production would decrease by 57% and oil production by 23% by the year 2018.⁵³ Further, it is estimated that the oil and gas industry has a \$77.3 billion economic impact in Louisiana,⁵⁴ making it clear that a substantial portion of Louisiana's economy relies on oil and gas production and, more specifically, on fracking.

II. THEORIES OF MINERAL OWNERSHIP

Over time, public policy and technology have molded the law regarding property and mineral rights.⁵⁵ Initially, the owner of the land owned everything above and below it.⁵⁶ Modern air traffic laws illustrate that this doctrine is no longer an absolute truth.⁵⁷

48. *Id.*

49. *Id.*

50. Zeik, *supra* note 3, at 603.

51. *Haynesville Shale*, DEP'T OF NATURAL RES., <http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=442&pnid=0&nid=170>, archived at <http://perma.cc/6D4A-5ADH> (last visited Feb. 18, 2015).

52. LA. DEP'T OF NATURAL RES., *supra* note 32, at 8.

53. IHS GLOBAL INSIGHT, MEASURING THE ECONOMIC AND ENERGY IMPACTS OF PROPOSALS TO REGULATE HYDRAULIC FRACTURING 2 (2009), available at <http://www.motoroil matters.org/~media/Files/News/2009/Study%20-%20Measuring%20the%20Economic%20and%20Energy%20Impacts%20of%20Proposals%20to%20Regulate%20Hydraulic%20Fracturing.pdf>, archived at <http://perma.cc/NU28-CHB3>.

54. LOREN C. SCOTT, THE ENERGY SECTOR: STILL A GIANT ECONOMIC ENGINE FOR THE LOUISIANA ECONOMY 27 (2011), available at http://www.lmoga.com/assets/Economic_Impact_Study_2011.pdf, archived at <http://perma.cc/KB4E-8YSA>.

55. Colleen E. Lamarre, Note, *Owning the Center of the Earth: Hydraulic Fracturing and Subsurface Trespass in the Marcellus Shale Region*, 21 CORNELL J.L. & PUB. POL'Y 457, 462 (2011).

56. *Id.*

57. See Owen L. Anderson, *Subsurface "Trespass": A Man's Subsurface is Not His Castle*, 49 WASHBURN L.J. 247 (2010) [hereinafter Anderson,

However, due in large part to a lack of understanding of how oil and gas behave miles underground, varying theories of mineral ownership have evolved.⁵⁸

*A. The Ad Coelum Doctrine “Has No Place in the Modern World”*⁵⁹

The *ad coelum* doctrine traces all the way back to Lord Coke and possibly even further.⁶⁰ The *ad coelum* doctrine is predicated on the phrase “*cujus est solum, ejus est usque ad coelum et ad inferos*”—meaning the owner of the land owns everything above and below it.⁶¹ Although this theory may have made sense both theoretically and practically in the past, the United States Supreme Court has held that the “[*ad coelum*] doctrine has no place in the modern world.”⁶²

Oil and gas are not immobile minerals even though they may be trapped in shale formations.⁶³ By nature, oil and gas flow from areas of high pressure to areas of low pressure just as any other liquid.⁶⁴ The fugitive nature of oil and gas results in the minerals migrating across so-called subsurface property lines.⁶⁵ However, under the *ad coelum* doctrine, a landowner who captures these minerals as they migrate from a neighboring property would be liable to the neighboring landowner.⁶⁶ Thus, landowners would potentially be deterred from drilling or exploring for oil or gas for

Subsurface “Trespass”] (explaining that modern air traffic laws place a significant burden on property rights of airspace above one’s property).

58. Lamarre, *supra* note 55, at 462.

59. United States v. Causby, 328 U.S. 256, 261 (1946).

60. Owen L. Anderson, *Lord Coke, The Restatement, and Modern Subsurface Trespass Law*, 6 TEX. J. OIL GAS & ENERGY L. 203, 204 n.6 (2011) [hereinafter Anderson, *Lord Coke*].

61. Lamarre, *supra* note 55, at 462. Louisiana has codified the *ad coelum* doctrine in Louisiana Civil Code article 490: “Unless otherwise provided by law, the ownership of a tract of land carries with it the ownership of everything that is directly above or under it.” LA. CIV. CODE art. 490 (2015).

62. *Causby*, 328 U.S. at 260–61 (recognizing that the doctrine is not an absolute truth and has been modified by certain laws). See LA. CIV. CODE art. 490 (2015).

63. PRIMER, *supra* note 4, at 14 (indicating that gas trapped in the rock remains, for practical purposes, immobile until the rock is fractured).

64. Lamarre, *supra* note 55, at 463–64.

65. *Id.* at 463.

66. Under the *ad coelum* doctrine, a landowner owns everything above and below the surface of the land; therefore, the landowner would own the minerals below his land and have that ownership interest in the minerals even after they migrate to other lands. *Id.* at 462.

fear of being held liable for the capture of said minerals.⁶⁷ Additionally, there would be no way to tell if oil or gas produced by a well was once located under another person's property and therefore owned by that person. Without a way to determine exactly where the minerals migrated from, the law was inoperable.⁶⁸ To prevent this, the *ad coelum* doctrine has been modified by modern doctrines such as the rule of capture.⁶⁹

B. The Rule of Capture: Eliminating Liability

The rule of capture provides that a person may reduce oil and gas to possession through drilling and mining operations even if the oil or gas migrated from other lands.⁷⁰ The intended result is to assure individuals who wish to drill a well to produce the minerals beneath their land that they would not be held liable for capturing oil and gas that has migrated from under another's land.⁷¹ Consider the apple orchard hypothetical: Assume no part of the apple tree extends across the property line onto the neighboring landowner's property but is instead entirely on the apple farmer's property. The landowner will have a right to collect or use the water beneath his land while it remains beneath his land. However, if the apple tree is absorbing water from the ground in such a way as to cause the water beneath the landowner's land to migrate to the farmer's land, then the landowner will lose any rights he once had in the water.

One central question that arises with the rule of capture is whether it should apply to situations in which there is a trespass.⁷² Some argue that the rule of capture only applies to oil and gas drained by legal means, i.e., if landowner *A* acquires the minerals without first trespassing onto landowner *B*'s property.⁷³ Others argue that the rule of capture applies as long as the actual capture of the minerals does not occur beneath *B*'s land.⁷⁴ Consider the apple orchard hypothetical again: Assume this time that the tree roots do extend across the subsurface property line as explained in

67. *Id.* at 463.

68. *Id.* at 462.

69. *Id.* at 463.

70. *Id.* See LA. REV. STAT. ANN. § 31:14 (2000).

71. Lamarre, *supra* note 55, at 464.

72. See Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1, 4 (Tex. 2008) (holding that the rule of capture does apply); Stone v. Chesapeake Appalachia, L.L.C., No. 5:12-CV-102, 2013 WL 2097397, at *8 (N.D. W. Va. Apr. 10) (holding that the rule of capture does not apply), *vacated on other grounds*, 2013 WL 7863861 (N.D. W. Va. July 30, 2013).

73. See Stone, 2013 WL 2097397, at *8.

74. See Garza, 268 S.W.3d at 13.

the original hypothetical. If the rule of capture applies regardless of whether there is first a trespass, then the neighboring landowner will have no right in the water that is drained due to the tree roots extending beneath his property because the water has migrated from beneath his land. However, if (1) the rule of capture does not apply if there is first a trespass, and (2) the tree roots extending beyond the property line is considered a trespass, then the landowner will still have a right in the water drained by the roots of the tree, and he will have a claim against the apple farmer. Although Louisiana has adopted the rule of capture,⁷⁵ the law provides no clear answer to whether the rule of capture applies when there has first been a trespass.⁷⁶

Although the rule of capture dictates what happens when minerals migrate from one land to another, it says nothing about a landowner's ownership rights in the minerals while they remain uncaptured under the landowner's property. As a result, two distinct mineral ownership theories evolved: the ownership-in-place doctrine and non-ownership theory.

C. Ownership-in-Place Doctrine: Giving Landowners Ownership Rights in the Minerals Beneath Their Land

The ownership-in-place doctrine states that a landowner owns the oil and gas beneath his property so long as the oil and gas remains there—hence the name ownership-in-place.⁷⁷ The ownership-in-place doctrine applies the ownership principles of solid minerals⁷⁸ to fluid minerals while they remain in place.⁷⁹ As the doctrine indicates, the landowner has a real ownership interest in the oil and gas beneath his land, even before production. However, once the fluid minerals migrate to other lands, the original landowner loses title to them.⁸⁰ Many states, including Texas and West Virginia, employ this ownership theory today.⁸¹

75. See LA. REV. STAT. ANN. § 31:14 (2000).

76. See *infra* Part IV.

77. Lamarre, *supra* note 55, at 466–67.

78. Solid minerals are owned by the owner of the land. See LA. REV. STAT. ANN. § 31:5 (2000) (stating that the “[o]wnership of land includes all minerals occurring naturally in a solid state”).

79. Lamarre, *supra* note 55, at 466.

80. *Id.* at 467.

81. *Id.*

D. Non-Ownership Theory: No Ownership Rights in the Minerals Beneath One's Land

Non-ownership theory takes property rights, or the lack thereof, a step further. Under the non-ownership theory, a landowner does not have any ownership rights in the fluid minerals beneath his property; he only has a right to reduce them to possession.⁸² Louisiana is one of the few states that has adopted this theory of ownership.⁸³ This theory pushes the rule of capture to its extreme limit, affording a landowner absolutely no ownership rights in the fluid minerals.⁸⁴ Although the landowner retains the “exclusive” right to reduce the minerals to possession, the minerals are not susceptible of being owned until the landowner possesses the minerals.⁸⁵

In the apple orchard hypothetical, the neighboring landowner would hold an ownership interest in the water under the ownership-in-place doctrine until the water migrated to the apple farmer's land. Conversely, neither landowner would possess an ownership interest in the water until it is reduced to possession under the non-ownership theory.

III. COURTS DIVIDED: INCONSISTENT APPLICATION OF THE
RULE OF CAPTURE

The application of the rule of capture to fracking has been litigated in two different jurisdictions, resulting in contradictory rulings. For the sake of simplicity, the relevant facts faced by both courts can be stated as follows: Landowner *A* fracks across subsurface property lines and causes gas to migrate from Landowner *B*'s property to the wellbore located on Landowner *A*'s property. Landowner *B* then sues Landowner *A* for damages amounting to the value of the oil or gas drained from his property due to the hydraulic fracturing. The Texas Supreme Court, when faced with this situation, barred recovery by Landowner *B*.⁸⁶ In 2013, a federal district court in West Virginia was faced with the same issue and ultimately held that the rule of capture does not

82. *Id.* at 469.

83. *Id.* at 467.

84. *Id.* at 469. *See also* LA. REV. STAT. ANN. § 31:6 (2000).

85. *See* LA. REV. STAT. ANN. § 31:6 (2000). *But see* discussion *infra* Part IV.A (explaining that the landowner's right to explore and develop his property for liquid minerals may not be exclusive).

86. *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 26 (Tex. 2008).

prevent recovery by Landowner B.⁸⁷ Although the two courts reached opposite conclusions, both analyses are helpful in evaluating how a Louisiana court should decide this issue.

A. Coastal Oil & Gas Corp. v. Garza Energy Trust: Rule of Capture Precludes Recovery of the Value of Gas Drained Due to Hydraulic Fracturing

In 2008, the Texas Supreme Court decided *Coastal Oil & Gas Corp. v. Garza Energy Trust* and tackled the issue of whether fracking beneath a neighboring property constitutes an actionable subsurface trespass.⁸⁸ In a split decision, the majority essentially avoided deciding the issue directly and instead held that the rule of capture precludes recovery regardless of whether there was first a trespass.⁸⁹

1. Garza Majority

In holding that the rule of capture bars recovery, the court rejected two core arguments made by the plaintiff.⁹⁰ First, the court rejected the plaintiff's argument that because hydraulic fracturing is unnatural, the rule of capture should not apply.⁹¹ This argument is based on the premise that the rule of capture only applies when oil and gas *naturally* flow from areas of high pressure to areas of low pressure, and therefore, should not apply if the flow is being artificially stimulated by human intervention.⁹² To this, the court reasoned that even conventional drilling is unnatural and artificially causes oil or gas to act in a different way than it would had a well not been drilled.⁹³

The court then rejected the argument that hydraulic fracturing should be analogized to a deviated well.⁹⁴ The plaintiff argued that

87. *Stone v. Chesapeake Appalachia, L.L.C.*, No. 5:12-CV-102, 2013 WL 2097397, at *8 (N.D. W. Va. Apr. 10), *vacated on other grounds*, 2013 WL 7863861 (N.D. W. Va. July 30, 2013).

88. *See Garza*, 268 S.W.3d at 4.

89. *Id.* at 12–13.

90. *Id.* at 13.

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.* at 13–14. A deviated well is defined as “a well that intentionally or accidentally departs from the vertical.” HOWARD R. WILLIAMS & CHARLES J. MEYERS, *MANUAL OF OIL AND GAS TERMS* 262 (13th ed. 2006). Also note that horizontal wells, although slightly different from deviated wells, can produce the same result. A horizontally drilled well is done purposefully to expose the wellbore to a greater portion of the shale formation without drilling additional

fractures extending beyond the property lines should be treated in the same way that the court would treat a deviated well—a well in which the wellbore deviates from vertical and bottoms beneath a neighboring property.⁹⁵ In rejecting this argument, the court distinguished the two circumstances, pointing out that in the case of a deviated well, the gas actually enters the wellbore while it is beneath the property owned by another.⁹⁶ By contrast, in the case of hydraulic fracturing, the gas enters the wellbore while under the property where the drilling operation is located.⁹⁷ The court also looked to the remedies a property owner has in both situations.⁹⁸ In the case of a deviated well, a property owner cannot remedy the drainage by simply drilling his own well to offset the oil or gas being drained by the deviated well.⁹⁹ The deviated well would still continue to extract the gas beneath his property. On the contrary, in the case of hydraulic fracturing, a landowner can remedy the situation by drilling his own well to counteract drainage.¹⁰⁰

wells. *See id.* at 477; PRIMER, *supra* note 4, at 46–47. Both horizontal and deviated wells can result in portions of the wellbore entering other lands. *See WILLIAMS & MEYERS, supra*, at 262, 477 (indicating that both well types deviate from vertical resulting in the wellbore potentially bottoming some distance lateral from the wellhead). *See infra* Figures 2, 3.

95. *Garza*, 268 S.W.3d at 13.

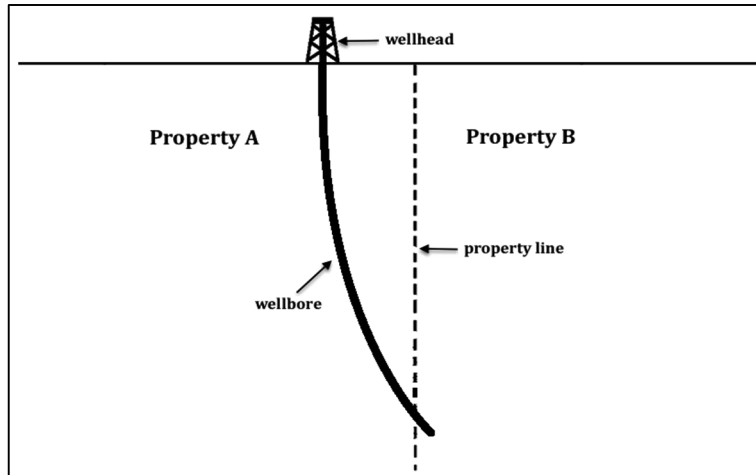
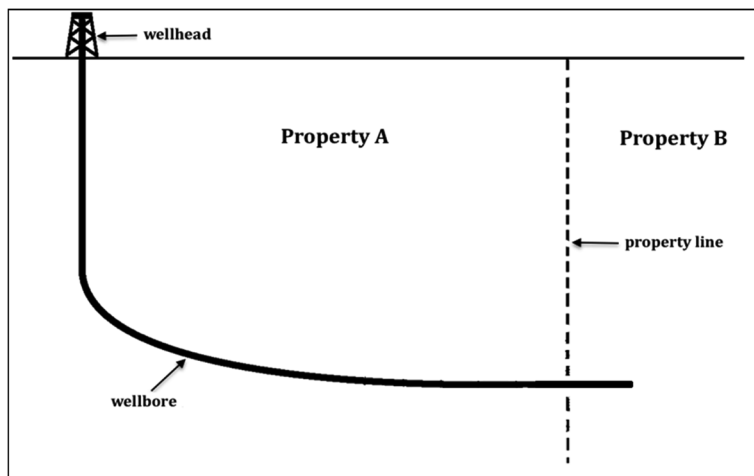
96. *Id.* at 14.

97. *Id.*

98. *Id.*

99. *Id.* To offset drainage caused by hydraulic fracturing, a landowner could theoretically drill a well the same distance from the property line as the well that is causing the drainage of the oil or gas from beneath his land. This would cause the oil or gas that was once flowing to the fractured well to now flow to his well. In the case of a deviated well, the landowner could not completely offset drainage because no matter where he drills his well, some of the oil or gas beneath his land will flow to the deviated wellbore simply because the wellbore is located on his property.

100. If *B* were to drill his own well and fracture the well, he could mitigate his losses by capturing the oil or gas that would have instead flowed to the existing well on *A*'s land.

FIGURE 2. DEVIATED WELL¹⁰¹FIGURE 3. HORIZONTAL/DIRECTIONAL WELL¹⁰²

After rejecting these two arguments, the court listed four reasons why the rule of capture should apply in this situation.¹⁰³

101. Notice that the wellbore crosses the subsurface property line just as in a horizontal or directionally drilled well.

102. Notice again that the wellbore extends across the subsurface property line.

103. See *Garza*, 268 S.W.3d at 14.

First, the court posited that the law already provides Landowner *B* a remedy.¹⁰⁴ The rule of capture allows landowners to drill a well and produce oil or gas without fear of liability to nearby landowners.¹⁰⁵ This not only allows *A* to drill a well but also permits *B* to drill a well to offset any drainage that may occur due to *A*'s well. Although this may not be the most favored remedy for a landowner whose oil or gas is being drained,¹⁰⁶ it does provide every landowner with an equal opportunity to extract the oil or gas from the common reservoir.

Second, the court stated that regulation of subsurface intrusions due to fracking should be left to the Texas Railroad Commission,¹⁰⁷ not the courts.¹⁰⁸ The Railroad Commission is tasked with regulating the drilling of oil and gas wells in Texas; therefore, this issue falls directly under its regulatory power.¹⁰⁹ The Railroad Commission, through the rule of capture, is allowed “to protect correlative rights¹¹⁰ of owners with interests in the same mineral deposits while securing ‘the state’s goals of preventing waste and conserving natural resources.’”¹¹¹ To allow the courts—rather than the Railroad Commission—to resolve this issue would, according to the court, usurp the regulatory power of the Railroad Commission.¹¹²

Third, the court articulated that “determining the value of oil and gas drained by hydraulic fracturing is the kind of issue the litigation process is least equipped to handle.”¹¹³ The drainage can occur miles below the Earth’s surface, making it difficult to

104. *Id.*

105. *Id.*

106. For additional discussion on why a landowner may think this remedy is insufficient, see discussion *infra* Part V.A.II.

107. The Texas Railroad Commission is a regulatory agency that regulates the drilling of oil and gas wells in Texas. See *Garza*, 268 S.W.3d. at 15.

108. *Id.* at 14–15.

109. *Id.* at 15.

110. The correlative rights doctrine is the idea that “each landowner in a common reservoir of oil and gas has legal rights and duties.” Theresa D. Poindexter, Comment, *Correlative Rights Doctrine, Not the Rule of Capture, Provides Correct Analysis for Resolving Hydraulic Fracturing Cases*, 48 WASHBURN L.J. 755, 767 (2009). This doctrine reserves rights to all the landowners in a common reservoir to have a fair opportunity to produce the oil and gas from the reservoir. See LA. REV. STAT. ANN. § 31:9 cmt. (2000). It essentially assures that all landowners are on the same playing field, and no one landowner is acting in such a way as to infringe on any other landowner’s right to produce the oil and gas from his or her land.

111. *Garza*, 268 S.W.3d at 15 (quoting *Seagull Energy E & P, Inc. v. R.R. Comm’n*, 226 S.W.3d 383, 389 (Tex. 2007)).

112. *Id.* at 15–16.

113. *Id.* at 16.

quantify the amount of gas drained and to determine from where the gas was being drained.¹¹⁴ This fact, the court reasoned, is one of the justifications for the rule of capture.¹¹⁵ The rule of capture was predicated on the lack of knowledge surrounding fluid minerals miles below the surface.¹¹⁶ By instituting the rule of capture, determinations such as these are not necessary. Additionally, the court added that judges and juries do not have sufficient knowledge of “social policies, industry operations, and the greater good” of the oil and gas industry.¹¹⁷ The court opined that allowing the judicial system to make such determinations could lead to damaging consequences across the industry that are not easily foreseen by judges and juries.

Fourth and finally, the court pointed out that “no one in the industry appears to want or need the change.”¹¹⁸ The court rationalized this idea based on the number of *amicus curiae* briefs it received, “warning of adverse consequences” if the rule of capture were not applied to hydraulic fracturing.¹¹⁹ Further, the lack of action on the part of the Texas Legislature and Railroad Commission after hydraulic fracturing became “commonplace in the oil and gas industry for over sixty years” indicated to the court the lack of a need for change.¹²⁰

As a result, the Texas Supreme Court ultimately interpreted the rule of capture to apply when fractures cross subsurface property lines.¹²¹

2. Garza Concurrence

The concurrence, written by Justice Willett, was willing to go a step further and assert that there should be no subsurface trespass at all under these circumstances.¹²² As stated by Justice Willett, the oil and gas industry is so vital to Texas and the nation as a whole that any hindrance of the industry would be ill-advised.¹²³ Although Justice Willett joined the majority in barring recovery by Landowner

114. *Id.*

115. *Id.*

116. Lamarre, *supra* note 55, at 462.

117. *Garza*, 268 S.W.3d at 16.

118. *Id.* at 16–17.

119. *Id.*

120. *Id.* at 17.

121. *See id.*

122. *Id.* at 26 (Willett, J., concurring).

123. “‘Water, not oil, is the lifeblood of Texas.’ But together, oil and gas are its muscle, which today fends off atrophy.” *Id.*

B in this case, he did so by reaching a different legal conclusion on two key issues.¹²⁴

First, not only did Justice Willett indicate his belief that there is no actionable trespass when fractures due to fracking cross subsurface property lines, he also suggested that there is *no trespass at all*.¹²⁵ Although the distinction was inconsequential to the issue at hand, it could affect cases moving forward.¹²⁶ Second, Justice Willett stated that there should be no opportunity to recover non-drainage damages¹²⁷ under a trespass theory.¹²⁸ Instead, Justice Willett argued that recovery of non-drainage damages should occur under a negligence theory.¹²⁹

Justice Willett also chastised the dissent's approach, arguing it would take the regulation of an "indispensable innovation in an indispensable industry" out of the hands of the Railroad Commission—a regulatory body created to regulate exactly these issues.¹³⁰ By allowing a landowner to recover the value of oil or gas drained from beneath his property due to fracking, Justice Willett anticipated a "flood of litigation . . . reward[ing] the free rider who would rather sue for trespass than drill his own well."¹³¹

Although the concurrence may seem to lie at the extreme end of the spectrum, some scholars take similar positions.¹³² The view that there is no trespass at all would restrict interference with what the concurrence denoted as an "indispensable innovation in an

124. *Id.* at 29.

125. *Id.*

126. The distinction between an actionable trespass and a trespass otherwise is irrelevant if the plaintiff is praying for drainage damages. However, the majority's view that there is not an actionable trespass because the rule of capture precludes recovery would be limited to this set of facts, while the concurrence's view that there is no trespass at all would preclude recovery under a trespass claim if the plaintiff were praying for non-drainage damages as well.

127. Non-drainage damages refer to any damages not including the value of the oil or gas drained. The most likely non-drainage damage to arise with hydraulic fracturing would be some type of damage to the property itself, whether it be structural damage to a building on the property due to the fracking or any damage to the land itself.

128. *Garza*, 268 S.W.3d at 30.

129. *Id.*

130. *Id.*

131. *Id.*

132. See Anderson, *Subsurface "Trespass"*, *supra* note 57, at 248; Anderson, *Lord Coke*, *supra* note 60, at 217–18 (suggesting that subsurface trespass should be treated much the same as aerial trespass, i.e., only a trespass when the intrusion occurs within near proximity to the surface, or when actual property damage occurs).

indispensable industry” and promote a simple solution to a complex issue.¹³³

3. *Garza Dissent*

In stark contrast to the *Garza* concurrence, the dissent found that if there is a trespass, the rule of capture does not apply, thus allowing Landowner *B* to recover.¹³⁴ The dissent’s reasoning was based on the idea that the rule of capture only applies to oil or gas that is captured by legal means.¹³⁵ Consequently, if fracking across subsurface property lines is found to be a trespass, the dissent argued that the rule of capture should not apply, effectively allowing the plaintiff to recover. Additionally, the dissent was persuaded by the plaintiff’s argument that the rule of capture should not apply to fracking because it is unnatural.¹³⁶ The rule of capture is based on the rationale that oil and gas naturally flow from areas of high pressure to areas of low pressure.¹³⁷ However, in the dissent’s view, the “fugitive nature” of the minerals is no longer present when the flow of the minerals is stimulated by artificial means.¹³⁸ Although the dissent’s belief that the rule of capture should not apply to hydraulic fracturing did not garner a majority in *Garza*, this view was largely adopted by a West Virginia federal district court five years later.¹³⁹

B. Stone v. Chesapeake Appalachia: Rule of Capture Does Not Apply if Hydraulic Fractures Cross Subsurface Property Lines

In early 2013, a West Virginia federal district court considered, like the court in *Garza*, whether fracking constituted a trespass for which damages could be recovered.¹⁴⁰ In resolving the issue, the court looked to the Texas Supreme Court’s decision in *Garza* for

133. *Garza*, 268 S.W.3d at 30 (Willett, J., concurring). A view that there is no trespass at all removes even more potential liability for drilling. This interpretation of the law, while extremely detrimental to landowners, provides a simple, straightforward solution that would seemingly result in consistent application by the courts.

134. *Id.* at 43 (Johnson, J., dissenting).

135. *Id.*

136. *Id.* at 42–43.

137. *Id.* at 43.

138. *Id.* at 42.

139. *See* *Stone v. Chesapeake Appalachia, L.L.C.*, No. 5:12–CV–102, 2013 WL 2097397 (N.D. W. Va. Apr. 10), *vacated on other grounds*, 2013 WL 7863861 (N.D. W. Va. July 30, 2013).

140. *Id.*

guidance.¹⁴¹ Nevertheless, the West Virginia federal court was unconvinced that the rule of capture precludes an actionable trespass.¹⁴² The West Virginia court found that “hydraulic fracturing under the land of a neighboring property without that party’s consent is not protected by the rule of capture, but rather constitutes an actionable trespass.”¹⁴³ In so finding, the court rejected the four reasons the *Garza* majority provided as to why the rule of capture should preclude recovery.¹⁴⁴

The court was skeptical of the conclusion that the law already affords landowners an effective remedy by drilling their own well.¹⁴⁵ Citing the dissenting opinion in *Garza*, the court adopted the argument that “not all property owners are sophisticated enough or have the resources to drill their own well.”¹⁴⁶ The court hypothesized a situation in which oil and gas operators possess all the bargaining leverage, and if the landowners do not assent to an agreement on the terms put forth by the oil and gas operators, the operators can simply threaten to capture the gas under the landowner’s property via fracking.¹⁴⁷

The West Virginia court also found the *Garza* majority’s pronouncement—that to rule on the issue of subsurface trespass would usurp the Railroad Commission’s authority to regulate the production of oil and gas—to be inapplicable in West Virginia.¹⁴⁸ The West Virginia court simply stated that the “Texas Railroad Commission has far more regulatory power than West Virginia’s regulatory authority.”¹⁴⁹ Turning to the court system’s competence to consider complex issues within the oil and gas industry in deciding such an issue, the court first clarified that the question presented does not ask the judge or a jury to decide that fracking is against the law—instead, the question is merely whether one can be held liable for the oil or gas drained from neighboring lands due to his own fracking.¹⁵⁰ Again citing to the dissent in *Garza*, the court pointed out that “[d]ifficulty in proving matters is not a new

141. *Id.* at *4.

142. *Id.* at *8.

143. *Id.* (internal quotation marks omitted).

144. *Id.* at *6–8.

145. *Id.* at *6.

146. *Id.*

147. *Id.*

148. *Id.* at *7.

149. *Id.* The West Virginia district court explicitly noted that the West Virginia regulatory agency does not have the authority to force pooling. *Id.* at *6 n.5.

150. *Id.* at *7.

problem to trial lawyers.”¹⁵¹ Also, rejecting the *Garza* majority’s reasoning that no one in the industry wants to change the way the rule of capture is applied, the court declined to allow “the desires of the industry [to] overcome the property rights of small landowners.”¹⁵²

The court went on to examine trespass as it is defined in the *Restatement (Second) of Torts*.¹⁵³ The court relied on the language of Comment i to the *Restatement (Second) of Torts*, Section 158,¹⁵⁴ in finding that fracking constitutes a trespass. Thus the court held: (1) that fracking that extends beyond subsurface property lines is a trespass, and (2) that the rule of capture does not apply if there is first a trespass.¹⁵⁵ Consequently, the court denied the defendant’s motion for summary judgment, insinuating that a landowner should be allowed to recover the value of the gas drained as a result of his neighbor’s fracking.¹⁵⁶

C. *The Two Decisions Compared*

The decisions reached by the Texas Supreme Court and the federal district court in West Virginia are in stark contrast. The Texas Supreme Court found that the rule of capture applies even when fractures caused by fracking cross subsurface property lines.¹⁵⁷ This leaves the neighboring landowner with no right to recover from the drilling landowner the value of the gas drained under a trespass theory as long as the drilling is not “illegal, malicious, reckless, or

151. *Id.* (quoting *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 45 n.3 (Tex. 2008) (Johnson, J., dissenting)).

152. *Id.* (alteration in original).

153. *Id.* at *8. The *Restatement (Second) of Torts*, Section 158, provides:

Liability For Intentional Intrusions On Land

One is subject to liability to another for trespass, irrespective of whether he thereby causes harm to any legally protected interest of the other, if he intentionally

(a) enters land in the possession of the other, or causes a thing or a third person to do so, or

(b) remains on the land, or

(c) fails to remove from the land a thing which he is under a duty to remove.

RESTATEMENT (SECOND) OF TORTS § 158 (1965).

154. RESTATEMENT (SECOND) OF TORTS § 158 cmt. i (1965) (“*Causing entry of a thing*. The actor, without himself entering the land, may invade another’s interest in its exclusive possession by throwing, propelling, or placing a thing either on or beneath the surface of the land or in the air space above it.”).

155. *Stone*, 2013 WL 2097397, at *8.

156. *Id.*

157. *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 17 (Tex. 2008).

intended to harm another without commercial justification.”¹⁵⁸ The West Virginia district court found that the rule of capture does not apply to fracking if the fractures cross subsurface property lines; thus, the drilling landowner would be liable to his neighbor for the gas drained from beneath his neighbor’s property due to fracking.¹⁵⁹

In the context of the apple orchard hypothetical, the Texas Supreme Court’s decision in *Garza* indicates that the rule of capture would apply even though the root of the apple tree (fracture) has invaded the subsurface of the neighboring landowner. Accordingly, the rule of capture provides that there is no ownership interest in minerals beneath the land if they migrate to other lands; therefore, the owner of the apple orchard will not be liable to the neighboring landowner for the value of the water (oil or gas) absorbed by the tree (drained by the well). In contrast, the West Virginia district court’s decision in *Stone* indicates that because the root of the apple tree has physically invaded the subsurface of the neighboring landowner, and because that technically is a trespass, the rule of capture no longer applies. Thus, any water absorbed by the tree will not be subject to the rule of capture, effectively allowing the neighboring landowner to recover the value of the water absorbed by the tree.

The key difference between the two opinions is when the rule of capture becomes operative. The Texas Supreme Court’s decision in *Garza* seems to indicate that the rule of capture applies even if there has first been a trespass. Thus, the rule of capture operates to bar recovery of the value of oil and gas drained due to the fracking, and because the rule of capture precludes such a recovery, there is no injury. Further, where there is no injury, there cannot be an actionable trespass.¹⁶⁰ The West Virginia district court believed that the rule of capture cannot operate if there is first a trespass, indicating that the non-existence of a trespass is the threshold inquiry before the rule of capture will apply.¹⁶¹

IV. DISCUSSION OF APPLICABLE LOUISIANA LAW

Garza and *Stone*, due to their conflicting nature, provide inadequate jurisprudential guidance on whether fracking under neighboring property creates an actionable trespass. When this issue inevitably reaches Louisiana courts, the courts should first analyze the relevant Louisiana Mineral Code statutes, which

158. *Id.*

159. *Stone*, 2013 WL 2097397, at *8.

160. *Garza*, 268 S.W.3d at 12–13.

161. *See Stone*, 2013 WL 2097397, at *8.

provide no clear answer, and then look to the jurisprudence for interpretation.

A. Louisiana Revised Statutes Section 31:6: Non-Ownership Theory

Louisiana Revised Statutes section 31:6 codifies Louisiana's non-ownership theory with respect to liquid mineral rights.¹⁶²

Ownership of land does not include ownership of oil, gas, and other minerals occurring naturally in liquid or gaseous form, or of any elements or compounds in solution, emulsion, or association with such minerals. The landowner has the exclusive right to explore and develop his property for the production of such minerals and to reduce them to possession and ownership.¹⁶³

Simply put, this statute does not give an owner of a tract of land any ownership rights to the oil or gas beneath his land, even while those minerals remain under the surface of his property.¹⁶⁴ What the statute does convey to the owner of the land is the "exclusive right to explore and develop his property for the production of such minerals."¹⁶⁵

If the right to explore and develop land for oil and gas belongs exclusively to the owner of the land, application of this statute would, in the context of fracking, lead to an infringement of the landowner's rights. However, the right to explore and develop land has not been found to be absolute by Louisiana courts or the Legislature.¹⁶⁶ The conflict between the plain meaning of the statute and the interpretation furthered by the courts leads to confusion on whether the right should be viewed as truly exclusive.

The Louisiana Supreme Court has weighed in on the matter.¹⁶⁷ In *Nunez v. Wainoco Oil*, the Louisiana Supreme Court recognized a limit on the rights of landowners whose land is part of a drilling unit¹⁶⁸ established by the Louisiana Commissioner of Conservation,

162. See LA. REV. STAT. ANN. § 31:6 (2000) (arising from the language in *Frost-Johnson Lumber Co. v. Salling's Heirs*, 91 So. 207 (La. 1920)).

163. LA. REV. STAT. ANN. § 31:6 (2000).

164. This represents the distinction between non-ownership theory and ownership in place theory. See *supra* Part II.C–D.

165. LA. REV. STAT. ANN. § 31:6 (2000).

166. See *Nunez v. Wainoco Oil & Gas Co.*, 488 So. 2d 955, 964 (La. 1986) (holding that there is no subsurface trespass within the drilling unit).

167. See *id.*

168. See NANCY SAINT-PAUL, § 5:16, in 1 SUMMERS OIL AND GAS (3d ed. 2004). "A drilling unit is defined as the maximum area which may be efficiently

holding that there can be no subsurface trespass within a unit.¹⁶⁹ The Louisiana Supreme Court explicitly recognized that “even the ‘exclusive right to explore’ is qualified by the imposition of duties with regard to others who have rights in the common reservoir.”¹⁷⁰ Although this Comment contemplates only the situation in which hydraulic fracturing is occurring outside of a unit, it is clear from the Louisiana Supreme Court’s decision in *Nunez* that there are instances in which the landowner’s right to explore and develop his land is not considered exclusive.¹⁷¹

Additionally, certain legislation also suggests that this right is not exclusive.¹⁷² For example, the Office of Conservation,¹⁷³ Louisiana’s regulatory agency, may force landowners to enter into a unit whereby the oil or gas produced from any well within that unit will be divided into shares proportional to the surface area of each landowner’s respective land within the unit.¹⁷⁴ This forced pooling takes the exclusive right of a landowner within the unit to explore and develop his land for minerals and pools his right with the rights of other landowners within the unit.¹⁷⁵ In the context of forced pooling, the exclusivity of the right is abridged in two ways. First, the right of the landowner who wanted to drill a well on his land but is restrained from doing so by the unit will not have the exclusive right to produce the minerals beneath his land. Although he will receive fair compensation for the minerals based on the percentage of his land located within the unit, he will not have the absolute exclusive right to produce them when and how he chooses.

and economically drained by one well” *Id.* Once a drilling unit is created, the landowners will be provided their equitable share of the oil or gas produced from the unit based on the proportion of each landowner’s land within the unit, thereby pooling the mineral interests of all landowners within the unit. *Id.*

169. *Nunez*, 488 So. 2d at 964. The Louisiana Commissioner of Conservation may establish a drilling unit pursuant to Louisiana Revised Statutes section 30:9(B). LA. REV. STAT. ANN. § 30:9(B) (2007) (allowing the Louisiana Commissioner of Conservation to establish a drilling unit “[f]or the prevention of waste and to avoid the drilling of unnecessary wells”).

170. *Nunez*, 488 So. 2d at 962.

171. *Id.*

172. See LA. REV. STAT. ANN. § 30:9 (2007).

173. The Office of Conservation is Louisiana’s regulatory agency that regulates the drilling and mining of oil and gas. The Office of Conservation is akin to the Texas Railroad Commission. See *Nunez*, 488 So. 2d at 961.

174. See LA. REV. STAT. ANN. § 30:9 (2007); see also *Nunez*, 488 So. 2d at 963 (stating that “[u]nitization is the device which the Louisiana Department of Conservation employs to protect the correlative rights of surface owners in a common reservoir, and . . . the device is clearly available without the consent of a particular landowner”).

175. See *supra* note 174 and accompanying text.

Second, the landowner who does get to drill a well on his land as the unit well will have to share the oil and gas he produces with neighboring landowners, where he would not have to do so had there not been a unit due to the rule of capture.

Therefore, although the right to explore and develop one's own land may be exclusive in some respects, both the courts and the Louisiana Legislature have limited the right in certain situations, thereby removing that right from the category of an exclusive right as the plain reading of the statute indicates.¹⁷⁶ A right cannot be exclusive if it can be infringed even in the narrowest of situations. Therefore, the question turns upon whether the right should still be considered exclusive within the context of fracking across subsurface property lines.

B. Louisiana Revised Statutes Section 31:7: When Minerals Are Reduced to Possession

Louisiana Revised Statutes section 31:7 states: "Minerals are reduced to possession when they are under physical control that permits delivery to another."¹⁷⁷ Although this may seem straightforward, it is unclear when the "physical control that permits delivery to another" actually occurs.¹⁷⁸ The Comment to section 31:7 notes that, for oil and gas, "physical control that permits delivery to another" occurs once the oil or gas reaches the surface at the wellhead.¹⁷⁹ This precludes the argument that in the context of fracking, one actually possesses the oil or gas while the oil or gas is within the fractures on another's land. However, the point in time at which the oil or gas is *extracted* is an important distinction, as evidenced by both the majority's decision in *Garza* and the Louisiana Supreme Court's decision in *Gliptis v. Fifteen Oil Co.*¹⁸⁰

In *Garza*, the plaintiff argued that fracking should be treated the same as deviated wells.¹⁸¹ In deviated-well cases, the wellbore deviates from vertical either intentionally or unintentionally, and the wellbore physically intrudes onto another property.¹⁸² *Garza*

176. See LA. REV. STAT. ANN. § 30:9 (2007); *Nunez*, 488 So. 2d at 962.

177. LA. REV. STAT. ANN. § 31:7 (2000).

178. *Id.*

179. *Id.* § 31:7 cmt.

180. See *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1 (Tex. 2008); *Gliptis v. Fifteen Oil Co.*, 16 So. 2d 471 (La. 1943); see also *supra* Figures 2, 3 (illustrating that in the case of a deviated well or a horizontal well, the wellbore actually invades the neighboring subsurface thus some of the minerals produced will have entered the wellbore on the neighboring property).

181. See *Garza*, 268 S.W.3d at 13.

182. *Id.*

made clear the distinction that in the case of a deviated well, the oil or gas that enters the wellbore does so while the oil or gas is still beneath another's property.¹⁸³ In the case of fracking, however, the oil or gas is merely drained from another's property and does not enter the wellbore until it has migrated from beneath another's property; thus, the gas extracted due only to fractures that extend across subsurface property lines is protected by the rule of capture.¹⁸⁴

In *Gliptis*, the Louisiana Supreme Court was faced with the question of whether a deviated wellbore constitutes an actionable trespass.¹⁸⁵ In finding that it does, the court explained that the exclusive right of the landowner to explore and develop his land for purposes of producing fluid minerals "necessarily excludes the right of any person to invade the subsurface of his neighbor's land and to *extract therefrom* fugacious minerals, such as oil and gas. Such invasion would be a trespass."¹⁸⁶ The language of the opinion suggests that the location of the minerals when they are extracted is crucial to determining whether the right of the landowner to explore and develop his land for purposes of producing fluid minerals has been infringed.¹⁸⁷ Further, the court in *Gliptis* suggested that the point of extraction occurs when the minerals reach the wellbore.¹⁸⁸ In the context of a deviated or horizontal well, it is clear that some of the minerals are being extracted from beneath another's land because they are entering the wellbore while still located beneath another's land. In the context of fracking, the point in time at which the minerals are extracted is not until they have drained from landowner *B*'s land to landowner *A*'s land.¹⁸⁹

Using the apple orchard hypothetical, if the apple farmer planted a portion of the tree on the neighboring landowner's property, when this tree is absorbing the water, i.e., the water is traveling through the roots to the tree itself, the tree, because of its

183. *Id.* at 14.

184. *Id.* See *supra* Figure 1 (illustrating that the wellbore itself does not invade the neighboring subsurface).

185. See generally *Gliptis*, 16 So. 2d 471.

186. *Id.* at 474–75 (emphasis added).

187. *Id.*

188. This must be true to find liability for a deviated well. According to the Comment to Louisiana Revised Statutes section 31:7, the gas, even in the case of a deviated well, is not reduced to possession until the gas reaches the surface. See LA. REV. STAT. ANN. § 31:7 cmt. (2000). Therefore, to find liability, the focus switched to the point in time at which the gas was extracted. To find that the gas was extracted beneath a neighboring land, the only logical point of extraction had to be when the gas entered the wellbore.

189. Compare *supra* Figure 1, with *supra* Figures 2, 3.

location, would actually be extracting the water while the water is still on the neighboring landowner's property. The tree trunk in this hypothetical represents a deviated wellbore. Conversely, if the tree is entirely on the apple farmer's land and only the roots intrude on the neighboring landowner's land, then the water will have already migrated from the neighboring landowner's land to the apple farmer's land by way of the roots before it is actually being absorbed by the tree itself. The roots represent the fractures created by hydraulic fracturing, thus illustrating the migration of the water (gas) through the roots (fractures) to the tree trunk (wellbore). Both *Gliptis* and *Garza* seem to indicate that the location of the "water" when it is "absorbed by the tree" is important.¹⁹⁰ Therefore, although section 31:7 leaves little question as to when the minerals are reduced to possession, Louisiana jurisprudence indicates that the point of extraction is crucial in determining whether the rule of capture applies.¹⁹¹

C. Louisiana Revised Statutes Section 31:14: Rule of Capture

Louisiana, unlike Texas and West Virginia, is unique in the sense that there is a codified rule of capture rather than a common-law, jurisprudential rule.¹⁹² This allows an examination of the actual language of the rule in an attempt to determine how it should apply. Louisiana Revised Statutes section 31:14 codifies the rule of capture.¹⁹³ In doing so, the statute provides:

A landowner has no right against another who causes drainage of liquid or gaseous minerals from beneath his property if the drainage results from drilling or mining operations on other lands.¹⁹⁴ This does not affect his right to relief for negligent or intentional waste . . . or against another who may be contractually obligated to protect his property from drainage.¹⁹⁵

190. See *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1 (Tex. 2008); *Gliptis*, 16 So. 2d 471.

191. See LA. REV. STAT. ANN. § 31:7 (2000); *Gliptis*, 16 So. 2d 471.

192. See LA. REV. STAT. ANN. § 31:14 (2000).

193. *Id.*

194. This is not the only statute that uses the language "drilling or mining operations on other lands." Louisiana Revised Statutes section 31:8 uses similar language, but for purposes of this Comment, the meaning of "operations" will be assumed to mean the same in both statutes. LA. REV. STAT. ANN. § 31:8 (2000).

195. *Id.* § 31:14.

It is not clear from the language of the statute whether it is even applicable to fracking, but if it is applicable, it also presents multiple issues in regards to how it is to be applied.

The initial threshold issue surrounding section 31:14 is whether the rule of capture should apply to fracking in spite of the artificial nature of fracking.¹⁹⁶ The basis for this question lies in the “rationale for the rule of capture.”¹⁹⁷ As the dissent in *Garza* described, the rule of capture was enacted due to the “fugitive nature” of oil and gas.¹⁹⁸ The argument is that when a well is fracked, the oil and gas are no longer acting naturally but instead reacting to artificial stimulation.¹⁹⁹ However, the majority in *Garza* found that the act of drilling a well itself is unnatural, regardless of whether fracking is involved.²⁰⁰

Louisiana jurisprudence suggests that Louisiana courts would resolve this issue similarly to the Texas Supreme Court in *Garza*.²⁰¹ The Louisiana Supreme Court in *Higgins Oil & Fuel Co. v. Guaranty Oil Co.* addressed whether the rule of capture applies when the oil is drawn from beneath the plaintiff’s property by means of a pump on neighboring property.²⁰² In holding that the rule of capture does apply in such cases, the court concluded that there is no “difference between a well and a pump; both are artificial; both cause the oil to flow from the neighbor’s land; and both produce that effect by creating a vacuum which the oil from the neighbor’s land comes in to fill.”²⁰³ Therefore, it seems unlikely that one could successfully argue that the rule of capture as codified in section 31:14 would not apply because the drainage was stimulated by artificial means.

Assuming that the rule of capture applies despite fracking’s “artificial” nature, a second threshold issue appears. That issue can be stated as follows: section 31:14 contemplates a defined area (drilling and mining operations) occurring within a defined area (other lands).²⁰⁴ However, when a well is fracked, the scope of the drilling or mining operation becomes unclear. In the case of a well

196. This question is resolved by the majority in *Garza*. See *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 13 (Tex. 2008).

197. *Id.* at 42 (Johnson, J., dissenting).

198. *Id.*

199. *Id.* at 43.

200. See *id.* at 13 (majority opinion).

201. See *Higgins Oil & Fuel Co. v. Guar. Oil Co.*, 82 So. 206 (La. 1919) (holding that the rule of capture is not precluded by the use of artificial means to stimulate the flow of the oil or gas).

202. *Id.* at 206.

203. *Id.* at 211.

204. LA. REV. STAT. ANN. § 31:14 (2000).

that has not been fracked, the drilling or mining operations will presumably be said to be occurring on all lands on which the wellbore is located.²⁰⁵ However, in the case of a fracked well it is unclear if the drilling and mining operations will also be considered to be occurring on all lands under which the fractures extend, or if the extent of the drilling or mining operations are limited to the land beneath which the wellbore is located. If, for example, the operations are thought to be occurring only on the land beneath which the wellbore is located, then section 31:14 makes it clear that as long as the wellbore does not deviate and enter the subsurface of the neighboring landowner, that landowner will not be able to recover.²⁰⁶ However, if the drilling and mining operations are thought to be occurring on all lands on which the fractures extend, then another potential problem with the statute arises.²⁰⁷ The statute provides no clear indication of the scope of “drilling or mining operations,” but for purposes of this Comment, assume that the fracking operation is said to be occurring on all lands on which the fractures extend.²⁰⁸

Assuming both threshold issues for the application of section 31:14 are met—that is, the rule of capture applies to fracking despite its artificial nature and the extent of fracking as a drilling and mining operation is said to occur on all lands on which the fractures extend—there is a third, more troublesome ambiguity presented in section 31:14. The first part of the opening sentence lays out the general rule: “A landowner has no right against another who causes drainage of liquid or gaseous minerals from beneath his property”²⁰⁹ The second part of the first sentence places a requirement—that “the drainage results from drilling or mining operations on other lands”—for the general rule to apply.²¹⁰

205. See generally *Gliptis v. Fifteen Oil Co.*, 16 So. 2d 471 (La. 1943) (holding that the rule of capture does not apply to deviated wellbores). This would seem to indicate that because the wellbore is located beneath the neighboring property, the drilling and mining operations are not occurring entirely on “other lands,” and thus the rule of capture does not apply.

206. *Id.*

207. *Id.*

208. However, let it be noted that if a court were to interpret drilling or mining operations to only refer to the actual wellhead and wellbore, then hydraulic fracturing is obviously well within the bounds of the statute. This would prohibit a landowner—who has had the oil or gas from beneath his land drained due to hydraulic fracturing that extends beneath his land—from recovering against the operator or the landowner on whose land the operations are occurring. See LA. REV. STAT. ANN. § 31:14 (2000).

209. *Id.*

210. *Id.*

This language contemplates three possibilities: (1) the drainage may result from drilling or mining operations exclusively on other lands (operator's land); (2) the drainage may result from drilling or mining operations exclusively on the landowner's land (neighbor's land); and (3) the drainage may result from drilling or mining operations that are occurring on both "other lands" and on the landowner's land (both operator and neighbor's land). Section 31:14 makes clear that if the drilling or mining operations occur only on the operator's land, then the general rule applies, barring recovery.²¹¹ Similarly, if the drilling or mining operations occur only on the neighbor's land, then the general rule does not apply, potentially allowing the neighboring landowner to recover.²¹²

The third possibility, however, is the one that is pertinent to fracking. The situation this Comment contemplates is one where the fracking is being conducted on both the operator and neighbor's land and the wellbore is on the operator's land but the fractures extend beneath the neighbor's land. To apply the statute correctly to this situation, it is necessary to determine if the statute is exclusive—the general rule applies only if the drilling or mining operations occur completely on the operator's land—or if the statute is inclusive—the general rule applies when the drilling or mining operations occur on both the operator and neighbor's land. The jurisprudence does not answer this question.²¹³

Gliptis would seem to indicate that the statute is exclusive.²¹⁴ A deviated wellbore, for purposes of this statute, would fall under the same category as a fracked well, i.e., drilling or mining operations occurring on both the operator and the neighbor's land, because the well starts on the operator's land but ends on the neighbor's land. However, *Gliptis* was decided in 1943, before section 31:14 was enacted and before fracking was discovered.²¹⁵ Therefore, the court's decision provides little guidance on how the statute should apply to fracking.

The relevant statutes and jurisprudence fail to provide a definitive answer as to how section 31:14 should apply to fracking that occurs across subsurface property lines. Thus, Louisiana courts will have to take public policy into consideration in reaching a conclusion on this issue, and once a decision is made, the relevant statutes must be amended to make the law clear.

211. *Id.*

212. *Id.*

213. *See, e.g.,* *Gliptis v. Fifteen Oil Co.*, 16 So. 2d 471 (La. 1943).

214. *See id.*

215. *See id.* Louisiana Revised Statutes section 31:14 was enacted in 1974. Hydraulic fracturing was first discovered in 1947 and was first used commercially in 1949. *See* *Montgomery & Smith*, *supra* note 25, at 27.

V. A SOLUTION—CLEARING UP THE AMBIGUITIES

There are many ambiguities throughout the Mineral Code that leave Louisiana courts, practitioners, and operators with no clear answer to whether fracking would result in an actionable subsurface trespass under Louisiana law. First, it is unclear if the landowner's right to explore and develop his land for mineral production is truly exclusive.²¹⁶ Second, it is unclear if the point in time at which the minerals are "extracted" is crucial for determining whether the rule of capture applies.²¹⁷ Third, it is unclear whether Louisiana Revised Statutes section 31:14 even applies, but if it does, there is no answer as to whether the general rule²¹⁸ should be applied when the drilling or mining operations occur only on the operator's lands or if the rule will apply when the drilling or mining operations occur both on the operator's lands and on the neighbor's land.²¹⁹ With ambiguities in the application and interpretation of the statutes, an equitable solution that takes into account public policy concerns is needed to adequately protect landowners while recognizing the importance of the oil and gas industry to Louisiana.

A. Public Policy: Landowners v. Louisiana Oil and Gas Industry

A ruling on the merits in a case involving a subsurface trespass claim for damages due to fracking beneath one's property will necessarily have either a negative impact on the Louisiana oil and gas industry or on the landowner that is bringing the claim as well as other landowners who may find themselves in similar situations in the future. To properly determine the equitable decision, Louisiana courts should weigh the potential negative impacts on each party as well as each party's ability to mitigate the negative impacts against each other.

1. Potential Negative Impacts on Landowners

A ruling that fracking across subsurface property lines does not result in an actionable trespass would adversely impact landowners. The most obvious and perhaps the most severe impact

216. See LA. REV. STAT. ANN. § 31:6 (2000); see also *supra* Part IV.A.

217. See LA. REV. STAT. ANN. § 31:7 (2000); *Gliptis*, 16 So. 2d 471; see also *supra* Part IV.B.

218. The general rule contained in Louisiana Revised Statutes section 31:14 states: "A landowner has no right against another who causes drainage of liquid or gaseous minerals from beneath his property . . ." LA. REV. STAT. ANN. § 31:14 (2000).

219. *Id.* See *supra* Part IV.C.

would be the loss of oil and gas itself and any profits the landowner would have earned from the minerals. However, this is not the only negative impact to be sustained by landowners.

An adverse ruling could also diminish any bargaining power landowners may have when entering into mineral leases.²²⁰ The West Virginia district court in *Stone* contemplated a situation where an adverse ruling for landowners could result in oil and gas companies possessing all of the bargaining power while negotiating mineral leases.²²¹ The West Virginia court reasoned that a production company may “tell a small landowner that either they sign a lease on the company’s terms or the company will just hydraulically [sic] fracture under the property and take the oil and gas without compensation.”²²² It is not hard to see why this may happen. Suppose *A* owns land surrounded by *B*, *C*, and *D*. An oil and gas company could easily go to *B*, *C*, or *D* and enter into a lease with them if they do not like the terms that *A* is willing to agree to. After entering into a lease with one of the neighboring landowners, the oil and gas company can to some extent drain gas from beneath *A*’s property by drilling the wellbore as close to *A*’s property as permissible by law²²³ and then fracking across the subsurface property line. Even if this scenario does not culminate with the oil and gas company signing a lease with a neighboring landowner and capturing the oil or gas beneath *A*’s property, it could very well result in *A* entering into a lease for less, simply out of fear that the situation above would occur.

Additionally, the remedy of “self-help,” i.e., drilling his own well to offset his losses, that a landowner is afforded may not be adequate.²²⁴ Although this is a valid remedy, leaving the landowner to engage in self-help presents some problems. First, not all landowners are capable of drilling their own well or entering into mineral leases. In fact, it is conceivable that a landowner could be oblivious to the fact that there are drilling and mining operations occurring on neighboring lands that are draining minerals from beneath his land. Additionally, arguing that self-help is an adequate remedy presupposes that the landowner has no preference for when the minerals beneath his property are mined but

220. See, e.g., *Stone v. Chesapeake Appalachia, L.L.C.*, No. 5:12-CV-102, 2013 WL 2097397, at *6 (N.D. W. Va. Apr. 10), *vacated on other grounds*, 2013 WL 7863861 (N.D. W. Va. July 30, 2013).

221. *Id.*

222. *Id.*

223. Generally, wells cannot be drilled within 330 feet of a property line. See LA. ADMIN. CODE tit. 43, pt. XIX, § 1905 (2013).

224. See *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 14 (Tex. 2008).

instead is only interested in their value. A landowner may wish to “sit” on the minerals beneath his land for many different reasons. However, if a neighboring landowner is conducting drilling operations and fracking, the landowner would be forced to drill himself or risk having the minerals beneath his property drained.

2. Potential Negative Impacts on Louisiana’s Oil and Gas Industry

If a court were to find an oil or gas company or a private landowner—whomever has the right to the minerals beneath the property on which the fracked well is drilled—liable to a neighboring landowner for the oil or gas drained from his property due to fracking across subsurface property lines, the impacts on the industry could prove to be substantial.²²⁵ The natural gas industry accounts for approximately 22% of the nation’s total energy supply.²²⁶ More specifically, Louisiana contributes 10% of the nation’s natural gas supply, making it the third highest producing state.²²⁷ Moreover, as of 2010, it is estimated that only roughly one-tenth of the number of wells needed to produce all of the gas from Louisiana’s Haynesville Shale have been drilled.²²⁸ Even so, the direct and indirect economic impact the oil and gas industry had on Louisiana in 2011 was estimated at \$77.3 billion.²²⁹ In addition to revenue, it is estimated that the oil and gas industry brings over 300,000 jobs to Louisiana.²³⁰ Thus, it is clear that the oil and gas industry is essential to the Louisiana and U.S. economy.²³¹

A ruling that landowners could recover the oil or gas drained due to fracking would discourage exploration and production companies from fracking, resulting in reduced production.²³² If exploration and production companies fear liability for fracking, they will be hesitant to conduct fracking operations, or at the very least, reduce the scale of such operations. According to a study conducted by IHS Global Insight, if fracking were completely

225. Although the anticipated negative impacts of such a ruling by Justice Willett in the concurring opinion in *Garza* may be extreme, there would undoubtedly be negative impacts to some extent. *Id.* at 26–27 (Willett, J., concurring).

226. See PRIMER, *supra* note 4, at 3.

227. SCOTT, *supra* note 54, at 3.

228. LA. DEP’T OF NATURAL RES., *supra* note 32, at 8.

229. SCOTT, *supra* note 54, at 27.

230. *Id.*

231. See *id.*

232. Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1, 26–27 (Tex. 2008) (Willett, J., concurring) (appealing to the court not to act as an “above ground obstacle” to oil and gas production).

eliminated, the country as a whole would experience a 17% reduction in oil production and a 45% reduction in natural gas production over a five-year period, with those numbers increasing to 23% and 57% respectively over an 18-year period.²³³ Thus, a ruling that would discourage fracking would have substantial impacts on the industry as a whole.

The geographical location of the primary natural gas reservoir in Louisiana, the Haynesville Shale, could also pose negative impacts.²³⁴ The Haynesville Shale is located in Northwest Louisiana and extends across the border into East Texas and Arkansas.²³⁵ If Louisiana were to hold oil and gas companies liable for actionable trespass due to fracking, the exploration and production companies could easily take their business across the border to Texas, where they now know that no such liability exists as a result of *Garza*.²³⁶ Such a consequence could have a substantial impact on the Louisiana economy.²³⁷ Although the natural gas reservoirs would eventually dry up, forcing the companies back to Louisiana, even a short departure from Louisiana could cause the immediate loss of hundreds of thousands of jobs and billions of dollars.²³⁸

Moreover, an adverse ruling would result in gas being left in the ground.²³⁹ The Haynesville Shale requires fracking to be economically viable.²⁴⁰ Without this much-needed technology, gas will remain trapped in the ground and unproduced. An adverse ruling creating liability for fracking could result in production companies designing fractures to stop a certain distance short of property lines to ensure that the fractures do not extend past the property line. Such a practice would result in an area on both sides of the property line that essentially goes undeveloped, leaving gas in the ground.²⁴¹ Even if fractures were designed to stop 150 feet short of property lines, 300 feet of the reservoir would go unproduced.²⁴² Although that may currently seem insignificant due

233. IHS GLOBAL INSIGHT, *supra* note 53.

234. LA. DEP'T OF NATURAL RES., *supra* note 32, at 8.

235. *Id.*

236. *See Garza*, 268 S.W.3d 1.

237. *See* SCOTT, *supra* note 54, at 27 (indicating that in 2011 the direct and indirect economic impacts of the energy sector in Louisiana alone were valued at \$77.3 billion).

238. *See* SCOTT, *supra* note 54, at 27.

239. *See Garza*, 268 S.W.3d at 26–27 (Willett, J., concurring).

240. LA. DEP'T OF NATURAL RES., *supra* note 32, at 8.

241. *See* Keith B. Hall, *Hydraulic Fracturing: If Fractures Cross Property Lines, Is There Actionable Subsurface Trespass?*, 54 NAT. RESOURCES J. 361, 401–02 (2014) [hereinafter Hall, *Trespass*].

242. Note that fractures designed to stop 150 feet short of property lines is a conservative estimate as the uncertainty associated with fracture length could

to the excess natural gas, as reservoirs dry up, 300 feet of reservoir would become extremely valuable. Further, to produce the unproduced strip of reservoir in the future, additional wells would have to be drilled or existing wells returned to operating condition, further disturbing the environment.²⁴³ For these reasons, a ruling that would allow landowners to recover the value of the oil or gas drained due to fracking under their land would likely have a negative impact on the oil and gas industry as well as the Louisiana economy as a whole.²⁴⁴

3. Balancing Test—Interests of Landowners v. Interests of Louisiana Oil and Gas Industry

It is clear that the oil and gas industry, the landowners, and Louisiana as well as the nation as a whole stand to suffer legitimate harms due to an adverse ruling. However, from a public policy perspective, the interest of the oil and gas industry and Louisiana's interest in the oil and gas industry outweighs the interest of the landowners, not necessarily because the Louisiana oil and gas industry's interests are more important, but rather because the landowners have ways to mitigate the potential negative impacts.

First, there is no way for the oil and gas industry to mitigate the losses it stands to suffer. To ensure they will not be held liable for fracking, oil and gas companies will have to design their fractures to stop well short of the property line. Although technological advances may eventually create completely predictable fractures, the existing technology is nowhere near that point.²⁴⁵ Further, leaving gas in the ground unproduced has an impact on everyone. As oil and gas reservoirs are tapped, the supply of gas will decrease, thus raising the cost of energy for everyone.²⁴⁶ When the gas becomes too valuable for the landowners to continue to disagree, a new well will have to be drilled, or an existing well

lead to operators designing fractures to stop much shorter of property lines. *See id.* (indicating that the margin of error between the designed fracture length and the actual fracture length could be as long as 500 feet causing operators to plan for at least a 500 foot buffer near property lines).

243. *See* PRIMER, *supra* note 4, at 43 (pointing out that surface disturbance of well pads and roads are one of the main environmental concerns with oil and gas production).

244. *See* IHS GLOBAL INSIGHT, *supra* note 53; SCOTT, *supra* note 54.

245. Montgomery & Smith, *supra* note 25, at 31. Note that although fracture design technology has come a long way, there is still much uncertainty with regards to fracture length. *See* Hall, *Trespass*, *supra* note 241, at 401.

246. *See* IHS GLOBAL INSIGHT, *supra* note 53.

reopened, to produce the minerals that were left in the ground before, further impacting the environment. Moreover, a landowner who wants to produce the oil or gas beneath his property may be prevented from producing the entirety of it for fear of liability if the fractures extend onto his neighbor's property. A rule that would limit fracking use would cause negative impacts throughout the oil and gas industry, as well as Louisiana and the United States as a whole.

Some landowners stand to suffer legitimate negative impacts; however, there are additional remedies and ways to mitigate those impacts.²⁴⁷ First, landowners are afforded the remedy of self-help.²⁴⁸ Though imperfect, it does afford the landowner a way to offset losses.²⁴⁹ If a landowner is aware that a fracking operation is occurring nearby that could potentially be draining minerals from beneath his land, he has the option to drill a well of his own.²⁵⁰ Therefore, although he may have a portion of his oil or gas drained, he would have the right to do the same to offset his drainage.²⁵¹

Although some landowners are assuredly not as well versed in the ins and outs of the oil and gas industry as others, it takes no special knowledge on the part of the landowner to produce the minerals from beneath his or her land. All one has to do is enter into a mineral lease with an oil and gas production company. Though there is a fear that oil and gas companies may hold the upper hand when it comes to bargaining power, such a result is unlikely in Louisiana. With the boom of the natural gas industry recently in Louisiana,²⁵² a small landowner will likely have many production companies waiting for a chance to lease mineral rights.

Further, although there is a chance that production companies may enjoy increased bargaining power when entering into mineral leases, this is not something that is exclusive to fracking. The rule of capture currently provides a better bargaining position to production companies in that it allows production companies to go to a neighboring landowner and lease from them and then drain the oil or gas from beneath the surrounding lands. Therefore, although this is a concern, it is not any more present with fracking than it is with conventional production.

247. *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 14 (Tex. 2008).

248. *Id.*

249. *See supra* Part V.A.1.

250. *Id.*

251. *Id.*

252. *See SCOTT, supra* note 54.

Second, a landowner always has the option to voluntarily enter into a unit and pool his rights with other neighboring landowners. This would effectively allow the landowner to get his proportional “piece of the pie” without having to worry about anyone draining minerals from beneath his property before he could produce them himself. In the event of disagreement among landowners, the Office of Conservation can force landowners to pool their rights.²⁵³ Therefore, in addition to drilling a well to offset losses, a landowner may also enter into a unit to pool his rights with the rights of the other landowners to ensure that he gets his equal share of the minerals produced.

Landowners also already have a governmental entity preserving their rights similar to the plaintiffs in *Garza*. The Louisiana Office of Conservation is responsible for “conserving and regulating oil, gas, and lignite resources of the state.”²⁵⁴ More specifically, the Engineering Division of the Office of Conservation is responsible for “the prevention of waste of oil and gas underground (in the reservoirs in which it accumulated), in storage and in transportation and is *responsible for the protection of property rights of all persons concerned or affected thereby* insofar as those rights relate to oil and gas exploration and exploitation in the state of Louisiana.”²⁵⁵ The regulation of all fracking issues, including fracking that extends beyond property lines, falls squarely within the authority of the Office of Conservation.²⁵⁶ The Office of Conservation is able to conduct an informed analysis of the balance between the potential effects on the oil and gas industry and the potential effects on the landowners and make an informed decision on how to regulate fracking. To date, the Office of Conservation has seen no reason to regulate fracking under these circumstances. Thus, it can be deduced that the Office of Conservation has no reason to believe landowners stand to suffer any egregious harm.

After balancing the public policy concerns that arise from a ruling that would find liability for fracking against the consequences

253. See LA. REV. STAT. ANN. § 30:9 (2007).

254. *Office of Conservation*, DEP’T OF NATURAL RES., <http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=46&ngid=4>, archived at <http://perma.cc/Q6KF-MRWV> (last visited Feb. 10, 2015) [hereinafter *Office of Conservation*].

255. *Office of Conservation: Engineering - Administrative Division*, DEP’T OF NATURAL RES., <http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=53&pnid=21&nid=26>, archived at <http://perma.cc/99A5-CTYT> (last visited Feb. 10, 2015) [hereinafter *Office of Conservation: Engineering*] (emphasis added).

256. See *Office of Conservation*, *supra* note 254; *Office of Conservation: Engineering*, *supra* note 255.

that a *Garza*-like ruling would have on landowners, the potential negative impacts on the oil and gas industry, Louisiana, and the nation as a whole outweigh the potential negative impacts on landowners. Consequently, when this issue arises in a Louisiana court, the court, finding no clear answer through the Mineral Code, should follow the Texas Supreme Court in *Garza* and reach an equitable decision finding no liability for fracking when the fractures alone extend beyond subsurface property lines.

B. Solution: Amend the Mineral Code to Reflect No Liability for Fracking While Preserving Liability for Deviated Wells

After concluding that there should be no liability for fracking when the fractures alone extend beyond subsurface property lines, the relevant Mineral Code statutes should be amended to reflect this interpretation. An amendment is necessary for two reasons. First, clarification of the Mineral Code would allow citizens, practitioners, and the oil and gas industry to better understand the legal remedies for such actions, and second, should this issue continue to arise in the judicial system, the law should be clear to promote a consistent application by the courts.

The Mineral Code, as it stands, leaves two unanswered questions in the provisions that are relevant to this issue:²⁵⁷ (1) whether the language in section 31:6 should be read to indicate that a landowner's right to explore and develop his property is "exclusive";²⁵⁸ and (2) whether the language "if drainage results from drilling or mining operations on other lands" in section 31:14 is inclusive or exclusive.²⁵⁹

1. Amendment to Section 31:6: Recognizing Limitation on the Exclusive Right

As explained above, section 31:6 refers to the right of a landowner to explore and develop his property as an "exclusive" right, even though it is recognized that there are limitations on the exclusivity of the right.²⁶⁰ The amendment to this statute is simple. Instead of the second sentence of the statute reading, "[t]he landowner has the exclusive right to explore and develop his property for the production of such minerals and to reduce them to possession and ownership," the statute should be amended to read,

257. See LA. REV. STAT. ANN. § 31:6 (2000); *id.* § 31:14.

258. See *supra* Part IV.A.

259. See *supra* Part IV.C.

260. LA. REV. STAT. ANN. § 31:6 (2000). See *supra* Part IV.A.

“the landowner has the exclusive right to explore and develop his property for the production of such minerals and to reduce them to possession and ownership, unless otherwise provided by law.” The addition of the language “unless otherwise provided by law” allows for the statute to be in concert with the recognized limitations on the right.²⁶¹

2. Amendment to Section 31:14: Point of Extraction, Not Where Operations Are Occurring, Should be Determinative

The proposed amendment to Louisiana Revised Statutes section 31:14 is not as simple. Section 31:14 currently reads, “A landowner has no right against another who causes drainage of liquid or gaseous minerals from beneath his property if the drainage results from drilling or mining operations on other lands.”²⁶² Although it would be simple to just amend the language to indicate that the statute is meant to be exclusive or inclusive, such an amendment would result in no liability for fracking *and* deviated wells, or imposed liability for fracking *and* deviated wells, neither of which would be desirable.

If the first sentence of the statute were to read, “A landowner has no right against another who causes drainage of liquid or gaseous minerals from beneath his property if the drainage results from drilling or mining operations occurring in any part, on other lands,” then a landowner would not be able to recover for drainage due to a deviated well. Although this would also prohibit liability for fracking, it would conflict with *Gliptis* and result in an undesirable outcome in deviated-well cases.

Conversely, if the statute were to read, “A landowner has no right against another who causes drainage of liquid or gaseous minerals from beneath his property if the drainage results from drilling or mining operations exclusively on other lands,” the result would create liability for fracking across subsurface property lines. Though this reading would preserve the *Gliptis* decision, it would result in liability for fracking, disregarding public policy concerns.

Therefore, a simple clarification of the exclusive or inclusive nature of the statute will not suffice. Instead, an alternative solution that preserves liability for deviated wells, but limits liability for hydraulic fracturing, is necessary. To accomplish this, the requirement for the general rule that gives a landowner no right of action should be focused on the location from which the gas was

261. See *supra* Part IV.A. Some recognized limits include forced pooling and rights within a unit.

262. LA. REV. STAT. ANN. § 31:14 (2000).

extracted, not where the drilling or mining operations are occurring. The court in *Gliptis*, in holding that a landowner is able to recover for drainage due to a deviated well, stated that the exclusive right of a landowner to explore and develop his land for the production of minerals “necessarily excludes the right of any person to invade the subsurface of his neighbor’s land *and to extract therefrom* fugacious minerals, such as oil and gas.”²⁶³ Therefore, it is clear that the relevant inquiry was not where the drilling or mining operations were located but rather from where the minerals were extracted. Louisiana Revised Statutes section 31:14 should thus be amended to reflect this language from *Gliptis* and read, “A landowner has no right against another who causes drainage of liquid or gaseous minerals from beneath his property so long as the minerals were extracted from beneath other lands.” Such an amendment would preserve *Gliptis* and limit liability for fracking, while not upsetting any other provision of the Mineral Code.

A definition of extraction would be needed to indicate exactly when extraction takes place. Extraction, for purposes of this statute, would be different than possession as contemplated in section 31:7.²⁶⁴ Extraction, as it pertains to this statute, should be defined as “the point in time at which the oil or gas reaches the wellbore.” Such a definition would result in the extraction of minerals occurring beneath the neighboring landowner’s land in the case of a deviated well, but in the case of fracking, extraction would occur beneath the operator’s land.

These two amendments to the Mineral Code would clarify the law as to when a landowner is able to recover for drainage of minerals beneath his land that are caused by another. Such clarification is beneficial for landowners, practitioners, and oil and gas companies alike and is necessary for a consistent application by the courts.

CONCLUSION

The question of whether a landowner may recover for the value of minerals drained due to fracking that extends beneath his land presents unique issues for Louisiana courts. The law, as it stands

263. *Gliptis v. Fifteen Oil Co.*, 16 So. 2d 471, 474 (La. 1943) (emphasis added).

264. Louisiana Revised Statutes section 31:7 provides: “Minerals are reduced to possession when they are under physical control that permits delivery to another.” LA. REV. STAT. ANN. § 31:7 (2000). The jurisprudence indicates that possession occurs at the wellhead (surface). *See id.* § 31:7 cmt.

now, is unclear and ambiguous as to the exclusivity of the right to explore and develop one's land for the liquid minerals beneath that land²⁶⁵ and as to the when Louisiana Revised Statutes section 31:14 bars recovery by a landowner who has had oil or gas drained from beneath his land,²⁶⁶ which could result in inconsistent application by the courts and inconsistent judgments. In an attempt to determine the equitable result, the potential negative impacts on the Louisiana oil and gas industry must be weighed against the potential negative impacts on landowners. After weighing these competing burdens, the oil and gas industry, the State of Louisiana, and the nation as a whole stand to suffer harm from an adverse ruling with little to no available measures to mitigate that harm. Additionally, the judicial system is not as well equipped to handle these types of issues as is the Office of Conservation. Therefore, should this issue be litigated in Louisiana, the court should follow the *Garza* decision limiting liability for fracking. However, for clarity and application, the Legislature should amend the relevant statutes to focus on the point at which the gas is extracted from the ground. Such an amendment would continue to allow a landowner to recover for a deviated well while barring recovery for fractures extending beyond property lines.

*Caleb Madere**

265. *See supra* Part IV.A.

266. *See supra* Part IV.C.

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