WHEN CAN LIGHTNING STRIKE? AN ANALYSIS OF *LIGHTNING OIL V. ANADARKO'S* EFFECTS ON OFF-LEASE HORIZONTAL DRILLING

I. INTRODUCTION

Horizontal drilling and related technological advancement has led to significant increases in production capabilities.[1] It has also brought with it novel legal issues that threaten the ability of longstanding principles of oil and gas law to keep up with technological advancements. The recent Supreme Court of Texas case, *Lightning Oil Co. v. Anadarko E&P Onshore, LLC* (*Lightning v. Anadarko*), is demonstrative of such a threat.[2] In a case of first impression, mineral estate owner Lightning Oil Company (Lightning) filed a subsurface trespass cause of action against an adjacent mineral estate owner, Anadarko E&P Onshore, LLC (Anadarko), in an attempt to enjoin Anadarko from continuing its off-lease horizontal

1. *Today In Energy: Nov. 4, 2016*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/todayinenergy/detail.php?id=28652 (last visited August 14, 2018).

2. Lightning Oil Co. v. Anadarko E&P Onshore, LLC, 520 S.W.3d 39 (2017).

drilling operations that were designed to traverse through Lightning's mineral bearing formations on the way to Anadarko's adjacent mineral estate.[3]

The Supreme Court of Texas affirmed the trial court and Court of Appeals' judgment to deny the Plaintiff's injunction, holding as a matter of first impression, that the loss of a *de minimis* amount of hydrocarbons within the drilling cuttings of a horizontal well is not sufficient enough to support a trespass claim when the injury is outweighed by competing factors.[4] The court further held that a mineral lessee has no right to prevent a surface owner and an adjacent mineral estate from contracting to engage in drilling activities which might later interfere with the lessee's plans, and that those drilling activities constitute a surface use under the accommodation doctrine.[5] Accordingly, the court refused to expand the scope of the accommodation doctrine and subsurface trespass jurisprudence.[6]

This decision clarifies the ownership rights of the subsurface in jurisdictions which formally recognize the severance of surface and mineral estates, and may perhaps offer guidance to those jurisdictions considering recognizing such a severance.[7] This decision also introduces new topics for parties to be cognizant of when negotiating agreements pertaining to the subsurface. Furthermore, this decision invites speculation about the role that modern drilling technologies and geophysical trespass will have on future off-site drilling causes of action.

II. BACKGROUND

Ranging across twenty-seven counties in Southeast Texas, the Eagle Ford formation is a 400-mile-long shale play, capable of producing significant amounts of both crude oil and natural gas.[8] Within this formation lies the Eagleville and Briscoe Ranch Fields.[9] In 2015, Eagleville and Briscoe Ranch were ranked number one and number five, respectively, in estimated crude oil production, and were among the top fifteen fields in estimated natural gas production.[10] The present cause of action arose between two mineral estate owners operating on adjacent tracts within the Briscoe Ranch Field in Dimmitt County, Texas.[11]

Overlying a portion of the Briscoe Ranch Oil Field is The Chaparral Wildlife Management Area (the Chaparral WMA); a 15,200-acre wildlife conservation and

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3. *Id.*

4. *Id.* at 51.

5. *Id.* at 39.

6. *See generally Lightning*, 520 S.W.3d 39.

7. Moser v. U.S. Steel Corp., 676 SW.2d 99, 101 (Tex. 1984) ("In Texas, the mineral estate may be severed from the surface estate by grant of the minerals in a deed or lease, or by reservation in a conveyance"). States in which mineral and surface estate severance is common "include: Texas, Oklahoma, Pennsylvania, Louisiana, Colorado, [and] New Mexico." MINERALWISE, SURFACE RIGHTS VS MINERAL ESTATES IN OIL & GAS LEASING, http://www.mineralweb.com/surface-rights-vs-mineral-rights-in-oil-gas-leasing/ (last visited August 14, 2018).

8. *Eagle Ford Shale Information*, RAILROAD COMMISSION OF TEXAS, http://www.rrc.state.tx.us/oil-gas/major-oil-and-gas-formations/eagle-ford-shale-information/ (last visited August 14, 2018).

9. EIA, TOP 100 U.S. OIL AND GAS FIELDS: MARCH 2015 (2015), https://www.eia.gov/naturalgas/crudeoilreserves/top100/pdf/top100.pdf.

10. *Id.*

11. *Lightning*, 520 S.W.3d at 43.

research area boasting a plethora of outdoor activities for the public.[12] The Texas Parks and Wildlife Department (TPWD) governs drilling in Texas' state parks and wildlife management areas, and all pertinent leases must be separately approved by a three-man board known as the "Board for Lease: Texas Parks and Wildlife Department."[13]

Due to the fragile nature of the overlying conservation areas, mineral leases within Texas park and wildlife management areas typically contain significant measures designed to limit the footprint of drilling operations.[14] For example, the TPWD precludes surface occupancy for most leases, instead preferring off-site surface activity accompanied by horizontal drilling which then kicks off into the mineral formation underlying the wildlife area.[15] Additionally, the TPWD usually requires leases which have been approved for surface activity by the Board for Lease to enter into surface use agreements with stringent stipulations governing the operator's use of the land.[16] In light of the TPWD's preferences and the resulting tendency for off-site drilling, a brief overview of Texas' accommodation doctrine and subsurface trespass laws is necessary.

A. Accommodation Doctrine

Courts have long held that a company's mineral estate is considered to be dominant over the servient surface estate.[17] With this dominance comes the inherent right for a mineral lessee to use the surface however it sees fit for its operations, so long as the use is reasonably necessary and in compliance with the terms of the lease.[18] This is not an absolute right, however, as each estate has an obligation to pay due regard to the other estate's rights while acting upon their own respective rights.[19] Generally, to invoke the accommodation doctrine, the surface owner bears the burden of proving that the mineral lessee did not fulfill its obligation to act with due regard in its operations.[20]

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12. *Chaparral WMA (CWMA)*, TEXAS PARKS & WILDLIFE, https://tpwd.texas.gov/huntwild/hunt/wma/find_a_wma/list/?id=45 (last visited August 14, 2018).

13. *Get The Frack Out of Our Parks*, SIERRA CLUB: LONE STAR CHAPTER (Feb. 21, 2015), https://www.sierraclub.org/texas/blog/2017/02/get-frack-out-our-parks.

14. *Id*.

15. *Id.*

16. *Id.* ("Among the provisions that the state will negotiate include location of facilities, timing of operations, facility aesthetics, traffic, noise, access, odors, fencing and incident reporting, and site restoration.").

17. Getty Oil Co. v. Jones, 470 S.W.2d 618, 621 (Tex. 1971) ("whereby the minerals can be recovered, the rules of reasonable usage of the surface may require the adoption of an alternative by the lessee."); *id.* at 622.

18. Humble Oil & Refining Co. v. Williams, 420 S.W.2d 133, 134 (Tex. 1967).

19. Ryan Gaddis, Note, *Coyote Lake Ranch, LLC v. City of Lubbock: The Accommodation Doctrine Expanded*, 38 ENERGY L. J. 455, 460 (2017).

20. Merriman v. XTO Energy, Inc., 407 S.W.3d 244, 249 (Tex. 2013).

> To obtain relief on a claim that the mineral lessee has failed to accommodate an existing use of the surface, the surface owner has the burden to prove that (1) the lessee's use completely precludes or substantially impairs the existing use, and (2) there is no reasonable alternative method available to the surface owner by which the existing use can be continued. . . . If the surface owner carries that burden, he must further prove that given the particular circumstances, there are alternative reasonable, customary, and industry-accepted methods available to the lessee which will allow recovery of the minerals and also allow the surface owner to continue the existing use.

Texas, through its Supreme Court decision in *Getty Oil Co. v. Jones* (*Getty*), was the first to adopt the accommodation doctrine, and today uses the doctrine as a tool to balance the rights and obligations of dominant and servient estates.[21] Texas courts have, on occasion, expanded the accommodation doctrine in order to resolve novel disputes between surface and mineral estates.[22] The accommodation doctrine has been precluded from applying to situations in which the reasonable alternatives available to mineral lessees can only be found outside of the lease premises.[23]

Several states have since adopted their own version of the accommodation doctrine, while others have chosen to adopt surface damage acts instead.[24] Operators in jurisdictions that have adopted surface damage acts are typically obligated to indemnify the surface owner for any damages incurred, and are thereby subject to different standards than those in accommodation doctrine jurisdictions.[25] Oklahoma's Surface Damages Act (OSDA) is representative of such a difference.[26] Pursuant to the OSDA, an operator is required to provide the surface estate owner with a notice of intent to drill, at which point a negotiation of the surface damages will begin.[27] If the operator and surface estate owner cannot reach an agreement, the mineral lessee may choose to commence operations, albeit with the knowledge that it will ultimately be required to compensate the surface owner for any damages awarded, pursuant to litigation or arbitration.[28] Similar to the OSDA, North Dakota's surface damages act permits operators to commence production even if negotiations have not been met, so long as the surface owner is subsequently compensated for damages "caused by drilling operations."[29]

While jurisdictions are split into those that have adopted a version of the accommodation doctrine and those which have instead implemented surface damage or surface use acts; there are still some states, such as Colorado, which have demonstrated a bifurcated mentality, implementing both approaches, or a fusion

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21. *See generally Getty*, 470 S.W.2d 618 (protecting the surface owner from the mineral lessee's invasive placement of pump jacks in light of reasonable alternatives).

22. Texas Genco, LP v. Valence Operating Company, 187 S.W.3d 118 (Tex. App. 2006) (extending the accommodation doctrine protection to a surface owner who had designated a portion of land as waste storage, but had not yet stored any waste); *see also* Gaddis, *supra* note 19, at 455 (discussing Coyote Lake Ranch v. City of Lubbock, 498 S.W.3d 53 (Tex. 2016), where, "[a]s a matter of first impression, the [Texas] Supreme Court expanded the accommodation doctrine to interests in groundwater and awarded the groundwater estate 'dominant' status over the surface.").

23. Sun Oil Co. v. Whitaker, 483 S.W.2d 808, 812 (Tex. 1972).

24. KENDOR P. JONES ET AL., *Split Estates and Surface Access Issues*, in LANDMAN'S LEGAL HANDBOOK, 186 (5th ed. 2013) (Alaska, Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming are among the states that "have adopted surface damage/surface use statutes to provide protection to surface owners while allowing for the development of the mineral resources.").

25. LOWE, ET AL., CASES AND MATERIALS ON OIL AND GAS LAW, 193 (6th ed. 2013) [hereinafter CASES AND MATERIALS].

26. 52 Okla. Stat. § 318.3 (2013).

27. *Id.*

28. *Id.* §318.5.

29. N.D. Cent. Code § 38-11.1-04 (2011); *see also* Murphy v. Amoco Production Co., 729 F.2d 552 (8th Cir. 1984) (holding North Dakota's surface damages act constitutional).

thereof.[30] Colorado's Supreme Court introduced elements of the accommodation doctrine in its *Gerrity v. Magness* decision to remand with clarification the surface owner's "trespass claim for alleged excessive surface use."[31] In this decision, the court also acknowledged the common decision that "neither the surface owner nor the severed mineral rights owner has any absolute right to exclude the other from the surface."[32]

Colorado's interpretation of the accommodation doctrine was codified ten years later.[33] Pursuant to this codified regulation, the duty to "minimiz[e] intrusion upon and damage to the surface of the land" is imposed upon operators.[34] Like the accommodation doctrine of Texas, this regulation permits the mineral lessee to use the surface in any way that is "reasonable and necessary," and may be superseded by contractual provisions of leases.[35] However, this "Reasonable Accommodation" statute does possess significant differences from Texas' accommodation doctrine, as it applies a shifting burden of proof, and surface owners may seek compensatory damages through litigation or arbitration for operations that fail to meet the requirements of this statute.[36]

B. Subsurface Trespass in Texas

Black's Law Dictionary defines a trespass as an "unlawful act committed against the person or property of another; especially wrongful entry on another's real property."[37] A real property owner's ability to decide what constitutes an authorized entry is indicative of its inherent right to exclude others from using their property.[38] Further, the unauthorized entry upon or damage to another's real property interest can constitute a trespass even if it causes no damage or injury.[39]

Although the tort of trespass shares the same fundamental elements as subsurface trespass, and although a mineral estate is traditionally considered to be a real property interest, Texas courts have consistently refused to treat subsurface trespass issues as a traditional trespass.[40] This continued distinction between traditional and subsurface trespass is perhaps demonstrated best in *Coastal Oil &*

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30. *See generally* Colo. Rev. Stat. § 34-60-127 (2007).

31. Gerrity Oil & Gas Corp. v. Magness, 946 P.2d 913, 927 (Colo. 1997) ("This 'due regard' concept requires mineral rights holders to accommodate surface use owners to the fullest extent possible consistent with their right to develop the mineral estate.").

32. *Id.*

33. Colo. Rev. Stat. § 34-60-127.

34. *Id.* § 34-60-127(1)(a).

35. *Id.* § 34-60-127(1)(c)(d).

36. Will Russ, *Inheriting the Wind: A Brief Guide to Resolving Split Estate Issues When Developing Renewable Projects*, Renewable Electric Energy Law, Development, and Investment, Paper 5, Page No. 9 (Rocky Mt. Min. L. Fdn. 2013) ("in Colorado, the doctrine is accompanied by a shifting burden of proof, where if the surface owner has met its initial burden of proving that alternative means of production are available, the mineral owner must then prove that its means of production is reasonable."); *see also* Colo. Rev. Stat. §34-60-127(2), (3)(a).

37. *Trespass*, BLACK'S LAW DICTIONARY (9th ed. 2009).

38. Environmental Processing Sys., L.C. v. FPL Farming Ltd., 457 S.W.3d 414, 424 (Tex. 2015).

39. Coastal Oil & Gas v. Garza Energy Trust, 268 S.W.3d 1, 12 n.36 (Tex. 2008).

40. Brief of Amicus Curiae Tex. Oil & Gas Ass'n at 8-9, 2017 WL 1180662, (Tex.) (No. 15-0910) [hereinafter *Amicus Brief*].

Gas Corp. v. Garza Energy Trust (*Coastal*), where the majority, concurring, and dissenting opinions all recognized that subsurface trespass should be governed separately from traditional trespass.[41]

Abiding by this ideology, the Texas Supreme Court in *Coastal* held that hydraulic fractures which extended into a neighboring tract did not constitute a trespass, because the resulting drainage was instead subject to the rule of capture.[42] This decision was largely influenced by public policy considerations in deciding whether to subject hydraulic fracturing to wide-open tort liability.[43] *Coastal* is one of many cases in which the Supreme Court of Texas has rejected an absolute trespass standard comparable to the common law tort, instead choosing to balance public policy considerations.[44]

Another such case is that of *Railroad Commission of Texas v. Manziel* (*Manziel*), where the court held that there was no actionable trespass when salt water from a secondary recovery operation migrated into neighboring territory.[45] When re-examining its *Manziel* holding in *Coastal Oil*, the Supreme Court of Texas acknowledged that its analysis had been largely influenced by the Railroad Commission's approval of the operation in question, and the fact that the law of trespass should be applied to the oil and gas industry with careful consideration.[46]

So, in Texas, a subsurface trespass cause of action will not be subject to an absolute trespass standard - where an unauthorized interference with the physical property or the property rights of another is automatically actionable.[47] The decision to designate a subsurface interference as a trespass is dependent upon the specific circumstances of the case, as well as the public policy considerations arising therefrom.

C. Geophysical Trespass

In addition to physical subsurface trespasses, there is also significant case law surrounding geophysical and exploratory trespass causes of action. Technological advances are crucial to the continued maximization of efficient production of hydrocarbons, but these advances often give rise to new legal conundrums. Among the rights traditionally conveyed through a mineral lease is the right to explore for

41. *Id.* (citing *Coastal Oil*, 268 S.W.3d at 29 (Willet, J., concurring) ("orthodox trespass principles that govern surface invasions . . . have dwindling subterranean relevance, particularly as exploration techniques grow ever more sophisticated.")); *see generally Coastal Oil*, 268 S.W.3d 1.

42. *Coastal Oil*, 268 S.W.3d at 12-13; *see also Lightning*, 520 S.W.3d at 50 ("The rule of capture addresses the ownership of minerals based on their production. It vests title in whoever brings the minerals to the wellhead, even if the minerals flowed into the production area from outside the lease or property boundaries.").

43. *Coastal Oil*, 268 S.W.3d at 29 ("Open-ended liability threatens to inflict grave and unmitigable harm, ensuring that much of our State's undeveloped energy supplies would stay that way—undeveloped.").

44. *Id.* at 36.

45. *Id.* at 12 (discussing the Texas Supreme Court's previous holding in Railroad Commission of Texas v. Manziel, 361 S.W.2d 560 (Tex. 1962)).

46. *Coastal Oil*, 268 S.W.3d at 12, 36 ("the definition of trespass must make room for industry innovations . . . we held the law of trespass must not be applied in an unduly dogmatic manner to the oil and gas industry.").

47. *Lightning*, 520 S.W.3d at 49; *see also Coastal Oil*, 268 S.W.3d at 36.

those minerals so far as it is reasonably necessary.[48] Among the predominant exploratory practices is the use of seismic surveys to construct a picture of subsurface geologic conditions.[49] This picture represents a prediction of what the operator will find, and is therefore instrumental for efficient drilling and development of hydrocarbons.[50]

In order to begin exploration of the subsurface, the surveyor must "obtain[] permission from the 'owner' of the right to explore" – the mineral estate.[51] Courts have traditionally held that any owner of a mineral interest, regardless of the extent of its ownership, is permitted to authorize geophysical operations.[52] Some jurisdictions, however, have held that only the mineral estate may provide the requisite permission.[53] In *Grynberg v. City of Northglenn* (*Grynberg*), the City of Northglenn was determined to have geophysically trespassed when it conducted subsurface explorations on a tract of land, even though it had been given permission to do so by the surface estate.[54] The court held that the surface estate was not the owner of the right to explore, and therefore the permission it gave was inconsequential.[55] So, in order to conduct any sort of geophysical exploration, a prospective surveyor must first obtain the permission of a mineral estate owner, or whoever legitimately possesses the right to explore.[56]

III. CASE BACKGROUND

A. Factual Background

On October 19, 2009, Lightning was granted an exclusive lease for the mineral estate underlying the tract of land known as the Briscoe Ranch.[57] The lease, referred to as the "Cutlass Lease," was amended in April 2013 to limit Lightning's attainable minerals to oil and gas, to expressly reserve the lessor's rights to geothermal water resources, and, upon termination of the primary term, to limit the depth of Lightning's lease to the deepest geologic formation from which production in payable quantities occurred.[58] Notably, there was no express reservation or contractual mention of the control or ownership of the subsurface.[59]

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48. *Lightning*, 520 S.W.3d at 49; *see also* Hunt Oil Co. v. Kerbaugh, 283 N.W.2d 131, 135 (N.D. 1979) ("the rights of the owner of the mineral estate are limited to so much of the surface and such use thereof as are reasonably necessary to explore, develop, and transport the minerals.").

49. CASES AND MATERIALS, *supra* note 25, at 121.

50. *Id.*

51. Owen L. Anderson & John D. Pigott, *Seismic Technology and Law: Partners or Adversaries?*, 24 ENERGY & MIN. L. INST. 349 (2004).

52. *See, e.g.*, Enron Oil & Gas Co. v. Worth, 947 P.2d 610 (Okla. Civ. App. 1997).

53. *See, e.g.*, Grynberg v. City of Northglenn, 739 P.2d 230 (Colo. 1987).

54. *Id.* at 237.

55. *Id.* at 238.

56. Anderson & Pigott, *supra* note 51, at 349.

57. Petitioner's Brief on the Merits at 6, Lightning Oil Co. v. Anadarko E&P Onshore, LLC., 520 S.W.3d 39 (2017) (No. 15-0910) [hereinafter Pet'rs Br.].

58. Respondent's Brief on the Merits at 5, Lightning Oil Co. v. Anadarko E&P Onshore, LLC., 520 S.W.3d 39 (2017) (No. 15-0910) [hereinafter Resp's Br.].

59. *Id.*

Lightning also entered into a surface use agreement with Briscoe Ranch, Inc. (Briscoe), the surface owner of the Cutlass Lease, to memorialize its inherent right as a mineral estate to use the surface as is reasonably necessary for its production activities.[60] Among the additional obligations this agreement imposed upon Lightning was a conscientious attempt to prevent its operations from interfering with the economic endeavors of the surface owner, which were contractually acknowledged to be "paramount to Briscoe."[61]

Meanwhile, Anadarko entered into an oil and gas lease (the Chaparral Lease) with the State of Texas to lease a portion of the mineral estate underlying the adjacent tract - the Chaparral WMA.[62] As is typical of leases governed by the TPWD, the Chaparral Lease contained significant measures designed to limit the footprint of Anadarko's drilling operations on the fragile surface of the conservation area.[63] Specifically, the lease provided:

> Drilling locations will be established off the Chaparral WMA site, when prudent and feasible. Any drilling site locations on the WMA must be planned and authorized by the Land Manager in order to conserve wildlife habitat, and prevent disruption of WMA operations, including management, research and public use activities. The number of drill sites shall be minimized by use of horizontal drilling, multiple wells from a single drilling site, and other appropriate methods.[64]

Unable to secure mutually agreeable terms for on-site drilling with the Land Manager of the Chaparral Lease, and also failing to establish reasonably efficient off-site drilling operations at all other adjacent tracts, Anadarko turned to its last remaining neighbor – the Briscoe Ranch.[65]

Anadarko subsequently entered into a Surface Use and Subsurface Easement Agreement (the Easement Agreement) with Briscoe that permitted Anadarko's wellbores to traverse through the Briscoe Ranch subsurface – which contained Lightning's mineral bearing formations – so that Anadarko could produce from the adjacent mineral estate.[66] The Easement Agreement identified its purpose as the promotion of Anadarko's efficient production of oil and gas – thereby aligning with similar policies of the State of Texas.[67]

In a good faith attempt to be transparent and accommodating, Anadarko informed Lightning of its initial proposed pad site and said that it would be flexible in choosing the drill site location in order to take into account the preferences of Lightning.[68] Additionally, Anadarko vowed to abide by industry customs and field

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60. Pet'rs Br., *supra* note 57, at 2.

61. *Id.*; Resp's Br., *supra* note 58, at 6.

62. Resp's Br., *supra* note 58, at 2.

63. *Id*.; *Get the Frack Out of Our Parks*, *supra* note 13.

64. Resp's Br., *supra* note 58, at 2.

65. *Id*. at 3-4 (Anadarko estimated an 85% loss of potential production from its lease if limited to its previous attempts at off-site drilling from the nearby Rancho Encantado).

66. *Id.* at 4-5.

67. *Id.* ("The express purpose of the Easement Agreement was to assist Anadarko in avoiding waste and maximizing development of oil and gas from the Chaparral Lease."); *see also* Key Operating & Equip., Inc. v. Hegar, 435 S.W.3d 794, 798 (Tex. 2014) ("The policy of Texas is to encourage the recovery of minerals, and the Legislature has made waste in the production of oil and gas unlawful.").

68. Resp's Br., *supra* note 58, at 7-8.

rules, and ensured that it would not produce any hydrocarbons during its traversal through Lightning's mineral bearing formations.[69] Despite Anadarko's efforts to negotiate, Lightning rejected the initial proposed drill site and firmly expressed that it would not consent to any wellbore traversing through its mineral bearing formations, and would therefore dispute any and all surface uses and drilling operations proposed by Anadarko on Briscoe Ranch.[70]

B. Procedural Disposition

When negotiations deteriorated and an impasse became evident, Lightning filed suit against Anadarko.[71] Relying on trespass and contractual interference causes of action, Lightning sought a temporary restraining order (TRO) and injunctive relief against Anadarko's proposed activities and operations.[72] Following an evidentiary hearing, the trial court denied Lightning's TRO.[73]

Both parties then moved for summary judgment on Lightning's trespass, tortious interference, and injunctive relief claims, as well as on the novel question of "whether the Ranch owners could authorize Anadarko's subsurface activities absent Lightning's consent."[74] Without supplying its reasoning, the trial court granted Anadarko summary judgment and denied Lightning's motions.[75] Lightning appealed, and the Fifth Circuit Court of Appeals in San Antonio affirmed the trial court's decision.[76]

In the Fifth Circuit appeal, Lightning's subsurface trespass argument centered around the assertion that a mineral owner should possess the exclusive right to exclude certain drilling and surface activities which would interfere with its mineral estate.[77] Lightning cited five cases in an attempt to reinforce its claim for such a dominance of the mineral estate, but all were distinguished by the Fifth Circuit.[78]

In opposition, Anadarko asserted that the mineral estate owner only owns the individual hydrocarbon molecules in a formation, while the surface owner retains ownership of the rest of the subsurface itself.[79] Anadarko therefore contended that

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69. *Id.* at 7.

70. *Id.* at 8; *Lightning*, 520 S.W.3d at 43.

71. Resp's Br., *supra* note 58, at 8.

72. *Id.*

73. *Id*. at 10 (Lightning filed an interlocutory appeal to this denial, but their petition for review was eventually denied by the San Antonio Court of Appeals.).

74. *Lightning*, 520 S.W.3d at 44.

75. *Id.*

76. *Id.*

77. Lightning Oil Co. v. Anadarko E&P Onshore, LLC., 480 S.W.3d 628, 631 (Tex. App. 2015) [hereinafter *Lightning Appeal*].

78. *Id.* at 633-635. Edwards Aquifer Authority v. Day, 369 S.W.3d 814 (Tex.2012) and Stephens Cty. V. Mid–Kansas Oil & Gas Co., 254 S.W. 290 (1923) were distinguished for not addressing who owns the earth in which a mineral estate may be contained; Villarreal v. Grant Geophysical, Inc., 136 S.W.3d 265 (Tex. App. 2004) was distinguished because there was no evidence that Anadarko had conducted a seismographic survey of Lightning's mineral estate; Hastings Oil Co. v. Texas Co., 234 S.W.2d 389 (1950) was distinguished because it addressed a rule of capture issue not deemed applicable; and lastly, Chevron Oil Co. v. Howell, 407 S.W.2d 525 (Tex. Civ. App.–Dallas 1966) was distinguished on its facts.

79. *Lightning Appeal*, 480 S.W.3d at 631.

drilling through the subterranean structures underlying Briscoe Ranch did not constitute a trespass because Anadarko received the only permission necessary to do so – Briscoe's permission.[80] Anadarko cited three cases from both the Fifth Circuit and the Texas Supreme Court to buttress its argument.[81]

Anadarko first called upon the Fifth Circuit's holding in *Springer Ranch, Ltd. v. Jones* (*Springer Ranch*) that a surface estate refers to the sections of earth retained by the surface estate owner following the estate's severance.[82] The *Springer Ranch* court further held that the mineral estate's ownership of hydrocarbons in a mineral estate does not inherently include ownership of the surrounding subsurface.[83]

Anadarko also cited *Dunn-McCampbell Royalty Interest, Inc. v. National Park Service* (*Dunn-McCampbell*), where the Fifth Circuit similarly held that granting ownership of the mineral rights does not inherently include a grant of ownership in the subsurface.[84] According to this decision, in Texas it is the surface estate which ''owns all non-mineral 'molecules' of the land, i.e., the mass that undergirds the surface of the [conveyed land].''[85] The court implied, however, that this ownership is transferrable via an express grant within the mineral lease conferring such ownership rights or control to the subsurface.[86]

Relying on the above decisions in *Springer Ranch* and *Dunn-McCampbell*, the Fifth Circuit confirmed that, upon severance of the estate, the surface owner inherently retains ownership of the underground land masses which encompass the mineral molecules.[87] The Fifth Circuit therefore affirmed the trial court's ruling and concluded that, because Briscoe Ranch effectively owned the subterranean structures encompassing the mineral estate's molecules, Lightning was not at liberty to prevent Anadarko from drilling through the mass of earth underlying the Cutlass Lease.[88] Lightning appealed once more, and the Supreme Court of Texas granted review.[89]

IV. ANALYSIS

The Supreme Court of Texas' decision on this matter carried with it far-reaching implications for off-site drilling, horizontal drilling, and the rights of the dominant and servient estates underlying both primary and adjacent tracts. The Supreme Court of Texas ultimately upheld the decisions of the lower courts, thereby

80. *Id.*

81. *Id.* at 635. The three cases cited by Anadarko were: Springer Ranch, Ltd. v. Jones, 421 S.W.3d 273 (Tex. App. 2013), *no pet.*; Dunn-McCampbell Royalty Interest, Inc. v. National Park Serv., 630 F.3d 431 (5th Cir. 2011); and Humble Oil & Refining Co. v. West, 508 S.W.2d 812 (Tex. 1974).

82. *Springer Ranch*, 421 S.W.3d at 282.

83. *Id.* at 283.

84. *Dunn-McCampbell*, 630 F.3d at 441.

85. *Lightning Appeal*, 480 S.W.3d at 635 (citing *Dunn-McCampbell*, 630 F.3d at 442).

86. *Id.*

87. *Id.*

88. *Id.* at 635-36 (citing *Dunn-McCampbell*, 630 F.3d at 442).

89. *Lightning*, 520 S.W.3d at 39.

addressing novel subsurface trespass and surface use concerns in a way that clarified the rights of the surface and mineral estates – adjacent or otherwise - and ensured that the balance of power between these estates remains equitable. The court's decision buttresses the practice of off-site drilling, once again demonstrating the State of Texas' endorsement of maximizing the efficient production of hydrocarbons. However, while this decision offers clarification and affirmation on several issues, it also invites speculation regarding its use as a future precedent. I will begin with an overview of the Supreme Court of Texas' analysis, which will then be followed by an analysis of the future implications of this landmark case.

A. The Decision of the Supreme Court of Texas.

This case turned upon the previously unsettled question of whether the dominant estate may preclude the servient estate or an adjacent lessee from drilling through the mineral-bearing formation with the sole intent of reaching an adjacent tract.[90] Accordingly, the court predominantly discussed Lightning's trespass cause of action and only briefly discussed the tortious interference of contract claim.[91]

In its appeal to the Supreme Court of Texas, Lightning once again asserted its trespass and tortious interference claims, expanded the scope of its arguments from its Fifth Circuit appeal, and called into question the ability of Texas' subsurface trespass jurisprudence and the accommodation doctrine to maintain the appropriate balance of power between the mineral and surface estate.[92] Lightning contended that if the mineral estate is not allowed to prevent other operators from passing through its mineral-bearing formation, then the "absolute rights of a mineral owner" would be reduced to a "mere license to hunt for the minerals."[93] Further, Lightning contended that the Fifth Circuit's decision over-expanded the accommodation doctrine, and that the contractual language did not grant the surface estate the right to permit Anadarko's drilling activities, which Lightning alleged would cause irreparable harm to its ability to operate.[94]

Anadarko maintained that the Fifth Circuit was correct in holding that only the surface owner's permission was required and that, pursuant to the traditional property rights of a severed mineral estate and the rule of capture, the mineral lessee does not have the authority to exclude pass-through drilling.[95] Further, Anadarko posited that the Appellate Court's accommodation doctrine discussion was irrelevant, and so did not constitute an expansion of the doctrine.[96]

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90. *Id.* at 46 (the Court acknowledges that, while this question has not yet been addressed by the Texas Supreme Court, it has been addressed in two appellate level cases with distinguishable circumstances: Chevron Oil Co. v. Howell, 407 S.W.2d. 525 (Tex. Civ. App. 1966) and Humble Oil & Ref. Co. v. L&G Oil Co., S.W.2d 933 (Tex. Civ. App. 1953)).

91. *See generally Lightning*, 520 S.W.3d. 39.

92. *Id.* at 44.

93. *Id.*

94. *Id.*

95. *Lightning*, 520 S.W.3d at 45.

96. *Id*.

1. The Distinction Between *Surrounding* and *Embedded*

The Supreme Court of Texas generally agreed with the Fifth Circuit's reliance upon three principles for its analysis of subterranean land ownership.[97] But the court determined that, while the surface owner may own and control the subsurface materials, the mineral lessee owns a determinable fee interest in the hydrocarbons captured within those materials.[98] The court did acknowledge, though, that any extraction resulting from Anadarko's traversal through Lightning's mineral-bearing formations could not be ignored, regardless of how minute such an extraction would be.[99] Acknowledgement of this loss and the requirement to address it led the court to find a distinction between the "earth *surrounding* hydrocarbons and earth *embedded* with hydrocarbons," and to determine that the extent of the servient estate's ownership rights relating to these subterranean structures turns upon this distinction.[100]

The court then stated that the cases relied upon by the Fifth Circuit, while similar, were not determinative of the issue in the present case, as they affirmed that the surface owner owns "the reservoir storage space" and "all non-mineral 'molecules' of the land," but they did not apply to the present situation in which the subsurface materials in question are "*embedded* with hydrocarbons."[101] The Texas Supreme Court then engaged in an in-depth analysis of the attributes of severed mineral interests, within which it acknowledged that "the ownership of oil and gas in place" is commonly regarded as a property right, and it also characterized a trespass as an unauthorized interference with either physical property or one of the owner's property rights.[102]

The Texas Supreme Court then cited the five rights traditionally conveyed to a mineral estate, and stated that lessees typically receive only the right to develop.[103] Although the right to develop includes several auxiliary rights, the court determined that possession of a specific place within which the minerals are embedded is not inherent within the right to develop."[104] Accordingly, the court held that, as a matter of law, "an unauthorized interference with the *place* where the minerals are located constitutes a trespass as to the mineral estate only if the interference infringes on the mineral lessee's ability to exercise its rights."[105]

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97. *Id.* at 46-47 (The three principles relied upon by the appellate court are: (1) the surface estate's "ownership rights include the geological structures beneath the surface"; (2) the surface owner, and not the mineral owner, owns "the mass that undergirds the surface" estate; and (3) "the mineral estate owner is only entitled to 'a fair chance to recover the oil and gas in place or under' the surface estate.").

98. *Id.* at 47.

99. *Lightning*, 520 S.W.3d at 47 (citing a U.S. Geologic Service study to provide quantifiable data depicting the scope of such an extraction).

100. *Id.* (citing *West*, 508 S.W.2d at 815 (emphasis in original)).

101. *Id.* at 47-48 (citing *West*, 508 S.W.2d at 815; citing also *Dunn-McCampbell*, 630 F.3d at 442).

102. *Lightning*, 520 S.W.3d at 48-49.

103. *Id.* at 49; *see also* French v. Chevron U.S.A. Inc., 896 S.W.2d 795, 797 (Tex. 1995) (The five rights traditionally conveyed to a mineral estate are: "(1) right to develop, (2) the right to lease, (3) the right to receive bonus payments, (4) the right to receive delay rentals, and (5) the right to receive royalty payments.").

104. *Lightning*, 520 S.W.3d. at 49 (the auxiliary rights within the right to develop include the rights to explore, obtain, produce, and possess the minerals subject to the lease).

105. *Id*. (emphasis in original).

2. Harm Necessary For Injunctive Relief

Under this premise, the Texas Supreme Court analyzed Lightning's two contentions of imminent and irreparable harm necessary for injunctive relief: first, that Anadarko's drilling activities would hinder Lightning's own plans for drilling activities; and second, that the inherent extraction of minerals resulting from Anadarko's drilling activities, however minute, constitutes an infringement.[106]

The Texas Supreme Court first dismissed Lightning's challenge of Anadarko's proposed drilling activities by referencing the overarching goal inherent within the regulations and traditions of both the State of Texas and the Railroad Commission: to promote the efficient production of minerals "while minimizing waste and protecting the interests of the parties involved."[107] The court reasoned that, because Anadarko professed its intention to act in good faith and submit to all rules and regulations, the Railroad Commission would have adequately protect Lightning's interests.[108] The court further reasoned that the accommodation doctrine has consistently demonstrated an ability to resolve conflicts, and that Lightning offers no indication as to why the doctrine should not apply here.[109]

The Texas Supreme Court also rejected Lightning's second contention of irreparable harm arising from the extracted minerals.[110] The court determined that the rule of capture was inapplicable because, while that doctrine governs the production of minerals, the given circumstances instead related to the extraction of physical matter within which minerals are embedded.[111]

The Texas Supreme Court instead implemented the balancing approach utilized in *Humble Oil & Refining Co. v. West*, thus weighing the societal and economic interests of the industry against those of each isolated operator.[112] Lightning's individual interest only pertains to the injury it suffered as a result of the extraction of its minerals through drilling cuttings.[113] In comparison, the court cited authorities that give credence to the added efficiency and accuracy of horizontal wells drilled from adjacent surface locations, ultimately reaching the determination that drilling activities such as those proposed by Anadarko traditionally "allow for recovering the most minerals while drilling the fewest wells."[114] The court adhered to the longstanding Texas policy of promoting the maximization of recovery and the minimization of waste in holding that the loss suffered by Light-

106. *Id.* at 49-50 (citing Batnaru v. Ford Motor Co., 84 S.W.3d 198, 204 (Tex. 2002)).

107. *Id.*; *see also* TEX. ADMIN CODE §§ 3.37-.39 (setting out spacing, well density, and proration and drilling units); *see also Coastal Oil*, 268 S.W.3d at 15; *see also Brown*, 83 S.W.2d at 944-945.

108. *Lightning*, 520 S.W.3d. at 50.

109. *Id.*

110. *Id.*

111. *Id.*

112. *Lightning*, 520 S.W.3d at 50 (citing *West* 508 S.W.2d at 816).

113. *Id.*

114. *Id.*

ning was outweighed by the societal benefits of the type of drilling activities proposed by Anadarko, and thus could not substantiate a subsurface trespass cause of action.[115]

3. Residual Arguments

The Supreme Court of Texas then examined and rejected Lightning's residual trespass arguments.[116] Lightning contended that if the court were to reject its trespass claim, it would effectively "depreciate the mineral estate's dominance" over the servient estate and infringe upon the mineral estate's right to reasonable surface use for production.[117] The court succinctly rejected this argument, stating that if Lightning were to have its way, it would "render the mineral estate *absolutely* dominant," and thereby implode the balance struck between mineral and surface estate owners achieved through the accommodation doctrine.[118]

Lightning once again argued that if the Fifth Circuit's decision was affirmed, it would dilute the dominance of the mineral estate, this time by "expand[ing] the accommodation doctrine to benefit a second, adjacent mineral owner."[119] Lightning contended that such an expansion would require mineral lessees to succumb to the business endeavors of the surface owner by allowing adjacent estates to benefit from a use of its mineral estate.[120] The court also rejected this argument, stating that Anadarko is an assignee of the surface owner, and thus its activities constituted a surface use, thereby garnering protection under the accommodation doctrine.[121] When Anadarko entered into the surface use and subsurface easement agreement with Briscoe Ranch, its status changed from a mere adjacent mineral lessee to an assignee, thereby rendering it capable of accommodation doctrine protection.[122]

The Supreme Court of Texas rejected all of Lightning's trespass arguments and held that Anadarko properly obtained the necessary permission for its activities.[123] The Supreme Court of Texas affirmed the Fifth Circuit's decision to deny Lightning injunctive relief and granted Anadarko summary judgment.[124]

B. Future Implications of the Decision

The Texas Supreme Court's decision in this case offers clarification and definitive answers to several issues; however, it does not dispel speculation as to how

115. *Id.*; *see also* Amicus Brief, *supra* note 40, at 2 (The Amicus Curiae Brief entered by the Texas Oil and Gas Association posited that had the Court recognized Lightning's trespass cause of action, it would have "threaten[ed] off-site drilling" which accounted for "approximately 30% of the wells permitted" in the 12 months preceding the brief, and thus would have drastically impaired future oil and gas production in Texas.)

116. *Lightning*, 520 S.W.3d at 51-53.

117. *Id.*

118. *Id.* (emphasis added).

119. *Id.*

120. *Lightning*, 520 S.W.3d at 52.

121. *Id.*

122. *Id.*

123. *Id.* at 53.

124. *Id.*

the decision may apply to geophysical trespass causes of action under similar circumstances. Further, this decision emphasizes the importance of negotiating subsurface ownership rights going forward, as the Cutlass Lease between Lightning and Briscoe Ranch offers a cautionary tale to mineral estates on the potential danger of staying silent.

1. The Decision Buttresses Off-Site Horizontal Drilling in Texas

By rejecting Lightning's arguments that it is entitled to a right to exclude surface and subsurface uses, the Supreme Court of Texas extended its tradition of refusing to validate traditional trespass claims for subterranean issues.[125] This decision therefore reaffirmed that the accommodation doctrine and subsurface trespass jurisprudence strike the appropriate balance between the rights of the dominant and servient estates.[126] By refusing to expand the scope of these principles and consequently restructure said balance, the Court protected the practice of off-site horizontal drilling in Texas from what could have been a massive increase of injunctions.[127]

In protecting this practice, which plays a significant role in efficient and effective energy production, the court made it clear that it will continue to balance the interests of individual operators against those of the industry and society as a whole - as it has for decades.[128] Therefore, in order for a dominant estate's loss of minerals resulting from a horizontal well to qualify for injunctive relief, it must be more severe than the small "quantum of minerals displaced and *extracted* by" the intervening wellbore of traditional horizontal drilling activities.[129]

It is important to note that, although the court determines that the lost minerals in this case is not worthy of injunctive relief, it does not establish any sort of threshold, and so invites speculation as to how large the amount of displaced and extracted minerals must be to tip the scales in favor of the affected mineral estate. It is also important to note the potentially overlooked distinction between "extracted" minerals and "produced" minerals, as off-site horizontal drilling activities involving the latter would be obviated by the rule of capture.[130]

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125. Amicus Brief, *supra* note 40, at 9; (citing *Coastal Oil*, 268 S.W.3d at 29, 34 (Willet, J., concurring)) ("[O]rthodox trespass principles that govern surface invasions . . . have dwindling subterranean relevance, particularly as exploration techniques grow ever more sophisticated . . . The interplay of common-law trespass and oil and gas law must be shaped by concern for the public good.").

126. Amicus Brief, *supra* note 40, at 2; *see also Lightning*, 520 S.W.3d at 51.

127. *See generally* Amicus Brief, *supra* note 40.

128. *Lightning*, 520 S.W.3d at 51 (citing Key Operating & Equip., Inc. v. Hegar, 435 S.W.3d 794, 708 (Tex. 2014) ("The policy of Texas is to encourage the recovery of minerals, and the Legislature has made waste in the production of oil and gas unlawful"); *see also West*, 508 S.W.2d, at 816.

129. *Lightning*, 520 S.W.3d at 47, 51 (emphasis in original).

130. *Id.* at 50; *see also Lightning Appeal*, 480 S.W.3d at 634 ("Anadarko acknowledges that Lightning would have a cause of action against Anadarko (subject to the rule of capture) if Anadarko produced oil or gas from the Cutlass lease.").

2. The Decision Addresses the Importance of Surface Use Agreements and Other Contractual Language

While this case turned largely upon policy considerations and the court's distinction of *embedded* versus *surrounding* earth, there are several contractual factors that were necessary to allow the court to delve so far into the subsurface trespass issue. By examining what these contractual factors are, it is possible to identify ways in which either the mineral estate or the surface estate may protect themselves from similar circumstances going forward. First and foremost, it is important to note that the Cutlass Lease between Lightning and Briscoe Ranch did not contain any provisions discussing ownership, control, or exclusive use of the subsurface.[131] Had the lease included language demonstrating intent of the parties, it is likely that that intent would have been adhered to, or at least afforded significant weight.

It is also important to note the carve-out alluded to in the Fifth Circuit's discussion of who controls the subsurface. In this discussion, the Court stated that "absent the grant of a right to control the subterranean structures," the surface owner inherently possesses that right.[132] The Supreme Court of Texas cited this language and did not reject the carve-out, thus implying that such a grant would in fact be a valid and effective measure to be used in preventing a dispute such as this.[133] Given the court's newfound distinction between *surrounding* and *embedded* earth, a thorough contractual provision granting the right to control the subterranean structures might include an express designation of ownership for both the mass and the matrix of land in the pertinent mineral estate.

This case also demonstrates the importance of a surface use and subsurface easement agreement for an adjacent mineral estate attempting to engage in offsite drilling without the permission of the other mineral owner. By contracting with Briscoe Ranch to use the surface for its pad site and drill through the subsurface with permission in the form of a subsurface easement, Anadarko effectively changed its status from an adjacent mineral lessee to an assignee of the surface owner.[134] As a result of Anadarko's status as an assignee of the surface estate, the Supreme Court of Texas designated Anadarko's activities as a surface use, and therefore afforded them protection under the accommodation doctrine.[135] In light of this decision, adjacent mineral owners seeking to engage in offsite drilling should strive to establish themselves as assignees of the surface owner by entering into surface use and subsurface easement agreements, and perhaps including express language designating itself as such.

3. The Decision Engenders Speculation About How Similar Cases Would Be Affected by Geophysical Trespass Arguments

The proliferation of real-time data acquired during drilling is nothing short of extraordinary and undoubtedly represents a significant benefit to the oil and gas

131. Resp's Br., *supra* note 58, at 5.

132. *Lightning Appeal*, 480 S.W.3d at 635.

133. *Lightning*, 520 S.W.3d at 44.

134. *Id.* at 52.

135. *Id.*

industry. It also, however, calls into question the longevity of the Supreme Court of Texas' decision in *Lightning v. Anadarko*. This question may be posed as follows: will the real-time information that is inherently produced by modern drilling techniques constitute a geophysical trespass under similar circumstances?

Directional drilling, being a staple of efficient production, represents a hotbed of technological growth. Much of today's directional drilling technology allows operators to receive data in real-time while drilling that is transmitted from the drill bit up to the driller through pulses in the mud column.[136] Logging While Drilling (LWD) is the term given to the techniques utilized in acquiring and transmitting petrophysical data in real-time while drilling.[137] Similarly, Measurement While Drilling (MWD) refers to the process of acquiring, collecting, and transmitting specific data while drilling.[138]

It is becoming increasingly common for drilling services companies such as Schlumberger and Halliburton to boast proprietary technological systems advancing the efficacy of safe and efficient drilling. Schlumberger, for example, offers a "seismicVISION Seismic-While-Drilling Service" which "[d]eliver[s] borehole seismic measurements for real-time, time-depth-velocity information without disrupting drilling operations."[139] The legal issues accompanying this technological growth are readily apparent.

In its appeal of the trial court's decision, Lightning expressed concern that it was being required to "trust" that Anadarko would not conduct any geophysical explorations or seismic surveys as it drilled through Lightning's mineral bearing formations.[140] The Fifth Circuit dismissed this concern, stating that there was not sufficient evidence to demonstrate that Anadarko had or would conduct such explorations.[141] Interestingly, Lightning abandons this concern, and does not reiterate its geophysical concerns, and so the Supreme Court of Texas' decision is completely void of a discussion regarding the issue of geophysical trespass.[142]

If Anadarko used modern drilling practices and technology in its traverse through Lightning's mineral bearing formations, which is a reasonable assumption, then I believe that Lightning had a legitimate geophysical trespass cause of action. The present case is analogous to *Grynberg*, in which the surveying party was held to have geophysically trespassed when it utilized permission to explore that was given by the surface estate and opposed by the mineral estate.[143] The *Lightning v. Anadarko* court held that Anadarko only needed the permission of Briscoe – the surface estate - in order to conduct its activities, and it was therefore irrelevant that Lightning consistently refused to grant Anadarko permission to do

136. Lamont-Doherty Earth Observatory, *An Introduction to Logging While Drilling: Seminar in Marine Geophysics*, THE EARTH INSTITUTE AT COLUMBIA UNIVERSITY (Feb. 14, 2008).

137. *Id.*

138. *Id.* (The specific data collected includes wellbore deviation directional surveys and drilling mechanics data, such as downhole torque, pressure, and vibration.).

139. *Geophysics While Drilling: Seismic Imaging and Correlation*, SCHLUMBERGER, *https://www.slb.com/services/drilling/mwd_lwd/geophysics_lwd.aspx* (last visited March 25, 2018).

140. *Lightning Appeal*, 480 S.W.3d at 631.

141. *Id.* at 634.

142. *See generally Lightning*, 520 S.W.3d 39.

143. *Grynberg*, 739 P.2d at 237.

anything.[144] But this lack of permission would have been significant in relation to a geophysical trespass cause of action, as the "rights to conduct geologic testing for minerals can be derived only from or through the owner of the mineral estate."[145] Therefore, Lightning would likely have had sufficient cause for a geophysical trespass cause of action against Anadarko.

There are, however, some considerations which might explain why Lightning did not pursue such a cause of action. First, if the Supreme Court of Texas had in fact entertained a geophysical trespass theory, Lightning would have then carried the burden of proving that the Anadarko's geophysical trespass and resulting data acquired therefrom actually caused Lightning damages.[146] Secondly, just as Texas Courts traditionally weigh the public policy considerations surrounding subsurface trespass claims, it would likely conduct a similar analysis for geophysical trespass causes of action.[147] Accordingly, had Lightning brought a valid geophysical trespass claim against Anadarko, the Supreme Court of Texas would likely have reached a similar conclusion as it did for Lightning's subsurface trespass claim – that the injury incurred by Lightning was not sufficient enough to substantiate a geophysical trespass cause of action given the overwhelming effect such a ruling would have on horizontal drilling, the oil and gas industry, and the continued proliferation of instrumental technological advancements.[148]

V. CONCLUSION

The Supreme Court of Texas rejected the argument that mineral estates have the authority to preclude adjacent mineral owners from traversing through its wellbore. Rather than drastically altering the balance of power between mineral and surface estates and significantly hindering horizontal drilling, the court reaffirmed its commitment to maximizing the efficient recovery of minerals.[149] Although it is clear that Lightning did suffer an injury resulting from the extraction of a small portion of its minerals, the Court appropriately placed greater weight in the interests of the industry; an industry upon which the country significantly relies. While the decision in *Lightning v. Anadarko* raises some questions regarding future offsite drilling cases, it has reaffirmed Texas Courts' approach to the oil and gas industry: "Texas oil and gas law favors drilling wells, not drilling consumers."[150]

Cody Schlegel[*]

144. *See generally Lightning*, 520 S.W.3d 39.

145. *Grynberg*, 739 P.2d at 238.

146. *City of Northglenn v. Grynberg*, 846 P.2d 175 (Colo. 1993), *cert. denied*, 510 U.S. 815 (1993) (Where, following the remand to the trial court of the initial case, the Colorado Supreme Court held that the mineral estate had not proved that there had been a compensable taking under a trade secret justification.).

147. Amicus Brief, *supra* note 40, at 9 ("orthodox trespass principles that govern surface invasions . . . have dwindling subterranean relevance, particularly as exploration techniques grow ever more sophisticated.").

148. *See generally Lightning*, 520 S.W.3d 39.

149. *Id.*

150. *Coastal Oil*, 268 S.W.3d at 29.

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like to note that although his father is currently an employee of Anadarko, he had no involvement in the case, nor any influence on or involvement in the drafting of this note.