

denying as moot Appellants' Motion to Compel.¹ We reverse and remand for further proceedings consistent with this Opinion.

Appellants own an approximately 11.07-acre parcel of land in Harford Township, Susquehanna County, Pennsylvania.

Southwestern is the lessee of oil and gas rights on a tract of land adjoining Appellants' property. Since 2011, Southwestern has continuously operated gas wells, known as the Innes Gas Unit and the Folger Gas Unit, respectively, on property adjacent to Appellants' property. Southwestern engages in hydraulic fracturing to extract natural gas from the Marcellus Shale formation through wellbores located on the Innes and Folger Gas Units.

¹ After Appellants filed the instant appeal, Southwestern filed a Motion to confirm jurisdiction and/or quash appeal, seeking a determination of whether the trial court's August 8, 2017 Order is a final and appealable order because judgment had not been entered on the docket. Appellants filed a Response, arguing that because the trial court granted summary judgment, no further action was necessary. This Court subsequently entered an Order denying Southwestern's Motion, without prejudice. Southwestern raised the issue again in its appellate brief. **See** Brief for Appellee at 30-31. We conclude that the trial court's Order granting summary judgment in favor of Southwestern is final and appealable, as it effectively resolved all of the claims presented in the action, including Southwestern's counterclaim, Appellants' Motion for Partial Summary Judgment and the outstanding Motion to Compel. **See** Pa.R.A.P. 341(b)(1) (providing that "[a] final order is any order that disposes of all claims and of all parties"); **see also Feidler v. Morris Coupling Co.**, 784 A.2d 812, 814 n.1 (Pa. Super. 2001) (stating that trial court's order granting motion for summary judgment was final and appealable because it disposed of the entire matter).

Southwestern does not have an oil and gas lease concerning Appellants' property.

On November 5, 2015, Appellants filed a Complaint, asserting claims of trespass and conversion, and requesting punitive damages. Appellants alleged that Southwestern, in its operation of drilling units located on the adjoining property, has unlawfully been extracting natural gas from beneath Appellants' property. Appellants also alleged that Southwestern's actions constituted a past and continuing trespass.

Southwestern filed an Answer and New Matter on December 23, 2015, asserting, *inter alia*, that Appellants' claims were barred by the rule of capture.² Southwestern also filed a counterclaim for declaratory relief, requesting that the trial court confirm that Southwestern did not trespass on Appellants' property.

Appellants filed an Answer to Southwestern's New Matter on January 7, 2016.

Both parties engaged in discovery. Relevantly, Appellants sent Southwestern three sets of Interrogatories. Southwestern filed Objections and Answers to each of Appellants' Interrogatories. On May 16, 2016,

² The rule of capture is "[a] fundamental principle of oil[]and[]gas law holding that there is no liability for drainage of oil and gas from under the lands of another so long as there has been no trespass and all relevant statutes and regulations have been observed." *Rule of Capture*, BLACK'S LAW DICTIONARY (10th ed. 2014).

Appellants filed a Motion to Compel answers to Interrogatories and a Motion for Sanctions. Specifically, Appellants claimed that Southwestern's responses to the Second and Third Interrogatories were evasive and "demonstrate[d] a calculated scheme of obduration[.]" Southwestern filed an Answer on June 3, 2016.

On April 24, 2017, Southwestern filed a Motion for Summary Judgment and brief in support thereof, asserting, *inter alia*, that Appellants' trespass claim must fail because Southwestern had not entered Appellants' property, and the rule of capture bars damages for drainage of natural gas due to hydraulic fracturing. Additionally, Southwestern requested summary judgment as to its counterclaim for a declaratory judgment.

On May 15, 2017, Appellants filed a Motion to Stay Resolution of Southwestern's Motion for Summary Judgment. Appellants argued that the case was not yet "ripe" for resolution on summary judgment because Southwestern had not provided Appellants with sufficient answers to their Interrogatories, which are necessary to determine the extent of Southwestern's actions in extracting natural gas. Southwestern filed an Answer.

On June 14, 2017, Appellants filed a Motion for Partial Summary Judgment, and a brief in support thereof, as to the issue of liability.

The trial court held oral argument on both Motions. By an Order dated August 8, 2017,³ the trial court granted Southwestern's Motion for Summary Judgment, denied Appellants' Motion for Partial Summary Judgment, and denied as moot Appellants' Motion to Compel. Therein, the trial court agreed with Southwestern that, as a matter of law, the rule of capture precluded recovery by Appellants.

Appellants filed a timely Notice of Appeal and a court-ordered Pa.R.A.P. 1925(b) Concise Statement of matters complained of on appeal.

On appeal, Appellants present the following claims for our review:

I. Did the [trial court] err in determining that the rule of capture precluded any liability on the part of [Southwestern] under the theories of trespass or conversion for natural gas extracted by [Southwestern,] even if said natural gas originated under the lands of [] Appellants and was extracted from under Appellants' land by [Southwestern] through hydr[aulic]fracturing?

II. Does the rule of capture apply to the extraction of natural gas from under land owned by a third party (such as [] Appellants here) through the process of hydr[aulic]fracturing[,] so as to preclude any liability on the part of [Southwestern] under the theories of trespass or conversion for natural gas extracted by [Southwestern,] even if said natural gas originated under the lands of [] Appellants and was extracted from under Appellants' land?

³ The Order was docketed on August 21, 2017.

Brief for Appellants at 2 (quotation marks omitted).⁴

Our standard of review in evaluating a trial court's grant or denial of summary judgment is well-settled:

Summary judgment is proper only when the pleadings, depositions, answers to interrogatories, admissions and affidavits and other materials demonstrate that there is no genuine issue of material fact and that the moving party is entitled to judgment as a matter of law. The reviewing court must view the record in the light most favorable to the non[-] moving party and resolve all doubts as to the existence of a genuine issue of material fact against the moving party. Only when the facts are so clear that reasonable minds could not differ can a trial court properly enter summary judgment.

Wall Rose Mut. Ins. Co. v. Manross, 939 A.2d 958, 962 (Pa. Super. 2007) (citations omitted). “[T]he trial court’s order will be reversed only where it is established that the court committed an error of law or abused its discretion.” **Good v. Frankie & Eddie’s Hanover Inn, LLP**, 171 A.3d 792, 795 (Pa. Super. 2017) (citation omitted).

Appellants argue that the extraction of natural gas from beneath their property is a trespass, despite the lack of physical intrusion by

⁴ In its summary judgment Order, the trial court, applying the rule of capture, determined that both the trespass and conversion claims failed as a matter of law. **See** Trial Court Order, 8/21/17, at 8-9. However, because Appellants’ brief does not include a separate discussion of their conversion claim, **see** Pa.R.A.P. 2119(a), we will limit our discussion to Appellants’ trespass claim. Additionally, we observe that Appellants set forth only one claim in their Concise Statement. **See** Pa.R.A.P. 1925(b)(4)(vii) (providing that “[i]ssues not included in the Statement ... are waived.”). Because both of Appellants’ claims present substantially the same issue, we decline to find waiver on this basis, and will address the claims simultaneously.

Southwestern. Brief for Appellants at 5-6. Appellants point to the differences between hydraulic fracturing and the “conventional process of tapping into a pool or reservoir of fluids that flow according only to high and low pressure...” *Id.* at 8. Appellants argue that, in the context of conventional oil and gas extraction, “the rule of capture is a rule of necessity caused by the inability to determine the ownership of natural gas or oil located in an underground pool...” *Id.* at 11. Appellants claim that this case is analogous to *Young v. Ethyl Corp.*, 521 F.2d 771 (8th Cir. 1975).⁵ Brief for Appellants at 8-11. Appellants assert that, like the minerals in *Young*, natural gas contained in shale formations would remain trapped there forever if not for the “forced extraction” through hydraulic fracturing. Brief for Appellants at 8. According to Appellants, it is possible to measure

⁵ In *Young*, the defendants operated a salt-water recycling operation whereby production wells were used to bring salt water to the surface; bromine was extracted from the brine; and the debrominated water was then injected into the ground, forcing subterranean brine toward the production wells. *See Young*, 521 F.2d at 772. Young, whose property was surrounded by land for which the defendants held mineral leases, sought an injunction for the defendants’ forcible removal of minerals from beneath his land. *See id.* The United States Court of Appeals for the Eighth Circuit, applying Arkansas state law, concluded that the forcible removal of minerals from beneath Young’s land constituted an actionable trespass. *See id.* at 774. The *Young* Court reasoned that “[t]he rule of capture has been applied exclusively ... to the escape, seepage, or drainage of ‘fugacious’ minerals which occurs as the inevitable result of the tapping of a common reservoir.” *Id.* (footnotes omitted). The Court further explained that Young had established “that the brine solution under his land would not migrate to the defendants’ production wells but for the force exerted by injection wells; in other words, that the brine is primarily ‘non-fugacious.’” *Id.*

the source of natural gas obtained through hydraulic fracturing, and therefore, the rule of capture should not apply. *Id.* at 11.

Southwestern argues that it cannot be held liable for trespass because it has never entered, or drilled any gas wells on, Appellants' property. Brief for Appellee at 14-15. Southwestern also contends that Appellants' trespass claim is precluded by the rule of capture. *Id.* at 17. Southwestern asserts that the rule of capture should be applied to natural gas obtained through hydraulic fracturing, which it describes as a "mechanical method of increasing the permeability of rock, and, thus, increasing the amount of oil or gas produced from it..." *Id.* at 21-22. Further, Southwestern argues that Appellants' reliance on *Young* is misplaced, as the process involved was different than hydraulic fracturing, and *Young* did not claim to lose minerals due to "seepage or drainage" toward the defendants' production wells. *Id.* at 26-27.

"In Pennsylvania, a person is subject to liability for trespass on land in accordance with the dictates of Restatement (Second) of Torts § 158." *Gavin v. Loeffelbein*, 161 A.3d 340, 355 (Pa. Super. 2017).

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. “The actor, without himself entering the land, may invade another’s interest in its exclusive possession by throwing, propelling, or placing a thing ... beneath the surface of the land”

Id., cmt. i.

The rule of capture, which precludes liability for drainage of oil and gas from under another’s land, has long been applied in the context of conventional oil and gas extraction. In **Westmoreland & Cambria Natural Gas Co. v. De Witt**, 18 A. 724 (Pa. 1889), the Pennsylvania Supreme Court recognized that gas “is a mineral with peculiar attributes,” and therefore, the question of possession requires a different analysis than that applied to ordinary mineral rights. **Id.** at 725. The Court noted that “unlike other minerals, [oil and gas] have the power and the tendency to escape without the volition of the owner.” **Id.**; **see also Brown v. Vandergrift**, 80 Pa. 142, 147 (Pa. 1875) (describing oil’s “fugitive and wandering existence”).

The **Westmoreland** Court stated that oil and gas

belong to the owner of the land, and are part of it, so long as they are on or in it, and are subject to his control; but when they escape, and go into other land, or come under another’s control, the title of the former owner is gone. Possession of the land, therefore, is not necessarily possession of the gas. If an adjoining, or even a distant, owner, drills his own land, and taps your gas, so that it comes into his well and under his control, it is no longer yours, but his. ... [T]he one who controls the gas—has it in his grasp, so to speak—is the one who has possession in the legal as well as in the ordinary sense of the word.

Westmoreland, 18 A. at 725; *see also* **Brown v. Spilman**, 155 U.S. 665, 669-70 (1895) (citing **Vandergrift** and **Westmoreland**, acknowledging the “peculiar character” of oil and gas, and reiterating the **Westmoreland** rule).

In **Jones v. Forest Oil Co.**, 44 A. 1074 (Pa. 1900), the Pennsylvania Supreme Court considered the extent to which an owner of oil wells may use mechanical devices, such as gas pumps, to help bring oil to the surface, even when doing so would affect the production of neighboring wells. The Court adopted the lower court’s Decree, which considered **Vandergrift** and **Westmoreland**, and concluded that “the property of the owner of lands in oil and gas is not absolute until it is actually within his grasp, and brought to the surface.” **Jones**, 44 A. at 1075. The Court analogized to the use of steam pumps, and reasoned that because, like water, possession of land does not give an owner possession of the underlying oil and gas, it is lawful to produce oil by the “exercise of all the skill and invention of which man is capable.” **Jones**, 44 A. at 1075 (citation omitted). Additionally, the Court noted that without the lawful use of gas pumps, few would be willing to assume the expense of drilling and operating a well. *See id.*

The Pennsylvania Supreme Court reaffirmed the rule of capture in **Barnard v. Monongahela Natural Gas Co.**, 65 A. 801 (Pa. 1907). In **Barnard**, the Court considered whether a landowner may drill a well close to his property line, and draw gas from beneath the adjoining property, without invading his neighbor’s property rights. *See id.* at 802. The **Barnard** Court

described the fugitive nature of oil and gas, and concluded that “every landowner or his lessee may locate his wells wherever he pleases, regardless of the interests of others. ... He may crowd the adjoining farms so as to enable him to draw the oil and gas from them.” **Id.** The Court additionally stated that the adjoining landowner’s only recourse is to “go and do likewise.” **Id.**

More recently, in **Minard Run Oil Co. v. United States Forest Service**, 670 F.3d 236 (3d Cir. 2011), the United States Court of Appeals for the Third Circuit recognized that “[u]nder Pennsylvania law, oil and gas resources are subject to the ‘rule of capture,’ which permits an owner to extract oil and gas even when extraction depletes a single oil or gas reservoir lying beneath adjoining lands.” **Id.** at 256.

Appellants argue that hydraulic fracturing “differs dramatically” from conventional gas drilling, and that the principles underlying the common law rule of capture do not apply to natural gas obtained through the process of hydraulic fracturing. Brief for Appellants at 7-8, 12. Pennsylvania courts have not yet considered whether subsurface hydraulic fracturing, which extends into an adjoining landowner’s property and results in the withdrawal of natural gas from beneath that property, constitutes an actionable

trespass. In fact, our extensive research reveals only two cases⁶ which have considered whether the rule of capture applies to hydraulic fracturing, and we look to those jurisdictions for guidance. However, we first find it necessary to examine the process of hydraulic fracturing.

Our Supreme Court has explained that “shale gas is [] natural gas that has been trapped by the shale rock formation from reaching the sandy, higher levels in the ground. The trapping of the natural gas by shale rock forces gas drillers to employ [hydraulic fracturing] to obtain the gas.” ***Butler v. Charles Powers Estate ex rel. Warren***, 65 A.3d 885, 894 (Pa. 2013) (citation omitted). In its summary judgment Order, the trial court relied on the following explanation of the process:

[Hydraulic fracturing] is done by pumping fluid down a well at high pressure so that it is forced out into the formation. The pressure creates cracks in the rock that propagate along the azimuth of natural fault lines in an elongated elliptical pattern in opposite directions from the well. Behind the fluid comes a slurry containing small granules called proppants—sand, ceramic beads, or bauxite are used—that lodge themselves in the cracks, propping them open against the enormous subsurface pressure that would force them shut as soon as the fluid was gone. The fluid is then drained, leaving the cracks open for gas or oil to flow to the wellbore. [Hydraulic fracturing] in effect increases the well’s exposure to the formation, allowing greater production. First used commercially in 1949, [hydraulic fracturing] is now essential to economic production of oil and gas

⁶ See ***Coastal Oil & Gas Corp. v. Garza Energy Trust***, 268 S.W.3d 1 (Tex. 2008), and ***Stone v. Chesapeake Appalachia, LLC***, No. 5:12-CV-102, 2013 WL 2097397 (N.D.W.Va. Apr. 10, 2013), ***order vacated***, 2013 WL 7863861 (N.D.W.Va. July 30, 2013).

and commonly used throughout Texas, the United States[] and the world.

Engineers design a [hydraulic fracturing] operation for a particular well, selecting the injection pressure, volumes of material injected, and type of proppant to achieve a desired result based on data regarding the porosity, permeability, and modulus (elasticity) of the rock, and the pressure and other aspects of the reservoir. The design projects the length of the fractures from the well measured three ways: the hydraulic length, which is the distance the [hydraulic fracturing] fluid will travel, sometimes as far as 3,000 feet from the well; the propped length, which is the slightly shorter distance the proppant will reach; and the effective length, the still shorter distance within which the [hydraulic fracturing] operation will actually improve production. Estimates of these distances are dependent on available data and are at best imprecise. Clues about the direction in which fractures are likely to run horizontally from the well may be derived from seismic and other data, but virtually nothing can be done to control that direction; the fractures will follow Mother Nature's fault lines in the formation. The vertical dimension of the [hydraulic fracturing] pattern is confined by barriers—in this case, shale—or other lithological changes above and below the reservoir.

Trial Court Order, 8/21/17, at 7 (citing ***Coastal Oil***, 268 S.W.3d at 6-7); ***see also*** *The Process of Unconventional Natural Gas Production*, EPA, <https://www.epa.gov/uog/process-unconventional-gas-production> (last updated Jan. 26, 2018) (describing hydraulic fracturing as a process used to extract natural gas from rock formations whereby large quantities of fluid (consisting of water, proppant and chemical additives) are pumped down a wellbore at high pressure to enlarge fractures within the target rock formation to stimulate the flow of natural gas).

In ***Coastal Oil***, the Supreme Court of Texas considered “whether subsurface hydraulic fracturing of a natural gas well that extends into

another's property is a trespass for which the value of the gas drained as a result may be recovered as damages." **Coastal Oil**, 268 S.W.3d at 4. The plaintiffs were the owners of the minerals contained in a 748-acre tract of land known as Share 13. **Id.** at 5. Coastal Oil and Gas Corporation ("Coastal") was the mineral lessee of Share 13, as well as two adjoining tracts of land not owned by the plaintiffs, all of which are situated above the Vicksburg T formation. **Id.** at 5, 6. Coastal drilled several wells on Share 13, one of which was an "exceptional producer." **Id.** at 6. Thereafter, Coastal shut in one of its producing wells on an adjoining share, and drilled two additional wells on that share, close to the Share 13 boundary line. **Id.** The plaintiffs subsequently sued Coastal, as they were concerned that Coastal was allowing gas from Share 13 to drain to the adjoining share, where Coastal could retrieve the gas, unburdened by an obligation to pay a royalty. **Id.** at 6. The parties agreed that the hydraulic and propped lengths of the first well on the adjoining share exceeded the distance between the well and the Share 13 lease line. **Id.** at 7. The plaintiffs subsequently amended their pleadings to assert a claim for trespass. **Id.** The plaintiffs' expert estimated that, of the two Coastal wells located on the adjoining share, the well closest to the boundary line had drained 25-35% of the gas it produced from Share 13 due to hydraulic fracturing. **Id.** at 8. Coastal's expert testified that no gas had drained from Share 13. **Id.** The jury found, *inter alia*, that Coastal's hydraulic fracturing of the well closest to the

boundary line had trespassed on Share 13, causing substantial drainage, and Coastal did not dispute that finding on appeal. *Id.*

The Supreme Court of Texas initially determined that because the plaintiffs, as the mineral lessors, had only a reversion interest in the minerals leased to Coastal, they had to establish actual injury. *Id.* at 10-11. The ***Coastal Oil*** Court then indicated that it “need not decide the broader issue” of whether the hydraulic fracturing constituted a trespass. *Id.* at 12. The Court reiterated that the plaintiffs had to establish injury, and determined that “[the plaintiffs’] only claim of injury—that Coastal’s [hydraulic fracturing] operation made it possible for gas to flow from beneath Share 13 to the [adjoining share’s] wells—is precluded by the law of capture.” *Id.* at 12-13; ***see also id.*** at 12 n.36 (noting that a case involving a trespass against a possessory interest would not require a showing of actual injury to be actionable). The ***Coastal Oil*** Court therefore held that “damages for drainage by hydraulic fracturing are precluded by the rule of capture,” citing the following four justifications for its holding: (1) “the law already affords the owner who claims damage full recourse;” (2) “allowing recovery for the value of gas drained by hydraulic fracturing usurps to the courts and juries the lawful and preferable authority of the Railroad Commission to regulate oil and gas production;” (3) “determining the value of oil and gas drained by hydraulic fracturing is the kind of issue the litigation process is least equipped to handle” because “trial judges and

juries cannot take into account social policies, industry operations, and the greater good[,] which are all tremendously important in deciding whether [hydraulic fracturing] should or should not be against the law;" and (4) "the law of capture should not be changed to apply differently to hydraulic fracturing because no one in the industry appears to want or need the change." *Id.* at 14-17.

In a concurring and dissenting Opinion joined by two additional justices, Justice Phil Johnson⁷ considered the rationale for the rule of capture, and pointed out that "[t]he gas at issue ... did not migrate to Coastal's well because of naturally occurring pressure changes in the reservoir." *Coastal Oil*, 268 S.W.3d at 42 (Johnson, J., dissenting). Justice Johnson stated that he "would not apply the rule [of capture] to a situation ... in which a party effectively enters another's lease without consent, drains minerals by means of an artificially created channel or device, and then 'captures' the minerals on the trespasser's lease." *Coastal Oil*, 268 S.W.3d at 43 (Johnson, J., dissenting). Justice Johnson also opined that the majority had prematurely addressed the issue of damages before determining whether hydraulic fractures that extend across lease lines constitute a trespass. *Id.* at 42; *see also id.* at 43 (stating that "[u]ntil the

⁷ Justice Johnson dissented only as to the majority's consideration of the trespass issue, and concurred as to a separate issue that is not relevant to the instant case. Thus, for our purposes, we will refer to Justice Johnson's minority decision as "the *Coastal Oil* dissent."

issue of trespass is addressed, Coastal's fractures into Share 13 must be considered an illegal trespass.").

Regarding the majority's four reasons "not to change the rule of capture," Justice Johnson stated that, although he disagreed with some of those reasons, his fundamental disagreement was that he believed the majority was, in fact, changing the rule of capture. **Id.** at 45. Justice Johnson also stated that "not all property owners ... are knowledgeable enough or have the resources to benefit from" the alternative remedies suggested by the majority, *i.e.*, self-help, lawsuits, and pooling. **Id.** Moreover, Justice Johnson reasoned that the majority holding "reduces incentives for operators to lease from small property owners" because it "effectively allows a lessee to change and expand the boundary lines of its lease by unilateral decision and action—fracturing its wells—as opposed to contracting for new lease lines ... or paying compensatory royalties." **Id.** at 45.

The United States District Court for the Northern District of West Virginia considered the applicability of the rule of capture to hydraulic fracturing in **Stone, supra**.⁸ In **Stone**, the plaintiffs were the owners of a

⁸ The parties subsequently settled the case, at which time the district court granted the parties' Joint Motion to vacate, and vacated its Order denying summary judgment. **See Stone**, 2013 WL 7863861 (N.D.W.Va. July 30, 2013).

combined 217.77-acre tract of land. **Stone**, 2013 WL 2097397, at *1. Chesapeake Appalachia, LLC (“Chesapeake”), by assignment, acquired a lease for the oil and gas underlying the plaintiffs’ property, which provided for “the right to pool and unitize the Onondaga, Oriskany, or deeper formations under all or any part of the land...” **Id.**⁹ Chesapeake drilled a horizontal well on a neighboring property; the vertical wellbore was located approximately 200 feet from the plaintiffs’ property, and the horizontal bore came within tens of feet of the property line. **Id.** The plaintiffs filed a Complaint, alleging, *inter alia*, that Chesapeake had trespassed on their property by engaging in hydraulic fracturing. **Id.** Chesapeake subsequently filed a Motion for summary judgment, asserting, *inter alia*, that the plaintiffs’ trespass claim was barred by the rule of capture, and urging the district court to apply the majority decision in **Coastal Oil**. **See id.** at *1, 2.

In its Order denying summary judgment, the district court, persuaded by the **Coastal Oil** dissent, stated that

[t]he [**Coastal Oil**] opinion gives oil and gas operators a blank check to steal from the small landowner. Under such a rule, the companies may tell a small landowner that either they sign a lease on the company’s terms or the company will just hydraulically fracture under the property and take the oil and gas without compensation. In the alternative, a company may just take the gas without even contacting a small landowner.

⁹ The Marcellus Shale formation is situated above both the Onondaga and Oriskany foundations. **See id.** at *1. The parties were unable to agree to a lease modification that would allow for pooling and unitization of the Marcellus Shale formation. **See id.**

Id. at *6. The court pointed to the **Coastal Oil** dissent's "most significant and compelling criticism" that not all property owners are able to drill their own well in order to protect their rights. **Id.** The district court also stated that West Virginia's regulatory authority does not have as much power as the Texas Railroad Commission. **Id.** at *7. Regarding the **Coastal Oil** majority's third justification, the district court pointed out that the relevant issue is not whether hydraulic fracturing should or should not be against the law, but instead, "whether an operator may use hydraulic fracturing on neighboring property, thereby taking the neighbor's oil and gas without compensation." **Id.** As to the fourth justification, the district court stated that "[it] sees no reason why the desires of the industry should overcome the property rights of small landowners." **Id.** Accordingly, the district court concluded that hydraulic fracturing beneath a neighbor's land without consent constitutes an actionable trespass. **Id.** at *8.

Here, in its summary judgment Order, the trial court stated that it "[found] no case[]law that would imply th[e] rule [of capture] is any less applicable when the gas is extracted using modern techniques, such as hydraulic fracturing." Trial Court Order, 8/21/17, at 5-6. The trial court, believing itself bound by the reasoning in **Barnard** and the rule of capture, concluded that Southwestern could not be held liable for trespass. **See id.** at 8-9. Additionally, in its Pa.R.A.P. 1925(a) Opinion, the trial court stated that even if Southwestern had recovered natural gas from beneath

Appellants' land, the gas was legally and permissibly extracted. **See** 1925(a) Opinion, 10/16/17, at 3.

Based upon our review of relevant case law and the principles underlying oil and gas extraction, we are persuaded by the analysis in the **Coastal Oil** dissent and **Stone**, and conclude that hydraulic fracturing is distinguishable from conventional methods of oil and gas extraction. Traditionally, the rule of capture assumes that oil and gas originate in subsurface reservoirs or pools, and can migrate freely within the reservoir and across property lines, according to changes in pressure. **See Barnard**, 65 A. at 802 (referring to the fugitive nature of oil and gas); **see also Coastal Oil**, 268 S.W.3d at 42 (Johnson, J., dissenting) (explaining that "[t]he rationale for the rule of capture is the 'fugitive nature' of hydrocarbons. They flow to places of lesser pressure and do not respect property lines." (citation omitted)); **Young**, 521 F.2d at 774 (stating that the rule of capture is traditionally applied where the drainage of minerals "occurs as the inevitable result of the tapping of a common reservoir." (citation omitted)). Unlike oil and gas originating in a common reservoir, natural gas, when trapped in a shale formation, is non-migratory in nature. **See Butler**, 65 A.3d at 984. Shale gas does not merely "escape" to adjoining land absent the application of an external force. **See Completion**, SOUTHWESTERN ENERGY, <https://www.swn.com/operations/Pages/completions.aspx> (last visited Mar. 15, 2018) (stating that many natural gas discoveries "are made in tight, relatively impermeable rocks, and natural gas will not

flow easily from these tight reservoirs without some assistance.”). Instead, the shale must be fractured through the process of hydraulic fracturing; only then may the natural gas contained in the shale move freely through the “artificially created channel[s].” ***Coastal Oil***, 268 S.W.3d at 43 (Johnson, J., dissenting); **see also id.** at 42 (stating that “[t]he rule of capture precludes liability for capturing oil or gas drained from a neighboring property whenever such flow occurs solely through the operation of natural agencies in a normal manner, **as distinguished from artificial means applied to stimulate such a flow.**” (citation omitted; emphasis added)); ***Young***, 521 F.2d at 774 (concluding that the defendants’ forcible removal of brine—a primarily non-fugacious mineral—from beneath Young’s land, where the brine would not have migrated to defendants’ wells without the exertion of force, constituted an actionable trespass).

Further, we are not persuaded by the ***Coastal Oil*** Court’s rationale that a landowner can adequately protect his interests by drilling his own well to prevent drainage to an adjoining property. **See *Coastal Oil***, 268 S.W.3d at 14; **see also *Barnard***, 65 A. at 802. Hydraulic fracturing is a costly and highly specialized endeavor, and the traditional recourse to “go and do likewise” is not necessarily readily available for an average landowner. **See *Coastal Oil***, 268 S.W.3d at 45 (Johnson, J., dissenting) (indicating that not all property owners have the resources to benefit from alternative remedies); **see also** U.S. ENERGY INFORMATION ADMINISTRATION, TRENDS IN U.S. OIL AND NATURAL GAS UPSTREAM COSTS, 1, 19 (March 2016),

<http://www.eia.gov/analysis/studies/drilling/pdf/upstream.pdf> (estimating an average Marcellus Shale well cost of \$6.1 million in 2015); Samuel C. Stephens, Comment, *Poison Under Pressure: The EPA's New Hydraulic Fracturing Study and the Case for Rational Regulation*, 43 CUMB. L. REV. 63, 74 (2013) (indicating that a single hydraulic fracturing well in the Marcellus Shale region has an estimated cost of over \$5 million). Additionally, while we are cognizant that establishing the occurrence of a subsurface trespass determining the value of natural gas drained through hydraulic fracturing will present evidentiary difficulties, **see Coastal Oil**, 268 S.W.3d at 16, we do not believe that such difficulty, in itself, is a sufficient justification for precluding recovery. **See id.** at 44 (Johnson, J., dissenting) (stating that “[t]he evidence showed that the effective length of a fracture can be fairly closely determined after the fracture operation,” and juries may resolve conflicts in expert testimony on the subject), 45 n.3 (stating that “[d]ifficulty in proving matters is not a new problem to trial lawyers.”).

We additionally echo the concern raised in both the **Coastal Oil** dissent and **Stone** that precluding trespass liability based on the rule of capture would effectively allow a mineral lessee to expand its lease by locating a well near the lease’s boundary line and withdrawing natural gas from beneath the adjoining property, for which it does not have a lease. **See id.** at 43, 45 (Johnson, J., dissenting); **see also Stone**, 2013 WL 2097397 at *6. Such an allowance would nearly eradicate a mineral lessee’s incentive to negotiate mineral leases with small property owners, as the

lessee could use hydraulic fracturing to create an artificial channel beneath an adjoining property, and withdraw natural gas from beneath the neighbor's land without paying a royalty. **See Coastal Oil**, 268 S.W.3d at 45 (Johnson, J., dissenting); **see also Stone**, 2013 WL 2097397 at *6.

In light of the distinctions between hydraulic fracturing and conventional gas drilling, we conclude that the rule of capture does not preclude liability for trespass due to hydraulic fracturing. Therefore, hydraulic fracturing may constitute an actionable trespass where subsurface fractures, fracturing fluid and proppant cross boundary lines and extend into the subsurface estate of an adjoining property for which the operator does not have a mineral lease, resulting in the extraction of natural gas from beneath the adjoining landowner's property.

In the instant case, it is unclear from the record before us¹⁰ whether Southwestern's hydraulic fracturing operations resulted in a subsurface trespass to Appellants' property. There does not appear to be any evidence, or even an estimate, as to how far the subsurface fractures extend from each of the wellbore on Southwestern's lease. However, we conclude that Appellants' allegations are sufficient to raise an issue as to whether there has been a trespass, and thus, the entry of summary judgment in favor of

¹⁰ The record does not contain any depositions (although Southwestern cites to the depositions of Adam and Paula Briggs in its appellate brief), nor does it contain complete copies of all three sets of Interrogatories.

Southwestern was premature. We therefore reverse the summary judgment Order and remand the case to the trial court for further proceedings. On remand, Appellants must be afforded the opportunity to fully develop their trespass claim. Moreover, because the trial court concluded that Appellants' conversion claim was precluded by the rule of capture, Appellants must also be afforded the opportunity to develop their conversion claim on remand.

Order reversed. Case remanded for further proceedings consistent with this Opinion. Jurisdiction relinquished.

President Judge Gantman joins the opinion.

Judge Murray did not participate in the consideration or decision of this case.

Judgment Entered.

A handwritten signature in black ink, appearing to read "Joseph D. Seletyn", written over a horizontal line.

Joseph D. Seletyn, Esq.
Prothonotary

Date: 4/2/2018