

IN THE SUPREME COURT OF PENNSYLVANIA

No. 63 MAP 2018

Adam Briggs, Paula Briggs, his wife, Joshua Briggs and Sarah Briggs,
Appellees

v.

Southwestern Energy Production Company,
Appellant

On appeal of an Opinion and Order of the Pennsylvania Superior Court dated April 2, 2018, reargument denied on June 8, 2018, reversing an August 8, 2017 Order entered by the Court of Common Pleas of Susquehanna County, Pennsylvania at Docket No. 2015-01253

BRIEF OF *AMICUS CURIAE* NATIONAL ASSOCIATION OF ROYALTY OWNERS PENNSYLVANIA CHAPTER, INC.

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TABLE OF CONTENTS

TABLE OF CONTENTS i

TABLE OF CITATIONS ii

INTRODUCTION..... 1

 I. INTERESTS OF *AMICUS CURIAE* 1

 II. BACKGROUND 3

 III. SUMMARY OF ARGUMENT 5

 IV. ARGUMENT..... 6

 A. An intrusion into the oil and gas estate of another has historically
 been recognized as a subsurface trespass. 6

 B. There is no functional difference between a well casing in a
 vertical or horizontal well and the proppants that are placed in the
 subsurface by hydraulic fracturing and they must be treated the same..... 9

 C. The “Rule of Capture” does not relieve or immunize a driller from
 trespass liability. 14

 D. The interplay between the..... 16

 E. The expansion of the “Rule of Capture” to insulate drillers from
 trespass liability associated with the placement of their well
 infrastructure would radically reshape property law in the
 Commonwealth..... 19

 F. There is no compelling public policy reason to expand the “Rule of
 Capture” to immunize a trespass. 25

 V. CONCLUSION..... 28

TABLE OF CITATIONS

Cases

<u>Aim v. Johnson</u> , 275 P.2d 959 (Idaho 1954).....	28
<u>Alphonzo E. Bell Corporation v. Bell View Oil Syndicate</u> , 76 P.2d 167 (Cal. 1938)	7
<u>Amoco Production Co. v. Underwood</u> , 558 S.W.2d 509 (Tex.Civ.App.-Eastland 1977, writ ref'd n.r.e.	21
<u>Barnard v. Monongahela Natural Gas Company</u> , 65 A. 801 (Pa. 1907)	20, 25
<u>Borland v. Sanders Lead Co.</u> , 369 So. 2d 523 (Ala. 1979)	27
<u>Bradley v. American Smelting & Refining Co.</u> , 709 P.2d 782 (Wash. 1985).....	27
<u>Brown v. Vandergrift</u> , 80 Pa. 147 (1875)	25
<u>Buckley Motors Inc. v. AMP. Inc.</u> , 23 D. & C. 2d 324 (Cumberland Co. 1960).....	27
<u>Butler v. Charles Powers Estate</u> , 65 A.3d 885 (Pa. 2013)	5
<u>Circle Dot Ranch, Inc. v. Sidwell Oil & Gas, Inc.</u> , 891 S.W.2d 342 (Tex.App.-Amarillo 1994, writ denied).....	22
<u>Coastal Oil & Gas Corp. v. Garza Energy Trust</u> , 268 S.W. 3d 1, (Tex. 2008).....	5
<u>Cross v. Harris</u> , 370 P.2d 703 (Ore. 1962).....	28
<u>Edwards v. Lachman</u> , 534 P.2d 670 (Okla. 1970)	8
<u>Elliff v. Texon Drilling Co.</u> , 210 S.W. 2d 558 (Tex. 1948).....	14, 15
<u>Elliott v. Davis</u> , 553 S.W.2d 223 (Tex.Civ.App.-Amarillo 1977, writ ref'd n.r.e.....	22
<u>Forsyth v. Wells</u> , 41 Pa. 291 (1862)	28
<u>Geo-Viking v. Tex-Lee Operating Co.</u> , 1992 WL 80263 (Tex. 1992)	12
<u>Gilbert v. Synagro Central, LLC</u> , 90 A.3d 37 (Pa. Super. Ct. 2014).....	6
<u>Gliptis v. Fifteen Oil Co.</u> , 16 So. 2d 471 (La. 1944)	8

<u>Gotshall v. J. Langdon & Co.,</u> 16 Pa. Super. 158 (Pa. Super. Ct. 1901)	28
<u>Gregg v. Delhi-Taylor Oil Corp.,</u> 344 S.W. 2d 411(Tex. 1961).....	12
<u>Hamilton v. Foster,</u> 116 A. 50 (Pa. 1922)	7
<u>Hastings Oil Co. v. Texas Co.,</u> 234 S.W. 2d 389 (Tex. 1950).....	8
<u>Highland v. Commonwealth,</u> 161 A.2d 390 (Pa. 1960).....	5
<u>In re Tayfur,</u> 505 B.R. 673 (Bankr. W.D.Pa.).....	7
<u>Jones v. Forest Oil Co.,</u> 44 A. 1074 (Pa. 1900)	18, 19
<u>L.W. Powell v. Forest Oil Corporation,</u> 392 S.W. 2d 549 (Tex. Civ. Appeals – Texarkana 1965)	8
<u>Lynch v Burford,</u> 50 A. 228 (Pa. 1901)	7
<u>Marlowe v. Lehigh Twp.,</u> 441 A.2d 497 (Pa. Commw. Ct. 1982)	6
<u>Martin v. Reynolds Metals Co.,</u> 342 P.2d 790 (Or. 1959)	27
<u>MD Mall Assocs., LLC v. CSX Transportation, Inc.,</u> 288 F. Supp. 3d 565 (E.D. Pa. 2017).....	6
<u>Murphy Exploration & Production Company-USA,</u> 2017 WL 2256709 (Tex.), 23-24, pp.3; 9	21
<u>Murphy Exploration and Production Company v. Adams,</u> 560 S.W. 3d 105 (Tex. 2018).....	26
<u>Oak Ridge Coal Co. v. Rogers,</u> 108 Pa. 147 (1884)	28
<u>Pan Am Petroleum Corp v. Orr,</u> 319 F.2d 512 (5th Cir. 1963)	8
<u>Philson v. Wills,</u> 100 A. 463 (Pa. 1917)	28
<u>PYR Energy Corp. v. Samson Res. Co.,</u> 470 F. Supp. 2d 709 (E.D. Tex. 2007).....	21
<u>Robinson Township v. Commonwealth,</u> 83 A.3d 901 (Pa. 2013)	3
<u>Roncace v. Welsh,</u> 14 A.2d 616 (Pa. Super. Ct. 1940).....	28

<u>Sabella v. Appalachian Development Corp.,</u> 103 A.3d (Pa. Super. Ct. 2014).....	7
<u>Schronk v. Gilliam,</u> 380 S.W.2d 743 (Tex. Ct. App. 1964).....	28
<u>Snyder Brothers, Inc. v. Pennsylvania Public Utility Commission,</u> 198 A.3d 1056 fn. 2 (Pa. 2018).....	25
<u>Stone v. Chesapeake Appalachia, LLC,</u> 2013 WL 2097397 (N.D.W.V. 2013) were withdrawn	12
<u>U.S. Steel Corp v. Hoge,</u> 468 A.2d 1380 (Pa. 1983).....	16, 17, 18
<u>Wall v. Trogdon,</u> 107 S.E.2d 757 (N.C. 1959).....	28
<u>Westmoreland & Cambria Natural Gas Co. v. DeWitt,</u> 18 A. 724 (Pa. 1889).....	14, 15, 25
<u>Young v. Darter,</u> 363 P.2d 829 (Okla. 1961).....	28

Other Authorities

Bruce M. Kramer, <u>Coastal Oil & Gas Corp. v. Garza Energy Trust: Some New Paradigms for the Rule of Capture and Implied Covenant Jurisprudence</u> , 30 Energy & Min. L. Inst. 11, p. 353 (2009).....	13
Caleb Fielder, <u>I Drink Your Milkshake: The Status of Hydraulic Fracture Stimulation in the Wake of Coastal v. Garza,</u> 46 Rocky Mtn. Min. L. Inst., 17 (2009).....	4
Cameron Huddleston-Holmes, Bailin Wu, James Kear and Raman Pandurangan, <u>Report into the shale gas well life cycle and well integrity.</u> EP179028. December 2017.	14
Daniel R. Surchy and K. David Newell, <u>Hydraulic Fracturing of Oil and Gas Wells in Kansas</u> , Kansas Geological Society Public Information Circular 32 at p. 1 (Rev. May 2012)	11
Feng Liang, et al. <u>A comprehensive review on proppant technologies.</u> Petroleum 2 (2016) at p. 26.....	5
http://marcelluscoalition.org/marcellus-shale/production-processes/casing-the-well/ (Accessed March 22, 2019).	9
http://www.jfe-steel.co.jp/en/products/pipes/oilwell.php (Accessed March 22, 2019)	10
https://business.financialpost.com/commodities/energy/grains-of-sand-how-fracking-has-caused-a-surge-in-demand-for-one-of-the-worlds-oldest-commodities (Accessed March 22, 2019).....	11

https://fairmountsanrol.com/industries/oil-gas-proppant-solutions/proppants/ (Accessed March 22, 2019).....	10
https://www.blackmountainsand.com/products/ (Accessed March 22, 2019).....	10
https://www.hartenergy.com/exclusives/super-laterals-going-really-really-long-appalachia-31209 (Accessed March 22, 2019).	11
Jesse Snyder, <u>Grains of Sand: How fracking has caused a surge in demand for one of the world’s oldest commodities</u> . June 2, 2017.....	11
Johannes Fink, <u>Petroleum Engineer’s Guide to Oil Field Chemicals and Fluids</u> , 2d. edition Ch. 17, p. 567. 2015.....	3, 4
Levi Rodgers, <u>Subsurface Trespass by Hydraulic Fracturing: Escaping Coastal v. Garza’s Disparate Jurisprudence Through Equitable Compromise</u> , 45 Tex. Tech. L. Rev. Online Edition 99, 123-24 (2012-2013)	13
Owen L. Anderson, <u>Lord Coke, The Restatement, and Modern Subsurface Trespass Law</u> . 6 Tex. J. Oil Gas & Energy L. 203, 214 (2010-2011).....	8
R.G. Dusterhoft, <u>Fracturing High-Permeability Reservoirs Increases Productivity</u> , Oil & Gas J. June 20, 1994 at 40.	4
Restatement (Second) of Torts § 158	6
Terry D. Ragsdale, <u>Hydraulic Fracturing: The Stealthy Subsurface Trespass</u> , 28 Tulsa L.J. 311, 339 (2013).....	12

INTRODUCTION

The National Association of Royalty Owners Pennsylvania Chapter, Inc. (“NARO-PA”) respectfully urges this Honorable Court to affirm the determination of the Pennsylvania Superior Court. The “Rule of Capture” has guided oil and gas jurisprudence in Pennsylvania for over a century and has allowed for the effective development of oil and gas resources while preserving landowners’ property rights. This appeal, however, proposes a radical and unnecessary expansion of the “Rule of Capture” which would fundamentally alter and change Pennsylvania oil and gas law. Such an expansion would erode and diminish oil and gas ownership rights here in the Commonwealth. This unwarranted expansion must be rejected and the Superior Court’s decision must be affirmed.

I. INTERESTS OF *AMICUS CURIAE*

NARO-PA is a Pennsylvania non-profit corporation that advocates on behalf of mineral and royalty owners’ rights and interests. NARO-PA was established in 2010 and, with 400 memberships that comprise over 900 individuals and business entities, NARO-PA is the third largest of the eleven (11) chapters of the National Association of Royalty Owners in the United States. NARO-PA members reside in thirty-eight (38) counties across the Commonwealth.

As an organization that promotes mineral and royalty owners’ rights, NARO-PA has a unique and substantial interest in the outcome of this proceeding

that is not otherwise represented by other parties. NARO-PA members are owners of oil, gas and mineral rights that realize the economic benefits from the exploration and production of hydrocarbons throughout the Commonwealth. As such, NARO-PA supports hydraulic fracturing and advancements in science and technology to allow for continued development of hydrocarbon resources. NARO-PA focuses its educational and advocacy efforts on these subjects.

NARO-PA members' ability to benefit from hydrocarbon production is rooted in their ownership of oil and gas. This ownership allows NARO-PA members the opportunity to lease their interests for development and to receive royalties when production occurs. This relationship, where royalty owners bring the rights to the natural resources and drillers bring the technical know-how and financial resources, has been a great benefit to royalty owners, drillers and the Commonwealth economy as a whole.

NARO-PA is concerned that drillers seek to fundamentally alter the dynamics of this relationship. That would be detrimental to NARO-PA members and royalty owners generally. Royalty owners across the Commonwealth have long relied on the "Rule of Capture" as the governing concept of oil and gas exploration and production and have structured their affairs accordingly. Oil and gas owners' settled expectations of their property rights and economic opportunities would be undermined if drillers no longer need oil and gas owners'

permission to enter a property to extract hydrocarbons. That would deprive royalty owners of the ability to market, lease and develop their properties and the financial benefits that come therewith. NARO-PA supports the affirmance of the Superior Court.¹

II. BACKGROUND

“In shale formations, organic matter in the soil generates gas molecules that adsorb onto the matrix of the rock . . . In the Marcellus Shale formation, fractures in the rock and naturally-occurring gas pockets are insufficient in size and number to sustain consistent gas production.” Robinson Township v. Commonwealth, 83 A.3d 901, 914-15 (Pa. 2013). To commercially produce hydrocarbons in shale formations, drillers utilize two techniques, horizontal drilling and hydraulic fracturing. Id.

Hydraulic fracturing increases hydrocarbon production to achieve economic viability. Because shale gas *in situ* does not readily migrate, “[t]he increased productivity results from the increased wellbore radius, because in the course of hydraulic fracturing, a large contact surface between the well and the reservoir is created.” Johannes Fink, Petroleum Engineer’s Guide to Oil Field Chemicals and Fluids, 2d. edition Ch. 17, p. 567. 2015. “Fracturing beyond the well bore region

¹ No person or entity other than the *amicus*, NARO-PA, its members, or their counsel either paid in whole or in part for the preparation of this brief or authored in whole or in part this *amicus* brief.

effectively bypasses the damages zone, increasing the effective radius of the well bore and enabling higher flow rates with lower drawdown pressure.” R.G. Dusterhoft, Fracturing High-Permeability Reservoirs Increases Productivity, Oil & Gas J. June 20, 1994 at 40.

In simplistic terms, there are two parts to the hydraulic fracturing process: the creation of the fissures and the mechanical propping of the fissures.

Generally a hydraulic fracturing treatment involves pumping a proppant-free viscous fluid, or pad, usually water with some fluid additives to generate high viscosity, into a well faster than the fluid can escape into the formation so that the pressure rises and the rock breaks, creating artificial fractures or enlarging existing fractures.

Fink, *supra* at p. 571. If the fluid were removed at this stage and no other steps of the process were performed, “. . . the weight of the earth and the subsurface pressure existing two miles deep are so powerful as to slam these fractures shut, often as though they had never been split open in the first place.” Caleb Fielder, I Drink Your Milkshake: The Status of Hydraulic Fracture Stimulation in the Wake of Coastal v. Garza, 46 Rocky Mtn. Min. L. Inst., 17, 31 (2009).

After the fissures are created, “. . . a propping agent, such as sand is added to the fluid to form a slurry that is pumped into the newly formed fractures in the formation to prevent them from closing when the pumping pressure is released.” Fink, *supra* at p. 571. “The carried proppant is of extreme importance as it

provides the long term conductivity of the fracture.” Feng Liang, et al. A comprehensive review on proppant technologies. Petroleum 2 (2016) at p. 26. Fracturing the rock and placing proppants into the cracks to mechanically keep them open “. . . in effect increases the well’s exposure to the formation, allowing greater production.” Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W. 3d 1, (Tex. 2008). Without proppant placement, many shale wells would not be economically viable:

Wells drilled in shale and tight reservoirs cannot be economically produced unless they are stimulated by a large hydraulic fracture treatment or produced by use of horizontal or multilateral wellbores. Currently, a combination of horizontal wells and multiple propped fracture treatments is utilized as completion method of choice for unconventional reservoirs.

Liang, *supra* at p. 35.

III. SUMMARY OF ARGUMENT

“A rule of property long acquiesced in should not be overthrown except for compelling reasons of public policy or the imperative demands of justice.” Butler v. Charles Powers Estate, 65 A.3d 885, 891-92 (Pa. 2013) *citing* Highland v. Commonwealth, 161 A.2d 390 (Pa. 1960). That maxim, employed by this Honorable Court to affirm the validity of a late 19th century property construct, the Dunham rule, must be employed here to defend an even more basic principle of the tort law – trespass. Royalty owners have long relied on the security that drillers

cannot lawfully enter property to extract hydrocarbons without acquiring a lease or purchasing the oil and gas. Now, drillers propose that they be immunized from tort liability if they enter upon the land of another and extract hydrocarbons. There is no basis for such broad immunity and the “Rule of Capture” cannot be invoked to create one.

IV. ARGUMENT

A. An intrusion into the oil and gas estate of another has historically been recognized as a subsurface trespass.

Pennsylvania trespass law is governed by Section 158 of the Restatement (Second) of Torts. *See, Marlowe v. Lehigh Twp.*, 441 A.2d 497, 500 n. 3 (Pa. Commw. Ct. 1982); *Gilbert v. Synagro Central, LLC*, 90 A.3d 37, 52 (Pa. Super. Ct. 2014), *aff'd in part and rev'd in part on other grounds*, 131 A.3d 1 (2015); *MD Mall Assocs., LLC v. CSX Transportation, Inc.*, 288 F. Supp. 3d 565, 586 (E.D. Pa. 2017). Section 158 of the Restatement (Second) describes a trespass as follows:

Liability for Intentional Intrusions on Land. One is subject to liability to another for trespass, irrespective of whether he thereby causes harm to any legally protected interest of the other, if he intentionally (a) enters land in the possession of the other, or causes a thing or a third person to do so, or (b) remains on the land, or (c) fails to remove from the land a thing which he is under a duty to remove.

Restatement (Second) of Torts § 158.

In Pennsylvania, oil and gas in place is considered real property and is owned just as one owns the surface of the land, which is referred to as “ownership-in-place”. *See, Hamilton v. Foster*, 116 A. 50 (Pa. 1922); *See also, In re Tayfur*, 505 B.R. 673, 681 (Bankr. W.D.Pa.) *aff’d* 513 B.R. 282 (W.D.Pa. 2014) *aff’d* 599 F. App’x 44 (3d Cir. 2015). A driller cannot place an oil and gas well on the surface of land to extract the oil and gas thereunder if that driller does not possess a valid ownership or leasehold interest in said land. *See, Sabella v. Appalachian Development Corp.*, 103 A.3d 84 (Pa. Super. Ct. 2014) (discussing “good faith” and “bad faith” damage liability for trespass by oil and gas wells); *Lynch v Burford*, 50 A. 228 (Pa. 1901) (prohibiting property owner from drilling on land leased to oil and gas operator). In short, one cannot erect a drilling rig or install well casing on a particular piece of property unless that driller has a legitimate and legal right to do so.

The principle that one cannot drill a well that invades oil and gas which he or she does not own or lease is not limited to Pennsylvania or to the surface location of a well. Rather, a multitude of prominent oil and gas jurisdictions across the country have recognized that such conduct is unlawful, particularly in the case of subsurface entry. *See, Alphonzo E. Bell Corporation v. Bell View Oil Syndicate*, 76 P.2d 167 (Cal. 1938) (“There is, in fact, no ownership of the oil and gas or other hydrocarbons not found beneath one’s property and brought to the surface and

reduced to possession”); Hastings Oil Co. v. Texas Co., 234 S.W. 2d 389 (Tex. 1950) (rehearing denied) (affirming judgment of temporary injunction where there was evidence that deviated well crossed a property line); L.W. Powell v. Forest Oil Corporation, 392 S.W. 2d 549 (Tex. Civ. Appeals – Texarkana 1965) (rehearing denied) (tort liability exists where deviated “slant hole” well extended onto another’s property); Edwards v. Lachman, 534 P.2d 670 (Okla. 1970) (examining damages for oil and gas well that encroached on another parcel); Gliptis v. Fifteen Oil Co., 16 So. 2d 471 (La. 1944) (holding that an oil and gas well’s invasion of the subsurface property of another was a trespass); Pan Am Petroleum Corp v. Orr, 319 F.2d 512 (5th Cir. 1963) (slant hole wells bottomed-out under plaintiff’s lease and court addressed question of whether statute of limitations barred tort claim due to lack of exercise of diligence). As such, it is well-settled that if a well bore (*i.e.*, the actual well casing) is drilled and placed on or through an unleased parcel, that driller has committed a subsurface trespass.

Professor Owen L. Anderson, succinctly expressed this concept, “. . . the most obvious example of actionable trespass is the drilling of a directional well that bottoms out beneath the neighboring property that is not part of the drilling unit for that well.” Owen L. Anderson, Lord Coke, The Restatement, and Modern Subsurface Trespass Law. 6 Tex. J. Oil Gas & Energy L. 203, 214 (2010-2011). Southwestern and its *amici* recognize in their briefing papers that entry into an

unleased tract via a slant or deviated well bore is unlawful, tortious conduct. The mechanics of a deviated well bore and hydraulic fracturing are no different from one another and must be treated identically under the law.

B. There is no functional difference between a well casing in a vertical or horizontal well and the proppants that are placed in the subsurface by hydraulic fracturing and they must be treated the same.

Oil and gas are produced from a well because the hydrocarbons migrate from areas of high pressure (the subsurface) to areas of low pressure (the surface) via mechanically created cavities in the ground that did not previously exist.² Historically, the migration pathway from the subsurface formations to the surface was created by a well bore and mechanically maintained open by the placement of a steel well casing in the subsurface. *Amicus curiae* Marcellus Shale Coalition explains on its website that:

The casing process keeps the well open . . . [and] [t]he hard metal casing shores up the wellbore and extends through both the vertical (if the well is completed vertically) and the horizontal drilling phases, assuring the long-term integrity of the well from end to end.”³

Well casings and proppants serve the same functional purpose – to mechanically prevent natural forces from closing a cavity through which

² Brief of *Amicus Curiae* Thomas D. Gillespie, P.G. at pp. 10-11.

³ <http://marcelluscoalition.org/marcellus-shale/production-processes/casing-the-well/> (Accessed March 22, 2019).

hydrocarbons migrate from the areas they are found in the subsurface to the surface. Both well casings and proppants are *personal property* specially engineered for placement in the ground as part of the drilling process. For example, JFE Steel promotes that it “develop[s] the high-strength, highly corrosion-resistant oil well casings . . . [which are] available in a wide range of materials, according to the application environment.”⁴ Black Mountain Sand, a proppant retailer, advertises five (5) different types of proppant on its website, for use in different shale development areas.⁵ Another proppant producer, Fairmount Santrol, bills itself as a “world-leading expert in the science and art of transforming sand into value-added products” and markets that:

Your reservoirs vary in composition, and the right proppant can help you get more out of your well. Fairmount Santrol’s wide selection of proppants includes flowback-preventing curable resin-coated sands, crush-resistant procured resin-coated sands, and raw frac sand. They’re engineered to meet your well’s specific requirements.⁶

There is no distinction between well casing and proppants insofar as they involve specialized manufacturing and variability depending on the unique application,

⁴ <http://www.jfe-steel.co.jp/en/products/pipes/oilwell.php> (Accessed March 22, 2019)

⁵ <https://www.blackmountainsand.com/products/> (Accessed March 22, 2019)

⁶ <https://fairmountsantrol.com/about> (Accessed March 22, 2019)
<https://fairmountsantrol.com/industries/oil-gas-proppant-solutions/proppants/>
(Accessed March 22, 2019)

which is always to maintain a subsurface cavity for hydrocarbons to migrate through.

Modern shale wells use large quantities of well casing and proppants to maintain an open pathway to the surface. A production casing alone in a shale well may be miles long. For example, it has been reported that Eclipse Resources has drilled a Utica Shale well in Ohio to a total depth of 27,048 feet, which includes a lateral length of 18,500 feet.⁷ Canadian news outlet *Financial Post* reported that in 2003, drillers in British Columbia and Alberta used 500 pounds of frac sand per foot to complete wells and, by 2017, the amount had increased to 1,000 pounds of frac sand per foot. Jesse Snyder, [Grains of Sand: How fracking has caused a surge in demand for one of the world's oldest commodities](#), June 2, 2017.⁸ Neither the well casing nor proppants are trivial parts of the overall well and, in fact, are necessary to its economic viability.

That a well casing and the proppants placed in the subsurface strata do the “same thing” is not a novel concept. Hydraulic fracturing first occurred in 1947 in the Hugoton gas field in Kansas. Daniel R. Surchy and K. David Newell, [Hydraulic Fracturing of Oil and Gas Wells in Kansas](#), Kansas Geological Society

⁷ <https://www.hartenergy.com/exclusives/super-laterals-going-really-really-long-appalachia-31209> (Accessed March 22, 2019).

⁸ <https://business.financialpost.com/commodities/energy/grains-of-sand-how-fracking-has-caused-a-surge-in-demand-for-one-of-the-worlds-oldest-commodities> (Accessed March 22, 2019)

Public Information Circular 32 at p. 1 (Rev. May 2012). Little over a decade later, the Texas Supreme Court was called upon to evaluate whether the Texas Railroad Commission or courts had jurisdiction to consider a subsurface trespass claim involving sand fracturing of a well. Gregg v. Delhi-Taylor Oil Corp., 344 S.W. 2d 411(Tex. 1961). After resolving the jurisdictional question, the Texas Supreme Court commented that “[w]hile the drilling bit of Gregg’s well is not alleged to have extended into Delhi-Taylor’s land, the same result is reached if in fact the cracks or veins extend into its land and gas is produced therefrom by Gregg.” Gregg v. Delhi-Taylor Oil Corp., 344 S.W. 2d 411, 416 (Tex. 1961).

The Gregg court’s observation is just as true today as it was over a half century ago⁹ and is shared by modern commentators. Terry D. Ragsdale explains that:

From both a functional and physical perspective, a hydraulic fracture is largely analogous to a directionally drilled well. In the subsurface trespass context, a hydraulic fracture operation creates an artificially propped crack in the formation that extends into a neighboring lease much as a well can be directionally drilled into a neighboring lease. In both situations, oil and gas are produced from beneath a neighboring lease in a manner not contemplated by the rule of capture.

⁹ Although opinions in Geo-Viking v. Tex-Lee Operating Co., 1992 WL 80263 (Tex. 1992) and Stone v. Chesapeake Appalachia, LLC, 2013 WL 2097397 (N.D.W.V. 2013) were withdrawn, they recognized potential tort liability associated with hydraulic fracturing into un-leased or non-owned land.

Terry D. Ragsdale, Hydraulic Fracturing: The Stealthy Subsurface Trespass, 28 Tulsa L.J. 311, 339 (2013). In his critique of the Texas Supreme Court's decision in Garza, professor Bruce M. Kramer reasoned:

The physical difference between hydrocarbons migrating to a perforated well bore and hydrocarbons migrating through fractures created sub-surface is not that significant. While it is clear that a deviated well bottomed on the land of another is a trespass, the [Garza] court . . . summarily dismisses the similarities between the two situations. In the deviated well case there is a semi-permanent structure (the well bore and casing) that encroaches, but in the hydraulic fracturing case there is a semi-permanent expansion of the pore space through the placement of the proppants on the other side of the property line.

Bruce M. Kramer, Coastal Oil & Gas Corp. v. Garza Energy Trust: Some New Paradigms for the Rule of Capture and Implied Covenant Jurisprudence, 30 Energy & Min. L. Inst. 11, p. 353 (2009). Further, a Comment in a Texas Tech Law Review publication relates that:

Construing the fractures in terms of their function—increasing formation permeability and providing an avenue for greater hydrocarbon capture—allows one to easily conclude that the wellbore and fractures are functionally synonymous. Hydraulic fracturing generates artificially propped fissures within the formation, induced by an operator's intentional actions, protruding into an adjacent mineral estate, facilitating hydrocarbon capture, and thus, accomplishing the same results as a directionally drilled well.

Levi Rodgers, Subsurface Trespass by Hydraulic Fracturing: Escaping Coastal v. Garza's Disparate Jurisprudence Through Equitable Compromise, 45 Tex. Tech. L. Rev. Online Edition 99, 123-24 (2012-2013).

This basic understanding is shared abroad as well. A report prepared for the Northern Territory Hydraulic Fracturing Inquiry in Australia notes that “[t]he hydraulic fractures increase the volume of the reservoir accessed by a well (the fractures are extensions of the well for practical purposes), overcoming the low permeability.” Cameron Huddleston-Holmes, Bailin Wu, James Kear and Raman Pandurangan, Report into the shale gas well life cycle and well integrity. EP179028. December 2017. Those authors also write that, after a hydraulically fractured well is flushed, it leaves “. . . behind a proppant-filled fracture that acts as a conductive channel through which oil and gas can flow into the wellbore.” Id. at p. 17.

C. The “Rule of Capture” does not relieve or immunize a driller from trespass liability.

The concepts of “trespass” and the “Rule of Capture” operate in mutually exclusive spheres in relation to oil and gas jurisprudence and they must not be conflated with one another. Over a century ago in Westmoreland & Cambria Natural Gas Co. v. DeWitt, 18 A. 724, 725 (Pa. 1889), this Honorable Court enunciated the rule that “[i]f 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.” (emphasis added). The Texas Supreme Court expressed the same concept in a more expansive form in Elliff v. Texon Drilling Co., 210 S.W. 2d 558, 561-62 (Tex. 1948):

. . . the owner of a tract of land acquires title to the oil or gas which he produces *from wells on his land*, though part of the oil or gas may have migrated from adjoining lands. He may thus appropriate the oil and gas that have flowed from adjacent lands without the consent of the owner of those lands, and without incurring liability to him for drainage.”

(emphasis added). As these cases illustrate, the operative question is whether the driller has remained on or within property that it owns or leases with its well infrastructure. Simply stated, the “Rule to Capture” implicitly recognizes that the subject well and related infrastructure must be located, and hence drilled, from an estate that the driller either owns or has a lease. If the well is located otherwise, the foundational basis for the “Rule to Capture” is absent.

As stated in DeWitt and Elliff, the “Rule of Capture” is premised on hydrocarbons from “other” lands migrating *to* well infrastructure that is lawfully drilled and sited. If a driller does not possess a valid ownership or leasehold interest in and to the hydrocarbons underlying a particular parcel, then the driller cannot enter or access that property with its personalty (*i.e.*, well casing or proppants) to extract hydrocarbons. Such an action is the exact opposite of the

“Rule of Capture” because it is a deliberate and knowing effort to access and remove the hydrocarbons in-place, rather than allowing them to migrate. The “Rule of Capture” has never insulated or justified such conduct. If the location of the well is unlawful or unauthorized, the “Rule of Capture” does not apply and cannot be relied upon to immunize the driller from trespass liability.

D. The interplay between the “Rule of Capture” and hydraulic fracturing has already been addressed by this Honorable Court and no new or novel issue is presented here.

While Southwestern and its *amici* present the question of the limits of hydraulic fracturing to this Honorable Court as a new or novel concept, that position is, respectfully, inaccurate. This Honorable Court has already spoken to the issue in this matter in U.S. Steel Corp v. Hoge, 468 A.2d 1380 (Pa. 1983). The issue in Hoge was the question of ownership of coalbed methane gas within a coal seam. This Honorable Court concluded that “. . . as a general rule, subterranean gas is owned by whoever has title to the property in which the gas is resting.” Hoge at 1383. It was explained that, absent a prior severance of the coalbed methane gas, the owners of the coal owned the gas within the coal, so long as it remained in the coal seam. Hoge at 1383.

Having resolved the question of ownership of the coalbed methane gas, the Hoge court turned to owners’ rights to extract their resource:

Hence, the coal owner may mine his coal, extract the gas from it, or both. If he chooses to extract the gas, drilling **as well as hydrofracturing** are available means, **so long as their utilization does not impinge upon the rights of owners of the surrounding property, since the damage to coal inflicted by these processes is within his dominion to inflict.**”

Hoge, at 1384 (emphasis added). It is respectfully submitted that the Hoge court’s discussion of the limits of the coal owner to extract the gas in the coal seam was foundational to the ultimate holding because answering the question of “ownership” is of little value without the context of what rights that ownership entails. Hoge remains good law and it should guide the analysis here.

Conceptually, the concepts in Hoge are identical to those at play here. The Hoge coal seam was severed from other estates in the land which resulted in the coal seam being, for all intents and purposes, a different piece of land from the surrounding strata. This is akin to tracts of land located next to one another on the surface – they are all owned by different individuals. Further, as there was no prior severance of oil and gas in the property, the ownership of the oil and gas rested with the owner of the “property” where the gas was situated, i.e. the coal seam. That is consistent with the “ownership-in-place” theory that applies to tracts of land adjoining one another on the surface.

The Hoge court made clear that the property owner (the owner of the coal seam) could drill or hydraulically fracture in its property (the coal seam) to extract

the gas there, because the coal owner had the right to damage the land to extract the hydrocarbons that it owned. Hoge at 1384. *But*, the coal owner was barred from impinging on the rights of surrounding property owners (the surrounding strata), either by drilling or hydraulic fracturing. Id. This restriction is consistent with the interplay between “trespass” and the “Rule of Capture”. Absent a prior severance, one owns the hydrocarbons in place in his/her own property and has the right to produce hydrocarbons that migrate into that property from elsewhere. However, one does not have a legal right to drill under a property boundary to damage a third party’s adjoining parcel for the purpose of removing or extracting hydrocarbons underlying that adjoining parcel.

The limitation expressed in Hoge is not an outlier. Rather, it is consistent with long-standing Pennsylvania law regarding the means of extracting hydrocarbons. In Jones v. Forest Oil Co., 44 A. 1074 (Pa. 1900) this Honorable Court addressed the utilization of new techniques and technologies to extract hydrocarbons. The Jones court allowed such activities – but with an important caveat:

. . . the defendant has the exclusive right to bore for oil on the farm. . . [t]he right being a lawful one, the defendant is at liberty to use all lawful means to obtain all the gas and oil contained in, or obtainable through the land . . . it may resort to the use of all known **lawful modern machinery and appliances.**

Id. (internal quotations and citations omitted) (emphasis added). The requirement of lawfulness is critical. Hydraulic fracturing can be utilized to extract hydrocarbons but the driller cannot utilize that “modern machinery and appliance” to commit a trespass. Jones stands for the proposition that new technologies can be utilized to extract hydrocarbons so long as that new technology is conducted and performed in a lawful manner. If the activity does not have a lawful basis (*i.e.*, the activity constitutes a trespass), Jones does not excuse or immunize the driller from liability.

Southwestern and certain of its *amici* reference century-old “torpedo” and nitroglycerin cases to inferentially suggest an expansive view of the “Rule of Capture”. Such reliance is misplaced. Those cases do not inform that point and are most appropriately viewed in the lens of their contemporary, Jones, as they were new techniques to explore hydrocarbons that could be utilized, so long as they were employed in a lawful manner. Trespass is not lawful.

E. The expansion of the “Rule of Capture” to insulate drillers from trespass liability associated with the placement of their well infrastructure would radically reshape property law in the Commonwealth.

An expansion of the “Rule of Capture” to immunize drillers from liability associated with the placement of their wells would erode property rights and the framework that has allowed oil and gas development to flourish in the

Commonwealth. Such a step would also eliminate the “Rule of Capture” as a legal concept altogether.

Since the start of widespread shale gas development in the Commonwealth over a decade ago, oil and gas owners have relied on the understanding that drillers would have to hydraulically fracture their properties in order to obtain the hydrocarbons. Oil and gas owners recognized that, in order to enter their properties, drillers needed to obtain lease rights to the oil and gas. The drillers could not simply break open the shale, insert personalty to mechanically maintain the voids in the shale and produce hydrocarbons in the absence of any contractual right to do so. Geology and the law have come together in a way that is beneficial to oil and gas owners and allows them to capitalize on the value of *their* property.

This would overturned by the proposed expansion of the “Rule of Capture”. If property lines become meaningless because drillers can cross them with impunity and place their personal property on others’ land to extract hydrocarbons without any contractual right to do so, then the concept of oil and gas ownership “in-place” is largely rendered meaningless. Oil and gas owners’ opportunities to market their rights for fair value would be greatly diminished. Basic principles of economics dictate that a prospective lessee will not expend resources to lease land that it could otherwise enter and extract hydrocarbons from without needing a lease.

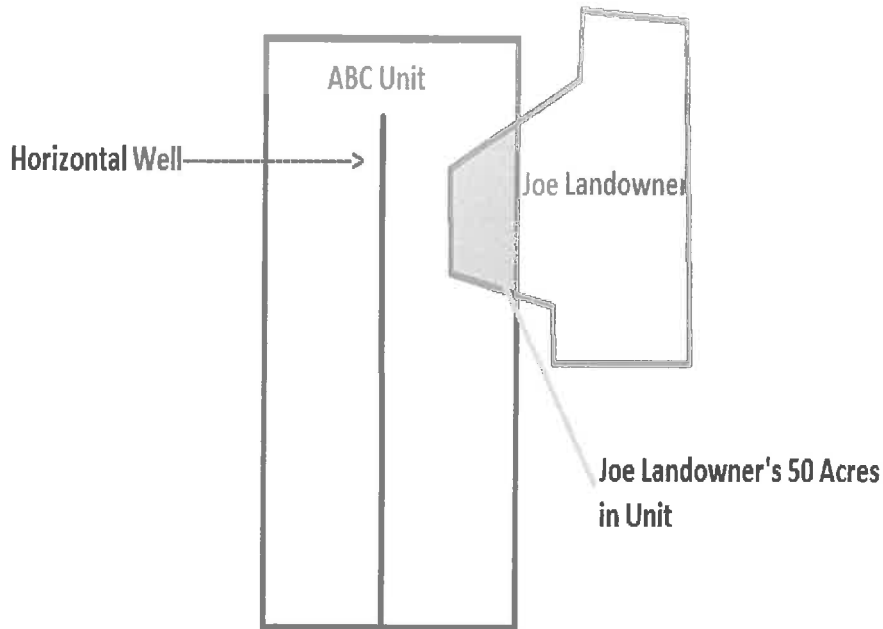
Along these lines, reference to traditional oil and gas development and remedies for drainage are inapt. While the Superior Court was correct that shale gas development requires technical expertise and financial resources that render the ability to drill shale wells to be outside of most oil and gas owners' abilities, it is respectfully submitted that such a comparison "misses the point". The concept of drilling an "offset" well to counteract drainage in Barnard v. Monongahela Natural Gas Company, 65 A. 801 (Pa. 1907) (*per curiam*) was premised upon the "draining" well being located on other lands. It was not intended as an oil and gas owner's means of recourse to address a situation where an oil and gas owner's property has been physically invaded by a well drilled by another.¹⁰ To this point, if the location of well infrastructure no longer matters, then there is no basis for the "Rule of Capture" itself.

Not only would the expansion of the "Rule of Capture" have a "chilling" effect on drillers' incentive to acquire new leases, it would also radically change how oil and gas from shale formations are developed – and royalties are paid. Drillers create drilling units around shale gas wells and generally pay production royalties to oil and gas owners whose properties are within the bounds of the unit,

¹⁰ Notably, in Murphy, the Texas Oil and Gas Association, the largest petroleum organization in Texas, filed an amicus brief supporting Murphy's position stating: "Prudent operators know that putting another straw in the milkshake will not prevent drainage in shale where drainage occurs only in fractures. It can be destructive instead[...]" Murphy Exploration & Production Company-USA, 2017 WL 2256709 (Tex.), 23-24, pp.3; 9.

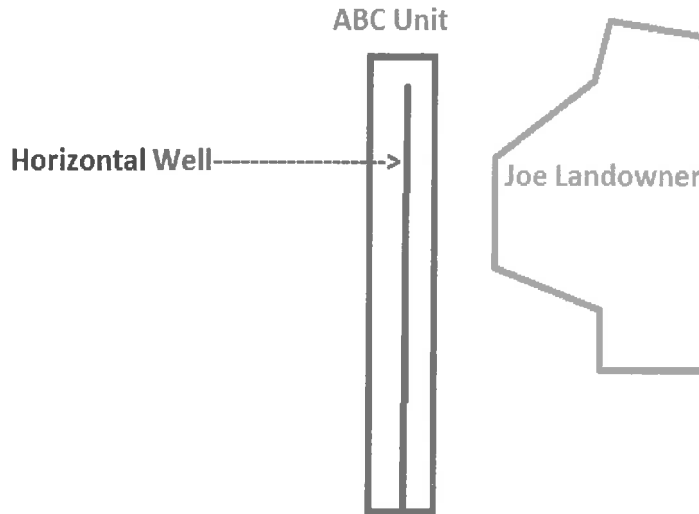
based on their proportionate share of the unit. The drilling unit boundaries cannot be arbitrary. Evaluating whether drilling units were formed in “good faith”, courts have looked to drillers’ consideration of geology and the inclusion of nonproductive acreage in the unit or acreage outside of a well’s drainage pattern. *See, PYR Energy Corp. v. Samson Res. Co.*, 470 F. Supp. 2d 709, 725 (E.D. Tex. 2007) *citing Amoco Production Co. v. Underwood*, 558 S.W.2d 509 (Tex.Civ.App.-Eastland 1977, writ ref’d n.r.e.); *Elliott v. Davis*, 553 S.W.2d 223 (Tex.Civ.App.-Amarillo 1977, writ ref’d n.r.e.); *Circle Dot Ranch, Inc. v. Sidwell Oil & Gas, Inc.*, 891 S.W.2d 342 (Tex.App.-Amarillo 1994, writ denied). In other words, production units must currently be formed taking into account the drainage pattern of the anticipated horizontal well bores. This would change if Southwestern’s expanded “Rule of Capture” is adopted. Drillers would have little incentive to create unit boundaries that take into account actual drainage patterns. The negative effect on existing drilling units and future leasing cannot be denied.

By way of example, assume a current production unit contains 650 acres (the “ABC Unit”) with one horizontal well. On one side of the unit, Mr. Landowner has leased all of the 200 acres of his farm, with a five-year primary term. Fifty (50) acres of Mr. Landowner’s farm have been included in the ABC Unit.



The driller has placed the part of Mr. Landowner's farm into the ABC Unit because the driller has determined that hydrocarbons from that area will be extracted and produced from the well in ABC Unit as a result of hydraulic fracturing. If, at the end of the primary term there is no unit production, the lease will expire as to all 200 of Mr. Landowner's acres. Since the driller still needs the fifty (50) acres included in the ABC Unit because of the anticipated drainage pattern of the planned horizontal well bore, the driller in such a scenario would typically approach Mr. Landowner about a new lease, offering a signing bonus calculated on all 200 acres. If hydrocarbon production began from the ABC Unit, then Mr. Landowner would be paid royalties based on his fifty (50) acres in the unit.

If Southwestern’s expansion of the “Rule of Capture” is adopted, the driller in the above scenario will no longer have any motivation to sign a renewal lease with Mr. Landowner. Instead, the lessee will allow the lease to expire and simply re-draw the boundary of the ABC Unit to exclude the fifty (50) acres.



The same thing happens if the horizontal well was producing hydrocarbons already and Mr. Landowner was receiving a royalty. The driller could simply re-draw the boundaries of ABC Unit to a small area around the horizontal well bore. The end result is that the driller will not have to lease the 200 acre farm but can nonetheless remove hydrocarbons from the fifty (50) acres that was formerly in the ABC Unit under the auspices of the expanded “Rule of Capture” and Mr. Landowner would receive no royalties.

By expanding the “Rule of Capture,” lessees will have little or no motivation to secure new leases along unit perimeters. This is especially likely if the perimeter

parcel is large but only a portion of the overall parcel falls within the anticipated drainage pattern of the unit's horizontal well bores. In other words, the lessee will simply avoid securing a new lease for the entire parcel and seek shelter under the expanded "Rule of Capture" if the proppants create voids in the so-called perimeter parcel and hydrocarbons migrate therefrom. By expanding the "Rule of Capture" as suggested by *Southwestern*, lessees across the Commonwealth will no longer take new leases on many parcels, thereby denying landowners royalty income and signing bonuses.

F. There is no compelling public policy reason to expand the "Rule of Capture" to immunize a trespass.

Foundational cases addressing the "Rule of Capture" and its application to oil and gas in Pennsylvania were rooted in a belief that oil and gas were of a ". . . fugitive and wandering existence within the limits of a particular tract. . ." *Brown v. Vandergrift*, 80 Pa. 147, 148 (1875). "In common with animals, and unlike other minerals, they have the power and the tendency to escape without the volition of the owner." *DeWitt*, 18 A. at 725. In *Barnard*, this Honorable Court stated:

An oil or gas well may draw its product from an indefinite distance and in time exhaust a large space. Exact knowledge on this subject is not at present attainable, but the vagrant character of the mineral and the porous sand rock in which it is found and through which it moves fully justify the general conclusion we have stated above . . ."

65 A. 801.

These understandings of oil and gas extraction are much different than observations of shale gas development in more recent cases. This Honorable Court recently observed that “[b]ecause of the impermeable nature of the rock comprising these formations, it is necessary to stimulate natural gas production from these formations through the use of processes such as fracking.” Snyder Brothers, Inc. v. Pennsylvania Public Utility Commission, 198 A.3d 1056 at fn. 2 (Pa. 2018). So, with shale formations, the concern that a well would drain “fugitive”, “wandering” and “vagrant” oil and gas from indefinite distances is non-existent. With the concern for indefinite hydrocarbon migration that prompted the “Rule of Capture” eliminated, there is no basis to expand that doctrine.

The Texas Supreme Court has recently come to a similar conclusion in Murphy Exploration and Production Company v. Adams, 560 S.W. 3d 105 (Tex. 2018). There, the Texas Supreme Court reviewed a claim that a driller breached its lease obligation to drill an offset well in a development of a shale formation. Id. The Adams court sided with the lessee, expressing that drilling an offset well near a lease line:

. . . is a reasonable premise in the context of vertical drilling, where placement of an offset well is an important factor in minimizing the amount of oil or gas being drained. But the same principle does not apply in the context of horizontal drilling and hydraulic fracturing in the Eagle Ford Shale.

Adams at 112. Supporting this, the Adams court reasoned that with horizontal drilling in shale formations, only the locations of the perforated and fractured sections of the wellbore mattered as it related to drainage. Id. The implication is clear: a driller utilizing directional drilling and hydraulic fracturing in a shale formation can control where hydrocarbons are produced from.

The “Rule of Capture” was formulated by courts justifiably concerned about the difficulties of determining the provenance of extracted hydrocarbons. Those same concerns do not apply to shale gas development because of the planning and control that is exercised to determine areas that will be stimulated and hydrocarbons removed from. Therefore, no reason exists to expand the “Rule of Capture” to apply to practices that no longer implicate the concerns that led to the formation of the principle in the first place.

While it is asserted in the briefing of Southwestern and its *amici* that drillers need relief because the propagation of fractures and proppants from the hydraulic fracturing process is uncertain and unknown, that concern does not warrant the requested blanket immunity from trespass liability. The law has routinely rejected the notion that a trespass only occurs when the invasion of property was intentional. *See, Buckley Motors Inc. v. AMP. Inc.*, 23 D. & C. 2d 324 (Cumberland Co. 1960) (unprivileged throwing of particles on the land of another can be actionable trespass); Martin v. Reynolds Metals Co., 342 P.2d 790 (Or.

1959) (gaseous and particulate fluorides released from an aluminum smelter constituted a trespass); Borland v. Sanders Lead Co., 369 So. 2d 523, 529 (Ala. 1979) (allowing trespass for airborne pollutants where there is actionable damage to the *res*); Bradley v. American Smelting & Refining Co., 709 P.2d 782 (Wash. 1985) (particles deposited on land constitutes a trespass); Aim v. Johnson, 275 P.2d 959 (Idaho 1954); Wall v. Trogdon, 107 S.E.2d 757 (N.C. 1959); Schronk v. Gilliam, 380 S.W.2d 743 (Tex. Ct. App. 1964); Young v. Darter, 363 P.2d 829 (Okla. 1961); Cross v. Harris, 370 P.2d 703 (Ore. 1962). Where resources are removed without privilege, Pennsylvania courts have long held that such removal is sufficient to constitute a trespass – regardless of whether the trespass was intentional or unintentional. Roncace v. Welsh, 14 A.2d 616, 618 (Pa. Super. Ct. 1940); Forsyth v. Wells, 41 Pa. 291, 295 (1862); Oak Ridge Coal Co. v. Rogers, 108 Pa. 147 (1884); Gotshall v. J. Langdon & Co., 16 Pa. Super. 158 (Pa. Super. Ct. 1901); Philson v. Wills, 100 A. 463, 464 (Pa. 1917).

V. CONCLUSION

The property rights of Pennsylvania’s citizens are being challenged by drillers attempting to insulate themselves from the centuries-old concept of trespass liability by radically expanding the “Rule of Capture”. Enlarging the “Rule of Capture” to insulate drillers from trespass liability for physical intrusions would be unwise, unconstitutional and overturn over a century of established

property law. The National Association of Royalty Owners Pennsylvania Chapter, Inc. respectfully requests this Honorable Court to affirm the determination of the Pennsylvania Superior Court.

Respectfully submitted,

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CERTIFICATE OF WORD-COUNT COMPLIANCE

The undersigned hereby certifies that according to the word-count feature of Microsoft Word, this document contains fewer than 7,000 words, including footnotes but excluding the cover page, table of contents, table of citations, certificates of service and compliance, and attached exhibits.

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on March 26, 2019, a true and correct copy of the foregoing document was served on the persons listed below via PACFile electronic service.

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