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**Whiteman v. Chesapeake:**
Damage to Human Health and the Environment as Seen Through an Application to Hydraulic Fracturing

**INTRODUCTION**

As the Fourth Circuit confronted in *Whiteman v. Chesapeake Appalachia, L.L.C.*, cases involving divided surface and mineral rights present unique problems in fully understanding a landowner’s property rights, especially when intertwined with issues of environmental harm. The ruling in *Whiteman*, when applied to hydraulic fracturing, or “fracking,” sets troubling precedent for the future of environmental nuisance and trespass cases. As extrapolated from this ruling, in lawsuits involving divided property rights and fracking, plaintiffs will face great difficulties in proving damages, and polluting defendants will be able to justify increased environmental harm through the “permit defense” and the reasonable necessity standard.

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1. Property owners can divide surface and mineral property rights by selling or leasing the right to harvest resources underneath their land to another party, while retaining the right to use the surface. See *Whiteman v. Chesapeake Appalachia, L.L.C.*, 729 F.3d 381, 382–83 (4th Cir. 2013).
2. See id. (discussing the parties’ divided property rights).
I. CASE BACKGROUND

Whiteman involves a conflict between Martin and Lisa Whiteman, the owners of the surface rights to 101 acres of land in Wetzel County, West Virginia, and Chesapeake Appalachia, L.L.C. (Chesapeake), the owner of the mineral rights to that same parcel.4 The Whitemans reside on and farm the land, while Chesapeake operates three conventional natural gas wells located on about ten acres of the land.5 Chesapeake holds valid well operation and waste discharge permits from the West Virginia Department of Environmental Protection.6 At the time the wells were drilled, the common waste disposal method used in West Virginia was a pit or “open” system, which involves on-site waste storage.7 In contrast, a “closed-loop” system,8 which Chesapeake employs in its Oklahoma and Texas operations and has begun preparing to employ in West Virginia, eliminates the chance of pit failures and decreases the on-site environmental footprint of the well operations.9

Fearing future harm from the on-site waste pits, the Whitemans filed suit to remove them.10 Requesting an injunction and damages, the Whitemans claimed that Chesapeake unlawfully trespassed through the operation of dangerous waste pits.11 However, expert testimony showed that Chesapeake’s operations did not decrease the value of the land, and the Whitemans admitted their monetary damages were “trivial.”12 Ultimately, the Fourth Circuit held that Chesapeake’s drilling and waste disposal operations did not constitute trespass under West Virginia law.13

II. HYDRAULIC FRACTURING

A. Fracking Hazards

Fracking, more formally known as “hydraulic fracturing,” is a resource extraction process in which miners pump pressurized fluids underground to create fractures in geological formations, facilitating the release of oil and

5. Id. at 383.
6. Id.
7. Id. at 384.
8. The “open” or “pit” system usually consists of on-site pits that are filled with water, chemicals, and waste byproducts. Conversely, the “closed loop” system is located off-site and consistently recycles the waste it contains to allow for some resources to be reused and to create more storage space. See Sue Smith-Heavenrich, Drilling for Gas: Closed Loop System Offers Alternative to Waste Pits, BROADER VIEW WKLY. (Oct. 3, 2008), http://www.tiogagaslease.org/images/BVW_10_03_08.pdf; OIL & GAS ACCOUNTABILITY PROJECT, supra note 3. For a more in-depth discussion of the costs and benefits of the open and closed-loop systems, see infra note 47.
10. Id.
11. Id.
12. Id.
13. Id. at 394.
natural gas.\textsuperscript{14} The fluids contain a mixture of sand, water, and chemicals that potentially harm the environment and human health.\textsuperscript{15}

A congressional fracking study found that, between 2005 and 2009, some of the fourteen largest oil and gas companies used fracking products containing twenty-nine chemicals that are “(1) known or possible human carcinogens, (2) regulated under the Safe Drinking Water Act for their risks to human health, or (3) listed as hazardous air pollutants under the Clean Air Act.”\textsuperscript{16} In addition, some of these companies used “extremely toxic” chemicals in their fracking fluids, such as benzene and lead.\textsuperscript{17}

The Pennsylvania Land Trust Association’s review of drilling violations on fracking sites identified 1056 environmentally damaging violations and 669 traffic citations to trucks transporting waste and resources from 2008 to 2010 in the Marcellus Shale area of Pennsylvania.\textsuperscript{18} Such violations included improper construction, discharge of waste, and waste management as well as violations of local environmental laws.\textsuperscript{19}

These two reports illustrate that fracking, through its use of hazardous chemicals and associated drilling and vehicular violations, poses a serious threat to the environment and human health.\textsuperscript{20} The result is an increased likelihood of soil and groundwater contamination, air pollution, and serious injury to nearby communities.\textsuperscript{21} In addition, since many chemical suppliers refuse to disclose the complete chemical makeup of the products they sell, numerous oil and gas companies “are injecting fluids containing chemicals that they themselves cannot identify.”\textsuperscript{22} This increased uncertainty creates an even greater chance for serious and irreparable harm.

\textbf{B. Lenient Regulations on Fracking}

The “lenient” federal and state regulations on fracking further increase the chance for serious harm.\textsuperscript{23} The Safe Drinking Water Act, the EPA’s “central authority” for protecting drinking water, excludes fracking from the Underground Injection Control program.\textsuperscript{24} This program “regulates the subsurface emplacement of fluid” and, due to the exclusion, subjects fracking

\begin{footnotesize}
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\item \textsuperscript{14} Cupas, supra note 3, at 610.
\item \textsuperscript{15} Id.
\item \textsuperscript{16} Id. at 8.
\item \textsuperscript{17} H.R. COMM. ON ENERGY & FINANCE, supra note 3, at 1.
\item \textsuperscript{18} PA. LAND TRUST ASS’N, supra note 3, at 1.
\item \textsuperscript{19} Id. at 3.
\item \textsuperscript{20} See H.R. COMM. ON ENERGY & FINANCE, supra note 3, at 12; PA. LAND TRUST ASS’N, supra note 3.
\item \textsuperscript{21} See H.R. COMM. ON ENERGY & FINANCE, supra note 3, at 125; PA. LAND TRUST ASS’N, supra note 3.
\item \textsuperscript{22} H.R. COMM. ON ENERGY & FINANCE, supra note 3, at 12.
\item \textsuperscript{23} See Cupas, supra note 3, at 629.
\item \textsuperscript{24} Regulation of Hydraulic Fracturing under the Safe Drinking Water Act, EPA, http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/wells_hydroreg.cfm (last visited Apr. 15, 2014) (noting that any company fracking while “using diesel fuel” is not included in this exception).
\end{itemize}
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to relatively lax standards. Although other federal regulations influence the fracking process, states have “regulatory primacy” on this topic. Many federal environmental acts delegate authority to the states, and, since state regulators have a more nuanced understanding of “local geology and environmental conditions,” states play an important role in regulating fracking. While some states have enacted more stringent regulations, many states, including West Virginia, have failed to do so.

In sum, fracking remains a hazardous resource extraction technique with relatively loose regulations, creating the potential for serious long-term harm.

III. ANALYSIS

The court in *Whiteman* explained that under West Virginia common law, trespass occurs only if “one’s entry upon the land of another—or one’s leaving a ‘thing’ upon the land of another—is ‘without lawful authority.’” Where the property rights are divided, mineral rights owners may only enter onto and use the surface for activities “reasonably necessary for the extraction of the mineral” from the mineral estate. The requirement of showing actual damages and the approval of the “reasonable necessity” standard create insurmountable difficulties for plaintiffs and allow defendants to justify increased environmental harm.

A. Difficulty in Proving Damages

The Fourth Circuit in *Whiteman* held that the plaintiffs had to show actual damages to prove their trespass claim and that a possibility of future damages was insufficient, based on its desire to conserve judicial resources and prevent a flood of meritless cases. Nevertheless, requiring a showing of actual damages may have unforeseen negative consequences when applied to fracking.

1. Asymmetry of Information

The asymmetry of information regarding damages caused by fracking places a heavy burden on plaintiffs. With most of the extraction process conducted deep underground, it is not immediately obvious whether fracking

25. See id.
27. Id.
28. Id. at 10–18.
32. See *Whiteman*, 729 F.3d at 394.
33. See id.
has caused contamination or other property damage. The fact that numerous chemical suppliers refuse to disclose the chemical makeup of many of the products they sell to oil and gas companies, for use in their fracking fluids, further imbalances the information available and creates an insurmountable obstacle for plaintiffs attempting to prove actual damages.

In addition, it may be technically difficult and overly expensive for some plaintiffs to conduct tests to determine if harm has occurred. In Strudley v. Antero Resources Corp., where the court dismissed plaintiffs’ toxic tort fracking suit due to an inability to directly establish causation, plaintiffs could not get to the “further substantive discovery” phase to compel disclosure of that information. This cyclical logic inhibits plaintiffs from acquiring the complex information about fracking operations needed to establish prima facie cases and favors defendants who have sole access to that information.

2. Reasonably Necessary Damage Is Allowed

A plaintiff must show actual damages that are not “reasonably necessary” for the permitted extraction of resources in order to present a valid trespass claim. In Whiteman, the court deemed Chesapeake’s use of an on-site waste disposal system reasonably necessary, accepting that some harm may result.

The holding in Whiteman requires landowners to wait until there are actual damages beyond those “reasonably necessary” before bringing a trespass claim. Showing that fracking can pollute underground water sources, contaminate soil, and release hazardous carcinogens and chemicals is not sufficient. While the court discredited “subjective” fears of harm as being difficult to verify, highly inflexible judicial standards that do not accept the realities of modern resource extraction processes can create even greater judicial inefficiency and injustice. In a situation like Whiteman, where plaintiffs live on and cultivate the land for the livelihood of their families,
waiting for actual damages to occur is irrational, given the high risks of irreparable groundwater and soil contamination associated with fracking.44

B. Increased Environmental Harm Through the Permit Defense

The Whiteman court ruled that Chesapeake could continue to operate because it had a permit to extract natural gas and its waste disposal pits were reasonably necessary for that permitted activity.45 The “permit defense,” whereby defendants argue that their conduct has caused no wrong because they have valid permits that allow such conduct,46 in combination with the reasonable necessity standard, may lead to increased environmental harm.

By permitting the inferior pit system, the Whiteman court discouraged Chesapeake and other companies from spending time and resources to convert their pit systems into environmentally superior closed-loop systems. In contrast to the open system, a closed-loop system involves the removal of waste to off-site disposal areas, where it is recycled.47 As the court in Whiteman acknowledged, the closed-loop system has the advantages of “better preserv[ing] expensive drilling mud for future drilling operations, eliminat[ing] the possibility of a pit failure, and creat[ing] a smaller drilling operation footprint.”48 Conversely, pit systems are inherently dangerous. From the mid-1980s to 2003, the New Mexico Environmental Bureau recorded 6700 incidents of open pits causing soil and water contamination within its state.49

Thus, the Whiteman decision allowed for more risk and increased environmental harm. For a trespass claim in a divided property rights regime, the plaintiff must be able to point to harm that is not reasonably necessary.50 Since pits inherently create some harm, by contaminating soil and groundwater and killing nearby wildlife,51 that harm is reasonably necessary for the pits’...

44. See id. at 383.
45. See id.
47. Typically, water, drilling fluids, and waste byproducts are stored in open system disposal sites, or pits, which are on-site or near the drilling well. Open pits pose numerous environmental hazards. An open pit’s hazardous contents can overflow, contaminating nearby soil and drinking water sources. In addition, the use of open pits can attract and kill nearby birds and other wildlife and can often lead to inefficient use of water and other resources. Conversely, a “closed loop” waste disposal system solves many of these problems. Closed loop systems allow for water, drilling fluids, and waste to be taken to off-site disposal areas and subsequently separated through mechanical and chemical processes. This system salvages water and other byproducts for reuse in the drilling process, which creates greater resource efficiency and more storage space. See Smith-Heavenrich, supra note 8.
48. Whiteman, 729 F.3d at 384.
50. Whiteman, 729 F.3d at 390.
51. Smith-Heavenrich, supra note 8.
operation. Companies can use the permit defense and reasonable necessity standard to justify environmental harm that their inferior practices cause.

This line of reasoning can also be applied to fracking. Fracking is appealing to oil and gas companies for many reasons. It expands access to resources in areas that previously were too expensive to reach and often is more cost-effective than conventional techniques. Due to these economic benefits and the lax regulations, many companies are incentivized to begin fracking. As more fracking lawsuits occur, courts may decide that some of the harm that fracking causes is reasonably necessary for its permitted operation, just as the Whiteman court allowed for the use of open pits. Thus, as fracking becomes more popular, more permits will be given and more harm will result.

C. Recommendations

Courts should not require plaintiffs to prove concrete damage before acquiring judicial aid, such as an injunction. The Sixth Circuit’s holding that actual harm need not be shown in all environmental trespass cases better addresses the fact that plaintiffs face unfair obstacles when investigating environmental harm. A case-by-case consideration of the risks associated with the defendant’s activity, the extent of the plaintiff’s dependency on his or her land, and the difficulty in quickly ascertaining property damage could result in less ecological harm and more individualized justice.

While EPA and state agencies should enact stricter regulations on fracking, courts can discourage the use of inferior practices by finding that some levels of environmental harm or risk are not reasonably necessary. Courts should be wary to approve of inferior practices, since the permit defense and the reasonable necessity standard can prolong their use and increase environmental harm over time.

CONCLUSION

Whiteman, when applied to fracking, may result in increased air pollution, chemical contamination, and human health injuries. Specifically, the requirement that plaintiffs show actual damages and the ability of defendants to rely on the permit defense and the reasonable necessity standard may result in increased environmental harm. Thus, courts should take into account such

52. See Wiseman, supra note 3, at 115–20.
54. Cupas, supra note 3, at 629.
56. See Whiteman v. Chesapeake Appalachia, L.L.C., 729 F.3d 381, 394 (4th Cir. 2013).
57. See id.

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environmental risks when determining what practices and consequences are reasonably necessary in future cases.

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