Deluge: Potential Solutions to Emerging Conflicts Regarding on-Lease and off-Lease Surface Damage Caused by Coal Bed Methane Production

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COMMENT

THE DELUGE: Potential Solutions to Emerging Conflicts Regarding On-Lease and Off-Lease Surface Damage Caused by Coal Bed Methane Production

INTRODUCTION

It is only during the primary term of an oil and gas lease, before commencement of development, that peaceful co-existence between lessor and lessee is truly possible, because then when the lessee has no need of the surface, the farmer is continuing to farm the land as if no lease existed. But, thereafter, and because their rights are truly distinct and reciprocal, antagonistic situations will surely develop.¹

Coal Bed Methane (CBM) is the new crown jewel of Wyoming’s mineral industry.² CBM production has exploded upon the political and economic landscapes across mineral rich Western states, and although Wyoming is reaping the benefits, it is also feeling the growing pains.³ The production of this clean burning fuel is creating a myriad of legal concerns and questions. At the forefront of such concerns are important questions relating to water damage caused by CBM production. The production of CBM requires the extraction of vast quantities of water from coal aquifers in order to release the trapped gas. It is among the practices of CBM developers to release this water freely onto the surface of the land. Consequently, this water can come in high enough quantities, and

². Donna Lijewski, Wyoming Oil and Gas Commission Website at http://wogcc.state.wy.us/coal.html (last updated August 29, 2000) (showing the incredible rise in the number of CBM wells and CBM production from April 1999 through April 2000).
arguably, in some cases, poor enough quality,\(^4\) to cause damage to the on-lease surface estate as well as to other lands outside of the leased premises. The CBM boom has certainly set the stage for “antagonistic situations” to erupt between Wyoming’s mineral developers and landowners. But because the vehicle of damage is water as opposed to obvious trespass by a mineral developer, the question of liability becomes more clouded.

Consider the following hypothetical:\(^5\)

Powder Land Development Company has subdivided three hundred and twenty acres into sixty-four five-acre tracts, all of which have been purchased. Powder Estates is the name of this new subdivision located just outside of the city limits of Gillette, Wyoming. Many Powder Estates residents have built homes for their families as well as barns and other outbuildings. All members of the subdivision legally own the surface rights to their property. None of them own the rights to the precious seams of minerals buried beneath their property because Powder Development reserved the oil and gas interests beneath the subdivision when it sold the tracts. Powder Development leased its mineral rights to Dominator Oil and Gas, a large mineral development corporation. Consequently, Dominator Oil possesses the right to cross fence lines, bulldoze access roads, and explore for

\(^4\). \textit{See, e.g.}, PowderRiverBasin.org at http://www.powderriverbasin.org (last updated April 20, 2001). The authors recognize that questions have been raised by environmental groups concerning the quality of CBM water and its possibly detrimental effects. The validity or non-validity of these concerns is not addressed in this comment. However, the group which maintains the above-cited website has stated:

Most recently [CBM] water quality was not meeting the Wyoming DEQ’s water quality standards. It was tested and contained higher levels of pollutants like Arsenic, Iron, Barium and Manganese than previously expected. The Water Waste and Advisory Board has removed the human health criteria for these metals from selected waterways flowing through CBM development areas. Essentially, with the Governor's approval, Wyoming's water is being down graded to accommodate Industry profit. The relaxed water quality standards will permit Industry to discharge the lower quality water onto Wyoming property owner's land and into our water ways.

\textit{Id. Heritage Brief, A Wyoming Business Alliance/Heritage Foundation Newsletter: Coal Bed Methane, 2 WYOMING BUSINESS BRIEF} 21 (Sept. 2000) which states that “SAR (Sodium Absorption Ratio) is a concern because of salinity to soils, but with dilution from natural water it appears to be treatable. In Campbell County, the water produced is similar to Gillette's drinking water.” \textit{Id.}

\(^5\). The following hypothetical has been created by the authors to give the reader an example of the type of situation that raises the legal issues addressed in this comment.
and drill wells as needed, within reason, in order to produce methane gas.

Six months ago, Dominator began the exploration process for CBM gas in the backyards of tracts in Powder Estates. Residents were shocked as their children's swing-sets were uprooted, and their backyards were transformed into a maze of access roads and drainage ditches. Dominator Oil is profiting from the production of methane gas within Powder Estates. Likewise, Powder Development is enjoying the royalties due under their lease agreement with Dominator Oil. But the subdivision residents are paying their own price. Dominator Oil has drilled eight wells and has excavated two reservoirs in its attempt to contain the vast amounts of CBM water. So much water has been artificially pumped to the surface that the reservoirs are no longer capable of containing it. Powder Estate residents are feeling the effects of CBM development as the quality and enjoyment of their property declines. Experts have been unable to prove conclusively that the water is contaminated; however, the residents fear the worst. Basements are flooding, lawns are swamplands, and the topsoil is slowly washing away. Moreover, trucks and equipment run noisily through what all expected to be a quiet subdivision.

Convinced that Dominator Oil is liable for the damage to their property, Powder Estate residents sought legal advice concerning the abuse of their surface estates. They were informed that it is uncertain whether they will be able to stop or even limit Dominator Oil's reasonable production activities for two reasons; one, because the mineral lessee has an implied easement to access the surface of the land in order to mine the minerals below, and two, Wyoming courts have not clearly articulated a reasonable accommodation standard to protect landowners in this situation.

The residential owners within Powder Estates are not the only group negatively affected by CBM development within Powder Estates. Owners of the adjacent Rolling Plains Ranch have watched helplessly as water has flooded an entire section of their winter pasture, impairing the growth of grass, and depreciating the value of their land. Family members have owned the Rolling Plains Ranch for over a hundred years. They have not severed their fee simple, retaining both the surface and the mineral estates. Attorneys have advised the owners of the Rolling
Plains Ranch that Wyoming law is not clear as to whether adjoining surface owners like themselves have a viable cause of action against Dominator Oil for damage caused by CBM water.

As is the situation with the Powder Estates surface owners, the mineral rights are often severed (owned separately) from the surface estate. Surface owners, who hold no interest in the mineral estate, cannot force the mineral owners or their lessees to pay compensation for surface damage caused by the mineral owner’s “reasonable” use of the surface. Surface owners are not in a position to negotiate any type of contractual restrictions on the use of the surface unless the gas company voluntarily agrees or is bound by the terms of their lease. Because surface owners are subject to the severance created by their predecessor in interest, in virtually all jurisdictions, including Wyoming, the law provides that the mineral operator possesses an implied easement. The implied easement trumps trespass laws, gives mineral operators legal access to the surface estate, and allows those operators to impose upon the surface any damage reasonably necessary to explore and produce the minerals lying beneath. Because the law favors the mineral estate, the hypothetical on-lease landowners (Powder Estates residents) may have no available remedy to redress the damages caused to their surface estates. Some precedent goes so far as to deny any compensation to on-lease landowners for the loss of value in their land as a result of mineral development, even when the mineral operations render the surface inoperable or uninhabitable.

Off-lease landowners, like the owners of the Rolling Plains Ranch, are also left with little clarity as to whether the law affords them recourse against Dominator Oil’s destructive discharge of CBM water upon their ranch property. Generally speaking, mineral producers have no right to “use” off-lease property. However, CBM production adds an interesting twist because producers are “using” off-lease property to dis-

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11. See infra pp. 13-17.
pose CBM water. Water is a unique substance that has its own body of law, and thus raises several issues that Wyoming courts have not yet addressed.

A closer look into the objectives of Wyoming’s mineral law is not only necessary but overdue. This comment addresses the following issues: (1) the background and history of CBM as a consumable resource; (2) the damage caused by CBM water to the on-lease surface estate, as well as to adjacent off-lease lands; (3) the potential remedies provided by Wyoming mineral law for on-lease surface owners; (4) the potential remedies available to off-lease surface owners in Wyoming for damages created by CBM water production; (5) the necessity for Wyoming courts and lawmakers to realize the detrimental effect CBM production is having upon surface owners, and to take appropriate action toward finding a cohesive and fair alternative in order to establish justice and ease the age old conflict between surface owners and mineral developers.

BACKGROUND

History of Coal Bed Methane

CBM has always existed as a natural phenomenon; however, its value as a resource has only recently been exploited. CBM is a byproduct of the process known as coalification. Over time, layer upon layer of decaying plant material is forced deeper into the earth. Through the coalification process, this decaying matter is eventually transformed into coal. Although methane exists in various rock formations, the porous nature of coal provides an ideal environment for trapping methane gas. Most CBM is adsorbed into the micropores that exist within the coal. CBM is also found absorbed within the coal itself, or dissolved within water located in coal seams.

CBM gas is inevitably released during the normal process of coal extraction because the decrease in pressure within the underground coal seam naturally allows CBM to escape. CBM is highly poisonous and

12. See supra note 2.
15. Id.
16. Id.
17. Id.
combustible, creating serious safety concerns for workers in underground coal mines. As a result, CBM was traditionally treated as a deadly nuisance, and was always ventilated from coal extraction areas to avoid inhalation and/or combustion. The history of coal production in the United States includes thousands of deadly accidents attributed to methane gas. To reduce the likelihood of accidents, federal regulations now provide standards for controlling methane in underground mines.

Although CBM was not valued as an energy resource in the United States when it was first discovered, there were visions of CBM as a potential energy resource as early as the 1940s. The energy crisis of the 1970s marked the period in which CBM production was first seriously pursued. However, even with the energy crisis providing an impetus, questions regarding the ownership of CBM hampered production. Specifically, it had not yet been determined whether CBM could be classified as a distinct property interest separate from coal.

The question of ownership hinged on one issue. If CBM were to be construed as part of the coal interest reserved by the government under the 1909 and 1910 Coal Lands Acts, then CBM would be subject to federal patent provisions. The government or its lessee would hold the right to mine coal and the right to produce CBM. On the other hand, if CBM were to be construed as a distinct property interest separate from coal, it would fall under the bundle of rights traditionally associated with mineral interests, and those holding the right to mine coal would not necessarily hold the right to produce CBM.

19. Id.
22. J. VENTER & P. STASSEN, U.S. DEP'T OF THE INTERIOR, DRAINAGE AND UTILIZATION OF FIREDAMP (Bureau of Mines Information Circular 7670, 1953); See C.C. Williams, Jr., On Leasing Gas From Coal Seams, 47 W. VA. L. Q. 211, 212 (1941) (stating that the abundant presence of gas in various coal strata is a matter of common knowledge, but the intrinsic worth of these deposits seldom gets attention).
23. Lewin, supra note 14, at 598.
25. Id. at 378.
The United States Supreme Court decided this issue in the landmark case of Amoco Production Company v. Southern Ute Indian Tribe.\(^{27}\) The Court found that the word “coal,” as used in the 1909 and 1910 Coal Lands Acts, did not include CBM.\(^{28}\) Therefore, CBM is not subject to the coal patents created by the Coal Lands Acts, and thus the government or its coal lessee does not automatically possess the right to produce CBM. The Amoco holding is limited to lands conveyed under the Coal Land Acts of 1909 and 1910. State case law paints a confusing and divergent picture regarding the question of ownership of non-Coal Lands Acts CBM.\(^{29}\)

The Amoco decision, by eliminating ownership disputes between the majority of coal patentees and gas lessees, greatly increased the production of CBM in Wyoming, particularly in the Powder River Basin.\(^{30}\) Since the June 7, 1999, decision, the number of Wyoming drilling permit applications has increased exponentially.\(^{31}\) In a state searching for addi-

\(^{27}\) 526 U.S. 865 (1999). See generally, Warwick Downing, An Oral History: Sam Maynes, Colorado Lawyer, October 1997, at 57. The attorney for the Southern Ute Tribe in Amoco Production Company v. Southern Ute Tribe used the following argument for non-severance of CBM from coal patents. “This cookie is the coal and the chocolate chips inside the cookie are the gas. Now, there’s no question that the coal belongs to the tribe. What Amoco wants to do is take out the chips!” Id.

\(^{28}\) Amoco Production, 526 U.S. at 880.

\(^{29}\) Southern Ute Indian Tribe v. Amoco Production Co., 119 F.3d 816, 828 (10th Cir. 1997). In its analysis of state common law regarding the ownership of CBM the 10th Circuit Court of Appeals stated:

The Tribe, the Amoco defendants, and the federal defendants have cited state court cases which have considered ownership of CBM. As interesting as these cases are (four of five deciding ownership of CBM is in the coal owner), they are not dispositive of the case at bar. The state cases construe CBM ownership in the context of common law deeds, which are negotiated conveyances with specific rules and presumptions of construction. These cases ultimately have little to offer in terms of our interpretation of congressional intent in the 1909 and 1910 Acts.

Id. See also NCNB Texas Nat’l Bank, N.A. v. West, 631 So.2d 212, 229 (Ala. 1993) (holding that the reservation of coalbed methane gas does not include coalbed gas contained within its source coal seam, and that the holder of the coal estate has the right to recover CBM found within the coal seam); Compare with, Carbon County v. Union Reserve Coal Co., 898 P.2d 680, 687 (Mont. 1995) (holding that coal seam methane gas is also severed from the coal estate).

\(^{30}\) See supra note 2.

\(^{31}\) See Wyoming Oil and Gas Conservation Commission Website, at http://wogcc.state.wy.us/CoalBedApdcount.cfm (last visited Feb. 2001) (stating that in October of 1999 alone the State of Wyoming received 1568 submittals for permits to drill for CBM); See also Wyoming Oil and Gas Commission Website at http://wogcc.state.wy.us/countsum.cfm (last updated Aug. 22, 2000) (stating that as of August 22, 2000, Campbell County alone had 4129 completed CMB wells, an additional 1872 “spuds” and 3194 active permits to drill).
tional revenue sources, the methane boom has been embraced as a potentially huge source of state income. In fact, state revenue forecasts for the 2001 legislative session project the current budget surplus to be in the neighborhood of seven hundred million dollars. This surplus is in large measure due to state royalties earned from the production of CBM.

**Surface Damage Resulting From CBM Production**

CBM exploration and development is generating serious resistance from those concerned about the rights of surface owners. Varying degrees of surface damage can result from CBM production, as can a myriad of adverse environmental consequences. Among the concerns of those opposed to CBM production is the vast quantity of water that is released upon the surface. In order to produce CBM, it is necessary to reduce pressure at the well bottom so as to allow higher pressured gas to escape; when the pressure is reduced, the higher pressured water also escapes up the well bore. The result is that large volumes of water are artificially cast upon the surface. In many cases, this water is causing damage to the surface of the premises leased by the mineral operator, as well as to neighboring off-lease surface estates.

Importantly, while mineral lessees are generally granted the ability to use the on-lease surface to the extent reasonably necessary to conduct their operations, the lessees are not allowed to use, trespass upon, or create a nuisance to off-lease lands. CBM production adds an unusual twist to this issue because water is the vehicle of damage to the adjoining estates; water is in fact the "trespasser." Wyoming courts have not held that the discharge of water upon a neighboring property creates a valid cause of action such as trespass or nuisance. The likely reason is that Wyoming is an arid, agriculturally based state. The need to prevent water waste in order to irrigate the land efficiently has been the overrid-

33. Id.
34. See supra note 4.
35. Walter R. Merschat, Coal Bed Methane: Gas Boom, Environmental Bust, CASPER STAR-TRIBUNE, August 29, 1999. The columnist's research concluded that:

The coalbed methane boom that is spreading across parts of the Powder River Basin of Wyoming and Montana is in its infancy and is out of control. There are about 1,000 wells on stream now with as many as 15,000 pending permits. Already 20,000 acre feet of water has been pumped out of the coal aquifer and with a life of 12 to 15 years for the project, hundreds of millions of barrels of water will be removed and either dumped into an existing drainage system or stored in newly created ponds or reservoirs.
36. See infra pp. 13-17.
The principle of Wyoming's water law.\textsuperscript{37} Up to the present, Wyoming residents have not had reason to complain of too much water.\textsuperscript{38} As a result, Wyoming courts have not recognized a coherent cause of action based on the existence of unwanted water.\textsuperscript{39}

There are two groups of landowners who are directly affected by the excess water flow produced as a result of CBM development. First, there are those who own the on-lease surface estate but who do not own the minerals beneath—i.e., the on-lease surface owners. Second, there are those who own the lands adjacent to the leased mineral estate—i.e., the off-lease surface owners. Water damage caused to on-lease surface estates is governed by the principles of oil and gas law.\textsuperscript{40} Water damage to neighboring off-lease surface estates has not been specifically addressed by the Wyoming courts, although it may be actionable through the principles of tort law such as trespass, nuisance, and strict liability.\textsuperscript{41}

\textit{On-lease Surface Damage}

The traditional principles of oil and gas law suggest that CBM producers likely will be insulated from liability with respect to the damage that CBM water causes to the on-lease surface estate. The following background is a synopsis of the traditional oil and gas principles that determine when, if ever, a mineral operator is liable for damage done to the on-lease surface estate.

\begin{itemize}
\item \textsuperscript{37} In Hofeldt v. Eyre, 849 P.2d 1295, 1298 (Wyo. 1993), the Wyoming Supreme Court described the economic importance of water to the State of Wyoming, and outlined the basic principles of Wyoming water law as follows:
\begin{quote}
There are certain basic principles with respect to water law that are reflected in our statutes and case law. Water is the lifeblood of Wyoming's economy. It is a scarce resource which must be effectively managed and efficiently used. [citations omitted]. Because water is a precious and scarce resource, it must not be wasted. Wyo. Stat. § 41-3-101 (Supp. 1991) provides in relevant part that "[b]eneficial use is a continuing requirement which must be satisfied in order for the appropriation to remain viable. [citation omitted]."
\end{quote}
\textit{Id.}
\item \textsuperscript{38} \textit{Id.}
\item \textsuperscript{39} \textit{See infra} pp. 13-17.
\item \textsuperscript{40} \textit{See} Mingo Oil Producers v. Kamp Cattle Co., 776 P.2d 736, 740 (Wyo. 1989) (explaining that the dominant structure of rights provided for exploration, development and production under oil and gas leases is abraded by the surface owner’s right to have reasonable use exercised and to recover for lease provided damages); \textit{accord} Kinney-Coastal Oil Co. v. Kieffer, 277 U.S. 488 (1928); Sanford v. Arjay Oil Co., 686 P.2d 566 (Wyo. 1984); Holbrook v. Continental Oil Co., 278 P.2d 798 (Wyo. 1955); see gener-
\item \textsuperscript{41} \textit{See infra} pp. 13-17, 22-28.
\end{itemize}
Early common law did not recognize the severed estate for two reasons. First, under the maxim *cujus est solum, ejus est usque ad coelum et ad inferos,* the subterranean minerals belonged solely to the surface owner. Second, land transfers were governed by the ritual of livery of seisin, or delivery of possession. In order to transfer real property, the transferor was required to clutch some physical manifestation of the land and actually hand it over to the transferee. Theoretically, unearthed minerals lying below the surface were precluded from separate transfer because the landowner was unable to grasp and transfer the minerals physically.

English legal theory opened the door to the doctrine of estate severance when the Sovereign declared certain lands to be "royal mines" that could exist independent from surface ownership. The economics of the Industrial Revolution solidified the doctrine of estate severance, making it available not only to the government but also to private parties. By the turn of the Twentieth Century, the concept of estate severance was well established. Today, every United States jurisdiction recognizes the right of an owner of real property in fee simple to sever her estate into as many interests as desired. Each severed interest is held under separate title, and consequently, each interest is independently transferable, taxable, and lienable.

The severed mineral estate creates the implicit need for the mineral interest owner or lessee to be able to gain access to the surface es-

42. "To whomever the soil belongs owns also to the sky and to the depths," BLACK'S LAW DICTIONARY 378 (6th ed. 1990).
44. THOMAS F. BERGIN & PAUL G. HASKELL, PREFACE TO ESTATES IN LAND AND FUTURE INTERESTS 11 (2d ed. 1984).
45. See, e.g., id. (stating that the use of livery of seisin was rendered unnecessary by the Statute of Uses and was finally done away with through the Real Property Act passed by the English Parliament in 1845 which sanctioned the use of written deeds as granting devices).
49. Id. at 997-98.
50. See City of Evanston v. Robinson, 702 P.2d 1283, 1289 (Wyo. 1985) (stating the accepted principle that a fee simple may be created in the mineral estate alone or in the surface estate alone.); Wenzel, supra note 48, at 618.
51. Wenzel, supra note 47, at 618.
tate. The need for access prompted courts to recognize an implied easement in order to give the mineral owner a right to use the surface above the minerals to the extent reasonably necessary to explore for, produce, and market the severed minerals. Accordingly, the common law rule of reasonable uses is that:

A lessee under a mining lease is generally entitled to use the premises only for the purpose for which they were leased. . . . Within that main purpose, however, the mineral lessee has the dominant estate and has the right to use as much of the premises and in such manner, absent express limitation to the contrary, as is necessary to comply with the terms of the lease and to effectuate its purpose.

Wyoming law reflects the adoption of the common law. By virtue of an implied or express easement, the mineral operator in Wyoming, absent express language in the original mineral conveyance deed or the oil and gas lease itself, has no obligation to compensate the surface

52. Although this implied easement belongs only to the mineral owner, in many circumstances the mineral operator will lease his rights to developers equipped with the necessary resources and expertise to produce the subterranean minerals. Mineral owners, however, usually negotiate to receive a royalty payment from the minerals retrieved by the developer. For clarity’s sake, this comment will refer only to the mineral owner. The reader is urged to keep in mind that this term includes any lessee, developer, or operator who has acquired a right to the methane gas from the mineral owner.


55. Mingo Oil Producers v. Kamp Cattle Co., 776 P.2d 736, 741-42 (Wyo. 1989). [T]he “true rule is that under the ordinary oil and gas lease, the lessee, in developing the premises in the production of oil and gas, is entitled to the possession and use of all that part of the leased premises which is reasonably necessary in producing and saving the oil and gas.” Id. See also Sanford v. Arjay Oil Co., 686 P.2d 566, 572 (1984) (stating that under the rule of reasonable necessity, a mineral lessee is entitled to possess that portion of the surface estate reasonably necessary to the production and storage of the mineral); Clarence A. Brimmer, The Rancher’s Subservient Surface Estate, 5 LAND & WATER LAW REVIEW 49, 55 (1970). Judge Brimmer summarized the reasonable use rule as follows:

[T]he lessee has the dominant sub-surface estate, with the right to reasonable use of the surface in connection with all kinds of operations on the lease, but that all such uses by the lessee must be reasonable and must be conducted in a careful and prudent manner without negligence for which the lessee may be liable.

Id.

56. See Susan H. Topp, Severed Minerals: Are Surface Owners Entitled to Damages for Diminution of Their Property Value?, 78 MICH. B. J. 148 (1999) (referring to an example of a damage clause included in some State of Michigan oil and gas leases
owner for the reasonable use of that easement, even if the mineral operation causes substantial damage to the surface estate. Liability attaches to the mineral developer only if the surface owner can prove that the land has been used in an unreasonable manner. In short, the surface owner must show excessive, wanton, or negligent use of the mining easement by the mineral developer.

Several forceful policy considerations support the common law doctrine of mineral dominance. Behind the mineral owner's implied right to access the surface is the logic that the parties would not have severed the minerals from the surface had they not intended for the mineral owner to have the right to obtain the minerals. Additionally, as early as the late 1800s, the United States Supreme Court sanctioned a national policy greatly prioritizing mineral development by allowing mining to proceed even in the middle of a town. That sentiment continues to be persuasive as reflected in today's mineral laws.

Times are changing however, and several mineral rich jurisdictions across this nation are beginning to correct the economic inequity that has plagued surface owners for nearly a century. The mineral development in existence at the time mineral dominance was born is but a mere infant in scale compared to the gigantic mineral industry of today.

that provides for the lessee to pay for damages to crops, buildings, person and property resulting from mineral operations).

57. See Transwestern Pipeline Co. v. Kerr-McGee Corp., 492 F.2d 878, 883 (10th Cir. 1974) (holding that the lessee of mineral rights was empowered to remove the minerals and if necessary to subside the surface in so doing).

58. Kinney-Coastal Oil Co. v. Kieffer, 277 U.S. 488, 584 (1928). The Court held that if mineral operations are negligently conducted and damage is done thereby to the surface estate, there will be liability therefore. Id.


60. See Steel v. St. Louis Smelting & Refining Co., 106 U.S. 447, 449 (1882) (where the Court opined that "[t]o such [mining] claims, though within the limits of what may be termed the site of the settlement of new town, the miner acquires as good a rights as though his discovery was in a wilderness. . . ."); see also Chartiers Block Coal Co. v. Mellon, 25 A. 597, 599 (Pa. 1893) (reflecting the sentiment that "[c]oal, oil, gas, and iron are absolutely essential to our comfort and prosperity. To place them beyond the reach of the public would be a great public wrong.").

61. National material and Mineral Policy, Research and Development Act of 1980, 30 U.S.C. § 1602 (1988). This section states that "it is in the continuing policy of the United States to promote an adequate and stable supply of materials necessary to maintain national security, economic well-being and industrial production. . . ." Id.

62. See Wenzel, supra note 47, at 624-25. Wenzel states:

Mineral developers now have powerful earthmoving equipment that allows a single
Presently, the mineral industry has the muscle to inflict damage to the surface to a degree unfathomable to lawmakers in the Nineteenth Century. Mineral estate dominance is based upon concepts and principles that are over a century old and, although its longevity is justified by the principle of maintaining a productive mineral industry, the need for limitation is paramount.

**Off-lease Surface Damage**

Although mineral operators possess the legal right to reasonably use the surface encompassed by their lease, the law suggests that they have long been subject to traditional tort causes of action when their operations invade the surface beyond the extent of their lease. The production of CBM inserts a twist into the question of operator liability for damage caused to off-lease lands. The twist is that huge volumes of water are causing damage to off-lease lands. Water is a unique vehicle of damage because water is accompanied by its own body of law and unique causes of action that are separate and distinct from the principles of oil and gas law. As off-lease plaintiffs begin to seek a remedy for damage caused by CBM water, Wyoming courts will have to decide whether to apply the principles of water law or traditional tort law to each situation.

This comment concludes that Wyoming courts should ignore water law primarily because CBM water is artificially produced and intentionally cast upon off-lease lands. However, operators will assert that water law nullifies any cause of action that off-lease landowners seek to bring, giving the CBM operator immunity. The following paragraphs explain this potential defense, the relevant water law principles applicable to CBM development, and why application of such principles would be not only improper, but a poor precedent for Wyoming to establish as well.

Courts approach issues of surface damage caused by water in a two-step process. First, courts define the type of water at issue by classifying it as watercourse water or surface water. Once the water has been

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miner to extract tons of ore per hour; new mining techniques inject cyanide and other chemicals into the ground and allow old mines to be productively reopened; increased pressures for energy sources impel production of previously ‘worthless’ minerals such as oil shale, lignite, methane, and geothermal steam; and new materials such as uranium have been discovered.

*Id.* (footnotes omitted).

63. *Id.*

64. *See infra* pp. 22-28.

classified, courts apply the water law principles relative to the identified class of water. If the water is classified as watercourse water, the general rule is that an upper proprietor cannot change the natural flow of watercourse to the detriment of a lower proprietor.66 If the water is classified as surface water, jurisdictions follow one of two positions, or apply a hybrid thereof.67

If Wyoming courts apply water law principles to address damage caused by CBM water, the first step—classifying CBM water as either surface water or watercourse water—will present several problems. At the forefront of these problems is the fact that CBM water does not fit neatly into the definition of either watercourse water or surface water.68 Watercourse water is water within a well-defined channel, while surface water is natural water originating from rain or snow.69 Choosing to analyze CBM water under the auspices of Wyoming water law definitions raises another problem; courts will have no choice but to examine CBM water damage on a time-consuming, case-by-case basis. An additional problem concerning the application of water law principles to this situation is that courts will have to pay particular attention to the form of CBM water at each step of its flowage.70 Therefore, Wyoming courts attempted to distinguish between the two classes of water as follows:

'Surface Water', it has been said, is that which is defused over the surface of the ground, derived from falling rains and melting snows, and continues to be such and may be impounded by the owner of the land, until it reaches some well defined channel in which it is accustomed to, and does, flow with other waters; or until it reaches some permanent lake or pond, and then it ceases to be surface water and becomes the water of watercourse, or a lake or a pond, as the case may be.

Id. (citations omitted) (citing Kinney on Irrigation § 318 (2d ed.).


67. See Janet Fairchild, J.D., Annotation, Modern Status of Rules Governing Interference With Drainage of Surface Waters, 93 A.L.R.3d 1193 (1979) for a list jurisdictions and a description of cases following the common-enemy doctrine, the civil law rule, or some modification.

68. See Hiber, 44 P.2d at 1008.

69. Id.

70. CBM water's existence is amorphous. At the time CBM water is released from the wellhead, the water is neither surface water nor watercourse primarily because the water has been artificially pumped to the surface. Even so, once the water begins to flow onto the off-lease surface estate, it may very well resemble surface water. But this water may eventually flow into some type of stream or channel, and it then would more resemble watercourse. It is not difficult to contemplate a situation where CBM water flows as surface water onto an off-lease neighbor's land, flows across his land and into a river. As the river volume increases, other downstream landowners may experience flooding, all caused by the CBM operator's release of underground water at the wellhead. As this comment will address, the first off-lease landowner may have no cause of
should recognize that because analysis of CBM water issues under water law principles would be problematic, a different course should be pursued.

Nonetheless, CBM operators will argue that water law should govern CBM water issues, and that the court should define CBM water as surface water. Operators will offer this defense because Wyoming has not recognized a cause of action when an upper landowner casts surface water upon his neighbor. Other jurisdictions are split as to whether such a cause of action exits. At the root of this split lie two opposing doctrines of law. Wyoming has expressly refused to adopt either doctrine, however, if Wyoming courts choose to scrutinize CBM water as a water law issue, they will be forced to choose which doctrine applies.

action against the CBM operator whereas the downstream landowners would likely have a cause of action, albeit weak. This inherent inequity is another reason why CBM water issues should not be addressed under the guidance of water law principles.

71. It is fair to assume that Wyoming has not extended liability to those who cast surface water onto neighboring lands because of the lack of cases and complaints brought by Wyoming landowners complaining of too much water. Additionally, Wyoming law reflects the concerns of arid landowners by hesitating to impose liability upon those that manipulate their water supply for irrigation purposes. See supra note 37, and accompanying text.

72. See, e.g., Janet Fairchild, J.D., Annotation, Modern Status of Rules Governing Interference With Drainage of Surface Waters, 93 A.L.R.3d 1193 (1979) (for reference as to how other jurisdictions apply the common-enemy doctrine, the civil law rule, or some modified form of each).

73. Id.

74. Lee v. Brown, 357 P.2d 1106, 1108-09 (Wyo. 1960) (where the court explains each doctrine and then expressly declines to adopt any rule with regards to damage of another's land by discharge of surface water). But see, Eiselein v. K-Mart, 868 P.2d 893, 898 (Wyo. 1994) Although factually off point, the Wyoming Supreme Court indicated that a proprietor will be held liable for artificially collecting surface water and discharging it onto adjoining lands to a greater extent than would occur naturally. Eiselein was a slip-and-fall case in which the plaintiff alleged that she fell due to an unnatural accumulation of ice and snow in the defendant's parking lot. The court reasoned that:

The equities shift if the accumulation of ice or snow is not a natural accumulation, but rather an artificial condition created by the defendant. If the defendant creates the hazard, then it is within the defendant's control and he is in a better position to foresee and prevent injuries resulting from the hazard. If the condition occurs naturally, the defendant is in no better position than the plaintiff to prevent the injuries. Our next step, then, is to determine what constitutes an artificial or unnatural accumulation of ice or snow. We are satisfied with the distinction adopted by Massachusetts: The landowner has the right to improve his land by a change of grade or by the construction of buildings even if the natural course of surface water is thereby changed. But he has no right to collect surface water into an artificial channel and discharge it upon the way [or permit it to accumulate] in a greater quantity than would have been discharged if the natural conformation of his land had not been altered.

Id. (citations omitted). Justine Cardine concurred in the judgment, yet noted, "[t]o the
The two doctrines from which to choose are the common-enemy doctrine and the civil law rule. The common-enemy doctrine purports that each landowner, in conjunction with the right to use and own property, has an unqualified right to fend off surface water without liability for adverse consequences to his neighbors. The civil law rule, on the other hand, recognizes that an upper proprietor cannot cast surface water in higher volumes or at a greater speed upon a lower neighbor than would occur naturally. A variety of exceptions have been chiseled out of both the common-enemy doctrine and the civil law rule. In fact, these exceptions have modified each doctrine to the extent that many jurisdictions now apply a hybrid of both doctrines.

CBM operators will urge the Wyoming courts to apply the common-enemy doctrine to situations where CBM water has damaged off-lease lands. The common-enemy doctrine would grant CBM operators immunity from off-lease landowners because the doctrine fails to establish a cause of action for landowners who suffer damage as a result of discharged surface water. If Wyoming were to adopt the common-enemy doctrine, the result would be very problematic. Application of the common-enemy doctrine would encourage CBM operators to abuse off-lease lands by artificially collecting CBM water and discharging it in mass on the lands below. Further, there would be no incentive for CBM operators to recognize and protect the rights of off-lease landowners by pursuing less destructive alternatives.

If Wyoming were to follow the confines of water law and define CBM water as surface water, off-lease landowners would be forced to argue in favor of the civil law approach. The civil law rule would give off-lease landowners a cause of action against CBM operators. However, adoption of the civil law rule would be inadequate to address the concerns of off-lease landowners seeking legal redress for surface damage caused by CBM operators. It would be uncertain whether the CBM

extent that the opinion may go beyond this case in discussing the effect of the volume and course of water flowing to adjoining land, I take no position but prefer awaiting a factual presentation that requires our discussion of these questions." (Cardine, J., concurrence at 898).

75. For a list of cases following the common-enemy doctrine see Janet Fairchild, J.D., Annotation, Modern Status of Rules Governing Interference With Drainage of Surface Waters, 93 A.L.R.3d 1193, 1199-1203 (1979).
76. For a list of cases following the civil-law rule see id. at 1207-11.
77. For a list of jurisdictions modifying both the common-enemy doctrine and the civil law, see id. at 1203-07, 1211-16.
78. See Fairchild, supra note 75.
79. See Fairchild, supra note 75, at 1197.
water in question was, by definition, consistently surface water. Because CBM water is produced artificially, construing CBM water as surface water would necessarily broaden the accepted definition of surface water to an extent that might disrupt Wyoming's water law. The amorphous nature of CBM water would require the court to take the time to review every case separately. A case-by-case review would likely lead to inequitable treatment of complaining off-lease surface owners. In short, although adoption of the civil law rule would grant relief to some off-lease plaintiffs, it would be an inefficient, inequitable, and confusing "solution" to a problem that can be more appropriately addressed through traditional tort principles.

In sum, as off-lease landowners begin to seek redress against CBM operators for damage to their lands caused by huge volumes of CBM water, Wyoming courts will have to decide whether water law or traditional tort causes of action better serve the objectives of the state. The confusion surrounding the applicability of Wyoming water law, as well as the damage that CBM water is causing, should lead Wyoming courts to recognize and apply traditional tort causes of action.

DISCUSSION

The situation illustrated in the hypothetical is consistent with individual situations in Wyoming's Powder River Basin. CBM production is booming, and the damage to both on-lease and off-lease surface estates is multiplying. The common law doctrine of reasonable use offers a broad and benevolent shelter to CBM producers, leaving on-lease surface owners with a paucity of remedies for damages to their estates. Likewise, off-lease surface owners find themselves frustrated by the lack of a cohesive standard to determine whether and how mineral operators will be liable for damage caused by CBM water. Wyoming's economic interest in developing its mineral resources must be balanced against the rights of Wyoming's surface owners. Guided by fairness and sound economic principles, Wyoming courts and lawmakers should act to prevent mineral operators from reaping the benefits of CBM production on the backs of surface owners. It is the responsibility of Wyoming's leaders to explore alternatives and create a framework that provides surface owners with compensation for damage caused by mineral developers.

81. See supra note 5 and accompanying text.
82. See supra note 3.
83. See supra notes 54-58 and accompanying text.
84. See supra pp. 13-17.
Court Created Solutions for On-lease Surface Owners

The common law rule of "reasonable surface use" permits the mineral owner to reasonably use the surface in order to develop the full potential of the minerals beneath. The surface estate is the servient estate burdened by the access rights granted to the mineral interest owner. With great adverse consequence to the surface owner, courts have interpreted "reasonableness" strictly from the mineral estate owner's point of view. In fact, for the past century, courts have found ways to obviate any limiting influence "reasonable surface use" might have on the dominance of the mineral interest.

For example, in Wall v. Shell Oil Company, the California Court of Appeals articulated a broad definition of "reasonableness" by holding that mineral development rightfully may burden the surface ownership in its totality by the reasonable exercise of the rights of the owner of the mineral estate. The Wall court held that any particular facility merely convenient to the operations of the mineral owner may be placed anywhere upon the surface, within reason, even though such placement may hinder the use of the surface. Other courts have held that a mineral operator obeys "reason" if the operator simply follows proper industry methods, regardless of the fact that the existing surface use may be rendered inoperable in its totality.

Wyoming case law in this area is very scarce, and as a consequence the Wyoming Supreme Court has not clearly outlined the scope of "reasonableness." For instance, in Mingo Oil Producers v. Kamp Cattle Company, the court held that the surface landowner could not force a surface damage agreement upon the lessee before granting access

87. Lowe, supra note 59, at 4-11.
88. Wenzel, supra note 47, at 628.
89. 209 Cal. App. 2d 504, 513 (1993). The mineral operations in this case consisted of drilling four oil wells, and placing a road, pipeline and other facilities on plaintiff's parcel. In regards to the subdivision, the court held that "the owner of the surface area may not by any subsequent subdivision of the surface deprive the owner of the oil and mineral estate of his rights in the entire surface." Id.
90. Id. at 517.
91. Vest v. Exxon Corp., 752 F.2d 959, 963 (Tex. Ct. App. 1985). A Texas family ranch was unable to function as a result of oil wells drilled into the surface. The family sued the mineral operators and lost based on the court's holding that nothing in the record indicated anything improper, or lack of due regard on the part of the operator in the choices for the locations of the wells and facilities. Id.
under an existing lease. Mingo Oil automatically had the right, as a function of its dominant estate, to possession provided by its lease. The court further noted that Mingo Oil undoubtedly had the right to enter upon the land, using reasonable means to exploit its mineral possibilities. The court's decision does not shed light on what actions it might consider unreasonable. Additionally, in Sanford v. Arjay Oil Company, the Wyoming Supreme Court held that a mineral operator was not liable for its failure to enclose oozing oil pits, which resulted in the surface owner's cattle ingesting oil. This decision suggests that mineral operators act within reason even when they fail to take precautions as simple as fencing off oozing oil pits to protect livestock from the inherent dangers of ingesting oil.

Most jurisdictions ignore the possibility that mineral estate dominance, in its common law form, overshoots the objective of ensuring mineral development. Mineral estate dominance is often interpreted to afford mineral developers far greater rights than are necessary to further mineral estate productivity. With the CBM boom as the catalyst, the Wyoming Supreme Court should consider conditioning the mineral owners' right of access with an obligation to pay for surface damage caused as a result of mining operations. At the very least, the court should require the mineral industry to use available methods and practices that have the least adverse effect on the current surface use.

In an effort to afford on-lease surface owners more opportunity to use their estate, some jurisdictions have adopted an extension of the reasonable use doctrine, called the accommodation doctrine. This doctrine is a multidimensional approach that attempts to balance the rights and duties of both mineral and surface owners. The accommodation

93. Mingo, 776 P.2d at 739.
94. Id. at 740.
95. Id. at 742.
96. Sanford, 686 P.2d at 568. The surface owner claimed the mineral operator was negligent in not fencing active oil pits resulting in surface owner's cattle ingesting oil and causing damage. The court held that failure of the mineral lessee to enclose the yard pit with a fence constituted a remote rather than a proximate cause of harm to surface owner's cattle, and thus, the mineral operator was not liable for the injury. Id. at 573.
98. Bruce Kramer, Conflicts Between the Exploitation of Lignite and Oil and Gas: The Case for Reciprocal Accommodation, 21 HOUS. L. REV. 49, 60-61 (1984). The author describes the reasonable use test as "unidimensional" since it focuses solely on the activities of the mineral owner to determine the scope of reasonableness, whereas the accommodation doctrine is "multidimensional" since it spreads the focus among both the surface and mineral owners. Id.
doctrine redefines the scope of the implied surface easement and transcends the concept of reasonableness by requiring mineral owners to exercise their rights with "due regard" for the surface owner.\textsuperscript{99} The accommodation doctrine was first adopted by the Texas Supreme Court in \textit{Getty Oil Company v. Jones}.\textsuperscript{100} The court defined the concept of accommodation by declaring the following principles:

There may be only one manner of use of the surface whereby the minerals can be produced. The lessee has the right to pursue this use, regardless of surface damage. (citations omitted.) And there may be necessitous temporary use governed by the same principle. But under the circumstances indicated here; i.e., where there is an existing use by the surface owner which would otherwise be precluded or impaired, and where under the established practices in the industry there are alternatives available to the lessee whereby the minerals can be recovered, the rules of reasonable usage of the surface may require the adoption of an alternative by the lessee.\textsuperscript{101}

The factors motivating the promulgation of the accommodation doctrine in Texas were threefold. First, the court had legislative support for the notion of accommodating surface owners.\textsuperscript{102} Second, in an attempt to minimize conflicts between surface owners and mineral operators, the practice in Texas was for the mineral developer to voluntarily attempt to accommodate the current use of the surface.\textsuperscript{103} Third, economic logic indicates that each severed estate holder should have the right to use and enjoy his respective interest in his property to the highest degree possible that is not inconsistent with the rights of the other. This type of reasoning has become the cornerstone for the adoption of the accommodation doctrine in several jurisdictions.\textsuperscript{104}

\textsuperscript{99} Getty Oil Co. v. Jones, 470 S.W.2d 618, 622 (Tex. 1971).
\textsuperscript{100} Id.
\textsuperscript{101} Id.
\textsuperscript{102} See Wenzel, supra note 47, at 633-34. Wenzel explains that the Texas legislature had openly recognized the economic importance of both the agricultural and mining industry before the adoption of the accommodation doctrine. \textit{Id.}
\textsuperscript{103} Id.
\textsuperscript{104} Flying Diamond Corp. v. Rust, 551 P.2d 509, 511 (Utah 1976). Utah followed Texas' lead and adopted the accommodation doctrine. \textit{Id.} Hunt Oil Co. v. Kerbaugh, 283 N.W.2d 131, 136 (N.D. 1979). The North Dakota court held that "[w]e join with the Utah court in adopting the accommodation doctrine...." \textit{Id.} See also Diamond Shamrock Corp. v. Phillips, 511 S.W.2d 160, 161, 164 (Ark. 1974) (where the court awarded damages to the surface owner because Diamond commenced drilling a gas well on the exact location of a proposed retirement home); Buffalo Mining Co. v. Martin, 267 S.E.2d 721, 725-26 (W. Va. 1980) (suggesting a broad accommodation doctrine favoring surface
concepts are also incorporated in the Model Surface Use and Mineral Development Accommodation Act.\textsuperscript{105}

Wyoming courts should join the growing number of states that have incorporated the accommodation doctrine to ensure, at the very least, that mineral operators take the path of least economic damage. Simply put, the surface owners should not have to absorb the depreciation of their land due to the damage caused by mineral development. Mineral developers, as one of the parties profiting from CBM development, are in a much better position to prevent the loss caused by surface damage, and should be held accountable for the damages that they cause. The growth of residential development supports the fact that agricultural producers are no longer the only on-lease surface owners affected by mineral dominance. In many cases, CBM developers are not drilling in the middle of vacant prairie land; the mineral industry is now moving into subdivisions and public parks.\textsuperscript{106} The reasonable use doctrine, absent accommodation, does not adequately protect subdivisions and other surface improvements because CBM developers may be allowed to completely subside the surface if they reasonably decide it is necessary in order to produce methane gas.\textsuperscript{107}

Importantly, the accommodation doctrine does not curtail mineral development. The effect of the doctrine is simply to obligate the mineral operator to respect the existing surface use and if possible, maintain it. By joining Texas in adopting the accommodation doctrine, the Utah Supreme Court recognized the tradition of mineral dominance by stating, "[w]e do not mean to be understood as saying that such a lessee must use any possible alternative. But he is obligated to pursue one which is reasonable and practical under the circumstances."\textsuperscript{108}

Consider the hypothetical situation presented earlier in this comment.\textsuperscript{109} If the Wyoming Supreme Court adopted the accommodation

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109. See supra note 5.
\end{flushleft}
doctrine, Dominator Oil would be obligated to pursue methane gas in a manner that would preserve the current surface use if it were reasonable to do so. Dominator Oil would still be able to use the surface to the extent necessary to fully utilize their mineral interest, but they would be required to preserve the existing surface use if a reasonable alternative existed. For instance, re-injection of the water back into the ground may be a viable and reasonable alternative so that mineral operators can avoid destruction of the on-lease surface estate. If, in fact re-injection is an economically viable alternative for disposal of CBM water, CBM operators would be obligated to use re-injection as part of their standard operating procedure. The homeowners of Powder Estates may not find total relief through the adoption of the accommodation doctrine, but accommodation would at least have the effect of minimizing any damage to the surface that could be avoided through the use of alternative CBM production methods.

**Potential Solutions for Off-lease Surface Owners**

As off-lease plaintiffs begin to seek a remedy for damage to their property caused by CBM water, Wyoming courts will have to decide whether to apply the principles of water law or tort law to each situation. This comment concludes that Wyoming courts should ignore water law, primarily because CBM water is artificially on the surface and intentionally cast upon off-lease lands, but also because application of water law principles would confuse and complicate an issue already fraught with ambiguity. Wyoming should extend traditional tort causes of action, such as trespass, nuisance, and strict liability to situations where off-lease lands have been damaged by the release of huge volumes of water from CBM wellheads.

Although never specifically recognized in Wyoming, tort causes of action for landowners who suffer water damage from their neighbor's intentional trespass or nuisance appear to be generally available:

So long as one takes no active steps to change the natural flow of water over or from his premises, whether from springs, streams or on the surface of the land, he is not chargeable with liability for any injury or damage which may result to an adjoining or lower proprietor from such flow. As a general rule however, no one has the right to project on adjoining lands, without the owner's consent, water that otherwise would not have flowed thereon; and if he does so, he may be held liable for an actionable wrong. Such flooding has been held to constitute a trespass,
but has also been held not to be such where it is only indirect or consequential. It has also been held to constitute a nuisance.\textsuperscript{110}

Because Wyoming case law does not set out specific elements for proving trespass, it is appropriate to look elsewhere. The Restatement (Second) of Torts § 158 sets out the following elements for trespass to real property:

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 the 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 (emphasis added).

It is conceivable that the Wyoming courts would view CBM water as a "thing" in the context of the Restatement, and therefore find CBM operators liable for the drainage of water onto adjoining lands. Other jurisdictions have found merit in this claim. In Ducham v. Tuma, the Supreme Court of Montana held that an uphill owner's intentional diversion of water into a trout pond causing water to flow onto downhill property constituted an intentional trespass to real property.\textsuperscript{111} Significantly, Montana has extended the traditional tort of trespass to include damage by water. The Ducham court stated:

We have adopted elements of the tort of intentional trespass to real property set forth in Restatement (Second) of Torts, §158: 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 the land in the possession of the other, or cause 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. It is clear that [defendant] "caused a thing"—namely water—to enter onto land owned by plaintiffs, satisfying subsection (a). . . . It is clear that [defendant] desired the overflow from the trout pond to be dispersed

\textsuperscript{110} 78 AM. JUR. 2d Waters § 359 (1975).
\textsuperscript{111} 877 P.2d 1002 (Mont. 1994).
via the swale and, as surely as water runs downhill, to cross plaintiff's property.\textsuperscript{112}

Likewise, Colorado upheld a lower proprietor’s claim that the intentional discharge of water from the upper landowner constituted a trespass.\textsuperscript{113} Like the Montana Supreme Court, the Colorado court relied on the Restatement (Second) of Torts §158, stating:

A landowner who sets in motion a force which, in the usual course of events, will damage property of another is guilty of trespass to real property. . . . Although we recognize the right of the owner of higher land to a drainage easement over the lower land of others, the discharge of water will be enjoined as a continuing trespass if the drain sends the water down in a manner or quantity to do more harm than formerly. . . . Damages would be an inadequate remedy because the repetitious or continuous nature of the city’s trespass would require a multiplicity of suits to determine the varying amount of damages.\textsuperscript{114}

Washington case law also recognizes trespass by water.\textsuperscript{115} In \textit{White v. Hedlund}, the Washington Court of Appeals noted that the purpose of the common-enemy doctrine is to allow an uphill proprietor to drain naturally accumulated surface water so as to fully utilize his property, while at the same time limiting the burden on the lower proprietor to acceptance of surface water created naturally.\textsuperscript{116} The court struck a balance between these policies by concluding that there was trespass by water due to the fact that the water flowing on the plaintiff’s land would not have flowed naturally because the upper landowner increased the flow of surface waters via a gated drainage ditch.\textsuperscript{117}

The Ohio Court of Appeals has similarly held that one who casts water to his neighbor’s detriment through artificial means commits an actionable trespass.\textsuperscript{118} The court established the following rule:

\begin{itemize}
\item \textsuperscript{112} \textit{Id.} at 1005; \textit{See also} Docheff v. City of Broomfield, 623 P.2d 69, 71 (Colo. App. 1980) (where the Colorado Supreme Court cited the \textit{RESTATEMENT (SECOND) OF TORTS} § 158 and held that the discharge of natural surface water emanating from the upper land via drains and gutters constituted an enjoinable continuing trespass).
\item \textsuperscript{113} \textit{Docheff}, 623 P.2d at 71.
\item \textsuperscript{114} \textit{Id.}
\item \textsuperscript{116} \textit{Id.} at 255.
\item \textsuperscript{117} \textit{Id.} at 256.
\end{itemize}
An owner of real estate who alters the natural flow of water across his property so as to increase the volume and intensity of the flow onto adjoining property may be held liable in trespass to an injured landowner. The gist of the trespass is the unlawful or unprivileged entry onto the land of another. Accordingly, one who obstructs or diverts a water source so as to cause the water to run onto neighboring lands or who impounds water in a reservoir where the soil is such that the water percolates onto neighboring land has committed a trespass.\(^\text{119}\)

Other courts have taken an alternative approach and found that water drainage onto adjoining lands constitutes a nuisance. The South Dakota Supreme Court limited the rights of the upper proprietor by finding that drainage onto the lower land constituted a nuisance.\(^\text{120}\) The court reasoned that, "[t]hose purchasing or acquiring land should expect and be required to accept it subject to burdens of natural drainage, but at the same time, the upper landowner should not be able to increase the natural burden of the lower estate."\(^\text{121}\)

In *City of Benton City v. Adrain*, the Washington Court of Appeals granted the plaintiff's claim of nuisance, but the court seemed to apply a trespass-like analysis, referring to the defendant's action as "interference with possession of property, by actual destruction through escaping water ..."\(^\text{122}\) The court held:

Washington has adopted a rule of negligence with regard to damage resulting from the maintenance, construction, or operation of irrigation works and other artificially collected bodies of water. Nevertheless, there is no question of negligence here; it is undisputed that disposal of the excess water via the [culverts] was intentional, not negligent. Hence, the general rule is: One who intentionally discharges water which has been brought or accumulated upon his premises by artificial means may be held liable for injury thereby caused by others.\(^\text{123}\)

The Superior Court of Connecticut addressed the artificially increased flow of surface water in the context of a nuisance claim.\(^\text{124}\) The

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119. *Id.* (citations omitted).
121. *Id.* at 383.
123. *Id.* (citing 78 AM. JUR. 2D Waters § 211 (1975)).
court set out a four element test for nuisance: (1) the condition complained of had a natural tendency to create danger and inflict injury upon person or property; (2) the danger created was a continuing one; (3) the use of the land was unreasonable or unlawful; and (4) the existence of the nuisance was the proximate cause of the plaintiffs' injuries and damages. The court held:

[I]t has long been the law of Connecticut that a landowner cannot collect surface water in an artificial volume and turn it from its natural course in an increased volume upon his neighbor's land to his substantial injury. . . . [A] landowner may not use or improve his land in such a way as to increase the total volume of surface water which flows from it to adjacent property, or as to discharge it or any part of it upon such property in a manner different in volume or course from its natural flow, to the substantial damage of the owner of that property.

In Missouri, liability based on nuisance may be premised upon continuing knowledge of the invasion of water. A separate line of Kansas cases has held a defendant responsible for a nuisance when he allows surface water to accumulate upon his land and subsequently, flow in volume upon the land of others. In Tennessee, the Court of Appeals articulated the following rule:

[T]he owners of higher land have a duty under law not to interfere with the natural water runoff. If an owner of a higher land discharges water upon a lower landowner in a direction or at a speed, or in larger volumes, that is unnatural quantities, or quality different from natural flow, then the owner of such higher land has created a nuisance and is liable under law to the owner of the lower land for any damages to the property of the lower landowner that proximately result from this nuisance. It does not matter in these situations whether an owner of the higher land used due care, extraordinary care or was negligent or complied or sought to comply with any existing government regulations, or any approved plan. The only question under law is whether

125. Id.
126. Id.
the higher landowner has altered the natural flow of the water, and thereby caused injury to the plaintiff.129

Strict liability is another alternative that some courts have pursued to hold landowners responsible for the damage caused by draining surface water. In Parker v. Larsen, the Supreme Court of California addressed the strict liability of an upper landowner who pulled underground water to the surface via a well, and then released the water to the detriment of his lower neighbor.130 The court stated:

The water which did the injury to plaintiff was not a natural stream flowing across defendant's land, but was brought upon the land by artificial means. And the rule is in general that, where one brings a foreign substance on his land, he must take care of it and not permit it to injure his neighbor. The law upon the subject is tersely expressed in the maxim, sic utere tuo ut alienum non laedas [one should not use his own property in such a manner as to injure that of another].131

The Wyoming Supreme Court has cited Parker, but has not further discussed it.132

The Wyoming Supreme Court does not impose strict liability on individuals engaged in abnormally dangerous activities, but instead adheres to the principle that the standard of care is always ordinary or reasonable care.133 In Wilson v. Amoco Corporation, the plaintiff sought recovery for damages allegedly resulting from the discharge of hazardous substances into the ground water.134 The court found the trespass and nuisance claims unsubstantiated because there was no evidence of any damage suffered by the plaintiffs.135 Applying Wyoming law, the federal district court further explained that the Wyoming Supreme Court has rejected the idea of strict liability in such cases, and that the court requires negligence to be shown instead.136

130. 24 P. 989 (Cal. 1890).
131. Id.
133. Wyrulec Co. v. Schutt, 866 P.2d 756, 761-62 (Wyo. 1993). The court stated "Wyoming [has] rejected the notion that absolute liability should be imposed for anything brought onto the land which was not naturally there, escaped and caused damage. This court require[s] that negligence must be shown." Id at 761.
135. Id. at 986.
136. Id. at 985.
Although strict liability may not be available to surface owners even when the CBM water is contaminated, the court has indicated that strict liability may be applicable in situations involving reservoirs. The argument is that reservoir owners should not be afforded the protection of a negligence standard, especially when the water is not being collected for a beneficial use. Once CBM water has been pumped to the surface, it is often collected in reservoirs, and these reservoirs at times overflow, causing damage to the lower lands. Arguably, Wyoming courts could determine that this type of damage falls within the scope of strict liability.

**Injunctive Relief**

The Wyoming Supreme Court's adoption of the accommodation doctrine as a protection for on-lease surface owners and its acceptance of traditional tort causes of action for cases involving off-lease damage by CBM water is critical. However, these judicial actions alone will do nothing to ameliorate the abuse if adequate remedies are not provided by the courts. Injunctive relief is the most adequate remedy for protecting the surface from unreasonable abuse. Damage awards do not ensure that producers will use less damaging production alternatives; they only ensure that to some extent the surface owner will be compensated.

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137. See supra note 4.
138. Wheatland Irrigation Dist. v. McGuire, 537 P.2d 1128, 1143 (Wyo. 1975). The court implied that reservoir owners may be subject to strict liability by stating:

[W]here damage is shown from an irrigation works in this part of the country, the burden of proof is upon the reservoir owner to show one of the exceptions to the absolute liability concept. . . . [T]he unlawful act of a third party, like an act of God or the act of a public enemy may be shown as a defense to the charge that a reservoir owner’s water has escaped to do damage to his neighbor’s property. . . .

*Id.*

139. *Id.*
140. Speedman Oil Co. v. Duval County Ranch Co., Inc., 504 S.W.2d 923, 929 (Tex. Civ. App. 1973). The court explained the necessity of injunctive relief in certain situations by stating:

Where the trespass or injury to land is continuous or frequently recurring, constantly adding to the damage, the legal remedy is inadequate because a jury cannot fix upon a time when the wrong may be said to be complete. Conduct which results in destruction, or a serious change in the nature of property either physically or in the character in which it is being used does irreparable injury and justifies interlocutory injunctive relief.

*Id.* (citations omitted).
141. Docheff v. City of Broomfield, 623 P. 2d 69, 70 (Colo. App. 1980). The court held as follows:
tifying damage to the use and enjoyment of the surface is an interim solution that does not adequately protect the surface from further degradation. Many plaintiffs would be forced to return to court on an annual basis to protect themselves from continuing damage. This might be remedied by a grant of future damages; however, the quantification of future damages is a guessing game that places the future of the surface estate’s economic viability at the hands of conjecture. Injunctive relief, as a remedy for damage caused by a violation of the accommodation doctrine, would ensure that damage to on-lease surface estates is stopped until the least damaging, reasonable method of production is used. Likewise, injunctive relief, as a remedy under traditional tort causes of action like trespass, would freeze the continuation of water damage caused to off-lease surface estates. In short, a willingness to grant injunctive relief would minimize the damage to the surface estate, as well as send a clear message to operators that Wyoming will protect the rights of surface owners vigorously.

Injunctive relief is an equitable remedy that is used at the discretion of the court in extraordinary circumstances. The standard for granting injunctive relief is a showing of irreparable harm to the complaining party and a lack of an adequate remedy at law. The Wyoming Supreme Court has defined irreparable harm as an injury for which compensation alone cannot atone. As discussed above, the adequacy of compensation alone in the case of injury done by CBM production to surface owners is inadequate to atone for the injury done, or even to limit the extent of the injury. Therefore, due to the fact that monetary damages are the only other vehicle of recovery for surface owners, in-

The city contends that an injunction was improperly granted because plaintiff had an adequate remedy at law. We do not agree. Damages would be an inadequate remedy because the repetitious or continuous nature of the city’s trespass would require a multiplicity of suits to determine the varying amount of damages.

Id.
144. Weiss v. Pedersen, 933 P.2d 495, 499 (Wyo. 1997). The court declared that “[a]n injury is irreparable where it is of a peculiar nature, so that compensation in money cannot atone for it.” (citations and internal quotations omitted). Id.
145. Docheff, 623 P.2d at 71. The court stated that:

[T]he discharge of water will be enjoined as a continuing trespass if the drain sends the water down in a manner or quantity to do more harm than formerly . . . . Damages would be an inadequate remedy because the repetitious or continuous nature of the city’s trespass would require a multiplicity of suits to determine the varying amount of damages.

Id.
injunctive relief as a remedy is completely acceptable and should be considered seriously by Wyoming courts as the only adequate remedy.

With injunctive relief available under the auspices of a court accepted and enforced accommodation doctrine, on-lease surface owners would be protected, at least partially. Likewise, the time and monetary costs of litigation would not discourage off-lease plaintiffs from pursuing traditional tort causes of action if plaintiffs knew that injunctive relief were available.

**Legislative Remedies for Surface Owners: Surface Damage Acts**

Some states have taken more aggressive measures to ensure that the mining industry adapts to the changes in policy and available mining methods so as not to continue to put the cost of mining on the shoulders of surface owners alone. A number of state legislatures have enacted surface damage statutes requiring the mineral developer to pay for damages to the surface caused by mining operations, regardless of whether the surface use is reasonable.\(^{146}\)

The policy considerations motivating development and enactment of surface damage statutes are compelling and should provide a basis for the Wyoming Legislature to follow suit. To begin, the public policy of the State of Wyoming should be to maximize the economic and environmental welfare of its citizens by preserving all reasonable oppor-

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\(^{146}\) See, e.g., 96 I.L.L. COMP. STAT. ANN. ch. 96 1 / 2, paras. 9651-9657 (1992) (requiring mineral operators to provide reasonable compensation to surface owners for damages caused to the surface by drilling and production operations); \*Ind. Code Ann. §§ 32-5-7-1 through 32-5-7-6 (Michie 1995 & Supp. 2000) (providing that the mineral operator must be accountable to the surface owner for any actual damage done to the surface as a result of subsurface operations); \*Mont. Code Ann. § 82-10-504 (1999) (establishing more protection for surface owners by requiring mineral developers to compensate surface owners for lost agricultural production, lost value of surface improvements, and lost land value caused by drilling operations); N.D. Cent. Code §§ 38-11.1-04 (1987 Repl. Vol. 7A) (adding to the list lost use of and access to the surface owner's land as well as damage to property and improvements resulting from oil and gas development); \*Ohio Rev. Code Ann. § 1509.072 (West 1996) (mandating oil and gas well owners to restore land surface within areas disturbed by drilling and production); \*Okla. Sta. Ann. tit. 52, §§ 318.1-.9 (West 2000) (requiring the operator to negotiate damages with the surface owner before drilling commences); \*S.D. Codified Laws §§ 45-5A-1 through 45-5A-11 (Michie 1983) (providing that the mineral developer must compensate the surface owner for injury to property or improvements and for interference with use of property due to mineral development); \*Tenn. Code Ann. § 60-1-604 (1989) (obligating oil and gas companies to compensate the surface owner for lost income, market value of crops destroyed or damaged, damage to a water supply in use before drilling, repair of personal property, and diminished value of the surface estate).
tunities for optimum development and use of all surface and mineral resources.\textsuperscript{147} Ostensibly, Wyoming should favor a central policy that values surface development and agricultural production on a par with mineral development. As Wyoming's population inevitably grows, so must the development of surface interests. The laws and policy of this state should not deter such growth, but should instead support a surface damage act that ensures the equal development of both surface and mineral estates and protects the economic interests of the agricultural producer and residential developer.

Challenges to surface damage acts have been made on a variety of constitutional grounds. For example, some have challenged surface damage statutes on the grounds that they create unconstitutional takings, or that they violate the Due Process and Equal Protection Clauses.\textsuperscript{148} Notably, courts have found that these statutes pass constitutional muster and provide the protection necessary for both mineral and surface developers.\textsuperscript{149} Primarily, courts uphold surface damage acts based on the inherent police power of the state.\textsuperscript{150} They reason that the legislature acts legitimately in balancing conflicting rights between owners of different resources, and that states have a legitimate goal of protecting surface resources from abuse by the dominant mineral estate.\textsuperscript{151} Enacting a surface damage act in Wyoming would be a direct benefit to the public welfare because the surface supports business, industrial, residential, and agricultural purposes.\textsuperscript{152} A surface damage act would ensure that the production of CBM is not undertaken on the backs of other economic interests critical to Wyoming's economy.

\begin{footnotes}
\textsuperscript{148} Murphy v. Amoco Prod. Co., 729 F.2d 552, 554-60 (8th Cir. 1984) The court upheld North Dakota's surface damage act against constitutional challenges. \textit{Id.} \textit{See also} Davis Oil Co. v. Cloud, 766 P.2d 1347, 1352 (Okla. 1986) (proclaiming the constitutionality of the Surface Damage Act by explaining that the Act would apply to mineral leases already in existence at the time of the statute's enactment).
\textsuperscript{149} \textit{Davis}, 766 P.2d at 1351; \textit{Murphy}, 729 F.2d at 555. In \textit{Murphy}, the court held that:

\begin{quote}
\textbf{[W]here different persons have incompatible interests in the same property, the state can legitimately exercise its police power to protect the interest that matters most to the public welfare, even at the cost of an uncompensated destruction of other interests . . . . The bare fact, therefore, that [the surface damage act] benefits certain surface owners, and disadvantages mineral developers, does not render it an invalid exercise of the police power.}
\end{quote}

\textit{Id.} (citations omitted).
\textsuperscript{150} \textit{Id.}
\textsuperscript{151} \textit{Id.}
\textsuperscript{152} \textit{Davis}, 766 P.2d at 1351.
\end{footnotes}
The adoption of a surface damage act in Wyoming would be an important step toward curtailing the problems previously highlighted by Federal District Court Judge Clarence A. Brimmer.\textsuperscript{153} If a state agency were granted the power to regulate the infliction and determination of surface damage, landowners would gain much needed protection, as they generally operate with considerably less information, resources, and bargaining power than do mining developers.\textsuperscript{154}

In sum, a surface damage act would provide a protective framework for on-lease surface owners to ensure that CBM development would not come at the cost of their property or livelihood. Additionally, enacting a surface damage act would save mineral owners the expense of timely and costly litigation in determining their obligations to the surface estate. While judicial remedies may provide some relief to surface owners, the certainty of statutory rights and obligations would ensure that surface owners do not continue to hold an unequal bargaining position.

CONCLUSION

The boom is back in Wyoming. Coal Bed Methane exploration and production has exploded upon Wyoming’s political and economic landscape. CBM development is bringing profit to producers, incredible revenue for a state government formerly hampered by budget deficit projections, and unfortunately, a good deal of negative economic externalities for surface owners suffering from a paucity of remedies for damage to their estates.

Re-examination of the inequity between surface owners and mineral developers is overdue. The Wyoming Supreme Court should expressly adopt the accommodation doctrine in order to require CBM operators to seek out the least destructive means possible to mine the

\textsuperscript{153} See Brimmer, supra note 1, at 51 (drawing attention to the inequalities that arise from hasty execution of mineral conveyances, and analogizing mineral lease agreements to adhesion contracts which should be construed strongly against the lessee).

\textsuperscript{154} Id. at 51. Judge Brimmer states:

On the one hand, is the urbane, diplomatic landman well schooled in the details of his lease for and versed in his petroleum landman’s handbook, who is the product of a hundred negotiating sessions this year; and on the other hand is a rancher who at worst may be negotiating his first lease in a lifetime and who probably may have leased the same tract a few years before on a similar form and did not get hurt because there was no development.

Id.
precious methane gas. In addition, the court should decline to define CBM water as either watercourse water or surface water so as to avoid the needless confusion of attempting to determine the rights of off-lease surface owners damaged by CBM water under the common-enemy doctrine, the civil law, or any hybrid thereof. Instead, the court’s most attractive alternative is to follow the lead of several other jurisdictions that have recognized traditional tort claims like trespass in cases where upper proprietors cast large volumes of water to the detriment of lower proprietors. Finally, to ensure that an aggressive but equal balance is struck between surface and mineral interests, the Wyoming Legislature should enact a surface damage act in line with other jurisdictions, obligating prospective CBM developers to pay for any damage caused to the on-lease surface estate as well as to any off-lease landowners affected by CBM water runoff.

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