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When Estates Collide: A Student's Exploration of the Law of Conflicts in Mineral Development

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When Estates Collide: A Student's Exploration of the Law of Conflicts in Mineral Development Part 1: Surface Use

Introduction

In the American system of property, fee-simple ownership of land encompasses ownership of a bundle of rights, each of which may be sold or leased separately.[1] In the case of mineral-bearing land, when the rights to ownership and use of minerals are severed, the resulting bundles are called "estates."[2] For a piece of land, there may be a surface estate, separate from one or more subsurface oil and gas or mineral estates.[3] A surface estate can also coexist with a mineral estate that is surface mined, at least in the legal sense![4]

The separation of estates can and does result in situations in which the interests of the possessors are in conflict. This paper explores the substantial body of common law pertaining to conflicts between mineral production and surface use. Traditionally, this law has unabashedly recognized the dominance of mineral interests over the surface estate. While some jurisdictions have adopted ameliorating doctrines through common law or by statute in recent decades, this unequal relationship still holds fast.

In many respects and many situations, the dominance of mineral interests is justified by the reasonable construction of leases and other conveyances. However, this paper argues that some circumstances, the ingrained tendency of the courts to construe all ambiguity against surface holder leads to unfair results and outcomes that are no longer congruent with policy.

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[1]Youngs v. Old Ben Coal Co., 243 F.3d 387, 388 (7th Cir. 2001), Posner, J.

[2]*Id.*

[3]Harris v. Currie, 178 S.W. 2d 302, 304 (Tex. 1943).

[4]*See, e.g.*, Dept. of Forests & Parks v. George's Creek Coal & Land Co., 242 A.2d 165 (Md. 1968) (concurrent coal strip-mining and timber estates).

This is particularly true in respect to the use of high-impact (to the surface and the environment) extraction methods such as water flooding.

A shorter companion paper explores the adjudication of conflicts between production of multiple mineral estates attached to the same parcel of surface land, an area where non-judicial solutions predominate.

The General Rule of Mineral Estate Dominance

When mineral estates are severed from the surface estate, the surface estate holder retains no rights to the production or sale of granted minerals (other than possibly royalty payments, if the severance is by lease), but the mineral rights holder effectively obtains a joint interest in the use of the surface.[5] With respect to this joint interest, the law has traditionally held that the rights associated with the mineral estates dominate those of the surface estate.[6] The operator of a mineral estate is generally entitled to interfere with the use and enjoyment of the surface to whatever extent is necessary to facilitate extraction.[7] Thus, the surface estate holder should be

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[5]Occidental Geothermal, Inc. v. Simmons, 543 F.Supp. 870, 876 (N.D. Cal. 1982).

[6]*Id*; Sun Oil Co. v. Whitaker, 483 S.W.2d 808, 810 (Tex. 1972).

[7]Union Producing Co. v. Pittman , 146 So.2d 553, 555 (Miss. 1962) (holding that "a grant or reservation of minerals gives to the mineral owner the incidental rights of entering and occupying the lands involved, and making such use of the surface thereof as is reasonably necessary to explore, mine, remove and market the minerals therein and thereunder"); *see also* Amoco Production Co. v. Carter Farms Co., 703 P.2d 894, 896 (N.M. 1985); Sun Oil, 483 S.W.2d at 812 (overturning jury award to surface estate plaintiffs and holding that the oil and gas lessee was entitled to use 100,000 gallons of fresh water per day to maintain pressure in its wells, even if this negatively impacted the water available for surface agricultural use.)

prepared to accommodate ingress and egress, including road construction;[8] construction of surface facilities;[9] ruinous consumption of his or her water supply;[10] the despoliation of the surface with the waste products of the subsurface operation;[11] and, depending on jurisdiction, subsidence.[12] Surface estate holders can take some comfort from the fact that the law will almost always bar destruction of the surface through activities such as strip and open-pit mining, absent an explicit grant of this right to the mineral estate operator.[13]

Negligence, the Traditional Common Law Limit on the Right to Use the Surface

The corollary to the rule of necessary access is the "negligence principle," under which damages may be assessed against the mineral operator when it is shown that an injury to the

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[8]Mustang Production Co. v. Texaco, Inc., 754 F.2d 892, 894 (10th Cir. 1985); Enron Oil & Gas Co. v. Worth , 947 P.2d 610, 613 (Okl. App. 1997); Amoco Production Co. v. Thunderhead Investments, Inc., 235 F.Supp.2d 1163, 1171 (D.Colo. 2002) (allowing the construction of gravel roads necessary to produce coal bed methane when surface estate holder claimed this impacted its ability to develop a residential subdivision).

[9]That this is the case is obvious with regard to wells and pipelines and so forth. For a relatively extreme example see Geothermal Kinetics, Inc. v. Union Oil Co. of California, 75 Cal.App.3d 56, 61 (1977), holding that mineral estate included the right to construct a geothermal power facility on the surface.

[10]*See e.g.*, Sun Oil, 483 S.W.2d at 812.

[11]*See e.g.*, Amoco Production Co., 703 P.2d at 895-96.

[12]*E.g.*, surface estates in Pennsylvania are protected from subsidence caused by coal mining under a statute upheld by the Supreme Court in *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470 (1987).

[13]*See e.g.*, Smith v. Moore, 474 P.2d 794, 795 (Colo. 1970); Skivolocki v. East Ohio Gas Co., 313 N.E.2d 374 (Ohio 1974); *but see* Belville Min. Co. v. U.S. 999 F.2d 989, 996 (6th Cir. 1993) (purporting to apply Ohio law, but holding that the right to strip mine can be inferred to mineral deeds absent explicit language, when strip mining was in common use in the area at the time deeds were granted).

surface estate went beyond what was needed fully produce the mineral.[14] For example, in the New Mexico case, *Amoco Production Co. v. Carter Farms Co.*, the oil producer departed from standard industry practices in constructing a "reserve pit" and this ultimately led to the possibility of greater degradation to the surface estate at the termination of production than would have normally occurred.[15] The state Supreme Court, while overturning the jury's damage award for other reasons, held that a valid negligence claim could have been founded in this case on the "reasonableness" (or lack thereof) of Amoco's actions: "Damage to the surface estate by the owner of the mineral estate is founded upon the unreasonable, excessive, or negligent use of the surface estate.[16]

Sources and Rationale of the Law

The subordination of surface interests to the rule of necessary access to mineral rights is arises in large part from law's imputation of expectations and intentions to the parties at the time the mineral estate was first severed. The general intent of the parties is the same in most cases, that being to sever the mineral and surface estates, convey the identified valuable substances to the mineral estate owner, and to assign incidental rights as necessary to accomplish the

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[14]The negligence principle also encompasses liabilities for injuries caused by the failure of the mineral operator to use ordinary care. See, e.g., Wells v. North East Coal Co., 118 S.W. 555 (Ky. App. 1938) (awarding damages for bodily injuries sustained by farmer/lessor's son when a rotten piece of timber fell detached from the coal operator's tramway trestle).

[15]703 P.2d 894, 897 (N.M. 1985).

[16]Amoco Production Co., 703 P.2d at 897. The court ultimately overturned the damage award on the grounds that the cost of remediation were in excess of the property's fair market value.

exploitation of the mineral estate.[17] But as is always the case with the law, the devil is in the details.

Sources of Conflict

At the time of the original severance of the mineral estate from the surface, the two parties to the transaction will necessarily be in agreement that the deal they have negotiated is fair and beneficial to both. Yet, as the volume of litigation attests, this initially harmonious relationship often deteriorates into conflicts. Some of these conflicts are simply the result of unrealistic expectations on the part of the mineral estate grantee. These expectations are aptly characterized in a 1970 law review article by Clarence Brimmer, later a federal judge:

> Ranchers and farmers--almost by definition, if not by some obscure oath of allegiance to the local county farm bureau--have a sure and certain faith that a printed form entitled "Producers 88" is a time-tested, honorable document that almost any prudent person would quickly sign on the tailgate of the pickup, in the hope that either development will lead to the pot at the end of the rainbow or that at least the annual lease rentals will defray the taxes.
>
> All too seldom is the family lawyer asked to participate in the negotiation of the oil lease, and frequently he only learns of his client's problems when the lessee's development has started and his client now tells him that a big well-site is in the middle of his best field, staked out by engineers, not farmers, in the dead of winter, taking far more land than reasonably required, that the newly constructed roads for heavy equipment are dividing the field so that the mowers will have trouble, that the roads will create low spots in which water will collect and sour the meadows, and will alter his irrigation pattern, that the culverts in the road will plug and necessitate annual cleaning, that the surface water where confined by culverts will wash away topsoil, that fences will have to be built to keep cattle out of the mud pits, that the lessee is using all the water that is now needed for crops or livestock, . . . [18]

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[17]Moser v. U.S. Steel Corp., 676 S.W.2d 99, 102 (Tex. 1984).

[18] Clarence A. Brimmer, The Rancher's Subservient Surface Estate, V Land & Water L.Rev. 49, 50 (1970).

In Brimmer's vignette, the farmer's problems are mostly of his own making, as he expressly granted surface access rights to the driller and the resulting impairments were perfectly foreseeable under prevalent industry practices.[19] More interesting, at least in the legal sense, are conflicts between surface and mineral estate rights arising from secular changes in technologies and markets that were not reasonably foreseeable by the parties to the original conveyance.

Changes in extractive technologies have been a fertile source of litigation. For example, courts have had to construe the likely intent of the parties to coal estate severance instruments that predate the development of strip mining,[20] and oil and gas leases predating the era of secondary recovery using water-flooding.[21] Litigation also erupts when a substance previously thought to have negligible commercial value becomes desirable, as did Uranium in the 1950s[22] and coalbed methane in the 1980s.[23] In these instances, courts may be required to ascertain ownership of the resource as well as to determine the liability rules for surface damages caused by mineral development. Finally, conflicts may also arise from unforeseen changes in the

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[19]It should be noted that while the material excerpted suggest that Brimmer blames the farmer's impulsiveness for all of his subsequent troubles, he also uses this vignette in as part of a critical analysis of the asymmetric bargaining stature of the parties.

[20]See cases at *supra* note 13.

[21]*E.g.*, Sun Oil v. Whitaker, 483 S.W.2d 808, 812 (Tex. 1972).

[22]*E.g.*, Moser v. U.S. Steel Corp., 676 S.W.2d 99 (Tex. 1984).

[23]E.g., Amoco Prod. Co. v. Southern Ute Indian Tribe, 526 U.S. 865, 879-80 (1999); NCNB Texas Nat'l Bank, N.A. v. West, 631 So.2d 212 (Ala. 1993); Newman v. Rag Wyoming Land Co., 53 P.3d 540 (Wyo. 2002).

potential use of the surface portion of a severed estate; in particular the growing potential for suburban residential sprawl to reach rural areas previously leased for mineral development.[24]

In each of these instances, adjudication of a conflict likely requires that the parties' intent to assign respective rights be construed in the face of circumstances they did not anticipate. It will be seen that the traditional rules for construing ambiguity in property conveyances work against the interest of the surface estate.

Rules of Construction Favor the Mineral Estate

Mineral rights may be severed from the surface estate by two sorts of transactions. In a "grant," the fee simple property owner of a parcel of land grants the mineral interests in that land to a second party by lease or deed, reserving the surface estate.[25] In a "reservation," the mineral interests are reserved by the original owner and the interest in the surface estate is transferred to the second party.

In almost all cases, the instrument granting or reserving a mineral interest will include language explicitly giving the surface rights necessary to access to the mineral. When this language is sufficiently specific, controversies may be resolved by giving effect to the language within the "four corners" of the document.[26] But this rule may not be particularly helpful when

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[24]*E.g.*, Calvert Joint Venture #140 v. Snider, 816 A.2d 854 (Md. 2003); Amoco Production Co. v. Thunderhead Investments, Inc., 235 F.Supp.2d 1163, 1171 (D.Colo. 2002).

[25]Little, if any, distinction may be drawn between severances by deed or lease with respect to appurtenant surface rights. A third form of conveyance, the "nonparticipating royalty interest," gives the grantee an economic interest in another party's development of the mineral estate, but the grantee

[26]Spurlock v. Santa Fe R.R. Co., 694 P.2d 299, 309 (Ariz. Ct. App. 1984).

dealing with older instruments using very general language[27] or when technological changes have caused what was initially a specific grant to now have an ambiguous meaning.

The *Restatement of Property* § 476 (concerning easements, in general) explicates two of the rules used in constructing mineral conveyances in the face of ambiguity: construction against the grantor and the rule of necessity. The general rule for construction of a property conveyance is that ambiguity in language granting a right or making a reservation is to be construed against the grantor.[28] The rule of necessity holds that "[i]f no use can be made of land conveyed or retained without the benefit of an easement, it is assumed that the parties intended the easement to be created."[29] State in the mineral law context, the rule holds that the right to access the mineral estate through the surface will be implied absent contrary language, "because a grant or reservation of minerals would be wholly worthless if the grantee or reserver could not enter upon the land in order to explore for and extract the minerals granted or reserved."[30]

These two rules, construction in favor of the grantee and necessity, join forces against the

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[27]*E.g.*, Winnings v. Wilpen Coal Co., 59 S.E.2d 655, 657 (W.Va. Ct. App. 1950) (1892 coal estate conveyance included "rights of way of ingress . . . over and through said land for the purpose of mining said coal"); Sentry at 77 ("to make such use of the surface of the leased premises as it may find necessary or convenient in the recovery of the leased coal.")

[28]Restatement of Property § 746, comment c., *see also e.g.*, Notch Mountain Corp. v. Elliott, 898 P.2d 550, 557 (Colo. 1995); In re Condemnation by County of Allegheny of Certain Coal, Oil, Gas, Limestone, Mineral Properties, 719 A.2d 1 (Pa. Cmwlth. 1998).

[29]Restatement of Property § 746, comment g.

[30]Harris v. Currie, 176 S.W.2d 302, 305 (Tex. 1944); *see also* MacDonnell v. Capital Co. 130 F.2d 311, 320 (9th Cir 1942) ("There is, apparently, complete unanimity amongst the various jurisdictions as regards the rule that an expressed mineral reservation contained in a deed carries with it, by necessary implication, the right to remove such minerals (including gas and oil) by the usual or customary methods of mining and thus reduce them to possession even though the surface ground may be wholly destroyed as a result thereof.")

interests of the surface estate in typical severance scenario in which a fee simple owner grants a mineral interest.[31] If they conflict, as in the case of a mineral estate severed by reservation, the rule of necessity will take precedence, with the courts presuming that the person acquiring the surface interest shall have known that only a subservient interest was being acquired.[32]

It is hard to argue that the rule of necessity is inappropriate in situations involving surface impairments that could have been anticipated by the parties at the time of the severance. Yet its application becomes more tenuous when it is used to justify surface holders' forbearance of damages extractive technologies not reasonably foreseen or the development of wholly unknown minerals included in a general conveyance.

Modifications to the Rule

This section of the paper covers three legal developments originating in the "environmental era" of mineral law (the 1970s and 1980s), by which the general rule of absolute dominance for mineral estates has been restricted in limited areas.

Accommodation Doctrine

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[31]But the rule of necessity can also help the surface estate holder in some situations. *E.g.*, Pyramid Coal Corp. v. Pratt, 99 N.E.2d 427 (Ind. 1951) (applying the rule to allowing the surface holder to drill through a coal seam for water).

[32]And when neither rule of construction supports finding an implied right of access to the surface in the conveyance, then they may be ignored. For example, in *Ball v. Dillard*, 602 S.W.2d 521, 522 (Tex. 1980), Ball was assessed damages for interfering with Dillard's right of egress to access his mineral estate, despite the fact that Ball acquired his interest in the use of surface through a lease with land-owner Robinson executed one year before Robinson created a severed mineral estate through a grant to Dillard. In coming to this conclusion, the court seems to have construed Ball's lease *in favor of the grantor*, Robinson, and found that the rule of necessity could convey rights from Ball to Dillard, parties not in privity.

Accommodation doctrine, which first arose in the early 1970s in Texas, recognizes that a measure of respect must be paid to the surface interests ("due regard") when the mineral operator has alternative means of extraction:

> [w]here there is an *existing use* by the surface owner which would otherwise be precluded or impaired, and where under established practices in the industry there are alternatives available to the lessee whereby minerals can be recovered, the rules of reasonable usage of the surface *may* require the adoption of an alternative by the lessee." [33]

In *Getty Oil v. Jones*, the leading case in this area, the Texas Supreme Court held that an oil well operator should have used below-grade pumping units so as not to unduly interfere with the surface holder's self-propelled sprinkler irrigation system.[34] While it would have been more costly for Getty to locate its pumps below-grade (an estimate of $12,000 is cited in the opinion), there was also evidence that maintenance costs would have been lower.[35]

But only one year later, in *Sun Oil v. Whitaker*, the Texas Supreme Court limited the alternative means of production that must be considered under the accommodation doctrine to those available "on the leased premises."[36] On this basis, the *Sun Oil* majority (who had been in the dissent in *Getty Oil*) held that requiring Sun to purchase offsite water for its secondary extraction program was *not* a "reasonable alternative method" of production and would be a "derogation of the dominant estate."[37] This despite factual findings by a jury below that Sun's

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[33] Tarrant County Water Control and Imp. Dist. No. One v. Haupt, Inc., 854 S.W.2d 909, 911 (Tex. 1993) (emphasis added).

[34] 470 S.W. 2d 618 (Tex. 1971).

[35] *Id.* at 622.

[36] 483 S.W.2d 808, 812 (Tex. 1972).

[37] *Id.*

pumping from the aquifer would substantially reduce the potable water available for the surface holder's existing agricultural use and that at the time of the original lease, the parties "did not contemplate or intend that large quantities of water would be used for [oil extraction]."[38]

The ostensible basis for the holding in *Sun Oil* was rereading *Getty* as being limited to onsite alternatives,[39] however, it seems likely that the possibility of the law requiring costly alternative methods was sufficient to persuade the swing vote on the Texas Supreme Court to restate the law in narrower terms.[40] Several jurisdictions have followed Texas in adopting accommodation as a legal standard, including Arkansas,[41] Utah,[42] North Dakota,[43] Alaska,[44] and

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[38]*Id.* at 810.

[39]*But see id.* at 820 (Daniels, J., dissenting) (Getty's "rationale is not limited to reasonable alternatives located on the leased premises").

[40]The Texas Court originally voted to affirm the district and appellate courts in finding for the landowner in an opinion reported at 15 Tex.Sup.Ct.J. 60 (1971). This opinion was reversed on rehearing, after one justice, who had earlier recused himself on account of a prior personal oil lessor relationship with Sun, was determined to be sufficiently free from partiality to break a four-four tie. 483 S.W. 2d at 823.

[41]Diamond Shamrock Corp. v. Phillips, 511 S.W.2d 160 (Ark. 1974) (oil driller held liable for damages when it located a well precisely at the planned location of the surface owner family home, despite the availability of an alternative drilling site that was equally good); *see also* McFarland v. Taylor, 65 S.W.3d 468 (Ark. Ct. App. 2002) (oil operator enjoined from using road with pre-existing residential use when alternative route available with the expenditure of $1,500).

[42]Flying Diamond Corp. v. Rust, 551 P.2d 509 (Utah 1976) (mineral lessee held liable for value of land lost to agricultural production by road, when available alternative routing would have been less damaging to surface interests).

[43]Hunt Oil Co. v. Kerbaugh, 283 N.W.2d 131, 136 (N.D. 1979) (applying accommodation to hold against compensating surface estate when surface estate failed to prove the availability of reasonable alternatives to mineral lessee's seismic operations).

[44]Hayes v. A.J. Associates, Inc., 960 P.2d 556, 574 (Alaska 1998).

West Virginia.[45] (Nevertheless, it clearly remains a minority rule.[46]) While these jurisdictions do not necessarily recognize the onsite/offsite distinction from Sun Oil, the reported cases tend to suggest that the accommodations that will be required are those of modest expense and inconvenience to the mineral operator.

Aspects of accommodation doctrine are easily confused with the more traditional negligence principle of mineral law, as expressed in cases such as *Carter Farms, supra*, yet there are key differences.[47] As *Carter Farms* illustrates, the negligence principle finds liability when the mineral operator fails to take ordinary care and thus causes extraordinary damage to the surface. The standard of care is set by industry practices and the mineral operator is not expected to incur any additional expense or inconvenience in deference to the surface interests.[48] Under negligence, surface use will be considered for the valuation of damages, but is not a key factor in establishing liability. In contrast, under the accommodation doctrine, the particular surface use is a critical factor in the analysis; the mineral owner is limited to exercising its rights of access to conduct "reasonably necessary for that purpose and consistent with allowing the fee owner the

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[45]Buffalo Min. Co. v. Martin, 267 S.E.2d 721 (W.Va. 1980) (opinion expressly states adoption of accommodation doctrine, but does not apply it in holding against surface holder claiming injury from mining company's placement of power lines).

[46]Tarrant County Water District, 854 S.W.2d at 911, n.3.

[47]*See, e.g.*, Christopher Alspach, Surface Use by the Mineral Owner: How Much Accommodation is Required, 55 Okla. L. Rev. 89, 100-01 (2002) (construing *Carter Farms as* New Mexico's adoption of accommodation).

[48]*See, e.g.*, Sentry Royalty Co. v. Kimmel, 461 S.W.2d 76 (Ky. Ct. App. 1970) (plaintiff denied recovery for damage to home site caused by rain-induced slide of deposited mining spoils, when lessee strip mining operator's deposition of spoils in a potentially hazardous location was required by its most economically advantageous plan of mining.)

greatest possible use of his property consistent therewith."[49] Thus, given the a particular use of the surface, the selection of an extraction method that is not intrinsically unreasonable can be become so (as in Getty Oil, *supra*). And, the mineral operator is expected to incur at least modest expense and inconvenience in order to accommodate the interests of the surface estate.

Generally Conveyed Minerals

In the 1984 case, *Moser v. U.S. Steel Corp*, the Texas Supreme Court held that the rule of necessity did not shield mineral operators from liability for surface damages caused by the extraction of minerals whose rights were obtained through a general conveyance; i.e., through language such as "and all other minerals."[50] The court began by reviewing the general intent of parties to a mineral conveyance:

> The general intent of parties executing a mineral deed or lease is presumed to be an intent to sever the mineral and surface estates, convey all valuable substances to the mineral estate owner regardless of whether their presence of value was known at the time of conveyance, and to preserve the uses incident to each estate.[51]

Given this general intent, the court reasoned that it could be reasonably assumed that the grantor of a mineral estate whose exploitation is known to involve destructive activities did in fact

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[49]Flying Diamond Corp. v. Rust, 551 P.2d at 511.

[50]676 S.W. 2d 99 (Tex. 1984).

[51]*Id.* at 102. For this passage and throughout *Moser*, the Texas court cites a 1949 law review article, Eugene Kuntz, The Law Relating to Oil and Gas in Wyoming, 3 Wyo. L.J. 107 (1949). With this article, Professor Kuntz became one of the first legal scholars to recognize that the question of ownership of a particular mineral right was separate from the question of the extent of mineral owner's right to use and damage the surface. Daniel Gibbons, In Memoriam: Eugene Kuntz, 48 Okla. L. Rev. xi, xii (1995). A widely recognized authority in the field of mineral law, Professor Kuntz' writings have been cited in well over 200 cases around the country, including three U.S. Supreme Court opinions. *Id.*

anticipate the impairment of the retained surface estate (a case of applying the rule of necessity).[52] And that the value of that diminution of the surface estate was included in the price charged for the mineral rights.[53] According to the court, this is the situation with a specifically conveyed mineral, and so the mineral operator is exempted from further compensation to the surface owner holder for damage to the surface, absent negligence.[54] On the other hand, the grantor of a rights to extract unknown substances in general conveyance would not have been on notice as to the potential impact on the retained surface estate.[55] In this instance, *permanent* damage to the surface estate is compensable.[56]

Applying this law to the case at bar, the *Moser* court held that the operator of a uranium mine pursuant to a general mineral conveyance would be required to compensate the holder of the surface estate for any permanent damage to the surface, without regard to negligence.[57] But even in holding that the surface estate owner be compensated for permanent damages that were

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[52]*Id.* at 103.

[53]*Id.*

[54]*Id.*

[55]*Id.*

[56]*Id.* at 103.

[57]Because it was a significant change from settled Texas law, the court majority elected to only apply its holding on compensation prospectively and not grant relief to the Mosers in the case at bar. *Id.* This case was actually before the court as an action to quiet title to the uranium deposit. Then-existing Texas common law had been that minerals whose extraction required substantial surface destruction were not included in a general mineral conveyance, and thus were retained with the surface estate. *Id.* at 101. This approach had proven difficult to apply and was resulting in uncertainty in the title to minerals in the state. *Id.* The court crafted a two-part replacement, holding that henceforth, the ordinary meaning of "other minerals" should control ownership, and the issue of surface damages be dealt with by the new liability rule discussed herein.

not cognizable at the time of the mineral grant, the surface estate was still required to accommodate any and all transitory activities required to extract the generally-conveyed minerals, without additional compensation.[58]

Thus, in *Moser* we see an explanation for the dominance of mineral rights interests over the surface holder's interests - the rights to unimpaired use of the surface were bargained away for compensation. We also see a refinement to the traditional doctrine calling for a special rule in *one* circumstance where surface damages could not have been anticipated at the time of the original mineral conveyance. This same logic could have - but has not - been applied to the circumstance of surface damages arising from the extraction of a specifically-conveyed mineral by means technologies that were unknown and unanticipated at the time of conveyance.[59]

Post-Production Remediation Required by Common Law or Statute

The rule of *Moser* regarding generally-conveyed minerals required compensation for permanent damages. Along these same lines, at least two jurisdictions have produced court decisions requiring post-production remediation of drilling sites. In addition, nine states have enacted legislation in the past two decades increasing the liability of mineral interest holders for surface damages.[60]

The Arkansas Supreme Court, in *Bonds v. Sanchez-O'Brien Oil & Gas Co.*, held that an

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[58]*Id.*

[59]Note, the four dissenting justices in water flooding case *Sun Oil v. Whitaker*, 483 S.W.2d 808 (Tex. 1972) would have created a rule excluding the surface use related to unanticipated extraction technologies from the implied grant of rights to the mineral estate.

[60]Christopher Alspach, Surface Use by the Mineral Owner: How Much Accommodation is Required, 55 Okla. L. Rev. 89, 110 (2002).

oil and gas lessee had an implied duty to restore the surface to its condition prior to drilling, to the extent practicable.[61] The court's position was that it is just as easy to infer an intent to restore, when leases are silent, as it is to make the traditional inference that the retainer of the surface estate had the intent and expectation that his or her estate was to be permanently impaired. Oklahoma came to a similar conclusion that restoration was required in *Tenneco Oil Co. v. Allen*, based on nuisance and negligence.[62] In that case, the impositions on the surface estate holder, including the failure to remove equipment and seal wells after production terminated, were compensable because they went beyond what was necessary for the production of oil.

Notwithstanding these two examples, surface holders' right to restoration, absent explicit contractual or statutory requirements, is a minority rule.[63]

Discussion

Two versions of the rule of necessity are present in mineral law. One version, eminently supportable, is a rule of construction for ambiguous conveyances to get at the implied intent of the parties. Necessity as a rule of construction is inherently limited to what is foreseeable by the

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[61]715 S.W.2d 444 (Ark. 1986).

[62]515 P.2d 1391 (Okl. 1973).

[63]Bonds, 715 S.W.2d at 446-47 (Newbern, J., *dissenting*). Indeed, even when remediation is contractually reserved, the surface holder may still be left uncompensated for damages under the principle of the famous case *Peevyhouse v. Garland Coal & Min. Co.* 382 P.2d 109 (Okla. 1963) (holding that specific performance shall not be awarded in a breach of contract suit when the value of the restored land is less than the cost of remediation). In *Youngs v. Old Ben Coal Co.*, 243 F.3d 387, 392 (7th Cir. 2001), Judge Posner cited the *Peevyhouse* holding as an alternative basis for denying plaintiff's claims for the cost to remove oil equipment from his land. *But see*, Davis v. Shell Oil Co., 795 F.Supp. 381, 385 (W.D.Okl. 1992) (*Peevyhouse* has not been good law in Oklahoma for at least 20 years).

parties: when A granted B the rights to the oil under A's land, A must have foreseen the necessity of drilling rigs, pumps, pipelines, etc., and so we will imply these rights of surface use even if omitted from the conveyance.

The second version of the rule of necessity is the one in which implicit economic policy is used as the basis to resolve a conflict in favor of the mineral estate holder in a situation in which the original parties could not have had an intent. This version of the rule of necessity supports the right to impair the surface estate in the pursuit of secondary recovery operations not foreseeable at the time of the mineral estate's severance[64] or through unanticipated innovations such as the long-wall method of coal mining.[65] Dominance is imputed to the minerals portion of all severed estates because "[p]ractically speaking, the mineral estate would be wholly worthless if the owner of the minerals could not enter upon the land in order to . . . extract them."[66]

Is a Dominant Mineral Estate Economically Efficient?

The implicit economic rationale of second version of the rule of necessity is the promotion of mineral development: we have to make costs as low as possible to the operator, or else the minerals will sit in the ground This is the same poorly thought-out economic hypothesis that led to the enactment of the Mining Act of 1872, which continues to grant private operators

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[64]Sun Oil Co. v. Whitaker, 483 S.W.2d 808 (Tex. 1972) (water flooding); *see also* Buffalo Min. Co. v. Martin, 267 S.E.2d 721 (W.Va. 1980) (coal operator had right to place electric power lines even though parties to 19th century mineral grant had no appreciation of this possibility).

[65]Smerdell v. Consolidation Coal Co., 806 F.Supp. 1278 (N.D.W.Va. 1992.) (waiver of subadjacent support not invalidated by subsequent development of long wall mining).

[66]Plainsman Trading Co. v. Crews, 898 S.W.2d 786, 788-89 (Tex 1995).

free mining rights to certain minerals on federal lands.[67] When resources are given away at no cost, be they mineral rights or the right to use excessive surface resources, this creates the potential for economically sub-optimal outcomes. Surface access at no cost is not a necessary requisite to economically advantageous mineral development

The premise that a mineral estate is worthless without surface access rights is hyperbole. Ownership without access does have value. Elsewhere in property law, it is firmly established that the right to exclude others is valuable in and of itself. "The right to exclude others is one of the most essential sticks in the bundle of rights that are commonly characterized as property."[68] Transferred to the mineral law context, ownership of the right to exclude implies that, even if a mineral grantee was permanently and irreversibly barred from ever producing for its own benefit a proven mineral reserve, the estate still has value that the surface holder would pay to regain the right to utilize the mineral.

For the sake of argument, assume this situation prevailed, and that mineral grants came with no rights of surface use or access implied.[69] A mineral rights holder with a verified find would then be forced to negotiate with the surface estate holder for the infringement on the surface estate necessary to accomplish the actual mode of production. The price arrived upon

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[67]30 U.S.C. §§ 21-42.

[68]Dolan v. City of Tigard, 512 U.S. 374, 384 (1994).

[69]There are actually several reported cases involving mineral conveyances in which surface use rights were explicitly withheld. *E.g.*, Hancock Oil Co. v. Meeker-Garner Oil Co., 257 P.2d 988 (Cal. Ct. App. 1953) (intent may have been to allow extraction from wells on adjacent property); Reed v. Williamson, 82 N.W.2d 18 (Neb. 1957) (collecting and following cases in which restrictive residential property covenants were disregarded in favor of finding a right of necessary access to a subadjacent mineral estate); Sellars v. Ohio Valley Trust Co., 248 S.W.2d 897 (Ky. Ct. App. 1952).

would be based on the relative value of the resource, the amount of infringement on the surface estate desired, and on the contemporary value of the surface estate for other uses. In such a legal regime, minerals would still be extracted when that was the most economically productive use of the land.[70] The only difference between outcomes in this hypothetical legal regime and the traditional legal view is which party accrues the bulk of the profits.[71]

If mineral development is theoretically possible with *all* of the liability for surface damage shifted to the producer, it must also be possible under a liberalization of liability rules in circumstances where the surface estate impact is significantly different from what the parties expected at the time of the severance. Such a change would correct the inverse distribution of risk and reward, making it more congruent with generally accepted economic policy; i.e., the surface estate would no longer bear all of the risk of unforeseeable impairment, while the mineral estate accrued most of the rewards.

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[70]*See* Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960) (demonstrating that, absent high transaction costs, the initial allocation of ownership rights has no effect on the economically productive use of property).

[71]There is a range of prices for surface access rights at which it is still profitable for the mineral estate holder to agree to such a deal in order to extract the resources that it owns. In the property rights world we are imagining, the normal rules of economics suggest that the mineral operator will go up to the high end of that range if necessary to secure the consent of the surface estate holder, and further that such assent will be forthcoming except in those instances where the value of the unimpaired surface estate exceeds the value of the minerals. Thus, in the end, subsurface minerals will be produced and made available to the market whenever their value exceeds that of the injury to the surface estate.

Coase's theorem predicts that the same result will obtain under the current allocation of property rights - if the the value of an unimpaired surface estate is great enough to the surface estate owner, he or she will be willing and able to pay the mineral operator not to produce. For example, the residential developers in *Thunderhead Investments* (*supra* note 8, 24). should have been willing to pay the oil operator not to build roads or locate drilling apparatus on their land, at an amount up to what they believed the diminution in value of the housing.

Historical Antecedents of the Dominant Mineral Estate Version of the Rule of Necessary Access

A plausible explanation for the historical origins of the traditional and irrational dominance of mineral estates in American common law is suggested by Judge Daniel's dissent in *Sun Oil*: it is a holdover from "the days when all minerals were royal patrimonies owned by the sovereign crown or state."[72] For both of the dominant colonial powers in the New World, England and Spain, the right to ownership of subsurface minerals was a privilege reserved to the crown.[73] As with all such royal privileges, "the sovereign's separate and severed mineral ownership on private lands rendered the surface estate servient and subject to any use the King might find necessary to mine for and produce the minerals on or beneath the lands of his subjects."[74]

In Texas, at least, this aspect of Spanish mineral law was initially received without much thought as to how it fit with republican principles, and thus for a time, the State legally owned all minerals.[75] Subsequently, in the Texas Constitution of 1866, the state transferred its mineral rights to the private owners of the land.[76] Under private ownership of minerals, surface access rights became somewhat less absolute, but it seems that some residue of the sovereign rights of

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[72]483 S.W.2d 808, 816 (Texas 1972) (Daniels, J., dissenting).

[73]*Id.* (focusing on Spanish mineral law received by Texas); *see also* Cowan v. Hardeman, 26 Tex. 217, 1862 WL 2839 *4 (1862) (collecting English common law).

[74]Sun Oil v. Whitaker, 483 S.W.2d at 816 (Daniels, J., dissenting).

[75]*See* Cowan, 1862 WL 2839 (allowing private ownership of the surface of land bearing salt springs and other valuable minerals, while continue to recognize state ownership of the minerals themselves).

[76]Sun Oil v. Whitaker, 483 S.W.2d at 817 (Daniels, J., dissenting).

kings remains imbedded in the law.[77] For example, in a 1995 opinion establishing ownership rights to a uranium deposit, the Texas Supreme Court cited *Cowan v. Hardeman*, a case from the era of state-owned minerals, as part of the line of cases establishing that "the mineral estate would be wholly worthless" without the right to reasonable use of the surface.[78]

Conclusion

Whether it is a holdover from the seventeenth century or just from the nineteenth, the legal rule of surface right access beyond what might reasonably be imputed to the intent of the parties to the original conveyance is increasingly archaic. This legal tradition stands opposed to the changing economics of surface use, such as those arising from encroachment of residential and commercial development on mineral lands. It also fails to recognize changing economics of resources associated with the surface estate, such as water. A revised rule that shifted liability for unforseen surface impacts to the producer would likely result in market-based, negotiated sharing of the costs and benefits of mineral development, more in tune with the value of the surface resources being consumed.

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[77] *Id.*

[78] Plainsman Trading Co. v. Crews, 898 S.W.2d 786, 788-89 (Tex. 1995).

WRITING COMPETITION ENTRY

#2

When Estates Collide: A Student's Exploration of the Law of Conflicts in Mineral Development Part 2: Multiple Mineral Development

Introduction

The concurrent development of multiple mineral resources from the same piece of land often presents practical problems. For example, in order to develop oil or gas reserves located beneath a coal deposit, it is necessary to leave support pillars of undisturbed coal around each oil or gas well, or else the wells may rupture and release hazardous substances into the coal mining area.[1] Thus, the more wells that are placed in the field, the less coal that can be utilized. Similar trade-offs occur in the concurrent development of other mined substances such as potash located sub-adjacent to oil and gas;[2] in the development of coalbed methane (CBM) trapped in coal deposits;[3] and even between natural gas and oil production, when the rights to these two hydrocarbons have been "phase severed."[4]

When one party possesses the rights to both competing mineral estates, the economic trade-offs are internalized. Mineral development proceeds in the manner expected to maximize total monetary returns from the field, based on the relative prices of the minerals and the technical considerations. When the mineral estates are under different ownership, the trade-offs will be determined, at least initially, by the terms of the severance instruments or by operation of law.[5] This paper examines the common law rules for adjudicating conflicts in the development

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[1]Einsig v. Pennsylvania Mines Corp., 452 A.2d 558, 563 (Pa. Commw. Ct. 1982).

[2]Rocky Mountain Law Foundation, 6 *American Law of Mining* 2d §200.04[2][b] (2002).

[3]Jeanine Feriancek, Coal and Coalbed Methane Development Conflicts: No Easy Solution, 14 Nat. Resources & Env't 260, 261 (2000).

[4]*See* Ralph A. Midkiff, Phase Severance of Gas Rights from Oil Rights, 63 Tex. L. Rev. 133, 178-79 (1984) (secondary oil recovery operations may interfere with gas recovery rights).

[5]If the initial allocation of development rights is not economically efficient with respect to the relative values of the minerals and so forth, Coase's Theorem predicts that the parties will

of multiple minerals as well as the non-judicial, administrative systems in place to resolve development conflicts occurring on government lands. Two contemporary mineral development conflicts are examined, oil-potash in the Permian Basin of New Mexico and coalbed methane development in Wyoming's Powder River coal basin. On this basis, some general conclusions are made as to the proper role of courts and legislatures in involving themselves in what are essentially private economic trade-offs.

Common Law and Other Rules for Resolution of Development Conflicts

Development conflicts occur when the mineral estate has been subdivided *and* minerals with separate possessory rights are present and commercially exploitable. These preconditions made their first joint appearance in the United States soon after the drilling of the country's first oil well in Western Pennsylvania in 1859.[6] Oil exploration quickly spread through the region, already the center of U.S. coal development.[7] Many of these new oil developers found themselves drilling through coal deposits and coal mines.[8]

The earliest reported litigation involving a mineral development conflict is likely the

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negotiate a reallocation that maximizes the total value of production, absent high transaction costs. Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960). But even if overall inefficiency is avoided, the initial legal allocation of rights will determine how the profits from mineral development are distributed.

[6]Fred Bosselman, Jim Rossi & Jacqueline Lang Weaver, *Energy, Economics and the Environment* 315 (2000).

[7]*Id.* at 234-36.

[8]*E.g.*, Rend v. Venture Oil Co. 48 F. 248, 250 (C.C. Pa. 1891) (affidavit in the record claimed that 50,000 wells had been drilled through coal and coal mines since the discovery of oil).

1885 case *Jefferson Iron Works v. Gill Bros.*, in which a natural gas lessee was enjoined from drilling through a coal estate that was being mined under a grant of mineral rights predating the commercialization of petroleum.[9] In granting the injunction, the court cited the threat to the safety of the coal miners and the lack of an explicit reservation of access rights to sub-adjacent strata in the coal conveyance.[10] However, this early case is an anomaly, with virtually all subsequent cases coming to a different conclusion and allowing some right of access through coal to reach sub-adjacent oil and gas deposits under similar circumstances.[11]

The legal grounds for accommodating concurrent production of subadjacent mineral resources were first developed by the Pennsylvania Supreme Court in *Chartiers Block Coal Co. v. Mellon*,[12] generally considered to be the leading case in this area. As in the other early cases, this dispute came to the court on the coal lessee's request to enjoin the defendant from drilling through the coal bearing strata to reach its oil and gas estate.[13] According to the plaintiff, "it was impossible for such wells to be drilled in such a manner as to allow the removal of all the coal without exposing the mine to leakage from gas from said wells, and rendering the mine operations so hazardous to plaintiff's property and plaintiff's employees as to very greatly injure and depreciate the value of said coal property."[14] Although the surface owner, in conveying the

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[9] 9 Ohio Dec. Reprint 481 (1885).

[10] *Id.*

[11] *See* 25 A.L.R.2d 1250 (1952) (discussing and collecting cases).

[12] 25 A. 597 (Pa. 1893).

[13] *Id.* at 597.

[14] *Id.*

coal estate in 1881, had not reserved any right of way privileges through the coal to reach any substances which might have been located in the strata below, the lower court denied the requested injunction under a theory of necessity.[15] The lower court did however, require the oil operator to post a $10,000 bond against damages that might result from a mishap.[16]

The Supreme Court unanimously upheld the court below in denying injunctive relief, but split four to three on the rationale and the extent to which rights were to be allocated amongst the parties.[17] The majority found a right of access to strata below the coal estate, reasoning that the coal estate meant ownership rights to the coal itself (and appurtenant rights), not permanent ownership rights to the strata in which the coal was located.[18] On the other hand, the majority recognized that necessity failed as a rule of construction when applied against *the purchaser* of the coal estate,[19] and thus was reluctant to accord the oil operator the right to make all necessary use of the coal estate, with no liability for impairment thereof.[20] Lastly, the majority was very concerned about what it perceived to be the economic policy implications of allowing injunctive relief that might place valuable mineral deposits beyond reach:

> Coal, oil, gas, and iron are absolutely essential to our common comfort and

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[15]*Id.* at 597-98.

[16]*Id.*

[17]Kemmerer v. Midland Oil & Drilling Co., 229 F. 872, 875 (8th Cir. 1915) (examining Chartiers Block Coal Co.).

[18]Chartiers Block Coal Co, 25 A. at 598-99.

[19]*Id.* at 598 (distinguishing the traditional mineral grantee's rights of necessary surface access from the question presented in "the right of the vendor to reach *strata* underlying a *stratum* which he has conveyed to another."

[20]*Id.* at 599 ("We do not see our way clear to apply the doctrine of a surface right of way of necessity to the facts of this case.")

> prosperity. To place them beyond the reach of the public would be a great public wrong. Abounding, as our state does, with these mineral treasures, so essential to our common prosperity, the question we are considering becomes of a *quasi* public character.[21]

On these bases, the majority declined to bring the power of equity to bear against the oil operator, but allowed for the possibility that the coal estate could obtain a remedy at law for any damages that might actually be sustained.[22] It further suggested that the legislature would be a more appropriate body to decide the extent to which traditional surface access rules (which allow necessary access without additional compensation) should be applied to underlying strata.[23]

Three justices joined a concurring opinion that would have sustained stronger rights of access through intermediate mineral strata.[24] From an analysis of the law of subadjacent support, the concurring justices derived the principle that reciprocal rights of access always inherently exist between possessors of subadjacent estates.[25] The concurring justices criticized the majority for failing to fully take to heart its own finding of a right of access to the oil strata below the coal estate when it placed the oil operator at risk of lawsuits.[26]

Courts, including the Pennsylvania Supreme Court, have largely followed the *Chartiers* concurrence, and not the majority, to find a broad right of access in subsequent mineral

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[21] *Id.*

[22] *Id.* ("The right may be suspended during the operation of the removal of the coal to the extent of preventing any wanton interference with the coal mining, and for every necessary interference with it the surface owner must respond in damages.")

[23] *Id.*

[24] *Id.* at 600 (Williams, J. concurring).

[25] *Id.*

[26] *Id.* at 600-01 (Williams, J, concurring).

development cases.[27] However, even though the practical issues of safety and economic trade-offs posed by *Chartiers Coal Co.* continue to be present in the field,[28] there are actually few subsequent reported opinions in which petroleum-coal development conflicts have been resolved by common law.[29]

The absence of a large body of case law on concurrent mineral estate development conflicts is likely due to the development of alternative avenues for dispute resolution as the extractive industries matured through the Twentieth Century. These alternatives include the development of statutory rules for conflict resolution, the use of non-judicial administrative processes to resolve conflicts between concurrent mineral lessees on land managed by the federal government or a state, and, following the prediction of economic theory, the willingness of companies in the field to adopt formal (contractual) and informal negotiated rules for conflict resolution.

Non-Judicial Methods of Resolving Development Conflicts

Statutory Rules

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[27]*E.g.*, Telford et Al. V. Jenning Producing Co., 203 F. 456 (7th Cir. 1913); Pennsylvania Central Brewing Co. v. Lehigh Valley Coal Co., 95 A. 471 (Penn. 1915) (awarding damages against coal company for its destruction of an artesian well bore passing through the coal seam); Richardson v. Citizens Gas and Coke Utility, 422 N.E.2d 744 (Ind. Ct. App. 1981) (owner of gas rights located underneath coal did not need to compensate coal estate for value of coal lost to 300' safety zone required for each well bore); *see also* 25 A.L.R. 1250 (1952) (commenting that even Pennsylvania courts have tended to follow the broader holding of the concurring judges in Chartiers.)

[28]*See e.g.*, Einsig v. Pennsylvania Mines Corp., 452 A.2d 558, 563 (Pa. Commw. Ct. 1982).

[29]*See* 25 A.L.R.2d 1250 (1952) (collecting only eight cases subsequent to Chartiers).

Pennsylvania eventually followed the suggestion of the *Chartiers* majority to enact statutory rules guiding the development of oil and gas in areas being worked for coal. In the Gas Operations Well Drilling Petroleum and Coal Mining Act of 1955, the legislature balanced the right of oil and gas operators to have necessary access to their estates with coal interests, using an administrative well-permitting process.[30] Under the permit rules, coal operators are notified of proposed drilling locations and have the right to object to the permit application for any oil well they believe may "unduly interfere with or endanger" a mine.[31] On the other side, the statute provides an equivalent administrative process to secure the agreement of the parties on the required diameter for the support pillars that the coal operator must leave around each well bore.[32]

Private Agreements and "Rules of Patch"

Another factor contributing to a paucity of multiple mineral case law is the apparently common practice for concurrent operators to enter into private agreements delineating the respective rights and duties of the parties. The Rocky Mountain Law Foundation treatise *American Law of Mining* presents one such private agreement between a federal coal lessee and an oil and gas lessee in which the oil and gas lessee agreed to work around the coal operator, so long as the coal operator did not hold a particular area for more than one year.[33]

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[30]52 P.S. §§ 2201-03, repealed 1984 and replaced by statutes at 58 P.S. § 601 *et seq.*

[31]*Id.*

[32]52 P.S. § 2203, repealed, now at 58 P.S. § 601.214. The statute provides that, should the parties be unable to come to an agreement, the Department of Environmental Resources should require a support pillar diameter of 100 feet, or 150 feet in unusual circumstances. *Id.*

[33]Rocky Mountain Law Foundation, 6 *American Law of Mining* 2d §200.04[2][d][ii] (2002).

Informal agreements and customs may also arise. In one area of Pennsylvania, an "association" of well drillers agreed with their coal mining counterparts that they would only drill on 1,000 foot or greater centers, so as to make it economically feasible for the coal operators to work their beds while leaving adequate support pillars for the oil equipment. In return, the coal companies would not challenge the drillers' applications for state permits.[34]

Administrative Remedies

As the Pennsylvania statute discussed earlier, governments may adopt administrative proceedings as an effective means of resolving economic conflicts between concurrent mineral operators on private land. This is also the case with regard to conflicts potentially arising on land owned by the federal government or a state government, when it is leased for mineral development. The two most important mineral development conflicts (measured by volume of law review articles, at least) in the past 20 years, Oil-Potash and Coal-CBM, are both principally identified with federally-managed western lands.

When minerals are developed on government land, the mineral estate is by virtue of a lease between a government agency and the operator. For at least 50 years, federal mineral law has emphasized that agencies controlling the land (e.g., the BLM) act to maximize multiple use. For example, a section in the Multiple Minerals Development Act of 1954 tells agencies that

> Any mining operations . . . shall be conducted, so far as reasonably practicable, in a manner which will avoid damage to any known deposit of any Leasing Act mineral. . . . mining operations shall be so conducted as not to endanger or materially interfere with any existing surface or underground improvements, workings, or facilities which may have been made for the purpose of Leasing Act

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[34]Einsig, 452 A.2d 356, n.4

operations, or with the utilization of such improvements, workings, or facilities.[35]

Multiple use maximization is also a key theme in the Federal Land Policy and Management Act of 1976,[36] which is the BLM's organic act. Regulations promulgated under this Act, such as those at 43 C.F.R. §§ 3161.2 and 3484 (pertaining concurrent coal and oil and gas lessees) confer authority upon the government land manager to direct lessees to take adjust their conduct to maximize safety and respect for other resources. The terms of federal leases require the lessee to be bound by these and other regulations. Following this general policy, in February 2000 the BLM issued a directive to the field to begin requiring concurrent coal and CBM lessees to enter into cooperative agreements under agency supervision.[37]

Potash Development in New Mexico

The federal rules for oil and gas operations on potash-bearing[38] lands in the Permian Basin of New Mexico presents a special case of administrative management of concurrent mineral operations, meriting extended discussion because of its local interest and because a recent case in this area highlights the problems that arise when regulatory "solutions" are imposed that run counter to market forces.

The federal interest in potash development in New Mexico dates back to at least 1939, when the Secretary of Interior reserved 42,000 acres of potash-bearing federal land (the "Potash

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[35]30 U.S.C. § 526(b).

[36] 43 U.S.C. § 1701 *et seq.*

[37]Feriancek, n. 2, 15 supra at 261.

[38]Potash is an ore form of potassium, used in the production of fertilizer.

Area") from the normal leasing provisions of the federal mineral laws then in effect.[39] In 1975, the Secretary issued rules governing the development of oil and gas resources in the Potash Area; these rules were substantially retained when the Secretary published the current 1986 Potash Order.[40]

The exploration and production of oil and gas in potash mining areas can potentially create hazardous conditions if subsidence caused by potash mining causes a well bore to shear and oil and gas are released.[41] This in turn creates an economic conflict between the respective operators. Our Judge Conway recently characterized the conflict as follows:

> The land near the Eddy County and Lea County border due east of Carlsbad, New Mexico, is doubly blessed by being rich in two natural resources, potash and oil and gas. The potash in this region may be mined by conventional underground mining techniques. The oil and gas are located much further beneath the earth and may be extracted through wells drilled through the potash zones. Potash mining requires years of lead time before production can begin. Oil and gas wells can be placed in production more quickly. The inherent conflict lies here: although it makes economic sense to extract oil and gas before the potash is mined, oil and gas drilling through potash *may* create safety hazards when the potash is eventually mined, *may* increase the costs required to mine the potash, and *may* reduce the ultimate amount of potash that is recovered if the potash is mined. Potash interests wish to restrict or prevent oil and gas drilling near potash leases, while oil and gas interests seek drilling permits near potash leases.[42]

Under the 1975 and 1986 federal rules, the public interest in maximizing multiple use of the land is achieved through a leasing and development regime that prioritizes the recovery of

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[39]Devon Energy Corp. v. U.S., 45 Fed.Cl. 519, 522 (1999); Dept. of the Interior Notice, *Oil, Gas and Potash Leasing and Development Within the Designated Potash Area of Eddy and Lea Counties, New Mexico*, 51 FR 39425 (1986) (hereinafter 1986 Potash Order).

[40]Devon Energy Corp., 45 Fed.Cl. at 522.

[41]Rocky Mountain Law Foundation, 6 *American Law of Mining* 2d §200.04[2][b] (2002).

[42]IMC Kalium Carlsbad, Inc. v. Babbitt, 32 F.Supp.2d 1264 (D.N.M.,1999), *rev'd* 206 F.3d 1003 (10th Cir 200)

potash. Oil and gas operators are not permitted to drill where in locations that will interfere with the mining and recovery of potash deposits, nor cause undue waste of potash or pose a hazard to potash operators.[43] While potash operators have some reciprocal restrictions on leases that might interfere with existing oil wells,[44] the order goes on to explicitly establish priorities: The BLM is directed to inventory potash enclaves containing commercially viable deposits of the ore, in which "[i]t is the policy of the Department of the Interior to deny approval of most applications for permits to drill oil and gas test wells from surface locations."[45] The order provides an exception to allow drilling in a viable potash area when there is *no* other way of reaching an oil deposit, but even this exception is limited to areas in which no potash mining is scheduled for three years.[46] It appears that exceptions under this provision are severely restricted in practice.[47]

Mineral leases and applications for mining and drilling plans under the 1986 Potash Order are under the control of BLM staff. Parties may appeal adverse decisions to the Interior Board of Land Appeals (IBLA).[48] The IBLA's ruling may be appealed in federal district court.[49]

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[43] 1986 Potash Order at III.A.

[44] *Id.* at III.C.

[45] *Id.* at III.E.1.

[46] *Id.* at III.E.1.b.

[47] *See* Devon Energy Corp., 45 Fed.Cl. at 528 ("Under the Potash Order, and consistent with BLM's denial of plaintiffs' prior APDs, any proposed wells piercing mineable potash resources would be denied. As the government concedes, potash is presumed to exist throughout the entire Potash Area, and drilling is severely restricted in the potash enclave and in MLR areas and buffer zones.")

[48] IMC Kalium Carlsbad, Inc. v. Interior Board of Land Appeals, 206 F.3d 1003, 1005 (10th Cir. 2000).

[49] *See id.*

A party may also appeal an adverse BLM decision directly in federal court, without first exhausting its appeal rights with the IBLA.[50]

IMC Kalium Carlsbad, Inc. v. Interior Board of Land Appeals

It is fairly safe to assume that oil operators in Southeastern New Mexico do not appreciate the current regulatory regime.[51] While it also may be presumed that the governments'[52] original intent in developing the rules for the Potash Area was to maximize economic development, resource economics change over time. The facts of a recent case from the Potash Area suggest that the goal of maximizing economic development and returns is being now being impeded by the rigid management rules in place.

IMC Kalium Carlsbad, Inc. v. Interior Board of Land Appeals tells a story in which two oil operators active in the area, Yates Petroleum Co. and Pogo Producing Co. (Yates/Pogo), formed a joint venture 1992 to bid on the potash rights for 5,280 acres.[53] The oil companies' strategy was to gain control over the generation of potash deposit information (quantity and grade estimates, and so forth) that would be used to circumscribe the area which could be developed for oil.[54] They reasoned that purchasing the potash leases would be more cost-effective than the alternative method of securing drilling permits, which based on experience they believed would

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[50]Devon Energy Corp., 45 Fed.Cl. at 529-30.

[51]*See e.g., id.*, a case in which an oil driller is raising breach of contract and constitutional takings claims against the BLM for preventing it from developing the oil resources it leased.

[52]The state of New Mexico has a role in the management of the Potash Area, as well.

[53]206 F.3d at 1005.

[54]*See id.* at 1007 (reprinting a memo from Yates/Pogo geologic consultant to Yate's management).

require litigating the potash operator's data.[55]

Yates/Pogo was the high bidder for the leases at $6.00/acre, outbidding potash operator IMC Kalium Carlsbad by eight-five cents.[56] But upon the petition of IMC, the BLM set aside the Yates/Pogo bid, on the grounds it was made in bad faith, and awarded the leases to IMC.[57] The IBLA was more receptive to the oil companies' claim that they had a real intention to develop the potash resources, and that they merely intended to balance the two operations, and the appeals board re-awarded the leases to Yates/Pogo.[58] The outcome went back and forth two more times, with District Court Judge Conway upholding the original BLM decision and the Tenth Circuit reversing him to give deference to the IBLA.[59]

Thus, eight years later, the oil companies finally won the right to buy the dominant mineral rights in the area, and eliminate *some* of the barriers to developing their own mineral estate. Yet, even after acquiring the right to control the submission of potash deposit data and thereby free up some locations for oil development, the oil companies are still barred from developing areas where their own "feasibility studies using real world data"[60] disclose commercially viable potash deposits. The oil companies' amelioration strategy is ultimately grounded in the modern economics of oil and potash, in which oil's market value is much greater. Presumably, absent the rigid rules of the government's Potash Order, oil operators

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[55] *Id.*

[56] *Id.*

[57] *Id.*

[58] *Id.*

[59] *Id.* at 1009-13.

[60] *Id.* at 1007 (geologist consultants' memo).

would have greater opportunities to buy the rights to develop the more economically valuable mineral resource in the Permian Basin.

Coalbed Methane

The current hot topic in multiple minerals development is the extraction of coalbed methane (CBM) from coal estates under control of a different party. CBM gas is a byproduct of the "coalification" process by which plant matter was transformed into bituminous coal millions of years ago.[61] The volume of the gas that remains embedded with the mineral coal depends on characteristics of the particular deposit.[62] In order for both resources to be recovered, the CBM gas must be developed first through drilling and wells, or it will be vented and permanently lost during the coal mining process.[63] Delaying coal extraction conflicts with the economic interests of the coal operator and may also come into conflict with the operator's contractual or statutory obligations.[64] There is also the potential that some coal will be wasted because of the interference of the former CBM wells with the maximum efficient long-wall coal mining plan.[65]

The coal - CBM conflict did not arise until recently. Prior to the late 1980s, when initial development of CBM was stimulated by tax incentives, the gas was considered nothing more

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[61]Thomas F. Darin and Amy W. Beatie, Debunking the Natural Gas "Clean Energy" Myth: Coalbed Methane in Wyoming's Powder River Basin, 31 Envtl. L. Rep. 10566, 10572 (2001).

[62]*Id.*

[63]Jeanine Feriancek, Coal and Coalbed Methane Development Conflicts: No Easy Solution, 14 Nat. Resources & Env't 260, 261 (2000).

[64]*Id.*

[65]See Darin and Beatie, supra note 61 At 10574 (discussing CBM extraction techniques).

than an unsafe nuisance by coal operators.[66] In the past ten years, new knowledge of the extent of CBM reserves - particularly in Wyoming's Powder River Basin - and new extractive technologies have resulted in the recognition that CBM is a valuable resource in its own right.[67]

The Supreme Court, in *Amoco Prod. Co. v. Southern Ute Indian Tribe*, summarily dismissed concerns that severing ownership of coal and CBM might lead to difficult to resolve operational conflicts.[68] However, practitioners are not so sanguine. In a presentation to the 2000 Rocky Mountain Law Institute, two practicing attorneys indicated that they expected a burgeoning docket of such suits and that they had knowledge of several cases then pending in court.[69] Nevertheless, no cases of this type appear to be reported to date.

Concluding Remarks

As a general rule, regardless of the initial allocation of property rights, an economically efficient solution can be reached if the parties are allowed to reallocate those rights through a market or through private negotiations and these transaction costs are not too high.[70] The justices of the Pennsylvania Supreme Court in *Chartiers Coal Block Co.* need not have been so worried that denying the oil company the right *as a matter of law* to drill through the intervening coal

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[66] *Id* at 10572.

[67] *Id.*

[68] 526 U.S. 865, 879-80 (1999).

[69] Patrick Day and Charles Henderson, "Getting Along or Going to Court: Ownership and Development Conflicts Between Coalbed Methane and Coal," 10 *Rocky Mt. Min. Law Inst.* § 7.01 (2000); see also Feriancek, n. 3, 63 supra (discussing the growing, but unrealized potential for litigation in this area).

[70] *See supra* note 5.

estate would frustrate the exploitation of petroleum reserves. With sufficiently valuable petroleum, relative to the coal that must be wasted for well support pillars, oil companies would have negotiated to buy the necessary rights from the coal estate, when they were otherwise lacking.[71] As a corollary to this rule, the experience of oil operators in the Permian Basin demonstrates that overly rigid rules that prevent the reallocation of rights according to market economics ultimately impair economic efficiency.

Thus, what is needed from the law are the following: First of all, by statute or common law, *clear* rules must be created to determine the initial allocation of use rights (easements) when the parties have not done so themselves. In this regard, the Supreme Court erred in *Southern Ute Tribe* when it severed CBM and coal ownership rights to without also defining the usage rights.

Secondly, the initial allocation of rights should be fair. We saw in the case of mineral/surface conflicts that the law tended to discriminate against surface interests by giving mineral operators the right to make impairments to the surface that were not anticipated (and bargained for) by the parties to the original conveyance. While the ability to reallocate property rights preserves the objective of economic efficiency, an initial unfair allocation does harm to the distribution of wealth between the parties.

Next, on a related point, the law should avoid strictures that prevent the parties from reallocating access rights between themselves, absent a compelling public interest.

Finally, there are some public goods that are not valued in monetary terms by the market at a level congruent with their public value. For example, post-production remediation of surface

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[71]Recall that in this case, the coal estate had been conveyed first, without reservation of any rights of access. Different rules, more clearly establishing a right of access would obtain in the situation where the oil estate was already existing at the time of the coal conveyance and/or when such rights were explicitly reserved.

land, employee health and safety, etc. In these cases, through regulation, government may appropriately place additional requirements on mineral operations beyond those agreed to by the private parties to the mineral conveyance.