COALBED METHANE: CRAFTING A RIGHT TO SELL FROM AN OBLIGATION TO VENT

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Coalbed methane ("CBM") is a rapidly growing source of energy in the United States, particularly in the Intermountain West. Rather than being captured and utilized, however, much of the recoverable CBM is released into the atmosphere as coal mine methane ("CMM"), a byproduct of coal mining. Allowing a federal coal operator to capture and sell or otherwise consume CMM would reduce greenhouse emissions, provide additional fuel for power generation, and avoid the waste of valuable natural resources. However, there is sparse guidance from the federal government regarding the right of federal coal operators to engage in CMM sale. What little federal law exists on this topic has focused exclusively on the issue of ownership. This Comment looks beyond the issue of ownership and explores the issue of implied incidental mining rights, the group of rights that allow a mine operator to use another party's resources without having an ownership interest in them. This Comment argues that such rights should also allow a federal coal operator to sell or consume CMM that would otherwise be vented.

INTRODUCTION

Coalbed methane ("CBM") is a rapidly growing source of energy in the United States, particularly in the Intermountain West.[1] The United States Geological Survey estimates that there are 700 trillion cubic feet of CBM trapped in coal deposits in the United States, of which up to 100 trillion cubic feet—

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1. *See* Gary Bryner, *Coalbed Methane Development in the Intermountain West: Producing Energy and Protecting Water*, 4 WYO. L. REV. 541 (2004).

worth nearly $1 trillion[2]—are recoverable.[3] This is enough methane to supply the United States' total natural gas needs for almost five years.[4] In 2003, national CBM production totaled only 1.6 trillion cubic feet,[5] approximately eight percent of total natural gas production.[6] The Rocky Mountain states account for more than half of this CBM production.[7]

Rather than being captured and utilized, however, much of the recoverable CBM is released into the atmosphere as coal mine methane ("CMM"), a byproduct of coal mining.[8] At current prices, this wasted methane is worth over $1.5 billion per year.[9] The methane has many potentially profitable uses, including injection into the natural gas pipeline system, burning for power generation, vehicle fuel, and many other manufacturing and industrial uses.[10]

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2. *See* Dep't of Energy, *Natural Gas Weekly Update* (Jan. 26, 2006), http://tonto.eia.doe.gov/oog/info/ngw/historical/2006/01_26/ngupdate.asp (reporting the price of natural gas at $10.02 per thousand cubic feet). It should be noted that this figure does not account for the cost of extracting and preparing the CBM for sale.

3. *See* U.S. Geological Survey, *Coalbed Methane—An Untapped Energy Resource and an Environmental Concern* (Jan. 17, 1997), http://energy.usgs.gov/factsheets/Coalbed/ coalmeth.html.

4. *See* Dep't of Energy, *Annual Energy Outlook 2005: Market Trends—Natural Gas Demand and Supply* (January 2005), http://www.eia.doe.gov/oiaf/archive/aeo05/gas.html (reporting that natural gas consumption in 2003 was 22 trillion cubic feet).

5. *See* Dep't of Energy, *Natural Gas Weekly Update* (June 16, 2005), http://tonto.eia.doe.gov/oog/info/ngw/historical/2005/06_16/ngupdate.asp.

6. *See* Dep't of Energy, *The Natural Gas Industry and Markets in 2003* (Feb. 2006), *available at* http://tonto.eia.doe.gov/FTPROOT/features/ngmarkets03.pdf.

7. *See* Gary Bryner, *Coalbed Methane Development in the Intermountain West: Primer* 1, Natural Resources Law Center, University of Colorado School of Law (July 2002).

8. Thus, CMM is a subset of CBM. CBM is considered CMM once it has been released from the coalbed during the process of mining for coal. The EPA estimates that the United States was responsible for approximately thirteen percent of CMM emissions from coal mines in 2000. *See* Envtl. Prot. Agency, *International Emerging Markets for Coal Mine Methane Projects* (May 17, 2001), http://www.epa.gov/cmop/pdf/introduction.pdf. In 2001, this amounted to 151 billion cubic feet, although this number has been gradually declining. *See* Envtl. Prot. Agency, *Annex F: Methodology for Estimating CH_4 Emissions from Coal Mining* at F-5 (2003), http://yosemite.epa.gov/oar/globalwarming.nsf/UniqueKeyLookup/LHOD5MJT9J/$File/2003-final-inventory_annex_f.pdf. Colorado's CMM emissions totaled 10.9 billion cubic feet in 2001. *Id.*

9. "Current price" is assumed for purposes of this Comment to be the January 26, 2006, price of $10.02 per thousand cubic feet. *See* Dep't of Energy, *supra* note 2.

10. *See* Envtl. Prot. Agency, Coalbed Methane Outreach Program: Basic Information (Oct. 4, 2006), http://www.epa.gov/coalbed/overview.html.

Approximately two-thirds of the wasted methane is intentionally "vented" as part of the coal mining process.[11] Such venting not only wastes the energy present in this methane, but also significantly contributes to the problem of global warming,[12] as methane is a powerful greenhouse gas with twenty-three times more "radiative effect" than carbon dioxide.[13] Increased methane concentrations in the atmosphere are believed to be responsible for fifteen to twenty percent of the recent increase in global temperatures.[14] Coal mine emissions account for approximately ten percent of worldwide methane emissions, and that number is expected to rise.[15]

In 1994, the Environmental Protection Agency ("EPA") created the Coalbed Methane Outreach Program ("CMOP") to help "reduce methane emissions from coal mining activities" and to "promote the profitable recovery and use of coal mine methane."[16] CMOP has contributed to a small but growing number of CMM recovery projects, including two power plants in West Virginia.[17] However, all of these projects involve privately owned coal and gas lands.[18] Although nearly half of all coal mined in the United States is recovered from federal leases,[19] almost no current CMM recovery projects involve fed-

11. Email from Pamela Franklin, Program Manager, Coalbed Methane Outreach Program, to author (Nov. 29, 2006, 11:17:42 EST) (on file with author). About fifty-nine percent of this methane is vented from ventilation shafts circulating air through the mine shafts and about eight percent is vented from pre-mining activities. *Id.*

12. *See* Jeff L. Lewin et al., *Unlocking the Fire: A Proposal for Judicial or Legislative Determination of the Ownership of Coalbed Methane*, 94 W. VA. L. REV. 563, 584–85 (1992).

13. U.S. Climate Change Tech. Program, *Research and Current Activities: Reducing Emissions of Other Greenhouse Gases* (Dec. 1, 2003), http://www.climatetechnology.gov/library/2003/currentactivities/othergases.htm. "Radiative effect" is the ability of a gas to reflect and trap heat in the atmosphere. *See* Lewin, *supra* note 12.

14. Lewin, *supra* note 12 at 585.

15. *Id.* at 586.

16. Envtl. Prot. Agency, *Coalbed Methane Outreach Program* (last visited Jan. 24, 2007), http://www.epa.gov/cmop/.

17. *See* Envtl. Prot. Agency, *Coalbed Methane Outreach Program: Accomplishments* (Oct. 4, 2006), http://www.epa.gov/cmop/accomplish.html.

18. Telephone Interview with Pamela Franklin, Program Manager, Coalbed Methane Outreach Program (July 28, 2005).

19. *See Oversight Hearing on the FY 2006 Energy and Minerals Budget Request of the Bureau of Land Management Before the H. Resources Comm. Subcomm. on Energy and Mineral Resources*, 109th Cong. (2005), *available at* http://www.blm.gov/nhp/news/legislative/pages/2005/te050510.htm (statement of Jim Hughes,

eral lands.[20]

Pamela Franklin, CMOP Program Manager, suggests that federal coal operators[21] are unwilling to develop CMM recovery projects due to the ownership uncertainty that arises in federal lease agreements.[22] Specifically, federal coal operators fear they may invest substantial sums into the development of a CMM recovery project, only to be told that the rights to—and profits from—the CMM belong to a gas lessee, the federal government, or both.[23] Further, federal coal operators seem uncertain as to which CMM uses would be royalty-free, which uses would require paying royalties, and to whom such royalties would be paid.[24] Finally, federal coal operators are concerned that any commercial CMM recovery project would open the CBM to competitive bidding under the Mineral Lands Leasing Act and that the resulting CBM extraction would interfere with coal mining operations.[25] Franklin calls the federal CMM ownership issue "the single biggest obstacle to [CMM recovery project] development"[26] and says that the EPA "would certainly like to see [coal] mining companies with federal [coal] mining leases that are eager to make project development happen and would be willing to find creative solutions to . . . utilize the otherwise-wasted gas within the legal framework."[27]

Allowing a federal coal operator to capture and sell or otherwise consume CMM would reduce greenhouse emissions, provide additional fuel for power generation, and avoid the waste of valuable natural resources. However, there is sparse guidance from the federal government regarding the right of

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Deputy Director, Bureau of Land Management, U.S. Department of the Interior) (stating that in FY 2004, 511 million tons, or forty-seven percent of the total estimated U.S. coal production, was mined from BLM coal leases).

20. *See* Franklin, *supra* note 11. Franklin notes that one coal operator on federal lands uses a small portion of the CMM, amounting to less than five percent of total emissions, for heating mineshaft air. *See id.* Additionally, a mine in Utah is trying to implement a CMM recovery project on mixed federal and private lands, but has not done so because the federal ownership issues have not yet been resolved. *Id.*

21. For the purposes of the Comment, "federal coal operator" refers to a company that operates a coal mine on federal land. The coal operators are themselves private.

22. *See* Franklin, *supra* note 18.

23. *Id.*

24. *Id.*

25. *Id.*

26. *Id.*

27. Franklin, *supra* note 11.

federal coal operators to engage in CMM sale. What little federal law exists on this topic has focused exclusively on the issue of ownership.[28] This Comment looks beyond the issue of ownership and explores the issue of implied incidental mining rights, the group of rights that allow a mine operator to use another party's resources without having an ownership interest in them.[29] The United States Supreme Court and other state and federal courts have recognized this bundle of rights in the CBM context.[30] While they do not "provide any basis for claiming ownership of CBM in place," these rights "allow coal owners to capture gas that they otherwise would have vented."[31] This Comment argues that such rights should also allow a federal coal operator to sell or consume CMM that would otherwise be vented.[32] Finally, this Comment proposes a legal framework that can be instituted on a state level by the Colorado Oil and Gas Conservation Commission ("COGCC"), and similar agencies in other states, whereby federal coal mine operators could sell CMM that they would normally vent to the atmosphere for safety purposes[33] without exposing the coal operator to ownership-related litigation.

Part I provides an overview of the scientific relationship between CBM and coal and discusses the current ownership status of CBM and CMM on federally leased coal lands. Part II examines the implied incidental mining rights that allow a federal coal lessee to sell or otherwise consume CMM, regardless of ownership. Part III explores the role of state conservation agencies in allowing federal coal lessees to sell or otherwise consume CMM, and discusses the various constitutional issues—including preemption and takings—that would arise if a state were to explicitly allow these uses. Part IV responds to concerns that the distribution of royalties would be due if the

28. *See, e.g.*, 42 U.S.C. § 13,336, 13,368 (2007); *see also* Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865 (1999) (discussing prior federal CBM cases).

29. *See* Lewin, *supra* note 12, at 642–43.

30. *See Amoco*, 526 U.S. at 880; Lewin, *supra* note 12, at 642–46.

31. Lewin, *supra* note 12, at 647.

32. By allowing the coal operator to sell normally vented methane, an incentive system would be created that would encourage coal operators to reduce environmentally dangerous methane. By limiting this right to normally vented methane, the owner of the gas estate would not realize any additional loss. Further, as discussed in Part IV, *infra*, the owner of the gas estate, whether private or public, will be able to realize royalties from this currently wasted resource.

33. As required by the Mine Safety and Health Act. *See* 30 U.S.C. § 863 (2000) (requiring mineshaft air to contain less than one percent methane).

coal operator sold the CMM. Part V concludes that the COGCC has authority to pass a rule that allows a coal operator to sell CMM, provided that certain limitations are included: only normally vented gas may be captured and sold, and royalties must be paid to any party who has an interest in the gas, whether that party be the government or a private leaseholder.

I. OVERVIEW OF COALBED METHANE SCIENCE AND OWNERSHIP

CBM has been regarded as both bane and boon for the coal industry. CBM was traditionally considered a waste product, but that perception changed in the 1980s when the natural gas industry discovered and harnessed CBM's properties as a rich energy source. Since then, CBM ownership has been litigated in state and federal courts. This litigation has not addressed the separation of CMM ownership as a separate issue from CBM ownership in general. This Part will explore the geological relationship between CBM and coal and will examine how the natural intermingling of these two resources has contributed to the growing battle over the rights to CBM's use.

A. The Nature of Coalbed Methane and Its Unique Relationship with Coal

In the first major case dealing with coal miners' rights to use or sell CBM, *United States Steel Corp. v. Hoge*, Judge Toothman wrote:

> [CBM has] a close affinity for and association with coal seams. In its original state it permeates and penetrates the coalbed, is its alter ego, its constant companion, its geological handmaiden, and is sometimes viewed as its contumacious free-spirited bride, but more generally regarded as its ill-chosen bridesmaid. It is found with the coal when they come to mine it, stays with the coal as it leaves, and remains in the space after the mining has been done. Its past has been filled with peril and tragedy, its present is seen as having a modest commercial attractiveness, and its future as a fuel potential has become increasingly brighter.[34]

34. United States Steel Corp. v. Hoge, Unreported Opinion No. 78-862 (Pa. Ct. C.P., Greene Cty., Mar. 24, 1980), *aff'd* 450 A.2d 162 (Pa. Super. Ct. 1982),

While this description is more poetic than scientifically accurate, it demonstrates the unusual nature of the coal-CBM relationship and the importance of resolving CBM ownership and use issues.

An earlier opinion in the same dispute, also written by Judge Toothman, points out the complete change in the coal industry's attitudes toward CBM. In the past, CBM was considered a dangerous "lethal enemy" of the mining industry.[35] Instead of trying to capture the CBM, "many millions of dollars and countless manhours of effort" were expended "to clear the active mine of its deadly contamination."[36] Now, however, CBM is considered a valuable energy resource.[37] The coal industry is reexamining its position to see if—while ridding the mines of the danger— "the erstwhile 'poison' can be turned to making lights burn, cars move, and homes heated."[38] The industry that once did everything possible to dispose of CBM now wants to capture it for use or sale.

CBM is naturally present in all coal before, during, and after the mining process.[39] CBM is chemically similar to natural gas, though it is trapped in coal seams, rather than in rock, and is held in place by water pressure.[40] CBM is chemically bound to the surface of the coal, but it is not part of the coal itself. The coal acts as a reservoir for the methane until the gas migrates out of the coal as the result of a natural or manmade decrease in water pressure.[41]

Historically, the extraction of CBM was part of the coal mining process.[42] Until recently, however, such extraction was only performed to the extent that it removed methane from the coal mineshafts.[43] When coal is mined, water must be drained out of the coal seam.[44] The decreased pressure resulting from this drainage frees the methane from the surface of the coal,

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rev'd 468 A.2d 1380 (Pa. 1983).

35. *See* United States Steel Corp. v. Hoge, 6 Pa. D. & C.3d 64, 67 (Pa. Com. Pl. 1978).

36. *Id.*

37. *Id.*

38. *Id.*

39. *See* Kurt M. Petersen, *Federal Onshore Oil and Gas Pooling and Unitization II: Unconventional Units* 19-4 (Rocky Mtn. Min. L. Fdn. 1990).

40. Bryner, *supra* note 1, at 1.

41. NCNB Tex. Nat'l Bank, N.A. v. West, 631 So.2d 212, 213 n.2 (Ala. 1993).

42. *See id.* at 225–26.

43. *See id.*

44. Vines v. McKenzie Methane Corp., 619 So.2d 1305, 1307 (Ala. 1993).

causing it to build up in the mining area.[45] This buildup is dangerous to miners because CBM is both toxic and highly explosive.[46] In order to protect miners from this hazard, federal and state laws require mine operators to monitor the levels of methane in the mine and to remove the methane from mineshafts.[47] Traditionally, although most methane was vented using large ventilation fans, some miners would drill into coal seams prior to mining for purposes of removing the methane before mining and venting any remaining methane once mining had started.[48] This technique "allowed the gas to escape with no effort to appropriate the gas."[49] It was a wasteful process that developed when "CBM was considered a dangerous waste product which escaped from coal fuel, rather than part of the coal itself."[50] CBM is now a valuable energy source, but coal miners are still required to vent this gas, as "[t]he grant of coal mining rights would be useless if it did not include the right to ventilate methane gas from the coal mining area, pursuant to the requirements of the law."[51]

The gas industry, on the other hand, frequently extracted CBM as part of commercial natural gas production.[52] Gas producers typically drilled vertical boreholes into the coal and pumped the methane out, in much the same way that oil or natural gas is normally extracted.[53] This type of CBM production was used to extract methane from unmined or unmineable coal seams.[54] Because CBM can be produced by both coal mining and traditional gas extraction techniques, both coal producers and gas producers claim a right to its sale:[55] the coal producer claims the CBM as a natural part of the coal, while the gas producer claims that, because CBM is a gas, and not a solid like coal, the CBM should be considered part of the gas estate. This distinction has been the subject of several lawsuits that have resulted in a wide variety of interpretations and out-

45. *Id.*
46. *Id.*
47. *Id.*
48. *Id.*
49. Bobbier Johnson, Casenote, *Coalbed Methane Ownership Rights in Wyoming*, 8 GREAT PLAINS NAT. RESOURCES J. 46, 49 (2004).
50. Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865, 876 (1999).
51. NCNB Tex. Nat'l Bank, N.A. v. West, 631 So.2d 212, 228 (Ala. 1993).
52. *See* Lewin, *supra* note 12, at 577.
53. *See id.*
54. *See id.*
55. *See id.* at 598.

comes.[56]

B. The State of Coalbed Methane Ownership

Although implied incidental mining rights exist independently of ownership rights, an examination of the current ownership regime is useful because it highlights the ongoing tension between coal and gas interests. Further, an examination of the ownership framework demonstrates the litigation risks that coal operators who choose to capture and sell otherwise-vented methane may face.

The current status of federal coal ownership traces back to the turn of the twentieth century. At that time, the federal government treated coal like other minerals,[57] offering coal-bearing land at five dollars an acre to anyone who could mine it.[58] Because coal-bearing lands could be cheaply acquired, even if they were to be used for non-mining purposes, this led to widespread fraud in the distribution of coal lands to the railroads and other industries.[59] In the face of a resulting national coal crisis, President Theodore Roosevelt withdrew sixty-four million acres of coal-bearing public land from sale under public land laws.[60] However, this action enraged homesteaders who had already begun settling these lands on the good-faith assumption that they would be able to keep such lands for farming and other agricultural purposes.[61] In response, Congress passed the Coal Lands Act of 1909, which authorized issuance of patents—or land titles—"to individuals who had already made good-faith agricultural entries onto tracts later identified as coal lands . . . subject to 'a reservation to the United States of all coal in said lands, and the right to prospect for, mine, and remove the same.'"[62] The Coal Lands Act of 1910 "opened the remaining coal lands to new entry under the homestead laws, subject to the same reservation of coal to the United States."[63]

The Bureau of Land Management ("BLM") no longer sells

56. For an in-depth discussion of these cases, see Part II.B, *infra*.
57. *See* Kenneth D. Hubbard, *Drafting Private Agreements Relating to Public Lands*, 3 NAT. RESOURCES & ENV'T 9, 9 (1988).
58. *See* 30 U.S.C. § 29 (2000).
59. *See* Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865, 868–69 (1999).
60. *See id.* at 869.
61. *See id.*
62. *Id.* at 870.
63. *Id.*

coal-bearing land, but instead leases it to coal companies pursuant to the Mineral Lands Leasing Act ("MLA").[64] The BLM is a branch of the United States Department of the Interior ("DOI") and is responsible for overseeing the operation of coal leases on federal lands.[65] The DOI currently has no official position as to who owns federal coalbed methane.[66] In 1981, the Solicitor of the DOI issued an opinion, since withdrawn, that stated, "[c]oalbed gas is not included in a coal lease under the MLA."[67] Because "Congress [had] never specifically addressed the question of whether the right to extract coalbed gas is part of a coal lease or part of an oil and gas lease," the Solicitor relied on the meaning of "coal" as it was understood in 1909 and 1910.[68] In addition, the Solicitor stated that, under lands reserved pursuant to the 1909 or 1910 Coal Lands Acts or the Stockraising Homestead Act of 1914, "all minerals other than coal, including coalbed gas, passed to the surface owner," and that coalbed gas is disposable as a gas under the MLA.[69] However, the Solicitor withdrew this opinion during the *Amoco Production Co. v. Southern Ute Indian Tribe* litigation discussed *infra*.[70] Therefore, the DOI's position on ownership of federal CBM is now unclear.

The leading federal case regarding CBM ownership, *Amoco Production Co. v. Southern Ute Indian Tribe*, held that the CBM contained in land granted under the Coal Lands Acts of 1909 and 1910 belonged to the surface owner because Congress did not reserve CBM under these Acts.[71] The Coal Lands Acts protected, among other parcels, property that had been traded to the United States by the Southern Ute Indian Tribe in 1880.[72] In 1938, the United States returned these lands to the Southern Ute Tribe to the extent the United States still had ti-

64. *See* ROCKY MT. MIN. L. FOUND., LAW OF FEDERAL OIL AND GAS LEASES § 3.02[1] (2004).

65. *See* William F. Carr, *Who's in Charge? An Introduction*, SPECIAL INST. ON REGULATION AND DEV. OF COALBED METHANE, ROCKY MT. MIN. L. INST. ch. 10A (Nov. 2002).

66. *See id.*

67. *Ownership of and Right to Extract Coalbed Gas in Federal Coal Deposits*, 88 Interior Dec. 538, 538 (1981).

68. *Id.* at 549.

69. *Id.* at 538.

70. *See* LAW OF FEDERAL OIL AND GAS LEASES, *supra* note 64, at §3.02[1].

71. *See* Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865, 880 (1999).

72. *Id.* at 870.

tle.[73] Because these lands had been settled by homesteaders, the United States no longer had title to the surface estates, and the Southern Ute Tribe only received title to the coal that had been reserved under the Coal Lands Acts.[74]

In the 1980s, as CBM became a valuable energy source, the individual landowners who had title to these surface estates entered into leases with Amoco Production Company that allowed Amoco to produce CBM in exchange for Amoco paying royalties.[75] The Southern Ute Indian Tribe sued Amoco and the landowners, claiming that the tribe should receive the CBM royalties because it had been granted the rights to the coal.[76] The surface owners responded that they were entitled to the royalties because the return of "coal" to the tribe did not include the right to the CBM.[77] The United States District Court for the District of Colorado agreed with the surface owners and granted summary judgment, stating that "common sense dictates that in 1909 and 1910, Congress intended 'coal' to mean the solid rock substance" and concluding that "Congress did not intend to reserve CBM gas in the 1909 and 1910 Acts but only the solid rock coal."[78]

The United States Supreme Court agreed, reasoning that CBM had been of little commercial value when the conveyances were executed.[79] The Court affirmed the district court's holding regarding original congressional intent.[80] Thus, the Court held, Congress in 1909 and 1910 would not have considered CBM to have been included in a conveyance of "coal," even though modern science has since changed this assessment.[81]

Although under *Southern Ute* a coal operator does not own the CBM found within his coal estate, general application of *Southern Ute* to federally leased coal lands is limited in three significant ways. First, "the *Southern Ute* decision is necessar-

73. *Id.*
74. *Id.*
75. *Id.* at 871.
76. *See id.* at 865.
77. *Id.* at 865.
78. S. Ute Indian Tribe v. Amoco Prod. Co., 874 F. Supp. 1142, 1153–54 (D. Colo. 1995).
79. Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865, 866, 873 (1999) (negatively framing the question as "not whether, given what scientists know today, it makes sense to regard CBM gas as a constituent of coal but whether Congress so regarded it in 1909 and 1910").
80. *Id.*
81. *See id.*

ily limited to coal reserved under the Coal Lands Act of [1909 and] 1910"[82] and thus does not address CBM ownership in lands where the United States owns or has reserved all of the mineral estate.[83] For such lands, it is unclear whether *Southern Ute*'s holding applies. If the coal lease in question was issued on Coal Acts land, *Southern Ute* would hold that the federal coal operator does not own the CBM.[84] However, after 1916, Congress reserved "all minerals," not just coal.[85] Therefore, if the land in question was reserved after 1916, *Southern Ute*'s holding may not apply. Further, under the MLA, the federal government receives royalties from the production of both coal and gas, including CBM.[86] Thus, if the coal and gas are both federally owned, *Southern Ute*'s central question of who should receive royalties for CBM development is irrelevant: the federal government receives royalties regardless of who extracts the CBM. Still, "many argue that the decision will undoubtedly become precedential for other private land actions" and "could be applied to many other situations in which landowners sold the rights to their coal with no intent to sell rights to the valuable CBM."[87]

Second, *Southern Ute* does not address whether CBM must be leased as a gas under the MLA,[88] although the BLM continues to permit CBM drilling and extraction in conjunction with oil-and-gas leases.[89] After withdrawing its 1981 opinion, the DOI no longer has a formal position regarding whether CBM should be included as a gas under an oil-and-gas lease.[90] *Southern Ute* did not clarify this issue. Nevertheless, the BLM has granted CBM drilling permits to many oil-and-gas lessees, facilitating thousands of CBM wells.[91] There is no case or

82. Patrick R. Day & Charles P. Henderson, *Getting Along or Going to Court: Ownership and Development Conflicts Between Coalbed Methane and Coal*, 46 ROCKY MT. MIN. L. INST. ch. 7 (2000).

83. *See id.* at ch. 7-6 to -7.

84. *See Amoco*, 526 U.S. at 880.

85. *See* Day & Henderson, *supra* note 82, at ch. 7-6 to -7.

86. *See* LAW OF FEDERAL OIL AND GAS LEASES, *supra* note 64, at 13-3.

87. Laura D. Windsor, Amoco Production Company v. Southern Ute Indian Tribe*: A Final Resolution to the Battle over Ownership of Coalbed Methane Gas?* 17 GA. ST. U. L. REV. 893, 916 (2001) (citation omitted).

88. For a more in-depth discussion of the applicability of the MLA to normally vented CBM, see text accompanying notes 180–191, *infra*.

89. *See* LAW OF FEDERAL OIL AND GAS LEASES, *supra* note 64, at 3-6, 3-31.

90. *Id.* at 3-6.

91. *Id.*

other law, however, *requiring* CBM drilling and extraction to be in conjunction with an oil-and-gas lease.

Finally, *Southern Ute* only addresses ownership of CBM as a distinct estate and does not address whether CMM incidentally released as a byproduct of coal mining may be sold or otherwise consumed by the federal coal operator. *Southern Ute* held that a coal owner did not have the right to lease the CBM rights, but did not consider whether the coal owner could have sold the CMM had he captured it himself in the process of mining the coal. Indeed, although the right to sell such CMM was not considered, the right to extract and vent CMM was upheld in *Southern Ute*.[92] The Court, citing *Williams v. Gibson*, an 1888 Alabama case, stated that "[t]he right to dissipate the CBM gas where reasonable and necessary to mine the coal . . . reflects the established common-law right of the owner of one mineral estate to use, and even damage, a neighboring estate as necessary and reasonable to the extraction of his own minerals."[93] Commentators have noted that this

> propels one to the inescapable conclusion that regardless of the nature of the public lands act creating the severance of minerals . . . , when there are two commercially valuable mineral estates in the same lands, the owners are entitled to develop them and to use, consume, or damage so much of the other estate as is reasonably necessary to enjoy the estate.[94]

Because the Mine Safety and Health Act ("MSHA") requires the coal operator to remove CMM for safety purposes,[95] such CMM removal is "necessary and reasonable" to the extraction of the coal and is therefore allowed by *Southern Ute*.[96] Further, as explained in Part II, *infra*, although no federal law specifically speaks to the issue of sale, there is ample support in state case law and federal policy to suggest that the coal operator may sell the CMM once it has been extracted for safety purposes.

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92. *See* Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865, 879 (1999).

93. *Id.* (citing Williams v. Gibson, 4 So. 350 (Ala. 1888)).

94. Phillip Wm. Lear & J. Matthew Snow, *Coal and Coalbed Methane Development Conflicts Revisited: The Oil and Gas Perspective*, *in* PUBLIC LAND LAW, REGULATION, AND MANAGEMENT 10-1, 10-8 (Rocky Mt. Min. L. Fdn. 2003).

95. *See* 30 U.S.C. § 863.

96. *See* Lear & Snow, *supra* note 94, at 10-7.

II. IMPLIED INCIDENTAL MINING RIGHTS

The right of a mine operator to use the other valuable natural resources on his or her land is often referred to as an implied incidental mining right. The coal operator's obligation to ventilate CMM for safety purposes creates a "mutual simultaneous right[]" to consume such methane, but does not create an ownership right to the exclusion of the gas estate holder, as forbidden by *Southern Ute*.[97] Discussing the theory of implied incidental mining rights, Professor Lewin points out that such incidental mining rights do not provide any right to capture CBM that would not normally be vented: "the incidental mining right theory *presumes* that the party exercising this right has no title to the associated mineral and would have no right to remove it except in conjunction with the mining of the primary mineral [coal]."[98] Because of the strong federal policy favoring a return of both energy and royalties to the public for the use of federal lands,[99] however, coal operators should be allowed to sell any incidentally produced methane. Several states, including Colorado, have expressly or impliedly allowed such sale with regard to state or private coal operators.[100]

A. Federal Policy SuggestsTthat a Coal Operator Should Be Allowed to Sell Any Incidentally Produced Methane

Allowing a coal operator to sell incidentally produced methane is consistent with the BLM's energy-management goals, such as the optimization of CBM recovery and the maximization of the return to the public.[101] In order to achieve these goals, the BLM issued a policy memorandum to assist in

97. Lewin, *supra* note 12, at 646–47.

98. *Id.* at 648.

99. *See* Bureau of Land Management, *Instruction Memorandum No. 2003-253* (Aug. 26, 2003), *available at* http://www.wy.blm.gov/minerals/cazmaps/im2003-253.html (declaring that "[t]he BLM will seek to . . . [o]ptimize the recovery of both [coal and CBM] resources in an endeavor to secure the maximum return to the public in revenue and energy production").

100. *See, e.g.*, NCNB Tex. Nat'l Bank, N.A. v. West, 631 So.2d 212, 228–29 (Ala. 1993); Vines v. McKenzie Methane Corp., 619 So.2d 1305, 1306 (Ala. 1993); U.S. Steel Corp. v. Hoge, 468 A.2d 1380 (Pa. 1983); Williamson v. Jones, 19 S.E. 436 (W. Va. 1894); Wood County Petroleum Co. v. W. Va. Transp. Co., 28 W. Va. 210 (1886); Kier v. Peterson, 41 Pa. 357 (1862).

101. William B. Prince, *Joint Development of Coal and Coalbed Methane*, 48 ROCKY MT. MIN. L. INST. 19-1, 19-40 (2002).

resolving CBM development conflicts between competing federal coal and gas leaseholders.[102] The memorandum espoused four objectives: (1) to optimize recovery of both resources—coal and CBM—in order to maximize the return to the public of both energy and royalties; (2) to prevent waste of the resources; (3) to honor the rights of each lessee; and (4) to protect health, safety, and the environment.[103] BLM state offices are instructed to implement these policies, either through regulations or through facilitating negotiations, in ways that optimize recovery of both coal and CBM and that minimize adverse environmental impacts.[104]

Other federal policies also support allowing the coal operator to sell incidentally produced methane in order to maximize the return to the public of both energy and royalties.[105] For example, the Federal Land Policy and Management Act ("FLPMA") declared that it is the policy of the United States to make use of all of its lands and resources.[106] As explained in FLPMA, the United States is entitled to receive fair market value for the use of its lands.[107] The Act encourages the development of hydrocarbon resources so that their value may be returned to the public both in royalty payments and in usable energy.[108] Thus, FLPMA codifies a federal policy objective encouraging the sale and consumption of federal energy-producing minerals, including CBM, and the payment of royalties to the federal government for such sale and consumption.[109] However, it is generally accepted that royalties are not required when venting CMM because no income is received from such use.[110] If the coal operator is unable to sell the nor-

102. *See* Bureau of Land Management, *supra* note 99.

103. *Id.*

104. *See* Lear & Snow, *supra* note 94, at 10-45.

105. *See* 42 U.S.C. § 13336–68; Elizabeth A. McClanahan et al., *Title Issues: Beyond* Amoco v. Southern Ute, Part IV.C, *in* REGULATION AND DEVELOPMENT OF COALBED METHANE 3-1 (Rocky Mt. Min. L. Fdn. 2002).

106. *See generally* 43 U.S.C. § 1701 (2000).

107. *See id.* at § 1701(a)(9).

108. *See id.* at § 1701(a)(12); *see also* Bureau of Land Management, *supra* note 99.

109. Further, a federal coal lessee is required to prevent any wasteful use of other mineral deposits. *See* 30 U.S.C. § 187 (2000); *see also* Sample Coal Lease, *available at* http://contracts.onecle.com/peabody/coal.lease.1998.08.04.shtml. If a coal operator has the opportunity to sell normally vented methane, such a use would reduce the wasteful venting of methane, putting it instead to the productive use of power generation.

110. *See* Prince, *supra* note 101, at 19–24.

mally vented CMM, the value of that CMM is not returned to the public, as no royalties or energy generation will be realized.[111] Thus, allowing the coal operator to sell normally vented CMM is the best way to maximize the return to the public, as required by FLPMA.

B. Many States, Including Colorado, Allow a Coal Operator to Sell Incidentally Produced Methane

Colorado encourages coal operators to sell normally vented CMM.[112] Although no case law supports this right, state policy encourages state coal operators to use incidentally produced CMM for their benefit.[113] Further, when issuing a lease on state-owned gas or coal, Colorado allows the coal operator to sell any gas that is incidentally produced during mining operations.[114] While this policy does not apply to federal leases, it indicates that Colorado prefers a resolution of the issue that allows the sale of any methane produced incidentally to mining.[115]

Many cases in other states have recognized the right of a coal operator to sell incidentally produced CMM. Several early, albeit still valid, cases support the notion that incidental production of oil and gas owned by another estate creates no liability for the incidental producer as long as that production is unavoidable.[116] Under these circumstances, the incidental producer has a right to sell or otherwise consume such oil or gas in a manner that assists the incidental producer's extraction of his own minerals. For example, in an 1861 Pennsylvania Supreme Court case, the owner of a brine well was found to have title to the oil produced as a byproduct of salt produc-

111. *See* 30 U.S.C. § 187; *see also* Sample Coal Lease, *supra* note 109.

112. *See* J. Hovey Kemp & Kurt M. Peterson, *Coal-Bed Gas Development in the San Juan Basin: A Primer for the Lawyer and Landman*, *in* GEOLOGY & COALBED METHANE RESOURCES OF THE NORTHERN SAN JUAN BASIN, COLORADO AND NEW MEXICO 257, 259 (Rocky Mtn. Assoc. of Geologists 1988); Phillip W. Lear, *Multiple Mineral Development Conflicts: An Armageddon in Simultaneous Mineral Operations?*, 28 ROCKY MT. MIN. L. INST. 79, 162 (1982).

113. *See* Kemp & Peterson, *supra* note 112; Lear, *supra* note 112, at Part IV.B.2.

114. *See* Kemp & Peterson, *supra* note 112; Lear, *supra* note 112, at Part IV.B.2.

115. For a more detailed discussion of Colorado's authority to make decisions regarding federal coal leases, see Part III.A, *infra*.

116. *See* text accompanying notes 117–18, *infra*.

tion and was granted the right to "either let it run to waste or prepare it for the market."[117] In another case, the Kansas Supreme Court held that both the oil and gas estate owners could "necessarily interfere with the property of the other" and allowed the oil estate owner to continue venting gas without compensating the owner of the gas estate, despite the gas estate owner's complaint that the oil operator was wasting gas in the process of producing oil.[118]

Modern state case law, in contrast, has placed limits on the right to sell incidentally produced CMM. For example, in Pennsylvania, a coal operator may only sell CMM that is extracted during the normal coal mining process.[119] If the gas migrates from the coal seam into the surrounding earth, ownership reverts to the surface owner.[120] In Alabama, the right to mine coal includes the right to possess the CMM estate only "so far as is reasonably necessary to carry on . . . mining operations."[121] The coal operator may capture and sell CMM only if it is captured during the normal coal mining process.[122] Like Pennsylvania, Alabama also limits the coal operator's CMM ownership rights to gas that did not migrate out of the coal seam before capture.[123] However, the Alabama court expanded on Pennsylvania's approach by requiring the coal lessee to share with the gas lessee any profits received from the coal operator's capture and subsequent sale of gas that migrated out of the coal seam.[124] Any gas recovered by the coal operator from wells it drilled into the coalbed for methane extraction prior to mining remained the property of the coal operator, and

117. Kier v. Peterson, 41 Pa. 357, 362 (1861). *Kier* was cited for this proposition by the Pennsylvania Supreme Court in U.S. Steel Corp. v. Hoge, 468 A.2d 1380, 1383 (Pa. 1983).

118. Arnold v. Garnett Light & Fuel Co., 174 P. 1027, 1028 (Kan. 1918). Of course, waiver of liability for unavoidably vented gas does not give coal operators carte blanche to waste CBM, as the BLM and many state conservation agencies, including the COGCC, require federal coal operators to minimize the possible wasting of surface and underground resources. *See* COLO. REV. STAT. §§ 34-60-102, 34-60-120 (2007); Lear, *supra* note 112, at Part IV.B.2.

119. *See Hoge*, 468 A.2d at 1383.

120. *See id.*

121. Vines v. McKenzie Methane Corp., 619 So.2d 1305, 1308 (Ala. 1993) (citing Williams v. Gibson, 4 So. 350 (Ala. 1888)).

122. *See* NCNB Tex. Nat'l Bank, N.A. v. West, 631 So.2d 212, 228–29 (Ala. 1993).

123. *See id.* at 229.

124. *See id.*

no profit-sharing was required.[125]

Some states have, however, forbidden the consumption or sale of either CBM or CMM even if it is removed for safety or venting purposes, unless the coal conveyance states otherwise.[126] These states have largely focused on the language of the conveyance at issue. For example, Wyoming examined conveyance language that granted the right to all "minerals . . . mined or extracted . . . in conjunction with coal mining operations"[127] and determined that the grantor could not have intended to include CBM or CMM in the grant because profitable extraction techniques did not exist until twenty years after the conveyance.[128] Thus, the grantor would not have considered CBM to be a mineral extracted in conjunction with coal mining.[129] Likewise, Montana focused on the statutory definition of coal and determined that the grantor would not have intended to include CBM in the conveyance.[130]

Neither of these cases applies in the federal lease context. The Wyoming Supreme Court's holding was based on concern about interpreting a grantor's original intent after previously non-valuable minerals had become valuable due to: "(1) discovery of new methods of production; (2) changes in economics making production of a previously known, but unwanted, mineral profitable; (3) or discovery of the presence of minerals not previously known to exist."[131] In contrast to the conveyance considered in *Newman*, every federal coal lease has been issued or renewed within the past twenty years: federal coal leases are issued for twenty-year terms, although they may be extended as long as the lease produces sufficient "commercial quantities" of coal.[132] As early as 1981, the DOI recognized that CBM could be extracted with coal as part of a coal lease.[133] Thus, all

125. *See id.*

126. *See* Newman v. RAG Wyo. Land Co., 53 P.3d 540, 545 (Wyo. 2002); Carbon County v. Union Reserve Coal Co., 898 P.2d 680, 687 (Mont. 1995).

127. *Newman*, 53 P.3d at 542.

128. *See id.* at 546.

129. *See id.*

130. *See Carbon County*, 898 P.2d at 686–87 (citations omitted).

131. *Newman*, 53 P.3d at 546.

132. *See* 30 U.S.C. § 207 (2000). The determination of "commercial quantity" is beyond the scope of this Comment.

133. *See Ownership of and Right to Extract Coalbed Gas in Federal Coal Deposits*, *supra* note 67 (*withdrawn during* Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865 (1999)); LAW OF FEDERAL OIL AND GAS LEASES, *supra* note 64, at § 3.02.

current federal coal leases have been issued or renewed after CBM became valuable. The Wyoming court's concern is therefore inapposite in the federal lease context.

The Montana Supreme Court's reasoning is also inapplicable to the federal lease context. First, the Montana court relied on the DOI's now-withdrawn opinion regarding the severability of the coal estate.[134] Second, while the court recognized the coal owner's "mutual, simultaneous right to extract and to capture" CMM, it left open the possibility that the coal operator would have to pay the gas operator for any gas extracted, even if extracted for safety purposes.[135] If allowed, such a limitation would be contrary to all other case law, including *Southern Ute*, which had not yet been decided.[136] Thus, the Montana court's reasoning is largely nullified by modern federal law.

While state courts have "[s]truggle[ed] to articulate clear rules for the resolution of this difficult issue," often using "confusing and inconsistent reasoning,"[137] many states grant the coal operator the right to sell CMM subject to certain limitations. These limitations—allowing the sale of CMM only when it is produced incidentally and only when it is captured before it migrates into the surrounding strata—indicate that state courts implicitly recognize the implied incidental mining rights theory.[138]

III. CONSTITUTIONAL ISSUES

Although a federal coal operator may have the right to extract and sell CMM that would normally be vented, it is still unclear whether such a right could be recognized by a state government agency without violating constitutional principles. State agencies, such as the COGCC (Colorado Oil and Gas Conservation Commission), have the power to make rules that are the functional equivalent of BLM rules, as long as these rules are in accord with federal laws, including the United States Constitution.[139] In particular, any rule that the COGCC

134. *See Carbon County*, 898 P.2d at 687 (citing *Ownership of and Right to Extract Coalbed Gas in Federal Coal Deposits*, *supra* note 67).

135. *Id.* at 689.

136. *See id.* at 689.

137. Newman v. RAG Wyo. Land Co., 53 P.3d 540, 548 (Wyo. 2002).

138. *See* Lewin, *supra* note 12, at 645–47.

139. *See, e.g.*, San Juan Citizen's Alliance v. Babbitt, 228 F. Supp. 2d 1224, 1233 (D. Colo. 2002) ("[D]ecisions made by COGCC should be treated the same as

passes must be within the state's power to regulate, must not be preempted by existing federal law, and must not violate takings law.

Rulemaking action by the COGCC is needed for several reasons. Governmental recognition would be useful in cases of competing gas and coal leases, as competing leaseholders would otherwise have a significant incentive to claim all of the CMM rights for themselves, resulting in uncertainty and potential litigation. This uncertainty is precisely what has prevented coal operators from developing CMM recovery operations in the past.[140] To avoid these problems, a statute or rule specifically allowing coal operators to make use of the CMM should be established. Although a federal statute or BLM rule would clearly resolve any uncertainty, Congress and the BLM have been unwilling to act.[141]

A. Colorado Has Police Power Authority to Regulate Federal Coal Operations

The MLA specifically allows state governments to regulate oil, gas, and coal extraction to the extent allowed by their police powers.[142] Such police powers include "regulat[ing] the rights of coal owners and gas owners to prevent waste of CBM, promot[ing] its orderly development, and minimiz[ing] extraction-related conflicts."[143] "Under the 'police power,' a state has the authority to enact regulatory legislation to control resource use in the interest of health, safety, morals, and public welfare."[144] Allowing federal coal operators to sell or otherwise consume incidentally produced CMM would optimize recovery of this otherwise-wasted resource. Preventing the methane from escap-

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those made by BLM.").

140. *See* Franklin, *supra* note 18.

141. In 2000, the Powder River Basin Resources Development Act, which would have provided for the co-development of CBM resources among coal and oil-and-gas lessees in the Powder River Basin, was introduced in the United States Senate. *See* Powder River Resource Development Act of 1999, S. 1950, 106th Cong. (1999). However, the Act did not pass the Senate. For the text of the Act, see http://thomas.loc.gov/cgi-bin/cpquery/?&dbname=cp106&sid=cp106G9Nkr&refer=&r_n=sr490.106&item=&sel=TOC_0&.

142. *See* 30 U.S.C. § 189 (2000) ("Nothing in this chapter shall be construed or held to affect the rights of the States or other local authority to exercise any rights which they may have.").

143. Lewin, *supra* note 12, at 671.

144. *Id.*

ing to the environment would provide recognized environmental benefits by reducing greenhouse gas emissions and improving local air quality.[145] Therefore, a state rule that allows a coal operator to sell normally vented CMM falls under the police power.[146]

In Colorado, the Colorado Oil and Gas Conservation Act expressly prohibits the wasting of any gas in the state[147] and gives the COGCC authority over federal and Indian lands to the extent necessary to prevent waste and mitigate adverse environmental impacts.[148] Thus, permitting such a use is within the jurisdiction of the COGCC, even if the coal is on federal land. The COGCC is also empowered to protect the environment from harmful consequences of mining, including the reduction of greenhouse gases and other toxic emissions.[149]

A recent New Mexico case demonstrated the power of state oil and gas conservation commissions to regulate federal coal and oil-and-gas leases.[150] New Mexico's Energy, Minerals and Natural Resources Department Oil Conservation Division ("NMOCD"), which is substantially similar to the COGCC, has jurisdiction over federal leases in New Mexico to the extent necessary to prevent waste.[151] In a 2002 order, the NMOCD, acting under its statutory authority, and under a memorandum of understanding with the BLM, considered competing claims between a federal gas lessee and a federal coal lessee concerning which lessee would be allowed to extract minerals first.[152] Although the order granted the gas operator the right to expand gas drilling ahead of coal mining in order to minimize waste of gas resources,[153] a later order emanating from the same dispute suggested, without further explanation, that the

145. *See id.* at 584–85.

146. *See* Huron Portland Cement Co. v. City of Detroit, 362 U.S. 440, 442 (1960) ("Legislation designed to free from pollution the very air that people breathe clearly falls within the exercise of even the most traditional concept of what is compendiously known as the police power. In the exercise of that power, the states and their instrumentalities may act, in many areas of interstate commerce . . . concurrently with the federal government.").

147. *See* COLO. REV. STAT. § 34-60-107 (2005).

148. *See id.* §§ 34-60-106, 34-60-107, 34-60-120.

149. *Id.* §§ 34-60-106, 34-60-120.

150. *See Application of Richardson Operating Co. to Establish a Special Infill Well Area Within the Basin-Fruitland Coal (Gas) Pool*, Order No. R-11775 at ¶ 1 (N.M. Energy, Minerals and Natural Resources Dep't 2002) (on file with author).

151. *See* N.M. STAT. §§ 70-2-6, 70-2-11, 70-2-12 (2007).

152. *See Application of Richardson*, *supra* note 150.

153. *See id.* ¶ 29.

coal operator follow the same BLM policy objectives that applied to the gas lessee and "also seek ways to put the methane it would otherwise vent and waste to beneficial use."[154] This case provides a good example of a state's implementation of both BLM and state conservation agency policies that encourage coal operators to consume otherwise-wasted CMM, even when the corresponding oil-and-gas estate is in other hands. In Colorado, the COGCC has authority to turn such a policy into a rule.[155]

The COGCC has even broader power than the NMOCD to make decisions regarding BLM land. In the context of permitting CBM development, the COGCC's authority over federal and Indian lands was recognized by a United States District Court, which held that "decisions made by COGCC should be treated the same as those made by BLM."[156] The court based its holding on a 1991 Memorandum of Understanding ("MOU") between the Colorado BLM and the COGCC.[157] The MOU gives the COGCC the initial authority to make decisions regarding federal oil-and-gas leases, providing that such decisions fall under the COGCC's statutory authority and that the Colorado office of the BLM is allowed to protest the COGCC's decision within three business days.[158] If the Colorado BLM office does not object, the COGCC decision is deemed to be a BLM decision, with jurisdiction over federal leases and subject to the same opportunity to appeal or challenge as if the decision had been rendered exclusively by the Colorado BLM office.[159] Thus, the COGCC is explicitly empowered to make a rule allowing federal coal operators to sell incidentally produced methane.

Congress envisioned states having such a role in developing CBM-related policy on federal lands when it passed the En-

154. *Id.* ¶ 76.

155. Although the COGCC does not regulate coal mining directly, it has the authority to require any gas lessee to allow a split-estate coal lessee to sell or otherwise consume the CMM. *See* text accompanying notes 147–49, *supra.*

156. San Juan Citizen's Alliance v. Babbitt, 228 F. Supp. 2d 1224, 1233 (D. Colo. 2002) (citing Burlington Res. Oil & Gas Co. v. Colo. Oil & Gas Comm'n, 986 F. Supp. 1351, 1354 (D. Colo. 1997)).

157. *See Burlington*, 986 F. Supp. at 1353.

158. *See Memorandum of Understanding Between the Colorado Bureau of Land Management and the Colorado Oil and Gas Conservation Commission*, ¶ F(3) (Aug. 22, 1991), *available at* http://oil-gas.state.co.us/Library/mou-moa/MOU-BLM.htm.

159. *See id.* ¶ G.

ergy Policy Act of 1992 ("EPACT").[160] EPACT directs the Secretary of Energy to promote the conservation and recovery of CBM.[161] It also promotes technology for using the air found in mine ventilation systems—which contains low concentrations of vented CMM—in nearby power generation facilities and other technologies for using CMM recovered from coal mines.[162] To optimize conservation and recovery of CBM, EPACT encourages states to determine ownership of CBM where the United States has any interest, whether as the owner of the surface estate, the coal estate, or the oil-and-gas estate.[163]

Under EPACT, any state that contains significant deposits of CBM—and has no statutory, regulatory, or common law procedure for determining ownership of the methane—becomes subject to the administration of the Secretary of the Interior until ownership certainty has been established.[164] In order to be removed from the Secretary of the Interior's administration, EPACT requires these "affected states"[165] to enact laws or procedures that encourage the development of CBM within those states.[166] Specifically, EPACT mandates that states create a statutory or regulatory scheme for deciding CBM ownership in a way that encourages development of this resource.[167] The Secretary of the Interior is ordered to preserve the mineability of coal seams and provide for the prevention of waste and maximization of recovery of coal and CBM in a manner that will protect the rights of all entities owning an interest in the CBM resource.[168] Even if the CBM is federally owned, states are encouraged to create rules that allow the coal operator to recover otherwise vented CBM—including explicit direction "to use mine ventilation air in nearby power generation facili-

160. *See* McClanahan, *supra* note 105, at Part IV.C.

161. *See* 42 U.S.C. § 13336 (2000).

162. *See id.*

163. *See* 42 U.S.C. § 13368; McClanahan, *supra* note 105, at Part IV.C.

164. *See Id.* at § 13368(b).

165. Colorado is specifically exempt from the "affected states" portion of EPACT. *Id.* However, from a federal policy perspective, EPACT shows that states have been encouraged to develop rules for assigning rights related to CBM ownership, with a mandate to decide ownership issues in a way that most encourages the development of the resource, even when the mineral or surface estate is federally owned. For more discussion of state powers in the CBM context, see Part III.B, *infra.*

166. § 13368(c)

167. *Id.* at § 13368(c)–(d).

168. *Id.* at § 13368(d).

ties"[169]—and to distribute the proceeds from CBM recovery projects among all interest holders.[170]

EPACT was passed before the Supreme Court's ruling in *Southern Ute*. Thus, in the limited circumstances to which *Southern Ute* clearly applies—namely, where the disputed lands were granted under the Coal Lands Acts and the coal estate and the surface estate are held by different private parties—EPACT's ownership-resolution function would be preempted by *Southern Ute*. However, EPACT is still a good example of federal policy encouraging states to develop federally leased CMM resources and allowing states to create ownership rules to advance such development.[171] A COGCC rule that encourages productive and environmentally friendly use of CMM released from federally leased coal by allowing for its sale is therefore in accord with EPACT's stated purpose and is well within the state's power to regulate.

B. Colorado's Power to Regulate CBM Is Not Preempted by Federal Law

Under the state's police power, state law applies to oil and gas production on federal lands only to the extent that: 1) Congress or the Secretary of the Interior has not demonstrated intent to preempt state law; 2) federal law does not fully occupy the field; and 3) the state law does not directly conflict with the federal law.[172] A Colorado rule allowing a federal coal operator to sell incidentally produced methane would not be preempted by federal law under any of these three preemption analyses. Most telling, Congress has not demonstrated intent to preempt state law in the mineral extraction context. The United States District Court for the Western District of Oklahoma so held in *Texas Oil and Gas Corp. v. Phillips Petroleum Co.*, noting that the MLA "seems to leave to the States the power to exercise

169. *Id.* at § 13,336.

170. *See id.* at § 13,368(g)–(k).

171. *See* id. at § 13,336; McClanahan, *supra* note 105, at Part IV.C. While Colorado is specifically exempted from EPACT, EPACT nonetheless exhibits a congressional preference for a state-by-state approach to the CMM ownership question.

172. *See* Fred E. Ferguson, Jr., *Who Is in Charge? Role of the Bureau of Land Management*, *in* REGULATION & DEVELOPMENT OF COALBED METHANE 10D-1, 10D-4 (2002).

State police power over Federal oil and gas leases."[173] The United States Supreme Court affirmed state jurisdiction over federal lands in *California Coastal Commission v. Granite Rock Co.*, holding that there was no "congressional expression of intent to pre-empt . . . state regulation" of the mineral extraction industry.[174]

Congress has not fully occupied the field of mineral extraction regulation on federal lands. Preemption by fully occupying the field is not shown merely because "Congress could . . . readily enact a complete code of law governing transactions in federal mineral leases among private parties. . . . Even where there is related federal legislation in an area . . . it must be remembered that 'Congress acts . . . against the background of the total *corpus juris* of the states.'"[175] The MLA gives the DOI "limited, but not exclusive, controls over the leasing of federal lands for oil and gas production."[176] For example, states may regulate the types of agreements entered into by competing leaseholders.[177] The crucial question becomes whether "the federal interest requires a uniform rule."[178] Where it does, "the entire body of state law applicable to the area conflicts and is replaced by federal rules."[179] The federal interest does not require a uniform rule in this area. In fact, by promoting a state-by-state approach to CBM ownership and development through EPACT, Congress has expressly declined to create a uniform rule.

Finally, there is no direct conflict between the rule proposed here and current federal law. In the absence of a "direct conflict" between state and federal law, state laws that regulate mining operations on federal land are valid.[180] Oil, gas, and coal on federal lands, including CBM, are subject to leasing

173. Texas Oil and Gas Corp. v. Phillips Petroleum Co., 277 F. Supp. 366, 369 (W.D. Okla. 1967), *aff'd*, 406 F.2d 1303 (10th Cir. 1969).

174. Cal. Coastal Comm'n v. Granite Rock Co., 480 U.S. 572, 593–94 (1987) (specifically referencing state environmental regulation).

175. Wallis v. Pan Am. Petroleum Corp., 384 U.S. 63, 68 (1966) (quoting HART & WECHSLER, THE FEDERAL COURTS AND THE FEDERAL SYSTEM 435 (1953)).

176. Kirkpatrick Oil & Gas Co. v. United States, 675 F.2d 1122, 1124 (10th Cir. 1982).

177. *See id.* at 1125–26.

178. Boyle v. United Tech. Corp., 487 U.S. 500, 508 (1988).

179. *Id.*

180. Thomas J. Kimmell, *Oil and Gas Leasing on Federal Lands: Application of State and Local Laws*, 12 COLO. LAW. 1458, 1461 (1983) (citing Brubaker v. Bd. Of County Comm'rs, 652 P.2d 1050 (Colo. 1982)).

under the MLA.[181] However, even though a gas deposit is subject to leasing, there is no requirement that it be leased.[182] Therefore, a rule allowing the coal operator to sell the CMM without a gas lease would not be in direct conflict with the MLA.

Additionally, a coal operator on federal lands has both a right and an obligation to capture and release CMM as necessary for safety purposes.[183] Federal coal leases require compliance with federal safety regulations, including regulations mandating the venting of CMM, and do not include any requirement that such CMM be leased or paid for.[184] Although the opinion was later withdrawn for other reasons, the Solicitor of the DOI stated, "nothing . . . detracts from any coal lessee's obligation to comply with the coalbed gas ventilation provisions of the Mine Health and Safety laws."[185] Therefore, it is logical to conclude that a federal coal lease authorizes the extraction of CMM for venting purposes and that no gas lease is required for such extraction. The Solicitor recognized as much: "the coal leasing provision of the MLA . . . [does] not authorize a coal lessee's extraction of coalbed gas, *other than the venting of the gas required by mine health and safety laws and regulations*."[186]

Because a coal operator may extract CMM for safety purposes without a lease, the coal operator should be able to sell such CMM without a lease. The MLA gives the Secretary the authority to determine, through the process of issuing leases, who may extract minerals from leaseable land and what royalties must be paid for such extraction.[187] The MLA authorizes

181. *See* 30 U.S.C. § 226(a) (2000) ("All lands subject to disposition under this chapter which are known or believed to contain oil or gas deposits may be leased by the Secretary."); 43 C.F.R. § 3100.0–3(a) (2006). *But see* LAW OF FEDERAL OIL AND GAS LEASES, *supra* note 64, at 3–6 ("[T]here is no longer any formal statement by the Department of the Interior that an oil and gas lease issued under the Mineral Leasing Act covers coalbed methane.").

182. *See* Burglin v. Morton, 527 F.2d 486, 488 (9th Cir. 1975) ("The permissive word 'may' in Section 226(a) allows the Secretary to lease such lands, but does not require him to do so.").

183. *See* Amoco Prod. Co. v. S. Ute Indian Tribe, 526 U.S. 865, 879 (1999) ("[T]he right to mine the coal implies the right to release gas incident to coal mining."); 30 C.F.R. § 75.323 (requiring that methane concentration in coal mines be below one percent).

184. *See* 30 U.S.C. § 187; *see also* Sample Coal Lease, *supra* note 109.

185. *Ownership of and Right to Extract Coalbed Gas in Federal Coal Deposits*, *supra* note 67, at 549.

186. *Id.* at 538–39 (emphasis added).

187. *See* Sample Coal Lease, *supra* note 109, at Part I § 2 ("Lessor, in consid-

the Secretary to "establish, alter, change, or revoke drilling, producing, rental, minimum royalty, and royalty requirements" of leases.[188] Thus, the Secretary has authority over two distinct concerns related to leasing: extraction of minerals (drilling and producing),[189] and payment of royalties to the government (rental and royalty requirements).[190] Therefore, the rights granted under the MLA are the rights to "drill for, extract, remove, and dispose of oil and gas deposits."[191] Under a federal coal lease, the right to drill for, extract, remove, and dispose of CMM has already been authorized because the coal operator is already required to extract CMM for safety purposes. To require a lease for such already authorized extraction would be redundant.

Further, the MLA does not authorize the Secretary to make decisions regarding the sale or other use of extracted minerals.[192] Therefore, requiring a lease for the *sale* of gas,

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eration of any bonuses, rents, and royalties to be paid . . . grants and leases to lessee the exclusive right and privilege to drill for, mine, extract, remove, or otherwise process and dispose of the coal deposits in, upon, or under the following described lands."). *See generally* 30 U.S.C. §§ 181–287.

188. 30 U.S.C. § 226(m). Although § 226(m) specifically refers to gas leases, the Secretary has similar authority over coal leases.

189. *See, e.g.*, 30 U.S.C. § 181 (reserving the right to extract helium); § 184a (authorizing cooperative units for sharing profits, regardless of where in the unit the oil or gas was extracted); § 201 (dividing lands into tracts based on the size that is most economical for extraction, authorizing the extraction of coal as necessary for rights-of-way, and limiting leases to lessees that actually extract coal); § 202a (allowing the consolidation of coal leases to maximize extraction); § 207 (requiring the diligent extraction of coal); § 208–1 (authorizing exploratory programs to aid the extraction of coal); § 209 (allowing a reduction in royalties in order to increase extraction of leaseable minerals); § 225 (requiring the prevention of waste when extracting oil or gas); § 226 (determining who may extract oil and gas and the royalty to be paid and allowing the term of a lease to be continued so long as oil and gas are actually extracted).

190. *See, e.g.*, 30 U.S.C. § 191 (discussing payment and disposition of royalties); § 192 (requiring royalties be paid in oil or gas); § 207 (requiring the payment of royalties for coal); § 209 (allowing a reduction in coal royalties in order to increase extraction of leaseable minerals); § 223 (allotting a portion of land with newly discovered oil and gas deposits to the finder and determining royalties to be paid on such land); § 224 (determining royalties to be paid on § 223 land); § 226 (determining who may extract oil and gas and the royalty to be paid; requiring compensatory royalties be paid for drainage).

191. Bureau of Land Management, Utah State Office, The Federal Onshore Oil and Gas Leasing System, http://www.ut.blm.gov/Infocenter/infoandgleasing.html (last visited Jan. 24, 2007) ("The lease grants the lessee the right to explore and drill for, extract, remove, and dispose of oil and gas deposits, except helium, that may be found in the leased lands.").

192. It does establish a preference right for the government to purchase such minerals for the use of the Army and Navy. *See* 30 U.S.C. § 193a.

when such gas has already been properly extracted without a lease requirement, is beyond the scope of the MLA, and no direct conflict arises with the rule proposed here. However, because the authority to extract CMM is limited to such CMM as is extracted for safety and ventilation purposes, a coal operator is not authorized to extract any additional CMM without a lease.

Under any of the three preemption analyses, a state rule allowing a federal coal operator to sell incidentally produced CMM is not preempted by federal law. Applying Colorado's current state policy regarding use and sale of incidentally produced CMM to federal lands within Colorado would not conflict with federal law, but would complement it. Such a law would further the development of CBM as an energy resource, as encouraged by EPACT, and would maximize the return to the public in both royalties and energy, as dictated by FLPMA and the MLA.

C. The COGCC Rule Proposed Here Would Survive a Takings Challenge

Although the MLA specifically allows state governments to regulate oil and gas drilling to the extent of their police powers,[193] if such regulation "goes 'too far' [it] can be treated as a taking of property that cannot be sustained without compensation" under the Fifth Amendment.[194] In order to avoid a takings challenge, a rule that allows federal coal operators to sell or otherwise consume CMM must either "not deprive the [gas] owner of a property right; or . . . deprive[] the owner of a property right but [do] so for public use and with just compensation."[195] Because federal and state law have not settled the question of whether the gas lessee has a property right in normally vented CMM, the first standard cannot be assumed to have been met, and the second standard requires examination.

"It has long been accepted that the [state] may not take the property of [one private party] for the sole purpose of transfer-

193. *See* 30 U.S.C. § 189 ("Nothing in this chapter shall be construed or held to affect the rights of the States or other local authority to exercise any rights which they may have.").

194. Lewin, *supra* note 12, at 671 (quoting Pa. Coal Co. v. Mahon, 260 U.S. 393, 415 (1922)).

195. *Id.* at 674.

ring it to another private party . . . even though [the first party] is paid just compensation."[196] Thus, even if just compensation is paid, there must be some public purpose. "A purely private taking could not withstand the scrutiny of the public use requirement; it would serve no legitimate purpose of government and would thus be void."[197] Further, the "public use" must confer some actual benefit on the public, as the government would not "be allowed to take property under the mere pretext of a public purpose, when its actual purpose was to bestow a private benefit."[198]

Kelo v. City of New London held that "public purpose" should be defined broadly, with great deference given to the government.[199] In addition, the *Kelo* Court noted that certain regions of the country may have unique public purposes:

> Viewed as a whole, our jurisprudence has recognized that the needs of society have varied between different parts of the Nation . . . . For more than a century, our public use jurisprudence has wisely eschewed rigid formulas and intrusive scrutiny in favor of affording legislatures broad latitude in determining what public needs justify the use of takings power.[200]

Implicit in this reasoning is the notion that what constitutes a public use in one state, such as Colorado, may be different from what constitutes a public use in another state. When considering property rights associated with coal mining, this variation is highly relevant. Seventy-five percent of coal produced in Colorado comes from federal leases.[201] In contrast, only five to fifteen percent of coal produced in the Appalachian states comes from federal leases.[202] The regional discretion

196. Kelo v. City of New London, 545 U.S. 469, 477 (2005).

197. Haw. Hous. Auth. v. Midkiff, 467 U.S. 229, 245 (1984).

198. *Kelo*, 545 U.S. at 478.

199. *See id.* at 480 ("The disposition of this case therefore turns on the question whether the City's development plan serves a 'public purpose.' Without exception, our cases have defined that concept broadly, reflecting our longstanding policy of deference to legislative judgments in this field.").

200. *Id.* at 482–83.

201. *See* COLO. GEOLOGICAL SURVEY, INFORMATION SERIES 70: COLORADO MINERAL AND MINERAL FUEL ACTIVITY, (2004), *available at* http://geosurvey.state.co.us/portals/0/ MMF_2004_Coal.pdf.

202. U.S. GEOLOGICAL SURVEY, FEDERALLY OWNED COAL AND FEDERAL LANDS IN THE NORTHERN AND CENTRAL APPALACHIAN BASIN COAL REGIONS (Feb. 2002), *available at* http://pubs.usgs.gov/fs/fs013-02/fs013-02.pdf.

recognized by *Kelo* gives the COGCC broad authority to allow coal operators to capture CMM from federally leased coal in Colorado, without having to consider whether such a use would be permissible in Pennsylvania, Alabama, West Virginia, or any other state in which coal and gas are largely privately owned.

Kelo has been controversial because of the perceived expansion of what is considered a "public purpose,"[203] but the interest achieved by the rule proposed here would have qualified as a "public purpose" even without *Kelo*'s expansive interpretation. The capture and consumption of CMM will reduce waste, help protect the environment, and supply energy for power generation.[204] These are well-recognized public purposes.[205] Therefore, even if the coal lessee does not own normally vented CMM, the proposed rule complies with the Takings Clause as long as just compensation is paid.[206] Accordingly, the COGCC should consider a provision allocating some of the royalties, after compensatory royalties are paid,[207] to any gas lessees. These royalties could serve as the "just compensation" required by the Takings Clause. In addition to bolstering the constitutionality of the rule, such a provision would likely decrease resistance from the gas industry.[208]

IV. ROYALTIES

As previously discussed, royalties serve two important functions in supporting the legality of the rule proposed here. First, Congress has asserted that the United States should receive compensation for the use of its resources. Without the payment of royalties for the sale of CMM, such a use would violate federal policy and would likely be preempted. Second, to

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203. *See* John Gibeaut, *Taking Control: The Eminent Domain Controversy Finds a Battlefront in the Development of a Cincinnati Suburb*, 91-DEC A.B.A. J. 45, 46 (2005) ("*Kelo*'s holding that economic development alone serves a public purpose opens an expansive new frontier for eminent domain.").

204. *See* Lewin, *supra* note 12, at 584–85, 686.

205. *See Id.* at 686–87.

206. "Just compensation" may come from the government itself, or from a private party. *See generally* Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419 (1982) (holding that a cable company's payment of one dollar to a property owner for installing a cable box is sufficient compensation to satisfy a takings analysis).

207. *See infra* Part IV.

208. *See* Lewin, *supra* note 12, at 689.

survive a takings challenge, a rule allowing the sale of CMM would need to include compensation to the gas estate holder who is losing the value of his property. Payment of royalties to the gas estate holder would satisfy the "just compensation" requirement for a taking.

FLMPA declares that it is the policy of the United States to make use of all of its lands and resources[209] and that the United States is entitled to receive fair market value for such use.[210] Development of mineral resources is also encouraged.[211] Thus, FLPMA codifies a federal policy objective encouraging the leasing of federal minerals, including CBM, and the payment of royalties to the federal government for such leases. However, it is generally accepted that royalties are not required when venting CMM from federally leased coal for safety purposes, as no income is received from such use.[212] If such normally vented gas were sold or otherwise consumed, the determination of whether or not royalties would be due would depend on the specific use in question. In the context of a federal oil or gas lease, no royalties are due on any gas that is put to "beneficial use."[213] But, if the federal coal operator sells the CMM, royalties would probably be due.

All federally leased gas is subject to royalties, "except gas unavoidably lost or used on, or for the benefit of, the lease . . . ."[214] "Beneficial use" is defined as on-site use of gas for the benefit of the producing lease as fuel for drilling, heating, compression, refining or other mining-related purposes.[215] Therefore, on-site production of electricity for the exclusive use of the coal mine would be a beneficial use and would presumably be exempt from royalty requirements-free. Further, gas that is used for unavoidable venting purposes may be used without ac-

209. *See generally* 43 U.S.C. § 1701.

210. *See* § 1701(a)(9).

211. *See* § 1701(a)(12).

212. *See* Prince, *supra* note 101.

213. *See generally* DEP'T OF INTERIOR, WASTE PREVENTION / BENEFICIAL USE (June 1, 1998), *available at* http://www.blm.gov/nhp/efoia/wy/1998ib/wy1998-081-atch1.pdf (discussing the application of federal and Wyoming statutes and regulations relating to beneficial use).

214. 30 C.F.R. § 202.150(b).

215. *See* DEP'T OF INTERIOR GEOLOGICAL SURVEY, NOTICE TO LESSEES AND OPERATORS OF ONSHORE FEDERAL AND INDIAN OIL AND GAS LEASES (NTL-4A): ROYALTY OR COMPENSATION FOR OIL AND GAS LOSS, *available at* http://www.blm.gov/utah/vernal/ minerals/NTL4A.html.

cruing royalties.[216] However, if a coal operator were to sell the CMM, royalties would probably be due to the United States, the gas estate holder, or both, as such a use would be subject to royalties under a traditional gas lease.

A well that extracts methane from a federal gas deposit for coal-mining safety purposes "drains" federal gas. If federal gas is being drained by a well that is not required to be under a MLA gas lease, such as a well used by a coal operator to extract methane for safety purposes, the BLM may execute a compensatory royalty agreement with the well operator. Under such an agreement, both the United States and any other gas lessee whose well is being drained must be compensated for the drainage.[217] In the alternative, the operator of the draining well may enter into a private "communitization agreement" with the drained lessee, but the parties must still pay the United States a compensatory royalty of 12.5 percent of all production attributable to the drained well, as if the gas were produced by the drained lessee.[218] While venting CMM does not create such an obligation under the beneficial use doctrine, the sale of such CMM is likely to do so.[219] Thus, the United States and any corresponding gas lessee would be entitled to compensation at a rate of 12.5 percent of the sale value of such methane.[220]

Colorado state leases provide a similar compensation requirement, as do EPACT-related statutes in some states.[221] Colorado state coal leases provide:

> Methane Gas . . . produced, saved, and/or sold by the coal mining Lessee from mineable coal measures . . . shall be the property of the Lessee provided that the gas is removed as a mining safety procedure prior to mining and that a royalty be paid to Lessor per the terms set forth in Lessor's then current oil-and-gas leases.[222]

Colorado state gas leases provide substantially similar language, allowing the coal lessee to use or sell incidentally

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216. *See id.*
217. 43 C.F.R. §§ 3100.2-1 to -2, 3181.5.
218. *See id.*; 30 U.S.C. § 226(g).
219. *See* Kemp & Peterson, *supra* note 112; Lewin, *supra* note 12 at 647.
220. *See* 43 C.F.R. §§ 3100.2-1 to -2, 3181.5; 30 U.S.C.A. § 226(g).
221. *See* Kemp & Peterson, *supra* note 112.
222. *Id.*

produced CMM, provided that royalties are paid to the state, while also allowing gas operators to produce CBM.[223]

Other states have rules allowing a private coal operator to sell incidentally produced methane from a private lease provided that royalties are paid to the proper parties. These states should serve as a model for a Colorado rule affecting federal leases. For example, in West Virginia, a former EPACT "affected state," state law authorizes federal (and any other) gas and coal lessees to participate in a "pooling structure" that allows all parties with an ownership interest in the CBM to realize profits from the produced methane, after costs, fees, and royalties have been deducted.[224] Under such a pooling structure, all parties with an interest in the CBM—including the surface owner, gas owner, and coal owner—are encouraged to allow CBM operators to drill and to apportion the profits according to the size of each party's interest in the estate.[225] If the parties cannot come to a voluntary agreement, a CBM operator can apply to the West Virginia CBM review board, which is authorized to create a pooling structure and assign appropriate profit-apportionment.[226] Regardless of how the profits are distributed, royalties are still paid to the gas lessor in accordance with the gas lease terms.[227] Any COGCC rule should take this system into account. It provides incentives for both the coal operator and the gas operator, as both will realize profits from harnessing the otherwise wasted CMM. It also accomplishes the important necessity of paying royalties to the gas lessor, which was recognized by Lewin in his discussion of implied incidental mining rights when he stated "neither logic nor justice would excuse [the coal operator] from compensating the actual owner of the gas."[228]

V. CONCLUSION

An optimal solution resolving CMM ownership and use issues will promote environmental and other policy goals while

223. *See id.*

224. *See* McClanahan, *supra* note 105, at Part IV.C (citing W.VA. CODE §§ 22-21-1 to -29 (2002)).

225. W.VA. CODE §§ 22-21-15 to -17 (2005).

226. *Id.* at § 22-21-17.

227. *See* McClanahan, *supra* note 105, at Part IV.C (citing §§ 22-21-1 to -29).

228. Lewin, *supra* note 12, at 647.

maintaining fairness for the involved parties.[229] While CBM ownership issues have been largely settled by *Southern Ute*, questions regarding the right to use CMM remain unresolved. A solution should "encourage the capture of CBM in conjunction with mining . . . because the current practice of venting CBM dissipates this valuable resource and contributes to the problem of global warming."[230]

Colorado is in a unique position to encourage the "creative solutions" that the EPA hopes to see[231] in resolving these questions. The COGCC has particularly broad power over the energy industry in Colorado. It has jurisdiction over federal lands—both to prevent waste of the methane resource and also to protect against environmental harm.[232] It also has authority to promulgate a rule allowing a coal operator to capture and sell CMM, provided that certain limitations are included: only normally vented gas may be captured and sold, and royalties must be paid to any party who has an interest in the gas, whether that party is the government or a private leaseholder. A rule providing payment of royalties on CMM that is normally vented benefits the public interest by reducing waste and protecting the environment. If royalties are paid to the holder of the gas estate, the gas estate holder will profit from the gas that is now lost, and no takings issue will arise. Thus, such a rule would benefit both the gas and coal industries. Such a rule is also in accordance with FLPMA, EPACT, and other federal and state policies: CBM resources will be developed, returning their value to the public in royalties and energy, and adverse environmental impacts will be mitigated. The rule proposed here is fully supported by federal and state law and policy and is in the best interest of the federal government, coal and oil-and-gas operators, and the general public.

229. *Id.* at 650–51.
230. *Id.* at 651.
231. Franklin, *supra* note 11.
232. *See supra* Part III.A.