

Fractured: How a Circuit Split in Natural Gas Intellectual Property Law Puts the Environment at Risk

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The link between intellectual property and environmental harm is not necessarily a clear one. Nevertheless, the connection becomes more clear in this Comment, in which the author argues that United States Courts of Appeals with less restrictive intellectual property schema lower the barrier of entry into the natural gas market, thus introducing more firms into one area and raising the risk of environmental harm the industry as a whole can cause. A circuit split currently exists in the United States Courts of Appeals between the Fifth, Tenth, and Second Circuits in the context of proprietary facts and studies surrounding natural gas production, transmission, and sales. The Author argues that the United States Supreme Court should address this split immediately in order not only to resolve the split, but also to promote environmental protection.

I.	BACKGROUND: A BRIEF HISTORY OF HYDRAULIC FRACTURING IN THE UNITED STATES	250
II.	INTELLECTUAL PROPERTY ISSUES SURROUNDING HYDRAULIC FRACTURING	251
III.	THE CIRCUIT SPLIT	253
	A. Kern River Gas Transmission Co. v. Coastal Corp.: <i>In the Fifth Circuit, Studies and Reports Relating to Natural Gas Production Are Not Protected Under the Copyright Act</i>	253
	B. R.W. Beck, Inc. v. E3 Consulting: <i>In the Tenth Circuit, Studies and Reports Relating to Natural Gas Production May Be Protected Under the Copyright Act</i>	257
	C. New York Mercantile Exchange, Inc. v. Intercontinental Exchange, Inc.: <i>In the Second Circuit, Facts and Studies Related to Natural Gas Trading are Not Protected Under the Copyright Act</i>	260
IV.	SUMMARY AND CONCLUSION	263

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I. BACKGROUND: A BRIEF HISTORY OF HYDRAULIC FRACTURING IN THE UNITED STATES

With resources of “more than 1744 trillion cubic feet (Tcf) of technically recoverable natural gas”—a figure that grows every year as more reservoirs are located—the United States has one of the world’s largest reserves of natural gas.¹ Natural gas recovery can be further broken down into two general categories: conventional and unconventional recovery.² In conventional recovery, natural gas is extracted from the underground formations where it is comingled with oil.³ In fact, natural gas is one of the primary tools for driving oil out of the earth, as natural gas expands when the oilfield is punctured.⁴

This Comment, however, is primarily focused on intellectual property issues surrounding unconventional natural gas extraction. Despite the surging presence of hydraulic fracturing—commonly, but alternatively, spelled “fracing” and “fracking” depending on whether one is referencing materials put out by the industry or environmental activists, respectively—in the public eye in recent years, unconventional hydraulic fracturing has actually existed in one form or another since the 1970s.⁵ The technology, many scholars agree, was perfected in the 1990s, as natural gas companies finally figured out how to best drill, punch holes, and inject millions of gallons of water into the ground in an effort to extract natural gas “trapped within shale formations.”⁶ A main difference between that era decades ago and the situation the United States is facing today is simply that the rate at which natural gas is being discovered and extracted is much faster now than it was then.⁷ Specifically, the number of gas and gas condensate wells has almost doubled since the early 1990s.⁸ This large uptick in production is mostly

1. FRANK R. SPELLMAN, ENVIRONMENTAL IMPACTS OF HYDRAULIC FRACTURING 19 (2012).

2. *Id.* at 21.

3. Muhammad M. Rehman & Mahmoud Meribout, *Conventional Versus Electrical Enhanced Oil Recovery: A Review*, J. PETROLEUM EXPLORATION & PROD. TECH. 157, 159 (2012).

4. Howard Rogers, *Shale Gas—The Unfolding Story*, 27 OXFORD REV. ECON. POL’Y 117, 118 (2011).

5. Vello A. Kuuskraa & Hugh D. Guthrie, *Translating Lessons Learned from Unconventional Natural Gas R&D to Geologic Sequestration Technology*, 2 J. ENERGY & ENVTL. RES. 75-77 (2002).

6. Hannah Wiseman, *Trade Secrets, Disclosure, and Dissent in a Fracturing Energy Revolution*, 111 COLUM. L. REV. 1, 3 (2011).

7. Vernon L. Smith, *Economics of Production from Natural Resources*, 58 AM. ECON. REV. 409, 424-25 (1968).

8. *U.S. Natural Gas Number of Gas and Gas Condensate Wells*, U.S. ENERGY INFO. ADMIN., http://www.eia.gov/dnav/ng/hist/na1170_nus_8a.htm (last visited Sept. 11, 2013).

due to advanced recovery techniques, including horizontal drilling, water flooding, and carbon dioxide or “smart” water enhanced recovery.⁹

II. INTELLECTUAL PROPERTY ISSUES SURROUNDING HYDRAULIC FRACTURING

Hydraulic fracturing is emerging as a third rail of the United States energy arena.¹⁰ All across the country, new citizens groups are forming to protest fracking in their communities, while at the same time huge industrial companies are spending millions on lobbying and legal fees to move natural gas extraction forward.¹¹ In her 2011 article, Professor Susan Sakmar of the University of Houston Law Center discusses how the influx of domestic natural gas production gave rise to a whole host of issues, including environmental concerns, emerging technologies, the need for a stronger regulatory framework, and intellectual property rights.¹² Indeed, while the potential damage to rural areas seems to be the most public issue surrounding fracking,¹³ many of those concerns may actually have their roots in intellectual property.

Professor Hannah Wiseman’s 2011 article is an outstanding starting point for understanding just how important intellectual property is in the hydraulic fracturing context.¹⁴ Professor Wiseman’s thesis is that fracking IP issues are unique in the United States because our regulatory framework supports the intersection of “citizen participation to control industrial activity and its effects on public welfare”—private attorney generals—and mandatory industry disclosure to enable this participation.¹⁵ Landmark disclosure statutes such as the Emergency Planning and Community Right-to-Know Act (EPCRA) and the Safe Drinking Water Act (SDWA) support such a framework.¹⁶ The mandatory disclosure of toxic chemicals contained in substances used in

9. *Drill Seekers: Advanced Recovery Techniques Are Key to Maximising Oil Resources*, OXFORD BUS. GRP., <http://www.oxfordbusinessgroup.com/news/drill-seekers-advanced-recovery-techniques-are-key-maximising-oil-resources> (last visited Sept. 11, 2013).

10. Robert Nelson, *Ernest Moniz and Fracking Drive Environmentalist Off of the Rails*, FORBES (Mar. 26, 2013, 8:00 AM), <http://www.forbes.com/sites/realspin/2013/03/26ernest-moniz-and-fracking-drive-environmentalist-off-of-the-rails/>.

11. *Fracking Ban Lawsuit Ordered Move to Boulder County*, DENVER BUS. J. MORNING CALL (Mar. 12, 2013, 5:57 AM), http://www.bizjournals.com/denver/morning_call/2013/03/fracking-ban-lawsuit-ordered-moved-to.html.

12. Susan L. Sakmar, *The Global Shale Gas Initiative: Will the United States Be the Role Model for the Development of Shale Gas Around the World?*, 33 HOUS. J. INT’L L. 369, 395-96, 406-15 (2011).

13. *See id.* at 395-96.

14. *See* Wiseman, *supra* note 6 (discussing trade secrets involved in hydraulic fracturing).

15. *Id.* at 1.

16. *Id.*

the fracking process, as well as the number and nature of water quality standards, is a key piece of this legislation.¹⁷

The public desire for such disclosure is driven primarily by environmental concerns. These concerns include methane contamination of drinking water,¹⁸ noise pollution,¹⁹ natural gas surface leaks,²⁰ and even earthquakes.²¹ However, on top of all of these worries remains an overall citizen-backed demand for more disclosure of exactly what is being pumped into the earth and how those fluids affect the things we need to live, such as clean water, land that will not succumb to sinkholes, and noncontaminated fruits, vegetables, and grazing animals.²²

Directly opposing this push for hydraulic fracturing disclosure is the industry's desire to protect trade secrets and other closely guarded intellectual property in which natural gas companies have invested millions.²³ Some of the biggest players have even refused requests for disclosure, only releasing them after a federal subpoena was signed for the documents.²⁴

Natural gas companies point to several arguments in favor of nondisclosure. First, America's natural gas supply is sufficient to last us more than 100 years, according to some studies.²⁵ However, this prediction is only based on current rates of extraction; if the protected secrets of natural gas recovery were exposed, we would reduce our supply at a much more rapid pace and, perhaps even worse, waste precious resources by either releasing them into the air or leaving them in underground reservoirs.²⁶ Second, natural gas extraction is good for the public, both creating jobs and allowing local communities to participate

17. *Id.*

18. Stephen Osborn, Avner Vengosh, Nathaniel R. Warner & Robert B. Jackson, *Methane Contamination of Drinking Water Accompanying Gas-Well Drilling and Hydraulic Fracturing*, 108 PROCS. NAT'L ACAD. SCIENCES U.S. 8172, 8173 (Apr. 14, 2011).

19. Hannah Wiseman, *Untested Waters: The Rise of Hydraulic Fracturing in Oil and Gas Production and the Need to Revisit Regulation*, 20 FORDHAM ENVTL. L. REV. 115, 127 (2008).

20. Alexander Gurevich & George Chilingarian, *Subsidence over Producing Oil and Gas Fields, and Gas Leakage to the Surface*, 9 J. PETROLEUM SCI. & ENG'G 239, 242, 245-46 (1993).

21. Brian Resnick, *Can Fracking Cause Earthquakes?*, NAT'L J. (Sept. 5, 2013, 4:36 PM), <http://www.nationaljournal.com/energy/can-fracking-cause-earthquakes-20130905>.

22. *See California Bills Seek More Disclosure, Oversight of Fracking*, CBS SACRAMENTO (Mar. 10, 2013, 3:22 PM), <http://sacramento.cbslocal.com/2013/03/10/california-bills-seek-more-disclosure-oversight-of-fracking/>.

23. *Id.*

24. Wiseman, *supra* note 6, at 2.

25. Wade Goodwyn, *Texas Study Points to a Longer Natural Gas Boom*, NPR ALL THINGS CONSIDERED (Feb. 28, 2013, 6:01 PM), <http://www.npr.org/2013/02/28/173173548/texas-study-points-to-a-longer-natural-gas-boom>.

26. *Id.*

in the future of American energy independence.²⁷ Finally, compared with even the cleanest method of coal-based energy production, natural gas releases far fewer harmful emissions and can be used as a primary means of producing electricity and moving our cars, trucks, buses, and trains.²⁸

Despite massive public pushback, company disclosure of fracking information has been vague at best.²⁹ While companies have disclosed that they use up to 250 different chemicals, the public still does not know which ones are used at different sites, in what quantities, and what the effects of each chemical are individually and in combination with other toxins.³⁰

III. THE CIRCUIT SPLIT

A. Kern River Gas Transmission Co. v. Coastal Corp.: *In the Fifth Circuit, Studies and Reports Relating to Natural Gas Production Are Not Protected Under the Copyright Act*

The Natural Gas Act mandates that natural gas be transported through pipelines. In an effort to transport natural gas from huge reservoirs in Wyoming to places with the highest demand, such as Southern California, plaintiff Kern River successfully applied for a certificate of public convenience and necessity (CCN) in 1985.³¹ However, in 1986, a Federal Energy Regulatory Commission (FERC) administrative law judge (ALJ) determined that, due to the existence of two proposed routes for natural gas transmission, a hearing would have to be held to determine which, if either, was the best.³²

In compliance with the ALJ's request, Kern submitted two sets of scale maps, a "large-scale" set and a "quad" set,³³ the latter of which lies at the heart of this intellectual property controversy.³⁴ After investing an untold amount of time and money into developing the maps, which depicted topographical and other geographical data for the entire proposed route, Kern turned the quad maps over to the California State Lands Commission (Commission) and its consultants, the Chambers Group, in order to draft an environmental impact statement (EIS).³⁵

27. Wiseman, *supra* note 6, at 3-4.

28. Mark Bittman, *Is Natural Gas 'Clean'?*, N.Y. TIMES OPINIONATOR BLOG (Sept. 24, 2013, 9:05 PM), <http://opinionator.blogs.nytimes.com/2013/09/24/is-natural-gas-clean/>.

29. Wiseman, *supra* note 6, at 4-5.

30. *Id.*

31. Kern River Gas Transmission v. Coastal Corp., 899 F.2d 1458, 1460 (5th Cir. 1990).

32. *Id.*

33. *Id.*

34. *Id.*

35. *Id.*

Besides being distributed to governmental agencies, the ALJ ordered that the maps be accessible to any interested parties—including competitors—who were also participants in the proposed route hearing.³⁶

In somewhat of a regulatory feat, the Commission approved the EIS after just two small revisions. Although Kern would not have an exclusive right to use the approved areas for its pipeline, the firm had accomplished a significant step towards building a natural gas transmission infrastructure from Wyoming to southern California.³⁷

After Kern obtained the Commission's approval, one of Kern's competitors, the Wyoming-California Pipeline Company (Wy-Cal), filed for an expedited certificate of convenience and necessity.³⁸ Much of Wy-Cal's proposed route—approximately 450 miles—utilized the route for which Kern had already obtained approval.³⁹ In its proposal, Wy-Cal did not refer to any of Kern's maps, although, as discussed above, it did have access to them given the nature of the EIS hearing process.⁴⁰

The timeline of events is extremely important to the holding in this case. Realizing that its competitors might utilize the quad maps in which it had invested significant resources, Kern registered the maps with the Copyright Office in February 1988.⁴¹ Just one month later, in March 1988, the Commission and its consultant invited Wy-Cal to its offices in Albuquerque to review parts of Wy-Cal's proposal that deviated from the lands approved by the EIS approved in December 1987.⁴² Wy-Cal accepted the invitation and, in the meeting, Chambers provided Wy-Cal with several of Kern's maps in order to aid Wy-Cal in amending its proposal.⁴³ A year later, in March 1989, after Wy-Cal had made changes to its proposal using Kern's maps, the Commission issued a final certificate of public convenience and necessity (CCN) to Wy-Cal.⁴⁴

The case does not elucidate exactly how Kern found out that Wy-Cal had utilized its maps, but when it did, Kern sued both Chambers and Wy-Cal for violation of copyright law.⁴⁵ In addition to damages, Kern prayed that the court rescind the Commission's grant of the CCN to Wy-Cal and enjoin Wy-Cal from using the maps in the future.⁴⁶ Finally, Kern,

36. *Id.*

37. *Id.* at 1460, 1464.

38. *Id.* at 1460.

39. *Id.*

40. *Id.*

41. *Id.* at 1461.

42. *Id.* at 1460-61.

43. *Id.* at 1461.

44. *Id.*

45. *Id.*

46. *Id.*

under the Copyright Act, moved for a temporary restraining order (TRO) in an attempt to prevent Wy-Cal from taking any action based on its use of Kern's maps.⁴⁷

The lower court issued three distinct holdings. First, in a preliminary hearing on the injunction and TRO, the lower court held that because the maps "represented the idea of the pipeline and that the idea was inseparable from its expression," they were not copyrightable.⁴⁸ Second, the court held that even though Kern had registered the maps, the maps actually did not influence the Commission's grant of Wy-Cal's CCN; furthermore, Kern only registered the quad maps, and it was actually the large-scale maps that Wy-Cal had copied in its amended proposal.⁴⁹ Finally, under § 107 of the Copyright Act, Wy-Cal's use of the maps was fair because Wy-Cal only intended to copy or adopt the route, not directly profit from it.⁵⁰ In other words, Wy-Cal's use of Kern's maps caused Kern no irreparable harm.⁵¹

In affirming the district court's denial of Kern's motion for a preliminary injunction, the appeals court discussed the difficulty of distinguishing a copyrightable expression of an idea from a noncopyrightable idea.⁵² Under the Copyright Act, "pictorial, graphic, and sculptural works" are protected, but "in no case does copyright protection for an original work of authorship extend to any idea."⁵³ In reaching its holding, the Court of Appeals found that "lines representing the proposed location of a pipeline on standard reference, publicly available maps" constitute ideas, not expressions of ideas.⁵⁴ Therefore, despite Kern's having successfully registered the copyright on its maps, its proposed routes were held to be open to any competitor who also wished to use the federally approved lands.⁵⁵

In reaching this difficult holding, the court may not have realized just how consequential its decision would be moving forward. In fact, the court's decision precipitates two major consequences that we are still seeing today, one explicit and one implicit.

47. *Id.*

48. *Id.*

49. *Id.* Kern did not register the large-scale maps until April 1989, one month after the Commission, which had utilized and distributed those maps to Wy-Cal, granted Wy-Cal its CCN.

50. *Id.*

51. *Id.*

52. *Id.* at 1463-4; 17 U.S.C. § 102(a) (2012).

53. 17 U.S.C. § 102(a)-(b).

54. *Kern*, 899 F.2d at 1464.

55. *See id.*

The explicit consequence of the court's holding is that natural gas firms and energy transmitters in general put themselves at tremendous risk when they apply for the state and federal permits needed to site and operate energy transmission infrastructure, such as natural gas pipelines. Under the National Environmental Policy Act, any major federal action, such as the permitting of a natural gas pipeline under the Natural Gas Act, significantly affecting the quality of the human environment requires an EIS.⁵⁶ EISs, which are, of course, funded completely by the applicant (here, a natural gas company), are time-consuming and extremely expensive.⁵⁷

In at least the natural gas context and perhaps other energy (and nonenergy) contexts as well, the court in *Kern* made a bold statement that firms that invest in permitting EISs have little to gain and everything to lose; once a firm has invested millions in an EIS, there is nothing preventing that firm's competitors from utilizing the information resulting from the EIS to compete, all without having to invest their own money.⁵⁸

On a much more implicit level, however, the court's holding in *Kern* supports the unchecked expansion of natural gas development. By choosing not to protect copyrighted proposed pipeline routes in federal court, the United States Court of Appeals for the Fifth Circuit essentially created a "free-for-all" in the natural gas market. Instead of moving cautiously and requiring each new market player to invest the same resources that earlier firms did in evaluating the environmental consequences of natural gas extraction, the court left any company now free to "piggy-back" off of another company's investment. In *Kern*, it had taken Kern years to gain federal approval for the route, but it took Wy-Cal just months to get its approval.⁵⁹

Given the potentially devastating effects of natural gas production discussed above, the court's holding in a prima facie intellectual property case may have had tremendous impacts on the environment. With a lower barrier to entry in the natural gas market, more companies will populate the ever-expanding arena of production by hydraulic fracturing. Of course, the more fracking, the more risk for environmental harm to both humans and habitats. Choosing not to provide copyright protection

56. 42 U.S.C. § 4332 (2006).

57. *Environmental Impact Statements*, 4 N.Y. FORMS LEGAL & BUS. § 5:61 (2012) ("The environmental impact statement process is a lengthy and expensive process that can result in a drastic change in, or even the abandonment of, the proposed development.").

58. *See Kern*, 899 F.2d at 1464.

59. *Id.* at 1461.

to two sets of maps could lead to much greater harm than the court probably ever anticipated.

B. R.W. Beck, Inc. v. E3 Consulting: In the Tenth Circuit, Studies and Reports Relating to Natural Gas Production May Be Protected Under the Copyright Act

The facts in *Beck* are strikingly similar to the facts in *Kern*. Both involved engineering consultation firms that provided reports on natural gas production and transmission in a certain area.⁶⁰ The plaintiffs in both cases alleged copyright infringement based on a competitor's use of information contained in those reports.⁶¹ Yet, while the Fifth Circuit held in *Kern* that the information was not protected, the United States Court of Appeals for the Tenth Circuit held in *Beck* that the information may be protected under the Copyright Act.⁶²

As the Tenth Circuit noted, both parties in *Beck* conducted investigations into the “technical, environmental, regulatory and commercial aspects” of a proposed energy project, including natural gas power plants.⁶³ In 1994, the Sacramento Municipal Utility District (SMUD) hired R.W. Beck, Inc., to conduct a study into whether SMUD should construct two power plants, one of which was a natural gas plant.⁶⁴ In its report, Beck included information from some of its earlier studies, including one dating back to 1985.⁶⁵ Every single study Beck completed from 1982 onwards was protected by copyright, including the “Orange Study,” which Beck alleged E3 infringed upon in this case.⁶⁶

In 2006, Calyon Corporate and Investment Bank hired E3 to complete a study of two other proposed power plants.⁶⁷ The court referred to E3's study as the “Windsor Study” because it was prepared for Windsor Financial.⁶⁸ One of the primary authors of Beck's natural gas plant studies was Paul Plath, who, at the time of this case, was a Senior Vice President of E3.⁶⁹ In a section entitled “Principal Considerations and Assumptions Used in the Projection of Operating Results” in E3's

60. R.W. Beck, Inc. v. E3 Consulting, L.L.C., 577 F.3d 1133, 1137 (10th Cir. 2009); *Kern*, 899 F.2d at 1464.

61. *Beck*, 577 F.3d at 1137; *Kern*, 899 F.2d at 1464.

62. *Beck*, 577 F.3d at 1150; *Kern*, 899 F.2d at 1465.

63. *Beck*, 577 F.3d at 1137.

64. *Id.* at 1140.

65. *Id.* at 1137.

66. *Id.* at 1141-42.

67. *Id.* at 1137.

68. *Id.*

69. *Id.* at 1140.

study, the language is substantially similar to the language in a section of Beck's Orange Study entitled "Considerations and Assumptions."⁷⁰ For example, while the Orange Report contains the introductory phrase, "In the preparation of this report," the Windsor Report begins its assumptions section with, "In preparing this Report."⁷¹ The two reports also contain similar phrases such as "[t]o the extent that actual future conditions differ from those assumed herein" and "[w]hile we believe these assumptions are reasonable for the purpose of this report."⁷²

After discovering that E3 had used language extremely similar to the language in its own report, Beck sued in federal court, alleging, *inter alia*, copyright infringement under the Copyright Act.⁷³ Holding that the phrases and sentences in Beck's report only constituted ideas and not expressions of ideas, however, the district court granted E3's motion for summary judgment and dismissed all of Beck's claims.⁷⁴

On appeal, the Tenth Circuit affirmed the district court's grant of summary judgment against Beck on all of its state law claims, such as deceptive trade practices and unjust enrichment.⁷⁵ Although it did not decide the copyright issue outright, the court reversed the district court's grant of summary judgment on Beck's copyright infringement claim and strongly suggested that, on remand, the language in Beck's report could be copyrightable.⁷⁶

Much like the court in *Kern*, the court in *Beck* toed the line between a copyrightable expression of an idea and an uncopyrightable idea.⁷⁷ While Beck argued that its reports—including the specific language in those reports—constituted expressions of ideas that deserve protection under § 102(b) of the Copyright Act, E3 argued that "Beck cannot protect '[t]he ideas of disclaimer, qualification of assumptions and identification of risk factors' that appear in Beck's reports."⁷⁸ In defense of its very similar language, E3 argued that ideas such as assumptions "may only be expressed in a limited number of ways" and that individual words or combinations of words cannot by themselves be copyrighted.⁷⁹

70. *Id.* at 1140-41.

71. *Id.*

72. *Id.*

73. *Id.* at 1136.

74. *Id.*

75. *Id.*

76. *Id.* at 1150.

77. *Id.* at 1146-48.

78. *Id.* at 1144.

79. *Id.*

The Tenth Circuit quickly dismissed E3's arguments against Beck's copyright infringement allegations.⁸⁰ Instead of mere words, phrases, and sentences, Beck's Orange Report, for which it had properly registered a copyright, constituted a "literary work" expressly protected under the Copyright Act.⁸¹ In describing the potential investment opportunities in a proposed natural gas plant, Beck created a copyrightable literary work, and when E3 used the same language as Beck did in E3's own later report, E3 clearly infringed on that copyright.⁸²

Similar to the analysis in *Kern*, the court's holding in *Beck* has both explicit and implicit consequences. Explicitly, natural gas firms in the Tenth Circuit's jurisdiction were made aware of the possibility that any use of information related to a proposed natural gas production or generation facility must be original; firms may not copy any language (or, presumably, graphics) prepared by any other firm, as long as that material is copyrightable.⁸³ Unlike those in the Fifth Circuit, where natural gas companies are free to "piggy-back" on each other's investments in natural gas-related studies and reports without risk of copyright infringement, companies in the Tenth Circuit may not gain a free ride and use a competitor's previously prepared and copyrighted natural gas findings.⁸⁴

A potential consequence of the holding in *Beck* is that the development of natural gas production and electricity generation in the Tenth Circuit will be much slower than it is in the Fifth Circuit. In the Fifth Circuit, a competitor was allowed to lift an entire graphical depiction of a proposed pipeline and still successfully apply for not only a certificate of convenience and necessity (CCN), but also an *expedited* CCN.⁸⁵ In other words, once the initial work had been conducted by a firm willing to invest the money in natural gas development, a sort of Pandora's box was opened, and any other firm could use the former company's information to quickly enter the market and increase natural gas production.

According to the holding in *Beck*, however, this low barrier to entry simply may not exist in the Tenth Circuit. Every company that wants to produce, transmit, or distribute electricity using natural gas must spend

80. *Id.* at 1146.

81. *Id.*

82. *Id.* at 1147.

83. *See id.*

84. *Id.* at 1136-37; *Kern River Gas Transmission v. Coastal Corp.*, 899 F.2d 1458, 1460 (5th Cir. 1990).

85. *Kern*, 899 F.2d at 1461.

its own money on both internal and permitting-related studies.⁸⁶ Due to the higher cost of market entry in the Tenth Circuit, it logically follows that there would simply be less natural gas production in that jurisdiction compared to the Fifth Circuit, where the barriers to entry are much lower.

Again, the connection between intellectual property and potential and actual environmental harm emerges. With potentially fewer companies engaged in natural gas production in the Tenth Circuit, the risk of the devastating effects of gas production discussed above is much lower than it is in the Fifth Circuit, where gas development is more rampant. Indeed, the effects of natural gas production in the Fifth Circuit have been particularly deleterious.⁸⁷ Meanwhile, natural gas production in Tenth Circuit states such as Colorado, while still significant, is on a much smaller scale than it is in their counterparts in the Fifth Circuit.⁸⁸

C. *New York Mercantile Exchange, Inc. v. Intercontinental Exchange, Inc.: In the Second Circuit, Facts and Studies Related to Natural Gas Trading are Not Protected Under the Copyright Act*

The production of natural gas and hydraulic fracturing do not occur only in pipelines and electricity generation facilities. As a result of restructuring and deregulation beginning in the 1980s, some jurisdictions permit energy prices to be set based on market demand, not regulatory mandate.⁸⁹ Although housed in New York City, one of the largest energy markets, the New York Mercantile Exchange, Inc. (Mercantile), does not buy and sell New York energy or even energy from surrounding states.⁹⁰

86. See *Beck*, 577 F.3d at 1136-37.

87. See Paul Galley, *Gas Industry Spin Can't Cover Up Air, Water Problems Caused by Fracking*, HUFFINGTON POST (Apr. 2, 2012, 4:21 PM), http://www.huffingtonpost.com/paul-galley/gas-industry-spin-cant-co_b_1392676.html (describing how the effects of natural gas production—including incidents of water contamination, higher concentrations of volatile organic compounds, and increased reports of benzene poisoning and asthma—are particularly acute in Texas).

88. Compare *id.*, with Allison Wolff, *Frack Free Colorado Rally Calls for Renewable Energy Future*, HUFFINGTON POST (Oct. 25, 2012, 5:58 PM), http://www.huffingtonpost.com/allison-wolff/frack-free-colorado_b_2017786.html (comparing 93,000 natural gas wells in Texas to 48,000 in Colorado). Additionally, Tenth Circuit states have some of the strongest mandatory disclosure laws in the country, another source of intellectual property law that supports why firms may be less inclined to being in production in that jurisdiction. Kate Galbraith, *Seeking Disclosure on Fracking*, N.Y. TIMES (May 30, 2012), <http://www.nytimes.com/2012/05/31/business/energy-environments/seeking-disclosure-on-fracking.html>.

89. William W. Hogan, *Electricity Market Restructuring Reforms*, 20 CTR. FOR RES. IN REGULATED INDUS. 1, 18 (2001).

90. *N.Y. Mercantile Exch., Inc. v. Intercontinental Exch., Inc.*, 497 F.3d 109, 110 (2d Cir. 2007).

Rather, one of its most lucrative markets is the Henry Hub natural gas pipeline in Erath, Louisiana.⁹¹

One of the firms that actually participates in trading Henry Hub natural gas is IntercontinentalExchange, Inc. (Exchange).⁹² Because the Mercantile is primarily focused on futures trading set for the next day, firms like Exchange must place bids on “open contracts.”⁹³ After these firms place their bids, Exchange’s Clearing House evaluates the overall change in value in natural gas prices and determines whether the firm must post additional margin or receive payment on margin.⁹⁴ A trading tool called a settlement price is used to value the day’s price for natural gas.⁹⁵ Though they are most often set for the next day, settlement values may also be set for the upcoming month or other periods of time.⁹⁶

In a prime example of transcontinental finance, Exchange began using Mercantile’s settlement prices as bargaining chips in the London Clearing House (LCH) for energy trading.⁹⁷ In fact, the transmission of prices from Mercantile to the LCH became so regular that the court in the instant case noted that most prices utilized by the LCH were “copied from [Mercantile].”⁹⁸

Upset that its settlement prices were being used to set prices in other markets, Mercantile attempted to register copyright in its natural gas settlement prices in 2002.⁹⁹ The Copyright Office quickly rejected Mercantile’s application.¹⁰⁰ Nevertheless, soon thereafter Mercantile successfully obtained a copyright for its entire database of natural gas prices as well as other relevant market factors affecting settlement prices.¹⁰¹

When Exchange refused to stop transmitting Mercantile’s settlement prices to the LCH, Mercantile sued for a violation of the Copyright Act in 2002.¹⁰² However, after countermotions for summary judgment were filed, the district court ruled in favor of Exchange, granting its motion and dismissing all of Mercantile’s claims, including

91. *Id.*
92. *Id.*
93. *Id.*
94. *Id.* at 110-11.
95. *Id.*
96. *Id.* at 111.
97. *Id.* at 112.
98. *Id.*
99. *Id.*
100. *Id.*
101. *Id.*
102. *Id.*

its claim for copyright infringement.¹⁰³ In its holding, the district court reasoned that because the settlement prices are based on real-world facts and already widely publicized, they do not constitute trade secrets but rather “non-copyrightable words.”¹⁰⁴

On appeal, the United States Court of Appeals for the Second Circuit affirmed the district court’s grant of summary judgment for Exchange, because the settlement prices reflect mere “ideas” that are explicitly not subject to copyright under the Copyright Act, as opposed to “original” works, which do merit protection.¹⁰⁵ Likening Mercantile to more of a “discoverer” of a natural scientific fact than an artist who creates an original piece, the court held that Mercantile’s “discovery” of the natural gas settlement price for a given period of time was not protected.¹⁰⁶

The Second Circuit further supported its reasoning in an argument similar to the one that was specifically rejected by the Tenth Circuit in *Beck*. In *Beck*, the court held that just because an idea could only be expressed in a single or a limited number of ways did not mean that an expression of that idea, such as a phrase, did not deserve copyright protection.¹⁰⁷ In the case at bar, the court reasoned that if an idea—such as a settlement price—could only be expressed in a finite number of ways, then it would be against public policy to prevent others from discovering and utilizing that same settlement price.¹⁰⁸

I believe the court missed the mark in this case. Instead of evaluating the effort put into generating each time period’s settlement price, the court only focused on the number itself.¹⁰⁹ It is, of course, no surprise that the merger doctrine prevents parties from copyrighting basic units of expression such as numbers or letters.¹¹⁰ However, it is clear that natural gas settlement prices are used for the exact purpose that copyrights are intended to protect—to “promote the advancement of knowledge and learning by giving [parties] economic incentives.”¹¹¹

Beyond this potentially flawed reasoning, however, lurk even more troubling themes. We already know from the holding in *Kern* that natural

103. *Id.*

104. *Id.* at 113.

105. *Id.*

106. *Id.* at 114.

107. *R.W. Beck, Inc. v. E3 Consulting, L.L.C.*, 577 F.3d 1133, 1137 (10th Cir. 2009).

108. *N.Y. Mercantile Exch., Inc. v. Intercontinental Exch., Inc.*, 497 F.3d 109, 116-17 (2d Cir. 2007).

109. *Id.* at 118.

110. *Id.* at 117-18.

111. *CCC Info. Servs., Inc. v. Maclean Hunter Mkt. Reports, Inc.*, 44 F.3d 61, 65 (2d Cir. 1994).

gas firms in the Fifth Circuit are free to directly copy any of their competitors' studies and reports about natural gas production,¹¹² and we can anticipate that this "piggy-backing" leads to a larger and potentially more harmful natural gas market. The combination of this free rein on intellectual findings and unbridled market pricing for natural gas produced in Fifth Circuit jurisdictions such as Louisiana could be particularly devastating in terms of environmental consequences.¹¹³

We only need to look at the Enron debacle in order to see how restructuring and unregulated energy markets can wreak havoc on the grid.¹¹⁴ There is no reason to suspect that unregulated natural gas markets will not wreak the same havoc on the environment. The Fifth Circuit already permits more players to compete in the market, as discussed above, given the lower barriers to entry in that jurisdiction. Unregulated natural gas settlement prices lower that barrier to entry even further. As is the thesis of this Comment, more natural gas firms in the same area raise the risk of significant environmental damage to that area exponentially, as companies are willing to try more dangerous extraction and transmission techniques than they would otherwise attempt in order to gain a competitive edge.

IV. SUMMARY AND CONCLUSION

As the table below illustrates, a significant split exists in how the courts of appeals treat intellectual property surrounding natural gas production, transmission, distribution, and electricity generation. Even between the circuits that ultimately reached the same conclusion as to whether facts and studies surrounding the natural gas market were noncopyrightable, the courts differed significantly in the reasoning they used to reach those holdings.¹¹⁵

112. See *Kern River Gas Transmission Co. v. Coastal Corp.*, 899 F.2d 1458, 1464 (5th Cir. 1999).

113. *Mercantile*, 497 F.3d at 116-17.

114. Ken Silverstein, *Enron, Ethics and Today's Corporate Values*, FORBES (May 14, 2013, 7:12 AM), <http://www.forbes.com/sites/kensilverstein/2013/05/14/enron-ethics-and-todays-corporate-values/>.

115. *Compare Kern*, 899 F.2d at 1466, *with Mercantile*, 497 F.3d at 117.

Case	Jurisdiction	Issue	Holding
<i>Kern</i>	Fifth Circuit	Proposed natural gas pipelines	Noncopyrightable
<i>Beck</i>	Tenth Circuit	Proposed natural gas electric generators	Copyrightable
<i>Mercantile Exchange</i>	Second Circuit	Natural gas settlement prices in futures trading	Noncopyrightable

No matter how one feels about hydraulic fracturing in general or in terms of its environmental effects, courts in other circuits and perhaps the Supreme Court itself should consider the holding in *Beck* when fracking intellectual property issues arise. In all three cases discussed, natural gas production and trading companies invested millions into developing innovative technologies. In seemingly all other industries, such as pharmaceutical medicine or high-tech electronics, courts are quick to grant protections for these developments. Just because trade secrets—such as a proposed natural gas pipeline in *Kern* or a futures price in *Mercantile Exchange*—could be more publicly “used” does not mean that these inventions are any less copyrightable.

Ultimately, a resolution of this circuit split would rely on a correct application of § 102 of the Copyright Act. Whether it is a map—a clear example of a protected pictorial or graphic work—or a settlement price—an innovation that is nothing other than a trade secret used to bolster a firm’s market position—courts should grant broader protection for natural gas and hydraulic fracturing-related IP. Of course, such a resolution should not conflict with the disclosure requirements of federal, state, or local law. However, without a public health and welfare need to force disclosure, firms should feel comfortable knowing that the money and time they spend developing new inventions will be protected under the law.

More important to environmentalists, greater protection of natural gas intellectual property will simply lead to less natural gas production. The more that technologies and inventions related to natural gas are protected, the less those inventions can be utilized by any company that wishes to enter the market and the higher the barrier to entry will be for those companies. The fewer companies attempting to produce or actually producing natural gas there are, the less risk of environmental harm resulting from hydraulic fracturing there is. In another light, the more protections that exist for natural gas companies, the more

cautiously both regulatory bodies and private firms will proceed in extracting natural gas.

Therefore, a circuit-split resolution in favor of greater protection for natural-gas-related technologies would be a proverbial “win-win” result. First, companies that do devote resources to innovative natural gas technologies can remain confident that their developments will not simply be made public—without any repercussions—if that information gets into a competitor’s hands. Second, greater protection means fewer participants in the natural gas market, less natural gas production overall, and ultimately less risk of environmental harm from hydraulic fracturing. Third, a circuit resolution granting greater protections for copyrights would serve the true purpose of the Copyright Act—to encourage invention—which is so important to America’s reputation as a country devoted to innovation.