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A Pragmatic Approach to Decision Making in the Next Era of Oil and Gas Jurisprudence

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> "Not the origin, but the goal is the main thing. There can be no wisdom in the choice of a path unless we know where it will lead . . . . The rule that functions well produces a title deed to recognition . . . . The final principle of selection for judges . . . is one of fitness to an end.[1]

In 1859, "Colonel" Edwin Drake struck oil in Titusville, Pennsylvania.[2] Because markets and technology had converged to create demand for artificial illumination, Drake's fortunate discovery of an ample supply of oil ignited the birth of the oil and gas industry.[3] In the decades to come, the Titusville pattern of sudden discovery, followed by unbridled speculation and production, occurred in other parts of the United States. The last decades of the nineteenth century saw boom after boom in Ohio,[4] Oklahoma,[5] Kansas,[6] and California.[7]

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[1] BENJAMIN N. CARDOZO, THE NATURE OF JUDICIAL PROCESS 102 (1921).

[2] DANIEL YERGIN, THE PRIZE: THE EPIC QUEST FOR OIL, MONEY AND POWER [hereinafter YERGIN, THE PRIZE] 26–28 (1991). In his seminal work on the history of oil and gas industry, Dr. Yergin explains that E.L. Drake assumed the title "Colonel" in an effort to impress the locals. *Id.* at 26.

[3] *Id.* at 22–34.

[4] *Id.* at 52. In the mid-1880s oil was discovered in northwestern Ohio near the Indiana border, igniting a great boom in an area that became known as the Lima-Indiana Fields. *Id.* "The newly discovered fields were so prolific that, by 1890, they accounted for a third of United States oil production." *Id.* The field eventually extended into 21 counties in Indiana and 14 in Ohio, and produced 480 million barrels from 1886 to 1945. EDGAR WESLEY OWEN, TREK OF THE OIL FINDERS: A HISTORY OF EXPLORATION FOR PETROLEUM 124–26 (1975) [hereinafter OWEN, OIL FINDERS].

[5] Several discoveries were made in Oklahoma, including the prolific Glenn Pool outside Tulsa in 1905. YERGIN, THE PRIZE, *supra* note 2, at 87. Due to the rapid development of the Glen Pool, Oklahoma's annual production rose from 1,367,000 barrels in 1904 to 43,524,000 barrels in 1907, making Oklahoma the largest oil producing state at the time. OWEN, OIL FINDERS, *supra* note 4, at 230, 233; CARL C. RISTER, OIL! TITAN OF THE SOUTHWEST 124 (1949) [hereinafter

Spindletop in Beaumont, Texas, gushed forth an unprecedented seventy-five thousand barrels a day in 1901.[8] In 1931, the Texas boom resumed after discovery of the prolific East Texas Field, where wildcatter Doc Joiner was to fall prey to the tactics of the notorious oilman H.L. Hunt.[9] For most of the twentieth century, the oil boom surged in the United States and throughout the world.[10]

RISTER, TITAN].

[6] *See* OWEN, OIL FINDERS, *supra* note 4, at 231 (discussing early discoveries in Kansas). The first commercial oil field in the Mid-Continent region was discovered in 1893 near Neodesha, Kansas. Standard Oil built a refinery at Neodesha in 1897 and by 1904 Kansas' annual production peaked at 4,250,779 barrels. *Id.* As one newspaper from that era reported: "Kansas, struggling a few years ago to pay off a heart-breaking load of indebtedness, is alive today with the hum of factory wheels, the flare of furnaces in foundry and glass plants, brick yard and smelters, flour mills, sorghum mills, cotton mills – all as a result of the coming of oil." RISTER, TITAN, *supra* note 6, at 36 (quoting the *Kansas City Star* from January 18, 1903).

[7] *See* OWEN, OIL FINDERS, *supra* note 4, at 161 (discussing growth of California oil industries). The discovery of the Los Angeles City Field in 1892 resulted in the first big increase in California production. *Id.* The prolific Kern River field was booming in 1899 and operations were in progress in other major fields. *Id.* California had annual production of only 324,000 barrels in 1891, but rapid development thereafter increased the annual output to 24 million barrels by 1903. *Id.* Thus, "California had by the turn of the century emerged as a major oil province." YERGIN, THE PRIZE, *supra* note 2, at 82. "By 1910, its output would reach 73 million barrels, more than that of any foreign nation, and 22 percent of total world production." *Id.* As Yergin describes, by the turn of the century, "[a] new era had quickly come into existence in the oil industry . . . . It was born of several coincidences: the rapid rise of the automobile; the discovery of the new oil provinces in Texas, Oklahoma, California, and Kansas; new competitors; and technological advances in refining." YERGIN, THE PRIZE, *supra* note 2, at 112.

[8] YERGIN, THE PRIZE, *supra* note 2, at 85. "One of the most consequential events in the history of the American petroleum industry occurred on January 10, 1901, when the discovery well of the Spindletop oil field near Beaumont, Texas, blew in from a depth of 1,139 feet with a flush flow estimated at 60,000 to 70,000 barrels per day." OWEN, OIL FINDERS, *supra* note 4, at 191. Texas' average daily production increased from 2,300 barrels in 1900 to 50,000 barrels in 1902. *Id.* Spindletop created "a new age in human progress . . . [leaving] America . . . blessed with the supply of energy and the incentive to move up from a secondary position in world affairs to that of undisputed leadership." JAMES A. CLARK & MICHAEL T. HALBOUTY, SPINDLETOP XV (1952).

[9] YERGIN, THE PRIZE, *supra* note 2, at 248. Yergin recounts that:

> Hunt stepped forward when the tidal wave of woes fell upon Joiner after his first discovery, but before other wells had begun to indicate the true magnitude of the oil field. . . . Hunt holed up with Joiner for an interminable negotiating session . . . and hammered away at him, trying to make a deal. Unbeknownst to Joiner, Hunt was being fed secret reports . . . Hunt did not share the news with Joiner.

Id.

[10] *See* OWEN, OIL FINDERS, *supra* note 4, at 101 (discussing early international oil discoveries). Russian output, fueled by the efforts of the Nobel family of Sweden, increased from 165,000 barrels in 1871 to 28,691,000 barrels in 1890, almost equaling that of the Pennsylvania-New York region. *Id.* After a pre-World War I decline, Russian production, aided by Western technology, surged in the late 1920s under the Bolshevik regime. YERGIN, THE PRIZE, *supra* note 2, at 240. In Persia in 1908, a major oil discovery signaled the beginning of the Middle East's

The boom years were peppered with busts. Yet, new discoveries or market corrections continually revived the industry.[11] By the 1980s, however, with United States reservoirs seemingly exhausted[12] and markets in chaos due to conflict in the Middle East and OPEC's increased role in controlling world supplies, pundits were preaching the demise of the domestic oil and gas business.[13] Today,

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dominance of world oil markets. *Id.* at 147, 393. In 1909, the discovery in Mexico of the Potrero del Llano 4 well, which flowed at 110,000 barrels per day, ignited a boom which made Mexico a major force in the world oil market. *Id.* at 231. In Venezuela in 1922, the discovery well of the La Rosa Field blew in at an estimated 100,000 barrels per day. *Id.* at 235. This was followed by major Venezuelan discoveries in the 1930s and 40s, which catapulted Venezuela into the position it currently holds as a major player in the export market and a member of OPEC. OWEN, OIL FINDERS, *supra* note 4, at 1103–04. "So, virtually from the very beginning, petroleum was an international business. The American oil industry could not have grown to the size it did and become what it was without its foreign markets." YERGIN, THE PRIZE, *supra* note 2, at 56.

[11] *See* YERGIN, THE PRIZE, *supra* note 2, at 32–34 (recounting fluctuations in oil markets). After the Titusville discovery in Pennsylvania, the price of oil fell from $10 per barrel in January of 1861 to 50 cents per barrel in June of that year. *Id.* at 30. Demand began to catch up and by September of 1863 the price was back up to $7.25 per barrel. *Id.* The result was overproduction, and the price again dropped drastically to $2.40 a barrel in 1866 and 1867. *Id.* at 33. Although oil prices dropped to as low as 3 to 10 cents per barrel in 1901 after Spindletop came in, prices rose quickly to 35 cents or more in the latter part of 1902 because of the plunge in production caused by overproduction. *Id.* at 89. Post-World War I prices, fueled by the rapid growth of the automobile industry, were driven to $3.36 in 1920, up from $1.20 in 1916, creating a frantic search for new supply sources. *Id.* at 218. The discovery of the East Texas Field again sent prices tumbling to as low as 13 cents a barrel in 1931. In order to stop overproduction and falling prices, Texas governor Ross Sterling sent the National Guardsmen and the Texas Rangers into East Texas. *Id.* at 250. To stabilize prices, production was shut down and a prorationing system implemented. *Id.* The following year prices rose to 98 cents a barrel, as the Texas Railroad Commission continued to issue prorationing orders. *Id.* at 251. Again from 1960 to 1969 rapid increase in the number of producers resulted in a 22% drop in prices. *Id.* at 529, 531–32.

[12] United States production peaked in 1970 with the production of 9.6 million barrels of oil per day. After that date, domestic production declined due to depleted resources. An exception was increased production from the north slope of Alaska from about 1975 to 1985. THE SOUTHWEST ECONOMY, Issue 4, 1995, at 1, 2.

[13] *See* YERGIN, THE PRIZE, *supra* note 2, at 625 (discussing impact of international political scene). In 1968, many of the petroleum exporting countries formed the Organization of Petroleum Exporting Countries (OPEC) in order to unify production and pricing policies. By 1972, the nations in OPEC accounted for 77.5 percent of free-world petroleum reserves. 8 HOWARD R. WILLIAMS & CHARLES J. MEYERS, THE LAW OF OIL AND GAS 757 (1995). For a discussion of the events leading to the formation of OPEC and its oil boycott of the western nations, *see* M.S. AL-OTAIBA, OPEC AND THE PETROLEUM INDUSTRY 47–63 (1975).

Dramatically increased demand in the early 1970s, combined with the Arab oil embargo in 1973, drove prices up from $1.80 a barrel in 1970 to $11.65 in December of 1973. YERGIN, THE PRIZE, supra note 2, at 625. Prices continued to rise as a result of OPEC's increased role in controlling world supplies until, in 1980, it appeared that the market had finally become saturated with the price at $32 per barrel. *Id.* at 705–06. The outbreak of the Iran-Iraq war in September of 1980 again threw oil markets into chaos, abruptly removing 4 million barrels daily

the national rig count is 20 percent lower than 50 years ago, and the price of oil has decreased $21 from the high of $42 a barrel in 1980, a 50 percent decline.[14]

As Professor Richard Maxwell noted recently, the oil and gas industry, and the body of law it spawned, has reached the end of its "Great Era."[15] But to paraphrase Mark Twain, predictions of the death of the industry have been greatly exaggerated. New technologies, such as horizontal drilling and three-dimensional exploration, have revived interest in old formations,[16] and new

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from the world market. *Id.* at 711. The price of Arab light crude temporarily jumped to an all-time high of $42 a barrel, in spite of the fact that world demand was apparently weakening. *Id.* The high prices resulted in increased exploration and production in the United States and the rest of the world in the first half of the 1980s, as well as increased conservation measures and development of alternative energy sources. *Id.* at 718–19. OPEC's share of world production output declined from 55% in 1974 to 30% in 1985. John L. Kennedy, *Good Times Ahead at Today's Prices?*, OIL & GAS J., Dec. 26, 1994, at 17. The big blow to the oil industry came in early 1986 when OPEC announced production increases designed to recapture lost market share, and oil plunged from $31.75 in November of 1985 to $10 a barrel in the months to follow. YERGIN, THE PRIZE, *supra* note 3, at 750.

In a remark representative of the mid-80s, Halliburton president Thomas H. Cruikshank stated, "[t]he U.S. oil industry is in a fight for survival, and at this point it's losing." *Consequences of U.S. Growing Dependence on Foreign Oil Considered at Symposium*, PLATT'S OILGRAM NEWS, Dec. 12, 1986, at 4. Others stated that, "the recent break in oil prices is reverberating like a death rattle throughout major segments of the industry." James R. Norman et al., *Casualties Start to Pile Up in the Oil Patch*, BUS. WEEK, Feb. 10, 1986, at 83. Senator J. Bennett Johnston (D-La.) described an import fee as "the only thing that will save the domestic oil industry." Helen Dewar, *Slowly but Steadily Scaling the Senate Ladder*, THE WASH. POST, Nov. 28, 1986, at A23.

Last year marked the first time since 1988, that the oil production of non-OPEC nations increased, which lead to "tempering price increases and limiting the world's dependance on the oil cartel." Allen Myerson, *Rivals Keeping OPEC Defensive*, SAN ANTONIO EXPRESS NEWS, Dec. 30, 1994, at 1D. "New technology, improved corporate efficiency and the opening to exploration of vast foreign tracts, energy experts say, promise to increase non-OPEC production 6.5 by 2000." *Id.*

[14] The Hughes Tool and rig count peaked at 4,530 in 1981, averaging 3,970 for the year. *See* Patrick Jankowski, *Why the Oil Import Fee Divides the Industry*, HOUS. MAG., Sept. 1, 1986, at 7; Robert J. Beck, *Pipeline Projects Fuel Rebound in Industry's U.S. Spending Plan*, OIL & GAS J., Feb. 27, 1995, at 17, 19. After the plunge in crude oil prices in 1986, the rig count fell to a post-World War II record low of 717 in 1992, averaged 757 in 1993 and 775 in 1994. *Id.* at 19. As of April 14, 1995, the Baker Hughes active rig count for the United States stood at 676. *OGJ Newsletter*, OIL & GAS J., Apr. 24, 1995, at 3. The spot market price of oil jumped to $42 a barrel immediately after the outbreak of the Iraq-Iran war in September of 1980. YERGIN, THE PRIZE, *supra* note 2, at 711. The spot market price as of August 25, 1995 stands at $19.70. *Business & Finance*, WALL ST. J., Aug. 25, 1995, C15.

[15] Richard C. Maxwell, *Oil and Gas Law at the End of its Great Era*, *in* NATURAL RESOURCES POLICY AND LAW, TRENDS AND DIRECTIONS 94, 96 (Lawrence J. Macdonnel et al., eds. 1993) [hereinafter Maxwell, *Great Era*].

[16] Maxwell, *Great Era*, *supra* note 15, at 96 (stating, "It is quite possible that advanced production and drilling techniques will create new sources of domestic supply and new legal

sources, particularly for gas, have been identified throughout the United States.[17] Additionally, the inevitable increase in demand for oil and gas due to the prospective growth in population, plus market shifts to natural gas as an alternative fuel, will continue to provide life-blood for the business.[18]

As in the "Great Era," new and recurring questions will continue to confront courts in this, the next era of oil and gas jurisprudence.[19] Because the boom years have passed, policies have shifted, and technology has evolved, it is imperative to reassess the approaches used by courts in answering these questions. This assessment will in turn provide guidance to the judges, lawyers, and legislators charged with creating a coherent jurisprudence for this

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problems."). *See infra* Part III for a discussion on the next era of oil and gas jurisprudence.

[17] In a recent keynote address, Deputy Secretary of Energy William H. White maintained that inventories of natural gas are "as much as we choose to drill." *Conference Looks at Future of Oil, Gasoline, Natural Gas*, OCTANE WK, July 18, 1994. State legislatures are also enacting provisions to encourage exploration, prompting Texas Railroad Commission Chairman Barry Williamson to state: "We'll see hundreds of wells drilled because of this bill." Susan Hightower, *Legislative Moves Satisfy Oil Industry*, SAN ANTONIO EXPRESS NEWS, June 11, 1995, at 4J (summarizing tax exemption for drilling gas wells in tight sand formations, or other wells that require high-cost recovery methods).

[18] *See* Ronda Fears, *Changes Needed in Thinking on Basic Energy*, J. REC., Sept. 17, 1993 *available in* WESTLAW, 1993 WL 9718076, at *4. In the last 50 years the world population has more than doubled, "from 2.5 billion people in 1940 to 5.3 billion in 1990." *Id.* It is estimated that the world population in the next fifty years will nearly double again to 10 billion. *Id.* 4–5. According to the United States Energy Information Administration (EIA), supply and demand will require the world to need another twenty million barrels of oil per day by 2010. *See* Bill White, *The Coming Oil Crises*, FISCAL NOTES, Aug. 1995, at 8.

The Department of Energy recently proposed rules, required by the Energy Policy Act of 1992, to implement alternative fueled vehicle acquisition requirements, stating a primary goal as the strengthening of United States energy security by reducing dependence on foreign oil. *See* 60 Fed. Reg. 10,970 (1995) (to be codified at 10 C.F.R. pt. 490) (proposed Feb. 28, 1995). In an exhaustive report prepared for the Texas Railroad Commission in 1993, an Alternative Transportation Fuels Committee recommended that the State of Texas implement a comprehensive alternatively fueled vehicles plan to maximize use of Texas' energy resources and to take advantage of new federal mandates and research and development opportunities. STATE OF TEXAS ENERGY POLICY PARTNERSHIP (STEPP), Vol 2, Committee Reports, March 1993, at 56 (on file with author). The report also stated that the policy of the state of Texas is to encourage the use of fuels that are alternatives to gasoline and diesel-based fuels. *Id.* at 57. This policy is reflected in Senate Bill 200 which passed the House by a vote of 137–0. The Health and Safety Code now defines alternative fuels as "any fuel or power source that, when used in a clean-fuel vehicle, allows the vehicle to comply with the standards and requirements of the federal Clean Air Act . . . and emission limits at least as stringent as the applicable low-emission vehicle standards for the clean-fuel fleet program." TEX. HEALTH & SAFETY CODE ANN. § 382.131 (1992 & Supp. 1995).

[19] However, as Professor Maxwell predicts, "[t]he trend will be toward fewer disputes that create cases of the sort that oil and gas lawyers have enthusiastically dissected, criticized, and tried to understand during most of this century." Maxwell, *Great Era*, *supra* note 15, at 95–96.

new era of oil and gas law.

The Great Era of oil and gas jurisprudence arose quickly, as sudden supplies and emerging markets for oil and gas caused disputes among property owners. Courts were challenged to provide answers to questions about the relative rights and liabilities incident to the production of these coveted resources. The common law provided few direct answers. To fill that void, judges trained in the shadow of Langdell[20] strictly followed the dictates of legal formalism and invoked the logical tool of analogy. By analogizing to the common-law rule used to determine rights in wild animals (ferae naturae), courts adopted the rule of capture to define a property owner's rights in oil and gas beneath her property. Under the rule of capture, an owner of land "acquires title to the oil or gas which he produces from wells drilled thereon."[21] The rule shields the owner from liability for draining the oil from her neighbor's tract; the neighbor's remedy is to "go and do likewise."[22]

Yet many courts throughout the Great Era recognized a dissonance between common-law doctrines, such as the rule of capture and remedies for trespass, and the prevailing policies for oil and gas production. For example, in 1900 the United States Supreme Court in *Ohio Oil Co. v. Indiana*[23] departed from the wild-animal analogy in upholding regulations on production. Instead, Justice White focused on the recognized goals of conserving resources and protecting correlative rights of mineral owners.[24] Similarly, in 1962, the Texas Supreme Court promoted the policy of encouraging secondary-recovery methods for oil by refusing to enjoin the process even though injected fluids would cross lease lines. In *Railroad*

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[20] Christopher Columbus Langdell received his L.L.B. from Harvard in 1853 and practiced law in New York City until 1870. From 1870 to 1895, Langdell served as dean of Harvard Law School. His judicial philosophy is described *infra* at footnote 43 and accompanying text.

[21] Robert E. Hardwicke, *The Rule of Capture and Its Implications as Applied to Oil and Gas*, 8 TEX. L. REV. 391, 393 (1935) [hereinafter Hardwicke, *Rule of Capture*].

[22] Barnard v. Monongahela, 65 A. 801, 801–02 (Pa. 1907).

[23] 177 U.S. 190 (1900).

[24] The correlative rights doctrine developed as a limitation the rule of capture. 1 EUGENE O. KUNTZ, OIL & GAS—A REVISION OF THORTON § 4.3, at 119–21 (1987). The term "correlative rights" refers to the rights and duties of all landowners in the common source of supply. *Id.* at 120. The correlative rights doctrine provides that each owner of minerals in a common source of supply has the right to a fair chance to produce oil and gas from the reservoir substantially in the proportion that the quantity of recoverable oil and gas under his land bears to the quantity in the reservoir. *Id. See also* 1 HOWARD R. WILLIAMS & CHARLES J. MEYERS, OIL & GAS LAW § 203.2 at 39–43 (1995) (discussing common-law restrictions on production and correlative rights doctrine).

Commission v. Manziel,[25] the court held that the "technical" rules of common-law trespass did not apply.[26]

In order to respond effectively to questions posed by shifting policies and new technologies in the next era of oil and gas jurisprudence, this article urges courts to adopt the pragmatic[27] or policy-conscious approach exemplified in opinions such as *Ohio Oil Co.* v. *Indiana* and *Railroad Commission v. Manziel*. These opinions echo the views of many Great Era commentators by recognizing the need for a special jurisprudence designed to respond to the unique realities of oil and gas production. The approach used in these cases to address new policies and technologies was appropriate for oil and gas law in the Great Era for two reasons. First, unlike in other areas of the law, a consensus existed about the guiding policies, which included conserving our national resources and encouraging fair and efficient production of oil and gas.[28] These general ends encompassed more specific goals, such as the need for title stability.[29] Second, because the technology and the markets for oil and gas evolved late

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[25] 361 S.W.2d 560 (Tex. 1962).

[26] *Manziel*, 361 S.W.2d at 568.

[27] As described in Part I, I use the word "pragmatic" both for its generic or lay definition and as a descriptive form of a jurisprudential theory currently receiving attention from several legal scholars, particularly Judge Richard Posner. Yet the approach I advocate is clearly influenced by other prominent jurisprudential theorists, including Henry M. Hart and Albert M. Sacks, who call for "reasoned elaboration" in judicial opinions. G. Edward White, *The Evolution of Reasoned Elaboration: Jurisprudential Criticism and Social Change*, 59 VA. L. REV. 279 (1973) [hereinafter White, *Reasoned Elaboration*]. I am also influenced by Herbert Wechsler's proposals for "genuinely principled" opinions that would provide guidance to resolving subsequent similar conflicts. Herbert Wechsler, *Toward Neutral Principles of Constitutional Law*, 73 HARV. L. REV. 1, 15 (1959). One purpose of this article is to suggest a practical approach to decision making for oil and gas jurisprudence rather than to reconcile the conflicts between the views of these and other legal theorists. Other scholars have argued for a "functional" or "unique" jurisprudence for oil and gas issues. *See, e.g.*, David E. Pierce, *Toward a More Functional Mineral Jurisprudence for Kansas*, 27 WASHBURN L.J. 223 (1987); Ronald W. Polston, *Surface Rights of Mineral Owners–What Happens When Judges Make Law and Nobody Listens?*, 63 N.D. L. REV. 41 (1987) [hereinafter Polston, *Surface Rights of Mineral Owners*]; A.W. Walker, Jr., *Property Rights in Oil and Gas and Their Effect Upon Police Regulation of Production*, 16 TEX. L. REV. 370 (1938) [hereinafter Walker, *Property Rights in Oil & Gas*].

[28] *See infra* Part I. Although there was largely a consensus on the guiding goals for the industry, these goals frequently conflicted. *See* Walter L. Summers, *The Modern Theory and Practical Application of Statutes for the Conservation of Oil and Gas*, 8 TUL. L. REV. 1, 5 (1938) [hereinafter Summers, *Modern Theory*] (describing two "somewhat contrary policies . . . the policy of production and the policy of conservation."). As described in Part I, the pragmatic approach I envision requires carefully assessing prevailing policy conflicts and available courses of action with a goal toward producing opinions which will provide much-needed guidance for the property owners and developers affected by oil and gas jurisprudence.

[29] *See infra* Part II.

in the nineteenth century, the courts had not produced opinions specifically addressing oil and gas controversies. The pragmatic approach of *Ohio Oil* and *Manziel* did little violence to notions of common-law decision making because of the lack of direct precedents. Nevertheless, judges frequently overworked the traditional tools of logic, such as analogy, in answering questions generated by the birth of an industry unknown at common law.[30]

To clarify the contours of the pragmatic approach I envision, and to demonstrate its value, I will contrast it to two formalistic approaches used throughout the Great Era. As noted above, by analogizing to the law of wild animals, many early judges myopically adhered to common-law rules rather than venturing to fashion a unique jurisprudence for oil and gas law. For example, in *Hammonds v. Central Kentucky Natural Gas Co.*,[31] the court stretched the wild-animal analogy to determine ownership of gas stored in depleted reservoirs.[32] True to its formalistic foundations, this approach myopically focused on creating a common-law "pedigree,"[33] despite more compelling contemporary policy considerations.

In a second formalistic approach, judges consider policy only surreptitiously, thereby masking a pragmatic approach in common-law garb. Blatant examples include opinions in which judges contorted common-law property rules in a subtle effort to invoke the touted policy of saving widely encountered interests, such as oil and gas leases, non-participating royalties, and term deeds, from destruction under the Rule Against Perpetuities.[34] Another recent example is the Supreme Court of Texas' failure to directly address and evaluate competing policy considerations in deciding whether

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[30] *See infra* Part I. *See, e.g.*, Daniel C. K. Chow, *A Pragmatic Model of Law*, 67 WASH. L. REV 755, 765–66 (1992) [hereinafter Chow, *Pragmatic Model*] (describing how formalists derived legal rules from positive law with logical tools like syllogism and analogy).

[31] 75 S.W.2d 204 (Ky. 1934), *overruled by*, Texas Am. Energy Corp. v. Citizens Fidelity Bank & Trust Co., 736 S.W.2d 25 (Ky. 1987).

[32] *See Hammonds*, 75 S.W.2d at 206 (analogizing oil as mineral *ferae naturae*). *But see* Lone Star Gas Co. v. Murchison, 353 S.W.2d 870, 880–81 (Tex. App.–Dallas 1962, *writ ref'd n.r.e.*, June 27, 1962) (allowing suit for conversion of natural gas injected into natural underground storage reservoir for storage purposes).

[33] Judge Posner uses this label in his book: RICHARD A. POSNER, THE PROBLEMS OF JURISPRUDENCE (1990) [hereinafter POSNER, PROBLEMS]. Posner refers to the Cardozo quote that introduced this article and states, "The reference to 'title deed' is particularly noteworthy; it is a rebuke to formalists who require that law to be valid be 'pedigreed' by being shown to derive from some authoritative source." *Id.* at 29.

[34] *See infra* notes 146–212 and accompanying text.

hydraulic fracturing constitutes a common-law trespass.[35]

By myopically ignoring policy or intentionally masking its role, these two formalistic approaches create uncertainty about property rights. This uncertainty leads to costly litigation and creates disincentives for investment in development of surface and mineral resources, as well as for investment in technology for alternative fuels and markets.[36] In order to avoid the counterproductive effects of these two approaches, judges should apply a pragmatic approach in which courts openly address competing policies, such as promoting oil and gas production versus preserving the environment, in deciding cases in the next era of oil and gas jurisprudence.

As described in Part I, the approach envisioned here encourages a process in which judges: (1) identify goals and policy conflicts; (2) assess the effects of available courses of action; and (3) adopt standards or rules to clarify the relative rights of property owners and developers.[37] This approach promotes the policies prevalent in the Great Era and also permits more effective consideration of concerns prominent in the new era, such as protecting the environment and promoting surface uses. The goal of this process is to produce opinions that inject a desired degree of "practical certainty" into oil and gas jurisprudence to ensure that

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[35] *See* Geo Viking, Inc. v. Tex-Lee Operating Co., 817 S.W.2d. 357, 364 (Tex. Ct. App. 1991) (holding that rule of capture allows landowner to drill as many wells on his or her tract as the Railroad Commission will allow, making self-help the remedy for injured landowners on adjacent tracts), *rev'd per curiam*, 1992 WL 80263 (Tex. Apr. 22, 1992), *withdrawn and writ of error denied as improvidently granted*, 839 S.W.2d 797 (Tex. 1992). As discussed *infra* in Part II implicit in the court's decision to withdraw its earlier opinion is the objective of encouraging high-tech exploration, like sandfracing. *See Geo Viking*, 839 S.W.2d at 797.

[36] Posner and others have emphasized the effect of clarifying titles to land on efficiency. *See* RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW §§ 3.1, 3.10, at 30, 67–69 (3d ed. 1986).

> [The] legal protection of property rights creates incentives to use resources efficiently. . . . In order to facilitate the transfer of resources from less to more valuable uses, property rights, in principle, should be freely transferable. . . . Efficiency requires that property rights be transferable; but if many people have a claim on each piece of property, transfers will be difficult to manage. . . . Problems in transferring property rights are part of a larger problem, that of deciding who owns what property.

Id.

[37] Deciding whether a standard or rule would be more appropriate is part of the pragmatic process. To illustrate the choice, for example, title issues generally benefit from clear rules to ensure stability. *See infra* notes 150–64 and accompanying text (discussing title stability policy behind RAP). For other issues, for example, determining whether sandfracing constitutes a trespass, a standard requiring the judge to balance competing policy considerations would be more appropriate. *See infra* notes 121–48 and accompanying text.

property owners and developers are able to confidently assess their courses of action.[38]

The two counterproductive types of decision making described above detract from achieving "practical certainty" for oil and gas jurisprudence and hinder efficient use of both surface and mineral estates.[39] Part II examines judicial decisions adopting these unfortunate approaches, including cases grappling with two classic common-law doctrines: trespass and the Rule Against Perpetuities.[40] The negative effects of these decisions serve to illustrate the positive attributes of a pragmatic approach.

Part III posits that courts should implement a pragmatic approach in this era despite the decades of precedent available from the Great Era. As noted above, decision making in the new era must also incorporate concerns too-often ignored in the formative era, particularly protection of the environment and the economic viability of surface uses. These concerns establish goals which conflict with the early Great Era goal of encouraging full-scale mineral development. Many state legislatures have exemplified this policy shift by their adoption of surface-use statutes which temper the traditional dominance of the mineral estate in development. Major mineral

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[38] The clarity I seek from the judiciary does not depend upon rigid rules that are mechanically applied. Instead, I argue for a judicial approach that will achieve "practical certainty," as described by the philosophy professor John Dewey:

> A large part of what has been asserted concerning the necessity of absolutely uniform and immutable antecedent rules of law is in effect an attempt to evade the really important issue of finding and employing rules of law, substantive and procedural, which will actually secure to the members of the community a reasonable measure of practical certainty of expectation in framing their courses of conduct.

John Dewey, *Logical Method and Law*, 10 CORNELL L.Q. 17, 25 (1924) [hereinafter Dewey, *Logical Method and Law*]. Dewey describes the "evil" of rigid, immutable rules as "sancti[fying] the old; adherence to it in practise constantly widens the gap between current social conditions and the principles used by the courts." *Id.* at 26. It is my purpose to urge courts to narrow that gap in oil and gas jurisprudence.

[39] *See* J. Stephens Dycus, *Legislative Clarification of the Correlative Rights of Surface and Mineral Owners*, 33 VAND. L. REV. 871, 883 (1980) [hereinafter Dycus, *Legislative Clarification*] (uncertainty prevents both surface and mineral owners from making investments in their properties).

[40] As described *infra* in Part II, many cases could be categorized as adopting both of these counterproductive approaches. For example, Professor Summers suggested in 1938 that it is likely that early cases that appeared divorced from policy considerations were in fact promoting the policy of production. Summers, *Modern Theory*, *supra* note 28, at 7 (discussing cases that adopted the ownership in place or non-ownership theories through analogies to other common-law doctrines).

producing states lacking such statutes, such as Texas and Colorado, continue to struggle with the policy conflicts in their courts and legislatures. As politics continue to polarize the surface-use debate in the legislatures, the burden falls upon the courts to respond to the policy shifts by adopting a pragmatic approach to decision making.

In addition to confronting policy shifts, judges, lawyers, and legislators will continue to grapple with the effect of technological advances on oil and gas jurisprudence. For example, new technologies, including three-dimensional exploration and hydraulic fracturing, have raised questions about the application of common-law rules of trespass. Rather than rely on courts incrementally to clarify the questions caused by the surface-use debate and by new technologies, Part III also advocates enactment of more statutes defining the rights and liabilities of landowners and mineral developers.

In this article, I do not suggest that a pragmatic approach necessarily will be more determinative than a formalistic approach in resolving these issues in the next era of oil and gas jurisprudence. Nor do I suggest ignoring settled precedent to achieve a particular result.[41] Instead, the pragmatic approach advocated herein informs the decision-making *process* more than the *result* by encouraging judges boldly to identify the policy conflicts and to assess the probable effects of alternative courses of action. With this approach, judicial decisions will clarify the effect of contemporary policies on the rights and liabilities of landowners and producers. Indeed, clarifying rights and liabilities through legislation and judicial decisions should be the ultimate goal for this, the next era of oil and gas jurisprudence.[42]

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[41] See RICHARD A. POSNER, OVERCOMING LAW, 400–01 (1995) [hereinafter POSNER, OVERCOMING LAW] (noting that pragmatism is not simple result-oriented decision making but rather, "[t]he relevant consequences to the pragmatist are long run as well as short run, systemic as well as individual, the importance of stability and predictability as well as of justice to the individual parties . . .").

[42] *See infra* Part I. *See, e.g.*, EUGENE O. KUNTZ ET AL., OIL AND GAS LAW 524 (2d ed. 1993) (Professor Lowe believes that adopting one rule or another in regards to apportionment, is not as important as "selecting a rule to ensure stability and clarity of land titles"); Dycus, *Legislative Clarification*, *supra* note 39, at 883 (observing importance of legislative clarity in surface and mineral rights).

I. THE CONTOURS OF A PRAGMATIC APPROACH FOR OIL AND GAS JURISPRUDENCE

A. A General Description of a Pragmatic Approach to Decision Making

The approach I envision initially can be defined by contrasting it to traditional or formalistic legal theory prominent during the formative years of the Great Era. The formalistic approach, associated with Dean Christopher Columbus Langdell of Harvard, considers legal reasoning a form of deduction that proceeds from major premises which have previously been established by earlier decisions.[43] When no similar cases exist, the formalist invokes the logical tool of analogy to supply the missing premises.[44] For example, by analogizing to the law of wild animals, early cases adopt the Rule of Capture to define rights and liabilities of landowners in the oil and gas beneath their properties.[45] Whether or not the courts draw

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[43] Langdell's judicial philosophy was disseminated to his students through the socratic teaching method and his casebook on contracts. STEPHEN B. PRESSER & JAMIL S. ZAINALDIN, LAW AND AMERICAN HISTORY: CASES AND MATERIALS 660 (1980). Like the philosophy behind his casebook, "Langdell's aim was to train law students to derive 'the few, ever-present, and ever-evolving and fructifying principles, which constituted the genius of the common law.'" *Id.* at n.1. *See* POSNER, OVERCOMING LAW, *supra* note 41, at 1 (stating that under formalistic devices "law, like mathematics was understood to be about the relations among concepts rather than about the relations between concepts and reality"). This approach meant that lawyers, in the eyes of Langdell and other proponents of formalism, should only act as "professional arbiters of an apolitical and 'scientific' body of rules." KERMIT L. HALL, THE MAGIC MIRROR: LAW IN AMERICAN HISTORY 211 (1989) [hereinafter HALL, THE MAGIC MIRROR]. Formalists also believed that judges had to restrict themselves to abstract, logical reasoning embodied in *laissez faire* economic principles. *Id.* Thus, the formalist era of decision making also brought with it the end of the Grand Style of opinion writing, leaving the law "characterized by dry, arid logic, divorced from society and life." BERNARD SCHWARTZ, MAIN CURRENTS IN AMERICAN LEGAL THOUGHT 367 (1993) [hereinafter SCHWARTZ, CURRENTS].

[44] Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 75 (1985). POSNER, PROBLEMS, *supra* note 33, at 39–40. In dissecting reasoning by analogy, Posner shows how formalists desire to change the law only incrementally, illustrating one of the limits of this logical tool. *See Id.* at 86–100; *see also* POSNER, OVERCOMING LAW, *supra* note 41, at 518–22. He cites oil and gas as an example: "The judge who analogizes oil and gas to rabbits and foxes might think he is taking a small step; actually he is impeding the efficient exploitation of valuable resources." POSNER, PROBLEMS, *supra* note 33, at 92.

[45] *See, e.g.*, Hammonds v. Central Ky. Natural Gas Co., 75 S.W.2d. 204, 206 (Ky. 1934), *overruled by*, Texas Am. Energy Corp. v. Citizens Fidelity Bank & Trust Co., 736 S.W.2d 25, 28 (Ky. 1987). The Rule of Capture has been stated as follows: "The owner of a tract of land acquires title to the oil or gas which he produces from wells drilled thereon, though it may be proved that part of such oil or gas migrated from adjoining lands." Hardwicke, *Rule of Capture*,

analogies or merely rely upon cases directly in point, the moorings for the formalistic approach consist of past cases rather than prevailing policy considerations.

By contrast a legal pragmatist views adherence to prior cases as guiding policy, rather than inescapable duty.[46] Justice Cardozo, one of the preeminent legal pragmatists,[47] stated that it is "[n]ot the origin, but the goal [which] is the main thing."[48] In addition to precedent, contemporary legal pragmatists urge juristic consideration of a "web of beliefs," consisting of history, prevailing policies, and current societal values.[49] The pragmatist strives to determine those doctrines which form the center of the web, and those which have "shifted to the web's periphery."[50] Identifying the constituent strands in the web facilitates achieving goals to serve "the real needs of real people."[51] Serving those needs drives a pragmatic approach to judicial decision making.[52]

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supra note 21, at 393. It is a rule of non-liability for drainage. 1 ERNEST E. SMITH & JACQUELINE LANG WEAVER, TEXAS LAW OF OIL AND GAS 6 (1994).

[46] POSNER, OVERCOMING LAW, *supra* note 41, at 4.

[47] POSNER, OVERCOMING LAW, *supra* note 41, at 19. *See* RICHARD A. POSNER, CARDOZO: A STUDY IN REPUTATION 1, 26–28 (observing that Cardozo's method of tradition is guided "by considerations of the effects of its decisions, rules, doctrines, and institutions on social welfare"). Posner explains that for Cardozo,

> [t]he rules of the common law are instrumental to social welfare, [and] must therefore be tested by that standard, and subject to considerations of legal stability . . . . Few rules in our time are so well established that they may not be called upon any day to justify their existence as means adapted to an end. If they do not function they are diseased. If they are diseased, they must not propagate their kind. Sometimes they are cut out and extirpated altogether. Sometimes they are left with the shadow of continued life, but sterilized, truncated, impotent for harm.

Id. at 27.

[48] CARDOZO, JUDICIAL PROCESS, *supra* note 1, at 102.

[49] Chow, *Pragmatic Model*, *supra* note 30, at 789, 794. Professor Chow borrows the web metaphor from scholars who advocate a pragmatic approach to statutory interpretation. *Id.* at 794 (citing William N. Eskrigdge, Jr., *Dynamic Statutory Interpretation*, 135 U. PA. L. REV. 1479 (1987)). According to Professor Chow, "Dynamic statutory interpretation should seek the result that best coheres with an existing "web of beliefs." *Id.*

[50] Chow, *Pragmatic Model*, *supra* note 30, at 789.

[51] POSNER, OVERCOMING LAW, *supra* note 41, at 19.

[52] POSNER, PROBLEMS, *supra* note 33, at 29. Posner views pragmatism as an instrumental approach: "Law is forward-looking. This is implicit in an instrumental concept of law –which is the pragmatic concept of law, law as the servant of human needs." *Id.* Although Holmes and Cardozo are probably the best known pragmatists, several others have discussed and proffered related views. *See generally* Edwin W. Patterson, *Pragmatism as Philosophy of Law*, *in* THE PHILOSOPHY OF COMMON MAN: ESSAYS IN HONOR OF JOHN DEWEY TO CELEBRATE HIS EIGHTIETH BIRTHDAY 172 (1940); Daniel A. Farber, *Legal Pragmatism and the Constitution*, 72 MINN. L. REV. 1331 (1988); Thomas C. Grey, *Holmes and Legal Pragmatism*, 41 STAN. L. REV. 787, 864

Advocates of pragmatism for legal decision making are quick to defend against charges that this jurisprudential approach encourages unbridled judicial activism. Instead, Judge Richard Posner, perhaps currently the most prominent promoter of pragmatism, describes the term "pragmatism" as follows:

> I mean, to begin with, an approach that is practical and instrumental rather than essentialist–interested in what works and what is useful rather than in what "really" is. It is therefore *forward-looking,* valuing continuity with the past only so far as such continuity can help us cope with the problems of the present and of the future. . . . It is a philosophy of action and of betterment–which is not to say that the pragmatist *judge* is necessarily an activist. . . . A pragmatist might have good pragmatic reasons for thinking that courts should maintain a low profile . . . . Emphasizing the practical, the forward-looking, and the consequential, the pragmatist, or at least my kind of pragmatist . . . is *empirical.* The pragmatist is interested in 'the facts,' and thus wants to be well informed about the operation, properties, and probable effects of alternative courses of action.[53]

(1989). Roscoe Pound is another scholar who advanced pragmatic legal theory insofar as his "sociological jurisprudence" advocated "judging legal doctrines by their social results." Paul D. Carrington, *The Missionary Diocese of Chicago,* 44 J. LEGAL EDUC. 467, 510 (1994). As Posner indicates, however, judicial pragmatists were not the inventors of pragmatic philosophy; rather, they formulated their doctrine based on experience and philosophical writings of the era. POSNER, PROBLEMS, *supra* note 33, at 27. Philosophical pragmatism, in which judicial pragmatism has its roots, is too variform to comprise a single philosophical school of thought. *Id.* at 28. But pragmatic philosophers include: the American writers; Charles Sanders Pierce, William James, John Dewey, George H. Mead, Thomas Kuhn, and Richard Rorty, and the European philosophers; Ludwig Wittgenstein, and Jürgin Habermas. *Id.* at 27–28. *See generally* JOHN E. SMITH, PURPOSE AND THOUGHT: THE MEANING OF PRAGMATISM (1978); H.S. THAYER, MEANING AND ACTION: A CRITICAL HISTORY OF PRAGMATISM (1968).

[53] POSNER, OVERCOMING LAW, *supra* note 41, at 4–5. In his books, Posner considers Holmes and Cardozo as the laws greatest Pragmatists. *See id.* at 13; POSNER, PROBLEMS, *supra* note 33, at 28–30. He quotes extensively from CARDOZO's, THE NATURE OF THE JUDICIAL PROCESS, to define the contours of a pragmatic approach, including the quote which introduces this article. *See* POSNER, PROBLEMS, *supra* note 33, at 29.

In another recent article, Professor Daniel C.K. Chow also defends pragmatism against charges that it represents a total rejection of traditional legal theory:

> To the extent that pragmatism emphasizes using arguments based upon weight rather than logical necessity, pragmatism is at odds with traditional views of legal reasoning and does resemble the type of informal approach that we often use in daily life. . . . Legal pragmatism does not hold that logical, discursive reasoning is no longer appropriate at all, but that it

Judge Posner's description of a pragmatic approach to decision making encourages a process in which judges directly identify contemporary problems and assess the effects of available "courses of action." Obviously, this approach assumes that judges, and lawyers,[54] are motivated to produce decisions that will gain the respect of the bench, the bar, and society at large. This approach further assumes that they will therefore boldly and thoroughly engage in this reasoning process.[55] When approached in this manner, the pragmatic approach I envision for oil and gas jurisprudence will produce opinions that respect precedent and legislative mandates yet also respond to prevailing policy concerns as well. The desired result is opinions that clarify the relative weight given to policy and to common-law doctrines for specific oil and gas issues and thereby provide "practical certainty" for the next era of oil and gas jurisprudence.[56]

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should no longer be considered the exclusive paradigm of legal reasoning.

Chow, *Pragmatic Model*, *supra* note 30, at 790.

[54] In this article I appear to place the burden solely on the judges who author opinions. The initial burden, of course, rests primarily on the lawyers who frame the issues and advance their theories before these judges.

[55] *See* Chow, *Pragmatic Model*, *supra* note 30, at 189. Professor Chow identifies "The Virtue of Prudence" in pragmatism:

> What makes a counselor wise rather than merely clever is a sense of which legal doctrines capture the sense of the enduring, underlying values of the legal community as opposed to legal precedents or doctrines that the legal community seems ready to abandon. To return to the web metaphor, the good lawyer will sense which legal doctrines are relatively centrally located within the web and which doctrines, once at the core, have gradually shifted to the web's periphery. In this way, the prudent counselor will find the confluence between his clients' needs and the interests of the legal community. The wise judge will reach decisions that gain the acceptance and respect of the bench and bar.

Id. *See also* White, *Reasoned Elaboration*, *supra* note 27, at 285. In considering the rise of reasoned elaboration as a theory for legal decision making, Professor White explains:

> In emphasizing the disingenuous aspects of the use of precedent, rule, and doctrine, the Realists had made too simplistic an appraisal of the function of the rationalization process in judicial opinions. They had failed to grant due respect to the fact that a judge's use of these devices was itself constrained by the expectations of others. A new set of questions about judicial decision-making emerged, revolving around the *reasoning* of opinions. Had the courts adequately articulated reasons for its result? . . . To what extent did the judge appeal to technical considerations, social policies, philosophical principles and moral values?

Id.

[56] *See* Dewey, *Logical Method and Law*, *supra* note 38, at 25.

B. The Pragmatic Approach and Oil and Gas Jurisprudence

The quilt of oil and gas jurisprudence was formed through a patchwork of both pragmatic and formalistic case decisions. In cases decided in the early part of this century, judges frequently showed allegiance to the Langdellian method and turned to the formalistic tool of analogy to fill the void of applicable precedents.[57] Judges in different states analogized oil and gas to hard minerals,[58] percolating waters,[59] and wild animals[60] to answer fundamental questions about the legal rights of landowners in oil and gas beneath their property. These analogies provided the premises upon which judges in various states eventually based the ownership-in-place or non-ownership theories to determine a landowner's rights in oil and gas beneath her land.[61]

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[57] Although analogy is not solely the tool of formalists, formalists tended to overwork that tool in their zeal to demonstrate a common law "pedigree." *See supra* note 33.

[58] *See, e.g.*, Texas Co. v. Daugherty, 176 S.W. 717, 720 (1915) ("With the land itself capable of absolute ownership, everything within it in the nature of a mineral is likewise capable of ownership, so long as it constitutes a part of it.").

[59] *See, e.g.*, Higgins Oil & Fuel Co. v. Guaranty Oil Co., 82 So. 206, 211 (La. 1919) ("The analogy between the subterranean oil and subterranean percolating waters is, we believe, near complete . . . .").

[60] *See* Westmoreland & Cambria Natural Gas Co. v. De Witt, 18 A. 724, 725 (Pa. 1889) ("Gas, it is true, is a mineral; but it is a mineral with peculiar attributes, which require the application of precedents arising out of ordinary mineral rights, with much more careful consideration of the principles involved than of the mere decisions.").

[61] *See* Summers, *The Modern Theory, supra* note 28, at 6–7. In illustrating how analogies led to theories of ownership, Professor Summers states:

> The principle of absolute ownership has been applied to minerals of solid nature such as coal and iron and also to subterranean waters, another mineral of fugitive nature, therefore, it was only natural for the courts to follow as far as possible these analogies and precedents and make the principle of absolute ownership the basis of property rights in oil and gas.

Walter L. Summers, *Property in Oil and Gas*, 29 YALE L. J. 175, 174, 178 (1919); *see also* RICHARD HEMINGWAY, THE LAW OF OIL AND GAS § 1.3, at 26–27 (3d ed. 1991) (noting that, "[s]uch analogies generally led to a concept that, like wild animals, the landowner had title only to such products as he actually reduced to possession").

As various courts began determining the nature of [oil and gas] rights, three ownership theories emerged: (1) Ownership in place: oil and gas in the ground is a part of the land until severed, and as realty are owned by the landowner; (2) Non-ownership in place: the owner of the land has nothing more than the mere right to reduce oil or gas to possession, with title to the oil or gas passing only when possession is actually obtained; and (3) Qualified ownership: which exists in a few of the non-ownership jurisdictions and provides the landowner with standing to prevent injurious or wasteful operations to the oil and gas in place. *Id.* at 27; *see*

For example, in *Westmoreland & Cambria Natural Gas Company v. De Witt*,[62] an 1889 Pennsylvania case, the court adopted the pivotal principle of oil and gas law, the rule of capture, by analogizing to wild animals. The court reasoned:

> Water and oil, and still more strongly gas, may be classed by themselves, if the analogy be not too fanciful, as minerals *ferae naturae*. In common with animals and unlike other minerals, they have the power and the tendency to escape without the volition of the owner. Their "fugitive and wandering existence within the limits of a particular tract was uncertain" . . . but when they escape, and go into other land, or come under another's control, the title of the former owner is gone. Possession of the land, therefore, is not necessarily possession of the gas. If an adjoining, or even a distant, owner, drills his own land, and taps your gas, so that it comes into his well and under his control, it is no longer yours, but his.[63]

Yet, Pennsylvania courts quickly recognized the awkwardness of the analogy owing to the obvious physical differences between substances in the ground and animals roaming on the surface. In 1907, the Pennsylvania Supreme Court admitted, "Exact knowledge on this subject is not at present attainable . . . . This may not be the best rule; but neither the Legislature nor our highest court has given us any better."[64]

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also KUNTZ, *supra* note 24, § 2.4, at 64–67 (1962) (explaining ownership theories).

Many scholars have criticized the adoption of the ownership-in-place doctrine. *See* Harry Cohen, *Property Theories Affecting the Landowner in a New Oil and Gas Producing State*, 10 ALA. L. REV. 323, 337 (1958) [hereinafter Cohen, *Property Theories*]. Professor Cohen explains that the ownership-in-place doctrine encumbers title:

> Experience has shown that there are many conveyances of "minerals" on record which merely "cloud" titles because the owners thereof have forgotten them and have disappeared. . . . [T]he main policy behind any rule of property relating to oil and gas should be that of promoting the rapid and orderly development of theses resources.

Id. at 337–38; *see also* Ronald W. Polston, *Mineral Ownership Theory: Doctrine in Disarray*, 70 N.D. L. REV. 541 (1994) [hereinafter Polston, *Doctrine in Disarray*] (discussing lack of a clear body of law resulting from application of ownership-in-place doctrine to minerals).

[62] 18 A. 724 (Pa. 1889).

[63] *Id.* at 725.

[64] Barnard v. Monongahela Gas Co., 65 A. 801, 802 (Pa. 1907).

1. Promoting the Policies of Conserving Resources and Protecting Correlative Rights of Property Owners—Ohio Oil Co. v. Indiana

As early as 1900, the United States Supreme Court admitted that although there is an analogy between gas and wild animals, there is "no identity between them."[65] In *Ohio Oil Co. v. Indiana*,[66] the Court held constitutional a statute that prevented waste by prohibiting the flaring of natural gas. States began enacting statutes promoting goals of conservation and prevention of waste as early as 1878.[67] In the *Ohio Oil* opinion, Chief Justice White evinced a pragmatic approach by considering the animal analogy as precedent, but only in light of prevailing policy. In order to serve the goals of preventing waste and protecting the correlative rights of landowners in a common supply of oil and gas, Justice White upheld the statute as a proper exercise of the police power.[68]

Four decades after *Ohio Oil*, Professor Maurice Merrill praised the approach used by Justice White and other judges for furthering the goals of conserving resources and protecting correlative rights of landowners by upholding statutory regulations:

> To reach such a result, it was necessary that the courts take account of the increasing fund of knowledge concerning the nature of oil and gas and the conditions surrounding their exploitation, the experience of the industry, the relative

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[65] Ohio Oil Co. v. Indiana, 177 U.S. 190, 209 (1900).

[66] 177 U.S. 190 (1900).

[67] *See* Summers, *The Modern Theory*, *supra* note 28, at 1 (noting that Pennsylvania enacted first statute in 1878). *See generally* BLAKELY M. MURPHY, CONSERVATION OF OIL & GAS: A LEGAL HISTORY, 425, 1948 (1972) [hereinafter MURPHY, CONSERVATION OF OIL & GAS] (summarizing history of oil and gas conservation in United States).

[68] *Ohio Oil*, 177 U.S. at 210. Justice White explains the validity of the statute:

> This necessarily implied legislative authority is borne out by the analogy suggested by things *ferae naturae* . . . . Viewed, then, as a statute to protect or to prevent the waste of the common property of the surface owners, the law of the state of Indiana which is here attacked because it is asserted that it devested private property without due compensation, in substance is a statute protecting private property and preventing it from being taken by one of the common owners without regard to the enjoyment of the others.

Id. *See also* Summers, *The Modern Theory*, *supra* note 28, at 9 (describing how *Ohio Oil* "exposed the fallacies of the wild-animal analogy, and pointed out that landowners' privileges to take oil and gas actually constitute a property interest"); KUNTZ, *supra* note 24, § 4.3, at 120.

> importance of the interests involved, and the ideals of the social order which lie back of the broad standards of decency and reasonableness controlling the substance of governmental regulation which are embodied in the due process clause.[69]

In praising these decisions, Professor Merrill voiced approval of a pragmatic approach informed by a broad "web of beliefs" including knowledge, needs, and experience, rather than simply past cases and analogies.[70]

2. The Reign of the Wild-Animal Analogy— Hammonds v. Central Kentucky Natural Gas Co.

In other cases, however, judges remained enamored with the formalists' use of analogy. Indeed, Professor Walker expressed dismay that, "as late as 1921, one of the Texas courts indulged in the fanciful statement that oil and gas 'are supposed to percolate restlessly about under the surface of the earth, even as the birds fly from field to field and the beasts roam from forest to forest.'"[71] Additionally, in the 1934 Kentucky case, *Hammonds v. Central Kentucky Natural Gas Co.*,[72] the opinion egregiously overworked the animal analogy to determine if a gas company had lost title to gas it had produced and then reinjected into the reservoir for storage. Appellant, Della Hammonds, sought to hold a gas company liable for having stored the gas in an exhausted reservoir beneath her property. By the date of the opinion, the goals of preventing waste and protecting correlative rights were well-ensconced in statutes in many states.[73] More significant for the issue in this case, the geological properties of oil and gas were well-recognized.[74] Yet, the judge myopically applied the pre-packaged

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[69] Maurice H. Merrill, *The Evolution of Oil and Gas Law*, 8 MISS. L.J. 281, 289–90 (1941).

[70] *Id.* at 290–91.

[71] A.W. Walker, Jr., *Property Rights in Oil and Gas and Their Effect Upon Police Regulation of Production*, 16 TEX. L. REV. 370, 370–71 (1938).

[72] 75 S.W.2d 204 (Ky. 1934).

[73] *See* MURPHY, CONSERVATION OF OIL AND GAS, *supra* note 67, at 571–72.

[74] *See* Hardwicke, *Rule of Capture*, *supra* note 21, at 394. Professor Harwicke recognized that the availability of information allowed for greater production control:

> It is generally recognized that a great deal is now known about the accumulation and movement of oil and gas in the reservoir, and that, with a reasonable amount of data available, experts can estimate with approximate accuracy the oil and gas in place in a pool, and the amount

common-law rules for "*ferae naturae*":

> If one capture a fox in a forest and turn it loose in another, or if he catch a fish and put it back in the stream at another point, has he not done with that migratory, common property just what the appellee has done with the gas in this case? Did the company not lose its exclusive property in the gas when it restored the substance to its natural habitat?[75]

Based on this analysis, the court held that the company was not liable to Della Hammonds because it had lost title to the gas.

As described above, a pragmatic approach would have required the judge in *Hammonds* to identify goals and policy conflicts and to assess the effects of available courses of action. The opinion, on its face, skips these steps. Relevant competing policies, such as encouraging production versus protecting property rights, are not mentioned. Rather than assume a forward-looking stance, the opinion resorts to extant law of wild animals and adopts the rule that a producer loses title once it reinjects the gas into a reservoir for storage, a rule which frustrates the goal of promoting efficient production and marketing of gas by encouraging subsurface storage.[76]

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ultimately recoverable under any given producing conditions.

Id. As early as 1930 a representative of petroleum engineers was describing to the American Bar Association about the nature of oil and gas in the earth. Earl Oliver, *Oil and Gas Law Responsible for Over-Production and Waste*, 55 A.B.A. REP. 712 (1930). Lawyers in the oil and gas industry knew a great deal about the physical nature of oil and gas as shown in articles by the general counsel of Carter Oil Company in 1920. *See* James A. Veasy, *The Law of Oil and Gas*, 18 MICH. L. REV. 445, 448–53 (1920) [hereinafter Veasy, *Law of Oil & Gas*]. Scholars have distinguished the evolution of oil and gas jurisprudence according to the relative knowledge:

> [I]n the evolution of a separate jurisprudence on oil and gas, the cases may be distinguished on the basis of a clearly recognizable time sequence– before 1900, the era of definition and comparative ignorance of how oil occurs and reacts when a well penetrates the reservoir; between 1900 and 1932– the era of scientific awareness of the nature of petroleum and petroleum reservoirs . . . .

See Robert E. Sullivan, *A Survey of Oil and Gas Law in Montana as It Relates to the Oil and Gas Lease*, 16 MONT. L. REV. 1, 16 (1955) [hereinafter Sullivan, *Oil and Gas Law in Montana*].

[75] *Hammonds*, 75 S.W.2d at 206.

[76] The importance of underground storage was well known by the 1944 opinion. *See* Alan Stamm, *Legal Problems in the Underground Storage of Natural Gas*, 36 TEX. L. REV. 161, 167 (1957) [hereinafter Stamm, *Legal Problems*] (discussing growth of natural gas industry). "Gas was first deliberately stored underground by man as early as 1915 in the Welland, Ontario, field." *Id.* at 161. (citing INTERSTATE OIL COMPACT COMMISSION, A SURVEY OF UNDERGROUND NATURAL GAS STORAGE PROJECTS IN THE UNITED STATES 2–3 (1943)). "Shortly thereafter, in 1916, the first subsurface gas storage project in the United States was inaugurated at the Zoar

Since the importance of underground storage was appreciated by 1944, a judge committed to a pragmatic process could have considered that policy in the decision-making process.[77] Moreover, by the date of the opinion, the factual basis for the wild-animal analogy had been repudiated by courts and scholars, and the need for a special jurisprudence governing oil and gas had been recognized.[78] In spite of that recognition, the opinion myopically clings to the wild-animal analogy in an apparent attempt to fulfill the formalistic goal of establishing a reliable "pedigree" for the decision.[79]

In an article written a year after the *Hammonds* decision, a well-known oil and gas scholar, Robert E. Hardwicke, criticized these false pedigrees created through analogy:

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field near Buffalo, New York." *Id.*

[77] *See* Stamm, *Legal Problems, supra* note 76, at 161. Underground storage was the only economical method for storing large quantities of gas. *Id.* at 163. In his article Professor Stamm explains that, "in order to make it easier for storage companies to acquire the necessary rights" states began enacting legislation authorizing storage companies to bring condemnation proceedings against owners. *Id.* at 174–75.

Kentucky's preoccupation with coal could provide an excuse for the judge's failure to promote the policy of gas storage in 1944. Kentucky's first comprehensive law enacted in 1932 regulating oil and gas wells was "designed primarily for the protection of the commonwealth's extensive coal deposits." MURPHY, CONSERVATION OF OIL AND GAS, *supra* note 67, at 193–94. *See generally* Appalachian Coals Inc. v. United States, 288 U.S. 344, 360–61, 376–77 (1933) (holding corporation formed by competing producers of bituminous coal for exclusive purpose of acting as an agent did not violate Sherman Act).

[78] *See, e.g., Ohio Oil*, 177 U.S. at 208–10 (regarding animal analogy as precedent but only in light of prevailing public policy); Standard Oil Co. v. Oil Well Salvage Co., 281 S.W. 360 (Ark. 1926) (holding *ferae naturae* analogy does not apply to oil which escapes from surface area); Medina Oil Dev. Co. v. Murphy, 233 S.W. 333 (Tex. Civ. App. 1921) (criticizing "fanciful analogy" between oil and gas and animals *ferea naturae* in dealing with acquisition of title).

Commentators have long criticized the continued use of the animal analogy. *See* A.W. Walker, Jr., *Fee Simple Ownership of Oil and Gas in Texas*, 6 TEX. L. REV. 125, 125 (1928) [hereinafter Walker, *Fee Simple Ownership of Oil and Gas*]. In 1928, Professor Walker identified why continued use of the analogy was no longer appropriate:

> [C]ourts at first attempted by analogy to pigeonhole oil and gas under the category of some other type of property which, in the court's mind, it seemed most to resemble . . . . Experience, and a better understanding of the nature of oil and gas and the economical and physical conditions surrounding its production, soon revealed that in many respects oil and gas was a species of property peculiar unto itself, and that rules of law that worked very well when applied to other types of property were wholly inadequate and unjust in their operations when applied to oil and gas.

Id. See also Veasy, *Law of Oil and Gas, supra* note 74, at 454–55 (noting "[t]his fundamental misconception of the nature and habits of oil and gas has produced great confusion of judicial thought upon the subject . . . . Their views in this regard have not kept pace with the expansion of physical and scientific knowledge upon the subject.")

[79] *See* POSNER, PROBLEMS, *supra* note 33, at 29 (the author will continue to use Judge Posner's label throughout the remainder of the article as explained *supra*).

> The courts naturally undertook to apply by analogy the common law which had been recognized as to other substances which are somewhat similar in several characteristics. This effort brought about complications, because in many ways the analogies to wild, roving animals, to percolating waters, and to minerals generally, were not wholly accurate, and were somewhat misleading. Furthermore, the courts seem to have been more interested in selecting high sounding labels, which they assumed almost automatically settled the law questions, than in working out fundamental principles, whatever the appropriate labels might be.[80]

As authority for these words, Hardwicke cited one of the premier pragmatic jurists, Justice Cardozo.[81] It would be decades, however, before courts embraced Justice Cardozo's pragmatic philosophy in opinions rejecting the *Hammonds* rule.[82]

3. *Rejecting the Wild-Animal Analogy to Encourage Underground Storage of Gas*—Lone Star Gas Co. v. Murchison

In 1962, a Texas case exhibited a pragmatic approach and in so doing rejected the *Hammonds* rule. In *Lone Star Gas Company v. Murchison*,[83] the appellate court considered a "web of beliefs" similar to the approach used by Justice White in 1897, which included precedent, but only in light of prevailing policy considerations: "An exegesis of the *Hammonds* opinion, when considered in the light of present day development of the gas industry, is unimpressive."[84] The opinion relied on several law review articles exposing the fallacies of the wild-animal analogy and emphasizing the policy arguments in favor of rejecting the *Hammonds* rule. One authority cited in *Lone Star* concluded, "The analogy between oil and gas and animals *ferae naturae* is inappropriate and should not be allowed to result in

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[80] Hardwicke, *The Rule of Capture*, *supra* note 21, at 399.

[81] Hardwicke, *The Rule of Capture*, *supra* note 21, at 399. Hardwicke notes that his idea, "was forcibly expressed by Mr. Justice Cardozo" in Snyder v. Massachusetts, 291 U.S. 97, 114 n.10 (1934). *Id.*

[82] Texas Am. Energy Corp. v. Citizens Fidelity Bank & Trust Co., 736 S.W.2d 25 (Ky. 1987).

[83] 353 S.W.2d 870 (Tex. Civ. App. 1962).

[84] *Id.* at 879.

decisions which would needlessly hinder an industry so vital to the economy as the underground storage of natural gas."[85] Therefore, the Texas court held that an owner of gas retained title after reinjecting the gas into a well-defined reservoir for storage. This result fulfilled the pragmatists' "practical and instrumental" aim to serve "the real needs of real people."[86]

4. A Pragmatic Approach to Trespass: Encouraging Secondary Recovery of Oil—Railroad Commission v. Manziel

In another Texas opinion decided in 1962, the same year as *Lone Star*, the Texas Supreme Court assumed a pragmatic approach in adopting a rule designed to serve another well-recognized goal—encouraging secondary recovery of oil. In *Railroad Commission v. Manziel*,[87] the Whelans and the Manziels were operators in a field with rules providing for eighty acre production units.[88] The wells were to be located on that unit 660 feet from lease lines.[89] The Whelans had unitized all of their leased properties but had no unitization agreement with the Manziels.[90] The Whelans planned a water-flooding program designed to recover an estimated 930,000 barrels of oil.[91] To implement this plan, they had received an order from the Railroad Commission permitting injection of water into a well located

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[85] *Id.* at 878 (citing Note, *Oil and Gas-Mines and Minerals-Injector of Natural Gas into a Natural Underground Reservoir Retains Title to the Gas*: White v. New York State Natural Gas Corp., 190 F. Supp. 342 (W.D. Penn. 1960), 40 TEX. L. REV. 290, 292 (1961)).

[86] *See supra* notes 52–53 and accompanying text.

[87] 361 S.W.2d 560 (Tex. 1962).

[88] *Id.* at 562.

[89] *Id.*

[90] The terms "unitization" and "pooling" are often used interchangeably, however, the two words do have different meanings and it is important to distinguish which term is meant. SMITH & WEAVER, *supra* note 45, at 427. Pooling is the process of combining small tracts into an area of sufficient size to merit a well permit under the field's applicable spacing rule. *Id.* at 427–28. Pooling serves to reduce the economic waste of drilling and producing unnecessary wells, while at the same time protecting the correlative rights of landowners in a drilling unit. *Id.* at 428. Unitization is the process of combining all or a large part of the acreage of an entire field into a unit, and may involve the joint operation of hundreds of individual drilling units covering thousands of acres. *Id.* Unitization serves to increase the amount of oil and gas recovered from a reservoir by allowing operators to choose the best production and development pattern for the field as a whole, while simultaneously protecting the correlative rights of all the field's owners. *Id.* at 428.

[91] *Manzeil*, 361 S.W.2d at 564.

only 206 feet from lease lines, rather than the 660 feet set forth in the field rules.[92]

The purpose of the water-injection program was to recover oil left in place after initial, or primary, recovery by sweeping water towards one well.[93] Because the injected water "spreads out radially from the injection well bore,"[94] water inevitably crosses lease lines. It was this sort of "trespass" which the Manziels sought to prevent by seeking to set aside the Railroad Commission's order.[95]

The Texas Supreme Court held that a trespass does not occur, and an injunction will not lie, when secondary-recovery projects are conducted pursuant to a valid commission order.[96] In reaching that result, the court weighed the interests of individual operators and landowners against the public policy of encouraging secondary-recovery operations:

> It cannot be disputed that such operations should be encouraged, for as the pressure behind the primary production dissipates, the greater is the public necessity for applying secondary recovery forces. It is obvious that secondary recovery programs could not and would not be conducted if any adjoining operator could stop the project on the ground of subsurface trespass . . . . The technical rules of trespass have no place in the consideration of the validity of the orders of the Commission.[97]

While commentators generally have praised the *Manziel* decision for promoting an accepted goal—encouraging secondary recovery—one scholar has criticized the decision as stifling efforts to prevent physical waste of oil and gas with a compulsory-unitization statute.[98] Professor Jacqueline Weaver has convincingly championed

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[92] *Id.*

[93] Secondary recovery is a method of extracting oil, gas, or both when a reservoir is approaching or has reached the exhaustion of natural energy. HOWARD R. WILLIAMS & CHARLES J. MEYERS., OIL AND GAS TERMS 886 (7th ed. 1987). Fluid in the form of water, gas, air, or other substance is injected into the formation through an input well. *Id.* The natural energy is then removed from surrounding wells. *Id.*

[94] *Manziel*, 361 S.W.2d at 564.

[95] The court recognized that "if the irregular spacing is used, the life of the [Manziel's] well would be reduced to three and one half to eight months" from thirty-two months. *Id.*

[96] *Id.* at 568.

[97] *Id.* at 568–69.

[98] Jacqueline L. Weaver, *The Politics of Oil and Gas Jurisprudence: The Eight-Six Percent Factor*, 33 WASHBURN L.J. 492, 510 (1994) [hereinafter Weaver, *Politics of Oil and Gas*

the need for a compulsory-unitization statute in Texas.[99] As she points out, Texas is an anomaly as the largest producing state without such a statute.[100] Even the court in *Manziel* recognized that if the field in that case had been appropriately unitized by including the Manziels in the agreement, the secondary-recovery efforts would have been more efficient.[101] Equally significant, if the field had been uniformly unitized, the trespass issue would have disappeared because unitization in effect erases the lease lines between unitized owners.

According to Professor Weaver, the Texas Supreme Court should have strictly applied common-law rules for trespass to force the legislature to fulfill its duty to implement public policy by enacting a compulsory-unitization statute.[102] But the court recognized that by denying the injunction and allowing the authorized secondary-recovery project to proceed, it was reinforcing public policy to encourage the secondary recovery of oil as expressed in legislation.[103] Granting the injunction, on the other hand, would have frustrated the legislature's policy by empowering "holdout" owners who refuse to join voluntary-unitization agreements unless their unreasonable demands are met. The *Manziel* opinion considered this holdout problem[104] in quoting from an Illinois decision refusing to enjoin a water-flooding program:

Jurisprudence].

[99] *See* JACQUELINE L. WEAVER, UNITIZATION OF OIL AND GAS FIELDS IN TEXAS 257 (1986) (discussing attitude of Texas courts toward unitization issues).

[100] WEAVER, *Politics of Oil and Gas Jurisprudence*, *supra* note 98, at 499. Texas does have a voluntary unitization statute. 1949 TEX. GEN. LAWS, ch. 259 at 477–83 (codified at TEX. NAT. RES. CODE ANN. §§ 101.001–101.052 (West 1993 & Supp. 1996)). However, that act provides the Railroad Commission with only limited authority to approve unitization agreements. *See generally* SMITH & WEAVER, *supra* note 45, at ch. 11 (discussing voluntary unitization act).

[101] *Manziel*, 361 S.W.2d at 564. As the court noted in *Manziel*, because there was no unitization agreement between the Manziels and the Whelans, "[t]he plan was not set up out of a consideration of what pattern would result in the most recovery from the entire field; but rather a plan was used that would result in the most recovery from that *one lease*." *Id.*

[102] Weaver, *Politics of Oil and Gas Jurisprudence*, *supra* note 98, at 513. "Such statutes may be more effective in promoting conservation than judicially created doctrines which try to fill the vacuum in legislative policy making." *Id.*

[103] *Manziel*, 361 S.W.2d at 569–70.

[104] Holdouts reflect a form of strategic behavior that may prevent the parties from reaching an agreement even when both could be made better off. A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 18 (2d ed. 1989). Holdouts can halt activities by refusing to comply with an agreement unless demands are met. *Id.* Generally, these demands are in the form of exorbitant prices reflecting the holdout's monopolistic power. *See* Harold Demsetz, *When Does the Rule of Liability Matter?*, *in* ECONOMIC FOUNDATIONS OF PROPERTY LAW (Bruce A. Ackerman ed., 1975); *see also* SMITH & WEAVER, *supra* note 45, 431 (describing several obstacles to voluntary unitization, including holdouts).

> If a minority of one or more persons affected by the operations could prevent it by refusing to join in the agreement, they could then force the others to choose between leaving a large part of the oil underground, or consent to granting the dissidents an unreasonably large percentage of the oil. In other words, *the power to block a repressure program by refusing to sign the unitization agreement, would be the power to insist upon unjust enrichment.*[105]

As Professor Weaver recognized, the danger in leaving to the legislature the duty to resolve the issue of trespass, incident to secondary-recovery projects, by enacting a compulsory-unitization statute is that "the politics of conservation will stalemate change."[106] Indeed, Professor Weaver has thoroughly documented the disruptive effects of the politics between the independents and the majors on Texas pooling and unitization legislation.[107] The *Manziel* decision does not remove the need for a compulsory-unitization statute. Because the field in *Manziel* had not been completely unitized, the water-flooding plan did not ensure efficient recovery from the whole field, but only from one lease.[108] This fact, coupled with *Manziel*'s message in favor of secondary recovery, should have convinced state legislators of the need for such a statute. One can only speculate whether a different decision in *Manziel* would have galvanized the political forces in the legislature to a point of consensus necessary for passing an effective compulsory-unitization statute.[109] To date, those disparate legislative

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[105] *Manziel*, 361 S.W.2d at 570–571 (quoting Reed v. Texas Co., 159 N.E.2d 641, 644 (Ill. App. 4d 1959)). *See, e.g.*, Baumgartner v. Gulf Oil Corp., 168 N.W.2d 510, 518 (Neb. 1969) (stating, "[W]hile we agree he had a perfect right to refuse to join the project, he should not be rewarded because he did . . . . Neither should he be permitted to recover what he would have received if he had assumed the risks of the project").

[106] *See* Weaver, *Politics of Oil & Gas Jurisprudence, supra* note 98, at 514.

[107] Weaver, *Politics of Oil & Gas Jurisprudence, supra* note 98, at 537.

[108] *Manziel*, 361 S.W.2d at 564.

[109] Texas Supreme Court decisions in the 1960s finally led to a pooling statute in Texas. *See* TEX. NAT. RES. CODE ANN. §§ 102.001–102.112 (West 1993). However, as Professor Weaver notes, that statute is narrow and badly needs reform before the benefits of pooling can be realized for technological advances, including horizontal drilling and sandfracing. *See* Weaver, *Politics of Oil and Gas Jurisprudence, supra* note 98, at 525. Professor Weaver cites the East Texas injection program and the Boonsville episode as successful examples of courts lobbing significant oil and gas issues to the legislature. *Id.* at 513. The East Texas injection program was established as a result of the court's opinion in Goldsmith & Powell v. State, 159 S.W.2d 534 (Tex. Civ. App. 1942). In *Goldsmith*, the Texas Attorney General sued 155 operators in the East Texas field to enjoin them from polluting the Neches river by discharging salt water and

forces continue to block the passage of such a statute.[110]

Professor Weaver's criticisms of the *Manziel* approach, that the court should have forced the legislature to enact a unitization statute by strictly adhering to common-law conceptions of trespass, are in accord with criticisms generally launched against legal theories perceived as condoning the courts' consistent judicial usurpation of the legislative role.[111] As described above, however, the pragmatic approach promotes a particular *process*, not unbridled judicial activism. The process includes directly identifying goals and policy conflicts, weighing precedent and legislative mandates, and assessing the effects of alternative courses of action. In *Manziel*, the court

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chlorides from their oil wells. *Id.* at 511. The small operators could not afford to comply with the ruling and sought the Railroad Commission's help. *Id.* In response to the small operators disposal problem, the commission began the bonus allowable rule which assured that the costs of building and operating a fieldwide salt water injection system would be recovered by varying the bonus allowable to equal the cost of injection. *Id.* at 513. In response to the rule, the East Texas Saltwater Disposal Company began injection operations in October 1942, serving all operators in the field regardless of whether they were stockholders. *Id.*

In the Boonsville episode, the Texas legislature responded to the Supreme Court opinion that conservation statutes, which prohibited the downhole commingling of oil and gas from different strata, only authorized the commission to prorate oil and gas produced from a common source of supply. *Id.* at 504 (citing Gage v. Railroad Comm'n, 582 S.W.2d 410 (Tex. 1979)). The court further held that each stringer in the Boonsville field was a separate source of supply which prevented the commission from prorating wells with commingled production. *Id.* The commission began to deny all requests for commingling in order to maintain the integrity of the prorationing system. *Id.* at 505. Eventually, the Texas legislature granted the commission the authority to prorate production from commingled zones as if they were a single pool. *See* TEX. NAT. RES. CODE ANN. § 85.053 (West 1993).

[110] *See* Weaver, *Politics of Oil and Gas Jurisprudence*, *supra* note 98, at 537 n.115 (discussing political debate that prevents passage of a compulsory unitization bill in Texas). "TIPRO [Texas Independent Producers and Royalty Owners Association] opposes any such bill which does not require the unit operator to market the gas of the nonoperators on the same terms as the operator's gas contract." *Id.* "The debate over this aspect of compulsory unitization is reminiscent of the great Panhandle prorationing battles between the majors and independents in 1930's." *Id.*

[111] The longstanding dispute between judicial restraint and judicial activism is often characterized today as "interpretive" and "noninterpretive." *See* JOHN HART ELY, DEMOCRACY AND DISTRUST: A THEORY OF JUDICIAL REVIEW 1 (1980). Interpretive judges decide constitutional issues by confining themselves to "enforcing norms that are stated or clearly implicit in the written Constitution." *Id.* Noninterpretive judges "go beyond that set of references and enforce norms that cannot be discovered within the four corners of the document." *Id.* Advocates of judicial restraint believe that it is not the function of the judiciary to strike down laws with which the judge may disagree. SCHWARTZ, CURRENTS, *supra* note 43, at 381. It is the legislator, not the judge, who has "the primary say on the policy considerations behind a regulatory measure." *Id. But see* Linda Greenhouse, *Farewell to the Oil Order in the Court: The Right Goes Activist and the Center Is a Void*, N.Y. TIMES, July 2, 1995, § 4, at 1 (noting that judicial activism, "a phrase that conservatives once hurled as an epithet," now describes the opinions of the United States Supreme Court's conservative block of justices).

proceeds with this process and succeeds where the legislature has failed to promote its own mandate in favor of secondary recovery.

Courts in other jurisdictions faced with the *Manziel* trespass issue have engaged in a pragmatic process but reached different results. For example, in *Jameson v. Ethyl Corp.*,[112] the Arkansas Supreme Court overtly identified the competing goals and assessed alternative courses of action:

> A determination that a trespass or nuisance occurs through secondary-recovery processes within a recovery area would tend to promote waste of such natural resources and extend unwarranted bargaining power to minority landowners. On the other hand, a determination that the rule of capture should be expanded to cover the present situation could unnecessarily extend the license of mineral extraction companies to appropriate minerals which might be induced to be moved from other properties through such processes and, in any event, further extend the bargaining power of such entities to reduce royalty payments to landowners who are financially unable to "go and do likewise". . . .[113]

In *Jameson*, the Arkansas court determined that the goals of encouraging secondary recovery and protecting property rights could be balanced if the denial of an injunction were conditioned upon requiring compensation for excess oil and gas removed from neighboring tracts through secondary recovery, as well as requiring compensation for any special damages. As explained in Part II, it is arguable whether *Manziel* would shield operators in Texas from liability for damages in private trespass actions, or whether *Manziel* only disallows an injunction when the Railroad Commission has approved a secondary-recovery plan.[114] Yet, in an effort to promote secondary recovery, both *Manziel* and *Jameson* evince a pragmatic process, informed by a "web of beliefs" inclusive of precedent and policy. Moreover, in both instances, the courts are able to fashion rules that promote secondary-recovery projects.

Although reaching different results, *Jameson* and *Manziel*, like

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[112] 609 S.W.2d 346 (Ark. 1980).

[113] *Id.* at 351. As discussed in Part II *infra*, most jurisdictions have not totally shielded operators from liability for approved secondary-recovery projects.

[114] *See supra*, Part II, notes 131–33 and accompanying text.

Lone Star and *Ohio Oil*, demonstrate the value of a pragmatic approach to decision making. Part II highlights the preferable attributes of this pragmatic approach by reviewing other cases that fail to follow its tenets. One example is a recent Texas case that presented the opportunity for the court to clarify *Manziel*'s effect on common-law trespass suits between private parties. Other cases consider the role in oil and gas jurisprudence of another classic common-law rule, the Rule Against Perpetuities.

II. THE ANTITHESIS OF THE PRAGMATIC APPROACH: MASKS AND MYOPIA

In the formative years of the Great Era, commentators consistently called for a special jurisprudence for oil and gas, one which would respond to prevailing policies rather than to inappropriate common-law analogies.[115] Such policies included conserving natural resources and encouraging fair and efficient production of oil and gas. As early as 1878, a litany of statutes codified measures to achieve these goals.[116] As described in Part I, *Ohio Oil*, *Lone Star*, *Manziel,* and *Jameson* exemplified many courts' promotion of policy by embracing a pragmatic approach to decision making.[117] The pragmatic approach was appropriate in the Great Era for two reasons. First, unlike in other areas of the law, the commentators and statutes attest to an early consensus about the guiding policies. Second, because the technology and markets for oil and gas evolved late in the Nineteenth Century, judges turning to the common law encountered a paucity of applicable rules. Free from direct precedent, courts could employ a pragmatic approach, which

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[115] In addition to the articles cited in *Lone Star* and others cited in the text, volumes were written in the Great Era. In these articles, scholars consistently criticized cases for rigid formalism and urged courts to assume more pragmatic approaches. *See* Veasy, *Law of Oil and Gas, supra* note 74, at 454 (criticizing continued use of animal analogy in light of physical and scientific knowledge); Walker, *Fee Simple Ownership of Oil and Gas, supra* note 78, at 125 (recognizing that early use of inappropriate analogies demands evolution of oil and gas law); Hardwicke, *Rule of Capture, supra* note 21, at 399 (noting that adherence to high sounding labels obscured fundamental questions); Walker, *Property Rights in Oil and Gas, supra* note 27, at 370 (cited in *Lone Star* urging special jurisprudence for oil and gas); Summers, *The Modern Theory, supra* note 28, at 5 (observing policy concerns in oil and gas production).

[116] In that year Pennsylvania enacted the first conservation statute, which required plugging and casing wells. Summers, *The Modern Theory, supra* note 28, at 1 n.1. Similar legislation was enacted in New York in 1879, in Ohio in 1883, and in West Virginia in 1891. *Id.*

[117] *See supra* notes 65–114 and accompanying text.

did no violence to strict notions of more formalistic decision making.

Unfortunately, as in *Hammonds* and other cases, judges trained in the shadow of Langdell frequently overworked traditional tools of logic, such as analogy, in answering questions spawned from the birth of an industry unknown at common law. As described in Part I, the *Hammonds* decision represents the antithesis of a pragmatic approach by clinging to the wild-animal analogy to construct a common-law pedigree. The text of that decision subverts the pragmatic process by failing to weigh policy considerations, to identify goals, or to consider factual differences undermining the logic for the analogy.

Viewed in this manner, the approach in *Hammonds* can be classified as myopic rather than pragmatic. However, one might also accuse the *Hammonds* court of intentionally concealing the role of policy. In fact, a leading oil and gas scholar criticized *Hammonds*, and other early cases strictly adhering to the wild-animal analogy, as being faulty for intentionally masking, rather than myopically ignoring, the role of policy. In analyzing the analogies used by courts to form differing theories of ownership in oil and gas, Professor Summers concluded:

> From fact analogies so different resulting in identical legal conclusions, it becomes apparent that the real basis for these decisions was something that did not appear in the language of the opinions. These judges were aware of the economic value of oil and gas after production. They disregarded such physical facts of oil and gas, if any, as may have been presented in the course of the proceedings. . . . In other words, the decisions were clearly based upon a false assumption of facts which pointed to the enforcement of a policy of production and a disregard of the policy of conservation.[118]

Whether these cases are characterized either as innocently ignoring policy or as purposefully hiding the role of policy, Professor Summers concluded correctly that they stifle development of a coherent jurisprudence for oil and gas law: "Out of these few decisions . . . there developed a rule of property law, an illegitimate progeny of the policy of production, conceived in ignorance, and christened in

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[118] Summers, *The Modern Theory*, *supra* note 28, at 7–8.

later years as the law of capture, which has lived in the minds of many judges and lawyers to form an obstructive force in the enactment as well as in the enforcement of conservation legislation."[119]

A weak defense of those cases would include assertions of ignorance about oil and gas properties and policies, a lack of knowledge unavoidable in that early era.[120] Yet, that defense becomes even weaker when, despite the passage of time and the evolution of knowledge and technology, modern courts frequently revert to these counterproductive approaches to decision making. Illustrating this unfortunate regression is the recent treatment by courts of two classic common-law rules, the doctrine of trespass and the Rule Against Perpetuities.

A. The Trespass Example—Geo Viking v. Tex-Lee Operating Co.

Thirty years after the *Manziel* decision, Texas courts recoiled from revisiting the trespass/policy dichotomy in a pragmatic fashion and rendered opinions that have created uncertainty about property

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[119] Summers, *The Modern Theory, supra* note 28, at 8. Several scholars, in addition to Professor Summers, point to the rule of capture and the ownership-in-place doctrine as hindering oil and gas jurisprudence, and consequently, the efficient production of natural resources. *See* Polston, *Doctrine in Disarray*, *supra* note 61 (asserting that application of ownership in place theory to minerals prevented development of sound body of law); Cohen, *Property Theories, supra* note 62, at 337 (criticizing incorporeal interest in oil and gas for preventing rapid and orderly development of resources). *But see* KUNTZ, *supra* note 24, § 4.1, at 113 (praising adoption of rule of capture in oil and gas law, regardless of its questionable genesis). Professor Kuntz recognizes that originally the adoption of the rule of capture was due to lack of scientific knowledge, "but the subsequent advance in scientific knowledge does not necessarily lead to a different rule." *Id. See also* SMITH & WEAVER, *supra* note 45, at 5–7 (illustrating that the rule of capture worked well when treated as policy rather than a rule of property).

[120] *See* Sullivan, *Oil and Gas Law in Montana*, *supra* note 74, at 16. Professor Sullivan views oil and gas jurisprudence as three distinct periods distinguished by relative knowledge:

> [I]n the evolution of a separate jurisprudence on oil and gas, the cases may be distinguished on the basis of a early recognizable time sequence–before 1900, the era of definition and comparative ignorance of how oil occurs and reacts when a well penetrates the reservoir; between 1900 and 1932–the era of scientific awareness of the nature of petroleum and petroleum reservoirs and the emergence of the conventional "unless" lease; from 1932 to the present–the era of conservation.

Id. The ignorance defense loses cogency since most cases were decided when information and scholarship were widely available.

rights. In *Geo Viking, Inc. v. Tex-Lee Operating Co.*,[121] the trespass issue stemmed from a hydraulic fracturing, or "sandfracing," procedure. Tex-Lee sued Geo Viking for damages under the Texas Deceptive Trade Practices Act claiming Geo Viking failed properly to "frac" an oil well.[122] Fracing is designed to increase permeability and production by breaking up tight oil and gas bearing formations.[123] Generally, a mixture of liquid and sand is injected into the formation, creating cracks which are then propped open by the sand. These cracks can extend for thousands of feet subsurface, raising the trespass issue.[124] Geo Viking countered Tex-Lee's claim by arguing that if the fracing job had been performed as planned, it would have extended beyond the boundaries of the unit.[125] Therefore, Geo Viking requested a limiting instruction to the jury not to consider minerals obtained by trespass in computing damages. The trial court refused the request.[126]

In resolving the propriety of refusing the jury instruction on damages, a pragmatic approach would have required identifying the policies and principles embraced in precedent and legislation, and assessing their role in determining whether sandfracing constitutes a trespass. Unlike the water-flooding project in *Manziel*, sandfracing lacks express legislative blessing.[127] Pertinent Texas statutes do not

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[121] 817 S.W.2d 357 (Tex. Ct. App. 1991), *rev'd per curiam*, No. 1992 WL 80263 (Tex. Apr. 22, 1992), *withdrawn and writ of error denied as improvidently granted*, 839 S.W.2d 797 (Tex. 1992).

[122] *Id.* at 359.

[123] *Id.* The fracing was performed on a well in the Austin Chalk Formation in Lee County, Texas, "an extremely tight formation containing intermittent fractures which must be tapped in order to obtain oil." *Id. See infra* note 128 (discussing advantages of sandfracing).

[124] *Geo Viking*, 817 S.W.2d at 359. The rapid development and improvement of recovery technologies such as fracturing presents a variety of potential legal problems. The current practice of using a larger casing to perforate and stimulate reservoirs has led to greater fracture lengths and proppant concentrations. *See* Gary Cartwright, *Tight Oklahoma Gas Sands Remain an Attractive Play*, OIL & GAS J., April 24, 1995, at 55. The extension of these fractures beneath neighboring tracts suggests that the fractures themselves could constitute a trespass. *See* Terry D. Ragsdale, *Hydraulic Fracturing: The Stealthy Subsurface Trespass*, 28 TULSA L.J. 311, 338 (1993) [hereinafter Ragsdale, *Hydraulic Fracturing*] (discussing whether a subsurface entry into an offsetting property constitutes an actionable tort). *See infra* Part IV (discussing recent technologies that raise new trespass concerns in oil and gas jurisprudence).

[125] *Geo Viking*, 817 S.W.2d at 359.

[126] *Id.* at 363–64.

[127] Weaver, *Politics of Oil and Gas*, *supra* note 98, at 524. Professor Weaver indicates that the legislature's refusal to categorize fracing as a secondary-recovery operation prevents the Railroad Commission from authorizing fracing procedures since "it is doubtful that it fits into the category of cooperative agreements that the Railroad Commission can approve under § 101.011 of the voluntary unitization act." *Id.*

classify sandfracing as a secondary-recovery project and thus, the Railroad Commission had no authority to authorize the procedure. Nevertheless, like secondary-recovery projects, there is no doubt that fracing operations lead to more efficient production.[128] Yet, with both secondary recovery and fracing, the procedure involves a physical intrusion of substances, including water and sand, onto a neighboring tract.[129]

Because the injected substances originate from procedures conducted on the potential defendant's land, Professors Williams and Meyers have proposed a "negative rule of capture," which would preclude liability for trespass damages:

> Just as under the rule of capture a landowner may capture such oil or gas as will migrate from adjoining premises to a well bottomed on his land, so also may he inject into a formation substances which may migrate through the structure to the land of others, even if it thus results in the displacement under such land of more valuable with less valuable substances.[130]

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[128] Weaver, *Politics of Oil and Gas*, *supra* note 98, at 524. Hydraulic fracturing provides a method of recovery in many situations where conventional recovery techniques fail. *See Chemical EOR: Enhanced Imbibition in Tight Reservoirs*, ENHANCED ENERGY RECOVERY & REFINING NEWS, July 1, 1995, *available in* WESTLAW, 1995 WL 8309057. Fracturing is often chosen over other methods of recovery, particularly for high-permeability reservoirs, due to productivity increases and the reduction of sand production. *See* R.G. Dusterhoft, *Fracturing High-Permeability Reservoirs Increases Productivity*, OIL & GAS J., June 20, 1994, at 40. Dusterhoft explains that:

> A key element is the reduction of near well bore drawdown during production. Drawdown, the difference between reservoir and production pressures, is the driving force for flow into the well bore. As drawdown increases because of higher production rates or depletion, formation instability may cause fines and sand to migrate into the well bore region. A greater well bore cadius reduces both radial velocity and drawdown. Fracturing beyond the well bore region effectively bypasses the damages zone, increasing the effective radius of the well bore and enabling higher flow rates with lower drawdown pressure.

Id. See also John E. Smith, *High Sand-Concentration Fracturing Treatments*, WORLD OIL, Mar., 1990, at 77 (recognizing that hydraulic fracturing is only technique in many areas that substantially increases production).

[129] *See* Ragsdale, *Hydraulic Fracturing*, *supra* note 124, at 346–47 (explaining that "[w]ith the advent of deep-penetrating, hydraulic fracturing operations in the past decade primarily in tight reservoirs, the potential for an operator to effect a subsurface entry into an adjacent lease is amplified").

[130] WILLIAMS & MEYERS, *supra* note 24, § 204.5, at 60.

In *Manziel*, the court sent mixed messages about its stance on trespass damages between private parties. On the one hand, the opinion limited the issue, stating "We are not confronted with the tort aspects of such practices."[131] Given only this statement, *Manziel* could be interpreted narrowly as simply prohibiting an injunction of a commission-approved, secondary-recovery project, but not as precluding liability for trespass.[132] Yet, because the opinion quotes the Williams and Meyers' "negative rule of capture" with approval, it also suggests that liability for trespass is precluded. The opinion further concludes, "The technical rules of trespass have no place in the consideration of the validity of the orders of the Commission."[133] Clearly *Geo Viking* presented Texas courts with the opportunity to resolve these mixed messages. Unfortunately, the appellate court's opinion short-circuits the trespass issue and the Texas Supreme Court ultimately avoids it.

In upholding the trial court's refusal to give the limiting instruction to the jury not to consider minerals obtained by trespass, the appellate court allocated only one paragraph to the trespass issue and decided it was "without merit."[134] The opinion rests its ruling on a curt recitation of the rule of capture and its accompanying remedy for an aggrieved landowner, self-help.[135] In a concurring opinion, Judge Cornelius only briefly acknowledged the trespass issue: "If Geo Viking is responsible for depriving Tex-Lee of production, it cannot defend on the basis that Tex-Lee might have secured some of that production by [having trespassed] on someone else's land. That is a matter between Tex-Lee and the other landowner."[136]

Only the dissenting opinion scrutinized the rule of capture as applied to hydraulic fracturing.[137] In his dissent, Judge Grant noted

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[131] *Manziel*, 361 S.W.2d at 566.

[132] *See* SMITH & WEAVER, *supra* note 45, at 476 (considering alternative interpretations of *Manziel*).

[133] *Manziel*, 361 S.W.2d at 568–69.

[134] *Geo Viking*, 817 S.W.2d at 364.

[135] *Id.* The self-help suggestion arises from early cases that admonished landowners concerned about drainage to "go and do likewise." *See* Barnard v. Monongahela Natural Gas Co., 65 A. 801, 802–03 (Pa. 1907) (recognizing ability of landowner whose tract was being drained to protect himself by offset drilling).

[136] *Geo Viking*, 817 S.W.2d at 364 (Cornelius, J., concurring). As indicated by Professor Weaver, this concurrence may mean damages will be permitted for trespass. Weaver, *Politics of Oil and Gas Jurisprudence*, *supra* note 98, at 523–24. Unfortunately, the Texas Supreme Court allowed this ambiguous opinion to stand.

[137] *Geo Viking*, 817 S.W.2d at 365 (Grant, J., dissenting).

that the rule of capture applies only if the producing well does not commit a trespass.[138] *Manziel* is neither cited nor discussed. Instead, the dissent relied on another Texas Supreme Court case, *Gregg v. Delhi-Taylor Oil Corp.*,[139] which had, in dictum, determined that fracing was similar to drilling a slant-well bottomed on a neighbor's tract and would constitute a trespass.[140] Because in *Geo Viking* there was evidence that the fracing process extended beyond the unit's boundaries, Judge Grant concluded damages should be limited.[141]

In its initial opinion in *Geo Viking*, the Texas Supreme Court agreed with the dissent.[142] Although not mentioning policy implications or *Manziel*'s mixed messages, the opinion briefly embraced a rule that sandfracing beyond lease lines "constitutes a

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[138] *Id.* at 365–66 (Grant, J., dissenting).

[139] 344 S.W.2d 411 (Tex. 1961).

[140] *Geo Viking*, 317 S.W. 2d at 365 (citing *Gregg*, 344 S.W.2d at 416). In addition to *Gregg*, there were three other Texas opinions involving the same plaintiff, Delhi-Taylor, collectively referred to as the Delhi-Taylor cases. Delhi-Taylor Oil Corp. v. Holmes, 344 S.W.2d 420 (Tex. 1961); Delhi-Taylor Oil Corp. v. Gregg, 337 S.W.2d 216 (Tex. Civ. App. 1960), *aff'd*, 344 S.W.2d 411 (Tex. 1961); Holmes v. Delhi-Taylor Oil Corp., 337 S.W.2d 479 (Tex. Civ. App. 1960), *rev'd*, 344 S.W.2d 420 (Tex. 1961). In Gregg v. Delhi-Taylor Oil Corp., Delhi-Taylor owned a mineral lease adjacent to Gregg's lease. Gregg drilled a gas well 80 feet to the south and 37.5 feet to the east of Delhi-Taylor's lease and planned to perform a hydraulic fracture operation to increase productivity. *Gregg*, 344 S.W.2d at 412. In Delhi-Taylor Oil Corp. v. Holmes, Holmes drilled a well on his mineral lease, a tract only 30 feet wide, and like Gregg planned to perform a hydraulic fracture operation on the well. *Delhi-Taylor Oil Corp.*, 344 S.W.2d at 420. Gregg and Holmes arrived as companion cases before the Texas Supreme Court on the issue of whether the Railroad Commission had primary jurisdiction to hear the case. The court concluded that they had jurisdiction to hear cases concerning hydraulic fracture subsurface trespass and that the allegations were sufficient to raise the issue. *Gregg*, 344 S.W.2d at 416. The court in determining whether hydraulic fracturing constitutes a trespass held, "entry upon another's land need not be in person, but may be made by causing or permitting a thing to cross the boundary of the premises." *Id.* In dictum, the court compared subsurface trespass by hydraulic fracturing to slant well drilling. *Id.*

Slant well drilling began in the 1930s as a result of technological advances, such as the whipstocks, "which permitted the drillers to deviate a wellbore toward a neighboring property line." *See* Ragsdale, *Hydraulic Fracturing, supra* note 124, at 319 (tracing history of directional well subsurface trespass). The advent of directional drilling tools allowed operators to "engage in sneaky, but intentional, subsurface trespasses." *Id.* The East Texas Field "slant hole" scandal in the 1960s put an end to the abuses. *Id.* In response to the directional drilling controversies, "many state conservation agencies began enforcing requirements that operators take and keep inexpensive surveys indicating the angle of deviation at specified drilling depths." *Id.* Today, many technological advances are raising similar allegations of subsurface trespass issues previously resolved by these state agencies. *Id.*

[141] *Geo Viking*, 817 S.W.2d at 365 (Grant, J., dissenting). Justice Grant originally wrote the majority opinion but changed his mind on motion for rehearing.

[142] Geo Viking, Inc. v. Tex-Lee Operating Co., No. D-1678, 1992 WL 80263, at *2 (Tex. Apr. 22, 1992).

subsurface trespass."[143] Six months later, the court withdrew that opinion and denied the application for writ of error with the noncommittal statement that "we should not be understood as approving or disapproving the opinions of the court of appeals analyzing the rule of capture or trespass as they apply to hydraulic fracturing."[144]

The *Geo Viking* opinions represent the antithesis to a pragmatic approach. The appellate court opinion, in a myopic mode reminiscent of the *Hammonds* decision, invoked the rule of capture without considering the policy conflicts of protecting the rights of property owners and promoting hydraulic fracturing to ensure efficient production, or the physical distinctions between hydraulic fracturing, conducting secondary recovery, and drilling an initial well. Or, as advanced by Professor Summers above, perhaps the opinion's myopia is merely a ruse for advancing the policy of production. By belatedly denying the application for writ of error, the Texas Supreme Court deprived Texas jurisprudence of the guidance provided by its first opinion. This side-step suggests that the court recognized that a finding of trespass would discourage hydraulic fracturing and hinder development. The court, rather than overtly address policy, masked its role by simply allowing the lower court's ambiguous opinion to stand.[145]

By failing to adopt the tenets of a pragmatic approach, the *Geo Viking* opinions illustrate its very value. A pragmatic approach would require: (1) identifying the competing policies, including encouraging efficient production and protecting the correlative rights of landowners; (2) assessing the effects of available courses of actions in light of policy and precedent, including the *Manziel* and the *Delhi* cases; and (3) articulating standards or rules to clarify the relative

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[143] *Id.*

[144] *Geo Viking*, 839 S.W.2d at 798.

[145] *See* Weaver, *Politics of Oil and Gas Jurisprudence*, *supra* note 98, at 524. Professor Weaver reveals the court's effort at masking the role of policy by comparing *Geo Viking* to *Manziel*. In attempting to explain the Texas Supreme Court's change of mind Weaver suggests:

> Return to the excerpt of the court's opinion in *Manziel*, substituting "hydraulic fracturing" for "secondary recovery." To paraphrase the resulting excerpt, it is obvious that fracturing operations could be encouraged and that they will not occur if adjoining operators can stop them on the ground of subsurface trespass. The proper measurement of damages at issue in the *Geo Viking* case implicates much larger public policy matters affecting the ultimate recovery of oil and gas in Texas.

Id.

rights of owners and operators. Pursuant to this pragmatic process, the courts could have encouraged fracturing techniques by relying on *Manziel*'s rejection of the "technical rules" of trespass in oil and gas secondary recovery, and by expressly adopting the Williams and Meyers' "negative rule of capture" precluding tort liability. On the other hand, a pragmatic judge might have weighed the precedential value of the *Delhi* cases recognizing trespass liability, and distinguished *Manziel* because of the lack of legislative approval for hydraulic fracturing.[146] Under this approach, the policy conflicts could have been balanced by adjusting the remedies as in a nuisance cause of action, by denying an injunction but requiring damages.[147] Following this trajectory would have placed Texas in line with the treatment of the trespass issue in most other jurisdictions.[148]

By failing to engage in the pragmatic process the courts deprived Texas jurisprudence of "practical certainty" on the trespass issue. Without this certainty, operators cannot ascertain whether, and to what extent, trespass damages should figure into their cost/benefit analysis before fracing a well. This uncertainty raises transaction costs, decreases the incentive for exploration and development of oil and gas, and ensures a multiplicity of subsequent lawsuits.

B. The Rule Against Perpetuities

Manziel's rejection of the "technical" common-law rules of trespass would have gratified scholars in the Great Era who called for

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[146] Weaver, *Politics of Oil and Gas Jurisprudence, supra* note 98, at 525. As discussed earlier, Professor Weaver believes this approach would force the legislature to amend the MIPA to permit effective use of new technologies, including horizontal drilling and hydraulic fracturing. *Id.*

[147] *See Jameson, supra* notes 112–14 and accompanying text; *see generally* SMITH & WEAVER, *supra* note 45, § 11.7[C] (noting that "prevailing right of judicial opinion is that tort liability exists in private lawsuits for damages caused by a unit's operation").

[148] *See, e.g.*, Jameson v. Ethyl Corp., 609 S.W.2d 346 (Ark. 1980) (balancing goals of encouraging secondary recovery and protecting property rights by requiring compensation for excess oil and gas removed from neighboring tract); Tidewater Oil Co. v. Jackson, 320 F.2d 157 (10th Cir. 1963), *cert. denied*, 375 U.S. 942 (1969) (recognizing recovery of damages caused by adjacent water flooding operations); Baumgartner v. Gulf Oil Corp., 168 N.W.2d 510 (Neb. 1968) (denying willful trespass to owner refusing to join unitization project); *see also* 2 SMITH & WEAVER, *supra* note 45, at 481 n.136 (acknowledging that negative rule of capture has not developed as projected by Williams and Meyer); Vitauts M. Gulbis, Annotation, *Rights and Obligations, With Respect to Adjoining Landowners, Arising Out of Secondary Recovery of Gas, Oil and Other Fluid Minerals*, 19 A.L.R. 4th 1182 (1994) (analyzing state and federal cases which have determined rights and obligations arising from secondary recovery operations).

a special jurisprudence for oil and gas, a jurisprudence that would consider the needs of a new industry unknown at common law. Many Great Era commentators urged courts to liberate oil and gas law from the dictates of another classic common-law rule, the Rule Against Perpetuities (RAP). For example, Williams and Meyers asserted that most oil and gas interests should be exempt from the rule "on the straightforward basis that they serve social and commercial convenience and do not offend the policy of the Rule Against Perpetuities."[149]

A straightforward consideration of policy is consonant with the pragmatic process described herein. Pursuant to that process, a court considering a perpetuities problem would: (1) identify the policies behind the RAP and the role of those policies in oil and gas jurisprudence; and (2) assess available options and their effects, including either applying the RAP as a legislative mandate, or exempting oil and gas interests on policy grounds.

The dilemma posed by the perpetuities problem is the same as that posed by the trespass issue: whether policy and precedent permit courts to exempt oil and gas jurisprudence from the strict common-law dictates, or whether they require courts strictly to apply these rules and leave it to the legislature to resolve the dilemma. Unfortunately, as in *Geo Viking*, courts in many oil and gas cases faced with perpetuities problems shun both of these straightforward approaches and opt for the myopic or the masking methods described above.

1. The Policy Behind the Rule Against Perpetuities: Title Stability and Efficient Use of Resources

The Rule Against Perpetuities is a rule of property created by courts concerned about fettering real property titles with interests vesting remotely in the future.[150] Professors Bergin and Haskell

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[149] 2 WILLIAMS & MEYERS, *supra* note 24, § 335, at 185. *But see* Bruce M. Kramer, *Property and Oil and Gas Don't Mix: The Mangling of Common Law Property Concepts*, 33 WASHBURN L.J. 540, 559 (1994) [hereinafter Kramer, *Mangling*] (concluding that "[a] wholesale exemption for these types of transactions from the application of the Rule is unwarranted").

[150] Gray's classic statement of the rule is, "[n]o interest is good unless it must vest, if at all, not later than twenty-one years after some life in being at the creation of the interest." JOHN C. GRAY, THE RULE AGAINST PERPETUITIES § 201, at 191 (Roland Gray ed., 4th ed. 1942). The

explain that the rule against perpetuities was aimed at family wealth: "Land was wealth, the landowner frequently wished to assure himself that his wealth would remain in the family for many generations; as a consequence various ingenious and complex forms of land settlement involving future interests were employed to accomplish this end." The RAP originated as a means for controlling this "dead hand" control. Because the RAP renders void interests that vest too late, it increases marketability by removing contingencies on titles. This clarity serves to ensure efficient use of resources by lowering transaction costs.[151] Since the RAP was celebrating its bicentennial before the first oil and gas well was drilled in Titusville, Pennsylvania, in 1859,[152] oil and gas interests were not the concern of its common-law creators. However, posed as a theory about the remote vesting of real property interests, the RAP has obvious application to many oil and gas transactions, including leases, executive rights, non-participating royalty interests, and term mineral

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rule against perpetuities is more of a rule against remoteness of vesting, than a rule invalidating interests which last too long. *See* Thomas F. Bergin & Paul G. Haskell, PREFACE TO ESTATES IN LAND AND FUTURE INTERESTS 183 (1966). Bergin explains that the phrase "rule against perpetuities" does not describe what the rule actually accomplishes:

> The rule does not attempt directly to limit the number of successive future interests that can be created . . . duration of a trust . . . period of time between the creation of a future interest and its realization as a present or possessory interest . . . [or] within which absolute title to property is incapable of being transferred. What the rule does is to limit the period of time between the creation of a contingent future interest and its vesting in interest. If it is possible that a contingent future interest may vest in interest after the time limitation established by the rule, then the interest is void.

Id. at 185; *see also* W. Barton Leach, *Perpetuities in a Nutshell*, 51 HARV. L. REV. 638, 639 (1938) (recognizing Rule as a rule invalidating interests which vest too remotely).

[151] *See supra* Part I (discussing theory of reducing transaction costs by clarifying land titles).

[152] GRAY, RULE AGAINST PERPETUITIES, *supra* note 150, § 22, at 18. The rule against perpetuities originated as a means of solving the problems in dealing with "peculiarities of English land law with its medieval overtones." *See* BERGIN & HASKELL, *supra* note 150, at 184 (noting common law origin of the Rule which remains in effect in most states). The modern rule originated in the 1682 Duke of Norfolk's Case, 3 Ch. Cas. 1, 22 Eng. Rep. 931 (1682) in which it was declared to be a rule against remote contingent future interests. *See* LEWIS M. SIMES, LAW OF FUTURE INTERESTS § 122 at 255 (2d ed. 1966) [hereinafter SIMES, LAW OF FUTURE INTERESTS] (tracing history of rule against perpetuities). In the Norfolk's case, the court did not establish the maximum number of years within which contingent future interests must vest, but it did hold "that they are valid if they must vest within a life in being." *Id.* In subsequent English cases, the permissible period of twenty-one years was determined, "to have derived from the period in which an estate tail could be made unbarrable." *Id.* at 258. The common law rule dominated when John Chipman Gray published the first edition of his treatise clarifying the rule of perpetuities in 1886. *Id.*

and royalty interests.[153] Similarly, the RAP's general aim to clear land titles and increase marketability applies to the oil and gas industry. When oil and gas titles are unclear, transaction costs rise and incentives to develop resources or invest in new technology decrease.[154] Therefore, it is imperative for courts to create clear rules for the interpretation of mineral and royalty deeds.[155] As described below, however, perpetuities analysis in the oil patch frequently creates uncertainty in land titles.

Classic perpetuities analysis requires a two-step process. First, it must be determined whether the rule applies. Second, if the rule applies, it must be determined whether it has been violated.[156] Under the common-law doctrine, the RAP applies to real property interests not presently vested, including contingent remainders and executory interests.[157] Although the RAP applies to those interests, it is not violated if the interests will vest within the RAP's time period of twenty-one years after a life in being at the creation of the interest.[158]

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[153] *See* KUNTZ, *supra* note 24, § 17.2, at 518–22 (discussing application of Rule to oil and gas leases); *see also* Kramer, *Mangling*, *supra* note 149, at 551–59 (explaining that creation of defeasible term interests and transfer of stand alone interests have created the most difficult Rule problems in oil and gas jurisprudence).

[154] *See supra* Part I (discussing reduction of transactions costs through clarity of titles).

[155] Courts have generally recognized this duty. *See, e.g.*, Moser v. United States Steel Corp., 676 S.W.2d 99 (Tex. 1984) (insisting upon rules which ensure title stability); Atlman v. Blake, 712 S.W.2d 117 (Tex. 1986) (recognizing necessity for stability and certainty in construction of mineral deeds); *see also* Bruce M. Kramer, *Conveying Mineral Interests – Mastering The Problem Areas*, 26 TULSA L.J. 175, 175 (1990) (stating that "one of the universal objectives of real property conveyancing rules is that courts will attempt to reach results which ensure title certainty"); Laura H. Burney, *The Regrettable Rebirth of the Two-Grant Doctrine in Texas Deed Construction*, 34 S. TEX. L. REV. 73, 81 (1993) (recognizing that courts need to ensure title stability "in order to facilitate the transfer of property rights . . . ."); Eugene O. Kuntz, *The Law Relating to Oil and Gas in Wyoming*, 3 WYO. L.J. 107, 114 (1949) (noting that "[i]n matters of land titles, and most certainly in the field of oil and gas where heavy expenditures of capital are incident to exploration, development, and production, certainty is of the utmost importance").

[156] *See* BERGIN & HASKELL, *supra* note 150, ch. 8.

[157] BERGIN & HASKELL, *supra* note 150, at 209–10. These future interests arise when the grantor conveys a fee leaving a reversion in the grantor or a future interest in a third party. *Id.* at 115–18. The Rule also applies to other interests, including powers of appointment and option contracts. *Id.* at 203–09, 211–12.

[158] In applying this time period, the doctrine requires assuming anything can happen, rather than considering what actually occurs. For example, the fertile octogenarian rule assumes that an 80-year-old could have more children; therefore, the contingent remainder created in the following grant is void:

> Suppose testator bequeaths in trust to pay income to A for life, then to pay the income to the children of A for their lives, and upon the death of the survivor of such children, to pay the principal to the grandchildren of A. At the time of the testator's death A is 72 years old, and has two children. . . .

Additionally, courts and legislatures have fashioned exceptions to the RAP's application permiting courts to "wait and see" whether the interest in fact vests too late,[159] or allowing a court to interpret a document in a manner to avoid the RAP's application and honor the parties' intent.[160]

Although these case-by-case exceptions avoid the harshness of the RAP in specific instances, they do not serve the goal of clearing titles to ensure efficient use of resources. Under the "wait and see" exception, titles are in limbo during the observation period.[161] Giving

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> A could have an additional child who would not be a life in being at the testator's death, and that child could have a child who would be born beyond the permissible period.

See BERGIN & HASKELL, *supra* note 150, at 193 (interpreting certainty of vesting in rule against perpetuities).

[159] The Restatement (Second) of Property incorporated the "wait and see approach" in 1981 when it applied the rule against perpetuities to donative transfers. RESTATEMENT (SECOND) OF PROPERTY § 1 (1981). The Restatement (Second) version of "wait and see" has neither been directly adopted by any common law covets, nor legislatively enacted by any state. At least twenty states have legislatively adopted both the "wait and see" and *cy pres* reformation modifications, but many of these states have repealed their listed statutes and replaced them with the Uniform Statutory Rule Against Perpetuities. LEWIS M. SIMES & ALLEN F. SMITH, FUTURE INTERESTS § 1411, 254–56 (1956). The Uniform Statutory Rule Against Perpetuities was approved by the National Conference of Commissioners on Uniform State Laws in 1986 and incorporates the "wait and see approach," the *cy pres* reformation approach, and an alternative ninety-year perpetuities period in modifying the common law Rule. UNIFORM STATUTORY RULE AGAINST PERPETUITIES § 1, 8B U.L.A. 321–33 (1993). The Uniform Rule has been enacted in California, Colorado, Connecticut, Florida, Georgia, Hawaii, Indiana, Kansas, Massachusetts, Michigan, Minnesota, Montana, Nebraska, Nevada, New Jersey, New Mexico, North Dakota, Oregon, South Carolina, and West Virginia. *Id.* at 321.

[160] This approach is the doctrine of *cy pres,* meaning as "nearly as possible." *See* W. Barton Leach, *Perpetuities: Cy Pres on the March*, 17 VAND. L. REV. 1381 (1964) (discussing development of *cy pres* doctrine and its growing acceptance). The concept of the *cy pres* doctrine was originally found in the law of charitable trusts as a means of mitigating the destructiveness of the rule against perpetuities. *Id. See also* SIMES, LAW OF FUTURE INTERESTS, *supra* note 152, § 130, at 275. "States with *cy pres* reformation legislation but not "wait and see" legislation include Idaho, Missouri, Oklahoma, and Texas." ROGER A. CUNNINGHAM ET AL., THE LAW OF PROPERTY § 3.22, 144 n.3 (2d ed. 1993). "Courts in Hawaii, Mississippi, and New Hampshire have applied the *cy pres* reformation approach to validate interest otherwise void under the common law Rule without any statutory basis." *Id.* The states with "wait and see" but not cy *pres* reformation legislation include Alaska, Kentucky, Maine, Maryland, Pennsylvania, and Rhode Island. *Id.*

[161] The uncertainty created by the "wait and see approach" has caused many scholars to criticize it. *See* Richard R. Powell, *Commentary, Common Law Rule Against Perpetuities*, RESTATEMENT (SECOND) OF PROPERTY § 1 (Tentative Draft No. 1, 1978). In his commentary on the "wait and see approach," Professor Powell explains: "[u]nder the 'wait-and-see approach,' the *whole* limitation is before us as soon as the creating instrument speaks, but we would be compelled to wait for the whole period of the rule before determining the location of ownership of the affected asset." *See also*, SIMES, LAW OF FUTURE INTERESTS, *supra* note 152, at 271 (criticizing doctrine for rendering a contingency neither valid nor void during period Rule

courts latitude in interpretation provides no guarantees until after litigation over specific documents has ended. Only the straightforward exemption for most oil and gas interests, favored by Williams and Meyers, would guarantee title certainty. Rather than adopt such a straightforward approach, most majority opinions engage in more surreptitious approaches, including cases that appear to ignore the role of policy or blatantly mask its role by distorting common-law property principles.[162] Other opinions consider policy at the periphery of the applicable "web of beliefs," but ultimately retreat to more comfortable, but less effective, case-by-case exceptions.[163]

One approach that avoids the RAP and protects interests created in widely-used oil and gas transactions is to determine that the interest is vested and therefore not subject to the Rule Against Perpetuities. For example, courts are seen to have established early on that an oil and gas lease vests an interest in the lessee immediately, rather than postponing the vesting of the interest until production.[164] Even if these early decisions mask the goal of exempting oil and gas interests from the Rule, or whether they arrive at that result through a genuine exegesis of property-law principles, the effect is the same: The Rule Against Perpetuities is not applicable to the lessee's interest in the oil and gas lease.

Unlike case-by-case exceptions, this blanket exemption served the industry, and the interests of landowners seeking to profit from oil and gas beneath their lands, by freeing one of its basic transactions from challenges under the RAP. That result achieved the goal of the pragmatic approach, serving the "real needs of real people." But the pragmatic process would require directly acknowledging the goal of exempting leases from the RAP's

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applied); Lewis M. Simes, *Is the Rule Against Perpetuities Doomed? The "Wait and See" Doctrine*, 52 MICH. L. REV. 179, 190–94 (1953) (noting that wait and see doctrine will have little restrictive effect and "[p]roperty will be tied up more frequently and for longer periods of time").

[162] *See infra* notes 165–206.

[163] *See infra* notes 207–12 and accompanying text.

[164] *See, e.g.*, Rich v. Doneghey, 177 P. 86 (Okla. 1918) (holding that an oil and gas lease conferring mining rights for a specified time grants lessee a present vested interest in land); Central Ohio Nat. Gas & Fuel Co. v. Eckert, 71 N.E. 281 (Ohio 1904) (recognizing lease as a vested interest); Brown v. Fowler, 63 N.E. 76 (Ohio 1902); Heller v. Dailey, 63 N.E. 490 (Ind. 1902) (noting that exclusive and assignable right to acquire minerals is a subsiding, exclusive assignable and irrevocable right which vests before production); Stephens County v. Mid-Kansas Oil & Gas Co., 254 S.W. 290 (1923) (recognizing oil and gas lease as a determinable fee that vests interest immediately); *see also* KUNTZ, *supra* note 24, § 17.2, at 518 (discussing application of the rule against perpetuities to oil and gas leases).

application. As described below, however, few cases addressing the RAP in the oil patch have adopted such a process.

2. *The Rule Against Perpetuities and Non-Participating Royalties*— Cosgrove v. Young

Similar to oil and gas leases, most courts have saved royalty interests from a Rule Against Perpetuities challenge by determining that a nonparticipating royalty interest is a vested real property estate.[165] In 1982, however, the Kansas Supreme Court reached the opposite conclusion. In *Cosgrove v. Young*,[166] the court dutifully engaged in the two-step perpetuities analysis.[167] First, the court determined that an instrument executed in 1918 created a contingent interest.[168] The court held it was subject to the RAP, because the instrument conveyed an interest in royalties from future leases.[169] Second, relying on an earlier Kansas Supreme Court case,[170] the

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[165] *See, e.g.*, Dusquesne Natural Gas Co. v. Fefolt, 198 So. 2d 595 (Pa. 1964) (recognizing royalty interest as real property that will pass to grantee upon conveyance of land); Hanson v. Ware, 274 S.W.2d 359 (Ark. 1955) (holding conveyance of perpetual nonparticipating royalty interest vests immediately preventing violation of Rule); Callahan v. Martin, 43 P.2d 788 (Cal. 1935) (determining that assignment of oil royalty is vested estate in land); Gulf Refining Co. v. Stanford, 30 So. 2d 516 (Miss. 1947) (recognizing reserved royalty interest as real property interest); Schlittler v. Smith, 101 S.W.2d 543 (1937) (asserting that grantor is entitled to reserved royalties from subsequent mineral production lease). *See generally* KUNTZ, *supra* note 24, § 15.4 (tracing history of nonparticipating royalty interest); Bruce M. Kramer, *Royalty Not Cut From the Same Cloth?*, 29 TULSA L.J. 449 (1994) (discussing diversity of opinion on royalty interest); *But see* Dauphin Island Property v. Callon Inst., 519 So. 2d 948 (Ala. 1988) (refusing to distinguish between nonparticipating royalty interests that are "interests in the minerals" or "personal property rights in the mineral interest" since they are both vested interests).

Since an executive right is considered a vested property interest in Texas, it should also be exempt from a rule against perpetuities challenge. *See* Day & Co., Inc. v. Texland Petroleum, Inc., 786 S.W.2d 667 (Tex. 1990) (reversing precedent to hold that executive right is real property interest). *But see* Kevin J. Croy, Note, *Executive Right in a Mineral Estate is a Separate Interest in Real Property Subject to Property Law Principles: Day & Co. v. Texland Petroleum, Inc.*, 786 S.W.2d 667 (Tex. 1990), 22 TEX. TECH L. REV. 281, 299–303 (1991) (suggesting that since an executive right is recognized as an interest in real property it is subject to rule against perpetuities). Not all jurisdictions have classified the executive right as a real property interest. *See* Dallapi v. Campbell, 114 P.2d 646 (Cal. 1941) (classifying power to lease as special power of appointment violating RAP since it is nonvested interest).

[166] 642 P.2d 75 (Kan. 1982).

[167] *Id.* at 82.

[168] *Id.* at 83.

[169] *Id.*

[170] *Id.* (relying on Lathrop v. Eyestone, 227 P.2d 136 (Kan. 1951)).

Cosgrove court concluded that, "[n]aturally, if no future oil and gas leases are made and executed, there would never be a vesting of title to any royalty interest."[171] Because the interest might not vest within the RAP period,[172] the court concluded that the interest failed the second step of the analysis and was void.[173]

The court myopically applied the two-step analysis, citing only common-law restatements of the RAP from general treatises and prior cases.[174] The court also failed to discuss the policies behind the RAP and their relevance to oil and gas interests.[175] Only a dissenting opinion pursued a more inclusive, pragmatic process.[176]

Unlike the majority opinion, the dissent's opinion in *Cosgrove* scans a wide web composed of policy and precedent. The dissent relies on Williams and Meyers' observation that "[t]o hold perpetual royalty to be too remote is to confuse the value of the right with the right itself."[177] William and Meyers point out that if oil and gas leases create vested rights, although those rights are dependent upon future production, a royalty interest should be considered vested as well.[178] The dissent, assessing the effects of available courses of action, also includes Williams and Meyers' prediction that the Kansas view "will impel persons to demand a fully participating fraction of the mineral estate, with the result that large areas of mineral land in Kansas are likely to be held by tenancy in common. . . ."[179] In accord with Williams and Meyers' view, the dissenting judge doubts that the policy behind the RAP is served by encouraging "the division of minerals into small shares held in common."[180] The dissent concludes that the "conveyance of future royalties does not violate the spirit of the rule" but promotes the development of minerals.[181]

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[171] *Id.*

[172] The court also seemed impressed that the interest did not in fact vest until thirty-one years after the execution of the document, at which time the royalties became payable. *Id.* at 83. The grantee's successors, however, did begin receiving royalties. *Id.* at 83, 86.

[173] *Id.*

[174] *Id.* at 82–3.

[175] *Id.*

[176] *Id.* 87–90 (Herd, J., dissenting).

[177] *Id.* at 89 (Herd, J., dissenting) (quoting 2 WILLIAMS & MEYERS, OIL AND GAS LAW § 324.4).

[178] *Id.* (Herd, J., dissenting).

[179] *Id.* (Herd, J., dissenting).

[180] *Cosgrove*, 642 P.2d at 89 (citing 2 WILLIAMS & MEYERS, OIL AND GAS LAW § 323).

[181] *Id.* at 90 (Herd, J., dissenting). Justice Herd relied on an Arkansas case that also overtly relied on policy in determining that non-participating royalty interests are vested interests not subject to the rule. *Id.* (citing Hanson v. Ware, 274 S.W.2d 359 (Ark. 1955)).

Blindly following the letter and not the spirit of the Rule, the majority opinion in *Cosgrove* jeopardizes the validity of countless transactions by invalidating a commonly encountered oil and gas interest, the nonparticipating royalty. Unlike the pragmatic paradigm, this myopic approach ignores and ultimately frustrates the RAP's purpose. As described below, in another counterproductive approach to decision making, other cases mask the role of policy in common-law garb. These cases involve other widely used oil and gas transactions, including deeds reserving a term mineral interest and top leases.

3. *The Rule Against Perpetuities and Reservations of Term Interests*—Williams v. Watt

From a pragmatic perspective, the non-participating royalty and the oil and gas lease share the advantage of being interests virtually unknown at common law. Thus, courts are generally free to promote contemporary policy by christening them "vested interests" in the first step of the perpetuities analysis. However, the reservation of a term mineral interest by a grantor who has conveyed the surface estate to the grantee parallels the very type of interest targeted by the common-law creators of the RAP, the springing executory interest.[182] Most courts do not adopt a straight forward approach which would strictly apply common law rules and void, or globally exempt, the interests on a policy basis. Rather, most courts lapse into approaches which uphold the interest at the cost of creating

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[182] Before the enactment of the Statute of Uses, a future interest in a grantee could not be made to take effect before the expiration of the preceding estate. See SIMES, LAW OF FUTURE INTEREST, *supra* note 152, § 5, at 8. The Statute of Uses changed the law of future interests by allowing the creation of legal future interests in transferees that had the capability to divest or cut short vested estates in others. *Id.* These interests are divided into two categories: springing and shifting executory interests. *See* BERGIN & HASKELL, *supra* note 150, at 115. The shifting executory interest is a future interest created in a transferee which will, if it "vests," divest or cut short a vested estate in a transferee created simultaneously with it. *Id.* at 116. "The springing executory interest is always a future estate created in a transferee which will, if it "vests," divest a present estate in the person who created the executory interest or his successor." *Id.* A springing executory interest is created in the grantee when a grantor conveys a future interest in his surface estate but retains a minerals interest. The grantor's present interest in the estate is subject to divestment, since the grantee's interest may commence while the grantor's interest is still possessory. *Id.* Since the grantee's lease is a springing executory interest that may vest 21 years after some life in being, it is void according to common-law standards.

uncertainty in land titles. The most extreme of these opinions is *Williams v. Watt*.[183]

In *Watt*, a bank had conveyed ranch land to Williams in a warranty deed that contained the following language: "[E]xcepting and reserving an undivided one-half interest in all oil, gas, and mineral rights . . . for a period of twenty years from the 10th day of April, 1940, and as long thereafter as oil, gas, or other minerals continue to be produced therefrom or said property is being so developed or operated."[184] Because of a reservation in a subsequent deed from Mr. Williams, as grantor, to Mr. Watt, as grantee, the issue was whether the RAP had voided any interest Mr. Williams received in the one-half interest reserved by the bank.[185]

The majority opinion foreshadows the contorted course of its analysis by initially recognizing the effects of properly labeling the estates created in the Bank-to-Williams deed.[186] If the judges determine the deed has created an executory interest in Williams, they must also find the interest void under the RAP. However, if they can label the interest a "vested remainder" instead of an executory interest, they can avoid applying the RAP.[187] Having charted this course, the majority opinion freely floats from one distortion of property principles to another.

The opinion analogizes to the oil and gas lease and to grants of term mineral interests to determine that the estate retained by the bank was a fee-simple determinable.[188] According to rules of property law, grantors create this estate when they convey fee simple title conditioned with the words "so long as."[189] The majority was correct

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[183] 668 P.2d 620 (Wyo. 1983). Professor Bruce Kramer has called *Watts* "the principle mangler of property principles." Kramer, *Mangling, supra* note 149, at 552.

[184] *Watt*, 668 P.2d at 622.

[185] *Id.* at 621–22. In conveying to Watt, the deed provided: "Excepting and reserving to . . . [Williams], his heirs, successors and assigns, all of the oil, gas and mineral rights running with said land and to which he is entitled under the present ownership of said lands, and which have not been reserved to [the bank]." *Id.* at 621. The Watts made no claim to the half of the minerals not reserved by the Land Bank. However, if Williams had an interest in the remaining one-half, he would have reserved them under the language of the Williams/Watts deed. *Id.* at 623. Williams claimed the parties did not bargain for any of the minerals. *Id.*

[186] *Id.*

[187] *Id.* at 624.

[188] *Id.*

[189] A defeasible fee is a kind of estate in fee simple, which though potentially infinite in duration, may terminate upon the happening of an event specified in the grant. BERGIN & HASKELL, *supra* note 150, at 27. There are three defeasible fee estates: 1) the fee simple determinable; 2) the fee simple subject to condition subsequent; and 3) the fee simple subject

in recognizing that granting instruments containing these magic words have been labeled as creating a fee simple determinable estate in the grantee;[190] however, the deed in *Watt* involved a reservation, not a grant. Had the majority opinion remained faithful to the property treatises quoted, it would have discovered that a reservation of this type creates a springing executory interest in the grantee, Williams. Springing executory interests are subject to the Rule Against Perpetuities.[191]

While the court was aware of RAP's application to a springing executory interest. the majority opinion strained to avoid this result by labeling Williams' interest a vested remainder rather than an executory interest.[192] Accepted property principles provide that remainders generally follow only life estates.[193] In order to transform the Bank's interest from a fee simple determinable into a life estate, the majority opinion admits to a "little exercise of property law imagination" and resorts to the tool of analogy: "When the minerals 'die' (the passage of 20 years or the cessation of production), the

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to an executory limitation. *Id.* at 53. The fee simple determinable is a fee estate that is subject to a special limitation. *Id.* The special limitation subjects a fee to possible termination on the happening of a designated event. RESTATEMENT (FIRST) OF PROPERTY § 23, at 55 (1936). The grantor retains a future interest, called the possibility of reverter, which is the right to the fee simple estate should the special limitation occur and the grantee's fee terminate. *Id.* § 154, at 525. Such a future interest in the grantor is deemed to be a presently vested interest and does not violate the rule against perpetuities. *Id.* § 372, at 2168. The possibility of reverter may be created in a person other than the grantor, in which case the fee simple determinable would be classified either as a fee simple subject to executory limitation or as a fee simple with an executory limitation creating an interest which takes effect at the expiration of the prior interest. *Id.* §§ 46, 47, at 147–66.

[190] The words, "while," "during," "until," and "so long as" are typical words of special limitation and are usually held to manifest an intent to create a fee simple determinable. CORNELIUS J. MOYNIHAN, INTRODUCTION TO THE LAW OF REAL PROPERTY 99 (1962) [hereinafter MOYNIHAN, THE LAW OF REAL PROPERTY]; *see also* BERGIN & HASKELL, *supra* note 150, at 55 (noting that use of certain words by transferrers give presumed meaning); Luckel v. White, 819 S.W.2d 459 (Tex. 1991) (recognizing words of limitation that introduce fee simple determinables).

[191] An executory interest, by definition, does not vest so long as it remains a future interest. SIMES, LAW OF FUTURE INTEREST, *supra* note 152, § 221, at 249. Consequently, all executory interests are subject to invalidation by the rule against perpetuities. *See* GRAY, RULE AGAINST PERPETUITIES, *supra* note 150, § 317 at 351 (stating that shifting and springing uses and executory devices are subject to Rule); *see also* BERGIN & HASKELL, *supra* note 150, at 209 (discussing interests subject to rule against perpetuities).

[192] *Watts*, 668 P.2d at 630.

[193] Life estates are generally followed by remainders since remainders cannot follow fees. SIMES & SMITH, FUTURE INTERESTS, *supra* note 159, § 103, at 81. The justification for this rule is that once the owner of an estate in fee simple conveys his estate in fee simple, there is nothing left to constitute a remainder. *See* BERGIN & HASKELL, *supra* note 150, at 72.

present estate in the Land Bank expires and passes automatically to Williams."[194] Therefore, the court concludes that Williams had a vested remainder free from the RAP's application.[195]

Whereas *Hammonds* uses the tool of analogy to forge a formalistic pedigree, *Watt* goes further and contorts applicable property law concepts. Unlike *Hammonds*, the *Watt* opinion briefly acknowledges other options. The *Watt* court cited other jurisdictions which avoid the perpetuities challenge to interests created by the reservation of a term interest through a "grant and re-grant fiction."[196] That fiction relies on a common-law distinction between "exceptions" and "reservations" and views one deed as making two grants. The basis for the two-grant fiction has been largely repudiated today.[197] However, using the fiction conveniently converts the springing executory interest into a "possibility of reverter."[198] The possibility of reverter is an interest retained by a grantor who conveys a fee simple determinable. Largely through historical accident, the possibility of reverter, unlike the executory interest, is not subject to

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[194] *Watt*, 668 P.2d at 632. Again, had the court remained true to its property lessons it would have seen the weakness in this analogy. At common law life estates could only be based upon human lives. *See* SIMES, LAW OF FUTURE INTEREST, *supra* note 152, § 5, at 8 (explaining that very early in the medieval law life estates were considered "of infinite, or potentially infinite duration [and] on the death of the owner passed to his heirs"). The life-estate analogy obviously contradicts the court's earlier classification of the bank's interest as a fee simple determinable.

[195] *Watts*, 668 P.2d at 633.

[196] *Watts*, 668 P.2d at 630.

[197] *See, e.g.*, Calli v. DeMattei, 460 N.E.2d 121 (Ill. 1984) (ignoring technical common law distinctions and holding that intent was to reserve interest to grantors where term "excepting" was used); Earle v. International Paper Co., 429 So. 2d 989 (Ala. 1983) (using strained application of common-law rules to hold that grantor owned fee simple determinable and grantee reversion); Bagby v. Bredthauer, 627 S.W.2d 190 (Tex. App.-Austin 1981) (writ not filed) (reluctantly treating reservation as creating new interest in grantor and leaving possibility of reverter in grantee); *see also* HEMMINGWAY, *supra* note 61, § 1.3, 30–31 (recognizing that "[t]he attitude of present day courts is to give effect to intent the intent of the parties wherever expressed in the instrument . . . without regard to older rules of construction . . . ").

[198] *See* Earle v. International Paper Co., 429 So. 2d 989 (Ala. 1983) (invoking regrant fiction to uphold grantee's interest in deed in which grantor reserved term mineral interest). The grant and regrant fiction is based on the common-law definition of a reservation as equivalent to a grantee receiving the interest and then regranting it to the grantor. *Id.* The fiction assumes the grantor conveyed the whole estate to the grantee and then the grantee reconveyed a term mineral interest to the grantor. These two grants would result in the grantee owning a possibility of reverter, an interest not subject to the Rule. *Id.* at 994–95; *Bagby*, 627 S.W.2d at 195–96; *see generally* HEMINGWAY, *supra* note 61, § 1.3.

In *Earle*, the Alabama Supreme Court admitted the artificial nature of the regrant fiction but applies it to the deed at issue to avoid frustrating "the policies behind the rule." *Earle*, 429 So. 2d at 995.

the RAP.[199]

The *Watt* opinion also notes that other jurisdictions view these interests as commercial in nature and, therefore, not covered by the policy of the RAP.[200] Rather than adopt this straightforward approach, the court feigned allegiance to state statutes adopting the RAP. A court feeling genuinely constrained by legislative mandates, however, should have determined that reserved term interests create springing executory interests in the grantees which violate the RAP, and left it to the legislature to create an exception.

A concurring opinion by Justice Thomas acknowledged the re-grant fiction but considered it to be as "awkward" as the majority's "vested remainder" analysis.[201] Instead, the concurring opinion assumed a pragmatic posture and advocated a straightforward approach endorsed by commentators.[202] The concurrence began by weighing the effect of applying common-law property principles against the need to respect the policy behind the Rule.[203] Justice Thomas concluded that the deed created an executory interest in the grantee, which would be void under the RAP.[204] After considering a case-by-case exception,[205] the concurring justice also deemed it "appropriate to judicially recognize the exception to the Rule Against Perpetuities advocated in Williams and Meyers . . . particularly when the recognition of the exception serves the ultimate purpose of the

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[199] Possibilities of reverter are not subject to the Rule Against Perpetuities. MOYNIHAN, LAW OF REAL PROPERTY, *supra* note 190, at 95; John Chipman Gray, *Perpetuities in a Nutshell,* 51 HARV. L. REV. 638, 647 (1938).

[200] *Watts*, 668 P.2d at 630. One case noted the Rule developed to prevent dead hand control of family property, which explains the use of 21 years, the age of majority. *See Earle*, 429 So. 2d at 995 (attempting to reconcile common-law analysis with polices behind rule against perpetuities); *see also* GRAY, RULE AGAINST PERPETUITIES, *supra* note 150, § 18 (explaining origin of Rule was to alleviate transfer of interests to future generations allowed by fee tail); RESTATEMENT (SECOND) OF PROPERTY, DONATIVE TRANSFERS 12 (Tent. Draft No. 2, 1979) (observing that rule against perpetuities developed in context of family wealth transactions).

[201] *Watts*, 668 P.2d at 636 (Thomas, J., concurring).

[202] *Id.* at 638 (Thomas, J., concurring).

[203] *Id.* at 635.

[204] *Id.* at 639 (Thomas, J., concurring).

[205] *Id.* at 636 (Thomas, J., concurring). The concurring opinion relied on an exception from the Restatement of Property that requires separately testing the validity of alternative interests in a wait and see approach. *Id.* Because there was no mineral production in the set twenty year term, this exception would validate the whole interest. *Id.*

The concurring opinion also considered adopting the view of scholars that many executory interests should be considered vested and exempt from the rule. *Id.* at 635 (citing SIMES & SMITH, FUTURE INTERESTS § 1236 (1956)).

rule promoting the free alienability of property . . . ."[206]

4. The Problems with Piecemeal Exceptions to the Rule Against Perpetuities

Under a general exception to the RAP for oil and gas interests, developers and landowners can be confident that interests created in leases and deeds are valid, without resorting to litigation or awaiting the passage of time. This result promotes the goal behind the RAP of increasing marketability of resources by clearing titles, as well as the goal of the pragmatic approach, injecting "practical certainty" into oil and gas jurisprudence. Both goals are frustrated by case-by-case exceptions such as the re-grant fiction or the "wait and see" approach, which create unpredictability as to the RAP's application to specific documents. For example, in a 1986 North Dakota opinion, *Nantt v. Puckett Energy Co.*,[207] the state supreme court held a top lease[208] valid against a perpetuities challenge but did not clarify whether it was adopting a blanket commercial exemption or applying a fact-specific "wait and see" exception.[209] As described by Professor Owen Anderson, this decision "causes needless confusion for title examiners who encounter instruments which raise perpetuities questions."[210]

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[206] *Id.* at 638.

[207] 382 N.W.2d 655 (N.D. 1986).

[208] A top lease is a "lease granted by a landowner during the existence of a recorded mineral lease which is to become effective if and when the existing lease expires or is terminated." 8 WILLIAMS & MEYERS, *supra* note 13, at 1147–48. A top lease, may be subject to the RAP if its wording suggests that the possibility of reverter created in the lessor from the bottom lease does not vest immediately in the top lessee. *See* Peveto v. Starkey, 645 S.W.2d 770 (Tex. 1982) (holding deed void as violating the RAP since interest could not vest until termination of prior estate); *see also* J. Suzanne Hill, *Top Leases and the Rule Against Perpetuities*, 10 PEPP. L. REV. 773 (1983) (discussing application of Rule to top leasing). *But see* Venture Oil Co. v. Fretts, 25 A. 732 (Pa. 1893) (holding oil and gas lessee did not receive vested interest until production).

[209] *Nantt*, 382 N.W.2d at 661. The opinion relied upon both a general commercial exception and a wait and see approach. *Id.* In Texas, the Supreme Court held invalid a top lease with wording that did not purport to convey a present interest to the top lessee. Peveto v. Starkey, 624 S.W.2d 310 (Tex.App.-Tyler 1981), *rev'd*, 645 S.W.2d 770 (Tex. 1982).

California is another jurisdiction which has created confusion with inconsistent approaches to the perpetuities problem. *See Watt*, 668 P.2d at 636 (Thomas, J. concurring) (discussing the following California cases: Victory Oil Co. v. Hancock Oil Co., 270 P.2d 604 (Cal. 1954); Brown v. Terra Bella Irrigation District, 330 P.2d 775 (1958); and Rousselot v. Spanier, 60 Cal. App. 3d 238, 131 Cal. Rptr. 438 (1976)). *See also* WILLIAMS & MEYERS, *supra* note 24, § 335.

[210] Owen L. Anderson & Charles T. Edin, *The Growing Uncertainty of Real Estate Titles*, 65 N.D. L. REV. 1, 88 n.518 (1989). In light of North Dakota's statutory treatment of the RAP,

Depending on a state's statutory scheme, courts may consider the piecemeal approach the only alternative to voiding the oil and gas interest for violating the RAP.[211] But most statutes re-enact the RAP as it was formulated by common-law judges. Therefore, a pragmatic jurist would consider the judicial justification for the RAP, which is increasing marketability by removing contingencies on land titles.[212] Weaving that policy consideration into their "web of beliefs" is what led the concurring justice in *Watt* and the dissenting justice in *Cosgrove* to urge straightforward rules exempting oil and gas interests from the RAP. Had the majority opinions in *Watt* and *Cosgrove* adopted the pragmatic approach used by those justices, the courts could have satisfied the policy behind the rule. This would have contributed to achieving the ultimate goal for the next era of oil and gas jurisprudence, clarifying property rights to ensure efficient use of resources.

III. THE ROLE OF A PRAGMATIC APPROACH IN THE NEXT ERA OF OIL AND GAS JURISPRUDENCE: SHIFTING POLICIES AND NEW TECHNOLOGIES

Whether court opinions such as *Hammonds*, *Watt*, and *Geo Viking* are classified as cases in which judges myopically ignore policy, or as cases in which judges surreptitiously mask the role of policy in formalistic garb, the approaches used in these cases create confusion and unpredictability about the relative rights of landowners and mineral developers. The ensuing uncertainty leads to costly litigation and creates disincentives for investment in the development of resources and in the creation of alternative markets. To avoid the counterproductive effects of these approaches, judges should boldly

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Professor Anderson concludes that the courts should have adopted the alternative straightforward approach outlined in the text of this article: strictly applying the RAP and leaving reform to the legislature. *Id.*

[211] *See* Kramer, *Mangling, supra* note 149, at 558. In discussing the *Nantt* case, Professor Kramer concludes that, "North Dakota has a statutory Rule, which should have restricted the court's ability to find exceptions to the Rule's coverage." *Id.*

[212] For an example of an opinion in which a judge focuses solely on this policy in deciding that the RAP should not apply to nonparticipating royalty interests, *see Dauphin Island Property*, 519 So. 2d at 952 (Houston J., concurring) (questioning, "What is the reason for the rule against perpetuities? It is to make certain that the property is not removed from the stream of commerce for an unreasonable period of time.").

apply the pragmatic approach described herein. Because this approach advocates an overt consideration of policy as well as precedent, it permits more effective consideration of concerns prominent in the current and future eras, including protection of the environment and promotion of surface uses.

As described in this section (Part III), courts adhering to the pragmatic process recognize that classic concepts from the Great Era have shifted to a position on the periphery of the current web of beliefs informing the decision-making process. One such concept is the dominance of the mineral estate in defining the scope of its appurtenant surface easement. This judicial recognition of shifting priorities should produce opinions that inject practical certainty into oil and gas jurisprudence by narrowing the gap between rights asserted by mineral owners and surface owners, thereby, clarifying the discourse of debates for legislators and private parties. Examples in two major producing states, Texas and Colorado, illustrate the value of the pragmatic approach in an era of shifting policies.

The final section of Part III urges courts to aim towards achieving practical certainty by adopting a pragmatic approach for issues posed by new technologies, particularly three-dimensional geophysical exploration. Rather than rely on courts incrementally to clarify the issues raised by the surface-use debate and new technologies, Part III also advocates statutes defining the rights and liabilities of landowners and mineral developers.

A. Shifting Policies: The Surface-Use Debate

In 1955, a commentator identified three eras in the evolution of oil and gas jurisprudence, calling pre-1900, "the era of definition and comparative ignorance"; 1900–1932, "the era of scientific awareness of the nature of petroleum and petroleum reservoirs"; and from 1932 to 1955, "the era of conservation."[213] In light of environmental awareness emergent in the 60s and 70s,[214] the current

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[213] Sullivan, *Oil and Gas Law in Montana, supra* note 74, at 16.

[214] In response to this awareness, considerable amounts of federal and state environmental legislation arose. Legislation, such as the National Environmental Policy Act of 1969, created methods for incorporating environmental concerns into the Federal legislative process. *See* National Environmental Policy Act, 42 U.S.C. §§ 4321–4370d (1988 & Supp. 1994). Specific legislation was established to regulate the environment's exposure to pollutants. The Clean Air Act (CAA) originally enacted in 1970, was designed to protect and enhance the quality of the

era of oil and gas jurisprudence has been labeled "the environmental era."[215] The concerns of this era have induced policy shifts which emphasize promoting surface uses particularly for agricultural use, and protecting the environment rather than engaging in full-scale mineral development.[216]

The policy shifts in the environmental era, in which we currently operate, have created a philosophical clash between owners of the surface and the mineral estates.[217] This clash will continue to polarize legislatures and challenge courts. The primary point of

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nation's air resources by establishing specific emissions limitations and standards for polluting sources. Clean Air Act §§ 101–618, 42 U.S.C. §§ 7401–7671q (1988 & Supp. 1994). In 1972, the Clean Water Act (CWA) established a comprehensive program designed to "restore and maintain the chemical, physical and biological integrity of the nation's waters." Clean Water Act, §§ 101–607, 33 U.S.C. §§ 1251–1387 (1988 & Supp. 1994). Legislation was also enacted to meet many of the growing environmental problems associated with contamination and hazardous waste. In 1976, Congress passed the Resource Conservation and Recovery Act (RCRA), a comprehensive regulatory statute that creates a "cradle to grave" system of controlling the entire hazardous waste lifecycle. RCRA, 42 U.S.C. §§ 9601–9675 (1988 & Supp. 1994). The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) was enacted to provide the federal government and states with the authority to cleanup abandoned sites containing hazardous substances. CERCLA, 42 U.S.C. §§ 9601–9675 (1988 & Supp. 1994). Unlike RCRA, CERCLA's primary purpose was the cleanup of leaking and past hazardous waste disposal sites.

[215] *See* James M. Colosky, *The Implied Covenant for Diligent and Prudent Operations in An Environmental Era*, 39 ROCKY MTN. MIN. L. INST. § 15, at 15–2–15–3 [hereinafter Colosky, *Implied Covenant*] (recognizing that "[i]n this era of environmental awareness and activism, the oil and gas industry rides the crest of a wave of overhaul and refitting within the order of oil and gas law.").

[216] Oil and gas exploration and production has been spared some of the effects of environmental legislation through the petroleum exclusion. CERCLA excluded petroleum, including crude oil, from the definition of "hazardous substance." CERCLA, 42 U.S.C. § 9601(14). Although petroleum is expressly excluded from the list of hazardous wastes, there still remains some concern since there are some substances used in oil and gas operations that are not exempted. *Id.* Proposed amendments to CERCLA could have profound effects on the oil and gas industry. A recent bill would have amended CERCLA § 107's liability provisions to include certain releases or threatened releases of pollutants or contaminants, significantly altering the Superfund's effect on the industry. Estela S. Wackerbarth, *Environmental Law in the Oil Patch-More Patch, Less Oil,* 40 ROCKY MTN. MIN. L. INST. §§ 14.01, 14.02[2] (1994) [hereinafter Wackerbarth, *Environmental Law in the Oil Patch*] (discussing legislation that would specifically effect oil and gas industry).

[217] The effects of the policy shifts induced by the environmental era are evident in programs sponsored for practitioners. *See, e.g.,* Samuel D. Hass & A. Kay Roska, *Environmental Indemnities and Other Environmental Provisions in the Purchase and Sale of Mineral Properties*, 38 ROCKY MTN. MIN. L. INST. § 22 (1992) (addressing environmental liabilities and their impact on transactions involving oil and gas properties); R. Kinnan Golemon & Danny G. Worrel, *Producing Property Conveyances and Environmental Liabilities: A Minefield for the Unwary*, 43d OIL AND GAS INST. 3–1 (Matthew Bender 1992); Wackerbarth, *Environmental Law in the Oil Patch, supra* note 190, at § 14 (surveying current environmental legislation and its effect on oil and gas industry).

contention is, who should bear the costs of damage incidental to mineral production? Mineral owners contend that "severed" surface owners, those who bought their land with no mineral rights, have taken their lands subject to the mineral owners' implied right to use the surface and cannot force mineral owners to pay for a right already owned.[218] Surface owners claim that in an environmental era, mineral developers should internalize the cost of production.[219] For "severed" surface owners, reaching their objective has required conquering one icon from earlier eras, the dominance of the mineral estate and the broad scope of the implied easement granted the mineral estate for surface use.

One of the first cases to express the concept of mineral-estate dominance hailed from Pennsylvania, birthplace of the oil and gas industry. In 1893, in *Chartiers Block Coal Co. v. Mellon*,[220] the court recognized the public's interest in ensuring access to valuable minerals. Denying access, according to the court, would have deprived the public "of the hidden treasures which the great laboratory of

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[218] *See, e.g.*, Getty Oil Company v. Jones, 470 S.W.2d 618, 623–27 (McGee, J., dissenting) (concluding that surface owners who purchase property with full knowledge of an oil and gas lease take a servient estate subject to dominant right of lessee to use "as much of the premises as is reasonably necessary to comply with the terms of the lease and to effectuate its purpose"); John F. Welborn, *New Rights of Surface Owners: Changes in the Dominant/Servient Relationship Between the Mineral and Surface Estates*, 40 ROCKY MTN. MIN. L. INST. §§ 22, 22.06, 22–39 (1994) [hereinafter Welborn, *New Rights of Surface Owners*] (noting that mineral owners believe they possess ownership of property rights once land is purchased and as such refuse to pay twice by having to reimburse surface owners for loses in market value). Mr. Welborn, who as a member of Colorado's Conservation Commission has witnessed the surface-use debate first hand, explains that surface owners are imputed with knowledge:

> Most mineral owners would say that they do not owe the surface owner for diminution in value of the land since the surface estate is servient and is (or should be) already devalued to reflect the fact that it is a severed surface estate. In other words, to require payment for diminution in value is to require payment for something the mineral owner already owns. If the value of the surface is not already diminished as a result of the mineral severance, then it has been artificially inflated, and the mineral owner should not bear this burden.

Id. at 22–18.

[219] *See* John S. Lowe, *The Easement of the Mineral Estate for Surface Use: An Analysis of Its Rational, Status and Prospects*, 39 ROCKY MTN. MIN. L. INST. §§ 4–1, 4–35 (1993) [hereinafter Lowe, *Easement of the Mineral Estate*] (contending that costs should be internalized since "those who create or use products also ought to bear the costs that are associated with their creation or with their use."). *See infra* notes 323–49 and accompanying text (discussing Colorado's surface-use debate between surface and mineral owners).

[220] 25 A. 597, 599 (Pa. 1893). The dispute in *Mellon* was between a surface owner who maintained title to the oil and gas and the owner of the coal beneath the surface. *Id.* at 597.

nature has provided for man's use in the bowels of the earth."[221] To ensure access to these treasures, courts recognized that the mineral estate should be considered the dominant estate, with an appurtenant easement implied to use the surface estate.[222]

Although considering the right of access to oil, gas, and other minerals absolute, courts in the earlier eras restricted the scope of the easement by requiring "reasonable use," which prohibited both using more land than reasonably necessary and using a reasonable amount of land in a negligent manner.[223] Courts, however, maintained mineral-estate dominance by interpreting "reasonableness" strictly from the mineral owner's point of view.[224] Therefore, as long as the lessee's use was reasonable according to industry practices, the effect on the surface estate was irrelevant.[225] For example, the broad scope of the easement sanctioned the destruction of crops,[226] the killing of cattle,[227] the depletion of water supplies,[228] and the interference with

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[221] *Id.*

[222] *Id. See, e.g.*, Spann v. City of Dallas, 235 S.W. 513, 514–15 (Tex. 1992) (stating that "The substantial value of property lies in its use. If the right be denied, the value of the property is annihilated and ownership is rendered a barren right."); Acker v. Guinn, 464 S.W.2d 348, 352 (Tex. 1971) (quoting favorably from an article that states, "The manner of enjoyment of the mineral estate is through the extraction of valuable substances."); Buck Creek R.R. Co. v. Haws, 69 S.W.2d 333, 334 (Ky. 1934) (holding that implied right of access was an easement appurtenant to mineral estate); Muscogee Mfg. Co. v. Eagle & Phenix Mills, 54 S.E. 1028, 1034 (Ga. 1906) (recognizing that "whoever grants a thing is deemed also to grant that without which the grant itself will be of no effect."). *See also* 2 AMERICAN LAW OF PROPERTY § 10.28 (1958) (recognizing that where mineral interest has been severed from surface estate it is subject to implied easement appurtenant belonging to mineral owner). The easement retained by the mineral owner entitles him to make such use of the surface as is reasonably necessary for the exploration, production, and marketing of the minerals. This implied easement is appurtenant only to the adjoining surface estate and using the surface to benefit a non-appurtenant mineral estate results in an overburden. *Id.*

[223] Lowe, *Easement of Mineral Estate*, *supra* note 219, § 4.03, at 4–8.

[224] *See* Bruce Kramer, *Conflicts Between the Exploitation of Lignite and Oil and Gas: The Case for Reciprocal Accommodation*, 21 HOUS. L. REV. 49, 61 (1984). Many opinions evaluated reasonableness as sanctioning activities that would protect the "mineral owner's or lessee's ability to exploit his resources and receive the benefit of his bargain." *Id.* Professor Kramer refers to this reasonable-use analysis as "unidimensional," which focuses not on injuries suffered by the surface owner but on the mineral owner's activities. *Id.*

[225] *Id.*

[226] *See, e.g.*, Robinson Drilling Co. v. Moses, 256 S.W.2d 650, 656 (Tex. Ct. App. 1953) (refusing to allow tenant of surface land recover damage to crops); Adkins v. United Fuel Gas Co., 61 S.E.2d 633 (W. VA. 1950) (denying surface owner recovery for destruction of crops); Rohner v. Austral Oil Exploration Co. Inc., 104 So. 2d 253 (La. Ct. App. 1958) (preventing surface owner from recovering damages sustained to crops despite agreement to pay for any crop damages).

[227] *See, e.g.*, Satanta Oil Co. v. Henderson, 855 S.W.2d 888 (Tex. Ct. App. 1993) (refusing to apply due-regard concept to injury-to-livestock situation); Mid-Continent Petroleum Corp. v.

roads and residences.[229]

In the environmental era, the scope of the mineral estate's surface easement has been eroded by federal[230] and state legislation[231] and, in some jurisdictions, by court decisions. For example, the federal Stock-Raising Homestead Act recently has been amended to provide protection to private surface owners by placing conditions on the right of access and by increasing liability for damages.[232] Since 1979, nine states have passed Surface Damage Acts.[233] The goal of these acts is to protect the "economic well-being" of surface estates, particularly for agricultural uses.[234] Although most of these acts retain the traditional right of access for the mineral-estate owner,[235]

Rhodes, 240 P.2d 95 (Okla. 1951) (denying recovery for injuries resulting to cattle from ingestion of pollutants contained in slush pit); Pure Oil Co. v. Gear, 83 P.2d 389 (Okla. 1938) (holding that surface owner could not recover for salt water poisoning to cattle).

[228] *See, e.g.*, Ricks Explor. Co. v. Oklahoma Water Resources Bd., 695 P.2d 498 (Okla. 1984) (allowing mineral lessee to obtain a nondomestic groundwater use permit for oil and gas development); Sun Oil Co. v. Whitaker, 483 S.W.2d 808 (Tex. 1972) (denying surface owner compensation for fresh water used by mineral owner for water flooding project); Norum v. Queen City Oil Co., 264 P. 122 (Mont. 1928) (denying surface owner recovery for pollution of water reservoir).

[229] *See, e.g.*, Grimes v. Goodman Drilling Co., 216 S.W. 202 (1919) (rejecting nuisance claim based on engine noise interfering with sleep, slush pit spattering onto house, doors, and windows and danger of fire due to proximity of engine, boiler and slush pit); Mary Oil & Gas Co. v. Rainer, 235 P. 1085 (Okla. 1925) (denying surface owner injunction enjoining oil and gas lessee from constructing, drilling and operating wells that interfered with peaceable occupation of plaintiff's home); Otis v. Haas 569 S.W.2d 508 (Tex. Ct. App. 1978) (installing tank batteries on surface near drilling site and in close proximity to lessor's home was reasonably necessary).

[230] *See supra* note 214.

[231] *See infra* note 233.

[232] *See* Welborn, *New Rights of Surface Owners, supra* note 218, §§ 22.01, 22.02[3] (suggesting that, "the SRHA amendment reflects a change, at least in spirit, of the public policy that determined that the mineral estate should be dominant to begin with.").

[233] The nine states adopting surface damage acts in one form or another are as follows: ILL. ANN. STAT. ch. 765, para. 530/1–530/7 (Smith-Hurd 1993); KY. REV. STAT. ANN. §§ 353.595 (Michie/Bobbs-Merrill 1993); MONT. CODE ANN. §§ 82–10–501 through–503 (1995); N.D. CENT. CODE §§ 38–11.1–01 through–10 (1987 & Supp. 1995); OKLA. STAT. ANN. tit. 52, §§ 318.2 through .9 (West 1991 & Supp. 1996); S.D. CODIFIED LAWS ANN. §§ 45–5A–1 through–11 (1993 & Supp. 1995); TENN. CODE ANN. §§ 60–1–601 through–608 (1989 & Supp. 1995); TEX. NAT. RES. CODE ANN. §§ 92.001 through 92.007 (Vernon 1993); W. VA. CODE §§ 22–7–1 through–8 (1994 & Supp. 1995).

[234] N.D. CENT. CODE § 3817.1–02. The "Legislative Findings" of the North Dakota Statute provides that: "It is necessary to exercise the police power of the state to protect the public welfare of North Dakota which is largely dependent on agriculture and to protect the economic well-being of individuals engaged in agricultural production." *See* Lowe, *Easement of the Mineral Estate, supra* note 219, at 4–25 (noting that "agricultural protection" is expressly recognized as a public purpose in eight of nine surface-damage acts).

[235] The Oklahoma statute is the only act that does not protect the common-law right of access. Oklahoma's surface damage statute precludes an operator from entering and drilling

they increase the amount of damages recoverable by a surface owner under the common-law rule.[236] Other states have responded to contemporary policy shifts by charging regulatory agencies with protecting all natural resources, in addition to their traditional responsibility of preventing waste of oil and gas.[237] In addition to diminishing mineral-estate dominance through statutes, courts in a few states have restricted the scope of the surface easement by adopting the accommodation doctrine.[238] This doctrine requires mineral-estate owners to exercise "due regard" for the rights of the surface-estate owners.[239]

As described below, the court that first adopted the accommodation doctrine employed a pragmatic approach which included recognizing a shift in policies.[240] That pragmatic approach produced a doctrine that appropriately narrowed the gap between rights asserted by owners of the two estates in an environmental era.

1. A Pragmatic Approach to the Surface-Use Debate in an Environmental Era: Getty Oil Co. v. Jones (1971)

The accommodation doctrine was first recognized in a 1971 case announced by the Texas Supreme Court, in the midst of a tide

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without first petitioning the court to commence the appraisal process. OKLA. STAT. ANN. 52 § 318.5A (West 1991 & Supp. 1996).

[236] The surface damage statutes of Oklahoma, North Dakota, Tennessee, and West Virginia, all change the common law approach by adopting a strict liability standard for damages. Though Texas has not adopted a strict liability standard it has enacted the Mineral Use of Subdivided Land Act to deal with the surface/mineral conflict. TEX. NAT. RES. CODE ANN. §§ 92.001–.007 (Vernon 1993). For a comparison of the various surface-damages acts *see* Welborn, *New Rights for Surface Owners*, *supra* note 218, at 22–16.

[237] *See infra* notes 332–34 and accompanying text.

[238] *See, e.g.*, Amoco Prod. Co. v. Carter Farms Co., 703 P.2d 894 (N.M. 1985) (recognizing that mineral lessee is entitled to reasonable use of surface area but requiring that this servitude be exercised with due regard for rights of surface owner); Flying Diamond Co. v. Rust, 551 P.2d 509 (Utah 1976) (stating that, "wherever there exists separate ownerships of interest in the same land, each should have the right to the use and enjoyment"); Diamond Shamrock Corp. v. Phillips, 511 S.W.2d 160 (Ark. 1974) (calling for accommodation by mineral lessee since actions were unreasonable as against surface owner's proposed surface use); Getty Oil Co. v. Jones, 470 S.W.2d 618 (Tex. 1971) (requiring mineral owners to accommodate surface owners). The accommodation doctrine was becoming the law in North Dakota before the adoption of its Surface Damage Act. *See* Hunt Oil Co. v. Kerbaugh, 283 N.W.2d 131, 136 (N.D. 1979) (adopting accommodation doctrine set forth in *Getty Oil*).

[239] *See supra* note 250.

[240] *See infra* part III.A.1.

of legislation passed in response to the ideals of the early environmental era.[241] In *Getty Oil Co. v. Jones*,[242] Mr. Jones, a cotton farmer, purchased his tract in 1955, seven years after Getty Oil had obtained its lease covering a portion of the tract.[243] Mr. Jones' tract was also subject to a lease owned and operated by other oil companies.[244] In 1963, Jones installed an automatic sprinkler system which extended seven feet above the ground. In 1967, Getty Oil completed two producing wells that required pumping units.[245] The units installed extended above the seven-foot height required by the sprinkler system and so prevented the use of the system. The other lessees, however, had installed pumping units which did not interfere with the sprinkler system.[246]

Mr. Jones brought suit against Getty Oil seeking an injunction and damages.[247] Although Getty Oil won in the trial court, the court of appeals ruled in favor of the surface owner, Mr. Jones, on the ground that the traditional scope of the surface easement had been exceeded because Getty Oil had used more land than was reasonably necessary.[248]

In affirming the appellate court, the Texas Supreme Court redefined the scope of the surface easement in light of the "public policy of developing our mineral resources while, at the same time, permitting the utilization of the surface for productive agricultural uses."[249] The court reassessed the concept of reasonableness by requiring mineral-estate owners to exercise their rights with "due regard" for the surface owner.[250] Therefore, the court held that the mineral owner must accommodate the surface owner in the following circumstances:

> Where there is an existing use by the surface owner which

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[241] *See* Colosky, *Implied Covenant*, *supra* note 215, at 15-18-19 (discussing federal and state environmental legislation that emerged in response to societal activism and its influence); *see also supra* note 214 (discussing legislative response to growing environmental awareness).

[242] 470 S.W.2d 618 (Tex. 1971).

[243] *Id.* at 620.

[244] *Id.*

[245] *Id.*

[246] *Id.* at 618.

[247] *Id.* at 619.

[248] Getty Oil Co. v. Jones, 458 S.W.2d 93, 95 (Tex. Ct. App. 1970), *aff'd*, 470 S.W.2d 618 (Tex. 1971).

[249] *Getty Oil*, 470 S.W.2d at 622–23.

[250] *Id.* at 621–22.

> would otherwise be precluded or impaired, and where under the established practices in the industry there are alternatives available to the [mineral-estate owner] whereby the minerals can be recovered, the rules of reasonable usage of the surface may require the adoption of an alternative by the lessee.[251]

On motion for rehearing the court added that the initial inquiry is whether the surface owner's existing use is reasonable.[252] On this question the court determined that Mr. Jones had no reasonable means of developing his land for agricultural purposes other than with the automatic sprinkler system in use.[253]

In reaching its decision, the Texas Supreme Court expressly considered the primary point of contention in the debate over surface use, namely, who should bear the costs of oil and gas development in an environmental era?[254] Getty Oil argued that the beam-type pumping units it used were more economical from its point of view and, therefore, it should not be required to incur the extra expense of using below-surface cellars to avoid interfering with the sprinkler system.[255] The dissenting justice agreed with this proposition, noting:

> Jones bought this surface with full knowledge of the lease . . . . Now, by changing the nature of his surface operations, Jones seeks to alter the terms of the prior mineral lease and to impose additional burdens on the oil and gas lessee which are not imposed by the original oil and gas lease.[256]

Nevertheless, the majority reviewed evidence showing that the alternative pumps would have cost less than $5,000 more than the pumps installed. Then, applying the test above, the court held that the below-surface cellars were reasonable alternatives for the mineral-estate owner.[257]

In *Getty Oil Co.*, the court evinced a pragmatic approach by

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[251] *Id.* at 622.
[252] *Id.*
[253] *Id.*
[254] *Id.*
[255] *Id.* at 621.
[256] *Id.* at 624 (McGee, J., dissenting).
[257] *Id.* at 623.

expressly addressing precedent in light of prevailing policy, particularly the need to protect agricultural surface uses. The opinion also acknowledged the question about the allocation of costs in the implied-easement debate. By including these issues in the web of beliefs that informs the decision, the *Getty Oil* opinion responded to the contemporary policy shifts affecting the scope of the surface easement. Unfortunately, subsequent Texas decisions detract from *Getty Oil*'s contribution to oil and gas jurisprudence by failing to embrace a pragmatic approach to decision making.

2. *Post*-Getty Oil *Cases—A Retreat from the Pragmatic Approach*

By adopting the accommodation doctrine, the *Getty Oil* opinion tempered traditional mineral-estate dominance by requiring the mineral-estate owner to bear the costs occasioned by the needs of the surface-estate owner when the following criteria are met: (1) the surface owner has a pre-existing use; (2) that use is reasonable; (3) the surface use would be precluded by the mineral owner's proposed use; and (4) there are reasonable alternatives for the mineral owner or lessee.[258] However, *Getty Oil* did not place surface owners on parity with mineral-estate owners. For example, the opinion placed the burden of proving all criteria under the accommodation doctrine on the surface owner.[259] Additionally, access for the mineral owner is guaranteed: "There may be only one manner of use of the surface whereby the minerals can be produced. The lessee has the right to pursue this use, regardless of surface damage."[260]

Although the opinion does respond to public policy concerns, *Getty Oil*'s fact-specific formulation of the accommodation doctrine left several issues open for clarification in subsequent decisions. These issues include: (1) When does pre-existing use status attach for a surface owner?; (2) What is the effect of the converse of the *Getty Oil*

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[258] *See* Tarrant County Water Control and Improvement Dist. Number One v. Haupt, Inc., 854 S.W.2d 909, 911–13 (Tex. 1993) (quoting passages from *Getty Oil* that establish criteria for applying accommodation doctrine); *see also* Laura Burney, *Accommodating and Condemning Surface and Mineral Estates—The Implication of Tarrant County Water Control and Improvement District Number One v. Haupt, Inc.*, 12 ADVANCED OIL, GAS & MIN. L. COURSE E–1 (1994) [hereinafter Burney, *Accommodating and Condemning Surface and Mineral Estates*] (assessing accommodation doctrine as it currently exits under Texas Law).

[259] *Getty Oil*, 470 S.W.2d at 622–27.

[260] *Id.* at 622.

situation, i.e., a mineral owner with a pre-existing use?; and (3) Will a technologically possible but expensive alternative be considered reasonable for the mineral-estate owner? Courts could provide answers to these questions by emulating the pragmatic approach embraced in *Getty Oil*. Unfortunately, in key cases courts have convoluted the issues by failing to expressly consider the policy conflicts prevailing in this environmental era.

a. Sun Oil Co. v. Whitaker

Post-*Getty Oil* cases have done little to refine the accommodation doctrine by answering the above questions. An Arkansas case, *Diamond Shamrock Corp. v. Phillips*,[261] responded to the first question by extending *Getty Oil*'s protection for surface owners to preclude a proposed use, of which the mineral owner has knowledge, in the definition of a "pre-existing surface use."[262] Rather than expand the scope of the accommodation doctrine as in *Phillips*, a Texas Supreme Court case decided a year after *Getty Oil*, has restricted the application of the doctrine.

In *Sun Oil Co. v. Whitaker*, Mr. Whitaker, a farmer, sought damages and an injunction against Sun Oil's plans to use not more than 100,000 gallons of fresh water per day for a water-flooding project.[263] Mr. Whitaker argued that purchasing water from sources other than the surface estate was a reasonable alternative for Sun Oil.[264] Evidence showed the cost of this alternative to Sun Oil to be about $42,000, a cost that would still result in the recovery of $2 million in additional oil (net value) from Sun Oil's water-flooding project. The majority opinion, written by Justice McGee who had dissented in *Getty Oil*, confined the "reasonable alternative" criterion to a consideration of alternatives on the leased premises.[265] In a five-to-four decision, the court held that requiring Sun Oil to purchase water from other sources "would be in derogation of the dominant

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[261] 511 S.W.2d 160 (Ark. 1974).

[262] *Id.* at 163. The mineral lessee was aware of the particular homesite chosen by the surface owner. *Id.* at 161. While the surface owner was gone from the state, the lessee disregarded the site selected and drilled a well over the five acre tract. *Id.*

[263] *Sun Oil*, 483 S.W.2d at 809.

[264] *Id.*

[265] *Id.* at 811.

[mineral] estate."[266]

Unlike the *Getty Oil* opinion, the *Sun Oil* decision shunned a pragmatic approach by failing to consider public policy concerns for protecting surface uses, and by failing to address the pivotal point in the debate between owners of the surface and the mineral estate, the allocation of costs. The dissenters, however, reasserted the pragmatic approach of *Getty Oil*: "In this day of unitizations, availability of fuel and water from other sources at economically feasible costs, and customary field and industry practices . . . the *Getty* rule should not be limited to alternatives involving only the leased premises. . . ."[267]

The majority opinion in *Sun Oil* manifests the counterproductive traits of the approaches described in Part II. On its face, the opinion appears myopically to consider precedent born in earlier eras that established mineral-estate dominance, with no consideration of contemporary concerns about protecting surface uses. More likely, however, *Sun Oil*, like the *Geo Viking* opinions, masks in formalistic-garb the policy of promoting oil and gas production in spite of consequences for other landowners. Regardless, *Sun Oil* has created uncertainty about the relative rights of oil and gas developers and surface owners by contradicting *Getty Oil*'s message about redefining the scope of the implied surface easement in the environmental era.

b. Tarrant County Water Control and Improvement District No. One v. Haupt, Inc.[268]

Recently, in 1993, the Texas Supreme Court had the opportunity to clarify the mixed messages of *Getty Oil* and *Sun Oil,* and to refine the criteria for the accommodation doctrine. Rather than seize this opportunity, the court provided little enlightenment through its opinion in *Tarrant County Water Control and Improvement District No. One v. Haupt, Inc.*[269] This case also demonstrated the responsibility devolving upon lawyers who frame the issues for the courts, as well as the judges who hear their cases, to ensure a

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[266] *Sun Oil*, 483 S.W.2d at 812.

[267] *Id.* at 820–21 (Daniel, J., dissenting).

[268] Portions of this section appeared in a paper written by the author and presented to the 12th Annual Advanced Oil, Gas, and Mineral Law Course 1994. *See* Burney, *Accommodating and Condemning Surface and Mineral Estates, supra* note 258.

[269] 854 S.W.2d 909 (Tex. 1993).

coherent jurisprudence for oil and gas law by engaging in the pragmatic process.

In *Haupt*, the lawyers and courts initially focused on condemnation law, rather than on the accommodation doctrine.[270] In 1981, the water district condemned the surface of an eighty-acre tract for construction of a reservoir.[271] Frances Breithaupt and Lillian Weiss, who each owned an undivided 1/4 mineral interest in the tract,[272] had leased their mineral interests in 1952. That lease was later assigned to Four-W Oil Company, which drilled two producing vertical wells.[273] In 1987, the water district condemned the assignee Four-W's working interest under the 1952 lease, but not the possibility of reverter in the lessors, Ms. Breithaupt and Ms. Weiss.[274] Therefore, the lessors' reversionary interest, and the executive right appurtenant thereto, remained intact after condemnation of their lessee's interest.

Prior to the condemnation by the water district, Ms. Breithaupt and Ms. Weiss had executed top leases[275] to Bar J B Company.[276] In June 1987, the water district plugged the assignee Four-W's two producing oil wells, whereupon the top leases became effective.[277] Pursuant to the top leases, Bar J B attempted to re-enter Four-W's plugged wells, but was enjoined in 1988 lawsuit filed by the water district.[278] Also in 1988, Ms. Breithaupt's son James acquired a 1/6 mineral interest in the eighty acres and leased that mineral interest to Haupt, Inc.[279] In May 1989, Four-W's plugged wells, along with approximately sixty-eight of the eighty acres were inundated by the new lake.[280] After inundation, Haupt Inc. unsuccessfully drilled a directional well located on the remaining twelve dry acres of the

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[270] *Id.* at 911.

[271] *Id.*

[272] The two women were sisters. *Id.*

[273] *Id.* at 910.

[274] *Id.* When a grantor conveys an oil and gas lease, the lease creates a mineral estate as a determinable fee leaving in the grantor the "possibility of reverter" as a future interest. *Id.* This reversionary interest entitles the grantor to fee ownership of the property once the conditions terminating the lease occur. *Id.* at 464. *See* Luckel v. White, 819 S.W.2d 459, 464 (Tex. 1991).

[275] *See supra* note 208 (discussing top leasing).

[276] *Haupt*, 854 S.W.2d at 910.

[277] *Id.*

[278] *Id.*

[279] *Id.*

[280] *Id.*

eighty acre tract.[281]

The mineral owners and lessees brought suit claiming that the water district had inversely condemned their interests in the mineral estate.[282] The trial court, without considering the accommodation doctrine, determined that the interests of mineral owners/lessors Ms. Breithaupt and Ms. Weiss had been taken in 1987, but not the interests of the lessees James, Haupt and Bar J B Co., the lessees.[283] The Texas Court of Appeals reversed and held that the lessees' interests had also been inversely condemned by the water district.[284] Ironically, although once again the parties failed to raise the accommodation doctrine, the court of appeals still focused on the

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[281] *Id.*

[282] Inverse condemnation occurs when the actions of a governmental entity result in the taking of property rights without initiating condemnation proceedings and without paying just compensation as required by the federal and state constitutions. *See* ROGER A. CUNNINGHAM ET AL., THE LAW OF PROPERTY § 9.1, at 510–12, 19 (1984). Therefore, in an inverse condemnation action, courts must determine, first, the extent of the parties' property interests and, second, whether those interests have been "taken" by the governmental entities' action. *Id.* at 511–13; *see also* William B. Stoebuck, *Condemnation of Rights the Condemnee Holds in Lands of Another*, 56 IOWA L. REV. 293, 296 (1970) (recognizing that an individual's property interest is not restricted to "physical land" but rather applies to legal abstractions of property rights). In Texas, the Supreme Court decided in 1970 that condemnation of the surface is not an inverse condemnation of the underlying mineral estate so long as mineral estate owners "possess their common law right to the reasonable use of the surface estate." Chambers-Liberty Counties Navigation Dist. v. Banta, 453 S.W.2d 134, 137 (Tex. 1970). That same year, the court in *Getty Oil* defined that common law right with the accommodation doctrine. *Getty Oil*, 458 S.W.2d at 96.

[283] *Haupt*, 854 S.W.2d at 910. By focusing on the date 1987, it appears the trial court did not understand the interests of the mineral owners. In 1987, Four-W's wells were plugged and the lease terminated. *Id.* Briefs filed on behalf of the water district in the appellate court argued that compensating the mineral owners for these lost royalty payments would fully compensate them for their interests. *See* Brief for the Appellee Tarrant County Water Control and Improvement District Number One, in the Court of Appeals for the Tenth Judicial District of Texas. (No. 10–91–00150–CV). The trial court apparently agreed with that logic and concluded that the mineral owners' property was taken because the royalty payments ceased. *Haupt*, 833 S.W.2d at 698. But terminating Four-W's lease did not effect the lessors' reversionary interest and the appurtenant executive right. *Id.* Therefore, the mineral owners had the right to lease again and receive additional royalty payments. *Id.*

[284] *Haupt*, 833 S.W.2d at 698. The court of appeals relied on a 1970 Texas Supreme Court case that held condemnation of the surface did not automatically result in a taking of a mineral estate owner's interest "as long as the common-law right to access the minerals through reasonable use of the surface remained unimpaired." *Id. Chambers-Liberty*, 453 S.W.2d at 137. In 1971, the Texas court defined that common-law right by adopting the accommodation doctrine in *Getty Oil*, 458 S.W.2d at 96. That doctrine was not raised in the appellate court in *Haupt*. Instead, in ruling in favor of the lessees and mineral owner, the opinion relied on cases involving denial of access between a privately owned tract and public streets. *Haupt*, 833 S.W.2d at 698 (citing City of Waco v. Texland Corp., 446 S.W.2d 1, 2 (Tex. 1969) and City of Austin v. Avenue Corp., 704 S.W.2d 11, 13 (Tex. 1986)).

pivotal issue in the surface-use debate, the allocation of costs.[285] The court of appeals stated that "[t]here is conclusive proof that inundation resulted in a permanent restriction of the most reasonable, lowest-risk, and most cost-effective means of access: vertical drilling from dry land."[286] Therefore, the appellate court rejected the water district's argument that the reservoir had not caused a taking of the appellants' property interests because the appellants could still access the minerals with directional drilling from the dry part of the tract or with vertical drilling from a platform over the lake.[287]

The water district appealed to the Texas Supreme Court and argued for the first time that the accommodation doctrine should determine if interests in the mineral estate had been taken through inverse condemnation. The supreme court agreed and extended the *Getty Oil* accommodation doctrine to apply "when [a] governmental entity is the surface owner."[288]

In analyzing the accommodation doctrine in *Haupt*, the Texas Supreme Court dutifully delineated the *Getty Oil* criteria and began its discussion with the pre-existing use criterion.[289] The court

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[285] *Haupt*, 833 S.W.2d at 700.

[286] *Id.*

[287] *Id.* at 699. In arguing that platform drilling was a "reasonable" alternative, the water district also pointed to a producing well (Fullwood No. VI) located on land adjacent to the eighty acre tract which had been vertically drilled from a platform prior to inundation. *Id.*

[288] *Haupt*, 854 S.W.2d at 912. In applying the *Getty Oil* test, the court viewed the evidence as legally sufficient to deem a finding that the alternative means of access found to exist by the trial court, platform or directional drilling, provided reasonable access to the mineral estate. *Id.* at 911. The court remanded the case to the appellate court for reconsideration of the factual sufficiency of the evidence. *Id.* at 913. The appellate court ultimately remanded all of the causes for a new trial. Haupt, Inc. v. Tarrant County Water Control and Improvement District Number One, 870 S.W.2d 350, 355 (Tex. Ct. App. 1994). The appellate court was obviously frustrated with the Supreme Court's view of the evidence:

> After considering the entire record, we hold the evidence is factually insufficient to support a finding, which has been deemed by the Supreme Court on the basis of the evidence's legal sufficiency, that the alternative means of production provide *reasonable access* to the mineral estate. The paucity of evidence that would support a finding of reasonableness is so weak as to make such a finding clearly wrong and manifestly unjust.

Id. at 355.

[289] *Haupt*, 854 S.W.2d at 911. Before proceeding to the *Getty Oil* accommodation criteria, the court disposed of the plaintiffs' argument that the accommodation doctrine should not be extended to inverse condemnation actions. *Id.* at 910–11. They emphasized that the doctrine had previously been applied only between surface and mineral landowners. *Id.* at 911. However, that argument ignores the role of the accommodation doctrine in defining the mineral owner's property rights. Those rights include the right to reasonable use of the surface estate. After

concluded, without analysis, that the surface owner, the water district, had a pre-existing use as a reservoir.[290] Yet, that conclusion ignored the facts that led to the creation of the reservoir: but for the water district's condemnation of the surface and condemnation of Four-W Oil Company's lease interest, the mineral owners' production of oil from vertical dry-land wells would have continued.[291] Thus, the facts present the converse of the *Getty Oil* situation. In *Haupt* there is a mineral owner with a pre-existing use. It is noteworthy that a concurring opinion in *Getty Oil* had insisted that a mineral owner would not be required to incur the expense of changing its operations merely because the surface owner might decide to change his use.[292] In *Haupt*, by ignoring these facts (that there is a mineral owner with a pre-existing use put to expense when the water district changed its use), the court allowed a governmental entity to manipulate pre-existing use status through its condemnation powers.[293] More importantly, the *Haupt* decision failed to clarify the pre-existing use criterion of the accommodation doctrine.

The Texas Supreme Court's dubious conclusion that the water district had a pre-existing use[294] facilitated its leap to the next

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Getty Oil, reasonableness is determined by applying the accommodation doctrine. Because the doctrine defines the extent of the mineral owner's property rights, it must be applied to determine if the government has inversely taken that property. *Id.* at 912. Thus, the court properly held that the doctrine applies when a governmental entity is the surface owner.

[290] *Id.* at 912.

[291] *Id.* at 910.

[292] *Getty Oil*, 470 S.W.2d at 621 (Greenhill, J., concurring).

[293] *Haupt*, 854 S.W.2d at 912–13. The court appropriately considered surface reservoirs as a valuable public use and wanted to protect that resource from contamination. *Id.* at 913. Under a takings analysis, that use would permit the condemnation; however, the governmental entity would be required to pay for all of its damage. Thus, the problem in *Haupt* can be traced to the water district's failure to pay for all the property rights "taken" for the reservoir in the initial condemnation proceedings. Records revealed that the water district knew it would likely have to compensate future lessees since they did not condemn the mineral owners' executive rights. *Haupt*, 833 S.W.2d at 701. That fact led the appellate court to chastise the water district's attorney for arguing that requiring the district to pay a subsequent lessee, Bar J B Company, would be forcing it to pay twice for the same interest. *Id.* (noting that, "lawyers occasionally resort to hyperbole in defending their clients' position. In this instance, however, hyperbole crosses the line between credible argument and knowing misstatement."). However, under *Banta*, the District was not required to pay for deprivation of the surface easement until the condemnor later interferes with that right. *Banta*, 453 S.W.2d at 137; *see also* Burney, *Accommodating and Condemning Surface and Mineral Estates*, *supra* note 258, at E–10 (describing inequities caused by *Banta* rule for mineral owners); Fred M. Lange, *The Mineral Estate in Condemnation*, 10 HOUS. L. REV. 266, 276–77 (1973) (observing disadvantages suffered by mineral owners and lessees as a result of *Banta* decision).

[294] Had the court recognized there was no pre-existing use by the surface owner, it should have concluded there was no duty for the mineral owner to accommodate the surface owner.

question posed by the accommodation doctrine, the availability of reasonable alternatives for the lessees.[295] Albeit tangentially, the court appeared to recognize the significance of costs in the debate between surface and mineral owners, referring to evidence which had consistently showed that using directional or platform drilling would severely reduce the value of the mineral interests.[296] The *Haupt* court also held that "the evidence may indicate that surface drilling is the only manner of use of the surface whereby the minerals can reasonably be produced. In that event, the lessee has the right to pursue this use under the accommodation doctrine."[297]

Although complicated by the condemnation proceedings, the facts in *Haupt* presented the courts with the opportunity to clarify the accommodation doctrine by addressing the mixed messages of *Getty Oil* and *Sun Oil* and the specific questions noted above: (1) When does pre-existing use status attach?; (2) Would a mineral owner be required to accommodate a surface owner's change in use in the converse of the *Getty Oil* situation—a mineral owner with a pre-existing use?; and (3) Will a technologically feasible but expensive alternative for a mineral owner be considered reasonable?

The *Haupt* court's conclusion that the water district had a pre-existing use failed to provide guidance on the first issue. When does pre-existing use status attach for surface owners? The court should have noted that in *Getty Oil*, the surface owner changed uses after severance but physically implemented the use before the mineral owner began production.[298] While in *Haupt*, the mineral owner was producing first, before the surface use was changed by the water

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Since the reservoir necessarily interferes with the mineral owner's exercise of its common law right at that point, the second taking under *Banta* would have occurred. *See Banta*, 453 S.W.2d at 137 (holding there is no duty for condemnor to compensate mineral owner for loss of access until that loss actually occurs). The sole issue then would have been the value of the mineral estate owners' property interest. Because the court determined there was a valid pre-existing surface use, it erroneously proceeded to the next question under the accommodation doctrine, whether there were reasonable alternatives for the lessee. *Haupt*, 854 S.W.2d at 912–13.

[295] *Haupt*, 854 S.W.2d at 913.

[296] *Id.* Several expert witnesses testified that the value of the mineral interests would be reduced to nearly zero by restricting access to directional or platform drilling. *Haupt*, 833 S.W.2d at 699–70. However, each expert had a differing opinion as to the value of the mineral interest prior to inundation. *Id.* One expert testified that inundating the surface had reduced the market value of the recoverable reserves from $3.75 million to $937,500. *Id.* at 700. Another experienced producer estimated the market value of recoverable reserves at $1.2 to $1.6 million before inundation and "close to zero" afterwards. *Id.*

[297] *Haupt*, 854 S.W.2d at 913.

[298] *Getty Oil*, 470 S.W.2d at 620.

district's condemnation. This sequential change in facts should have elicited from the court an assessment of the second question, the converse of the *Getty Oil* situation.

Leaping instead to the final *Getty Oil* criterion, the *Haupt* court tacitly addressed the third question and determined that mineral owners will not be required to adopt technologically feasible but economically prohibitive alternatives. However, despite the striking evidence that the available alternatives would render the mineral estate worthless, the *Haupt* court found sufficient evidence of reasonableness and remanded the case.[299] Although the court's haphazard approach makes discernment difficult, perhaps this action can be dismissed as a procedural aberration rather than a signal that mineral-estate owners will be required to bear heavy cost burdens in the environmental era.

In *Haupt*, the court completed its truncated analysis of the *Getty Oil* criteria without ever addressing the mixed messages from *Sun Oil*.[300] Read broadly, the Texas Supreme Court rejected *Sun Oil's* return to unabashed mineral-estate dominance. Although the *Haupt* opinion does not expressly mention *Sun Oil*'s contradictions with *Getty Oil*'s rationale, it refers in a footnote to "a trend toward the balancing of the interests between the surface and mineral estates."[301] *Sun Oil*'s departure from the trend initiated in *Getty Oil*, was apparent by the *Sun Oil* court's ignoring cost considerations and failing to promote agricultural surface uses. Apart from the foregoing speculations about the *Haupt* holding, the current status of the accommodation doctrine remains unclear. It is unfortunate for oil and gas jurisprudence that the *Haupt* opinion failed to apply a pragmatic process and thereby failed to provide guidance on the questions articulated in *Getty Oil*.

3. Achieving Clarity Through Statutes

In more than twenty years since the accommodation doctrine

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[299] *See supra* note 288 and accompanying text.

[300] While the *Haupt* opinion quotes extensively from *Getty Oil*, it only cites *Sun Oil* once for the proposition that the accommodation doctrine had previously only been applied between private landowners. *Haupt*, 854 S.W.2d at 911.

[301] *Id.* at 911 n.3 (citing Paul F. Hultin, *Recent Developments in Statutory and Judicial Accomodation bewteen Surface and Mineral Owners*, 28 ROCKY MTN. MIN. L. INST. 1021, 1066 (1983)).

was first recognized early in the current, environmental era, courts have not refined the doctrine.[302] Statutes can provide the clarity that judicial decisions have been shown to provide only incrementally. Thus, several jurisdictions have responded to the surface-use debate with legislation holding mineral developers strictly liable for surface damage.[303] These statutes have the advantage of ensuring access for the mineral-estate owner, but at costs exceeding those placed on mineral owners in earlier eras.[304]

4. The Model Surface Use and Mineral Development Accommodation Act

The Model Surface Use and Mineral Development Accommodation Act strives to respond to the issue at the heart of the implied-easement debate: defining the relative rights of owners of "severed" surface estates and owners or developers of the underlying

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[302] There were several Texas cases decided since *Sun Oil* but none addressed the mixed messages of *Sun Oil* and *Getty Oil*, the role of cost, or public policy. Nor have the courts addressed the questions concerning the accommodation doctrine posed in the text. Though many issues remain unresolved which create uncertainty in the relative rights of the surface and mineral estates, there is some suggestion that mineral owners with pre-existing uses may be required to accommodate. In Getty Oil Co. v. Royal, 422 S.W.2d 591, 592 (Tex. Ct. App. 1967), a mineral owner had roads in existence several years before the surface estate was subdivided. *Id.* at 592. One of the surface owners erected unlocked gates over the roads to protect his property. *Id.* The court held that since no conflict existed, the rule of dual possession applied. *Id.* at 593. The court defined the rule as allowing the lessee "to use so much of the leased premises as is required in its lease operations reasonably necessary for development and exploration," and entitling the surface owner to "the right to use the portion of the surface not so required by the mineral lessee." *Id.* However, the *Royal* decision is distinguishable because it was premised on the lack of a "conflict" and the fact that only minimal costs and inconveniences were added to the lessee's operations. *Id.* at 593. A subsequent decision suggests that a mineral owner should accommodate the surface owner if a reasonable alternative exists, but mere inconvenience to the surface owner is not enough to require the mineral owner to accommodate. Reading & Bates Offshore Drilling Co. v. Jergenson, 453 S.W.2d 853 (Tex. Ct. App. 1970). In *Jergenson*, a landowner in the cattle feeding business sued a lessee claiming that by drilling a well at the edge of an ensilage pit, the pit was destroyed, his business ruined, and the land permanently damaged. *Id.* at 854. The lessee argued that it had the right to use so much of the surface and to use it in such a manner as is reasonably necessary to accomplish the purposes of the lease. *Id.* The *Jergenson* court recognized that those rights are to be exercised with "due regard" for the rights of the surface owner and held that the lessee's location of the well was an unreasonable use. *Id.* at 855–56.

The paucity of cases providing courts with the opportunity to discuss the unresolved issues of *Sun Oil* may be due to the industry's reliance on privately negotiated documents. *See infra* note 328 (discussing role of private agreements).

[303] *Supra* note 233 and accompanying text.

[304] *See supra* note 233.

mineral estates.[305] In 1990, the National Conference of Commissioners on Uniform State Law approved the Model Act after a three-year study of the rights and liabilities of surface and mineral owners.[306] The Model Act draws its definition of accommodation from *Getty Oil* and clarifies accommodation doctrine criteria. Also, the Model Act incorporates the pre-existing use requirement and defines it as an "existing surface use or improvement."[307] In order to protect proposed surface use, the Model Act requires surface owners to give notice to mineral owners. However, the Model Act provides broad protection to mineral-estate owners by similarly protecting their proposed uses.[308] The Model Act expressly addresses the converse of the *Getty Oil* situation by providing that if there is "ongoing mineral development,"

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[305] Clyde Martz, a member of the drafting committee for the National Conference of Commissioners on Uniform Laws, explains many of the problems giving rise to the Model Surface Use and Development Act arose from wide-spread use of the broad form severance documents:

> By the middle of the twentieth century, extensive severance practices and use of broad form severance documents without the definition of any party's rights began to produce significant title and land development problems. Uncertainty as to the scope and extent of potential mineral development and consequential surface impact from such development impeded land development in a number of ways. Owners of severed mineral estates . . . could interfere with new surface improvements and deter financing for such improvements by a mere manifestation of intention to exercise dominant rights in the surface estate for mineral access, exploration, excavation, storage . . . Severed surface rights could impair mineral development under the federal Surface Mining Control and Reclamation Act and similar state mine permitting statutes . . . .

Clyde O. Martz, *The New Model Surface Use and Mineral Development Accommodation Act*, 5 NAT. RESOURCES & ENV'T 30, 31 (ABA Winter 1991). The beginning of the Model Act encompasses a policy statement that guides its interpretation and promotes the efficient development of both surface and mineral estates:

> [I]t is declared that where mineral estates are severed from surface estates by grant or reservation it is the public policy of this State to: (i) facilitate responsible development of surface and mineral estates by quantifying so far as practical the surface and mineral rights and burdens arising from the severance of the estates; (ii) encourage accommodation of potentially conflicting interests by agreement; and (iii) provide expeditious procedures for defining and quantifying rights and obligations of owners of severed estates whenever uncertainties exist and conflicts arises.

MODEL SURFACE USE AND MINERAL DEVELOPMENT ACCOMMODATION ACT § 1, 14 U.L.A. 100, 101 (Supp. 1995).

[306] *Martz*, *supra* note 305, at 30.

[307] MODEL SURFACE USE AND MINERAL DEVELOPMENT ACCOMMODATION ACT § 2(a)(comment) (Supp. 1995) [hereinffter THE MODEL ACT].

[308] *Id.* § 4.

a surface owner is not entitled to accommodation.[309] The term "ongoing mineral development" is defined to include approved development plans and "the resumption or extension of mineral development within thirty years after the previous production stopped."[310] The Model Act also limits acceptable alternatives to those that are "technologically sound and economically practicable."[311] If accommodation is not required under these criteria, the act provides that the mineral developer may proceed without liability for damages.[312] Also, a mineral owner's right of access is protected by denying courts the authority to issue injunctions against the owner's right of access.[313]

In addition to clarifying *Getty Oil's* accommodation doctrine criteria, the Model Act implicitly disapproves of *Sun Oil*. *Sun Oil* is conspicuously absent from cases cited as authority for the accommodation doctrine.[314] Moreover, an express policy statement which promotes efficient development of both surface and mineral estates suggests that *Sun Oil* has been rejected.[315] The Model Act would have clarified the rights of the parties in *Haupt*. The mineral owners' "ongoing" development would have allowed them to continue drilling without accommodating the change in surface use to a reservoir. The Model Act's requirement of "technologically sound and economically practicable" procedures for mineral owners would have excluded the cost-prohibitive alternatives posed by the surface owner, the water district.[316] More important, the Model Act's protection for the converse of the *Getty Oil* situation (a mineral owner with a pre-existing or "ongoing" use) allows that use to continue regardless of the reasonableness of alternatives.[317] The *Haupt* court might have prevented or reduced the costs and time invested in this litigation if it had adopted the Model Act's pragmatic approach.

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[309] *Id.* § 5.

[310] *Id.* § 2(s).

[311] *Id.* § 8.

[312] *Id.*

[313] *Id.* § 8(d).

[314] In addition to *Getty Oil*, the Model Act cites two prior decisions where the surface owner prevailed, *Royal* and *Jergenson*. *See supra* note 302 (discussing *Royal* and *Jergenson*).

[315] THE MODEL ACT, *supra* note 305, § 5. The introductory section states, "[t]he public policy of this State is to maximize the economic, cultural and environmental welfare of the people by preserving all reasonable opportunities for optimum development and use of all surface and mineral resources." *Id.* § 1.

[316] *Haupt*, 854 S.W.2d at 913.

[317] THE MODEL ACT, *supra* note 305, § 8(d).

Because currently Texas courts accept the accommodation doctrine, adoption of the Model Act would most likely fail to support a traditional takings claim.[318] Political obstacles pose a more likely barrier to Texas' adoption of the Model Act. Surface owners might view the Model Act as permitting mineral owners to avoid internalizing most costs, and mineral owners would not want to sacrifice *Sun Oil*'s reassertion of mineral-estate dominance.[319] For example, the Surface Damage bill recently failed to become law in Texas.[320] Therefore, in Texas and other states without clear guidance from the courts or surface-damage legislation,[321] private agreements remain imperative for both surface and mineral owners.[322]

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[318] Even in states adopting strict liability statutes which significantly altered the common law, courts have upheld the statutes against constitutional challenges. *See* Murphy v. Amoco Prod. Co., 729 F.2 552 (8th Cir. 1984) (upholding constitutionality of North Dakota's Surface Damage Statute which required mineral developers to pay all damage to surface owner during development); *see also* Lowe, *Easement of the Mineral Estate for Surface Use*, *supra* note 219, § 4.04[3], at 4–34 (noting opinion that surface damage acts do not result in an unconstitutional taking). *But see* Polston, *Doctrine in Disarray*, *supra* note 62, at 576–79 (criticizing courts for upholding surface damage acts as constitutional).

[319] The Model Act has been criticized as unfairly promoting the dominance of the mineral estate. Michelle A. Wenzel, Comment, *The Model Surface Use and Mineral Development Accommodation Act: Easy Easements for Mining Interests*, 42 AM. U. L. REV. 607, 675 (1993) (viewing Model Act as still protecting mineral owners "from the reasonable desires of surface owners to use their land.").

[320] A recent Surface Damage Litigation Reform Bill failed in the 74th Texas Legislation. Senate Bill 1538 would have vested the Railroad Commission with exclusive jurisdiction over issues regarding remediation. The bill also would have required that prior to investigating an action for environmental harm due to exploration and production activities, administrative remedies available through the Railroad Commission must first be exhausted.

[321] Though Texas does not have general surface damage legislation, it does have a statute specifically designed to protect surface owners seeking to develop subdivisions in heavily populated areas. TEX. NAT. RES. CODE ANN. §§ 92.001–007 (West 1995). The Texas Mineral Use of Subdivisions Act allows surface owners to create a qualified subdivision if their parcel of land meets the statutory requirements. *Id* § 92.003. In order for mineral owners or lessees to drill on these subdivisions they must designate well site locations. *Id.* § 92.005. This statute permits, "the imposition of restrictions on a mineral owner's surface use which are more stringent than those imposed by the accommodation doctrine." SMITH & WEAVER, 1 TEXAS LAW OF OIL AND GAS 26 (1992). The Model Surface Use Act embraces and expands both the scheme of the Texas Subdivision Act statute and the accommodation doctrine. UNIF. MODEL SURFACE USE & MIN. DEV. ACCOMMODATION ACT, 42 AM. U. L. REV. 673, 675 (1993).

[322] *See* Welborn, *New Rights of Surface Owners*, *supra* note 218, at 22–39 (noting that when there is a lack of surface damage legislation, private fairness standards such as "good neighbor policy" and "golden rule" assist surface and mineral owners in reaching compromise); Burney, *Accommodating and Condemning Surface and Mineral Estates*, *supra* note 258, at E–11 (recognizing importance of carefully drafted surface use agreements in absence of sufficient surface use legislation).

5. The Colorado Example

a. Gerrity Oil & Natural Gas Corp. v. Magness

Another jurisdiction without a Surface Damages Act, Colorado,[323] has been a contentious battle site between surface and mineral owners over who should bear the costs of oil and gas development. Several counties in that state contain highly productive agricultural acreage with severed surface and mineral ownership.[324] For example, in 1993, Weld County, Colorado, ranked fourth in the nation in agricultural production, and was the "most drilled county" in the United States.[325] The debate raging there between surface and mineral owners epitomizes the polar positions of those owners in the environmental era. While mineral owners in the region staunchly assert the right to destroy the surface under the dominant-estate rule, severed-surface owners claim, "[i]f you break it you fix it. That's an issue the oil industry has a hard time understanding."[326] This polarization has left the parties entrenched in their corners, with unfortunate effects on private negotiating.[327] For example, it has been reported that oil and gas companies are offering "take-it-or-leave-it deals" with dollar numbers lower than the minimum amount which surface owners consider acceptable for their farm lands.[328]

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[323] Legislation for a Surface Damages Act recently failed in Colorado. *See* Jeanine Feriancek & Cynthia L. McNeill, *Oil Company Surface Use: Do Farmers Need Protection?*, NR & E 28 (Winter 1995) [hereinafter Feriancek & McNeill, *Oil Company Surface Use*] (describing politics over surface damage legislation in Colorado). In 1993, the Colorado legislature considered but defeated two bills for surface owner's rights. *See Colorado Surface Rights Bills Defeated*, E & P ENV'T, June 11, 1993, at 14. SB 230 was voted down due to continued debate over substantive changes to the bill, while HB 1345 died in the Chambers Agricultural Committee. *Id.*

[324] Welborn, *New Rights for Surface Owners, supra* note 218, at 22–32.

[325] Gerald Karey, *Regulation & The Environment,* PLATT'S OILGRAM NEWS, Dec. 6, 1993, at 3. The situation is exasperated because the county has a high percent of severed-surface owners who receive no royalties. Because they receive no royalty payments, surface owners are not compensated although they have to "take land out of agricultural production during energy development." *Id.*

[326] *Id.*

[327] *Id.*

[328] *Id.* at 3. A real estate broker and appraiser is quoted as hearing that "companies are offering from $1,000 to $2,500 and I've heard of surface owners wanting as much as $50,000 . . . If you have a farm high in carrots, onions, potatoes, sugar beets and spinach, you're conceivably in the $25,000–$35,000 range. But that isn't the normal situation. The 90th

As support for the dominant-estate rule, mineral-estate owners depend upon a 1966 Colorado Supreme Court case, *Frankfort Oil Co. v. Abrams*.[329] In *Frankfort*, the court held that, "[w]ithout a lease provision the rule seems to be that absent unreasonable use or statutory provisions or a suit brought in tort for negligence, no payment is due the surface owner for damage due to exploration or drilling."[330] Although the court construed a specific surface-damages clause in a lease, *Frankfort* is frequently cited for the proposition that Colorado strictly adheres to the common-law concept of unabashed mineral-estate dominance.[331]

The gap between rights asserted by mineral and surface owners has likely contributed to Colorado's inability to pass a Surface

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percentile will be in the $4,000–$6,000 range." *Id.*

[329] 413 P.2d 190 (Colo. 1966).

[330] *Id.* at 195.

[331] *See* Welborn, *New Rights of Surface Owners*, *supra* note 218, at 22–30 (noting lack of judicial direction in Colorado courts on what damages, if any, are compensable and *Frankfort*'s role in shaping Colorado law); Feranicek & McNeil, *Oil Company Surface Use*, *supra* note 323, at 29 (citing *Frankfort Oil* as setting "clear rule" of mineral-estate dominance). Mr. Sam Oldenburg, an attorney who has practiced oil and gas law for many years in Colorado and represented surface owners in Gerrity Oil and Natural Gas Corp. v. Magness, discussed *infra*, opines that: "Those in the oil and gas industry carry *Frankfort Oil* around in their brief cases; it is even rumored that they sleep with it under their pillow at night." Telephone Interview with R. Sam Oldenburg (January 24, 1996).

In *Frankfort Oil*, the court strictly construed a surface-damages clause and relied on an earlier case suggesting that the surface owner bears the risk of damage to the agricultural value of his land:

> When plaintiff leased the land, and purchased or erected valuable improvements thereon, he did so with knowledge of the right of the State [the mineral-estate owner] to explore and operate the land for oil and gas, and with knowledge that such use by the State might affect the agricultural value and use thereof . . . .

Franfurt Oil, 413 P.2d at 196 (citing Anderson-Prichard Oil Corp. v. McBride, 109 P.2d 221, 224 (1940)).

In a recent inverse condemnation case handed down by the Colorado Supreme Court, a concurring judge asserted the mineral-estate owner's right "to mine his estate in the most reasonable, lowest-risk, and most cost effective method" and concluded a mineral owner would have a constitutional claim for damage upon suffering "a material and substantial impairment of the right to access" caused by a governmental entities' use of the surface estate. City of Northglenn v. Grynberg, 846 P.2d 175, 188 n.8 (Colo. 1993)(Erickson, J., concurring). In support of that statement, Justice Erickson cites a Texas case relied upon by the appellate court in *Haupt*, discussed *supra* notes 268–301 and accompanying text. Chambers-Liberty Counties Navigation District v. Banta, 453 S.W.2d 134 (Tex. 1970). Recall that the *Haupt* appellate court opinion did not rely on the accommodation doctrine but rather on cases involving denial of access when adjoining streets were condemned by government entities. *Haupt*, 833 S.W.2d at 698.

Damages Act.[332] The state's political bodies, however, have responded to the concerns of the environmental era in other ways. For example, the Colorado legislature has authorized its conservation agency, the Colorado Oil and Gas Conservation Commission (COGCC), to issue regulations to avoid environmental problems caused by oil and gas production.[333] Additionally, special rules adopted by the COGCC have embraced the "due regard" concept and expressly addressed cost considerations: "due regard" shall not mean that the operator shall be required to accept locations or time schedules which would unreasonably increase the operator's cost of operations. . . ."[334]

Recently, an appellate court relied upon the COGCC rules and regulations to restrict the rights that mineral-estate owners claim under *Frankfort Oil*. In *Gerrity Oil and Natural Gas Corp. v. Magness*,[335] the court held that the COGCC's rules and regulations created a private right of action for surface owners who have been injured by the alleged failure of an oil drilling site operator to properly remediate the soil after drilling oil wells.[336] In *Gerrity Oil*,

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[332] *See* Welborn, *New Rights of Surface Owners*, *supra* note 218, at 22–37 (recognizing reasons preventing adoption of Surface Damages Act in Colorado).

[333] The amendment to Colorado's Oil and Gas Conservation Act authorizes the commission to regulate oil and gas resources "in a manner consistent with protection of public health, safety, and welfare." COLO. REV. STAT. § 34–60–102 (Supp. 1994). "Prior to the amendment, the Commission's role was simply to foster, encourage and promote development, production and utilization of the natural resources of oil and gas in the state of Colorado." Feriancek & McNeill, *Oil Company Surface Use*, *supra* note 323, at 30.

Several counties in Colorado have also responded to the debate by passing ordinances restricting or denying drilling. *See* Welborn, *New Rights for Surface Owners*, *supra* note 218, at 22–34 n.162 (expounding on oil and gas ordinances that have been promulgated). Whether these efforts by local governments are within their authority and not violative on pre-emption grounds remains unclear. *Id.* at 22–35; *see* Bowen/Edwards Assoc., Inc. v. Board of County Comm'rs, 812 P.2d 656 (Colo. Ct. App. 1990), *aff'd in part and rev'd in part*, 830 P.2d 1045 (Colo. 1992) (reversing decision that oil and gas conservation act totally preempts county's land-use authority); Voss v. Lundvall Bros., Inc., 830 P.2d 1061 (Colo. 1992) (affirming decision that oil and gas conservation act preempted home-rule city from enacting land use ordinance).

[334] The Wattenberg Special Area Rules, adopted by the Commission in 1993, resulted from a task force "comprised of representatives from the oil and gas industry and Colorado's agricultural communities." Feriancek & McNeill, *Oil Company Surface Use*, *supra* note 323, at 30. In this article the authors address whether these Special Rules are enforceable since they were passed prior to the changes made in the conservation agency's duties. In concluding that the rules are enforceable, the authors state, "[g]iven that several other states have found protection of agricultural activities to be a matter of public welfare . . . the 1994 amendment to the Conservation Act at least arguably gave the Commission additional retroactive authority for the Special Rules." *Id.*

[335] Gerrity Oil & Natural Gas Corp. v. Magness, 1995 WL 755092, at *3 (Colo. App. Dec. 21, 1995) (No. 94CA1319), as modified on denial of reh'g (Mar. 7, 1996).

[336] *Gerrity Oil*, 1995 WL 755092, at *2–3.

the surface owner, Magness, raised horses on his land and planted crops.[337] After the operator, Gerrity, drilled one of four planned oil wells, Magness' attorney informed Gerrity that it lacked the authority to proceed with further drilling operations.[338] Gerrity obtained a temporary restraining order and requested a permanent injunction at trial. Magness asserted several counterclaims claiming that Gerrity had breached its duty to remediate the surface after drilling.[339]

In rejecting the surface owner's claims, the district court reasserted mineral-estate dominance and expressly rejected adoption of the accommodation doctrine.[340] On appeal, Magness stressed his rights under COGCC rules and regulations, convinced that a court would interpret *Frankfort Oil* as precluding adoption of the accommodation doctrine in Colorado.[341] The appellate court adopted his view and concluded that the COGCC's rules demonstrated a legislative policy "that the negative environmental impact of oil and gas extraction be minimized."[342]

The *Gerrity Oil* opinion promoted the accomodation doctrine, and consequently significantly increased the rights of surface owners, in three ways.[343] First, as noted above, the opinion interpreted the conservation statutes as creating a private right of action for surface owners against mineral-estate developers.[344] Second, the court held

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[337] *Id.* at *1.

[338] *Id.*

[339] *Id.* Magness' counterclaims dealt primarily with the manner in which Gerrity Oil had conducted the post-drilling cleanup of the surface area. *Id.* Magness alleged that he was unable to irrigate a field and lost a portion of his alfalfa crop as result of Gerrity's unnecessary delay in filling several water pits and other holes it had dug during the drilling process. *Id.* He further alleged that irrigation was still impeded once the pits were filled-in due to the sinking and settling that occurred. *Id.* At trial, Magness presented evidence that Gerrity's agent, buried large pieces of plastic lining material in the pits, rather than removing them. *Id.* He also presented evidence that Gerrity Oil had failed to remove many of the substances used or unearthed during the drilling process. *Id.*

[340] Gerrity Oil & Gas Corp. v. Magness, No. 92CV802 (D.C. Colo. Apr. 22, 1994).

[341] Telephone Interview with R. Sam Oldenburg (January 24, 1996).

[342] *Gerrity Oil*, 1995 WL 755092, at *3.

[343] *Id.*

[344] Although the statutes do not expressly establish a private right of action for surface owners, the court determined that Magness was in the class of persons intended to be benefitted by the statute and that an implied private right of action would be consistent with the purpose behind the legislative enactment. *Id.* at *2 (citing Allstate Insurance Co. v. Parfrey, 830 P.2d 905 (Colo. 1992)). In reaching its conclusion, the court relied on statutes creating a limitations period, another statute creating an environmental response fund, and the act's statement of purpose to "promote the development . . . of oil and gas . . . in a manner consistent with protection of public health, safety and welfare; [and] to protect the public and private interests against the evils of waste in the production . . . of oil and gas . . . ." *Id.* at *3.

that expert testimony about standard practices in the industry was not required to establish the surface owner's duty of care in development, determining instead that the statutes and rules delineate those standards.[345] Finally, the court also held that the doctrine of trespass is a remedy for surface owners alleging unnecessary use of the surface, irrespective of the "reasonableness" of the operator's conduct.[346]

If the *Gerrity* opinion survives a challenge in Colorado's supreme court, its interpretation of the COGCC rules will substantially restrict the rights of oil and gas developers in Colorado as they have been perceived under *Frankfort*. The question remaining is whether, in addition to imposing more costs of development on mineral-estate owners, the COGCC's rules could also lead to denying them access. Writing before *Gerrity*, commentators predicted that "the Commission's expanded authority . . . in regulating oil and gas resources potentially could lead to denial of drilling permits based on balancing oil and gas development and other land uses such as agriculture."[347] In other states, commission rules have led to the denial of access for mineral developers.[348] *Gerrity Oil* should convince

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[345] *Id.* at *3. An attorney for Mr. Mayness has commented that no expert testimony was used at trial because no experts would be available in Colorado to contradict the industry practices. Telephone Interview with R. Sam Oldenburg (January 24, 1996). The court's holding regarding the use of expert testimony apparently reduces the burden placed on surface owners under *Frankfort Oil*'s reasonable use rule.

[346] *Gerrity Oil*, 1995 WL 755092, at *5.

[347] *See* Feriancek & McNeill, *Oil Company Surface Use*, *supra* note 323, at 69. If access is not denied totally, mineral owners risk de jure denial with costly conditions. *See also* Gulf Oil Co. v. Wyoming Oil and Gas Conservation Comm'n, 693 P.2d 227 (Wyo. 1985) (recognizing helicopter mobilization as reasonable alternative means of accessing well); Feriancek & McNeill, *Oil Company Surface Use*, *supra* note 323, at 31 (observing that surface owners want mineral developers to use expensive slant well drilling); Welborn, *New Rights of Surface Owners*, *supra* note 218, at 22–34, 35 (citing county ordinances that place a variety of restrictions on mineral owners).

[348] *See* Michigan Oil Co. v. Natural Resources Comm'n, 276 N.W.2d 141 (Mich. 1979) (upholding state Natural Resources Commission's denial of mineral owner's drilling application on state-owned land in order to protect wildlife habitat). The majority and dissenting opinions of *Michigan Oil* reflect the polarized positions of environmentalists and oil and gas industry proponents. The majority rejects a narrow construction of the Oil Conservation Act, which permits oil and gas drilling "unnecessarily detrimental to other natural resources." *Id.* at 146. In construing the act to prevent environmental damage, the majority states:

> The ordinary use of the term "waste" does not refer only to waste of oil and gas, but includes any spoilation or destruction of the land, including flora and fauna, by one lawfully in possession, to the prejudice of the estate or interest of another. . . . Conservation should not be read to apply only to efficient extraction of oil, but should include the efficient extraction of oil

legislators to pass surface-damages legislation that would ensure access for developers due to the potential threat to the mineral industry's well-being. However, the legislature should require mineral owners to pay damages to surface owners.[349]

Surface-damages statutes respond to the policy shifts in the current environmental era by ensuring access to the minerals lying subsurface and by clearly assigning responsibility for the costs of mineral development. In Colorado, surface-damages legislation would balance the rights asserted by surface and mineral owners and provide predictability currently lacking with the COGCC's expanded authority. However, as demonstrated in Texas, passage of a surface-damages act is not guaranteed despite cues from the judiciary about requiring mineral owners and producers to assume more of the costs of development. Therefore, as these controversies continue in the judicial system, it is incumbent on courts to embrace the pragmatic process and recognize that mineral-estate dominance has shifted to the periphery of the web of beliefs of informed decision making in an environmental era.

B. New Technologies: The Role of Trespass and Other Torts

In addition to shifting policies, new and improved technologies will continue to challenge courts in this era of oil and gas jurisprudence. The hydraulic fracturing technique at issue in *Geo Viking,* discussed in Part II, provides an example.[350] *Geo Viking* pressed the Texas courts to balance the rights of neighboring property

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> which simultaneously conserves the other natural resources (flora and fauna) of the state.

Id. at 147. However, according to the dissent, the purpose of the Oil Conservation Act is not to conserve the environment, but to conserve oil and gas, so that they are efficiently extracted:

> The act is not designed to assure the balanced conservation of all natural resources but to assure conservation with a view to the ultimate recovery of the maximum production of oil and gas. The primary purpose of the act it to prevent waste of oil and gas so as to assure maximum production.

Id. at 156 (Levin, J., dissenting).

[349] Prior to *Gerrity Oil,* Colorado Conservation Commissioner John F. Welborn opined that the Model Act had little chance of adoption in Colorado since the state courts had not adopted the accommodation doctrine. Wellborn, *New Rights for Surface Owners, supra* note 218, at 22–26. In light of the court's interpretation of the commission rules in *Gerrity Oil,* however, the oil and gas industry should welcome the approach codified in the Model Act.

[350] 817 S.W.2d 357 (Tex. Ct. App. 1991).

owners against the policy of encouraging the use of techniques which enhance recovery of oil and gas. As demonstrated in Part II, the Texas courts have failed to engage in pragmatic decision making and have failed to articulate standards for striking that balance between property rights and improved technology. Instead, the courts left the mixed messages of *Manziel* unresolved and the following questions unanswered: Whether these techniques constitute an actionable common-law trespass, which would permit a court to issue an injunction and to impose liability for tort damages. Or whether these techniques are permissible procedures under the rule of capture which precludes a court from issuing injunctions or imposing liability in tort.

A more recent technological advancement in geophysical exploration[351] poses similar questions for the courts. The three-dimensional seismic survey has transformed exploration and production by providing information about oil and gas reserves which could not have been derived from techniques such as two-dimensional surveys used throughout the Great Era.[352] The technique has been

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[351] "Geophysical exploration" has been defined as:

> The search for geologic structures favorable to the accumulation of petroleum by means of geophysical devices. By use of one or more of such devices, geophysicists seek to arrive at a picture of subsurface conditions. The gravity meter measures the gravitational pull of subsurface rocks, revealing on occasion disconformities and structural traps. The magnetometer measures the magnetic attraction of iron contained in various types of rock, from which it is sometimes possible to locate a subsurface structure. Perhaps the most commonly used geophysical device is the seismograph, which measures shock waves reflected and refracted by subterranean rock layers. From this data is plotted a contour map indicating the presence (if any) of structural traps. Today, in any new area, geophysical investigation is the almost universal preliminary to exploratory drilling.

8 WILLIAM & MEYERS, *supra* note 24, at 469.

[352] Allen Johnson, *Integration Makes Industry Seek Ways to Break Data Bottleneck*, OIL & GAS J., March 14, 1994, at 50. *See also* David Bennett, *Seismic Revolution: Computer Technology Making Oil, Natural Gas Easier to Find*, Sept. 11, 1994 at 1G [hereinafter Bennett, *Seismic Revolution*] (reporting that three-dimensional seismic studies of oil and natural gas producing land use giving a "much-needed shot in the arm to the United States' oil and gas exploration industry."). Oil companies have shown new interest in the Gulf of Mexico because 3-D imaging indicates that the Gulf holds giant oil reserves, perhaps making it the last huge domestic oil discovery. Agis Salppukas, *The New Gulf War: Man Your Computers: Off the U.S. Coast, The Oil Giants Gird for Battle*, N.Y. TIMES, Jun. 18, 1995, at 1, 10. *But cf. House Committee Votes to Slash Environment Arts Programs*, SAN ANTONIO EXPRESS NEWS, Jun. 28, 1995, at 3A (noting that exploration in coastal waters will continue to be limited because the House Appropriation Committee recently voted to continue the thirteen year-old moratorium on drilling off most of America's coasts).

"hailed as the salvation of the onshore United States industry," which "is helping the industry operate profitably even in an era of low prices."[353]

Unlike two-dimensional exploration, with sources and receivers for shock waves placed along a straight line, three-dimensional surveys require locating the sources and receivers in a grid pattern over a larger area. This pattern produces more detailed subsurface information, which leads to accurate imaging of structural traps for oil and gas; the result has been a marked increase in drilling-success rates.[354] As the cost of the computer technology necessary to process the 3-D data has become more affordable, the use of this exploration technique has expanded.[355]

In the Great Era, courts were confronted with questions raised by the use of two-dimensional surveys. In *Kennedy v. General Geophysical Co.*,[356] the defendant had located "shot points" for the operation on land adjoining the plaintiff's land, with one shot point located within ten or fifteen feet from plaintiff's boundary.[357] The *Kennedy* court determined no trespass had occurred because the defendant had not physically entered the plaintiff's land.[358] According to the *Kennedy* court, mere vibrations caused by the survey's shock waves were not enough to constitute a trespass.[359] Additionally, in

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[353] Williams, *3-D: The Light and the Way, Oil & Gas Investor*, May 1994, at 24.

[354] Bennett, *Seismic Revolution, supra* note 352, at G1. "On developmental wells in proven producing areas, the historical success rate using 2-D seismic was in the 30 percent to 50 percent range. Now using 3-D seismic in proper drilling, successes have been 70 percent to 80 percent and higher." *Id.* The chairman of a company using these surveys described them as "the closet thing we have ever come to a direct oil and gas finding tool." *Id.* at G6. *See also* Harry L. Blomquist, III, *Geophysical Trespass? The Guessing Game Created by the Awkward Combination of Outmoded Laws and Soaring Technology*, 48 BAYLOR L. REV. 21, 29–31 (1996) (recognizing that accuracy of 3-D seismic technology results in drilling fewer dry holes) [hereinafter Blomquist, *Geophysical Trespass?*].

[355] Bennett, *Seismic Revolution, supra* note 352, at G6; Blomquist, *Geophysical Trespass?, supra* note 354, at 29.

[356] 213 S.W.2d 707 (Tex. Ct. App. 1948).

[357] *Id.* at 708-09.

[358] *Id.* at 712.

[359] *Id.* at 711–12. *But see* Ohio Oil Co. v. Sharp, 135 F.2d 303 (10th Cir. 1943). Applying Oklahoma law the court assumed there was a trespass stemming from vibrations and from the information obtained from the process. *Id.* at 307-08. The trespass issue was not determinative because the cause of action was between the explorer and the purchaser of the information from one of the explorer's employees. *Id.* at 308. However, a concurring opinion emphatically stated the vibrations did not constitute a trespass because the geophysical tests were "conducted upon lands rightfully entered." *Id.* at 309 (Phillips, J., concurring). The concurring justice based his opinion on the fact that Oklahoma is a non-ownership jurisdiction. *Id.* (Phillips, J., concurring). As noted, *infra* at note 305, a jurisdiction's view of oil and gas ownership should be considered

holding the defendant was not liable, the *Kennedy* court was influenced by the plaintiff's failure to prove an injury resulting from the procedure.[360]

Despite this additional statement noting the absence of an injury, the legacy of the *Kennedy* court is the general proposition that a physical entry is required before a geophysical explorer will be liable in trespass for conducting seismic surveys.[361] Under that interpretation, a trespass occurs only on the lands where shot holes are located, not on lands affected by the resulting sound waves. Such a restrictive definition of trespass provides immunity to explorers using technologies such as 3-D seismic surveys that furnish valuable geophysical data without physical entry on the property.[362]

To avoid the limitations of this restrictive definition of common-law trespass, many courts and commentators suggest other causes of action for protecting a mineral owner's property rights. These causes of action include trade secrets, assumpsit, or a new tort labeled "interference with prospective advantage."[363] From the

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in resolving controversies arising from the use of three-dimensional surveys and other technologies that do not require a physical entry in order to obtain sub-surface information.

[360] *Kennedy*, 213 S.W.2d at 709; *see also* Blomquist, *Geophysical Trespass?*, *supra* note 354, at 26 (stating that "[b]y qualifying its holding, the court inferentially left the door open for an actionable trespass on the mineral estate without physical entry, conditioned upon a showing that the trespasser has obtained valuable subsurface information under the subject property").

[361] *See, e.g.*, WILLIAMS & MEYERS, *supra* note 24, § 230; HEMINGWAY, *supra* note 61, § 4.1, Robert J. Rice, *Wrongful Geophysical Exploration*, 44 MONT. L. REV. 53, 58 (1983); Mark D. Christiansen, Note, *Oil and Gas: Improper Geophysical Exploration – Filling in the Remedial Gap*, 32 OKLA L. REV. 903, 907 (1979) (discussing geophysical explorational assessing trade secret laws as potential frameork for trespasser liability) [hereinafter Christiansen, *Improper Geophysical Exploration*].

[362] Another device, the aerial magnetometer, can be used to conduct surveys from several hundred feet above the ground. *See* Scott S. Slater, Note, *The Surreptitious Geophysical Survey: An Interference with Prospective Advantage*, 15 PAC. L. J. 381, 387 (1984) (discussing various methods to explore and survey for oil and gas) [hereinafter Slater, *Surreptitious Geophysical Survey*].

[363] *See, e.g.*, Grynberg v. City of Northglenn, 739 P.2d 230 (Colo. 1987) (Grynberg I) (recognizing actionable claims for geophysical trespass absent physical trespass); Phillips Petroleum Co. v. Cowden, 241 F.2d 586 (5th Cir. 1957) (allowing plaintiff to waive trespass and sue in assumpsit for the reasonable value of use and occupation of land where permission of severed mineral owner was not obtained); Slater, *Surreptitious Geophysical Survey*, *supra* note 362, at 410. Slater notes that the new tort "interference with prospective advantage" would avoid many of the inadequacies resulting from alternative tort actions:

> The unauthorized geophysical survey involves an intangible invasion of the landowner's estate. That survey results in a misappropriation of confidential commercial information, and whether conducted from on or off the property, this misappropriation is the kind of unethical commercial activity that should be guarded against. The tort of interference with prospective

mineral owner's point of view, these approaches are more reliable vehicles than common-law trespass for addressing the wrongs inflicted upon them when the mineral owner's have not consented to surveys that provide information about the producing potential of their land.

Controversies caused by 3-D surveys inevitably will require more courts to address the viability of these causes of action, as well as *Kennedy's* criteria for imposing liability on the surveyor for common-law trespass. The trespass issue parallels the problems discussed earlier in *Manziel* and *Geo Viking*, involving secondary recovery and sandfracing, respectively. In other words, are producers or their agents liable when they conduct procedures on one tract of land, with the landowner's consent, that affect tracts of neighboring landowners from whom the explorer has not received permission?[364] The secondary recovery and sandfracing procedures result in a physical trespass of other substances, fluids or sand, that permit drainage of oil and gas from the neighbor's land. By contrast, seismic surveys emit vibrations rather than tangible substances that lead to *information* about the potential for production from a tract of land owned by the non-consenting neighbor. Despite these factual differences, 3-D surveys require addressing competing policies similar to the policy conflicts created by secondary recovery and sandfracing: 1) protecting a mineral owner's rights, and 2) encouraging the use of these procedures to ensure efficient production of oil and gas.[365]

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advantage can provide the needed legal redress.

Id. See also Christiansen, *Improper Geophysical Exploration, supra* note 361, at 909 (urging use of trade secret principles to protect the interest of a property owner in subsurface information). A recent law review article reports that in a Texas case involving an aerial survey, the trial court recognized the viability of these causes of action for the nonconsenting mineral owner. *See* Blomquist, *Geophysical Trespass?, supra* note 354, at 34 (citing BGM Airborne Surveys, Inc. v. Coppock, No. 92–CI–13993 (288th Dist. Ct., Bexar County, Tex., filed Oct. 6, 1992) as an illustration of "the courts' willingness to fashioning alternatives for protection of the property rights of mineral owners against unauthorized intrusions").

[364] The issue could arise in two situations: first, when the surface has been severed from the mineral estate and the geophysical explorer has received permission only from the surface-estate owner, and second, when the mineral estate is owned in co-tenancy and the explorer has not received permission from all of the co-tenants. Regarding a dispute between surface and mineral owners, courts have generally held that the mineral estate owner owns the right to consent. *See generally* HEMINGWAY, *supra* note 61, § 4.1. Professor Hemingway explains that modern lease forms generally grant the lessee the "exclusive" right to explore; without such a provision, some cases have held that the right to explore co-existed between the lessor and lessee. *Id.*

[365] Blomquist, *Geophysical Trespass?, supra* note 354, at 49–50.

Courts embracing a pragmatic process should directly acknowledge these competing policies and assess the effects of alternative courses of action. One alternative is to protect the rights of mineral owners in the prospective value of their estates by recognizing causes of action that do not require a physical entry on their land, or by extending the definition of trespass to cover sound waves and vibrations.[366] A competing consideration is that those remedies subject producers to more frequent liability and encourage the holdout problem described with secondary recovery in Part II.[367] These additional costs discourage exploration and development in an era of depressed prices.

In order to encourage the use of 3-D surveys, another alternative is for courts to consider applying the rule of capture and its caveat of non-liability for the consequences of procedures conducted rightfully on neighboring land. Such a rule embraces Williams and Meyers proposed "negative rule of capture," which thus far has received little acceptance in cases determining liability when drainage occurs incident to a secondary-recovery project.[368] In weighing this alternative a court might distinguish the secondary-recovery cases because that procedure causes actual physical drainage, whereas geophysical exploration provides only information. Faced with that factual distinction, the initial inquiry for courts should be whether mineral owners *have* a protectable property right in the information about their estate, just as they may have in the actual minerals.[369] Several courts have recognized that such information is a protectible property right.[370] To protect that right

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[366] *See* HEMINGWAY, *supra* note 61, § 4.1, at 194.

> Recovery [by the mineral owner] should be allowed. This would follow by viewing the acts as comprising a new tort, or by extending the traditional scope of trespass to cover any type of energy wave caused to pass through the property of another . . . the value of the exploration rights may be lost by the use of modern technology and it is ridiculous that the law not compensate for such taking by application of archaic and out-moded concepts.

Id. See also Slater, *Surreptitious Geophysical Survey*, *supra* note 362, at 409–10.

[367] *Supra* Part I notes 102–05 and accompanying text.

[368] *See supra* notes 127–33 and accompanying text (discussing *Manziel* and Williams & Meyers's negative rule of capture).

[369] As in determining the rights of landowners in the oil and gas beneath their property produced by drilling, the extent of protection a court extends to a mineral owner's rights in the information about her estate will depend on whether the jurisdiction is an ownership-in-place or non-ownership jurisdiction. *See supra* note 359 (noting Phillips' concurring opinion in *Sharp*).

[370] *See, e.g.*, Grynberg v. City of Northglenn, 739 P.2d 230 (Colo. 1987) (refusing surface

without unnecessarily discouraging seismic exploration, a court should consider an approach reminiscent of the *Jameson* decision regarding remedies for mineral owners who have not consented to secondary-recovery projects.[371] Pursuant to that approach, a court could balance the competing policies by prohibiting injunctions but allowing limited damages when an explorer receives information from sound waves or vibrations without obtaining permission from the affected mineral-estate owner.[372]

The legislature is the logical venue for resolving the competing policies raised by shifting policies and new technologies.[373] As

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owner authority to authorize geophysical exploration where surface and mineral estate are severed); Phillips Petroleum Co. v. Cowden 241 F.2d 586, 592 (5th Cir. 1957) (allowing plaintiff mineral owner to waive trespass and sue in assumpsit for value of land actually used); Layne Louisiana Co. v. Superior Oil Co., 26 So. 2d 20, 22 (La. 1946) (recognizing mineral owner's right to geophysically explore land for oil or other minerals as valuable right requiring compensation when used by others). The *Layne* court states, "[t]he average landowner is without means or funds to secure geophysical or seismograph information. Where that information, which is exclusively his by virtue of his ownership of the land, is unlawfully obtained by others, the landowner is clearly entitled to recover compensatory damages for the disregard of his property rights." *Id.*

[371] *See supra* notes 112–14 and accompanying text.

[372] The issue then becomes whether damages should be based on loss of market value of the property or the contractual value of the use and occupation of the land for conducting the survey. *See Cowden*, 241 F.2d at 592 (damages in assumpsit based on contract value of exploration right); Blomquist, *Geophysical Trespass?*, *supra* note 354, at 43 (noting court's difficulty in determining an appropriate value and causal connection between trespass and resulting damage). Another issue is whether punitive damages should be allowed. *Compare* Layne Louisiana Co. v. Superior Oil Co. 26 So. 2d 20, 21–22 (La. 1946) (not permitting punitive damages under Louisiana Law) *with* Teledyne Exploration Co. v. Klotz, 694 S.W.2d 109 (Tex Ct. App. 1985) (allowed exemplary damages when trespass is willful). To promote the policy of encouraging the use of new technologies, punitive damages should be disallowed or restricted to cases involving malicious conduct.

[373] Louisiana recently enacted a statute affecting geophysical exploration. The statute provides that seismic surveys cannot be conducted without "the consent of either the owner or the party or parties authorized to execute geological surveys, leases or permits as provided in the mineral code." LA. REV. STAT. ANN. § 30.217(A)(1) (West 1995). That statute was passed in response to Jeanes v. GFS Co., 647 So. 2d 533 (La. App. 1994), which interpreted a criminal statute prohibiting conducting geophysical surveys without permission as requiring the consent of the surface owner rather than only the consent of the mineral owner. *See* Millard E. Matthew, Jr., *GeoPhysical Data: Acquisition and Protection-Whose Permission Do You Need?*, 13 ADV. OIL & GAS COURSE, Sept. 21–22, 1995; *see also* Blomquist, *Geophysical Trespass?*, *supra* note 354, at 49–50 (recognizing value in statutes to resolve competing policies).

Statutes should clarify the rights of severed-surface owners relative to mineral owners and the relative rights of cotenants in the mineral estate as well. Whereas most jurisdictions consider that the right to consent to geophysical exploration belongs to the mineral owner, courts have not clarified whether a geophysical explorer can proceed without consent from all of the mineral co-tenants. Blomquist, *Geophysical Trespass?*, *supra* note 354, at 35–37. In suggesting a statute to govern geophysical exploration, Mr. Blomquist analogizes to statutes governing the underground storage of gas. Those statutes protect a storer from liability when

described in Part III, many states have passed surface-damages statutes in response to the debate surrounding the scope of the mineral owner's surface easement in development. Similarly, most major producing states, other than Texas, uncomplicate conducting secondary-recovery efforts through compulsory unitization statutes. However, the policies and politics surrounding the unitization and surface-use debates also have stymied legislative efforts. The competing policies posed by new technologies could produce a similar polarization in the legislature over statutes governing geophysical exploration. Without any guidance from the legislature in defining the rights and liabilities of geophysical explorers, the burden inevitably will fall upon the courts to resolve the controversies created by the use of 3-D seismic surveys and other technologies.

IV. CONCLUSION

Although the Great Era of the Oil and Gas Industry has ended, courts will continue to confront issues raised by the pursuit of these prized resources. A reassessment of the approaches used by courts in the past provides guidance to the lawyers, judges, and legislators who are charged with creating a coherent jurisprudence for oil and gas law, a jurisprudence that respects precedent and legislative mandates, but also responds to contemporary policy considerations.

During the Great Era, courts frequently frustrated industry goals and created confusion for property owners and developers with approaches that myopically ignored relevant policies or surreptitiously masked the role of policy in formalistic garb. The continued use of those misguided approaches deprives oil and gas jurisprudence of the "practical certainty" needed to enable property owners and other actors in the industry efficiently to order their conduct. As politics continue to stymy legislative resolutions to controversies caused by shifting policies and new technologies, the burden will continue to fall upon the courts. To avoid the counterproductive effects of approaches to decision making that fail pointedly to address the role of prevailing policy, judges should adopt a pragmatic process. This process must

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the rights of a certain percentage of mineral owners have been obtained. That approach balances the policy of promoting underground storage of gas and protecting the rights of mineral owners in reservoirs. *See, e.g.*, TEX.. NAT. RES. CODE ANN. § 91.171–184 (Vernon 1993).

first, identify goals and policy conflicts. Second, it must assess the effects of available courses of action. Finally, it must adopt standards or rules to clarify the relative rights of property owners and developers. Indeed, clarifying rights and liabilities through legislation and judicial decisions should be the ultimate goal for the next era of oil and gas jurisprudence.