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Oil and Gas: The Implied Covenant for Reasonable Development Includes a Duty to Use Secondary Recovery Methods under the Proper Circumstances

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OIL AND GAS: THE IMPLIED COVENANT FOR REASONABLE DEVELOPMENT INCLUDES A DUTY TO USE SECONDARY RECOVERY METHODS UNDER THE PROPER CIRCUMSTANCES. *Waseco Chemical & Supply Co. v. Bayou State Oil Corp.*, 371 So. 2d 305 (La. Ct. App. 1979).

I. INTRODUCTION

The ever-evolving oil and gas lease has long been a source of controversy, as evidenced by the voluminous works on the subject.¹ Among the topics which have attracted attention are the implied covenants² created by the oil and gas lease.³ Prominent among the implied covenants is what is most often termed the covenant for reasonable development.⁴ While the law of the development covenant has been years in the making, at least one important question had, until recently,

1. *E.g.*, E. BROWN, *THE LAW OF OIL AND GAS LEASES* (2d ed. 1979); S. GLASSMIRE, *LAW OF OIL AND GAS LEASES AND ROYALTIES* (2d ed. 1959); Ashabraner, *Oil and Gas Lease Royalty Clause—One-Eighth of What?*, 20 ROCKY MT. M.L. INST. 163 (1975); Note, *Construing the Long Definite Term Lease: Gulf Oil Corp. v. Southland Royalty Co.*, 25 BAYLOR L. REV. 683 (1973); Note, *Oil and Gas Leases—the Habendum Clause Determines the Duration of the Lease Unless Properly Modified by Other Provisions of the Lease*, 5 TEX. TECH L. REV. 900 (1974); Note, *Oil and Gas: Lease Extension*, 3 TULSA L. J. 65 (1966).

2. There has been some disagreement among the writers as to whether the covenants are implied in law or implied in fact. Professor A.W. Walker, Jr. believes they are implied in fact. Walker, *The Nature of the Property Interests Created by an Oil and Gas Lease in Texas*, 11 TEX. L. REV. 399, 402-06 (1933). Professor Maurice Merrill, on the other hand, believes that they are implied in law. M. MERRILL, *THE LAW RELATING TO COVENANTS IMPLIED IN OIL AND GAS LEASES* §§ 7, 220 (2d ed. 1940 & Supp. 1964). According to Professors Howard Williams and Charles Meyers, courts have held wherever it has mattered that the covenants are implied in fact. H. WILLIAMS & C. MEYERS, 5 OIL AND GAS LAW § 803 (1978). The only real importance in this distinction is that covenants implied in fact may be disclaimed by specific provisions in the lease.

3. M. MERRILL, *THE LAW RELATING TO COVENANTS IMPLIED IN OIL AND GAS LEASES* (2d ed. 1940 & Supp. 1964); H. WILLIAMS & C. MEYERS, 5 OIL AND GAS LAW (1978); Boone, *Implied Covenant for Additional Development*, 31 MISS. L.J. 34 (1959); Martin, *Modern Look at Implied Covenants to Explore, Develop and Market Under Mineral Leases*, 27 OIL & GAS INST. 177 (1976); Meyers, *The Implied Covenant of Further Exploration*, 34 TEX. L. REV. 553 (1956); Williams, *Implied Covenants for Development and Exploration in Oil and Gas Leases—the Determination of Profitability*, 27 KAN. L. REV. 443 (1979).

4. The implied covenant for reasonable development has been referred to by various names. Among them are the following. The implied covenant to proceed with reasonable diligence. *Ezell v. Oil Assoc., Inc.*, 180 Ark. 802, 22 S.W.2d 1015, 1018 (1930). The implied covenant to develop with reasonable diligence. *State ex rel. Shell Petroleum Corp. v. Worden*, 44 N.M. 400, ___, 103 P.2d 124, 126 (1940); Walker, *The Nature of the Property Interests Created by an Oil and Gas Lease in Texas*, 11 TEX. L. REV. 399, 401 (1932). The implied covenant to conduct additional development after paying production is obtained. E. BROWN, 2 LAW OF OIL AND GAS LEASES

remained unanswered: Does the lessee's duty to develop reasonably extend to the use of secondary recovery methods?⁵

Recently, in *Waseco Chemical & Supply Co. v. Bayou State Oil Corp.*,⁶ a major shift occurred in defining the lessee's duty under this covenant. This shift answered affirmatively the question posited above. This note will briefly examine the evolution of the covenant for reasonable development and identify its basic principles. An examination of the *Waseco* decision will then be undertaken with an analysis of its implications for the future.

II. EVOLUTION OF THE IMPLIED COVENANT FOR REASONABLE DEVELOPMENT

The implied covenant for reasonable development has long been recognized in the typical oil and gas lease.⁷ According to Professors

§ 16.02 (1973). The implied covenant to fully develop. *Id.* at 16-17 n.33 (citing *Berry v. Wondra*, 173 Kan. 273, 246 P.2d 282 (1952)).

Under any name, the implied covenant for reasonable development is now universally recognized in the typical oil and gas lease. H. WILLIAMS & C. MEYERS, 5 OIL AND GAS LAW 212.1-57 (1978).

5. After the pressure within an oil and gas formation has been dissipated, production will decrease substantially or cease entirely. This decrease in pressure and production occurs before all of the oil in place has been recovered. As used herein, "secondary recovery" refers to any of a number of specialized techniques used to extract the remaining oil.

Broadly defined, [secondary recovery] includes all methods of oil extraction in which energy sources extrinsic to the reservoir are utilized in the extraction. . . . The term is usually defined somewhat more narrowly as a method of recovery of hydrocarbons in which part of the energy employed to move the hydrocarbons through the reservoir is applied from extraneous sources by the injection of liquids or gases into the reservoir. Typically a differentiation is made between secondary recovery and pressure maintenance; the former involves an application of fluid injection when a reservoir is approaching or has reached the exhaustion of natural energy, while the latter involves an application of fluid injection early in the productive life of a reservoir when there has been little or no loss of natural reservoir energy. The fluid (water, gas or air) is injected into the formation through an input well and oil is removed from surrounding wells.

H. WILLIAMS & C. MEYERS, MANUAL OF OIL AND GAS TERMS 532 (4th ed. 1976).

In most oil reservoirs, natural energy for production can be supplemented to bring about increased oil recovery by injection of either gas or water into the reservoir. If such injection takes place while the reservoir pressures are still high and most of the wells still flowing, the operation is classified as *pressure maintenance*. If it is started after pressures have been substantially depleted and the field is in general pumping or stripper stage, it is classified as *secondary recovery*, *repressuring*, or *water-flooding*.

ENGINEERING COMM. OF THE INTERSTATE OIL COMPACT COMMISSION, OIL AND GAS PRODUCTION 50 (1951).

See STANDING SUBCOMM. ON SECONDARY RECOVERY METHODS, DIVISION OF PRODUCTION OF THE AMERICAN PETROLEUM INSTITUTE, SECONDARY RECOVERY OF OIL IN THE UNITED STATES (2d ed. 1950); H. WILLIAMS & C. MEYERS, 1 OIL AND GAS LAW § 104 (1978).

6. 371 So. 2d 305 (La. Ct. App.), *cert. denied* 374 So. 2d 656 (La. Sup. Ct. 1979).

7. The covenant was actually recognized as long ago as 1897 in *Harris v. Ohio Oil Co.*, 57 Ohio St. 118, 48 N.E. 502 (1897).

Williams and Meyers,⁸ and the leading case, *Brewster v. Lanyon Zinc Co.*,⁹ the lessee's obligation under the development covenant arises only after production. The covenant requires that the lessee perform such development activities as the reasonably prudent operator would undertake considering the interests of both the lessor and the lessee.¹⁰

The origin of the implied covenant for reasonable development, as producing jurisdictions know it today, is found in the common law action of abandonment.¹¹ A number of lessors brought successful suits for partial cancellation relying on legal fiction and an action for abandonment as their basis of recovery.¹² These cases were open to serious

8. H. WILLIAMS & C. MEYERS, OIL AND GAS LAW § 832 (abr. ed. 1975).

9. 140 F. 801 (8th Cir. 1905).

10. The lessee's obligation is "upon securing production of oil or gas from the leasehold . . . to drill such additional wells to develop the premises as a reasonably prudent operator, bearing in mind the interests of both lessor and lessee, would drill under similar circumstances." H. WILLIAMS & C. MEYERS, OIL AND GAS LAW § 832, at 507 (abr. ed. 1975).

"Whatever, in the circumstances, would be reasonably expected of operators of ordinary prudence, having regard to the interests of both lessor and lessee, is what is required." 140 F. at 814. The same or a substantially similar standard has been recognized in every important producing jurisdiction. *U.S. v. City of Pawhuska*, 502 F.2d 821 (10th Cir. 1974) (Oklahoma); *Gregg v. Harper-Turner Oil Co.*, 199 F.2d 1 (10th Cir. 1952) (Oklahoma); *Brixey v. Union Oil Co.*, 283 F. Supp. 353 (W.D. Ark. 1968); *Clayton v. Atlantic Ref. Co.*, 150 F. Supp. 9 (D.N.M. 1957); *Ezzell v. Oil Assocs.*, 180 Ark. 802, 22 S.W.2d 1015 (1930); *Hartman Ranch Co. v. Associated Oil Co.*, 10 Cal. 2d 232, 73 P.2d 1163 (1937); *Mountain States Oil Corp. v. Sandoval*, 109 Colo. 401, 125 P.2d 964 (1942); *Carter Oil Co. v. Dees*, 340 Ill. App. 449, 92 N.E.2d 519 (1950); *Sanders v. Birmingham*, 214 Kan. 769, 522 P.2d 959 (1974); *Myers v. Shell Petroleum Corp.*, 153 Kan. 287, 110 P.2d 810 (1941); *McMahan v. Boggess*, 302 S.W.2d 592 (Ky. 1957); *Caddo Oil & Mining Co. v. Producers' Oil Co.*, 134 La. 701, 64 So. 684 (1914); *Compton v. Fisher-McCall, Inc.*, 298 Mich. 648, 299 N.W. 750 (1941); *Southwest Gas Producing Co. v. Seale*, 191 So. 2d 115 (Miss. 1966); *Fey v. A.A. Oil Corp.*, 129 Mont. 300, 285 P.2d 578 (1955); *Libby v. De Baca*, 51 N.M. 95, 179 P.2d 263 (1947); *Hermon Hanson Oil Syndicate v. Bentz*, 77 N.D. 20, 40 N.W.2d 304 (1949); *Harris v. Ohio Oil Co.*, 57 Ohio St. 118, 48 N.E. 502 (1897); *Spiller v. Massey & Moore*, 406 P.2d 467 (Okla. 1965); *North Am. Petroleum Co. v. Knight*, 321 P.2d 964 (Okla. 1958); *Ramsey Petroleum Corp. v. Davis*, 184 Okla. 155, 85 P.2d 427 (1938); *Wilcox v. Ryndak*, 174 Okla. 24, 49 P.2d 733 (1935); *Clifton v. Koontz*, 160 Tex. 82, 325 S.W.2d 684 (1959); *Texas Pacific Coal & Oil Co. v. Barker*, 117 Tex. 418, 6 S.W.2d 1031 (1928). See E. BROWN, 2 LAW OF OIL AND GAS LEASES at 16-49 (1976); H. WILLIAMS & C. MEYERS, 5 OIL & GAS LAW § 806.3 (1978).

11. While *Brewster* recognized the implied covenant for reasonable development in 1905, many courts, particularly those in the major producing states, were unwilling to recognize the existence of the covenant, relying instead on common law abandonment and legal fictions. See notes 12-15 *infra* and accompanying text.

Abandonment has been defined as the intent to relinquish a property interest forever, coupled with physical acts evidencing that intent. Both elements are required to state a cause of action. See *Capital Transit Co. v. Hazen*, 93 F.2d 250 (D.C. Cir. 1937); *Cohn v. San Pedro, L.A. & S.L.R. Co.*, 103 Cal. App. 496, 284 P. 1051 (1930); *Ullman ex rel. Eramo v. Payne*, 127 Conn. 239, 16 A.2d 286 (1940); *Stinnett v. Kinslow*, 238 Ky. 812, 38 S.W.2d 920 (1931); *Jackson v. Steinberg*, 200 P.2d 376 (Or. 1948); *Boatman v. Andre*, 44 Wyo. 352, 12 P.2d 370 (1932).

Simply a failure to use is not sufficient to establish abandonment. *Barnett v. Dickinson*, 93 Md. 258, 48 A. 838 (1901); *Welsh v. Taylor*, 134 N.Y. 450, 31 N.E. 896, 2 N.Y.S. 815 (1892); *Phillips v. Gross*, 32 S.D. 438, 143 N.W. 373 (1913).

12. One such case is *Hodges v. Mud Branch Oil & Gas Co.*, 270 Ky. 206, 109 S.W.2d 576

question, however, because the required elements of physical relinquishment of the leases and an intent to abandon were absent and often contrary to the uncontradicted evidence. Many courts and writers were concerned with the inappropriateness of this theory of recovery and in response, the implied covenant for reasonable development was recognized as the proper theory of recovery in *Doss Oil Royalty Co. v. Texas Co.*¹³

The Supreme Court of Oklahoma began its opinion in *Doss* with a careful review of the confused line of precedent which had granted recovery on the theory of abandonment in some cases and in some cases on no theory at all.¹⁴ The court reasoned that prior Oklahoma decisions granting relief on the theory of abandonment¹⁵ were correctly decided but for the wrong reasons. The court concluded that the implied covenant for reasonable development was the proper theory of recovery and adopted a reasonably prudent operator standard similar to the one set out in *Brewster*.¹⁶

After *Brewster*¹⁷ had recognized the covenant for reasonable development and the standard to be followed, and *Doss* had clarified its

(1937), in which a well was drilled on a 70 acre lease in 1932. In 1935, following demand by the lessor, the lessee refused to engage in further development. The lessor brought an action for abandonment and the court accepted his argument, cancelling the lease on all the leasehold except the land immediately surrounding the one producing well. *See also Ezzell v. Oil Assocs.*, 180 Ark. 802, 22 S.W.2d 1015 (1930); *Mills v. Hartz*, 77 Kan. 218, 94 P. 142 (1908); *Wing v. Edwards*, 175 Okla. 642, 54 P.2d 351 (1936); *Newman v. Replogle*, 139 Okla. 86, 281 P. 272 (1929); *Highfield Co. v. Kirk*, 248 Pa. 19, 93 A. 815 (1915); *Parish Fork Oil Co. v. Bridgewater Gas Co.*, 51 W. Va. 583, 42 S.E. 655 (1902); *Pryor Mountain Oil & Gas Co. v. Cross*, 31 Wyo. 9, 222 P. 570 (1924).

13. 192 Okla. 359, 137 P.2d 934 (1943). The *Doss* controversy involved two leases. On one, a 40 acre lease, five wells were drilled, between 1920 and 1922, in the east 20 acres and one in the northwest corner of the west 20 acres. No wells were drilled from May, 1922 until suit was filed in October, 1938. On the second lease, containing 100 acres, 10 producing wells were drilled in 1921 and 1922. There was additional activity on the lease in 1923 and 1924, but no other drilling until 1938. *Doss Oil Royalty Co.* filed suit for cancellation of the lease on the undeveloped portions thereof, basing its action on a theory of abandonment.

14. *See, e.g., Severson v. Barstow*, 103 Mont. 526, 63 P.2d 1022 (1936).

15. *See, e.g., Wing v. Edwards*, 175 Okla. 642, 54 P.2d 351 (1936); *Newman v. Replogle*, 139 Okla. 86, 281 P. 272 (1929).

16. We have conclusively presumed the intent to abandon from failure to drill for an unreasonable length of time. This doctrine of abandonment is simply a legal fiction used to arrive at an equitable result. . . .

. . . We think the rights heretofore granted under the theory of abandonment should be granted under the true doctrine of breach of the implied covenant to fully develop. . . . The prudent operator rule may be considered as a measuring stick to guide the court in determining the diligence required of the lessee in order to ascertain whether a breach of the implied covenants has occurred.

Doss Oil Royalty Co. v. Texas Co., 192 Okla. 359, 363, 137 P.2d 934, 938 (1943).

17. 140 F. 801 (8th Cir. 1905).

applicability, the covenant became well entrenched in American oil and gas law.

Extending the lessee's duty under the development covenant to secondary recovery methods is reasonable. The standard of the reasonably prudent operator¹⁸ dictates that the lessee must undertake any drilling activity which the prudent operator would undertake. When the desired continued development would be profitable and in the best interests of both lessor and lessee, such development should be required of the lessee regardless of whether it requires primary or secondary recovery. There is no difficulty, under the proper circumstances, in extending this theory to the use of secondary recovery methods. In the past, however, courts have refused to take this step.¹⁹

The reasons for the courts' failure to extend the development covenant are difficult to pinpoint. The recency of secondary recovery methods has made it difficult for lessors to prove that such activities would be profitable and feasible.²⁰ This has, in large part, contributed to the courts' unwillingness to grant relief when there has been a failure to engage in secondary recovery. Despite the lack of an authoritative answer²¹ on the subject, a number of commentators and courts predicted that the duty to reasonably develop would be extended to secondary recovery methods.²²

18. See note 10 *supra* and accompanying text.

19. Many cases explicitly refuse to recognize such a duty. See, e.g., *Wolfson Oil Co. v. Gill*, 309 P.2d 282 (Okla. 1957) (holding that the particular facts present did not warrant a finding that the lessee had a duty to engage in secondary recovery); *Morrison v. Johnson*, 199 Okla. 264, 185 P.2d 208 (1947).

20. NATIONAL ENERGY LAW AND POLICY INSTITUTE, UNIVERSITY OF TULSA COLLEGE OF LAW, *LEGAL ASPECTS OF ENHANCED OIL RECOVERY* 37 (1977).

21. While the cases interpreting the duty to use secondary recovery are few there is ample case law examining the lessee's *right* to use secondary recovery. *Ramsey v. Carter Oil Co.*, 74 F. Supp. 481 (E.D. Ill. 1947), *aff'd*, 172 F.2d 622 (7th Cir.), *cert. denied*, 337 U.S. 958, *rehearing denied*, 338 U.S. 842 (1949); *Carter Oil Co. v. Dees*, 340 Ill. App. 449, 92 N.E.2d 519 (1950); *Wiser Oil Co. v. Conley*, 346 S.W.2d 718 (Ky. 1960). See H. WILLIAMS & C. MEYERS, 1 OIL AND GAS LAW § 218.5 (1978).

22. H. WILLIAMS & C. MEYERS, OIL AND GAS LAW § 935 (abr. ed. 1975); LEGAL ASPECT OF ENHANCED OIL RECOVERY, *supra* note 20, at 37 (1977); Merrill, *Implied Covenants and Secondary Recovery*, 4 OKLA. L. REV. 177 (1951); Walker, *Problems Incident to the Acquisition, Use and Disposal of Repressuring Substances Used in Secondary Recovery Operations*, 6 ROCKY MT. MIN. L. INST. 273 (1961). The following "hints" that this extension of the covenant might be proper have appeared in the case law. "There is respectable authority to the effect that there is an implied covenant in oil and gas leases that a lessee should resort to a secondary recovery method shown to be practical and presumably profitable as a means of getting additional return from the lease." *In re Shailer's Estate*, 266 P.2d 613, 616-17 (Okla. 1954). "[T]he Lessee not only had a right, but had a duty, to waterflood the premises for the recovery of oil for the benefit of the mineral owners should it be determined by a prudent operator to be profitable." *Tidewater Oil Co. v. Penix*, 223 F. Supp. 215, 217 (E.D. Okla. 1963). There is an "implied right, and even a duty, for a reasonably

Another area of controversy concerning the development covenant is the remedy to be provided the lessor upon the lessee's breach of that covenant. It, like the standard used to define the lessee's duty, has been the center of many legal disputes.

Because the implied covenant for reasonable development has its roots in equity,²³ the common and logically acceptable remedies for breach of the covenant include:²⁴ 1) cancellation of the lease on all but the producing property;²⁵ 2) conditional cancellation unless the lessee begins new development operations;²⁶ and 3) damages.²⁷ While there

prudent operator to adopt a repressuring system for the secondary recovery of oil." *Reed v. Texas Co.*, 22 Ill. App. 2d 131, 136, 159 N.E.2d 641, 644 (1959). See *Ramsey v. Carter Oil Co.*, 74 F. Supp. 481 (E.D. Ill. 1947); *Carter Oil Co. v. Dees*, 340 Ill. App. 449, 92 N.E.2d 519 (1950).

23. *Humble Oil & Ref. Co. v. Romero*, 194 F.2d 383 (5th Cir. 1952), is a good example of how courts have emphasized equitable considerations. In modifying a trial court order, the Court of Appeals for the Fifth Circuit stated, "It cannot be too often or too clearly stated that a decree in a situation of this kind must be equitable to both lessee and lessor." *Id.* at 386. The court went on to grant conditional cancellation on currently nonproducing portions of the lease.

24. "Various courts have recognized three separate remedies for breach of the covenant of reasonable development: (1) Outright cancellation, except for a small area surrounding existing, producing wells; (2) the more moderate conditional decree of cancellation, unless a specified number of wells are drilled within a fixed period of time, and (3) damages." *Southwest Gas Producing Co. v. Seale*, 191 So. 2d 115, 122 (Miss. 1966).

25. *Hull v. Magnolia Petroleum Co.*, 119 F.2d 123 (5th Cir. 1941); *Amerada Petroleum Co. v. Doering*, 93 F.2d 540 (5th Cir. 1937); *McMahan v. Boggess*, 302 S.W.2d 592 (Ky. 1957); *Hodges v. Mud Branch Oil & Gas Co.*, 270 Ky. 206, 109 S.W.2d 576 (1937); *Vetter v. Morrow*, 361 So. 2d 898 (La. Ct. App. 1978); *Vickers v. Vining*, 452 P.2d 798 (Okla. 1969); *Wolfson Oil Co. v. Gill*, 309 P.2d 282 (Okla. 1957); *Doss Oil Royalty Co. v. Texas Co.*, 192 Okla. 359, 137 P.2d 934 (1943); *Amerada Petroleum Co. v. Sledge*, 151 Okla. 160, 3 P.2d 167 (1931).

26. *Saunder v. Mid-Continent Petroleum Corp.*, 292 U.S. 272, *rehearing denied*, 292 U.S. 613 (1934); *Humble Oil & Ref. Co. v. Romero*, 194 F.2d 383 (5th Cir. 1952); *Hull v. Magnolia Petroleum Co.*, 119 F.2d 123 (5th Cir.), *rev'd per curiam on other grounds*, 314 U.S. 575 (1941); *Amerada Petroleum Co. v. Doering*, 93 F.2d 540 (5th Cir. 1937); *Elliot v. Pure Oil Co.*, 10 Ill. 2d 146, 139 N.E.2d 295 (1956); *Rush v. King Oil Co.*, 220 Kan. 616, 556 P.2d 431 (1976); *Shaw v. Henry*, 216 Kan. 96, 531 P.2d 128 (1975); *Vonfeldt v. Hanes*, 196 Kan. 719, 414 P.2d 7 (1966); *Stamper v. Jones, Shelborne, & Farmer*, 188 Kan. 626, 364 P.2d 972 (1961); *Temple v. Continental Oil Co.*, 182 Kan. 213, 320 P.2d 1039, *on rehearing*, 183 Kan. 411, 328 P.2d 358 (1958); *Berry v. Wondra*, 173 Kan. 273, 246 P.2d 282 (1952); *Gregory v. Sohio Petroleum Co.*, 261 S.W.2d 623 (Ky. 1953); *Vickers v. Vining*, 452 P.2d 798 (Okla. 1969); *Perkins v. Mitchell*, 153 Tex. 368, 268 S.W.2d 907 (1954).

27. The lessor is generally allowed to recover lost royalties, but required to pay the lessee the royalties again when the oil and gas are actually produced. *Daughetee v. Ohio Oil Co.*, 263 Ill. 518, 105 N.E. 308 (1914); *Texas Pacific Coal & Oil Co. v. Barker*, 117 Tex. 418, 6 S.W.2d 1031 (1928). There is, however, a minority of jurisdictions that gives the lessee credit for damages paid as royalties become due on actual production. *Cotiga Dev. Co. v. United Fuel Gas Co.*, 147 W. Va. 484, 128 S.E.2d 626 (1962).

There is some authority that an award of damages is the only appropriate remedy unless the legal remedy is inadequate. *Daughetee v. Ohio Oil Co.*, 263 Ill. 518, 105 N.E. 308 (1914); *Howerton v. Kansas Natural Gas Co.*, 81 Kan. 553, 106 P. 47, *rev'd on other grounds*, 82 Kan. 367, 108 P. 813 (1910); *Harris v. Ohio Oil Co.*, 57 Ohio St. 118, 48 N.E. 502 (1897); *Waggoner Estate v. Sigler Oil Co.*, 118 Tex. 509, 19 S.W.2d 27 (1929); *Cristie, Mitchell & Mitchell Co. v. Howell*, 359 S.W.2d 658 (Tex. Civ. App. 1962). There are also a number of older cases holding that damages is the only appropriate remedy. *Vendocia Oil & Gas Co. v. Robinson*, 71 Ohio St. 302, 73 N.E. 222

is some authority otherwise,²⁸ oil and gas writers agree that these are the typical and only logical remedies.²⁹

Thus, the oil and gas lessee had no duty under the development covenant to engage in secondary recovery. A breach of the development covenant typically resulted in partial cancellation of the lease, conditional cancellation of the lease, or damages. These rules were firmly established until last year's landmark decision in *Waseco*.

III. *WASECO CHEMICAL & SUPPLY CO. v. BAYOU STATE OIL CORP.*³⁰

A. *The Unique Factual Setting*

The lease in question in *Waseco* covered eighty acres in the Bellevue field located near Shreveport, Louisiana. Production in the 900 acre field is from the Nacatoch sand.³¹ The oil from the reservoir under the Bellevue field, first produced in significant quantities in 1963, is a heavy, asphaltic, high viscosity crude.³² Prior to 1963 large quantities of water were produced with the oil through the use of stripper wells.³³

Bayou State acquired the Scanland lease in the early fifties. At that time there were about fifty wells, most of which were producing,

(1905); *McKnight v. Manufacturers Natural Gas Co.*, 146 Pa. 185, 23 A. 164 (1892); *Cole Petroleum Co. v. United States Gas & Oil Co.*, 121 Tex. 59, 41 S.W.2d 414 (1931); *McGraw Oil & Gas Co. v. Kennedy*, 65 W. Va. 595, 64 S.E. 1027 (1909).

28. *Collins v. Mt. Pleasant Oil & Gas Co.*, 85 Kan. 483, 118 P. 54 (1911); *Grass v. Big Creek Dev. Co.*, 75 W. Va. 719, 84 S.E. 750 (1915).

29. See E. BROWN, *THE LAW OF OIL AND GAS LEASES* § 16.03 (2d ed. 1979); H. WILLIAMS & C. MEYERS, *5 OIL AND GAS LAW* § 834 (1978).

30. 371 So. 2d 305 (La. Ct. App. 1979).

31. Detailed technical descriptions of current operations in the Bellevue field are set out in *Fireflood More Than Half Way to Production Goal*, *OIL & GAS J.*, June 4, 1979, at 66. That article makes reference to a more detailed report, #SAN/1189-2, available from the Department of Energy, Energy Technology Center, Bartlesville, Oklahoma.

32. One method of describing the consistency of a given type of oil is to measure its specific gravity or relative density. Commonly, specific gravity is expressed as the ratio of the weight of a volume of oil to the weight of the same volume of water. These measurements are typically taken at 60° fahrenheit, and the resulting measurement is called 60/60° relative density.

Another measurement of specific gravity is API degrees. This measurement is calculated as follows: API degrees equals 141.5 divided by 60/60° relative density minus 131.5. Using these calculations, the oil in the Bellevue field has been measured at 19° API. This is roughly the same consistency as honey. See AMERICAN PETROLEUM INSTITUTE, *1 MANUAL OF PETROLEUM MEASUREMENT STANDARDS 1-2* (1977); P. HOBSON, *INDUSTRIAL LUBRICATION PRACTICE 4-6 to 4-7* (1955).

33. The federal government defines a stripper well as one that has an average daily production of 10 barrels per day or less during a 12 month period starting after December 1, 1972. 10 C.F.R. § 212.54(c) (1979).

on the eighty acre tract. Average production in 1955 was forty-six barrels per day. In the ensuing twenty-four years, the lessee, Bayou State, made no capital expenditures on the lease and drilled no wells. In the same period, production declined to six barrels per day and the number of producing wells declined to nine.³⁴ In reviewing Bayou State's activities, the court declared, "When judged even by 1950 standards, Bayou State's production operations on the Scanland lease [are] derelict, antiquated, cheap and inefficient."³⁵ This statement reflects a seemingly unwarranted prejudice against Bayou State, possibly explaining the decision's more unusual aspects.³⁶

The problem in *Waseco* is attributable to Bayou State's comparative lack of activity in the Bellevue field. While Bayou State's production was decreasing dramatically, production on neighboring leases was increasing because of the use of a relatively new method of secondary recovery—fireflooding or *in situ* combustion.³⁷ Fireflooding had been used by nearby operators on other leases.³⁸ The opinion relies strongly on statistics to show the reasonableness of implementing fireflooding techniques in the Bellevue field.³⁹ The court also properly emphasized that Bayou State itself had used fireflooding in this same field on an-

34. The court states, with apparent opprobrium, that Bayou State reported to Louisiana authorities that production was taken from 10 wells, while in 1976, it was admitted that production was actually from only nine wells. The court's emphasis on this rather minor error seems misplaced. 371 So. 2d at 311.

35. *Id.* The court supports this statement by citing Bayou's failure to drill on the lease, its methods of gauging, measuring, securing, and commingling the oil sold, and some questions expressed by the lower court concerning whether production was in paying quantities.

36. *See* notes 47-48 *infra* and accompanying text. That this is the first opinion to recognize a duty to engage in secondary recovery methods makes the decision additionally unusual. While some may say this unusual expression of prejudice reduces the precedential value of the decision, the fact that various authors have predicted such a development, *see* note 22 *supra*, and the inherently appealing logic of the extension, saves at least some of the opinion's value.

Some may even argue that the case was not decided on a failure to engage in secondary recovery, but rather a failure to develop reasonably from the outset. The remainder of the opinion makes clear, however, that the basis of the remedy granted was Bayou State's failure to fireflood rather than its "derelict, antiquated, cheap and inefficient" operations judged by 1950 standards. 371 So. 2d at 311.

37. There are various methods of fireflooding. In each, an igniting material is lowered into the bore hole. The hydrocarbons in the reservoir are ignited and the resulting heat and steam reduce the viscosity of the oil and force it toward the well. *See* B. BERGER & K. ANDERSON, MODERN PETROLEUM, A BASIC PRIMER OF THE INDUSTRY 157-60 (1978); INTERSTATE OIL COMPACT COMMISSION, SECONDARY AND TERTIARY OIL RECOVERY PROCESSES (1974); LEGAL ASPECTS OF ENHANCED OIL RECOVERY, *supra* note 20, at 17-19 (1977); NATIONAL PETROLEUM COUNCIL, ENHANCED OIL RECOVERY (1976).

38. The Getty-Lodwick Lumber lease, the Getty-Elston lease, the Cities Service-Bodcau leases, the Getty-Buckelew lease, and to a much smaller extent on the Bayou State-Wyche lease.

39. The first fireflood project by Getty on 2.8 acres increased production from about four to about 100 barrels per day in only 18 months.

other lease. While this project was not as successful as others in the field, it did make operations profitable. Among the most important statistics was that the royalty owners where fireflooding was used received more than \$1200 per acre per month while royalty owners in a field with stripper wells received less than \$3 per acre per month. Also of primary importance was that the lease in question was nearly identical to those surrounding it.⁴⁰

B. *Applying the Reasonably Prudent Operator Standard to Secondary Recovery*

After considering the facts noted above, the court reached the following conclusion: "While technically called a technique of *secondary* recovery, fireflooding is, as to the type of the Bellevue residuary oil, as the trial court emphasized, the 'only method of producing the Bellevue field and has been for a number of years . . . the normal [and] efficient method' "⁴¹ This being the only feasible method of production on this lease, the court concluded that the lessee, by failing to utilize this method of recovery, had breached its duty to reasonably develop.⁴²

To determine the reasonableness of the lessee's operations, the *Waseco* court adopted the factors first set out in *Vetter v. Morrow*.⁴³ These factors are:

- (1) geological data; (2) number and location of the wells drilled both on leased lands and adjoining property; (3) productive capacity of producing wells; (4) costs of drilling operations as compared with profits; (5) time interval between completion of the last well and the demand for additional operations; and (6) acreage involved in the disputed lease. . . .⁴⁴

40. The court found that the oil below this lease is the same heavy, low viscosity crude below the other leases in the field. The sand thickness below the Scanland lease is said to be conducive to fireflooding. The Scanland lease comprises 10% of the productive capacity of the field and contains about 3,000,000 barrels of oil still in place. 371 So. 2d at 311-12.

41. *Id.* at 312 (quoting the opinion of Cecil C. Lowe, J., Twenty-Sixth Judicial District Court, Parish of Bosier, State of Louisiana).

42. The formulation of the lessee's duty in Louisiana is found in LA. REV. STAT. ANN. § 31:122 (West 1975). "A mineral lessee is . . . bound . . . to develop and operate the property leased as a reasonably prudent operator for the mutual benefit of himself and his lessor." See *Vetter v. Morrow*, 361 So. 2d 898, 899 (La. Ct. App. 1978). While statutorily based, this statement of the reasonably prudent operator standard is nearly identical to the common law statement. See notes 8-10 *supra* and accompanying text.

43. 361 So. 2d 898 (La. Ct. App. 1978).

44. 371 So. 2d at 307, 312; 361 So. 2d at 900.

Without specifically stating how each of these factors were met, the *Waseco* court stated,

Applying these factors to the circumstances of this case as found by the lower court, which we add, are fully supported by the record, compels our concluding, as did the lower court, that Bayou State failed in its obligation of diligent development of the Scanland lease for the benefit of itself and the lessors.⁴⁵

Thus, without considering the many concerns associated with fireflooding and secondary recovery in general,⁴⁶ the court extended the implied covenant for reasonable development to include secondary recovery methods.

C. *The Unusual Remedy*

The unique remedy granted by the *Waseco* court is of great importance. As previously noted⁴⁷ the typical and only reasonable remedies for breach of the development covenant are cancellation on all but the producing areas of the lease, conditional cancellation, and damages. These remedies sufficiently protect the lessor's interest and provide him with precisely what he is entitled to, while maintaining production and avoiding economic waste.

Notwithstanding this, the *Waseco* court granted immediate and unconditional cancellation of the entire lease. Such a remedy is novel in a case involving a breach of the development covenant,⁴⁸ but more important, such a remedy is inappropriate. The result unduly penalizes lessees. The lessee, who has been producing in paying quantities for many years, loses an entire lease, including producing wells, with no chance to redeem himself. Damages would sufficiently redress any hardship visited upon the lessor as a result of the lessee's careless operation. This makes clear the punitive nature of the *Waseco* court's questionable remedy. Equally undesirable is the removal of this leasehold from production in a time when each barrel of oil increases in value and importance daily.⁴⁹ While the theory of recovery relied on in

45. 371 So. 2d at 307.

46. The high initial capital investment required, the technique's experimental nature, the decreasing use of fireflooding in the past five years, and the general difficulty of proving profitability.

47. Notes 24-29 *supra* and accompanying text.

48. Such a remedy has, however, been granted for a breach of the offset covenant—the implied covenant to protect from drainage. H. WILLIAMS & C. MEYERS, 5 OIL AND GAS LAW § 825 (1978).

49. If, as the lessor argues, this is still a valuable lease, one would expect that a new lessee

Waseco is sound, the remedy granted is questionable.

IV. THE FUTURE OF *WASECO*

A. *The Significance of the Lessee's Extended Duty*

While many will criticize the decision in *Waseco*, it is theoretically sound and extremely important to both owners and producers. The court's apparent prejudice against Bayou State⁵⁰ and its failure to consider the uncertainties connected with secondary recovery methods⁵¹ will prompt many to criticize the opinion and discount its precedential value. One must be careful, however, not to overlook the importance of *Waseco*. The *Waseco* decision established a long awaited and much needed revision in oil and gas jurisprudence. It is only reasonable that the duty of the lessee to develop⁵² extend to secondary recovery methods when such would be the course of action of the reasonably prudent operator. The facts of the *Waseco* case⁵³ present circumstances in which fireflooding would be a course of action followed by the reasonably prudent operator. In this limited respect, the *Waseco* decision is both valuable and correct.

Waseco's theory of recovery is a valid and important precedent. The remedy granted in *Waseco*, unconditional, immediate, and total cancellation, however, is inappropriate and logically unsound. Its punitive nature is unnecessary and unlikely to be accepted in other jurisdictions.

B. *Limitations on Waseco's Precedential Value*

Despite the decision's value, it will likely be limited in several important respects. The unique facts of the case make future factual dis-

would be found shortly. There are, however, a variety of factors mitigating against immediate continuation of production. The former lessee must be given a reasonable time to remove his equipment. It will take a new lessee a substantial amount of time to obtain equipment and employees and begin operations. Most important, however, is the likelihood of speculation. With the rising price of oil, a speculative holding of valuable oil producing property is increasingly likely. Such speculative holding not only removes the lease from production, lowering domestic output, but also creates a potential for a disastrous cumulative effect resulting in increased energy prices.

50. See note 35 *supra* and accompanying text.

51. See note 46 *supra* and accompanying text.

52. See note 10 *supra* and accompanying text.

53. The most important factors, and those most likely to form the basis for further application of *Waseco*, are: (1) great success on surrounding leases with secondary recovery, (2) comparatively poor production using conventional primary recovery techniques on the lease in question, (3) physical conditions on the particular lease conducive to secondary recovery, and (4) financial benefit to the lessors of nearby leases on which secondary recovery is being used.

tinctions probable. The use of *in situ* combustion as a secondary recovery method is declining.⁵⁴ There is reason to believe that this decline will continue.⁵⁵ The declining use suggests that the occurrence of facts substantially similar to those in *Waseco* will be unlikely. Without successful, established fireflooding projects in other fields, the precedential value of *Waseco* will likely be diminished.

The *Waseco* decision was largely based on the activities of Getty Oil Corp. in the Bellevue field. Several factors make Getty's actions unique and suggest that their repetition is unlikely. The Getty operation has been described as the nation's "pacesetter."⁵⁶ This description indicates the unique nature of the factors present in *Waseco*. The technology available to Getty is, according to Professor Martin, largely unavailable to other prudent operators due to its high degree of confidentiality. This not only exhibits the uniqueness of the Getty project, but illustrates its marginal use as a guide for future drilling operations. The court also relied, in part, on other successful operations in the Bellevue field. These successful projects may also be discounted. A recent report indicates that the Department of Energy is underwriting a sizable portion of the developing company's cost because of the experimental nature of many of its operations.⁵⁷ This outside financial assistance lends credence to the speculation that fireflooding requires a prohibitively high initial investment,⁵⁸ and reinforces thoughts that a similar project will be difficult if not impossible to duplicate. The unique character of the Bellevue field is significant in that a fact situa-

54. The number of active *in situ* combustion projects in the United States dropped from 38 in 1970 to 21 in 1975. Noran, *Production Report, Enhanced Recovery Action is Worldwide*, OIL & GAS J., April 5, 1976, at 107.

55. *In situ* combustion is a method of recovery hampered by substantial physical limitations. The following barriers to further utilization have been recognized: (1) use of the method requires a prohibitively large initial investment; (2) operation of the entire reservoir is required for effective use; (3) the method creates extensive adverse air emissions; (4) close control of the operation is required; (5) unusually high heat emissions are created; (6) extremely high sound emissions accompany production; (7) additional land-use is necessary; (8) there are high occupational hazards due to potentially toxic or explosive concentrations of gas. LEGAL ASPECTS OF ENHANCED OIL RECOVERY, *supra* note 20, at 18-19 (1977).

56. Noran, *Production Report, Enhanced Recovery Action is Worldwide*, OIL & GAS J., April 5, 1976, at 107, 119 (1976).

57. The Getty-Bodcau fireflood project has an estimated budget of \$8.2 million, of which the Department of Energy will fund a maximum of \$3.1 million or about 38%. In the first two years of the project, \$3.6 million were spent, of which \$1.05 million were provided by the Department of Energy. This project has been labeled as a test project. *Fireflood More Than Halfway to Production Goal*, OIL & GAS J., June 4, 1979, at 66.

58. See note 55 *supra*.

tion substantially similar to *Waseco* is unlikely to occur in the near future. This may severely limit the opinion's precedential value.

V. CONCLUSION

The decision in *Waseco Chemical & Supply Co. v. Bayou State Oil Corp.* is significant. It is the first to extend the oil and gas lessee's duty to reasonably develop to the use of unconventional secondary recovery methods. This extension was developed by applying the traditional standard of the reasonably prudent operator. Although logically appealing, the *Waseco* decision is subject to several substantial limitations. Foremost is the unique factual setting of the decision. As lessors rejoice and lessees drown their sorrows, both should be cautioned to indulge in moderation.

Gary Boyle