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Determination of Paying Quantities: An Accounting Perspective

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DETERMINATION OF PAYING QUANTITIES: AN ACCOUNTING PERSPECTIVE

I. INTRODUCTION

In *Duerson v. Mills*,[1] the Oklahoma Court of Appeals held that certain oil and gas leases should terminate because of lack of production in paying quantities.[2] In making this decision, the court addressed the difficult issue that numerous courts have faced: how to determine whether wells upon a lease tract are producing in paying quantities.[3]

Although one might presume that lessees, as well as lessors, are interested only in the short term profitability of an oil and gas lease, several other factors influence a lessee's decision to either maintain a lease or abandon the property. For example, even if oil and gas wells are operating at a loss, the lessee may decide to continue the lease for speculative purposes.[4] In a fluctuating market, a producer may wish to

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1. 648 P.2d 1276 (Okla. Ct. App. 1982), *aff'g* Duerson v. Amoco Prod. Co., No. C-78-1 (Okla. Dist. Ct. Beaver Cty. July 10, 1979), *cert. denied*, Order No. 54,196 (July 13, 1982).

2. *Id.* at 1280. In most modern oil and gas leases, the "thereafter provision" of an habendum clause provides for termination of the lease after expiration of a fixed primary term in the absence of production of oil or gas in paying quantities. Quite often, a lessee, for various purposes, will attempt to maintain his leasehold interest in a tract even when wells upon it are no longer operating at a profit. *See infra* notes 4-6 and accompanying text.

In contrast to the fixed, long-term leases, common in the early days of oil and gas production, the modern habendum clause places the lessee-producer in a much stronger position with regard to extending the term of the lease. *See* 2 W. SUMMERS, THE LAW OF OIL AND GAS §§ 284-285 (rev. ed. 1959). Previously, the lessee was at a great disadvantage if bound by a fixed term lease, absent an option to renew, because the lessor could insist on a new lease containing terms more favorable to him than the terms of the original lease. The lessee, who may have invested a considerable amount of capital to develop the lease, was forced to either accept the terms offered by the lessor or abandon the lease and lose his investment. *See id.*

3. *See* Mason v. Ladd Petroleum Corp., 630 P.2d 1283 (Okla. 1981) (holding that lease in question was producing in paying quantities and should continue); Hoyt v. Continental Oil Co., 606 P.2d 560 (Okla. 1980) (court, finding cessation of production in paying quantities, ordered the lease terminated); Stewart v. Amerada Hess Corp., 604 P.2d 854 (Okla. 1979) (supreme court remanding case for further proceedings because trial court's computation of profitability, resulting in judgment for lessor, was incorrect); West v. Russell, 12 Cal. App. 3d 638, 90 Cal. Rptr. 772 (1970) (affirming trial court's judgment for lessee); Skelly Oil Co. v. Archer, 163 Tex. 336, 356 S.W.2d 774 (1961) (reversing trial court's judgment for lessor because jury had improperly considered depreciation as lifting expense).

4. *See* 2 E. KUNTZ, A TREATISE ON THE LAW OF OIL AND GAS § 26.7(e) (1974) (producer may feel certain conditions will change in future enabling him to make profits from lease); *see also* Patton v. Rogers, 417 S.W.2d 470, 473-74 (Tex. Civ. App. 1967) (Although the nearest gas pipeline at the time was nine miles from the well, the lessee maintained his interest in the lease because Sinclair Oil Co., which was interested in obtaining gas from the lessee's wells, had promised him a market for gas produced on the lease. The court found that there was not a bona fide commercial

operate his wells at a minimum level, contemplating higher prices in the near future. A producer may also wish to continue operating a marginal well to maintain a lease in order to explore additional formations on the premises.[5] Other factors such as interest rates and market conditions[6] will have an impact on the decision to maintain a lease.

As a result, these circumstances often persuade a lessee to interpret "paying quantities" differently than the lessor, who must then seek a legal remedy to terminate an unprofitable lease. In resolving these conflicting interpretations of paying quantities, the courts must determine what factors are relevant. *Duerson v. Mills* presents examples of some of the problems courts must address in making this determination.

After a review of the facts and the legal background, this Note will examine the issues and holdings in *Duerson*, which illustrate the lack of consistency in accounting methods used by producers to determine profitability. This inconsistency creates a burden for the courts that must determine which data to use in computing paying quantities. Recognizing that the choice of accounting methods should not be subjective because various considerations have an impact on a producer's decision to maintain a lease, this Note will propose an objective[7] test based on the use of consistent accounting procedures in the oil and gas industry.

II. STATEMENT OF THE CASE

The issues in *Duerson v. Mills*[8] pertained to five leases covering oil, gas, and mineral interests in land located in section twenty-four of Beaver County, Oklahoma.[9] Section twenty-four is a 640 acre drilling and

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market for the gas and ordered the lease terminated.); Clifton v. Koontz, 160 Tex. 82, 89, 325 S.W.2d 684, 691 (1959) (The supreme court recognized that a producer may hold a lease merely for speculative purposes, concluding that such speculation should be a consideration in determining whether the lease should terminate.).

5. 2 E. KUNTZ, *supra* note 4, § 26.7(e), at 271.

6. Such circumstances might include a prediction that interest rates will fall in the future which would allow the producer to further develop the lease at lower costs, or he may feel that operating conditions at the well can be improved. Additionally the producer might suspect that demand for oil or gas will increase or that production from other wells in the area will decrease, either of which would improve the marketing conditions under which the producer is operating.

7. An objective test involves examining the accounting records to determine whether the well is actually making a profit, while a subjective test investigates the good faith judgment of the lessee. *See generally* 2 E. KUNTZ, *supra* note 4, § 26.7(f), (g) (discusses the difference between an objective and a subjective test).

8. 648 P.2d 1276.

9. Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 2 (Okla. Dist. Ct. Beaver Cty. Aug. 13, 1979), *aff'd sub nom.* Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982). The defendants,

spacing unit for the production of gas and associated hydrocarbons from two geological formations known as the Morrow and the Chester.[10] Each of the five leases in question remained in effect due to the activity of the Angleton No. 1 well which produced gas from the Morrow formation.[11] Duerson and Mitchell, the original plaintiffs, owned fractional mineral interests in section twenty-four; Amoco Production Co. and the other defendants were assignees of oil and gas leases which conveyed the right to produce these minerals.[12] Roger Mills and various other parties, who also owned mineral interests under portions of section twenty-four, were petitioners in intervention.[13]

Each lease contained an habendum clause,[14] varying the primary terms from five to twenty years[15] and requiring production in paying quantities in the secondary term. Production from the Morrow formation diminished and the plaintiffs demanded, on December 1, 1977, that Amoco test the feasibility of drilling into the Chester formation within thirty days.[16] When the feasibility test was not commenced by January 3, 1978, Duerson and Mitchell filed a petition in district court to cancel their oil and gas lease with Amoco as to all non-producing areas.[17] On June 14, 1978, Mills and the other intervenors filed a petition in intervention seeking to cancel oil and gas leases for the portions of section twenty-four in which they owned interests.[18]

Amoco Production Co., Anadarko Production Co., Pan Eastern Exploration Co., and Exxon Corp., were assignees of five oil and gas leases covering mineral rights in section 24. *Id.*

10. Appellants' Brief at 2, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

11. *Id.*

12. *Id.* at 1-2. The original lease held by Amoco was from Lettie A. Adams and husband to Frank Parks dated Nov. 6, 1948. *Id.*

13. *Id.* at 2. Mills and the other petitioners intervened in the *Duerson* litigation in June 1978 and were the first to allege that the Angleton No. 1 well had ceased to produce in paying quantities. *See infra* note 98 and accompanying text.

14. *E.g.*, Appellants' Brief at 2, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982). The oil and gas lease between Lettie A. Adams and husband, Allen Adams, and Frank Parks dated Nov. 6, 1948, specifies that the "lease shall remain in force for a term ending November 6th, 1958, and as long thereafter as oil, gas, casinghead gas, casinghead gasoline, or any of them is produced." This lease is recorded in Book 21 at page 559 in the records of the County Clerk of Beaver County, Oklahoma. *Id.*

15. Since the most recent lease—between Beaver, Meade and Englewood Railway Co. and O. M. Evans—was dated Dec. 14, 1956, the primary term of each of the leases had expired. *See* Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 2 (Okla. Dist. Ct. Beaver Cty. Aug. 14, 1979).

16. Appellants' Brief at 11, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

17. *See* Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 2 (Okla. Dist. Ct. Beaver Cty. July 10, 1979), *aff'd sub nom.* Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

18. *Id.* It appears that some of the intervenors were assisted in the commencement of this litigation by Ralph Harvey of Marlin Oil Co. Marlin had completed a producing well on property adjoining that of one of the intervenors and some of the mineral owners contacted Harvey, prom-

In their final amended petitions, the plaintiffs and intervenors alleged that the well on the properties in question was "non-commercial and the term thereof had expired."[19] Basing this allegation on the claim that the well had ceased to produce in paying quantities, they argued that Amoco and the other defendants were holding the leases for speculative purposes.[20] The district court found that "at the time the intervenors filed their claim, the well in question was not producing . . . oil or gas in paying quantities,"[21] and granted judgment for the plaintiffs and intervenors, canceling the oil and gas leases and quieting the title of the lessors.[22]

On appeal by Amoco and the other defendants, the question before the court of appeals was whether the district court had correctly concluded that the Angleton No. 1 well was not profitable. The resolution of this question involved three issues:

(1) Whether administrative overhead costs should be charged against the operating expense account;

(2) For purposes of calculating whether a well is producing in "paying quantities," whether nonrecurring capital expenditures for lifting equipment (as opposed to repair) should be charged against operating expenses or amortized over the life of the component;

(3) Whether post-suit production performance is relevant in a suit to cancel leases on grounds of lack of production in paying quantities.[23]

In order to make a critical evaluation of the court of appeals' holding in *Duerson*, a brief discussion of the issues involved and the prevailing case law which addresses these issues is necessary.

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ising to execute a lease to his oil company if he would assist them in procuring termination of their leases with appellants. *See* Appellees' Brief—Petitioners in Intervention at 18, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

19. Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 2 (Okla. Dist. Ct. Beaver Cty. July 10, 1979).

20. Appellants' Brief at 34, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982). It seems that both Marlin Oil Co. and the defendants were interested in production which might be obtained from another geological formation, the Chester, under section 24. "The defendants wanted to drill a new well to test the Chester [formation] because a better price could be obtained for gas from a new well and the location could be improved." *Id.* at 38.

21. Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 3 (Okla. Dist. Ct. Beaver Cty. July 10, 1979).

22. *Id.* at 4.

23. Duerson v. Mills, 648 P.2d at 1277-78.

III. Background on Paying Quantities

A. *The Habendum Clause*

The typical habendum clause contained in an oil and gas lease provides "that the estate granted by the lease shall endure for a prescribed term of years . . . and as long thereafter as oil, gas or other minerals are produced in paying quantities."[24] The estate created by this clause has been identified by most courts as a determinable fee.[25] The effect of this interpretation is that if wells on the lease are not producing in paying quantities at the end of the primary term, or cease to produce in paying quantities thereafter, the lessee's interest in the minerals terminates.

B. *Determination of Paying Quantities*

In determining whether a lease should terminate due to a cessation of profitable production, it is necessary to interpret the term "paying quantities." Two questions which arise in this interpretation are how to define paying quantities and how to calculate paying quantities. The second question involves accounting issues which cannot always be answered by reference to generally accepted accounting principles.[26] Prevailing accounting standards allow producers considerable discretion in the reporting of financial information. There are various accounting methods available for determining an oil well's profitability which will produce different results, depending on the method used.[27]

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24. H. Williams & C. Meyers, Oil and Gas Law § 603, at 300 (abr. ed. 1981). Even when an habendum clause states only that the lease shall extend so long as oil or gas is produced, Oklahoma courts have interpreted this to imply production in paying quantities. *See* Hoyt v. Continental Oil Co., 606 P.2d 560, 563 (Okla. 1980); Stewart v. Amerada Hess Corp., 604 P.2d 854, 857 (Okla. 1979); State *ex rel.* Comm'rs of Land Office v. Carter Oil Co., 336 P.2d 1086, 1093-94 (Okla. 1958); Henry v. Clay, 274 P.2d 545, 546 (Okla. 1954).

25. 2 E. Kuntz, *supra* note 4, § 26.2, at 246. A determinable fee is an estate which may end on the happening of a merely possible event. Black's Law Dictionary 553 (5th ed. 1979); *see also* H. Williams & C. Meyers, *supra* note 24, § 604, at 302 (discussing termination of the fee).

26. These principles have been formulated by private organizations such as the Financial Accounting Standards Board (FASB) and the Accounting Principles Board (APB). *See generally* Layton, *Accounting Authorities and Organizations*, in 1 Accountants' Handbook 3.9, 3.15 (L. Seidler & D. Carmichael 6th ed. 1981). The Securities and Exchange Commission, which has authority to regulate financial reporting by publicly held companies, *id.* at 3.5, has delegated to these private organizations the authority to establish principles. *See id.* at 3.17 (The SEC considers principles promulgated by the FASB as having substantial authoritative support, while principles contrary to FASB pronouncements are considered to have no such support.).

27. *See* Lawson, *Depreciation of Equipment as an Element of Production in Paying Quantities: An Analysis of* Stewart v. Amerada Hess Corp., 51 Okla. B.J. 2217 (1980). One example is the computation of depreciation expense. Lawson discusses various methods of calculating depreciation of production equipment and points out, "There are several methods of depreciation which

The term "paying quantities" is variously defined depending on the context in which it is used. When used in connection with a lessee's liability for breach of a covenant to drill an offset or development well, paying quantities means "that the well would have produced enough to be profitable to the lessee after paying . . . the operating costs of the well [plus] the costs of drilling the well."[28] When used in relation to a thereafter provision of an habendum clause, paying quantities means "the lessee must produce in quantities sufficient to yield a return, however small, in excess of 'lifting expenses,' even though the well drilling and completion costs might never be repaid."[29] Once the proper definition has been determined, the more difficult question of how to make the computation must be addressed. A well is producing in paying quantities if it is making a gross profit, meaning that revenues from sales exceed operating expenses, otherwise designated in the industry as "lifting expenses." Determining revenues does not pose a problem,[30] but the identification of operating or lifting expenses can be complicated and create a great deal of difficulty for the courts. In *Stewart v. Amerada Hess*, the Oklahoma Supreme Court defined lifting expenses as "those expenses which are directly related to lifting operations."[31] The court specified that "lifting expenses may include: costs of operating the pumps, pumpers' salaries, costs of supervision, gross production taxes, royalties payable to the lessor, electricity, telephone, repairs and other incidental lifting expenses."[32] Depreciation of lifting equipment should also be included.[33] Expenses which are never classified as lift-

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would qualify as 'currently prevailing accounting standards' that could result in a broad range of depreciation expense charges for a particular lease." *Id.* at 2218.

28. H. WILLIAMS & C. MEYERS, *supra* note 24, § 604.6(a).

29. Stewart v. Amerada Hess Corp., 604 P.2d 854, 857 (Okla. 1979) (citations omitted); *accord* Mason v. Ladd Petroleum Corp., 630 P.2d 1283, 1284 (Okla. 1981) (citing *Stewart*); Henry v. Clay, 274 P.2d 545, 546 (Okla. 1954). Compare *Stewart* definition with H. WILLIAMS & C. MEYERS definition, *supra* note 28 and accompanying text. Obviously, the definition used in connection with a lessee's liability for breach of a convenant to further develop places a more difficult requirement of profitability on the producer than does the definition as applied to an habendum clause.

30. Assuming that all the oil or gas produced from a given lease is sold at a specified price, revenues can be calculated by multiplying the volume of oil or gas sold during a given time period by the sales price per unit.

31. Stewart v. Amerada Hess Corp., 604 P.2d 854, 857 (Okla. 1979). This definition was reaffirmed by the supreme court in Mason v. Ladd Petroleum Corp., 630 P.2d 1283, 1284 (Okla. 1981), and relied upon by the court of appeals in *Duerson*, 648 P.2d at 1278 (The court, relying on *Mason*, concluded that overhead expenses are too indirectly related to a producer's operation to be considered a lifting expense.).

32. 604 P.2d at 857 n.11.

33. *Id.* at 857. The rationale for adopting this rule is "that while depreciation of the original investment in the drilling of a well may not be . . . an out of pocket lifting expense, production-related equipment does have value that is being reduced through its continued operation." *Id.*

ing expenses include exploration, drilling, and finishing costs, because they are not incurred as a result of the lifting of oil from the ground; therefore, these expenses should not be included in the calculation of paying quantities.[34] This definition of lifting expenses has proved difficult to apply to expenses not classified in *Stewart*, such as administrative overhead and lifting system replacement costs.

Another troublesome issue that often arises when courts are asked to determine if a well is producing in paying quantities is the determination of the appropriate time period to consider when computing the well's profitability. The effect that the actions of the lessor can have on the obligation of the lessee to produce in paying quantities bears on this issue.[35] It must be determined if the lessor has acted in such a way as to relieve the lessee of his duties under the lease for any time period.

C. *Judicial Treatment of the Issues*

1. Overhead Expense

Overhead expense may include costs of management, office supplies, maintenance, bookkeeping and accounting, and legal and professional services.[36] These costs, incurred for administration at the district office level and above, are often allocated to the individual leases operated by the company. A producer may use one of a number of methods, which comply with the guidelines of generally accepted accounting principles, to make this allocation.[37] The question of whether to include these costs in calculating paying quantities for a certain lease often arises. Professor Kuntz maintains that a corporation should not consider overhead expense as an element of paying quantities if those costs would continue even if the lease in question were not operating. However, if an office is maintained solely for the purpose of managing

34. The lifting of oil marks the commencement of production and only expenses incurred after this event should be considered. Therefore, a lease yielding a return in excess of lifting expenses can continue, even if drilling and completion costs might never be repaid. *Id.* at 857; *see, e.g.*, Henry v. Clay, 274 P.2d at 546; Skelly Oil Co. v. Archer, 163 Tex. 336, —, 356 S.W.2d 774, 780 (1961).

35. If the lessee commits an act which relieves the lessor of his obligation to produce in paying quantities, a well's production performance subsequent to such action should not be considered. *See infra* notes 48-52 and accompanying text.

36. *See* 2 E. KUNTZ, *supra* note 4, § 26.7(m).

37. The two most commonly used bases for allocating overhead expenses to leases are the number of wells served and barrels of oil produced. Under the first method, a percentage of administrative overhead expense is allocated to each lease based on the number of wells operating upon it. If the second method is used, a producer allocates a percentage of overhead expense to a lease based upon the number of barrels of oil produced from it. S. PORTER, PETROLEUM ACCOUNTING PRACTICES 170 (1965).

a specific lease, the overhead costs of this office should be treated as an operating expense of that lease.[38]

As a whole, appellate courts have not had many opportunities to decide whether overhead expense is a lifting expense.[39] Two Texas appellate courts relied heavily upon the discretion of the trial court to make the determination. In *Sullivan & Garnett v. James*,[40] the Texas Court of Civil Appeals considered overhead expense an element in the calculation of paying quantities.[41] In that same year, the Texas Supreme Court affirmed the theory that overhead expense which can be traced to the cost of production can be considered in the determination.[42] This issue was not directly addressed in Oklahoma until 1981 when the Oklahoma Supreme Court held that administrative overhead expense is not a factor in the determination.[43]

2. Replacement of Lifting Equipment

It is well settled that the initial costs of drilling and equipping a well are not relevant in determining if a well should be terminated due to a cessation of production.[44] This rule, however, does not address treatment of costs of replacement equipment. In addressing the question of whether such an expenditure should be expensed when the equipment is purchased or should be spread out over the useful life of the component, Professor Kuntz wrote, "In order to avoid a distortion in the amount of operating expenses in the year such equipment is acquired, it is reasonable to amortize the cost of such equipment [over the

38. 2 E. KUNTZ, *supra* note 4, § 26.7(m). Any special type of overhead expense which can be attributed to the lease in question should also be considered in the calculation of paying quantities. *Id.*; *see also* 3 H. WILLIAMS, OIL AND GAS LAW § 604.6(b) (9th ed. 1980) (suggesting that overhead may be element to consider in determination of paying quantities).

39. Very few appellate court opinions have directly addressed the administrative overhead issue. Annot., 43 A.L.R.3d 8, § 6(d) (1972) cites only four cases in which the court decided the issue of whether these expenses are elements in the computation of paying quantities, and this author's search uncovered relatively few cases which could serve as authority in this area.

40. 308 S.W.2d 891 (Tex. Civ. App. 1957).

41. *Id.* at 893. There was controversy in this case concerning how overhead expense should have been allocated. The trial court found that overhead could be allocated to each lease based upon the number of wells operating on it. The lessee appealed, demanding that the amount of overhead expense allocated to a lease be based on a percentage of income recognized from that lease. The appellate court refused to overrule the trial court, stating that overhead allocation is a question of fact for the jury. *Id.*

42. Skelly Oil Co. v. Archer, 163 Tex. 336, —, 356 S.W.2d 774, 781-82 (1961). The lessee in this case argued that the trial judge erred in allowing the jury to consider overhead expense in their computation of paying quantities. The Texas Supreme Court, however, disagreed and affirmed the finding of the trial court. *Id.*

43. Mason v. Ladd Petroleum Corp., 630 P.2d 1283, 1285-86 (Okla. 1981).

44. *See supra* note 34 and accompanying text.

life of the component]."[45]

In one of the few cases to address this issue, the United States Court of Appeals, applying Oklahoma law, indicated that the costs associated with installing additional equipment for the purpose of securing production should be depreciated over a period of years.[46] In another jurisdiction, the Supreme Court of Texas held that replacement equipment necessary to produce gas "should be depreciated if the evidence shows it is subject to depreciation as a part of the expense in producing and marketing the gas."[47]

3. Post-Suit Production Performance

The effect that filing a lawsuit has on the production requirements of a lease is one aspect of determining the proper time period for computing profitability. Should the court give consideration to the production performance of a well subsequent to the initiation of litigation by the lessor?

The Oklahoma Supreme Court has traditionally held that the lessee is relieved of his obligation to produce in paying quantities once his title has been attacked. In *Jones v. Moore*,[48] the Oklahoma Supreme Court held that if court action prevents a lessee from continuing his operations, production performance cannot be "counted against him" when determining profitability of the well.[49] In *Durkee v. Hazan*,[50] the Oklahoma Supreme Court again ruled that litigation commenced by a lessor excuses the lessee from continuing operations under the lease. In *Hoyt v. Continental Oil Co.*,[51] the court, reiterating this theory, held that, "the filing of [a legal] proceeding puts the defend-

45. 2 E. KUNTZ, *supra* note 4, § 26.7(*l*), at 276.

46. Whitaker v. Texaco Inc., 283 F.2d 169, 176 (10th Cir. 1960). The court said, "A proper depreciation charge on equipment installed to secure production may be made in the computation of profit or loss from such production." *Id.*

47. Skelly v. Archer, 163 Tex. at —, 356 S.W.2d at 781. The equipment at issue in this case was not part of the original drilling equipment and was necessary to obtain production from the well. *Id.*

48. 338 P.2d 872 (Okla. 1959).

49. *Id.* at 875-76. Here the lessee was prevented from drilling a well on the leasehold during the primary term of the lease as a result of the commencement of litigation by the lessor. Such action suspended the lessee's obligation to drill as specified in the lease. *Id.*

50. 452 P.2d 803 (Okla. 1969). Regarding the duty of the lessee to drill a well before expiration of the primary term, the court said, "The litigation provoked by Henrys' assertion of expiration of the lease is a recognized circumstance excusing failure to continue operations." *Id.* at 814.

51. 606 P.2d 560 (Okla. 1980). The facts in this case were very similar to those in *Duerson*. The litigation began when the lessor demanded that the lessee drill an offset well on the leased property or abandon the lease. When the offset well was not drilled, the lessor commenced litigation, claiming that the existing well was not producing in paying quantities.

ants' title at issue and relieves him [sic] of [responsibility to produce] until determination is made that title to the lease does indeed rest with him."[52]

IV. Analysis of the Holdings in *Duerson*

The Oklahoma Court of Appeals affirmed the district court's holding that the lease terminated because the Angleton No. 1 well was not producing in paying quantities.[53] In making this decision, the court focused on the issues of the classification of administrative overhead expense and lifting system replacement costs, and post-suit production performance.[54]

A. *Administrative Overhead Expense*

The district court held that allocated administrative overhead expense was properly included in determining paying quantities.[55] The overhead expense in question, charged to the well by Amoco, the well operator, was a percentage of Amoco's expenses at the district office level and above. The figure was based on the amount of overhead costs the company felt was attributable to the well.[56]

The court of appeals, however, ruled that administrative overhead expense should not have been a consideration in the calculation of net income.[57] This holding was based on the 1981 Oklahoma Supreme Court decision in *Mason v. Ladd Petroleum Corp.*,[58] which held that administrative overhead expenses are "too indirectly and too remotely related to [a producer's] lifting or producing operations in connection with [a well] to be included in determining whether the well operates at a profit."[59] The rationale for this holding is that such expenses are in-

52. *Id.* at 562.

53. Duerson v. Mills, 648 P.2d at 1280.

54. *Id.* at 1277-78.

55. Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 3 (Okla. Dist. Ct. Beaver Cty. July 10, 1979).

56. Appellees' Brief—Petitioners in Intervention at 3, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982). The Angleton No. 1 well was governed by a joint operating agreement; administrative overhead rates were negotiated for by the working interest owners of the well. These rates were applied to the expenses incurred by the well operator, Amoco, at its district office level and above. The overhead costs were then charged to the working interest owners of the well based on their percentage of ownership in the operation. *Id.*

57. Duerson v. Mills, 648 P.2d at 1278. *But see supra* notes 40-41 and accompanying text (appellate court holding in *Duerson* is in conflict with Texas decisions holding that overhead costs can be classified as lifting expenses).

58. 630 P.2d 1283 (Okla. 1981).

59. *Id.* at 1285.

curred because of the bureaucratic structure of large corporations, and that operations of a district or corporate office are not necessary to secure the productivity of a particular well.[60]

The *Mason* court recognized that if overhead expenses are used in the calculation of a well's profitability, several different methods can be used to allocate overhead expenses. The effect of this fact is that one allocation method using "generally accepted accounting practices may lead to one result, whereas equally accepted accounting practices, using acceptable but alternate methods and practices, can result in an opposite result."[61] The court also concluded that because the operator of a well charges overhead expenses to the respective joint interest owners, it does not necessarily follow that these charges represent actual lifting expenses.[62]

Although the rule proclaimed in *Mason* is theoretically sound when applied to facts similar to those found in *Mason* and *Duerson*, it is unlikely that the Oklahoma Supreme Court intended the rule to apply to all types of administrative overhead, but rather, only to overhead which is too indirectly or remotely related to the operations of the well, such as the expenses of district and corporate offices. However, overhead expense incurred due to operations of a particular lease should be a factor in calculating profitability.[63] For instance, if a small office is located specifically to oversee production of a particular lease, the expense of maintaining that office is attributable to that lease. Other examples of expenses which should be considered include costs of accounting, legal or professional services, or other types of administrative services that can be directly traced to a particular lease.[64] Based on the evidence presented, the court must first determine whether administrative overhead charges are directly attributable to the operations of a well or lease. If so, overhead costs should be a factor in the calculation of paying quantities. If the charges are unrelated, these expenses should be excluded from the computation.

The various accounting methods used, however, complicate the

60. *Id.* The supreme court reasoned that if administrative overhead costs are to be included in the computation of net revenue, a well might be profitable when operated by a single operator, but nonprofitable in the hands of a large corporation. *Id.*

61. *Id.*

62. *Id.* at 1286. The amount of overhead charges is usually negotiated when the parties enter into a joint operating agreement. Such charges are arbitrary and too remotely related to lifting costs to be considered actual lifting expenses. *Id.*

63. 2 E. KUNTZ, *supra* note 4, § 26.7(m).

64. *See id.*

court's determination of whether these expenses are indirect and remote or directly attributable to a lease. A solution to these problems would be to require producers to classify allocated administrative overhead expense in a section of the income statement separate from the operating expenses. Any person with access to the producer's financial statements could then easily identify those overhead costs that should be excluded from the calculation of paying quantities. Only overhead directly attributable to a lease and classified in the operating expense section of the income statement would be applicable to the computation. Such a requirement could be enacted legislatively, but a body more qualified to establish financial accounting requirements is the Financial Accounting Standards Board (FASB).[65] The FASB, by issuing a pronouncement requiring separate classification of allocated overhead expenses, could alleviate problems faced by lessors, lessees, and the courts when asked to determine paying quantities.

B. *Replacement of Lifting Equipment*

The second issue before the court of appeals in *Duerson* concerned the cost of installation of a McLean swabbing tool[66] to replace the existing Merla subsurface tool which was no longer operational. The lessees contended that the new swabbing tool would last for the remaining life of the well and was, therefore, a capital expenditure,[67] which should not be treated as an operating expense during 1977 but should be depreciated over a ten year period.[68] On the other hand, the lessors characterized the swabbing tool replacement as a repair of the lifting system, and claimed that as such it should be treated as a direct operating expense, and that the entire cost should be chargeable to the well in August 1977.[69] Agreeing with the lessors, the district court held that the replacement cost of the machinery was a direct operating expense and should have been charged to the well in the month that the instal-

65. The FASB is a seven-member board, comprised of experts in accounting and financial reporting. "To date, the FASB has issued 36 Statements of Financial Accounting Standards, which establish new standards or amend those previously issued. It has also issued 32 interpretations to clarify, explain, or expand [upon] . . . prior pronouncements." Layton, *supra* note 26, at 3.15.

66. Duerson v. Mills, 648 P.2d at 1277-78.

67. Appellants' Brief at 21, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

68. *Id.* at 26.

69. Appellees' Brief—Petitioners in Intervention at 12-13, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

lation was made.[70]

The court of appeals, however, accepted the lessees' contention that the cost of the tool should have been depreciated over a ten year period.[71] Distinguishing between routine repairs of the lifting equipment and replacement of major components of the system, the court concluded that the cost impact of the replacement of original lifting equipment should be spread over the average useful life of the component.[72] This treatment of such expenditures is appropriate in situations where the original equipment has suffered a "catastrophic failure" or when such an expenditure is justified in light of improved production technology.[73] In arriving at its decision, the court reasoned that replacement of lifting system components enhances the life expectancy of the well and encourages greater production and conservatism.[74] If such expenditures were required to be charged as an operating expense, it might lead to an "illusory conclusion that the well is technically a non-producer though ample reserves remain."[75] This rationale indicates that the court considered public policy to be an important factor when ruling on this issue. Concerned about discouraging production in Oklahoma, the court seemed hesitant to promote termination of leases when ample reserves of oil or gas might still be present on the property.[76] The court of appeals indicated that the trial court should determine whether replacement costs should be capitalized or expensed, stating they "would apply the 'prudent operator rule' and leave the determination . . . to the trial court's judgment based on the proof presented and taking into account all the evidence, especially the age of the well, the proven recoverable reserves and other pertinent evidence."[77]

The appeals court's finding on this issue appears fair as applied to

70. Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 3 (Okla. Dist. Ct. Beaver Cty. July 10, 1979).

71. Duerson v. Mills, 648 P.2d at 1280.

72. *See id.* at 1279. The court stated, "It would be unrealistic . . . to charge major component replacement . . . to the month or even the year of installation without spreading the cost impact over the average useful life of the component . . . ." *Id.*

73. *Id.* at 1280.

74. *Id.* at 1279.

75. *Id.*

76. This is evident from the statement that courts should have "due regard for the remaining recoverable reserves" when determining whether to capitalize or expense replacement equipment. *Id.* at 1280.

77. *Id.* at 1279-80. This statement seems contradictory in light of the fact that the court of appeals struck down the finding of the district court in *Duerson* that the replacement equipment was an item of expense. *See supra* notes 69-71 and accompanying text.

the fact situation in *Duerson*, but the decision fails to clearly define a rule which can be applied in future controversies. Considerations mentioned by the court include: 1) Will the replacement component remain operational for the life of the well; 2) will it enhance the well's life expectancy; 3) has there been a catastrophic failure of the lifting system, or is replacement justified in light of improved production technology; 4) the age of the well; and 5) the proven recoverable reserves.[78] Some of these factors are not related to the issue at hand. The age of the well and the presence of oil or gas reserves have no bearing on the cost impact of replacement of lifting equipment. The nature of the replacement and the reasons for it should be the controlling factors when determining whether to capitalize or expense costs associated with the replacement.[79]

A more reasonable test which could be easily applied stems from the procedure generally followed by accountants when confronted with the issue before the court. Expenditures made for the purpose of achieving greater future benefits from an asset should be capitalized, while costs incurred to maintain an asset at its present level of service should be expensed.[80] In order to capitalize replacement costs, the equipment should prolong the life of the asset, increase its productivity, or improve the quality of its output.[81] Such a test distinguishes between an ordinary repair of the original lifting system and installation of a component which will, in some manner improve the system and increase the value of the well. This test is logical when the issue is viewed in proper perspective. The question involves treatment of the cost impact of replacing lifting system components. These assets have book values which are reflected in the accounting records.[82] If a system component is replaced for the purpose of improving the system and, ultimately, production from the well, the replacement increases the value of the asset, and its cost should be capitalized. The effect of capi-

78. 648 P.2d at 1279-80.

79. *See infra* notes 80-81 and accompanying text.

80. D. KIESO & J. WEYGANDT, INTERMEDIATE ACCOUNTING 489 (3d ed. 1980) For example, ordinary repairs merely maintain an asset at a given level of production or return it to its normal operating efficiency. Such cost should be expensed when incurred. *Id.; see also* M. MILLER, COMPREHENSIVE GAAP GUIDE § 11.03 (1983). Expenditures that increase the capacity or operation efficiency of an asset, if they are substantial, should be capitalized. *Id.* "However, . . . expenditures that do not add to the utility of the asset should be charged to expense." *Id.* § 11.01.

81. D. KIESO & J. WEYGANDT, *supra* note 80, at 489.

82. Generally, assets are initially recorded at cost, which is the cash outlay or its equivalent made to acquire the assets and put them into operation. O'Neill, *Fixed Assets*, in 1 ACCOUNTANTS' HANDBOOK, *supra* note 26, at 21.3 to .4.

talizing this cost is to increase the book value of the lifting system as shown in the accounting records. If, however, a lifting system component replacement must be made in order to bring the well back to its original operating condition, this expenditure does not increase the value of the lifting system beyond the producer's original investment. Such a replacement is merely a repair of the lifting system, and should be expensed rather than capitalized.[83]

The court of appeals in *Duerson* intended to protect public interests by encouraging continuance of leases on property with plentiful oil and gas reserves.[84] This rule, however, could be misused by a producer who, preferring to operate a well at a minimum level in contemplation of a rise in crude oil prices, attempts to capitalize an expense item. If ample reserves are present on the property, a trial court will have to consider this to be a circumstance favoring the lessor's position that the cost of replacement equipment be capitalized. Such a finding would make the well look more profitable because the expense associated with replacement would be gradually recognized over a period of time as the asset was depreciated.[85] Such a result is not the intent of a lease containing an habendum clause,[86] which provides the lessee with security if there is production, while guaranteeing the lessor some profits in the secondary term of a lease. The accounting rule suggested would carry out the intent of the habendum clause without violating the public interest of encouraging productivity. A lessor who seeks to terminate a lease because of nonprofitability is seeking production; thus, he will lease to another producer who promises to develop the reserves.

This proposed test would also be easier for trial courts to apply than the *Duerson* test, which uses five factors to determine if an expenditure should be expensed or capitalized. With the proposed test, trial courts need only investigate the purpose of the replacement of equipment. If costs are incurred by the producer to improve the well in some way, that is, to extend its life, increase its production or improve its efficiency, such costs should be capitalized. If, however, expenditures

83. *See id.* at 21.11. The author states, "Ordinary repairs and maintenance do not benefit future periods and are properly charged as expense in the period incurred." *Id.*

84. *See supra* note 76 and accompanying text.

85. SyCip, *Depreciation*, in 1 ACCOUNTANTS' HANDBOOK, *supra* note 26, at 22.4. The basic purpose of depreciation is to spread the cost of the asset over its useful life.

86. One purpose of the thereafter provision of the clause is to "prescribe conditions of fact which must exist after the end of the exploratory period, upon which the lease may continue indefinitely." 2 W. SUMMERS, *supra* note 2, § 293. It follows that courts should not consider the extent of oil and gas reserves when deciding whether to terminate a lease; rather, they should consider the true profitability of the lease as this is the condition which must be met.

are made to maintain a well at its present level of service, these costs should be expensed in the year in which they are incurred.

Applying this test to the *Duerson* facts, a court would probably determine, as did the court of appeals, that the replacement of the swabbing tool was a capital expenditure. Amoco presented evidence that the McLean tool had certain advantages over the replaced Merla tool. First, the McLean tool did not require that gas be vented, which decreases the risk of killing the well.[87] A more important advantage was that the tool would last for the life of the well. This evidence leads one to the conclusion that the replacement costs should be capitalized because the new tool would increase the value of the well by extending its life.

One reason this issue is so troublesome for the courts is that the accounting rule[88] is not strictly adhered to by production companies. It is not always clear whether a replacement component will improve the operation of the lifting system or prolong the life of the well. Therefore the decision concerning whether to capitalize or expense the cost is left to the discretion of the producer.[89] In most instances, the cost of the equipment is so insignificant that it has no substantial effect on the financial position of the company.[90] When, however, as in *Duerson*, the classification of the equipment costs are important to determine the rights of a lessee to continue producing on the premises, the accounting test should be strictly applied to the facts. Courts must be familiar with the concept of capitalization of replacement costs and should carefully analyze the situation to determine the purpose of the component replacement in order to resolve a dispute over the accounting treatment of these costs.

C. *Post-Suit Production Performance*

The third issue in the *Duerson* case was whether production performance subsequent to January 3, 1978, the date plaintiffs filed suit, should be considered in determining profitability.[91] The evidence revealed that in December 1977, plaintiffs wrote a letter to Amoco "demanding compliance with the implied covenants to protect the lease

87. Duerson v. Mills, 648 P.2d at 1279.
88. *See supra* notes 80-81 and accompanying text.
89. *See* O'Neill, *supra* note 82, at 21.10.
90. Therefore, an error in classifying replacement costs will not result in a misstatement of a producer's financial position in most cases.
91. Duerson v. Mills, 648 P.2d at 1278.

from drainage and for further development."[92] On January 3, 1978, the plaintiffs filed suit claiming Amoco had failed to fulfill the performance of these implied covenants.[93] Subsequently, on March 15, 1978, counsel for the intervenors wrote Amoco demanding the release of other oil and gas leases on property in section twenty-four. This letter claimed that the Angleton No. 1 well was not producing in paying quantities and the leases had terminated by their own terms.[94] Pursuant to these demands, the intervenors filed a petition on June 14, 1978, to intervene in the *Duerson* litigation and quiet title to their minerals.[95]

The defendants, claiming that the initiation of litigation on January 3, 1978, put their title to the mineral rights at issue and "excused further performance . . . until the case was decided,"[96] argued that production performance of the well subsequent to this date should not have been considered by the district court when determining whether the well was producing in paying quantities. The plaintiffs and intervenors countered by arguing that the plaintiffs' original demand requested a release of nonproducing zones only and did not put defendants' interest in the Angleton No. 1 well at issue. They claimed that defendants were not relieved of their duty to produce in paying quantities until June 1978 when the intervenors filed their lawsuit.[97] The court of appeals, in upholding the district court finding that production during the first six months of 1978 should have been considered in the determination of profitability, accepted the plaintiffs' position that the attack on Angleton No. 1 was not made until June 1978 when intervenors filed their petition;[98] thus defendant's title to the producing zones of section twenty-four was not at issue until this time.[99] Since the Angleton No. 1 well was not profitable between Janu-

92. Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 2 (Okla. Dist. Ct. Beaver Cty. July 10, 1979).

93. *Id.*

94. Appellants' Brief at 12, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

95. Duerson v. Amoco Prod. Co., No. C-78-1, slip op. at 2 (Okla. Dist. Ct. Beaver Cty. July 10, 1979).

96. Appellants' Brief at 9, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982). The appellants relied on Hoyt v. Continental Oil Co., 606 P.2d 560 (Okla. 1980) as an authority for this proposition. *See supra* notes 50-52 and accompanying text (discussion of *Hoyt*).

97. Appellees' Brief—Petitioners in Intervention at 12, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982).

98. Duerson v. Mills, 648 P.2d at 1279; *see also* Appellants' Brief at 11, Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982) (Amoco admits that plaintiffs commenced litigation in January 1978 because production company did not respond quickly enough to their demands to explore and produce from Chester formation).

99. 648 P.2d at 1279.

ary and June of 1978,[100] the well was not producing in paying quantities.

The court went further in its reasoning, stating, "We find the principle that all duties are suspended during litigation comes from cases which deal strictly with lessees who were sued while in the process of drilling or reworking a well."[101] That this reason alone would be sufficient to support inclusion of the data in the computation of profitability is indicated by the court's conclusion that litigation involving the capabilities of a producing well "presents no compelling circumstances to excuse any of the lease terms."[102] The court theorized that if litigation were to suspend the lessee's obligation to produce in paying quantities, it logically follows that he may not be required to produce at all until the dispute is settled.[103] Finding such a corollary unacceptable, the court went on to say, "Production during litigation is probably more pertinent than pre-litigation production, because that is the essence of the litigation . . . . [T]he more recent the evidence of production, . . . the more fairly and accurately the court can adjudge the equities."[104]

Thus, the court of appeals amended the general rule in Oklahoma that commencement of litigation by a lessor against the lessee puts his title at issue and suspends his duties under the lease,[105] by limiting it to cases where the lessees are in the process of drilling or reworking a well on the leasehold.[106] The rationale for suspending a producer's duties when he is in this situation is that a lessee should not be faced with the dilemma of choosing between two undesirable options. The producer must either drill or rework the well, risking the possibility that he will lose his investment should the outcome of the litigation be unfavorable, or await the outcome of the lawsuit, in which case the producer may lose the lease due to the mere passage of time and inactivity of the well.[107] The court of appeals theorized that a producer does not face this dilemma unless he is in the process of drilling or reworking a

100. *Id.* at 1280.

101. *Id.* at 1278 (footnote omitted).

102. *Id.*

103. *Id.* at 1278-79. Commencement of litigation by the lessor would thus create a safe zone of nonproduction for the lessee since he would not have to produce oil or gas from the well in paying quantities during this time. This would be unfair because the producer is the only one with knowledge of the exact operation expense. Additionally, nonproduction can kill a well. *Id.*

104. *Id.* at 1279.

105. *See supra* notes 48-52 and accompanying text.

106. 648 P.2d at 1278.

107. *Id.*

well.[108] If the lessors attack the title to minerals presently being extracted, however, a producer can be placed in a similar dilemma. If a well is only marginally profitable, the producer must either invest time and money to improve operations of the well, in which case the investment will be lost should the outcome of the litigation be unfavorable, or wait for the outcome of the lawsuit to make improvements, in which case the lease will terminate for failure to produce in paying quantities.

Additionally, the rationale of the court of appeals is suspect because it departs from the Oklahoma Supreme Court's holding in *Hoyt v. Continental Oil Co.*[109] which has similar facts. The plaintiffs in both cases initiated litigation to terminate their leases when the lessees failed to develop the lease to the lessor's satisfaction and the judicial decision depended upon the production performance of existing wells.[110] In *Hoyt*, the supreme court found that the commencement of the lawsuit by the lessors relieved the lessee of his obligation to produce in paying quantities until the litigation was settled.[111] If the ruling by the court of appeals in *Duerson* represents a change in policy in Oklahoma, producers will be placed at a great disadvantage when lessors initiate litigation to terminate oil and gas leases. Under such circumstances, there will be little motivation for the producer to invest new capital in the well. If necessary improvements are not made during the litigation period, production from the well could possibly diminish so drastically that valuable oil and gas reserves may be lost, creating waste which is counter-productive and contrary to the best interests of the public.

Since the Supreme Court denied review to the lessees in *Duerson*,[112] a conflict presently exists between the supreme court and the appellate court opinions concerning post-suit production performance of existing wells. There are two possible solutions for conclusively resolving the question of whether to consider post-suit production performance in the calculation of profitability. First, the Oklahoma Supreme Court could review a lower court ruling on this issue to either clarify any distinction between the facts in *Hoyt* and in *Duerson*, or simply overrule the decision of the court of appeals in *Duerson*. A second solution to this problem would be for the state legislature to ad-

108. *See supra* notes 101-03 and accompanying text.

109. 606 P.2d 560 (Okla. 1980); *see supra* note 51 (discussing the facts of *Hoyt*).

110. *See supra* notes 51-52 and accompanying text.

111. 606 P.2d at 562 (citing Jones v. Moore, 338 P.2d 872 (Okla. 1959)).

112. *See* Duerson v. Mills, 648 P.2d 1276 (Okla. Ct. App. 1982), *aff'g* Duerson v. Amoco Prod. Co., No. C-78-1 (Okla. Dist. Ct. Beaver Cty. July 10, 1979), *cert. denied*, Order No. 54,196 (July 13, 1982).

dress the issue by enacting a statute to clarify the lessee's obligation to produce once his title has been put at issue by commencement of litigation. Either solution would enable producers to determine, with knowledge of the consequences, what action to take concerning operating wells once a lawsuit has been filed by the lessor to terminate the lease.

V. CONCLUSION

The *Duerson* case illustrates the need for more clearly defined accounting standards for the oil and gas industry, especially in the computation of paying quantities. Considerable litigation can be avoided if the parties to an oil and gas lease know their rights and liabilities with respect to a marginal well. At present, neither party can be certain a well is producing in paying quantities, even if the accounting data is available. Depending on the producer's method for classifying costs, a marginal well can be reflected in the accounting records as profitable or unprofitable. Although the producer's records reflect profits on a well, the lessor can challenge this by using a different accounting method. Thus the courts must often resolve these accounting issues to determine whether a lease should terminate because of lack of production in paying quantities.

Consistency could be achieved by the enactment of statutes which require producers to classify expenses in a uniform manner. Since the area of oil and gas production accounting requires special expertise, the legislature might look to the Financial Accounting Standards Board (FASB)[113] as the source of accounting standards. The FASB consists of accounting experts who establish rules and issue pronouncements and are primarily responsible for developing accounting standards followed by all publicly held businesses. A solution to the types of problems presented by the *Duerson* case would be the passage of a new pronouncement setting more definite accounting requirements for oil and gas producers dealing specifically with classification of overhead expenses and lifting system component replacement costs. The promulgation of more specific oil and gas accounting rules could prevent unnecessary litigation between lessors and lessees and make the determination of paying quantities more definite. In those cases which do require judicial determination, the courts could rely on consistent rules for classification of production expenses rather than determining lifting

113. *See supra* note 65.

expenses on a case by case basis. Until such rules are adopted, it would be wise for both producers and lessors to be familiar with the *Duerson* decision, as well as other judicial determinations regarding paying quantities.

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