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Evaluating the Production Status of Oil and Gas Leases

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EVALUATING THE "PRODUCTION" STATUS OF OIL AND GAS LEASES

I. INTRODUCTION

Since the recent decline of oil and gas prices, profit margins for the oil and gas industry have been drastically reduced.[1] Depressed petroleum prices affect the continued validity of oil and gas leases. Oil or gas must be produced in paying quantities to maintain an oil and gas lease beyond the period stated in the habendum clause or primary term. All lessees must address problems caused by production in a volatile price market. With wild price fluctuation, the production requirement may cause premature loss of the lease.

To determine whether a lease has ceased producing in paying quantities, courts have traditionally compared operating income with operating expenses over a period of time that reflects the current production status of the lease.[2] Currently, although courts may be sympathetic to problems caused by wild price fluctuation, the traditional approach is still used to determine whether a lease is producing in paying quantities. Attorneys must evaluate leases and formulate an independent determination of production in paying quantities. A summary checklist evaluating the current status of the lease containing the appropriate accounting period, and proper determination of income and expense items, will further a systematic determination of the production status of oil and gas leases.

II. THE REQUIREMENT OF "PRODUCTION IN PAYING QUANTITIES"

A. *Habendum Clause*

The habendum clause in an oil and gas lease establishes the duration

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1. OIL & GAS JOURNAL, *OGL Newsletter*, Jan. 28, 1985. From 1973 to 1985, the average price of crude petroleum per barrel ranged from the lowest of $3.89 in 1973, to the highest of $31.77 in 1981, and $24.08 in 1985. STATISTICAL ABSTRACT OF THE UNITED STATES 1987 No. 1224 (U.S. Department of Commerce, Bureau of the Census).

2. Clifton v. Koontz, 160 Tex. 82, 325 S.W.2d 684 (1959). *Clifton* was a seminal case for establishing the paying quantities standard. In *Clifton*, the lessor sought cancellation of the lease for failure to produce in paying quantities after expiration of the primary term. The court's analysis of this issue involved relevant time periods of production and whether a profit was realized. The court found continuous production in paying quantities throughout the material time period. *Id.*

of the lease.[3] Generally, the habendum clause provides for a definite period of time, called the primary term, that may be extended indefinitely so long as production is obtained from the leased land during the primary term.[4] Accordingly, the habendum clause should operate to effectuate goals of both lessee and lessor. During the primary term, development of the property for the mutual benefit of both parties is the foremost goal and purpose of the lease.[5] Extending the lease beyond the primary term into the secondary term permits the lessee to benefit from the substantial investment necessary to test the leased land.[6] If, however, production is not sufficient to earn a profit, the lease cannot be maintained merely on the prospect of future profit speculation.[7]

B. *The Definition of "Production"*

The "thereafter" phrase in the habendum clause of an oil and gas lease states that the lease shall remain in force "so long thereafter as oil or gas is produced" from the leasehold.[8] The majority interpretation of the term production requires actual production in paying quantities plus marketing to satisfy the habendum clause requirement.[9] Although most

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3. J. LOWE, OIL AND GAS LAW IN A NUTSHELL 172-73 (1983); D. PIERCE, KANSAS OIL AND GAS HANDBOOK § 9.21 (1986).

4. D. PIERCE, KANSAS OIL AND GAS HANDBOOK § 9.21 (1986). For example, the typical habendum clause of an oil and gas lease provides that "this lease shall remain in force for a term of __ years from this date (called "primary term") and as long thereafter as oil, liquid hydrocarbons, gas or other respective constituent products, or any of them, is produced from said land." Producers Form 88.

5. Garcia v. King, 139 Tex. 578, __, 164 S.W.2d 509, 512-13 (1942).

6. The court stated in *Garcia*:

> The object of the contract was to secure development of the property for the mutual benefit of the parties. It was contemplated that this would be done during the primary period of the contract. So far as the lessees were concerned, the object in providing for a continuation of the lease for an indefinite time after the expiration of the primary period was to allow the lessees to reap the full fruits of the investments made by them in developing the property. Obviously, if the lease could no longer be operated at a profit, there were no fruits for them to reap. The lessors should not be required to suffer a continuation of the lease after the expiration of the primary period merely for speculation purposes on the part of the lessees.

Id.

7. *Id.* at 513.

8. Producers Form 88. In comparison, the *AAPL Form 690 lease clause 2 provides that "[t]his Lease shall remain in force for a primary term of __ years and as long thereafter as oil, gas or other hydrocarbon is or can be produced." This language denotes that discovery of oil or gas, rather than actual production will extend the lease beyond the primary term. *See* Greer v. Salmon, 82 N.M. 245, 479 P.2d 294 (1970); *see also* notes 4 & 9 *infra* and accompanying text.

9. The majority approach has been adopted in the following eight states: Illinois (Gillespie v. Ohio Oil Co., 260 Ill. 169, 102 N.E. 1093 (1913)), Kansas (Bundy v. Ahrens, 115 Kan. 818, 224 P. 899 (1924)), Louisiana (Caldwell v. Alton Oil Co., 161 La. 139, 108 So. 314 (1926)), Michigan (Kinne v. Swanson Consol. Oil Co., 293 Mich. 509, 292 N.W. 472 (1940)), New Mexico (Greer v. Salmon, 82 N.M. 245, 479 P.2d 294 (1970)), Ohio (Hanna v. Shorts, 163 Ohio St. 44, 125 N.E.2d

leases fail to expressly state the term "paying quantities," courts have uniformly interpreted the word production as having the substantially same meaning.[10]

A literal interpretation of the production requirement in the habendum clause would terminate a lease upon any interruption in production.[11] Under such an interpretation, a lease would terminate when, for example, production had ceased due to equipment breakdown. Consequently, courts have rejected a literal interpretation to avoid forfeitures resulting from interruptions in production.[12]

Jurisdictions interpret the causes of temporary cessation differently in their determination of whether production in paying quantities has ceased.[13] Factors taken into consideration in characterizing temporary

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338 (1955)), Tennessee (Waddle v. Lucky Strike Oil Co. 551 S.W.2d 323 (Tenn. 1977)), and Texas (Garcia v. King, 139 Tex. 578, 164 S.W.2d 509 (1942)). These states require actual production in contrast with mere discovery of oil or gas to satisfy the habendum clause. In addition, the resource must be marketed. The economic rationale of the habendum clause supports the marketing requirement because the lessor does not receive royalty until the product is marketed.

Under a minority approach adopted by Oklahoma (Mason v. Ladd Petro. Corp., 630 P. 2d 1283 (Okla. 1981)) and West Virginia (South Penn Oil Co. v. Snodgrass, 11 W. Va. 438, 76 S.E. 961 (W. Va. 1913)); mere discovery satisfies the habendum clause. Thus, discovery alone accomplishes the lessee's goal of executing a lease for discovery of oil or gas. Marketing must occur, however, within a reasonable time following discovery.

Under a second minority approach discovery of gas satisfies the habendum clause but oil must actually be produced to satisfy the clause. The rationale behind this view recognizes that oil may be easily stored without marketing, while gas may not. The habendum clause will therefore be extended if gas is discovered or oil is produced. This approach has been adopted by Kentucky (Reynolds v. White Plains Oil & Gas Co., 199 Ky. 243, 250 S.W. 975 (1923)), Montana (Steven v. Potlatch Oil & Ref. Co., 80 Mont. 239, 260 P. 119 (1927)), Wyoming (Pryor Mt. Oil & Gas Co. v. Cross, 31 Wyo. 9, 222 P. 570 (1924)). J. LOWE, OIL AND GAS LAW IN A NUTSHELL 174-75 (1983); 2 E. KUNTZ, THE LAW OF OIL AND GAS § 26.5-§ 26.6 (1964).

10. Whitaker v. Texaco Inc., 283 F.2d 169, 175 (10th Cir. 1960); Michigan Wisconsin Pipeline Co. v. Michigan Nat'l Bank, 118 Mich. App. 74, __, 324 N.W.2d 541, 544 (1982); Hininger v. Kaiser, 738 P.2d 137, 138 (Okla. 1987); Stewart v. Amerada Hess Corp., 604 P.2d 854, 857 (Okla. 1979); Exxon Co. v. Dalco Oil Co., 609 S.W.2d 281, 285 (Tex. Civ. App. 1980); Clifton v. Koontz, 160 Tex. 82, __, 325 S.W.2d 684, 691 (1959) (citing Garcia v. King, 139 Tex. 578, __, 164 S.W.2d 509, 511 (1942)).

In Kansas, "commercial quantities" is synonymous with "paying quantities." Texaco, Inc. v. Fox, 228 Kan. 589, __, 618 P.2d 844, 847 (1980). Further, the court stated that "found in paying quantities" and "produced in paying quantities" were synonymous. Oil is not "found" until it is brought to the surface, and once it is brought to the surface, it is "produced." Reese Enters., Inc. v. Lawson, 220 Kan. 300, __, 553 P.2d 885, 886 (1976) (quoting Tedrow v. Shaffer, 23 Ohio App. 343, 155 N.E. 510 (1926)). Clearly, whether "production" is referred to as "production," "commercial quantities," or "found," courts consistently define "production" as meaning "in paying quantities."

11. Pearson, *Production In Paying Quantities: A Review of Oklahoma Law*, 56 OKLA. B.J. 1189 (1985). Parties could, however, draft an oil and gas lease that would terminate upon a slight interruption in production, if that were the desired result. In the absence of bad faith, courts would uphold the different term as controlling. All parties to a contract have a duty of good faith in negotiating oil and gas leases. RESTATEMENT (SECOND) OF CONTRACTS § 205 (1981).

12. Stewart v. Amerada Hess Corp., 604 P.2d 854, 858 (Okla. 1979).

13. 3 H. WILLIAMS, OIL AND GAS LAW § 604.4 (1985). State Comm'rs. of Land Office v.

cessation include the length of time production has ceased and the lessee's diligent efforts to restore production.[14] In contrast, a lease may contain an express provision stating that cessation of production in paying quantities, not merely a temporary cessation in production, will terminate the lease within some specified period of time.[15]

C. *The Definition of "Production in Paying Quantities"*

Production in paying quantities means production which generates enough income to exceed operating expenses and to provide some profit to the lessee.[16] Even if the initial drilling expenses are never recaptured and the entire operation is unprofitable, the paying quantities requirement is met if enough income is produced to cover operating expenses.[17] Although the definition appears simple, the application has proven difficult. The standard for determining paying quantities is "whether or not under all the relevant circumstances a reasonably prudent operator would, for the purposes of making a profit and not merely for speculation, continue to operate a well."[18] So long as well production generates greater income than expenses, paying quantities is achieved.

The requirement of paying quantities is justified by the parties' economic interest in the transaction. The basic purposes of a lease are "to secure development of the property for the mutual benefit of the lessor

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Amoco Prod. Co., 645 P.2d 468, 471 (Okla. 1982) (collapsed casing in original well and mechanical failure caused cessation in production which prevented production during secondary term but due diligence in drilling the lease did not terminate because of an additional producing well); Casey v. Western Oil & Gas, Inc., 611 S.W.2d 676 (Tex. Ct. App. 1980, writ ref'd n.r.e.) (lessee renegotiated an expired gas contract which justified a legal excuse for cessation of production for two months in spite of exclusion from the lease by the lessor and stolen pump equipment).

14. 3 H. WILLIAMS, OIL AND GAS LAW § 604.4 (1985).

15. *Id.* Temporary cessation may result from reworking a well, mechanical breakdowns, necessary repairs, an act of God, or an imposition of new federal, state, or municipal regulation which justifies recognition of an interruption in production. These factors are generally anticipated and included in most oil and gas leases. *Id.*

Sorum v. Schwartz, 344 N.W.2d 73 (N.D. 1984) (temporary cessation did not terminate lease since lessee had invested $170,000 to restore production which would maintain entire lease); Fike v. Riddle, 677 S.W.2d 722 (Tex. Ct. App.-Tyler 1984, no writ) (no temporary cessation found where lessee elected not to restore well during ninety day period after cessation of production); McCullough Oil, Inc. v. Rezek, 346 S.E.2d 788 (W. Va. 1986) (lease automatically terminated, as provided in lease provision, after failure to restore production within sixty days of cessation during secondary term), Hoyt v. Continental Oil Co., 606 P.2d 560 (Okla. 1980). In *Hoyt*, although there was no production in paying quantities after the expiration of the primary term, the Oklahoma Supreme Court decided that production during the secondary term requires production in paying quantities within sixty days of cessation. In spite of renegotiation attempts by the lessee, the lease terminated because production in paying quantities did not resume within sixty days of cessation. *Id.* at 563-64.

16. Garcia v. King, 139 Tex. 578, __, 164 S.W.2d 509, 511 (1942).

17. *Id.*

18. *Id.*

and lessee," and "to keep the lessee from holding the lease for speculation."[19] Profitable development of the property is assured when courts interpret paying quantities in a manner which prevents arbitrary termination of a lease when it is profitable.[20] The basic purpose of the lease is also furthered when courts interpret paying quantities as requiring termination of an unprofitable lease.

The requirement of paying quantities compels courts to consider "all the relevant circumstances" surrounding an oil and gas lease based upon a reasonably prudent operator standard.[21] Traditionally, courts have considered income from production,[22] costs of production,[23] time periods for accounting,[24] and other circumstances[25] to determine whether "production in paying quantities" has been satisfied so that operations may continue.

III. Current Analysis of "Paying Quantities"

In initially determining whether the requirements of paying quantities has been met, courts must weigh all the relevant circumstances which may prejudice business decisions of the reasonably prudent operator. The Texas Supreme Court has recognized some of the factors that a trial court must consider:

> The depletion of the reservoir and the price for which the lessee is able to sell his produce, the relative profitableness of other wells in the area, the operating and marketing costs of the lease, his net profit, the lease provisions, a reasonable period of time under the circumstances, and whether or not the lessee is holding the lease merely for speculative purposes.[26]

These existing factors are broad enough to encompass the relevant considerations surrounding a determination of paying quantities.[27] Any "new" considerations can be classified to fit within the existing factors.

Although use of these factors to determine whether a reasonably

19. Clifton v. Koontz, 160 Tex. 82, __, 325 S.W.2d 684, 691 (1959).
20. 2 E. Kuntz, The Law of Oil and Gas § 26.5 (1964).
21. J. Lowe, Oil and Gas Law in a Nutshell 175-76 (1983).
22. *See infra* notes 47-51 and accompanying text.
23. *See infra* notes 52-71 and accompanying text.
24. *See infra* notes 31-46 and accompanying text.
25. *See infra* notes 72-74 and accompanying text.
26. Clifton v. Koontz, 160 Tex. 82, __, 325 S.W.2d 684, 691 (1959).
27. This list is illustrative only and does not address economic factors. Upon review of the most recent paying quantities cases and in light of the decline in oil prices, courts have declined to substantially expand these factors.

prudent operator would continue the lease requires subjective determination by the courts,[28] the Kansas Supreme Court has adopted an objective standard to determine whether production in paying quantities has been met.[29] This objective mathematical computation was premised on the desire of the Kansas court to provide greater protection to the lessor who is restrained by a lease which is providing insignificant royalty payments.[30] The objective approach contrasts operating income with expenses to determine profitability. The subjective approach differs from the objective approach by considering circumstances which affect profit.

In light of the current volatile economic status surrounding the oil industry, a subjective approach would appear to be better than an objective standard. The subjective standard allows the courts to better balance normal oil and gas markets with the current fluctuating market for a more consistent determination of production in paying quantities.

A. *The Time Factor*

At the outset, a suitable time period or accounting period must be designated in order to determine whether production in paying quantities has ceased.[31] Texas, Oklahoma, and Kansas have used a subjective approach to determine a reasonable time period taking into account various circumstances which could distort the profitability analysis. Texas courts have required that a "reasonable period of time under the circumstances" should be employed so that the computation will reflect normal circumstances.[32] Furthermore, no arbitrary time period should be used to determine termination of an oil and gas lease. The Texas Supreme Court requires that the time period used to determine profitability must be reasonable rather than arbitrary.[33]

28. J. LOWE, OIL AND GAS LAW IN A NUTSHELL 177 (1983).

29. Reese Enters., Inc. v. Lawson, 220 Kan. 300, __, 553 P.2d 885, 897 (1976). A subjective approach may be used to determine the good faith efforts of the reasonably prudent operator in making business decisions. In theory, it would appear that the interests of both the lessee and lessor would be represented fairly because of the economic goals. However, the lessee could possibly maintain the lease for speculative purposes under the subjective standard of determining paying quantities, but the lessor's interests would not be protected. *Id.*

In contrast, the public interest in this natural resource may benefit from a subjective approach in determining paying quantities. A lessee could maintain a lease in anticipation of increased oil prices or new discoveries in production, thereby benefiting the public through production of oil or gas that would not otherwise be possible under an objective determination.

30. *Id.*

31. Clifton v. Koontz, 160 Tex. 82, __, 325 S.W.2d 684, 691 (1959).

32. *Id.*

33. *Id.* at 690.

In *Pshigoda v. Texaco, Inc.*,[34] a Texas appellate court upheld the application of two time periods to determine profitability of one well.[35] One time period used ran from two years prior to the suit until it was filed, and the second period ran from the time that suit was filed until the day before the trial.[36] For the second period during which litigation was pending, the court determined that one year was sufficient time to determine profitability.[37] In addition to the two time periods, the court required a finding by the jury that a reasonably prudent operator would continue to operate the lease for profit and not for speculation. The court's use of two time periods was more tolerant of the lessee's efforts to maintain production in paying quantities. In contrast, a single inquiry may have resulted in no production in paying quantities and thus automatic termination of the lease. Although not specifically stated in the opinion, evidently one time period was not reasonable under the circumstances to measure profitability. The appellate court relied on the "reasonable period of time under the circumstances" standard from *Clifton v. Koontz*[38] as a guide to determine profitability. An implementation of a two-step inquiry into the proper time frames was an effort by this court to accommodate the oil industry by seeking to find normal conditions during the economic downturn by contrasting performance of a broken well with a properly functioning well.

In comparison to the Texas approach, the Kansas Supreme Court employed a single inquiry of "a reasonable time depending on the circumstances of each case" for the proper accounting period to determine profitability.[39] In *Texaco, Inc. v. Fox*,[40] the Kansas Supreme Court declined to follow annual business accounting periods for oil and gas leases in an effort to avoid a rigid or fixed term for accounting purposes. *Texaco* involved a thirteen-year period, which the court found unreasonably long for measuring profitability.[41] The use of a short time period was

34. 703 S.W. 2d 416 (Tex. App.-Amarillo 1986, writ ref'd n.r.e.).

35. *Id.* at 419. This suit involved the reworking of a producing well that had sprung a leak. The leak caused the well to produce more saltwater than oil. Texaco repaired the leak by squeeze cementing to plug the hole.

36. *Id.* The first time period was from January 1, 1981, through December 12, 1982. The suit was filed on December 13, 1982, which began the second time period. This period ran until March 1, 1984, shortly before the trial commenced.

37. *Id.*

38. 160 Tex. 82, __, 325 S.W.2d 684, 691 (1959).

39. Texaco, Inc. v. Fox, 228 Kan. 589, __, 618 P.2d 844, 848 (1980).

40. 228 Kan. 589, 618 P.2d 844 (1980).

41. *Id.* Four years earlier, the Kansas Supreme Court left the time period question open but held that an eighteen-month period was not required in determining profitability. Reese Enters., Inc. v. Lawson, 220 Kan. 300, __, 553 P.2d 885, 899 (1976).

untenable, yet a long period allowed "using past glories during flush production to determine a lease's present condition" which could potentially distort the actual condition.[42] Similar to Kansas, the established time period in Oklahoma is based upon a one-step inquiry into the circumstances surrounding cessation in each case.[43] Production during litigation, as compared to prelitigation, is an important time period to Oklahoma courts.[44]

In order for a lease to terminate based upon failure to produce in paying quantities, the time period evidencing unprofitable production must be sufficiently long to demonstrate profit speculation by the lessee.[45] Both Texas and Oklahoma[46] recognize the time period during litigation as important, as distinguished from prelitigation periods, and all jurisdictions employ a period of time sufficient to determine current productivity of the lease under normal circumstances. Although fluctuation in oil and gas prices is normal, the recent decline has been drastic. Whenever any court selects an accounting period, that period should reflect average or normal conditions of each individual case. Once an appropriate time or accounting period has been selected, an identification of proper operating income and expenses must be made to determine whether production in paying quantities has been satisfied.

B. *Operating Income*

Revenue which can be classified as income must be identified in order to determine whether the lease is profitable. Basically, all income or revenue from the sale of production is included to determine production in paying quantities.[47] Clearly, the lessee must operate the lease at a profit, no matter how small, to prevent termination of the lease.[48]

The overriding royalty interest is also included in operating income.[49] Inclusion of overriding royalty is justified by the indirect benefit

42. *Texaco*, 228 Kan. at __, 618 P.2d at 848.

43. Stewart v. Amerada Hess Corp., 604 P.2d 854, 858 (Okla. 1979). The court stated the strong policy against forfeitures will be furthered by recognizing compelling equitable considerations in each case. *Id.*

44. Duerson v. Mills, 648 P.2d 1276, 1279 (Okla. Ct. App. 1982); Pearson, *Production in Paying Quantities: A Review of Oklahoma Law*, 56 OKLA. B.J. 1189, 1193 (1985); Note, *Determination of Paying Quantities: An Accounting Perspective*, 18 TULSA L.J. 475 (1983).

45. Clifton v. Koontz, 160 Tex. 82, __, 325 S.W.2d 684, 691 (1959).

46. *See supra* notes 35-39 and 44-45 and accompanying text.

47. J. LOWE, OIL AND GAS LAW IN A NUTSHELL 177-78 (1983).

48. Reese Enters., Inc. v. Lawson, 220 Kan. 300, __, 553 P.2d 885, 897 (1976); Hininger v. Kaiser, 738 P.2d 137, 140 (Okla. 1987); Clifton v. Koontz, 160 Tex. 82, __, 325 S.W.2d 684, 691 (1959).

49. J. LOWE, OIL AND GAS LAW IN A NUTSHELL 178 (1983).

received by the lessee because direct costs of production are not increased.[50] Indeed, payment of overriding royalty is made to investors who typically finance the oil and gas venture. Once the lessee obtains production, equitable considerations compel a benefit in favor of the lessee resulting from the substantial investment.[51]

C. *Operating Expenses*

In contrast to operating income, courts have had difficulty in identifying expenses or costs for determining whether the lease has produced in paying quantities. Basically, operating costs are considered to be "ordinary periodic expenses of production."[52] These expenses, or direct costs, include: "labor, trucking, transportation expense, replacement and repair of equipment, taxes, license and permit fees, operator's time on the lease, maintenance and repair of roads, entrances and gates, and expenses encountered in complying with state laws which require the plugging of abandoned wells and prevention of pollution."[53] Thus, direct costs corresponding to those listed are included as operating expenses for purposes of determining paying quantities.

Specifically, Texas and Oklahoma have held that administrative expenses are not deductible as operating expenses for determining paying quantities because only those expenses directly related to production or lifting are properly included in operating expenses.[54] In *Hininger v. Kaiser*,[55] the Oklahoma Supreme Court rejected the argument that administrative costs directly related to a particular lease should be deductible as operating expenses.[56] This argument was rejected by the court because

50. *Id.*
51. *Hininger*, 738 P.2d at 139-40.
52. *Reese Enters., Inc.* 220 Kan. at ___, 553 P.2d at 898. In contrast, the inclusion of plugging costs for abandoned wells is unique to Kansas. Other states do not recognize plugging as a direct expense. On the other hand, an illustrative list of expenses used by the Texas courts includes, "taxes, overhead charges, labor, repairs, depreciation on salvable equipment, if any, and other such items of expense, if any." Skelly Oil Co. v. Archer, 163 Tex. 336, ___, 356 S.W.2d 774, 781 (1961); Pshigoda v. Texaco, Inc., 703 S.W.2d 416, 418 (Tex. App.-Amarillo 1986, writ ref'd n.r.e.).
53. Reese Enters. Inc. v. Lawson, 220 Kan. 300, ___, 553 P.2d 885, 898 (1976).
54. *Id.* For example, administrative expenses include "costs of accounting, interest, postage, office supplies, telephone, depreciation of office equipment, and all other indirect expenses of the oil company regarding production." Mason v. Ladd Petroleum Corp., 630 P.2d 1283, 1286 (Okla. 1981).

"Lifting expenses" have been defined as costs of production exclusive of drilling or equipment costs. Hininger v. Kaiser, 738 P.2d 137, 140 (Okla. 1987). Specifically, lifting expenses have been defined as those expenses necessary to lift the oil from the ground. Stewart v. Amerada Hess Corp., 604 P.2d 854, 857 n.8 (Okla. 1979).
55. 738 P.2d 137 (Okla. 1987).
56. *Id.* at 141.

of the apparent unfairness to small working interest owners. Large corporation could exclude administrative expenses because of the expansive nature of their operations.[57] Thus, the Oklahoma courts appear reluctant to allow deductions of administrative expenses because the effect would create a great disparity between abilities of small working interest owners in comparison to large corporations, based upon the size of the operation.

Although the *Hininger* court recognized the difference in size of operators for purposes of determining administrative expenses, the court failed to consider the effect on the lessor and the public. The exclusion of administrative costs may indirectly cause the continuation of leases. Since production remains profitable by excluding these costs, the benefit is mutually shared by the lessor and public. The lessor retains a profitable lease through the receipt of royalty, and the public benefits from continued exploration and production of the natural resources.

Similarly to administrative expenses, reworking costs are not deductible as operating expenses.[58] In *Pshigoda v. Texaco, Inc.*,[59] the Texas court analogized reworking expenses to initial drilling expense and concluded that reworking costs are a one time expense.[60] Just as drilling expenses may be recaptured if the operation is profitable, reworking expenses may be recovered through production and should properly be excluded as operating expenses.[61]

Overriding royalties are not properly includable as operating expenses. In *Hininger v. Kaiser*,[62] the Oklahoma Supreme Court rejected an argument to include overriding royalties as operating expenses for purposes of calculating production in paying quantities.[63] In rejecting overriding royalties as an expense, the court concluded that overriding royalties were a part of the initial investment, like drilling costs, and not an operating expense.[64]

For the purposes of determining paying quantities, depreciation may

57. *Id.*

58. Pshigoda v. Texaco, Inc., 703 S.W.2d 416 (Tex. App.-Amarillo 1986, writ ref'd n.r.e.).

59. 703 S.W.2d 416 (Tex. App.-Amarillo 1986, writ ref'd n.r.e.).

60. *Id.* In this case, a well developed a casing leak which was repaired by squeeze cementing at a cost of $89,000. If the $89,000 expense had been included, the lease would have operated at a loss of $69,000 for 37 months. By excluding the $89,000, the lease operated at a profit of $20,000 during the 37 months. *Id.* at 418-19.

61. *Id.*

62. 738 P.2d 137 (Okla. 1987).

63. *Id.* at 140. Since the overriding royalty was carved out of the lessee's estate and part of the working interest originally created, exclusion from the operating expenses was proper. *Id.*

64. *Id.* at 139-40.

be allowed as an operating expense on lifting equipment, but excluded on original equipment.[65] Thus, depreciation on preproduction equipment should be excluded from operating expenses. In *Stewart v. Amerada Hess Corp.*,[66] the Oklahoma Supreme Court allowed depreciation of equipment used in lifting operations, as contrasted with the original investment, for purposes of operating expenses.[67] Admittedly, depreciation of lifting equipment is not an out-of-pocket expense which is always included in operating expenses. However, the court justified depreciation as an operating expense because the value of lifting equipment is diminished through its continued use in production.[68]

In contrast to Oklahoma, the Kansas Supreme Court expressly rejected the Oklahoma approach which allowed depreciation of lifting equipment.[69] In *Texaco, Inc. v. Fox*,[70] the Kansas court stated that only direct costs are included as operating expenses to determine paying quantities, whereas costs of drilling are not considered operating expenses.[71] In Kansas, depreciation on lifting equipment is not a direct cost and should not be included as an operating expense.

D. *Other Considerations*

In addition to determining proper operating revenues, expenses, and accounting periods, other equitable factors may be considered in determining whether a lease has been terminated based upon production in paying quantities. Initially, the attorney should determine whether the production in paying quantities clause should be included in the lease.[72]

65. Stewart v. Amerada Hess Corp., 604 P.2d 854, 857 (Okla. 1979). The tenth circuit rejected inclusion of depreciation on original equipment in operating expenses. "If the original investment is not to be considered, there is no reason for considering a depreciation charge based upon the acquisition cost of the tangible property making up a part of such investment." Whitaker v. Texaco, Inc., 283 F.2d 169, 176 (10th Cir. 1960).

The Texas Supreme Court has held that certain salvable equipment used in the production of gas and not drilling or completion, should be depreciated as an operating expense. Like Oklahoma, Texas has reasoned that the life of the equipment was diminished through the production of gas. Evidence must be shown to relate this equipment to production and marketing of gas. Skelly Oil Co. v. Archer, 163 Tex. 336, __, 356 S.W.2d 774, 781 (1961).

66. 604 P.2d 854 (Okla. 1979).

67. *Id.* at 857. In addition, the Court stated that the base period for depreciation should be based upon current accounting standards. *Id.*

68. *Id.*

69. Texaco, Inc. v. Fox, 228 Kan. 589, __, 618 P.2d 844, 848 (1980). The equipment under consideration was the original equipment.

70. 228 Kan. 589, 618 P.2d 844 (1980).

71. *Id.* at __, 618 P.2d at 848.

72. Pierce, *Rethinking The Oil and Gas Lease*, 22 TULSA L.J. 445, 467-68 (1987).

The purpose of the paying quantities requirement is to protect the economic interest of the lessor by requiring a minimal profit. A lease will terminate if production is not in paying quantities. However, the requirement of production in paying quantities may not protect interests of the public, because the termination of a lease may forfeit otherwise recoverable resources.[73] Rather, if a lessee was permitted to continue operations, albeit unprofitable operations, new production levels or resources might be discovered.[74] Thus, recovery of otherwise unrecoverable resources could possibly be discovered if production in paying quantities was eliminated.

IV. LEASE EVALUATION

Perhaps the requirement of production in paying quantities can best be understood through a hypothetical example. To illustrate, suppose that a landowner/lessor leases Section 10 to a developer/lessee. The term of the lease states that the lease will continue so long as oil or gas is produced from Section 10. During the primary term, developer/lessee drills a producing well. Upon execution of the lease, the price of oil is $24 per barrel. However, due to a recent decline in the price of oil, developer/lessee currently receives only $9 per barrel of oil produced.

The decline in the price of oil creates a problem currently shared by many lessees, which is failure to produce in paying quantities. In this hypothetical situation, the lease wa profitable at $24 per barrel but unprofitable at $9 per barrel. The same quantities are produced but sold at a greatly reduced price per barrel. Thus, the lease is unprofitable under the present prices and therefore unable to satisfy the requirement of production in paying quantities.

The following four-step approach is suggested for determining whether the requirement of production in paying quantities has been met. First, an attorney must ascertain the jurisdiction where the lease is located to determine the proper definition of "production" required for paying quantities.[75] The majority of states require marketing and production whereas the minority jurisdictions require either discovery of oil

73. *Id.* at 467. Termination of the lease would allow the lessor to lease to another developer. However, the lease terminated because of unprofitability, thus it would probably be unprofitable for the next lessee, absent an increase in the price of oil. *Id.*

74. *Id.* at 468.

75. *See supra* notes 13-15 and accompanying text.

or gas or the production of oil and discovery of gas.[76] Second, an attorney must determine the current status of the lease in terms of production, lease provisions, and the market. Specifically, the attorney must determine whether the well is producing at all, and if not, whether the cessation is temporary or permanent.[77] Third, operating expenses must be examined to resolve which costs are actually associated with production and which are accrued.[78] Fourth, a determination of which income may be credited to operating income as well as the value of production must be made to balance against the operating expenses.[79] Last, the proper accounting period should reflect a sufficient time period based upon all the relevant circumstances to prove or disprove production in paying quantities.[80]

V. CONCLUSION

At the outset, attorneys must recognize that today's oil and gas markets are not normal because of reduced petroleum prices which may create problems with the paying quantities requirement. Eventually, parties in an oil and gas lease may be confronted with the cancellation of the lease. A systematic approach for a self-determination by the attorney of production in paying quantities can reduce the difficulty in solving the problematic application of paying quantities to production. Accordingly, ascertaining the jurisdiction where the lease is located, evaluating the present status of the lease, determining which items of income and expense are properly includable and selecting an accounting period which reflects normal conditions will provide the practitioner with a summary checklist for evaluating the production status of oil and gas leases.

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76. *See supra* note 9 and accompanying text.
77. *See supra* notes 13-15 and accompanying text.
78. *See supra* notes 52-71 and accompanying text.
79. *See supra* notes 47-51 and accompanying text.
80. *See supra* notes 31-46 and accompanying text.