No. 104,631

IN THE COURT OF APPEALS OF THE STATE OF KANSAS

IN THE MATTER OF THE EQUALIZATION APPEALS OF EOG RESOURCES, INC.
FOR THE YEAR 2007 IN SEWARD COUNTY, KANSAS

and

IN THE MATTER OF THE EQUALIZATION APPEALS OF EOG RESOURCES, INC.
FOR THE YEAR 2008 IN SEWARD COUNTY, KANSAS.

SYLLABUS BY THE COURT

1.

In determining the value of oil and gas properties for ad valorem taxation, the appraiser shall take into consideration the age of the wells; the quality of oil or gas being produced therefrom; the nearness of the wells to market; the cost of operation; the character, extent, and permanency of the market; the probable life of the wells; the quantity of oil or gas produced from the lease or property; the number of wells being operated; and such other facts as may be known by the appraiser to affect the value of the lease or property. Consideration of these statutory factors is mandatory; failure to take into consideration any of these statutory factors will invalidate the assessment.

2.

The goal in valuing such properties is to value the reserves that are in the ground by discounting income over a period of time to reflect the production capabilities of those reserves. The essential mathematical formula to achieve that goal is: annual production rate times net price on valuation date equals estimated gross income times present worth factor associated with decline rate equals estimated gross reserve value. The decline rate is the most critical factor in establishing the proper valuation.

3.

Ad valorem taxation of oil and gas leases differs from that of most other personal property in that the assessment is based on the present worth of the lease's future production. The determination of the fair market value of a lease necessarily requires consideration of the expected future income potential of a lease, including the age and probable life of producing wells thereon.

4.

The decline rate is the annual percentage by which a well has or is expected to decrease in production as the recoverable mineral reserves are depleted. The failure by an appraiser to properly calculate and confirm the decline rate of a well will necessarily lead to an inaccurate reflection of its future production and result in an inaccurate valuation and assessment.

5.

The legislature has specifically mandated special treatment of new wells with production achieved after July 1 of the year preceding valuation in K.S.A. 2010 Supp. 79-331(b) by applying a 40% reduction in the amount of production that would have been achieved if the new well had produced the entire year prior to appraisal.

6.

Production data pertaining to periods after January 1 is relevant to a determination of an oil and gas lease's future productivity and earning potential as of January 1, particularly when there have been significant changes in production late in the year prior to assessment.

7.

Where the only available production data as of appraisal date for a new oil or gas well is clearly distorted by flush production, but all such data indicates that the

production rate from which a stable decline will commence has not yet been achieved, fair market value is not achieved by application to inflated production rates of a 30% assumed decline rate. Instead, the taxpayer is entitled not only to the statutory 40% reduction in annualized rate, but the maximum decline must be assumed in order to avoid overtaxation in the first year of assessment. All such data may include month to month comparisons, initial month to latest month comparison, or comparison with the characteristics of production in the same field or formation. Under these circumstances, to assume a 30% decline rate is to disregard statutory factors of value critical to determination of fair market value, including the age of the wells, their probable life, and the quantity of oil or gas that will be produced from the property.

8.

Where initial production on an oil or gas well is established after July 1 of the year prior to appraisal and reflects several months of flush production: (1) annualization of all available actual production data prior to April 1 of the tax year is required to achieve the proper production rate; (2) the 40% reduction mandated by K.S.A. 2010 Supp. 79-331(b) must be applied to that annualization; (3) decline rate should not be assumed if all available data demonstrates a decline that exceeds the assumed rate; (4) back-to-back quarterly comparisons of actual production are permissible for both oil and gas wells; and (5) such quarterly comparisons provide reliable information to calculate annual rate where flush production no longer distorts any monthly production amount used in the calculation.

Appeal from the Kansas Court of Tax Appeals. Opinion filed November 10, 2011. Reversed and remanded with directions.

James D. Oliver, of Foulston Siefkin LLP, of Overland Park, and *Charles R. Curran*, and *Scott C. Palecki*, of the same firm, of Wichita, for appellant EOG Resources, Inc.

Daniel H. Diepenbrock, of Law Office of Daniel H. Diepenbrock, P.A., of Liberal, for appellee Seward County.

Before GREENE, C.J., GREEN, J., and LARSON, S.J.

GREENE, C.J.: EOG Resources, Inc. (EOG) appeals a decision of the Kansas Court of Tax Appeals (COTA) establishing the value for ad valorem tax purposes of six oil and gas leasehold interests located in Seward County (County) for tax years 2007 and 2008. EOG argues that COTA erred as a matter of law or acted in a manner that was arbitrary, capricious, and unreasonable by failing to exclude the phenomena of flush production in determining either the annual production rate or the proper rate of decline for new wells on these six leases. We examine the evidentiary record for each of the wells at issue, together with applicable legal principles, and determine that COTA's decision must be reversed and remanded with directions.

FACTUAL AND PROCEDURAL BACKGROUND APPLICABLE TO ALL PROPERTIES

In 2005, EOG acquired several new oil and gas leases in Seward County, and production was obtained through new wells on five of these properties subsequent to July 1, 2006, and on a sixth property in late 2007. For tax years 2007 and 2008, EOG and the County argued about the proper methodology to calculate valuation for purposes of ad valorem taxation, and they principally argued about the correct manner to exclude for purposes of that valuation the distorting effect of flush production apparent on each lease. The dispute ultimately reached COTA, which heard evidence before issuing an order that redetermined the valuation of each leasehold interest for each of the tax years at issue. For purposes of our opinion on appeal, we reserve a more detailed discussion of applicable evidence and COTA's ultimate valuation of the leasehold interests for more specific treatment hereafter.

Procedurally, we note at the outset that EOG did not initially contest the extent to which flush production distorted the production rate utilized in the County's valuation calculation; instead, EOG's initial position focused exclusively on decline rate. In fact, COTA ultimately accepted EOG's proposed production rates in its initial order and decision. In EOG's motion for reconsideration, however, EOG clearly raised this issue, suggesting that "new calculations must be performed to factor out the influence of flush production in the annualized production rate," citing *Helmerich & Payne, Inc. v. Board of Seward County Comm'rs*, 34 Kan. App. 2d 53, 115 P.3d 149, *rev. denied*, 280 Kan. 982 (2005). This issue has now become one of the primary arguments of EOG on appeal. The County has asserted no procedural bar to our consideration of this argument, nor do we recognize any such bar given the clear preservation of the issue before COTA in the motion for reconsideration. See *In re Tax Exemption Application of Strother Field Airport*, 46 Kan. App. 2d 316, __, __ P.3d __ (2011); *In re Tax Appeal of Dillon Real Estate Co.*, 43 Kan. App. 2d 581, 589, 228 P.3d 1080 (2010).

STANDARDS OF REVIEW

Judicial review of orders of COTA is governed by K.S.A. 2010 Supp. 77-621. For purposes of this appeal, application of this statute requires the appellate court to grant relief (i) if the agency has erroneously interpreted or applied the law, K.S.A. 2010 Supp. 77-621(c)(4); or (ii) if the agency failed to follow prescribed procedure, K.S.A. 2010 Supp. 77-621(c)(5); or (iii) if the agency's action is arbitrary, capricious, or unreasonable, K.S.A. 2010 Supp. 77-621(c)(8). We do not perceive that EOG has challenged any of the factual findings of COTA, but it has challenged exclusively COTA's application of legal principles—appraisal principles—to the undisputed facts.

On appeal of COTA's decision, the party complaining bears the burden of demonstrating that the agency erred. K.S.A. 2010 Supp. 77-621(a)(1).

Interpretation of a statute is a question of law over which this court has unlimited review. *Unruh v. Purina Mills*, 289 Kan. 1185, 1193, 221 P.3d 1130 (2009). Kansas appellate courts no longer give deference to agency statutory interpretations. See *Kansas Dept. of Revenue v. Powell*, 290 Kan. 564, 567, 232 P.3d 856 (2010); *In re Tax Exemption Application of Kouri Place*, 44 Kan. App. 2d 467, 471-72, 239 P.3d 96 (2010).

OVERVIEW OF APPLICABLE LEGAL PRINCIPLES GOVERNING VALUATION OF OIL AND GAS INTERESTS FOR AD VALOREM TAXATION PURPOSES IN KANSAS

In *Helmerich*, 34 Kan. App. 2d at 53, a panel of this court noted the statutory guidelines and theory of oil and gas leasehold valuation for ad valorem taxation in Kansas:

> "For purposes of valuation and taxation in Kansas, all oil and gas leases and wells are considered personal property. K.S.A. 79-329. Persons who own such personal property are required to file a statement of assessment on standard rendition forms on or before April 1 of each tax year. K.S.A. 79-332a. In practice, the county appraiser then reviews the taxpayer's rendition and determines whether changes to the valuation are required and thereafter notifies the taxpayer of the appraised value. See K.S.A. 2004 Supp. 79-1460. The county appraiser is obligated to follow the Oil and Gas Appraisal Guide (Guide) prescribed by the Director of Property Valuation but may deviate from the Guide on an individual piece of property 'for just cause shown and in a manner consistent with achieving fair market value.' K.S.A. 79-1456. In determining the value of such property, the appraiser must also consider statutory factors of value.
>
> "'Except as otherwise provided in subsection (b) of this section, in determining the value of oil and gas leases or properties the appraiser shall take into consideration the age of the wells, the quality of oil or gas being produced therefrom, the nearness of the wells to market, the cost of operation, the character, extent and permanency of the market, the probable life of the wells, the quantity of oil or gas produced from the lease or property, the number of wells being operated, and such other facts as may be known

> by the appraiser to affect the value of the lease or property.' K.S.A. 2004 Supp. 79-331(a).
>
> "Consideration of these statutory factors is mandatory; failure to take into consideration any of these statutory factors will invalidate the assessment. See *Garvey Grain, Inc. v. MacDonald*, 203 Kan. 1, 14-15, 453 P.2d 59 (1969). In the context of oil and gas valuation, failure to give consideration to known production decline in making an assessment may be considered inadequate consideration of the 'probable life of the wells,' thus rendering the assessment arbitrary, capricious, and void as a matter of law. *Angle v. Board of County Commissioners*, 214 Kan. 708, 713, 522 P.2d 347 (1974). *Helmerich*, 34 Kan. App. 2d at 55-56.

The theory and practice for appraising such properties was endorsed by our Supreme Court in *Board of Ness County Comm'rs v. Bankoff Oil Co.*, 265 Kan. 525, 529, 960 P.2d 1279 (1998). The court quoted with approval an expert who noted that the goal is to value the reserves that are in the ground by discounting income over a period of time to reflect the production capabilities of those reserves. The essential mathematical formula to achieve that goal is: annual production rate times net price on valuation date equals estimated gross income times present worth factor associated with decline rate equals estimated gross reserve value. The court recognized that the decline rate is "the most critical factor in establishing its valuation." 265 Kan. at 529-30. The decline rate is the annual percentage by which a well has or is expected to decrease in production as the recoverable mineral reserves are depleted. The decline rate is then correlated to the associated present worth factor from a table in the Oil and Gas Appraisal Guide prepared annually by the Division of Property Valuation of the Kansas Department of Revenue (PVD Appraisal Guide).

Of particular consideration here is that the legislature has specifically mandated special treatment of new wells with initial production achieved after July 1 of the year preceding valuation in K.S.A. 2010 Supp. 79-331(b) as follows:

> "The valuation of the working interest and royalty interest, except valuation of equipment, of any original base lease or property producing oil or gas for the first time in economic quantities on and after July 1 of the calendar year preceding the year in which such property is first assessed shall be determined for the year in which such property is first assessed by determining the quantity of oil or gas such property would have produced during the entire year preceding the year in which such property is first assessed upon the basis of the actual production in such year and by multiplying the income and expenses that would have been attributable to such property at such production level, excluding equipment valuation thereof, if it had actually produced said entire year preceding the year in which such property is first assessed by sixty percent (60%)."

This special treatment was adopted in 1979 to address the problematic influence of flush production on the methodology for valuation of new oil or gas production. As noted by our Supreme Court in *State ex rel. Stephan v. Martin*, 230 Kan. 747, 749, 641 P.2d 1011 (1982):

> "It has long been recognized that when a new well is completed it will ordinarily produce at a far greater rate than will be customary for that particular well after only a few weeks or months have elapsed. This initial excessive production is referred to as 'flush production' and, if used as one of the factors for determining value, is misleading and often results in excessive valuation and assessment for the initial year of taxation. Prior to the amendments, local assessors often failed or refused to take into consideration the 'flush production' feature of new wells and for wells completed late in the year would merely annualize the initial 'flush production' and arrive at a greatly inflated production factor resulting in excessive valuation and assessment along with other consequences detrimental not only to the oil and gas producers and royalty owners but to the public at large."

Critical to our analysis here, however, is that our Supreme Court found K.S.A. 79-331(b) to be constitutional *only* because it was assumed that subsection (b) would be applied with due consideration of the factors set forth in subsection (a) of the same

statute, with the view that the objective "is to arrive at the actual fair market value of the property appraised" "as opposed to a fictional, unrealistic, or arbitrary determination." 230 Kan. at 755, 756. In fact, the court admonished that if subsection (b) was applied in a vacuum, the result might be found arbitrary.

> "If it should develop in practice that a county appraiser has assessed an oil and gas lease or property based solely upon the production factor of subsection (b) of the statute then such action might be found to be arbitrary. However, we cannot assume that such is the required result of the statute. On the contrary, *we must assume that the entire statute will be considered as a whole and properly applied with subsection (b) being considered only in determining 'the quantity of oil or gas produced' during the taxable period.* When so applied to all leases and properties from which production of oil or gas for the first time occurs on or after July 1 of the initial taxing year, no violation of the fair and equal provisions of the Constitution result." (Emphasis added.) 230 Kan. at 757.

The pernicious influence of flush production was elegantly explained by our Supreme Court in *Bankoff*:

> "Ad valorem taxation of oil and gas leases differs from that of most other personal property in that the assessment is based on the present worth of the lease's future production. The determination of the fair market value of a lease necessarily requires consideration of the expected future income potential of a lease, including the age and probable life of producing wells thereon. This methodology primarily arose out of the efforts of Dr. Charles F. Weinaug, a professor of petroleum engineering at the University of Kansas and a consultant to the Kansas Department of Revenue. This method was approved by our court in *Cities Service Oil Co. v. Murphy*, 202 Kan. 282, 447 P.2d 791 (1968).
>
> "The appraisal difficulties created by the flush production of a new lease are similar to the difficulties encountered when a lease begins a production decline late in the year preceding appraisal. The Guide developed by the Division of Property Valuation treats both incidents similarly, as *the failure to properly calculate and confirm the decline rate of a lease would inaccurately reflect its future production and result in an inaccurate*

> *valuation and assessment*, just as the failure to account for flush production in a new well would." (Emphasis added.) 265 Kan. at 541.

In *Helmerich*, we had occasion to address the impact and proper treatment of flush production when it occurs in an oil well that achieved initial production *prior to* July 1 of the year prior to assessment. We held in material part that production data that was "clearly abnormal" due to flush production "should not be considered for purposes of determining decline or for purposes of determining annual production as factors to be employed in the formula to calculate gross reserve value." 34 Kan. App. 2d at 62. Not before the court in *Helmerich*, however, was a situation where the initial production was achieved *on or after July 1* of the year prior to assessment (thus invoking K.S.A. 2010 Supp. 79-331[b]), and where the only available data for all months prior to the appraisal date reflected at least some degree of flush production. Squarely framed here is precisely that situation; thus, we must decide in this appeal how such flush production data must be interpreted in best arriving at fair market value for the leasehold interest. Obviously, our prohibition against considering such data in *Helmerich* is inapplicable where the *only* available production data available to the appraiser is distorted by flush production. Nevertheless, the general admonition recognized in both *Bankoff* and *Helmerich* that flush production has a distorting influence on both the production rate and the decline rate remains applicable.

Finally, we acknowledge the most essential holding of *Bankoff*: "Production data pertaining to periods after January 1 is relevant to a determination of an oil and gas lease's future productivity and earning potential as of January 1, particularly when there have been significant changes in production late in the year prior to assessment." 265 Kan. 525, Syl. ¶ 7.

Against this legal background, we examine the record evidence and apply these principles to the properties in question.

PROPER VALUATION OF HATCHER 8#1 OIL LEASE

EOG's Hatcher 8#1 lease first produced oil on December 8, 2006. During the 24 productive days of that month alone, 3,688 barrels were produced; within 12 months, the lease was producing only 315 barrels per month. The complete production history of this lease through the appraisal date for 2008 was as follows:

Month	Production (Barrels)
December 2006	3,688
January 2007	2,113
February	1,436
March	1,326
April	941
May	1,315
June	815
July	727
August	542
September	388
October	371
November	332
December	315
January 2008	428
February	366
March	307
April	343

2007 Tax Year

The County conceded that flush production was apparent from December 2006 through May 2007, but annualized production based only on the 24 days in December 2006 and assumed a decline rate of 30% prior to a K.S.A. 2010 Supp. 79-331(b) statutory 40% reduction. EOG argues that the County's annualization "included flush production" and that the evidence supported a decline rate in excess of 50%. EOG's contentions—if accepted—would reduce the gross reserve value subject to taxation by nearly 75%. COTA agreed with the County that there was insufficient data to support "an actual, normalized decline rate" and found appropriate the County's use of the 30% assumed decline rate.

These facts present the most challenging valuation problems in this case. With only 24 days of actual production before the valuation date (January 1, 2007) and the County's concession that this production was flush production, how should the production and decline rate be determined and how should the statutory 40% reduction be applied?

First, based on *Bankoff*'s mandate to consider postvaluation date production data, we conclude that the production data through March 31, 2007 "is relevant to a determination of the property's future productivity and earning potential." See 265 Kan. at 542. Thus, for the first 114 days of production, 8,563 barrels of oil were produced, and the annualization of this production yields an annual production rate of 27,416 barrels. Not only does this calculation minimize the distorting influence of the flush production, this annualization of all available data yields more precisely the production rate "if [the lease] had actually produced said entire year preceding the year in which such property is first assessed" for purposes of K.S.A. 2010 Supp. 79-331(b).

Second, given the Supreme Court's explanation that the statutory reduction should apply to the "'quantity of oil or gas produced'" (*Martin*, 230 Kan. at 757), the resulting annualized production rate for purposes of valuation should be 27,416 times 60%, or 16,449 barrels.

Finally, we agree that—as of the appraisal date—no "*stable*" *or* "*normalized*" rate of decline could be calculated, but it simply cannot be said that no decline was apparent given all available data. The absence of evidence of a stable or normalized rate does not dictate that an assumed declined rate of 30% should be applied. After all, even the applicable PVD Appraisal Guide (2007 & 2008, respectively) states that the assumed rate of 30% should be employed only "if the first few months of production and *all data available* do not indicate a reasonable rate of decline." (Emphasis added.) The PVD Appraisal Guide further provides that "this [assumed rate] is not automatic and is to be used only when the actual decline rate cannot be established." Here, the consideration of postvaluation date information clearly establishes that the decline already being experienced was far in excess of 50%; *i.e.*: (1) we know from examining the first 4 months of production that the well production had declined more than 50% between December and February—and this would indicate an annual decline "off the charts"; and (2) the daily production rate for December was 153.7 barrels, whereas the daily rate for the entire first quarter of 2007 was only 54.2 barrels. Thus, from raw production data alone, it is clear that this lease was declining in excess of 50% from its initial production. Thus, gross reserve value for tax year 2007 should have been determined using production of 16,449 barrels declining in excess of 50%. We leave the precise calculations deriving taxable valuation to the working interest and the royalty interest(s) to COTA on remand.

Where the only available production data as of the January 1 valuation date for a new oil or gas well is clearly distorted by flush production, but all such data indicates that the production rate from which a stable decline will commence has not yet been

achieved, fair market value is not achieved by application of a 30% decline rate. Instead, the taxpayer is entitled not only to the statutory 40% reduction in annualized rate, but the maximum decline must be assumed in order to avoid overtaxation in the first year of assessment. All such data may include month to month comparisons, initial month to latest month comparison, or comparison with the characteristics of production in the same field or formation. The essential point is that when or if a stable decline develops for the well, that decline will not commence at production levels anywhere near the initial flush production rates. Under these circumstances, to assume a 30% decline rate is to disregard statutory factors of value critical to determination of fair market value, including the age of the wells, their probable life, and the quantity of oil or gas that will be produced from the property. Application of this holding will be demonstrated below to the first lease at issue here.

We pause in our analyses to corroborate these conclusions and our holding. The goal here is to determine fair market value of the remaining mineral reserves, based on production already achieved. For how many years and at what rate might the remaining reserves continue to be produced? We have already utilized an annual production rate known to exceed by multiples of any likely future production. Granted, the 40% statutory discount lends some reality to the calculation, but if the apparent decline rate is already far in excess of 50%, an assumption of a lesser decline will clearly overstate current value. The present worth factor (pwf) for the 30% rate is 1.552, whereas the pwf for a 50% rate is .79. Thus, the potential error of COTA in embracing the annualization of only the December production here, factored by the statutory reduction and coupled with an assumed decline rate of 30% necessarily assumed that 2007 production would approach 38,000 barrels. We now know from the actual data, however, that 2007 production totaled only 10,621 barrels. This overstatement of value leads us to conclude that COTA's rationale and value conclusion is wholly unreasonable and must be reversed and vacated on this ground alone.

2008 Tax Year

As noted above, there was apparently no dispute at the initial COTA hearing as to actual production for the calendar year, but EOG's motion for reconsideration suggested that this rate merited adjustment to disregard flush production. At the initial hearing, the principal issue was decline rate. The County applied an assumed 30% decline rate "because the production was starting to level off after the flush ended." EOG requested a decline rate of 45% based in part on an "Aries" computer graph and a back-to-back analysis that demonstrated a 38.6% quarterly decline which indicated an annual decline rate in excess of 50%.

COTA conceded that there were two full quarters of postflush production that could be considered in 2007, and one quarter in 2008, but rejected a back-to-back approach because "the use of a singular back-to-back quarter analysis to establish a stable and normalized rate of decline should also be supported by additional evidence in order to show that the decline experienced in such a short period reflects a normalized rate of decline." COTA found that this principle was supported by the 2008 PVD Appraisal Guide, which stated that "more than a single quarter decline should be considered when trying to establish an annual rate" and suggested that "results should be compared with other estimates of decline for the same lease or the typical decline for the area."

We respectfully disagree with COTA in rejecting a singular back-to-back quarter analysis here. Comparison of third and fourth quarter production in 2007 establishes a quarterly decline of 38%, which indicates an annual rate far in excess of 50%. Although production spiked a bit in early 2008 (which was not explained in the record but may have been the result of artificial stimulation), even a comparison of production in January and March 2008 indicates a decline of 28% in only 60 days, and that would also drive an annual rate far in excess of 50%. Monthly declines after the flush production period were often 25%, also indicating an annual rate far in excess of 50%. These clear mathematical

conclusions cannot be disregarded; there was ample evidence that EOG was entitled to the maximum decline rate permitted under the PVD Appraisal Guide. Additionally, these indications of the 2008 decline should be examined against the backdrop of our valuation conclusion in 2007; *i.e.*, this lease has since inception indicated a very high rate of decline, both during *and after* initial flush production. This was simply not a situation justifying a default assumption of a 30% decline rate. We acknowledge that there was not the same precise corroborating evidence as we noted in *Helmerich*, but there was plenty of corroboration by the raw data.

Additionally, we recognize that this lease may someday achieve a stable decline rate less than 50%. If or when it does so, the rate of production will then necessarily be a fraction of the high flush production rates achieved in its first 4 or 5 months of production. Does this mean that some of the reserves may have forever escaped taxation by reason of our conclusions or holdings? No; the appraisal scheme is virtually self-correcting. To the extent that reserves may be slightly underestimated in the early years of productivity, EOG will ultimately be taxed on those reserves because they are recomputed and taxed every year of each well's productive life. In contrast, if the reserves are overstated and overtaxed in the early years of production, EOG's excessive tax payment can never be recouped from the County. This truism may indeed be quite consistent with the policy underlying the legislature's enactment of K.S.A. 2010 Supp. 79-331(b), which attempted to assure that producers were not overtaxed for leasehold interests developed late in a calendar year.

Although EOG's "Aries" computer graph of decline is urged as further support of decline rate, we are not inclined to consider its value on appeal because COTA found the graph unreliable due to lack of foundation, uncertainty as to its data points, and inclusion of "speculative" data points. Such graphical analysis, however, is not necessary to establish decline rates that are apparent from mathematical comparisons of raw production data. As we noted in *Helmerich*, such engineering curves or gross reserve

estimates can indeed support a decline rate analysis achieved by a comparison of singular back-to-back quarters. 34 Kan. App. 2d at 64. Here, they are not necessary because of the additional evidence noted above that supports the 50% decline rate.

PROPER VALUATION OF MCQUILLEN 19#1 GAS LEASE

EOG's McQuillen 19#1 gas lease attained initial production on November 21, 2006, and had produced nearly 42,000 million cubic feet of gas (Mcf) before the end of the year, or an average daily production of 900 Mcf. Within a year, daily production had slipped to only 140 Mcf—an 80% decline. Production history through the appraisal date for 2008 was as follows:

Month	**Production (Mcf)**
November 2006 (10 days)	14,903
December 2006	27,084
January 2007	19,144
February	13,989
March	12,270
April	11,450
May	9,994
June	8,315
July	7,057
August	7,166
September	5,706
October	5,885
November	4,219
December	4,755
January 2008	4,388

February	4,130
March	3,931
April	3,620

2007 Tax Year

Once again, the County conceded that as of the appraisal date (April 1, 2007), part if not all production from this lease was flush production. Until the motion for reconsideration, EOG does not appear to challenge the production rate, but that motion clearly suggested that the production merited an adjustment for flush production. As in the case of the Hatcher oil lease, the principal dispute at COTA's hearing was not the annual production rate but the decline, with the County assuming a 30% decline and EOG contending the apparent decline was 45%.

COTA rejected EOG's contended decline rate, noting that the PVD Appraisal Guide instructs that the "appraiser should use an assumed 30% decline rate for new wells . . . unless an actual rate can be established with supporting documentation." COTA concluded that "a reasonable amount of time had not passed to establish a normalized decline," thus finding appropriate the assumed 30% decline rate.

Again, we respectfully disagree with COTA's application of the law to the facts presented. *First*, based on *Bankoff*'s mandate to consider postvaluation date production data, we conclude that the production data through March 31, 2007, "is relevant to a determination of the property's future productivity and earning potential." See 265 Kan. at 542. Thus, for the first 131 days of production, 87,390 Mcf of gas were produced, and the annualization of this production yields 211,241 Mcf. *Second*, given the Supreme Court's explanation that the statutory reduction should apply to the "quantity of oil or gas produced" (see *Martin*, 230 Kan. at 757), the resulting production rate for purposes of valuation should be 211,241 times 60%, or 126,744 Mcf. That is, the statutory reduction

must be applied to annual production *prior to* application of any decline rate analysis. *Finally*, here again we must reject the notion that an assumed rate was justified when virtually all available data showed that a decline in excess of 50% was being experienced. Here, as in our analysis of the Hatcher 8#1 oil lease, the consideration of postvaluation date information clearly establishes that the decline being experienced was far in excess of 50%; *i.e.* (1) we know from examining the first 5 months of production that the well had declined more than 50% between December and February—and this would indicate an annual decline rate that was "off the charts"; and (2) the daily production rate for December was 874 Mcf, whereas the daily rate for the entire first quarter of 2007 was only 504 Mcf. Thus, from raw production data alone, it is clear that this lease would decline in excess of 50% from its initial production. Accordingly, the gross reserve value for tax year 2007 should have been determined using a gas production of 211,241 Mcf declining in excess of 50%. We leave the precise calculations deriving taxable valuation to the working interest and the royalty interest(s) to COTA on remand.

2008 Tax Year

Here, the factual contentions were not unlike those for the 2007 tax year, except EOG contended the apparent decline rate was 50% based on back-to-back quarter comparisons and the "Aries" computer model. COTA rejected this contention, again quoting the PVD Appraisal Guide, but also stating:

> "The production of gas wells is rendered on an annual basis, not monthly. Further the Court notes that the two appellate cases addressing the use of a back-to-back quarter analysis involved the decline rates of oil wells, not gas wells. This raises an interesting question regarding the applicability of the back-to-back quarter analysis for gas wells. However, assuming the back-to-back quarter analysis may be applicable to gas wells, the same reasoning as previously discussed would apply. As explained in more detail with respect to the Hatcher 8#1 lease, the Court's conclusion regarding the remaining wells is that the evidence presented by the Taxpayer is insufficient to support the use of its

> decline rates. While the County utilized the assumed 30% decline rate, the County did not do so automatically. The County considered the data available and concluded that a reasonable amount of time had not passed to establish a normalized decline. As a result, based upon the entirety of the evidence presented, the Court concludes that the County's use of the 30% decline rate for tax years 2007 and 2008 was appropriate."

As to production rate, we note that the County conceded that flush production was evident thru May 2007. Disregarding such production, a realistic production rate can be calculated by annualizing actual production through the balance of the year, June through December, a total of 43,103 Mcf, for an annualized rate of 73,175 Mcf.

As to decline rate, we must first address COTA's "interesting question" as to the viability of comparing back-to-back quarters in determining the decline of gas production. We see no reason this is not just as valid for gas as it is for oil. The statutory framework for the appraisal of oil and gas leases makes no distinction between oil and gas production, and the gas section of the PVD Appraisal Guide often incorporates or refers to the parallel provisions in the oil section. Back-to-back quarter comparisons provide a valuable vehicle to determining annual decline rate for either type of production, especially where there is substantial distortion in actual data due to flush production.

Analyzing quarterly data, we note that there is actual production data here after the conceded flush production to compare three back-to-back quarters. Comparing quarter three to quarter four of 2007, the quarterly decline rate is 25%, and comparing quarter 4 of 2007 to quarter 1 of 2008, the quarterly decline is 16%, both of which indicate an annual decline rate in excess of 50%. We respectfully disagree with COTA's conclusion that there was insufficient data to support this rate of decline; it is born out in undisputed actual production information during a period beyond any distortion by flush production.

We fear that in rejecting a more realistic decline rate for 2008, COTA may have been influenced by the testimony of the Seward County Appraiser, who testified that the assumed decline rate of 30% was corroborated by her calculation of decline after the flush production was no longer apparent. Unfortunately, her calculation used a comparison of an annualized 6-month period in 2007 and compared it to an annualized 3-month period in early 2008. This same mathematically flawed approach was also employed by this appraiser in the *Helmerich* case, where it was expressly criticized and rejected by this court. 34 Kan. App. 2d at 64.

PROPER VALUATION OF REMAINING GAS LEASES

COTA's Order contains no lease-specific discussion of each of the remaining gas leases involved here, but it notes that "[EOG] made similar arguments and presented similar documents and testimony regarding each lease." By attachments to the Order, however, COTA derived the lease-specific valuation on all properties involved, and it is apparent that the assumed decline rate of 30% was applied to all. Annual production was not contested until the motion for reconsideration, but—as noted above—that motion was denied without further discussion.

We similarly decline to discuss each of the remaining leases other than to say that our rationale and conclusions applicable to the Hatcher 8#1 and McQuillen 19#1 are equally applicable to the remaining leases. Thus, the valuation determined by COTA for each such lease for each respective tax year is reversed and vacated, and the entire case is remanded to COTA for precise determination of values in a manner not inconsistent with this opinion.

SUMMARY AND CONCLUSION

In summary, we have held that where initial production on an oil or gas well is established after July 1 of the year prior to valuation and reflects several months of flush production, (1) annualization of all available actual production data prior to April 1 of the tax year is required to determine the production rate; (2) the 40% reduction mandated by K.S.A. 2010 Supp. 79-331(b) must be applied to that annualization; (3) the decline rate should not be assumed if there is available data demonstrating a decline that exceeds the assumed rate; (4) back-to-back quarterly comparisons of actual production are permissible for both oil and gas wells, and (5) such quarterly comparisons provide reliable information to calculate the annual rate where flush production no longer distorts any monthly production amount used in the calculations.

We have reversed COTA's valuation determinations for all properties and all respective tax years framed by this appeal, concluding that (1) COTA erroneously interpreted or applied the law in failing to recognize the pernicious influence of flush production on the production and decline rates employed in its final valuation determinations and in failing to consider all data available as of the appraisal date; (2) COTA failed to follow prescribed procedures in endorsing assumption of decline rates that were facially erroneous considering all available data; and (3) COTA's final valuation determinations were unreasonable in utilizing overstated production rates and understated decline rates. See K.S.A. 2010 Supp. 77-621(c)(4), (5), and (8).

We recognize that aspects of our holdings herein may not square with the most recent 2011 edition of the PVD Appraisal Guide. To the extent of any variance, we have relied exclusively on statutory factors and procedures, and any statement or direction in the PVD Appraisal Guide that is inconsistent with our opinion is erroneous as a matter of law. See *Garvey Grain, Inc. v. MacDonald*, 203 Kan. 1, 12, 453 P.2d 59 (1969).

We remand to COTA with directions to recalculate all valuation determinations in this case in a manner not inconsistent with this opinion and to order associated refunds by the County.

Reversed and remanded with directions.