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HORIZONTAL DRILLING - STRAIGHT ANSWERS FOR
CROOKED HOLES

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BIOGRAPHY

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HORIZONTAL DRILLING
Straight Answers for Crooked Holes

Horizontal drilling in Oklahoma has overtaken the drilling of vertical wells. The first significant use of horizontal technology was in the Woodford shale in Eastern Oklahoma. The trend continued with development of the Woodford shale in the Cana Field in Canadian and Blaine counties. However, the use of horizontal laterals has now exploded with development of the Mississippi, Hunton, Cleveland, Tonkawa, Granite Wash, Cottage Grove, Cherokee and Marmaton, among other formations, in all parts of Oklahoma.

Accompanying the expanded use of horizontal laterals has been the evolution of the regulatory landscape. The Conservation Statutes have changed in several ways as a direct result of the different legal issues raised by horizontal drilling. Those statutory changes have also resulted in both new and revised rules from the Oklahoma Corporation Commission ("Commission"). The interrelationship of horizontal spacing units and pooling with vertical units and pooling, is just now being explored at the Commission. This paper will address several issues created by these circumstances.

I.

HORIZONTAL DRILLING AND SPACING UNITS

A. HORIZONTAL DRILLING AND SPACING UNITS FOR GAS.

The jurisdiction of the Oklahoma Corporation Commission relating to conservation of oil and gas is limited to the power expressly or impliedly granted to it by the Oklahoma Constitution or Statues. *Gulf Oil Corp. v. State, 1961 OK 71, 360 P.2d*
933. The provisions of 52 O.S. §87.1 provide to the Commission its power to establish drilling and spacing units. Prior to a 2007 amendment to that statute the Commission's authority to establish such units was expressly limited by 52 O.S. §87.1(d). That statute had no reference to horizontal spacing. In its pre-2007 form, the spacing statute originally prohibited drilling and spacing units larger than forty (40) acres in size for a common source of supply of oil, the top of which was shallower than 4,000 feet below the surface. Similar prohibitions prevented units larger than 80-acres in size for a common source of supply found shallower than 9,990 feet; and, prevented units greater than 160-acres in size for a common source of supply of oil found deeper than 9,990 feet.¹

Based upon the fact that companies were interested in drilling horizontal laterals of a length which could not be accommodated by the smaller drilling and spacing units in oil bearing formations, the Legislature in 2007 amended the conservation statute by adding 52 O.S. §87.1(f) as follows:

"Notwithstanding any provision of this section to the contrary, the Corporation Commission shall have jurisdiction upon the filing of a proper application therefor, and upon notice given as provided in subsection (d) above, to establish spacing rules for horizontally drilled oil wells whereby horizontally drilled oil wells may have well spacing units established up to six hundred forty (640) acres plus tolerances and variances as allowed for gas wells pursuant to subsection C of this section. For purposes of this subsection a 'horizontally drilled oil well' shall mean an oil well drilled, completed or recompleted in a manner in which the horizontal component of the completion interval in the

¹ 52 O.S. §87.1(c) limits a drilling and spacing unit for a common source of supply of gas to no more than 640-acres in size. In addition, in its current form §87.1(d) no longer refers to a 160-acre size limitation.
geological formation exceeds the vertical component thereof and which horizontal component extends a minimum of one hundred fifty (150) feet in the formation. The Corporation Commission shall promulgate rules necessary for the proper administration of this subsection.” (Emphasis added)

An immediate question was raised by the highlighted language within this amendment to the conservation statute. Given the fact that the Commission may only draw its power to establish drilling and spacing units from that statute, there was some suggestion that the Commission did not have the power to create a horizontal drilling and spacing unit for the production of predominantly gas. Most of the mineral bar concluded that there was no limitation on the Commission’s authority in that regard.

Oklahoma, like a number of other states with significant oil and gas reserves, experienced the wasteful practice of production of oil and gas by too many wells drilled in too close a proximity to each other. In response to that fact the Conservation Act was originally enacted to avoid the drilling of unnecessary wells.²

The Oklahoma oil and gas conservation statutes have as their primary purpose the protection of correlative rights of owners in common sources of supply, including prohibition of waste of oil and gas. The Oklahoma Supreme Court has condoned the exercise by the Commission of the State’s police power to regulate the drilling and production of oil and gas wells based upon such statute. See Anderson-Prichard Oil

² The current provisions of 52 O.S. §87.1 are successors to a series of now repealed statutes which were designed to limit the excessive production of oil and gas. The Corporation Commission’s first apparent conservation rules were approved in 1917 following legislative enactment of the first oil and gas conservation laws that same year. See Order No. 1299 issued in Cause No. 2935.

Express language contained within the conservation statute simultaneously authorizes creation of drilling and spacing units and limits the number of wells which can be produced therein. 52 O.S. §87.1(c) includes a directive that any spacing order entered by the Commission specify the geographical surface boundaries of a unit; the size and shape of such unit; the drilling pattern for such unit; and, the location of the permitted well. That same provision obligates the Commission to issue spacing orders which "direct that no more than one well shall hereafter be produced from the common source of supply on any unit so established . . ." As noted above the statute expressly limits the size of drilling and spacing units. However, other than the general admonition for establishing a well pattern and location as described above, there is no specific footage set back requirement prescribed therein. The latter fact is significant in the analysis of the Commission's power to create horizontal gas units.

The most apparent purpose of 52 O.S. §87.1(f) was the expansion of Commission authority so as to allow creation of an oil unit for horizontal wells of a size which would otherwise have been prohibited by the depth related unit size limitations of 40-acres, 80-acres or 160-acres for standard oil units. If that was the only purpose of the amendment, the Commission should not be constrained from creating horizontal drilling and spacing units for production of predominantly gas. The provisions of 52 O.S. §87.1(c) already authorize the creation of drilling and spacing units for gas up to 640-acres in size. Nothing within that particular provision dictates that the authorized well for such units be drilled as a vertical well. In fact, directionally drilled wells have
never been suggested to be prohibited by the wording of the statute. Accordingly, it would seem to follow that there is no prohibition of horizontal gas units as long as the 640-acre limitation is acknowledged.

There is an esoteric argument that the potentially different productive characteristics of a horizontal well should be considered as significant to this argument. Although not necessarily supported by exact engineering modeling, there is often an assumption of radial drainage by a vertically drilled well. Arguably, the production of gas from a horizontal lateral changes that drainage pattern so as to exacerbate the effect upon the common source of supply in adjoining lands. Given that assumed fact, it could be argued that the Legislature purposely limited the Commission’s power to create horizontal units to common sources of supply producing primarily oil. However, that position appears to be less supportable for no other reason than that it depends upon too many technical assumptions. Another argument against Commission authority to create horizontal gas units might be based upon a contention that a horizontal unit allows the drilling of gas wells closer to an adjoining tract than would be allowed in a standard unit. There is an admitted advantage in the creation of horizontal drilling and spacing units if the permitted bottomhole locations authorized by the spacing order for such unit provides for such fact. However, that advantage has nothing to do with the statutory language of 52 O.S. 87.1(f). As noted above no part of the conservation statute has express requirements for permitted well locations. The more liberal location allowables for a horizontal unit are found in the rules implemented by the Commission.
B. THE ADVANTAGES AND DISADVANTAGES OF HORIZONTAL DRILLING AND SPACING UNITS.

If my opinion is requested by a client concerning whether to consider creation of horizontal drilling and spacing units for a particular geological prospect, my first question always concerns whether the anticipated production is oil or gas. If the answer is that gas is expected, my typical recommendation is that no application be filed for horizontal units. That answer is not based upon a jurisdictional concern. Rather, it is offered because the disadvantages of those units will often outweigh the advantage of drilling gas wells on non-horizontal units.

There are two (2) primary advantages to a horizontal drilling and spacing unit. The first has application to the discussion above concerning common sources of supply of oil. As noted above the size limitations for oil units contained within 52 O.S. §87.1(d) are removed by 52 O.S. §87.1(f). The second advantage is a product of Corporation Commission rules for horizontal units. By virtue of OAC 165:10-1-24(a) of The General Rules of Oklahoma Corporation Commission the permitted location for a standard 40-acre unit, or the proper square 40-acre tract within a standard 80-acre unit, is not less than 330 feet from the boundary thereof. For a standard 160-acre unit, or the proper square 160-acre tract within any standard 320-acre unit, the permitted location is not closer than 660 feet from the boundary thereof. Finally, for a standard 640-acre unit the permitted location is not less than 1,320 feet from its boundary. OAC 165:10-3-28 of those same General Rules relaxes the location requirements for horizontal units. The permitted location for any 80-acre or 160-acre horizontal well unit is not less than 330 feet from its boundary. The permitted location for a 320-acre or 640-acre
horizontal well unit is not less than 660 feet from its boundary. Given that the first stated advantage has relevance only to oil units, the question raised if horizontal gas units are considered is whether the location allowances are enough of an advantage to overcome the issues which may exist with horizontal units.

The liberal permitted locations for a 640-acre horizontal gas unit could be a significant advantage if opposition to a location exception request by an offset owner is anticipated. However, in most instances the horizontal well is being drilled because the formation is tight. That fact has tended to inhibit the ability of a protesting offset owner to either deny a location exception, or have an allowable adjustment imposed by the Commission. Given that fact, the delay caused by such protest is all that is avoided by creation of a horizontal unit.

It is a fact that there is an enhanced production allowable for horizontal oil wells as described in Appendix C (Table HD) of The General Rules of the Commission. But that increased allowable applies to any horizontally drilled oil well, not just to a well drilled in a horizontal unit. Admittedly to qualify for the highest potential allowable a minimum length of lateral must be drilled. If there is the potential for producing high volumes of oil these allowable rules do provide significant advantage to oil wells drilled in horizontal units for the simple reason that the limitations on the size of standard oil units would not allow room within which to drill the required length of lateral.

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3 OAC 165:10-3-28(e) now provides for a distinction between "conventional" and "unconventional" reservoirs insofar as well location requirements for horizontal well units. In an unconventional reservoir the permitted location for any 80-acre, 160-acre, 320-acre or 640-acre horizontal unit is not less than 330 feet from a unit boundary.
Notwithstanding the foregoing, there are some potential distinct disadvantages to horizontal drilling and spacing units which may override all of the described benefits accruing therefrom. Those disadvantages are not a function of the provisions of 52 O.S. §87.1(f). Rather, the issues result from unresolved legal questions relating to the relationship of vertical units and horizontal units; and, pooling orders which relate thereto.

C. ISSUES CREATED BY SIMULTANEOUS EXISTENCE OF VERTICAL AND HORIZONTAL SPACING

The provisions of OAC 165:10-3-29(e) provide as follows:

(e) Drilling and spacing units.

(1) A horizontal well may be drilled on any drilling and spacing unit. (3-20-91)

(2) A horizontal well unit may be created in accordance with 165:10-1-22 and 165:5-7-6. Such units shall be created as new units after notice and hearing as provided for by the Rules of Practice, OAC 165:5. (7-11-2010) (Emphasis added)

(3) The Commission may create a non-standard horizontal well unit covering contiguous lands in any configuration or shape deemed by the Commission to be necessary for the development of a conventional reservoir or any unconventional reservoir by the drilling of one or more horizontal wells. A non-standard horizontal well unit may not exceed 640 acres plus the tolerances and variances allowed pursuant to 52 O.S. § 87.1. (7-11-2010)

(4) A horizontal well unit may be established for a common source of supply for which there are already established non-horizontal drilling and spacing units, and said horizontal well unit may include within the boundaries thereof more than one existing non-horizontal drilling and spacing unit for the common source of supply. (3-20-91)
(A) Horizontal well units may exist concurrently with producing non-horizontal drilling and spacing units. (3-20-91) (Emphasis added)

(B) Horizontal well units shall supersede existing non-developed non-horizontal drilling and spacing units. (7-11-2010). (Emphasis added)

The first issue raised by the quoted Commission rules relates to the statement that horizontal units shall be created as “new” units. If there is existing vertical spacing for the common source of supply affected by the horizontal unit, the logical conclusion might be that such vertical units are not just “old” units, but perhaps “different” units. That conclusion has the potential for creating very significant legal issues.

As a predicate to discussion of this specific concern, it is important to note that neither 52 O.S. § 87.1, nor any Commission rule, require that vertical spacing be vacated in anticipation of the creation of horizontal units. Therefore, it is not unusual to have both vertical and horizontal units existing for the same common source of supply.

As noted above OAC 165:10-3-28(e)(4) contemplates the simultaneous existence of vertical and horizontal spacing. There was some effort made by that Rule to anticipate the legal questions raised by such fact. The Rule refers to “concurrent” existence of such units when there is production from a vertical unit; but, also notes that

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4 In early 2013 there was consideration given to a proposal to amend the spacing statute by a group of oil and gas industry representatives (both mineral and working interest owners) who participated in a series of discussions relating to horizontal development. One of the originally proposed changes was a requirement to vacate vertical spacing as a pre-condition to Commission approval of horizontal units. However, after objection by a number of parties that proposal was withdrawn.
the a horizontal unit will supersede “non-developed” vertical drilling and spacing units. However, that Rule raises more questions than the answers intended to be given.

It is interesting to note that the word “producing” is used in connection with horizontal units that will exist concurrently with vertical units, while the word “non-developed” is used to identify vertical units which will be superseded by horizontal units. That fact raises the question of whether a vertical unit possessed of a plugged well which originally produced the common source of supply was intended to be superseded. There has been no Commission ruling to date on that question.

An application to create a horizontal drilling and spacing must be carefully analyzed by a working interest owner in an existing vertical well within the geographical boundaries of the proposed unit. The mere fact that the horizontal unit will exist “concurrently” with the vertical spacing unit covering the same common sources of supply does not guarantee that the working interest owners’ rights in a vertical well are protected. Assume that the Smith No. 1 well is a vertical well perforated only in the Chester Formation, but has “behind pipe” reserves in the Tonkawa Formation subject to 80-vertical acre spacing which have never been produced in the wellbore. If a horizontal drilling and spacing unit is created for the Tonkawa common source of supply in a section of land which includes the Smith No. 1 well, the horizontal spacing order will “supersede” the 80-acre Tonkawa vertical unit covering that wellbore. The result of that fact is the inability to re-complete the wellbore in the Tonkawa Formation for as long as the horizontal unit remains in place. The solution to that problem is an exception within the horizontal spacing order providing express authority to perform that
re-completion at an appropriate time in the future. However, that exception must be requested or the horizontal spacing order will "supersede" the vertical unit.

A second difficult question arises from a fact circumstance involving a vertical unit which has been the subject of a pooling order covering the common source of supply affected by the horizontal spacing. Take for example a fictional 640-acre horizontal drilling and spacing unit created to cover the Tonkawa common source of supply in Section 1 of any township in Oklahoma. Assume that prior to creation of the horizontal unit the Commission had established 80-acre vertical drilling and spacing units for the Tonkawa; and, thereafter had issued a pooling order covering one such 80-acre unit in which a well has been completed so as to perpetuate that pooling order. Under existing Oklahoma law any owner subject to that pooling order who did not participate in the risk of unit development is deemed to have relinquished its working interest and right to drill in the Tonkawa common source of supply to the Applicant who filed for that pooling order. Those relinquished rights vest in that party by the drilling and production of an initial unit well. The rights remain vested until the order is vacated by the Commission.

In the hypothetical circumstance above, the working interest rights of any non-participating owner under the original pooling order would have vested in the applicant/operator. Unless the pooling order is subsequently vacated by Commission order, those rights remain vested at the time of the creation of the horizontal unit. That

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fact creates significant ambiguity concerning who possesses the working interest for purposes of a new pooling application covering the horizontal unit.

The *Amoco* decision (discussed in more detail in Part II of this paper) provides for "unit" pooling; and, for vesting of working interests in common sources of supply. As noted above, the provisions of OAC 165:10-3-28(e)(2) leave room for an argument that a "vertical unit" might be different from a "horizontal unit." If that was true for all purposes, the working interest rights vested pursuant to the hypothetical above could be argued to exist only in the vertical unit. As a result, the oil and gas owner whose rights were relinquished under the original pooling order would be in a position of again being considered a working interest owner in the horizontal unit. The result of that fact would be the need to re-pool such owner's rights in a new pooling application covering only the horizontal unit. However, there are significant legal problems with that form of analysis.

52 O.S. § 87.1 refers simply to creation of drilling and spacing units for "common sources of supply"; and does not create a distinction between a common source of supply for a horizontal unit versus a vertical unit. Therefore, if the hypothetical owner described above for the pooling of the vertical unit has relinquished its working interest in the Tonkawa common source of supply within that unit, it is difficult to justify why such rights would be restored to the previous owner simply by creation of the horizontal unit. The principles of the *Amoco* decision reinforce that proposition.

In *Amoco*, the Court explained that by virtue of the risk taken by participating owners in the drilling and completion of oil and gas wells, the Applicant/Operator under a pooling order is vested with all of the working interest rights of non-participating
owners in the pooled unit; and, in all common sources of supply included within that unit. Those rights cannot be constitutionally divested except by subsequent order of the Commission vacating the pooling order based upon a change in knowledge of condition. The mere entry of an order creating a horizontal unit for the same common source of supply previously pooled in a vertical unit would not have the affect of modifying rights vested under the original pooling order. To suggest otherwise would be to condone an impermissible collateral attack on that order. See Inexco, supra. Given that fact, the party to whom the rights were relinquished under the prior pooling order should retain those rights for purposes of horizontal development.

The Commission has, on at least one occasion, entered an order in accordance with the latter suggestion. In Cause CD No. 200805912, the Commission issued Order No. 559931, the terms of which found that the rights relinquished under a pooling for a vertical unit would remain vested for purposes of pooling a horizontal unit covering the same common source of supply. However, it must be noted that such order did not result from a protested cause. There was no briefing done for the Commission; and, no legal arguments were presented in support of the requested relief.

This postulated set of circumstances is one primary reason for drilling a horizontal well on a 640-acre vertical unit if that possibility exists. If a horizontal well can be drilled in a 640-acre vertical unit there would not exist the potential for the controversy discussed above. That unit can be pooled one time; and, the order would accommodate either vertical or horizontal wells.

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C. POOLING OF VERTICAL UNITS WITH THE INITIAL OPERATION PROPOSED TO BE A HORIZONTAL WELL.

In the Application of Panther Energy, Cause CD No. 200603531, the Commission entered an order pooling oil and gas owners in a standard 640-acre drilling and spacing unit. One pooled owner objected to the fact that the initial well proposed was a vertical "pilot hole" which was not proposed to be completed as a producer. Depending upon the result of that "pilot hole" there was to be drilled a horizontal well. The Commission rejected the protestant's argument that the initial "pilot hole" would not satisfy the requirements of 52 O.S. §87.1(e), and, could not be the predicate for relinquishment of unit rights. The Panther case was not appealed to the Oklahoma Supreme Court. The author still believes this issue has merit. The Conservation Statute clearly contemplates that the entry of pooling orders be based upon the intention of developing pooled common sources of supply with the initial wellbore. If a particular operation is defined as the initial unit well it should result in a wellbore capable of developing, i.e. producing, the pooled common sources of supply.

II. POOLING ORDERS FOR HORIZONTAL WELLS

In 1980 the Oklahoma Supreme Court issued C. F. Braun & Co. v. Corporation Commission, 609 P.2d 1268, 1980 OK 42, a case of first impression interpreting the Commission's authority to include multiple common sources of supply in one pooling order. The perceived result of the case was confirmation of the power of the Commission to issue pooling orders which would impact all spaced common sources of supply to be penetrated in a vertical well. After the issuance of the opinion in C. F. Braun all pooling orders which included multiple common sources of supply were
routinely approved. There were only rare cases in which the principles of that case were trolled out for argument.

With the advent of horizontal development in Oklahoma, especially in areas where the potential for use of such technology in more than one type of geological formation have become apparent, the law established in C. F. Braun has once again become the subject of debate.

A. HISTORY OF THE POOLING STATUE

The original act from which the current pooling statute evolved was passed in 1945. That statute was the direct result of certain ordinances utilized by the City of Oklahoma City to control drilling and provide the operator a basis for establishing a relationship with the unleased owners. The Oklahoma City ordinance allowed creation of "drilling blocks" in which a well could be drilled. The unleased mineral owners within that drilling block were provided the opportunity to participate in the cost of such well, but were given the alternative of leasing their rights in the block. The ordinance required that such owners be offered a fair and reasonable bonus in exchange for the lease.

The Supreme Court of Oklahoma ruled that the foregoing municipal ordinance was valid in Amis v. Bryan Petroleum Corporation, 90 P.2d 936 (Okla. 1939). Thereafter, the Oklahoma legislature created the first statute relating to creation and

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8 A discussion of the Kansas ordinance which was the foundation for the Oklahoma City ordinance is found in Marrs v. City of Oxford, 32 F.2d 134 (8th Cir. 1929).

9 See Phillips Petroleum Co. v. Davis, 194 Okla. 84, 147, P.2d 135 (1942).
development of drilling and spacing units.\textsuperscript{10} Obviously, that statute mirrored a number of the concepts displayed in the municipal ordinance. The drilling and spacing unit served the function of the drilling block, the foundation for proportionate sharing of the royalty interest. The Conservation Statute was subsequently expanded to expressly provide for an option to participate, or the alternative right to “lease or sell” an affected working interest.

Prior to 1957 Commission pooling orders typically required that owners who chose not to participate in the drilling of the initial well “sell a lease” to the applicant in exchange for the bonus consideration provided in the order.\textsuperscript{11} Gradually, thereafter, such orders were supplanted by orders containing provisions comparable to those used today.

Most of the pooling orders issued after 1957 did not specifically state that the order would cover all wells ultimately drilled in a unit. Most such orders simply stated the order was adjudicating rights “as a unit.” This fact was largely ignored until increased density drilling begin in the late 1970's. The Commission’s original stated position on this matter came in Order No. 243274 issued in Cause CD No. 63843, a pooling application of A. L. Huston. That Order, dated August 10, 1983, denied an attempt by the Applicant to “pool his way into” certain density wells drilled after an initial pooling order was issued covering the common sources of supply produced in the initial unit well. The facts of the case show that the Applicant’s predecessor-in-title had

\textsuperscript{10} The provisions of 52 O.S. 87.1 regarding creation of drilling and spacing units provides for “pooling” the standard 1/8th royalty interest.

\textsuperscript{11} For a summary of the effects of such orders see Wakefield v. State, 306 P.2d 305 (Okla. 1957).
elected not to participate in the first well under the initial order. In support of Order No. 243274 the Commission found that the Conservation Statute dictates pooling by the unit, and that the original pooling order covers all wells drilled to the common sources of supply in the drilling and spacing unit. The Commission stated as follows in that Order:

"It would be unreasonable to assume that once an operator relies on a Commission created unit, that unitized interest will later be disturbed in a new order authorizing second-chance elections in additional wells. Such a subsequent order would amount to a collateral attack on the first pooling order under 52 O.S. 1981 Section 111."

The order in the Huston case was appealed to the Oklahoma Supreme Court. However, the Commission, in an unprecedented move, reversed its legal position after the cause was appealed. The Commission filed Motions to Remand with the Supreme Court based upon the desire to reverse the original decision.

The flip-flop of the Commission in the Huston case was consistent with its issuance of Statement of Policy No. 45 on May 3, 1984. Therein the Commission adopted a "policy" of pooling, without exception, by the wellbore. That position was supported by a finding to the effect that unit pooling thwarted efficient development of productive common sources of supply.

The final chapter on pre-Amoco Commission action regarding pooling was written in General Cause No. 29596, an application of Valero Producing Company to vacate Statement of Policy No. 45. After lengthy hearings the Commission entered Order No. 307751 on January 14, 1987. That Order withdrew the Policy Statement, but denied the Applicant's request to implement rules addressing the relinquishment of rights under pooling orders.
From the date of the order in *Valero* until October 13, 1987 (the date of the issuance of the *Amoco* case) the Commission allowed pooling orders to provide for either unit development, or wellbore development, depending upon the evidence presented at the hearing. After October 13, 1987, pooling orders, at least those of the authors, have specifically dictated relinquishment of unit rights by non-participating owners.

**B. THE AMOCO DECISION**

On July 28, 1986, the Court of Appeals of the State of Oklahoma, Division No. 1, issued an opinion, the terms of which addressed the breadth of the power possessed by the Corporation Commission of Oklahoma regarding pooling of oil and gas interests. In *Amoco Production Company v Corporation Commission of Oklahoma*, 751 P.2d 203 (Okla. App. 1986)(Adopted by the Supreme Court of Oklahoma on February 9, 1988), (hereinafter “Amoco”), the Court of Appeals held that the Commission does not have the power to pool by the wellbore. This was a case of first impression inasmuch as the appellate courts of Oklahoma had artfully dodged that issue for years. The Court of Appeals’ ruling was given temporary finality on October 13, 1987, when the Supreme Court of Oklahoma denied certiorari (previously granted), and approved for publication the opinion of the Court of Appeals as originally published in Volume 57, OBJ No. 31, Page 1961 (July 29, 1986). For the first time in many years mineral lawyers felt possessed with the necessary precedent to offer at least some opinion concerning the rights relinquished by non-participating respondents. However, any such confidence was short-lived, as the Supreme Court issued an Order on Certiorari dated December
14, 1987 which “recalled” the mandate previously issued. A prior writ of certiorari was “reinstated” for the purpose of modifying the decision in *Amoco*.

The Order was modified by adding the following:

"The rule announced in this case as to the scope of the authorization granted the Corporation Commission under 52 O.S., 1981, Section 87.1, in forced pooling proceedings is a decision rendered on an issue of first impression. This ruling to the effect that Section 87.1 may be read only to authorize the forced pooling of working interest on a unit-wide basis rather than on an individual wellbore basis, because the ruling has not been clearly foreshadowed and because of the inequity of applying the rule to orders which have now become final on the validity of the orders, shall be given effect in this case, and prospectively, in all matters where the order of the Corporation Commission in question has become final as of the date of mandate in this case. See *Harry L. Carlile Trust v Cotton Petroleum Corp.*, 732 P.2d 438 (Okla. 1986); *Griggs v. State, ex rel. Department of Transportation*, 702 P.2d 1017 (Okl. 1985)."

Subsequent to this issuance of the Order on Certiorari *Amoco* filed a Petition for Rehearing. That Petition was denied and mandate was again issued on February 19, 1988.

On March 21, 1988, the Supreme Court of Oklahoma denied a Petition for Certiorari in *Amoco Production Company v The Corporation Commission of the State of Oklahoma, et al.*, 752 P.2d 835 (Okla. App. 1987), (hereinafter "*Amoco II*"). In this case, the Court of Appeals once again presented as the basic issue the question of the authority of the Commission to force pool by the wellbore instead of force pooling by the drilling and spacing unit. *Amoco II* was decided on the same basic premise as *Amoco*, supra. *Amoco II* involved the drilling of an increased density well by the operator of the unit as designated under the original pooling order. Subsequent to the completion of the density well, there was filed a pooling application by a party pooled by the original
pooling order. The second pooling application sought an order from the Commission adjudicating the rights and equities of the parties pertaining to the second well. However, Amoco II also involved arguments concerning the Policy Memo No. 45, dated May 3, 1984, issued by the Corporation Commission of Oklahoma. That policy was introduced into evidence at the hearing on the second pooling application, and was adopted by the Trial Examiner who found that the original pooling order was limited to the initial wellbore drilled thereunder.

In its opinion the Court of Appeals in Amoco II reiterated the position expressed in Amoco, supra, regarding the limitations of the authority of the Corporation Commission. It was concluded that the Conservation Statute is restrictive and requires pooling by the unit. That statute does not authorize pooling by the wellbore. Finally, the opinion specifically addresses the validity of Policy Memo No. 45. The Court finds that the Commission's statement of policy represents "an arbitrary and erroneous interpretation of 52 O.S., Section 87.1." The Court goes on to find that any assertion of a right to force pool by the wellbore needs to be addressed through legislation and not by Commission action such as Policy Memo No. 45.

A key third case was issued by the Oklahoma Supreme Court in Inexco Oil Company v Oklahoma Corporation Commission, 767 P.2d 404 (Okl. 1988). Inexco repeated the same holdings of Amoco and Amoco II, but specifically pointed out that once rights are relinquished by virtue of a decision not to participate in the risk of drilling the initial well, those rights vest in the operator, or others sharing therein, and could not be modified by collateral attack. In dictum, the Court in Inexco alluded to the permitted vacation of pooling orders by a showing of a substantial change in condition.
C. THE C. F. BRAUN DECISION

The pooling order appealed from in C. F. Braun included thirteen (13) separate common sources of supply. One protesting party wanted to drill a Hunton well. The other protesting party wanted to drill a shallower Morrow well. The order which issued segregated two (2) groups of common sources of supply by depth; and, required that separate elections be made between those two (2) groups. The order also provided for cost allocation; and, allocated bonus among the two (2) groups of common sources of supply. One party to the protest ultimately elected to participate in the Morrow well; but, attempted to elect also the cash bonus allocated to the separate common sources of supply found shallower than the Morrow. On appeal that party argued that since the pooling order included all thirteen (13) common sources of supply, it should have been entitled to a separate election as to each one.

The holding of C. F. Braun as regards the issues to be discussed herein was as follows:

(1) "The thirteen (13) common sources of supply named in the pooling order constitute thirteen separate and distinct spacing and drilling units where one bore hole can be used to test and develop one or all of the thirteen units." 609 P.2d at 1271.

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12 In Marathon Oil Co. v Corporation Commission, 651 P.2d 1051, 1982 OK 91, the Oklahoma Supreme Court cited C. F. Braun with approval. The pooling order in Marathon again concerned a split of working interest ownership by depths. On appeal, the Appellant cited Patterson v Stanolind Oil & Gas, 182 Okla 155, 77 P.2d 83 (1938) as authority for the proposition that the Commission's pooling power is limited to a "single common source of supply" with the result that the pooling statute precludes treating separate common sources of supply as an aggregate. The Court in Marathon rejected that argument; and, also noted that no evidence was presented to the Commission to compel a conclusion that the creation of one pooled unit was erroneous.
(2) Whether a pooled owner is entitled to an election as to each common source of supply or each separate spacing unit "depends upon the facts and circumstances in each pooling proceeding." 609 P.2d at 1271.

(3) The pooling order should be responsive to the application and evidence. "If the parties treat two or more spacing units underlying the same tract as a single unit the pooling order may treat them as a single unit. If the parties treat the different common sources of supply or spacing units as separate and distinct spacing units, and the evidence discloses an intent or desire on the owners part that they be considered separately, an owner may not be required to have his rights under one spacing unit be dependent or contingent upon his rights or his election in another spacing unit." 609 P.2d at 1271.

(4) "The rights of all owners, including the owner seeking the pooling order, must be considered" because the provisions of 52 O.S. §87.1(e) require pooling orders to issue on terms just and reasonable which will allow each pooled owner the opportunity to recover their just and fair share of oil and gas." 609 P.2d at 1271.

D. APPLICATION OF C. F. BRAUN TO POOLING ORDERS FOR HORIZONTAL WELLS

Until recently, pooling orders issued after the date of C. F. Braun covered vertical wells designed for one or more specific primary zones of interest. However, in drilling those wells to total depth other secondary zones of interest would be penetrated, logged and evaluated for production in the initial wellbore. If there was no difference in ownership by depth, it became second nature for the Applicant to treat all separate common sources of supply named in the pooling application as one unit for pooling purposes and request an order covering one pooled unit. The admonition of the Court in C. F. Braun to evaluate the treatment of the separate owners' spacing units was largely forgotten.
With the advent of horizontal development the principles of *C. F. Braun* need to be dusted off and discussed. While the applicant in a pooling application designed to facilitate the drilling of a horizontal well may imply that it wants a pooling order which amalgamates shallower drilling and spacing units by inclusion of same in the application, more may be required to have the Commission order such result.

Unlike the vertical wellbore which can be used to analyze and exploit each penetrated common source of supply, the horizontal well in a particular case must be evaluated to consider the intent and potential for developing formations to be penetrated in the vertical portion of that wellbore. The applicant’s intentions must be scrutinized in relation to the admonitions of the opinion in *C. F. Braun*. There may very well be justification for pooling as one unit all spaced common sources of supply penetrated by the initial well; but, it is not as easy an analysis as was presented by the purely vertical wellbore.

The principles in *C. F. Braun* do not require that all common sources of supply other than that targeted by the horizontal lateral be dismissed from an application. Rather, it simply means that some of those common sources of supply may retain their separate unit status. If that occurs, the relinquishment of working interest rights by a non-participating owner in the horizontal well would be limited to the unit” covering that particular formation. In that event there will be the need to consider allocation of the cash bonus provided for in the pooling order. It would not be fair to allow separate treatment of units, but require payment of full bonus every time that an election is made on the segregated units.
E. PRACTICAL EVALUATION OF THE IMPACT OF A POOLED UNIT

In the Application of Petrohawk Energy Corporation, Cause CD No. 200705712T, the Commission was asked to clarify a pooling order covering the Woodford and Mississippian common sources of supply, among other formations. One non-operating working interest owner elected to participate in the initial horizontal well for the Woodford common source of supply. After successful completion of that initial well the operator proposed a horizontal well in the Mississippian common source of supply. The non-operating owner elected not to participate in that subsequent well, but assumed it would retain the right to participate in subsequent Woodford wells. The operator disagreed and the Commission was asked to “clarify” the original order in that regard. The Commission denied that request finding that in accordance with C. F. Braun, the original order treated all pooled common sources of supply as a unit; and, that under the unambiguous terms of that order the result of the non-operator’s decision on the Mississippian well was the relinquishment of all participating rights other than in the initial Woodford well.

Petrohawk was appealed; and, the Commission’s order was affirmed in an unpublished opinion.

This case illustrates the practical affect of consolidation of multiple common sources of supply in one pooled unit. Owners who choose to ignore the potential impact of such an order do so at risk to their working interest. If Petrohawk had successfully argued for segregation of different spacing units in this pooling order it would have had the basis for retaining Woodford rights.
III.

MULTI-UNIT HORIZONTAL DEVELOPMENT

One of the benefits from the rapid increase in technology for horizontal wells has been the ability to drill and complete wells with laterals which exceed 5,000 feet in length. There are wells in Oklahoma with laterals in excess of 8,000 feet in length. With those technological advances come regulatory issues created by the size of drilling and spacing units. As noted earlier the largest size of drilling and spacing unit permitted by 52 O.S. § 87.1 is 640-acres. If a 640-acre unit is created to consist of a governmental section, the unit’s boundaries will generally be formed as a square approximately 5,280 feet wide and long.\(^\text{13}\) That fact will necessarily limit the length of a producible lateral.\(^\text{14}\)

A 640-acre drilling and spacing unit does not have to conform to a governmental section. The Commission has the authority to establish what are denominated "irregular" 640-acre units. For example, the Commission could establish an irregular 640-acre unit consisting of the W/2 of Section 1 and the W/2 of Section 12 in a given township. A unit so configured would provide the opportunity to drill a lateral in excess of 5,000 feet. However, a number of land related reasons have often created an impediment to creation of such irregular units. The opposition to irregular units created the need to evaluate other options.

\(^{13}\) Of course, by virtue of the curvature of the earth, and/or other surface considerations, most sections are not perfect squares. As a result the breadth and width of a section will vary.

\(^{14}\) Most horizontal wells in Oklahoma are drilled north to south or south or north, for geological or engineering reasons.
In response to the drilling restrictions imposed upon drilling and spacing units consisting of governmental sections, Newfield Exploration Mid-Continent, Inc. filed an application in Cause CD No. 200902066-T/O seeking to unitize the Woodford common source of supply in a proposed twenty-six (26) section unit in Coal County, Oklahoma. The statutory basis for that request was 52 O.S. § 287.1 et seq. ("the Secondary Recovery Statute"). The Secondary Recovery Statute does not have any restriction on the amount of acres to be included in a unit created pursuant thereto.

The goal of the Newfield application was to remove the restrictions imposed by drilling and spacing units on the location and length of horizontal laterals. If created by the Commission the unit sought by Newfield would have unitized all royalty and working interest rights within its boundaries. Without the drilling and spacing unit boundary restrictions, horizontal wells could be drilled to cross governmental section lines; and, drainage considerations would no longer affect the density or placement of laterals.

The request by Newfield was opposed by several parties on jurisdictional grounds. After lengthy hearings, the Commission denied the application finding that the provisions of 52 O.S. § 287.1 et seq. were limited to secondary recovery operations; and, that the horizontal development proposed was simply a series of horizontal wells drilled for primary production purposes.15

Almost immediately after issuance of the order denying the Newfield application, the Oklahoma Legislature enacted what is now codified as 52 O.S. § 87.6. That Act is denominated the "2011 Shale Reservoir Development Act." That Act; and, the

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15 See Order No. 582534 issued on February 2, 2011.
Commission Rules implemented in response thereto, allow the Commission to approve a “multi-unit horizontal well in a shale reservoir.” If the Commission grants a request for a multi-unit horizontal well, the completion interval within the lateral is authorized to exist in multiple drilling and spacing units. The Commission must be presented evidence of a proper allocation of well costs; and, the allocation of production and revenues attributable to the commingled production therefrom. The Commission orders issued to date for such multi-unit horizontal wells have based that allocation upon a ratio of the length of producible lateral within the multiple units penetrated. The orders are typically interim orders pending presentation of bottomhole surveys and completion data to identify whether the pre-determined allocation ratio was justified. If the anticipated length of lateral is not accomplished there will be a re-allocation of costs and revenues.

The order authorizing a multi-unit horizontal well does not change the existing drilling and spacing units, except for the allocation of costs and revenues. It simply facilitates the desire of an operator to lengthen a proposed lateral to the extent that multiple unit boundaries must be crossed. If there are existing pooling orders for the multiple drilling and spacing units, those orders will require modification to allow such a well to be treated as a unit well; and, to be proposed thereunder as a subsequent well or operation. Any new pooling orders required would be limited to the pre-existing drilling and spacing unit, but would expressly authorize the multi-unit lateral as a unit well.

See OAC 165:5-7-6.2.
Numerous questions remain for consideration in use of this new statute. Among those issues will be the determination of operator for a multi-unit lateral covering previously pooled units which have different operators designated by existing pooling orders. A bigger obstacle in that regard would be the circumstance presented by one of the drilling and spacing units unit being controlled by a private operating agreement. The Commission lacks authority to modify private contracts for unit development.\(^{17}\) A private agreement to modify the operating agreement would be necessary to allow the drilling of such a well. Another issue not yet well defined by Commission ruling is the fair method to re-allocate costs and production proceeds in the event a multi-unit horizontal well fails to penetrate one of the two (2) drilling and spacing units; or, only penetrates slightly into one of the two units. There has been discussion of requiring a wellbore involving the latter circumstance to be plugged back so that all perorations are in only the one unit fully drilled. However, to date that circumstance has not been addressed by Commission order.

A second statute was enacted after the denial of the *Newfield* application. 52 O.S. § 87.9 is the “Horizontal Well Unitization Act for Shale Reservoirs.” That statute expressly allows the creation of a unit (up to four (4) governmental sections in size) basically equivalent to a secondary recovery unit formed under 52 O.S. § 287.1 et seq. Such a unit would supplant existing drilling and spacing units for the affected common source of supply. This statute requires a “plan of development” to be approved by the Commission. Sixty-three percent (63%) of all working interest owners and royalty owners within the unit must consent to its creation before the unit will become effective.

\(^{17}\) See *Hunton Oil & Gas Corp. v. Atchison, Topeka and Santa Fe Ry, Co.*, 738 P.2d 191.
The production from the affected interval is unitized; and, paid on the basis of tract allocation parameters.

To date the Commission has not issued an order under the terms of this new Horizontal Unitization Act. I have been unable to find any application filed seeking creation of such a unit.

**SUMMARY**

The law has not yet caught up with technology as regards horizontal wells and their regulation in Oklahoma. Numerous unanswered questions remain in connection with the affect of horizontal units on oil and gas owners in Oklahoma. The Commission will be asked in the coming decade to address several issues resulting from the use of horizontal wells. Until those questions are resolved all parties will be exploring new ground.