



Musick Estate, Cindy Baker Goralewicz, Claudette M. Barker, Clump Family, LLC, Coye Lee Barker, Don L. Ray Revocable Trust, Doris L. Smith, Evelyn M. Post & Albert W. Post, Fred Henry Barker, Glen M. Perdue Revocable Trust, James David Foster & Roberta Foster, James Robert Hill, Jima, LLC, Judy Tomanka, Kenneth C. Musick Revocable Trust, Leland Eugene Copeland & Janet Louise Copeland, Leonard Copeland Living Trust, M. Carolyn Blankenship, Margaret Ann Copeland Hixon & Donald Lee Hixon, Martin/Helsel Revocable Trust, Marvin D. Turner, Pamela Jean Vinson, Robert Stephens; Schaal Family Trust, Simpson Descendants' Trust, The Estate of Jima Lee Smart, Thelma Hansens, Wilcox Family Revocable Trust, Dorothy Aleene Perdue, Carol A Hildebrand, V. Kay Curtis, Barbara J. Tenbrink and Kathlyn E. Caldron (collectively "Protestants"); **Coy Horn**, P.O. Box 776, Crescent, OK 73028, appeared *pro se*; **Rebecca Farris**, P.O. Box 20773, Oklahoma City, OK 73156 appeared *pro se*; **Don L. Ray**, Trustee of the Don L. Ray Revocable Trust, 6105 Sudbury Drive, Oklahoma City, OK 73162-1723 appeared *pro se*; **Melvin Bollenbach**, 14736 North Council Road, Oklahoma City, OK 73142, appeared *pro se*; **Scott and Barbara Bollenbach**, Route 1, P.O. Box 5A, Kingfisher, OK 73750, appeared *pro se*; and **Sally Shipley**, Deputy General Counsel, appeared on behalf of the Oil and Gas Conservation Division of the Commission; and **Jim Hamilton**, Deputy General Counsel for Deliberations, filed notice of appearance.

The Administrative Law Judge ("ALJ") filed his Report of the Administrative Law Judge on the 27<sup>th</sup> day of August, 2013, to which Exceptions were timely filed and proper notice given of the setting of the Exceptions.

The Appellate argument concerning the Oral Exceptions was referred to **Patricia D. MacGuigan**, Oil and Gas Appellate Referee ("Referee"), on the 24<sup>th</sup> day of January, 2014. After considering the arguments of counsel and the record contained within this Cause, the Referee finds as follows:

### **STATEMENT OF THE CASE**

**OEA TAKES EXCEPTION** to the ALJ's recommendation that OEA's application to amend the Lincoln Southeast Unit to add the Cottage Grove and Big Lime common sources of supply be denied.

On September 18, 1963, the Commission issued Order No. 52793 establishing the Lincoln Southwest Oswego Unit for the unitized management, operation and further development of a portion of the Oswego Lime common source of supply underlying portions of Sections 7, 8, 9, 16, 17, 18, 19, 20, 21, 27, 28, 29 and 30, T17N, R5W, and portions of Sections 12, 13 and 24, T17N, R6W, Kingfisher County, Oklahoma. Texaco, Inc. was appointed the Unit Operator to

carry out the plan of unitization. The geographical area of the unit was expanded by Order No. 62528 on May 11, 1966.

On October 12, 2012 OEA filed its application to amend the Lincoln Southeast Oswego Unit to add the Cottage Grove and Big Lime common sources of supply. OEA filed a plan of unitization with its application that identified the expanded unit as the Lincoln Southeast Unit. The plan named Hinkle as the Unit Operator and stated that the unit would be developed by water flooding whereby both the injection and producing wells would be situated to optimize the flood pattern.

On October 29, 2012, Melvin Bollenbach protested the cause alleging that the proposed plan would not prevent waste and could pollute the ground water in the area. On that same day, Don L. Ray, the Trustee of the Don L. Ray 1992 Revocable Trust, also protested the cause. A Pre-hearing Conference was held on February 3, 2013 where the issues to be heard comprised in part the tract participation factor, the area of the proposed unit and notice of jurisdiction.

On March 15, 2013 the Application was amended with respect to notice to the respondents and various motions were subsequently filed. The Commission issued Order No. 610063 on April 8, 2013 dismissing a motion for production of documents and the hearing date was then set with the cause being heard by the ALJ on April 3 and 4, 2013. The ALJ took the cause under advisement after receiving all of the transcripts on June 28, 2013.

### **OEA TAKES THE POSITION:**

#### **Background**

1) This case involves the expansion of the Lincoln Southeast Oswego Unit which was formed on September 18, 1963 by Order No. 52793 and amended by Order No. 62528 on May 11, 1966 (the "Unit"). The Unit has continuously operated as a waterflood and produced millions of barrels of oil from the Oswego common source of supply. There have been 159 wells drilled to the Oswego that have also penetrated the shallower Big Lime and Cottage Grove formations. There are only a few wells completed only in the Big Lime. There have only been two wells drilled or recompleted to test the Cottage Grove.

2) By this Application OEA proposed expanding the Unit to add the Big Lime and Cottage Grove formations to recover an anticipated 700,000 bbls that would not otherwise be recovered. (Big Lime 600,000 bbls and Cottage Grove 100,000 bbls). OEA presented uncontroverted testimony that in most instances it would not be economic to drill a well to produce the Big Lime or Cottage Grove independently. (Tr. 4/3/13, p. 131-134 and 135-136). The ALJ found that there were hydrocarbons in place in the Big Lime and Cottage Grove

that would not otherwise be recovered unless they were included in the existing waterflood operation. (See Report, paragraph 96). In short, the proposed expansion would certainly prevent waste. The ALJ, however, denied the Application finding the proposed tract participation factors ("TPFs") were unfair.

3) OEA anticipated using existing assets of the Unit (e.g., 159 wellbores, tank batteries, injection wells, water disposal facilities, etc.) to contribute to the new expanded unit at no cost to the owners of the Big Lime and Cottage Grove. The cost savings in not having to drill new wells to the Big Lime and the Cottage Grove and the ability to use existing Unit assets would make it economic to waterflood and produce the hydrocarbons in the Big Lime and Cottage Grove formations that would not otherwise be recovered.

4) OEA's evidence reflected that the Big Lime and Oswego formations were similar geologically. According to OEA's uncontroverted geology testimony, the Big Lime is located directly above the Oswego. The Oswego and Big Lime are limestones with similar lithology and similar settings. (Tr. 4/3/13, p 67) Both zones will also be predominately oil. Both zones have approximately the same geographic coverage inside the unit. (Compare Ex. 5 to Ex. 7). Both zones were mapped with the same 3% porosity cutoff indicating similar porosities. Id.

5) OEA presented evidence showing that the Cottage Grove is geologically unpredictable and risky. Of the two Cottage Grove wells drilled by OEA, the Copeland well (#49-2 in Section 20) and the Wilcox well (#88-1 in Section 29), the Copeland had 167 porosity feet and produced approximately 20,000 bbls, while the Wilcox had 180 porosity feet and produced approximately 1 BOPD. The "porosity feet" in a particular well is calculated by multiplying the net pay thickness by the porosity percentage in the reservoir. For example if you have 10 feet of net pay, multiplied by 16% porosity, you get 160 porosity feet. (See Tr. 4/3/13, p. 120). (Tr. 4/3/13, p. 116). Therefore, porosity feet of pay is not an accurate indicator of productive capacity.

6) OEA's testimony and evidence established that the Oswego and Big Lime make up approximately 96% of the anticipated future production and the unpredictable Cottage Grove could make up the remaining 4%. To that end, OEA concluded that the existing tract participation factors, which had been in place for over 50 years, were the most fair. Leaving the same TPFs in place also gave OEA the best chance of getting the unit expansion approved by the required 63% of the mineral owners and recovering hydrocarbons from the Big Lime and Cottage Grove that would not otherwise be recovered. Any plan that considered upsetting the existing TPFs because of the Cottage Grove would be fundamentally less fair based on the evidence presented by OEA, and would be less likely to receive the required 63% approval by the mineral owners. However, the ALJ found that OEA simply submitted the same TPFs that were used for the Oswego zone without conducting a "feasibility study" or using

"measurable and determinable" factors to assess the ability to waterflood the Cottage Grove and Big Lime formations or their potential productive capabilities.

### **Exceptions**

1) OEA's TFPs were fair given the circumstances of the existing unit and the unpredictable geology of the Cottage Grove. The ALJ's Report is contrary to the facts presented and Oklahoma Law as follows:

a) The ALJ erred in finding that OEA did not use "measurable and determinable factors" to evaluate the proper TFPs. OEA did use measurable and determinable factors to determine that the TFPs should not be disturbed. Specifically, David Reisdorf ("Reisdorf"), OEA's engineer, concluded that each formation would contribute future reserves in the following amounts: Oswego - 2,000,000 bbls; Big Lime - 600,000 bbls; and Cottage Grove - 100,000 bbls. (Tr. 4/3/13, p. 142-143). The Protestants did not present a competing study. OEA came to this conclusion by analyzing both the Big Lime and Cottage Grove in comparison to the Oswego. OEA's geologist, Dennis Browning ("Browning"), reviewed all of the available well logs on the 159 wells drilled in the area that penetrated both the Big Lime and Cottage Grove. (Tr. 4/3/13, p. 44-45) Reisdorf created isopach maps for all three formations studying the thicknesses of each formation and the porosity feet of pay present. (See Exs. 5, 6, 7). Reisdorf also testified that he did a net hydrocarbon foot investigation under certain tracts. (See Tr. 4/3/13, p. 168). OEA has evaluated all Big Lime completions inside the Unit and OEA drilled two Cottage Grove wells in different parts of the Unit to determine the productive capabilities of the Cottage Grove. Clearly, net feet of pay, porosity feet, formation thickness and productive capabilities are measurable and determinable factors routinely presented as evidence at the Commission. Reisdorf did not, as suggested in paragraph 116 of the Report, simply "declare" that the Plan was fair. He clearly chose to use the existing TFPs because the measurable and determinable factors he studied indicated that the most fair approach was not to disturb the existing TFPs.

b) The ALJ erred in finding that the evidence presented by OEA was not sufficient to determine the proposed TFPs were fair.

1. OEA presented evidence as required by 52 O.S. Section 287.4(b), which provides in pertinent part that TFPs can be determined as follows:

A separately owned tract's fair, equitable and reasonable share of the unit production shall be measured by the value of each such tract for oil and

gas purposes and its contributing value to the unit in relation to like values of other tracts in the unit, taking into account acreage, the quantity of oil and gas recoverable therefrom, location on structure, its probable productivity of oil and gas in the absence of unit operations, the burden of operation to which the tract will or is likely to be subjected, **or so many of said factors or such other pertinent engineering, geological, or operating factors, as may be reasonably susceptible of determination** (emphasis added)

Section 287.4 also states:

The plan of unitization for each such unit and unit area shall be one suited to the needs and requirements of the particular unit dependent upon the facts and conditions found to exist with respect thereto.

2. In determining the comparative value of the tracts, OEA considered the fact that the Unit was a going concern with 50 years of production history from the Oswego. Reisdorf testified that in addition to the porosity feet and geologic analysis, some value had to be assigned to the existing equipment and wellbores each formation was contributing. (Tr. 4/3/13, p. 160-165). He then quantified equipment value as a portion of the future reserve potential, and concluded the Oswego was contributing 74%, the Big Lime was contributing 22% and the Cottage Grove was contributing 4%. (Tr. 4/3/13, p. 156-160). It was apparent that the Cottage Grove should have little to no impact on TPFs because it was a risky, unpredictable formation that would not otherwise be developed if not allowed to tag along with the Oswego and Big Lime. (Tr. 4/3/13, p. 235-236). OEA considered all the available evidence and concluded that telling an owner who has had the same tract participation factor for 50 years that his revenue was getting lowered because a formation was being added that may or may not contribute 4% to the overall equation was fundamentally unfair. Reisdorf also had to consider what Plan gave him the best opportunity to get the required 63% approval from the mineral owners. Oklahoma law, specifically Section 287.4, clearly allows this type of evidence to be considered as it does not enumerate any specific type of measurable or determinable factors that have to be presented. The language of the statute is open-ended and the overarching principle embodied in the statute is to have a plan **suited to the needs and requirements of the particular unit dependent upon the facts and conditions present.**

c) The ALJ erred in finding that the TPF's for the Big Lime would have to be substantially different from the Oswego because the Big Lime has substantially different porosities, thicknesses and producing characteristics

from the Oswego. (See Report, paragraph 116). This is directly contradictory to the evidence presented by OEA's geologist, Browning, who characterized the Big Lime as thinner but essentially the same lithology with similar porosity. (Tr. 4/3/13, p. 67). OEA's expert is the only expert who put on geologic evidence as to the characteristics of the Big Lime. The Protestants' expert simply presumed that the Big Lime was significantly different.

d) The ALJ erred in finding the TPFs were unfair when only 16% of the royalty interest owners in the Unit were protesting and 28% were supporting the unit expansion. The ALJ supported his decision with calculations reflecting that "all" of the royalty interest owners in the Cottage Grove may care about revising the TPFs. (See Report, paragraphs 110 and 113). However, it is clear that only 16% of the royalty interest owners opposed keeping the TPFs the same. (Tr. 4/3/13, p. 19). The largest single royalty interest owner in the Unit, Scott and Barbara Bollenbach, support the existing Plan. (See Ex. 13). Moreover 28% of the total royalty interest owners have already signed ratifications of the proposed Plan that maintains the same TPFs. (Tr. 4/3/13, p. 20, and Ex. 13). Accordingly, the AL's calculations are based on presumptions that are incorrect.

e) The ALJ erred in not granting the Unit expansion as it would have prevented waste, and recovered hydrocarbons from portions of the reservoir that would otherwise be undeveloped. The ALJ found that the existing TPFs were unfair, but if the Plan cannot be ratified then none of the anticipated 700,000 bbls in the Cottage Grove and Big Lime will be recovered.

f) The ALJ erred in finding that OEA did not conduct a "feasibility study." The lack of a feasibility study was not an issue listed by Protestants on the Prehearing Conference Agreement and was not addressed as a contested issue in conversations between counsel prior to the hearing. OEA was led to believe that Protestants were not disputing that the Big Lime and Cottage Grove could be water flooded or would be appropriate to waterflood. Protestants' counsel did not even cross-examine any of OEA's experts on whether the Cottage Grove or Big Lime were appropriate formations to waterflood. Regardless, Browning testified that they were appropriate to waterflood as they were solution gas drive reservoirs that would respond well to waterflooding. (Tr. 4/3/13, p. 78-79). Reisdorf also testified that they anticipated that areas of the Big Lime and Cottage Grove would contribute hydrocarbons that fall below the porosity cutoff used to create Exhibits 5, 6 and 7. (Tr. 4/3/13, p. 126-130). In other words, Reisdorf anticipated that waterflooding would sweep hydrocarbons from "white" areas on the map (Exhibit 6) and some of the white areas would significantly contribute to the waterflood. *Id.* It was not until Protestants' expert began his direct examination that it was discovered that Protestants were going to dispute the need for a "feasibility study."

g) The ALJ erred in finding that OEA did not calculate TPFs for the Big Lime and Cottage Grove. (See Report, paragraph 118). Reisdorf testified that he could have used the parameters he looked at to average net feet together for all three zones and come up with new TPFs. This, however, would be unfair given the uncontroverted testimony that a foot of pay in the Cottage Grove is not equal to a foot of pay in the Oswego. (Tr. 4/3/13, p. 236). The ALJ even admits as Protestants' experts admitted that hydrocarbon feet and porosity feet don't always give the most "productive number." (See Report, paragraph 118). It is likewise improper to conclude that OEA should have made a speculative calculation in an attempt to quantify production from the Cottage Grove based on limited information.

h) The ALJ erred in prescribing a purported "fair" way to calculate the TPFs by suggesting OEA needed to average the production potential for all three formations. (See Report, paragraph 119). At the heart of this dispute is a belief proposed by the Protestants' expert that future potential productivity must be calculated with mathematical certainty and that such mathematical calculation must be used to adjust the TPFs--otherwise the Plan is unfair. Nothing could be further from the requirements of Oklahoma law. As stated above, in calculating the TPFs, one is able to consider the unique circumstances of each unit. The language of the statute is permissive and open ended in terms of what a party can consider to create fair TPFs. Reisdorf concluded that net hydrocarbon feet, porosity feet and other measurable parameters do not indicate that it would be fair to disturb the TPFs. There is no requirement under the statute that adding a zone must result in adjustment of TPFs in every instance. In this particular instance OEA demonstrated why adjusting the TPFs because of a hydrocarbon foot analysis would not be fair. OEA conducted 20 years of study to determine whether it would be fair to expand the unit and adjust the TPFs. Protestants' expert admitted he only worked on the case for 10-15 hours. (Tr. 4/4/13, p. 63).

i) The AL's finding that the Application should be resubmitted with revised TPFs is fundamentally less fair given the circumstances that exist in this Unit. The conclusion Reisdorf reached is that not all zones have equal value that can be calculated on a hydrocarbon foot basis. The value of a foot of pay in the Oswego is different from a foot of pay in the Cottage Grove. (Tr. 4/3/13, p. 236). The ALJ erred in following the logic of the Protestants' expert that TPFs ultimately must be based on some sort of "hydrocarbon foot" calculation in order to consider the addition of the new zones. OEA presented substantial evidence to the contrary reflecting that a "phi h" or hydrocarbon foot analysis treats a foot of pay in the Oswego the same as a foot of pay in the Cottage Grove. In fact, Reisdorf testified that he performed a "hydrocarbon foot" analysis but that it does not yield a fair distribution because the reservoirs are different. (Tr. 4/3/13, p. 168 and 236). OEA showed that this

was not fair through evidence and testimony that reflected the Oswego is considerably more productive and therefore has more value than the unpredictable and much more risky Cottage Grove. (Tr. 4/3/13, p. 235-238).

2) OEA respectfully requests that the Report of the ALJ be reversed.

### **THE ALJ FOUND:**

1) After taking into consideration all of the facts, circumstances, evidence and testimony presented in both causes, it is the recommendation of the ALJ that OEA's application for unitization of the Lincoln Southeast Unit be denied. The application should be denied because OEA did not provide substantial evidence to the Commission that the tract allocation or participation factors were fair, equitable or reasonable with respect to the distribution of hydrocarbons produced by the water flood of the Big Lime and Cottage Grove common sources of supply. The ALJ further recommends that OEA resubmit its Application with Tract Participation Factors ("TPF") that can be demonstrated to the Commission as being fair, equitable and reasonable. OEA should determine the hydrocarbon production potential for all three formations in the unit and calculate their contribution separately and then combine their individual hydrocarbon production potentials into TPF's that take into account the production potential for each formation.

## **POSITIONS OF THE PARTIES**

### **OEA**

1) **Richard K. Books**, attorney, appearing on behalf of OEA, stated the narrow vision approach taken by the ALJ requiring tract factors based upon thickness, porosity, and production characteristics is in error. These factors are not required when adding a formation to an existing unit, these factors are only required when creating a new unit.

2) This unit has been in existence for over 30 years. OEA is not seeking to expand geographically the unit size, rather OEA is requesting to add additional formations, the Big Lime and the Cottage Grove, which by themselves are not economical to produce.

3) The current unit includes only the Oswego formation which has been extensively drilled, containing 159 wells. Two of those wells are Cottage Grove formation wells and four wells are producing from the Big Lime formation.

4) It is clear and uncontroverted that the six wells drilled into the Big Lime and Cottage Grove formations are not economical and no prudent operator would take on the task of drilling additional wells into those formations.

5) The working interest owners in the Oswego Unit are willing to donate existing wells and to recomplete those wells into the Cottage Grove and Big Lime formations. Using these existing wells will make the production of those formations economical. Without using existing wells they are not economical.

6) The formation thickness, porosity and production characteristics of the Cottage Grove and Big Lime formations are not consistent throughout the existing Oswego Unit. While those formations show excellent potential, the wells that exist in those formations are producing less than one barrel per day, so the evidence is contrary to the geologic expectations.

7) We have a stark value difference between the Oswego formation and that of the Big Lime or Cottage Grove formations. The value of the Cottage Grove and Big Lime formations does not relate to their thickness, porosity, and production characteristics, their value relates only as to whether or not they can be produced by recompleting an existing Oswego well bore.

8) When all zones are deemed economical, then the ALJ would be correct to require tract production factors in evaluating value; however, here these two additional zones are not economical and have no value by themselves.

9) We acknowledge that the tract production formulas of the Cottage Grove and Big Lime formations would be different from the Oswego, but given the lack of economic value to those additional formations, we are seeking to use the existing Oswego unit tract production formulas. Without the existing Oswego wells, the Big Lime and Cottage Grove formations have no economic value.

10) The Oswego tract production formula, extended to the Cottage Grove and Big Lime formations, is fair because these zones will not be produced otherwise and would result in waste of hydrocarbons.

## **PROTESTANTS**

- 1) **Michael D. Stack**, attorney, appearing on behalf of Protestants, stated 52 O.S. Section 287.1, regarding unitization, reads in part "...to authorize and provide for unitized management, operation and further development."
- 2) 52 O.S. Section 287.3 reads in part "all upon such terms and conditions as may be shown by the evidence...to be fair, reasonable, equitable and which are necessary or proper to protect, safeguard, and adjust the respective rights and obligations of the several persons affected, including royalty owners...." The statute says that the unitization has to be fair, reasonable, and equitable.
- 3) The existing Oswego unit was created in the 1960's using the Oswego common source of supply. The existing tract production formula is based only on the Oswego common source of supply and not any other geologic formations underlying the unit.
- 4) OEA is asking to unitize three separate supply sources into one unit without changing the tract production factors that were established for only one common supply source.
- 5) In *Eason Oil Co. v. Corporation Commission*, 535 P.2d 283 (Okl. 1995) the Court there discusses 52 O.S. Section 287.4(b) which provides in part: "...and subject to the further requirements hereof, each such plan of unitization SHALL contain fair, reasonable, and equitable provisions." (Emphasis added.) The Court goes on to say that a separately-owned tract's fair and equitable unit production "shall be measured by the value of EACH such tract for oil and gas purposes and its contributing value to the unit." (Emphasis added.)
- 6) As an example of the impact that they are seeking to impose on this unit, under Section 30, which currently gets 10.2% of the Oswego unit production contains none of the Cottage Grove formation within that unit, yet it would get 10.2% of the production from the Cottage Grove formation. Similarly Section 28, which currently gets 4.2% of the Oswego unit, does have a thick depth of the Cottage Grove formation but would continue to get only 4.2% of the unit production. This production formula is not fair, reasonable or equitable when it does not take into consideration the production factors of the zones being added.
- 7) The Protestants agree that the proposed unitization would prevent waste and recover hydrocarbons that would otherwise not be recovered; however, there must be a proper tract production formula based on formation thickness, porosity, and production characteristics for each of the zones to be added. That is what the statute reads, and that is what the case law supports.

8) A tract production formula based solely on the Oswego common source of supply is not fair, reasonable, or equitable as it relates to the Cottage Grove and Big Lime common sources of supply.

### **RESPONSE OF OEA**

1) The Cottage Grove and Big Lime formations will not be produced unless they can be produced using and recompleting an existing Oswego well bore.

2) The Big Lime is very thick, very porous, and has off the chart production characteristics; however, it does not produce very much oil. If you recomplete a well and it is unsuccessful, those owners of the Big Lime get nothing and pay nothing; however, if you recomplete a well and it is successful, those owners of the Big Lime will get paid.

3) But if we use the ALJ's Report and we incorporate thickness, porosity, and producing characteristics and we have tracts that produce nothing from those zones, they are going to get more than their fair share. There will be tracts that won't produce. We don't know which ones they are until it is tried. And if we're required to include thickness, porosity and producing characteristics, there are going to be tracts that are overpaid. So the question is does the statute require thickness and porosity to be used where the evidence shows that there will be tracts that won't contribute, even though they may be thick and porous. Is it more fair to have tracts that are thick and porous and have good producing characteristics but when we get there we can't reenter the well or the completion is unsuccessful, or the owners of those wells aren't going to let you have them.

4) The overriding factor that should be considered in this unique circumstance is that the owners of the Big Lime and the Cottage Grove cannot produce those formations unless the existing Oswego wells are recompleted into those zones. That is what we are offering to do, to provide wells, and recomplete them, at no cost to the owners of the Big Lime and Cottage Grove formations.

5) Allowing the existing Oswego unit tract production formula to be extended to the Big Lime and Cottage Grove formations, will prevent waste. That is, the hydrocarbons that may be produced from the Big Lime and Cottage Grove formations will only be produced if we can use existing wells. No prudent operator would drill a well into these formations as it is not economical.

## CONCLUSIONS

**The Referee finds the Report of the Administrative Law Judge should be affirmed.**

1) After extensive review of the transcript and record in the cause, the Referee finds the ALJ's determination that OEA's application should be denied because OEA did not provide substantial evidence to the Commission that the tract allocation or participation factors were fair, equitable and reasonable with respect to the distribution of hydrocarbons produced by the waterflood of the Big Lime and Cottage Grove common sources of supply is supported by the weight of the evidence, by law and free of reversible error. The Commission must determine if OEA's plan for unitization will prevent waste, protect the correlative rights of all the interested owners and is supported by substantial evidence. 52 O.S. Section 287.1 states:

The Legislature finds and determines that it is desirable and necessary, under the circumstances and for the purposes hereinafter set out, to authorize and provide for unitized management, operation and further development of the oil and gas properties to which this act is applicable, to the end that a greater ultimate recovery of oil and gas may be had therefrom, waste prevented, and the correlative rights of the owners in a fuller and more beneficial enjoyment of the oil and gas rights, protected.

2) OEA presented substantial evidence that additional hydrocarbons can be recovered and waste prevented by amending the existing Lincoln Southeast Oswego Unit unitized to waterflood the Oswego formation in 1963 to include the Cottage Grove and Big Lime common sources of supply. OEA's experts presented data from a Type log concerning the Copeland well #49-2 in the NW/4 of Section 20 in approximately the center of the Lincoln Southeast Oswego Unit. This Type log showed that there was Cottage Grove sandstone, Big Lime and Oswego sandstone formations. These formations were separate and distinct from other formations. There are only two wells producing from the Cottage Grove formation and four wells are producing from the Big Lime formation. The testimony reflected that the proposed waterflood would recover about 700,000 BO or oil equivalent from the Cottage Grove formation and the Big Lime formation. Approximately 159 wells which penetrated the Oswego also penetrated the Big Lime formation and the Cottage Grove formation and it would be much less expensive to perforate these existing wells in the two new formations compared to drilling new wells for this purpose.

3) The issue in this protested case is that OEA's tract allegation formula, tract allocation schedule and tract participation formula are not fair and fail to protect correlative rights. 52 O.S. Section 287.4 provides in part:

...and subject to the further requirements hereof, each such plan of unitization shall contain fair, reasonable and equitable provisions for:

...(b) The division of interest or formula for the apportionment and allocation of the unit production, among and to the several separately-owned tracts within the unit area such as will reasonably permit persons otherwise entitled to share in or benefit by the production from such separately owned tracts to produce or receive, in lieu thereof, their fair, equitable and reasonable share of the unit production or other benefits thereof. A separately owned tract's fair, equitable and reasonable share of the unit production shall be measured by the value of each such tract for oil and gas purposes and its contributing value to the unit in relation to like values of other tracts in the unit, taking into account acreage, the quantity of oil and gas recoverable therefrom, location on structure, its probable productivity of oil and gas in the absence of unit operations, the burden of operation to which the tract will or is likely to be subjected, or so many of said factors, or such other pertinent engineering, geological, or operating factors, as may be reasonably susceptible of determination. Unit production as that term is used in this act shall mean and include all oil and gas produced from a unit area from and after the effective date of the order of the Commission creating the unit regardless of the well or tract within the unit area from which the same is produced.

4) OEA's argument was that the proposed unitization plan was fair because the mineral owners will receive a revenue from the Big Lime and Cottage Grove formations that they wouldn't receive under the old plan. The tract participation factors for the new plan can be based solely upon the old tract participation factors from the old plan because an analysis of the individual differences in geology, porosity and productivity for all three common sources of supply would not result in tract participation factors significantly different from the old tract participation factors based upon the Oswego. Also, it would be a very complex exercise and problem to create new tract participation factors for all three formations. OEA presented testimony

that the creation of new tract participation factors would be complex because of the advance state of production from the reservoirs, and also because the Cottage Grove formation is highly variable where well data from the Copeland #49-2 well in Section 20 was drilled into a thicker portion of the Cottage Grove formation and doesn't perform as well as a well drilled into a thinner portion of the Cottage Grove formation.

5) The Protestants however testified that they agreed it may be difficult for OEA to calculate tract participation factors for the Big Lime and Cottage Grove because the Cottage Grove formation is highly variable. However, when well data from a well drilled into a thicker portion of the reservoir doesn't perform as good as a well drilled into a thinner portion of the reservoir, this should not be a bar from using geological data from the Cottage Grove along with other pertinent data to calculate tract participation formulas. The Protestants' expert testified that a determination of the productivity of a formula based on thickness, hydrocarbon feet, and porosity feet doesn't always give the most productive number but the basis is often the best that can be used to derive an estimate of productivity. If such a basis is not used in an area such as the Cottage Grove formation where there is little production, there wouldn't be anything left to use that represents hydrocarbon production potential. The evidence reflected that the proposed waterflood plan had the potential to produce around 700,000 BO worth about \$70 million from the Big Lime and the Cottage Grove, so even though the exercise could be complex, it would be worth the effort if doing so would provide the data that would allow the Commission to approve the application.

6) The ALJ in his Report on page 30, paragraph 116, states:

OEA's argument is not persuasive because it is not supported by substantial evidence. An expert's opinion that the proposed TPF's are fair must be based upon more than just his declaration that they are fair; it must be based upon measurable and determinable factors that can be used to assess the value of a tract. Although OEA prepared specific geological data for the Big Lime and Cottage Grove in the form of net porosity isopach maps, OEA's expert chose not to use this data in his determination of the proposed TPF's and didn't provide any other data or measurable criteria to the Commission that would support his claim that the old TPF's based upon the Oswego could be used to fairly and accurately allocate production from the Big Lime and Cottage Grove to all of the tract owners. As pointed out by the protestants' expert, one can reasonably presume that the TPF's for the Big Lime

and the Cottage Grove would be substantially different from the TPF's for the Oswego because the Cottage Grove and the Big Lime have significantly different porosities, thicknesses and producing characteristics than the Oswego, and OEA provided no persuasive evidence to contradict this presumption.

7) The Referee agrees with the ALJ's conclusions. His Report is well reasoned setting forth his recommendation based on the evidence presented before him. The ALJ is the trier of fact. It is the ALJ's duty as the trier of fact to observe the demeanor of the witnesses, assess their credibility, and assign the appropriate weight to their opinions. *Grison Oil v. Corporation Comm'n*, 99 P.2d 134 (Okl. 1940); *Palmer Oil Corp. v. Phillips Petroleum Co.*, 231 P.2d 997 (Okl. 1951).

8) The ALJ in making his determination weighed the expert opinion presented before him and found the Protestants' opinions to be worth greater weight. It is clear that the Commission must follow the procedure set forth in *Haymaker v. Oklahoma Corporation Commission*, 731 P.2d 1008 (Okl.App. 1986) where the Court stated:

Proper appraisal of the expert testimony requires observance of the following benchmark principle approved in *Downs v. Longfellow Corp.*, 351 P.2d 999 (Okl. 1960):

"The reasons given in support of the opinions [of an expert witness] rather than the abstract opinions are of importance, and the opinion is of no greater value than the reasons given in its support. If no rational basis for the opinion appears, or if the facts from which the opinion was derived do not justify it, the opinion is of no probative force, and it does not constitute evidence sufficient to...sustain a finding or verdict."

The ALJ followed that principle in weighing the expert opinion espoused before him.

9) The Referee affirms the ALJ's conclusion that there was substantial evidence to support his recommendation and believes that his findings and conclusions are sustained by substantial evidence. See *Texas Cty. Irrigation & Water Res. v. Dunnett*, 527 P.2d 578 (Okl. 1974).

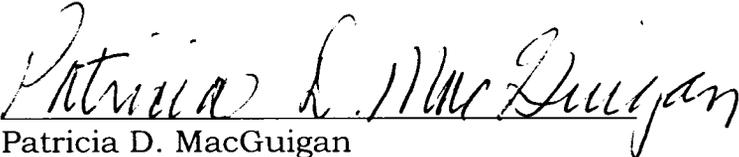
10) Lastly the Referee would state that the tract participation formula that must be adopted by the Commission in a particular case is to allocate production fairly accordingly to the guidelines set forth in 52 O.S. Section 287.4(b). In *Eason Oil Company v. Corporation Commission*, 535 P.2d 283 (Okla. 1975), the Supreme Court determined that an allocation formula can include or exclude any or all of the statutory factors, depending on whether they are pertinent. What is important is that the tract participation formula allocates to each tract its fair, equitable and reasonable share of unit production. The Supreme Court in *Eason* stated:

A separately-owned tract's share of the unit production must be measured by the value it contributes to the total value of the unit for oil and gas purposes. Each tract must be measured by the same set of values as must the unit as a whole.

The guidelines of 52 O.S. Section 287.4(b) include a consideration of the acreage of a tract, the quantity of oil and gas recoverable therefrom, its location or structure, its probable productivity of oil and gas in the absence of unit operations, and the burden of operations to which the tract well is likely to be subjected. The overriding consideration is: "...the value of each tract for oil and gas purposes and its contributing value to the unit in relation to like values of other tracts in the unit."

11) Thus, the Referee is in agreement with the ALJ's conclusion that the application must be denied because OEA did not provide substantial evidence to the Commission that the tract allocation or participation factors were fair, equitable and reasonable with respect to the distribution of hydrocarbons produced by the waterflood of the Big Lime and Cottage Grove common sources of supply. The Referee is in further agreement with the ALJ that OEA should resubmit its application with tract participation factors that can be demonstrated to the Commission as being fair, equitable and reasonable and OEA should determine the hydrocarbon production potential for all three formations in the unit and calculate their contributions separately and then combine their individual hydrocarbon production potentials into tract participation formulas that take into account the production potential for each formation.

**RESPECTFULLY SUBMITTED THIS 28<sup>th</sup> day of March, 2014.**

  
 Patricia D. MacGuigan  
 OIL & GAS APPELLATE REFEREE

PM:ac

xc: Commissioner Anthony  
Commissioner Douglas  
Commissioner Murphy  
Jim Hamilton  
ALJ David D. Leavitt  
Richard K. Books  
Richard A. Grimes  
Michael D. Stack  
Randy Mecklenburg  
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