



the Moseley Family; and **Jim Hamilton**, Assistant General Counsel for the Conservation Division, filed notice of appearance.

The Administrative Law Judge ("ALJ") filed his Report of the Administrative Law Judge on the 6<sup>th</sup> day of April, 2011, to which Exceptions were timely filed and proper notice given of the setting of the Exceptions.

The Appellate argument concerning the Oral Exceptions were referred to **Patricia D. MacGuigan**, Oil and Gas Appellate Referee ("Referee"), on the 1<sup>st</sup> day of July, 2011. After considering the arguments of counsel and the record contained within these Causes, the Referee finds as follows:

### **STATEMENT OF THE CASE**

**JMA APPEALS** the ALJ's recommendation that the application of H&S for 160 acre horizontal spacing in the SW/4 of Section 22, T16N, R19W, Dewey County, Oklahoma, be granted. JMA further appeals the ALJ's recommendation that the JMA application for 320 acre horizontal spacing in the E/2 of Section 22, T16N, R19W, Dewey County, Oklahoma, be denied.

On August 11, 2010 H&S filed its application for Horizontal Well Unit Rice #1-22H covering the SE/4 of Section 22 for the Tonkawa and Cleveland common sources of supply seeking 160 acre spacing. JMA protested that application as an owner in the adjoining NE/4 of Section 22. On November 10, 2010 JMA filed its own application seeking 320 acre horizontal drilling and spacing units for the Tonkawa and Cleveland common sources of supply for the E/2 of Section 22. On motion the cases were joined for hearing.

JMA owns all of the NE/4 and is allied with an owner of a small interest in the SE/4 but not participating in the joined hearing. JMA also is the operator of the 160 acre irregular unit composed of stacked 80 acre tracts and described as the E/2 W/2 of Section 22. After the H&S filing and before the JMA filing, JMA completed the Ferrell #7-22H well in the E/2 W/2 of Section 22. The Ferrell #7-22H well is a very successful well in the Cleveland and Tonkawa common sources of supply.

In the SE/4 there is only one well, the Ferrell #1-22H, a long time oil producer wellbore owned by a third party. H&S is the major owner of the SE/4 with a 65% interest. If it is successful in its application it would, in all probability, be designated operator and could drill a horizontal well with the lateral solely within the SE/4 of Section 22. If the 320 acre horizontal spacing is allowed, H&S would see its unit interest diminish to 33% and its allied interests reduced to 1/8<sup>th</sup>. The result would be that JMA would own a majority of the

working interest in the unit and in all probability be designated operator with the right to designate the well location, path and termination point.

JMA has developed the NE/4 in the Tonkawa and Cleveland formations by drilling four vertical wells, one in each quarter quarter section. Its announced view of horizontal development is to start in the SW corner of the 320 acre unit gently slant to the middle of the unit at the halfway point and then go up the middle line of the NE/4 with two of its existing wells on either side of the wellbore, terminating near the north line of the unit. JMA apparently intends to continue producing from the Cleveland through its vertical wells in the NE/4 along with its proportional production from the proposed Rice #1-22H.

The NE/4 originally had and still has more oil to be produced from this common source of supply than the SE/4 by a ratio of two to one.

**JMA TAKES THE POSITION:**

- (1) The ALJ's Report is contrary to 52 O.S. § 87.1 that requires well spacing and drilling and spacing units to be approximately uniform in size and shape.
- (2) The ALJ's Report fails to protect correlative rights of owners in the E/2 of Section 22 by denying them the same opportunity the Commission granted owners in the W/2 of Section 22 and the adjoining eight offset sections.
- (3) The ALJ's Report fails to consider costs and risks in his analysis of economic waste.
- (4) The ALJ's Report fails to consider efficient development with regard to the proposed unit size and shape.
- (5) The ALJ's Report fails to consider performance and stimulation relating to horizontal development.
- (6) The ALJ's Report fails to consider the significant undeveloped areas in the E/2 of Section 22 created by smaller square drilling and spacing units.
- (7) The ALJ's Report is in conflict with case law discussing the balance between economic waste and the protection of correlative rights and appears to be in conflict with the evidence presented in this cause.
- (8) The ALJ's Report failed to consider the loss of approximately 99,000 barrels of oil in the NE/4 of Section 22 that will go undeveloped as a result of the recommendation, and as such, the ALJ erred in the analysis of economic waste.

(9) The ALJ erred in the analysis of pressure information reviewed outside the record in these causes.

(10) The ALJ's pressure analysis of the Ferrell #7-22H well and the NE/4 of Section 22 is in error and the conclusions reached are not supported by the evidence.

(11) The ALJ erred in concluding that JMA's application violates correlative rights of owners in the SW/4 of Section 22.

(12) The ALJ's recommendation regarding the Tonkawa is not supported by any evidence and is in complete opposition to his reasons given regarding the proper size for the Cleveland common source of supply.

(13) The ALJ erred in stating there are horizontal wells in quarter sections. There is no evidence to support that conclusion and it appears the ALJ relied on that fact as a component to his recommendations.

(14) Therefore, JMA respectfully requests that the Report of the ALJ be reversed and that the Commission grant the application of JMA and deny the application of H&S.

**THE ALJ FOUND:**

(1) It is clear under the Conservation Laws that H&S, as an owner with an interest in the minerals or a right to drill in the common sources of supply covered by the application, has the right to apply for spacing of either the actual or prospective Tonkawa and Cleveland common sources of supply so that development of those common sources of supply can be pursued, waste prevented, and correlative rights protected. *May Petroleum, Inc. v. Corporation Com'n of State of Okl.*, 663 P.2d 716 (Okl. 1982); *Cameron v. Corporation Commission*, 418 P.2d 932 (Okl. 1966). Its application was filed on August 11, 2010 to obtain horizontal spacing for the SE/4 of Section 22 where it owned or held by lease a 65% mineral interest in the Cleveland and Tonkawa common sources of supply. JMA protested as allowed by Title 52 O.S. § 87.2 as an affected owner of a mineral interest in the common source of supply. On November 10, 2010 JMA filed its application for horizontal spacing as an owner in the NE/4 and asking that the spacing be for a 320 acre unit consisting of the E/2 of Section 22. The matters were joined for hearing.

(2) The Commission derives its jurisdiction in the matter from Tit. 52 O.S. §87.1 which provides in relevant part:

(a) To prevent or to assist in preventing the various types of waste of oil or gas prohibited by statute, or any of said wastes, or to protect or assist in protecting the correlative rights of interested parties, the Corporation Commission, upon a proper application and notice given as hereinafter provided, and after a hearing as provided in said notice, shall have the power to establish well spacing and drilling units of specified and approximately uniform size and shape covering any common source of supply, or prospective common source of supply, of oil or gas within the State of Oklahoma;...

In the abstract JMA would seem to have the better position to argue the concept of prevention of economic waste. Hundreds of times a year valid testimony is presented to the Commission that: 1) horizontal drilling exposes more pay zone for extraction of hydrocarbons than vertical wells; 2) the vertical portion of a well is more expensive than the lateral portion; 3) the longer the lateral the more cost effective the well; and 4) wells are drilled up dip and perpendicular to the natural fractures to enhance drainage.

(3) When prevention of waste competes with correlative rights, waste has the priority. *Denver Producing & Ref. Co. v. State*, 184 P.2d 961 (Okl. 1947). However, personal rights are also involved and while they must yield to the reasonable exercise of police power of the state it is not contemplated that they be annihilated thereby, or that they be interfered with to any greater extent than is reasonably required by a proper exercise of the power, taking into consideration the legitimate object to be accomplished. *State ex rel. Roth v. Waterfield*, 29 P.2d 24 (Okl. 1933); *Denver Producing & Ref. Co. v. State*, supra.

(4) In this case JMA chose to develop the two 80 acre units of the NE/4 through four vertical wells to the Cleveland, one in each quarter section. These wells have produced both oil and gas out of an oil reservoir. Basically, the gas was taken out leaving oil in place. In the SE/4 only one well was drilled in the approximate center of the unit. It has been a consistent oil producer. Mr. Davis, engineer for JMA, estimates approximately 207,000 barrels of oil remain in the NE/4 and only 97,000 barrels of oil remain in the SE/4. However, the pressures in the four wells in the NE/4 were given by Harding & Shelton to be around 1,500 psi, down considerably from the virgin pressure of 4,000 psi. Indicative of the pressure depleted nature of the NE/4, the Ferrell #2-22 well in the SW/4 NE/4 of Section 22 has an EUR of 57,000 barrels of oil. It has cycled only 4,000 barrels in the last five years. The remaining wells in the NE/4 are between 56% and 82% depleted. Production is slow and arduous, but there was no testimony that the remaining oil in the NE/4 could not be

produced with the existing wells. There was the opinion evidence by H& that these wells could drain the two 80 acre units upon which they respectively sit.

(5) There was evidence that the Ferrell #7-22H well drilled by JMA in the 160 acre unit comprised of the E/2 W/2 of Section 22 became stuck in the course of drilling a horizontal well. Judicial notice is taken of Form 1002A attached in Appendix 1 filed with the Commission for the Ferrell #7-22H showing the well was drilled at a surface location of 250' FSL and 330' FEL of the quarter section line which is the center line of Section 22. Upon becoming stuck the operator pulled back and cut a hole to drill in a more northwesterly direction. The result was a lesser lateral and a very good well with, according to the Form 1002A, a "Flow Tubing Pressure" of 1600. Between September 4 and December 3, 2010 the Ferrell #7-22H produced approximately 37,000 barrels of oil and .2 BCF gas. Reportedly it is to pay out in 6 months and still make 260 barrels a day and 1.2 MCFG/D. The surface location of the Ferrell #7-22H is close to a legal location for the H&S proposed Rice #1-22 in the SE/4 of Section 22, and according to Exhibit 7, would enter the formation close to the location of the Ferrell #7-22H and be in the same isopach thickness.

(6) There was a difference of opinion concerning the cause of the problem encountered by JMA in the drilling of the Ferrell #7-22H. H&S presented opinion evidence through its engineer based on drilling reports that the bit had left a shale portion and was drilling in sand at the time of "differential sticking.". Differential sticking occurs when the mud pressure within the drill pipe is greater than the pressure in the hole. The pipe and bit are then thrown against the side of the hole and become lodged. JMA through its drilling engineer states that the problem was caused when the bit's entry into the formation was too high causing frequent drilling through shale. The dispute arose because H&S was trying to show depletion of gas pressure in the W/2 NE/4 by the two wells located therein. The H&S theory was (and is) that the wellbore entered the depleted by production area of the lower such well causing the differential sticking. If established, this in turn, would militate against drilling a horizontal well between these two wells and their sister two wells in the E/2 of NE/4. Deciding the exact cause is not outcome determinative in this case. Each side produced plausible theories. The proof did establish that shale cuttings can cause problems and that drilling a horizontal into a pressure depleted zone is risky. Happily, JMA moved deeper into the Cleveland zone and westward from the wells in the W/2 of NE/4 and completed a very good well.

(7) Mr. Davis was also asked why JMA would wish to share the greater portion of reserves in the NE/4 with the SW/4 by spacing the E/2 as a 320 acre unit? His response was that it would be difficult to place a well between the existing wells in the NE/4 and it would be a short lateral. He also stated that he did not know the Cleveland zone pressure in the NE/4. He took the

position that the reserves in the SE/4 had been greatly depleted by the Ferrell #1-22, as having drained a radius of 1,295 feet. He is convinced that there are remaining some 207,000 recoverable barrels of oil in the NE/4 and 97,000 recoverable barrels of oil in the SE/4. If it is difficult to thread the needle from the north at the beginning of the lateral drill, it would be more difficult to thread the needle from the south after the lateral drill had gone more than 2000 feet. If the SE/4 is depleted it makes no economic sense for the NE/4 to offer to share on a two for one basis.

(8) It is clear that JMA had the results of the Ferrell #7-22H well available immediately prior to the filing of its application in November 2010. These and other factors point to the conclusion that this protest is about pressure. The drilling of a lateral from the southwest corner of the SE/4 to its middle northern boundary and thence through the middle of the NE/4 would result in transferring stronger pressure in the SE/4 to lesser pressure in the NE/4. There is an obvious truth that such a maneuver would result in waste of pressure in the SE/4 to the detriment of the oil reservoir owned by Harding & Shelton.

Title 52 O.S. § 86.2 states:

The term "waste", as applied to the production of oil, in addition to its ordinary meaning, shall include economic waste, underground waste, including water encroachment in the oil or gas bearing strata; the use of reservoir energy for oil producing purposes by means or methods that unreasonably interfere with obtaining from the common source of supply the largest ultimate recovery of oil; ---

Title 52 O.S. § 86.3 states:

The term "waste", as applied to gas, in addition to its ordinary meaning, shall include the inefficient or wasteful utilization of gas in the operation of oil wells drilled to and producing from a common source of supply; the inefficient or wasteful utilization of gas from gas wells drilled to and producing from a common source of supply; ---

The loss of gas in the SE/4 by escape to the NE/4 is waste of gas to the SE/4. This loss might well be countenanced had it been shown that such action would result in the "largest ultimate recovery of oil.". There was no evidence that this waste would result in a greater recovery of hydrocarbons in the total, the true measure of conservation. Without that proof the traditional arguments concerning waste asserted by JMA become platitudes, and; the

granting of the JMA application would violate the correlative rights of owners of the SW/4.

(9) H&S is justified in not wanting to drill a lateral into a pressure depleted zone. While the proof of H&S of differential sticking in the Ferrell #7-22H was not sufficient to override the testimony of other causes by the drilling engineer of that well, the phenomena of differential sticking is still a recognized risk to be avoided. The 1002A for the Ferrell #7-22H shows a healthy "Flow Tubing Pressure" from the Cleveland formation in close proximity to the potential entry into formation location of the proposed Rice #1-22H well in the SE/4 as shown by Exhibit 7. The success of the Ferrell #7-22H well bodes well for the proposed Rice #1-22H well. While long laterals are the rule, there are horizontal wells in quarter sections.

(10) For these reasons the ALJ recommends that the application of H&S be granted and that the application of JMA be denied.

## **POSITIONS OF THE PARTIES**

### **JMA**

1) **Charles Helm**, attorney, appearing on behalf of JMA, stated that the ALJ's decision to approve H&S's application and deny JMA's application resulted in the SE/4 of Section 22 now having 160 acre horizontal spacing covering the Tonkawa and Cleveland common sources of supply and the NE/4 of Section 22 being unspaced horizontally. JMA believes the ALJ's decision is contrary to law and inconsistent with recent spacings had for these two zones in the 9-section area and in the immediate Township.

2) JMA further notes the ALJ gave no explanation for such decision. JMA is merely requesting to create a unit in E/2 of Section 22 that allows the same lateral as had in W/2 of Section 22 to Section 26 units.

3) JMA notes the 1002A does show the Ferrell #7-22H well produces from the Cleveland yet the ALJ stated this well was producing from the Tonkawa and Cleveland zones. JMA disagrees with the ALJ's Report where it states the NE/4 wells produced from the Tonkawa zone. JMA believes the ALJ was confused that the Tonkawa and Cleveland were somehow the same zones.

4) JMA observes that the two wells in the W/2 NE/4 have produced from solely the Tonkawa and the 2 wells in W/2 NE/4 produced commingled production from the Cleveland, Inola and Atoka zones with the NE/4 being mainly Cleveland production.

- 5) JMA notes the ALJ erroneously believed the case here relates to pressure. JMA submits the flowing tubing pressure has nothing to do with the issues at hand.
- 6) JMA notes the 1002A does show the Ferrell #7-22H well produces from the Cleveland yet the ALJ stated this well was producing from the Tonkawa and Cleveland zones.
- 7) JMA notes this 1002A shows a flowing tubing pressure of 1600 pounds, which the ALJ apparently believed was the expected reservoir pressure per H&S's evidence.
- 8) JMA notes the ALJ took judicial notice of the flowing tubing pressure for use in his written report to JMA's detriment and did not allow any experts to discuss it at the hearing.
- 9) JMA notes there was no expert testimony regarding this flowing tubing pressure given by the expert witnesses due to the flowing tubing pressure having no bearing on issues at hand, hence this was done off the record by the ALJ.
- 10) JMA has testified with 2 expert engineers that pressure depletion is not an issue with regard to the creation of these proposed horizontal units.
- 11) JMA believes that absent some kind of pressure build-up, any guess as to the reservoir pressure is speculation. JMA notes there has not been any actual tests had on the existing wells in Section 22 to determine reservoir pressure and that any attempt by H&S to define such is pure speculation.
- 12) JMA notes that flowing tubing pressure is not the same as reservoir pressure. JMA submits that an operator does not determine reservoir pressure from flowing tubing pressure.
- 13) JMA notes that H&S raised concerns per the potential depletion caused by the four NE/4 existing vertical wells and one vertical well in SE/4 of Section 22. JMA believes the ALJ considered this 1002A form to be a smoking gun and hence based his Conclusions on such outside data. JMA notes the ALJ reviewed this data outside of the record, which ultimately formed the cornerstone of the ALJ's decision to deny JMA's relief. JMA wonders how a party can combat an erroneous fact discovered outside the report that was not relied on by any expert witnesses and which the ALJ bases his decision on.
- 14) The JMA engineer had estimated 307,000 BO oil in the Cleveland left in the NE/4. JMA notes after the existing wells produce their maximum in next 20 to 30 years, there will be approximately 99,000 BO left unrecovered in NE/4. JMA notes the 5 existing wells in Section 22 can't produce all the

recoverable oil under the S/2 here. JMA notes the E/2 of Section 22 is ripe for Cleveland horizontal development.

15) JMA notes that Exhibit 15 shows that for the past 10 plus years in 4 Townships—16N, 15N, 19W and 20W, which surround the proposed Section 22 and go down and extend back to the west that operators here have drilled many vertical wells to develop the Cleveland and Atoka zones.

16) JMA notes the primary zone is Cleveland, with lines extending from some of the wells indicate horizontal wells. JMA notes that while the Tonkawa is bit shallower than the Cleveland zone, historically the Tonkawa has been produced vertically here.

17) JMA notes that recently this area has come under more development and redrilled horizontally with over 50 horizontal wells drilled in this area. JMA notes that every well crosses multiple quarter section boundaries. JMA submits those facts are consistent with JMA's request for 320 acre spacing with a lateral to extend from SE/4 to NE/4.

18) JMA notes that no 160 acre horizontal spaced unit has been created to cover a square governmental quarter section. JMA believes such would be considered economic waste which is prohibited by 52 O.S. Section 87.1.

19) JMA notes that each witness testified that there has never been a horizontal lateral for the Tonkawa and Cleveland zone in this area limited to one quarter section; however, the ALJ stated "there are horizontal wells in quarter sections." JMA disagrees and believes these laterals extend across two quarter sections, like JMA is requesting for their 320 acre spacing.

20) JMA notes in the recent 9 section area development that the owners of the Tonkawa and Cleveland rights around Section 22 have enjoyed use of 4000 foot laterals due to Section 14 being spaced as 640s. JMA notes that these 640s do not have a limited lateral of 2000 feet or one quarter section. JMA observes that by having 640s around Section 22, Sections 14, 15, 16, 21, 23, 26, 27 and 28 have the flexibility of having a section unit with 5,280 feet length.

21) JMA notes in Section 14 where H&S operates that several wells have been drilled. H&S drilled a Cleveland 4000 foot horizontal lateral in Holcomb #1-14H well; a Tonkawa 4000 foot horizontal lateral in Frady #1-14H well; a Cleveland 4000 foot horizontal lateral in Irene 1-14H well; a proposed Graybill #1-14HT well Tonkawa 4000 foot lateral.

22) JMA notes in Section 15 that Chesapeake drilled a Cleveland Graybill well plus Duncan drilled a Cleveland Graham well and Cleveland Juanita well in Section 21. JMA notes in Section 22 that in the W/2 JMA's drilled

Cleveland Ferrell #7-22H horizontal well and there is a proposed well in W/2 W/2 for a Cleveland 4000 lateral. JMA notes in Section 23 that H&S drilled in the E/2 the Basler #1-H well with a Cleveland lateral and a newly Martin 1-23 well next to E/2 of Section 22. JMA notes in Section 26 that JMA has proposed a Cleveland 4000 foot lateral. JMA notes in Section 27 that Duncan has a Cleveland 4000 foot lateral in the Williams 2H well. JMA notes in Section 28 there is a drilled Chester #1-28 Cleveland horizontal well. JMA points out to the Court that these horizontal wells drilled here in this 9-section area and those crossing over two quarter section borders have been 4000 foot lateral lengths.

23) Further, JMA notes the H&S unit of 2,640 feet is for only one quarter section. By upholding the ALJ's decision this would preclude proposed 4000 foot development given to all other operators in the area. It would be limiting it to just the SE/4.

24) JMA points out that in 1976 the SE/4 owners wanted to modify the 640 acre spacing for Tonkawa and Cleveland to be 80 acre stand-ups so as to avoid sharing the well drilled in the center of SE/4. 80 acre standups were created in 1976 per Order 121308. Hence, these 80 acre stand-ups created by Order 121308 mainly existing in Section 22.

25) JMA discusses Exhibit 2. JMA notes it was the spacing that created the E/2 W/2 unit. Then the Section 22 owners in W/2 W/2 added in the Tonkawa zone for a likewise 5280 foot length unit which allowed for a 4000 foot lateral to be drilled.

26) JMA notes that at time of trial the area surrounding E/2 of Section 22 was the only area that had 80 acre spacing and did not allow for any type of horizontal development. JMA submits an operator cannot drill these 4000 foot laterals like the other surrounding operators have been allowed to do so under the 80 acre existing spacing.

27) JMA notes that H&S had stated 160s would have given H&S 66% of the SE/4 and if 320s were formed, H&S would be divested down to a 33% working interest. JMA notes that H&S favored 160s due to their ownership position. JMA further notes that 60% of the E/2 working interest owners have agreed to the 320s request.

28) JMA notes that page 2 of the 1002A states the Ferrell #7-22H well produced from the Cleveland only zone and notes the witnesses said the same.

29) JMA does agree there were 4 vertical wells in the NE/4 yet the ALJ was wrong in his belief these wells produced from the Tonkawa zone. JMA disagrees as there is no evidence the Tonkawa has ever been developed or produced in NE/4. JMA finds this to be a significant error since the ALJ

based his conclusions believing all those wells were Tonkawa producers when none were such.

30) JMA submits the ALJ's approval of the H&S 160 acre horizontal spacing for SE/4 of Section 22 is inconsistent with recent orders creating horizontal spacing in Section 26 and W/2 of Section 22.

31) JMA notes that the testimony showed the longer laterals will reduce costs and improve productivity in the Cleveland and Tonkawa zones. JMA notes every horizontal lateral drilled in the nine section area has targeted an approximate 4000 foot lateral. JMA submits if the ALJ's decision is upheld then the NE/4 will have no horizontal spacing which will result in Cleveland and Tonkawa reserves being unproduced.

32) Further JMA believes the creation of the small square quarter section unit is an anomaly and inconsistent with previous approved Commission spacing in the nine section area or in the nearest four Townships. JMA submits there has never been a horizontal well limited to just one quarter section in this area. JMA notes the statute provides all parties the same opportunity to drill uniformly and consistent with all of the offsets.

33) JMA thinks the best way is to drill a horizontal lateral to access those unrecovered reserves via a horizontal well. While the costs are huge JMA believes them to be justifiable based on the \$4.9 million in production that can be gained by just one horizontal well.

34) JMA submits this case is about creating the proper drilling and spacing units for horizontal development for the Tonkawa and Cleveland zones. JMA believes the Commission should look at 52 O.S. Section 87.1 to resolve the conflict herein. JMA notes that the Section 22 Cleveland zone is an oil reservoir per the recent and past final orders.

35) JMA differs with the ALJ's belief that JMA chose to produce the gas and opted to leave the oil behind in the NE/4. JMA notes the gas was produced as an associated hydrocarbon along with the oil, hence the Cleveland is clearly not a gas reservoir.

36) JMA cites *Kuykendall v. Corporation Commission*, 634 P.2d 711 (Okl. 1981) and *Denver Producing & Refining Co. v. State*, 184 P.2d 961 (Okl. 1947) in support of their position. JMA believes the ALJ's decision will cause waste.

37) JMA notes that in 2009 horizontal development became active. JMA believes it is impossible to drill a 4000 foot lateral when a unit is 2640 feet in length. Consequently JMA sought to create the E/2 W/2 unit to drill a proposed 4000 foot lateral. JMA submits due to the old 80 acre conventional spacing it requires the creation of horizontal spacing in Section 22.

38) JMA requests the ALJ's decision be either reversed and/or reopened for determination if the flowing tubing pressure had on 1002A form has any relevance herein to issues at hand. Further, JMA requests the ALJ's recommendation be reversed due to the ALJ going outside the record and using irrelevant flowing tubing pressure data that has nothing to do with the issues at hand.

39) JMA respectfully requests the ALJ be reversed and the Court find there should be 320 acre horizontal spacing created covering the two zones for the E/2 of Section 22.

### **H&S**

1) **Gregory L. Mahaffey**, attorney, appearing on behalf of H&S, stated that JMA takes the same position that it did with the ALJ, believing that it is unfair for JMA to be given a shorter lateral than the units around them.

2) H&S notes JMA, a previous owner of this SE/4 for years, had sold their interests to another party. However, when H&S filed its 160 acres request in 8-10, then JMA filed their 320 acre relief application. H&S questions why JMA took so long to develop an interest in development here. H&S notes that even the ALJ wondered why JMA wanted to share all that oil with other parties when the SE/4 is depleted.

3) H&S notes the ALJ states the transfer of pressure from NE/4 to SE/4 would result in pressure waste to be detrimental to H&S's oil reserves in the SE/4. H&S thinks this basically would shift the hydrocarbons from SE/4 to NE/4 with the four existing wells possibly getting some of this new oil. H&S notes that the ALJ based his decision on the evidence that H&S is justified in not wanting to drill a lateral into a pressure depleted zone. H&S notes the ALJ indicated the phenomenon of differential sticking must be recognized and is a risk to be avoided.

4) H&S notes the engineer made a detailed analysis of area pressure data which supported the ALJ's decision. H&S believes the pressure data the ALJ relied on came from H&S's witnesses, not the Form 1002A from which JMA claims.

5) H&S witness stated "there's not going to be any significant incremental reserves that could be recovered by drilling a horizontal lateral in the NE/4, even if same could be successfully drilled." H&S notes there is no certain case where there has been a successful lateral drilled into a quarter section that has 4 wells in place already.

6) H&S notes that pressure wise that some of the reserves here might flow from SE/4 to NE/4, due to following the path of least resistance, which will not protect the SE/4 owners.

7) H&S notes that both geologists agreed there was really no substantial difference in the geologic interpretation. H&S agrees there are no barriers between the NE/4 and SE/4. However, H&S finds it odd that there are 181,000 BO in NE/4 and 107,000 BO in SE/4 yet JMA is intent on developing the SE/4.

8) H&S discusses Exhibit 8 and notes the letter sent by JMA to working interest owners in the Ferrell #7-22H well which states the problems were due to hole cleaning and lost circulation, but nothing about the drill stem being stuck in the shale often during the operation. H&S notes the letter also says JMA will now drill a new lateral 2500 feet to test the Cleveland zone.

9) H&S notes the 2500 figure came from JMA's experts who believed it would be economic and workable to drill a 2500 foot lateral yet actually it went to 3400 feet.

10) H&S notes that only the JMA operated Ferrell 7-22H well encountered completion problems here, despite lighter pound mud of 9.6 pounds per gallon being used, prior to the well's abandonment at initial mud rate of 10.7 pounds.

11) H&S notes the current reservoir pressure was 1500 pounds in NE/4 resulting in a 76% depletion and an abandonment pressure of 700 pounds. Further, H&S notes the redrill's success was due to using a shorter lateral in Ferrell 7-22H and staying to the west, to avoid the depleted area.

12) H&S notes the NE/4 is already developed on spacing units. H&S believes that JMA did not want to commit economic waste to redrill an expensive well in the NE/4 depleted area where the existing wells will recover the oil reserves present. H&S notes that the Kauk unit and State unit in Sections 15 and 16 have laterals drilled at an angle. H&S points out that JMA had no idea how they were going to drill the lateral around the existing Ferrell #1-22 well.

13) H&S believes JMA's differentially sticking due to drilling into the low pressure zone resulted in lost circulation costing their working interest owners an extra \$2.5 million. H&S finds spending that in the SE/4 would be economic waste.

14) H&S notes there are 4 Cleveland wells in the NE/4 which produce substantial quantities of oil. H&S believes that the ALJ simply found those wells would recover the oil reserves with no other well needed.

15) H&S notes that JMA did not own in the SE/4 when the initial hearing was had and at the hearing the well owners supported 160 acres. H&S did not focus on the Tonkawa nor did the ALJ. H&S had some evidence in the record to support their case for the Tonkawa. H&S believes there was no substantial evidence from JMA to support its Tonkawa spacing request.

16) The H&S witness indicated the H&S proposed 3200 foot lateral in SE/4 would not have any substantial or less reserves than the JMA 3400 foot lateral in Ferrell #7-22H well.

17) H&S notes that JMA stated that all experts agree it was important to drill a long lateral in the Cleveland and Tonkawa zones. H&S notes the drilling of 2 wells doubles the risk. Even JMA agreed that prevention of waste beats out correlative rights. H&S believes that the ALJ cited the appropriate statutes and case law in order to prevent waste here. H&S agrees the ALJ can take judicial notice of the 1002A pressure data.

18) H&S notes the remaining wells were between 56 to 82% depleted. H&S believes there is no evidence to show the existing NE/4 wells will not produce the remaining reserves here. H&S experts believed these 4 NE/4 wells would drain the Cleveland reserves.

19) H&S notes the ALJ may have made minor error yet the ALJ knew the main facts. H&S notes that even if judicial notice of the 1002A was error, it was harmless error as that information was already in the record that the Ferrell #7-22H well was a good well. H&S does not believe the ALJ used the 1002A to form the basis of his decision.

20) H&S notes the ALJ felt H&S's method better protects correlative rights here. H&S believes that it also insures that the parties with only one well won't be required to share their reserves with 4 existing well owners. H&S believes that while production would be arduous and slow, those 4 existing Section 22 NE/4 wells would ultimately recover all the recoverable Cleveland oil.

21) H&S believes that JMA did not want to commit economic waste to redrill an expensive well in NE/4 depleted area where the existing wells will recover the oil reserves present. H&S notes that H&S has successfully drilled more oriented laterals where required. H&S notes that the Kauk unit and State unit in Sections 15 and 16 have laterals drilled at an angle. H&S points out that JMA had no idea how H&S was going to drill the lateral around the existing Ferrell well.

22) H&S believes the proposed 160 acre horizontal spacing would be the best method to develop the Tonkawa and Cleveland zones here. H&S notes there was a true battle of the experts involved here and the facts of the case

justify the ALJ's decision. H&S would ask the Commission to affirm the ALJ ruling.

### **RESPONSE OF JMA**

1) JMA finds H&S's testimony to be a little disingenuous as to alleged reasons for drilling problems in this area. JMA notes the Ferrell #7-22H well was drilled into shale and ultimately got stuck in a bend and had to be redrilled. Redrilling had nothing to do with pressure depletion. JMA believes H&S's reasons here to be speculative as H&S admitted H&S doesn't know why the well pipe got stuck and why there was a difference in pressure depletion numbers.

2) JMA notes that H&S is currently drilling the Martin well along the east flank of Section 22, along the Section 22 east boundary next to the alleged NE/4 pressure depletion. Thus, H&S is obviously not concerned about pressure depletion. JMA believes the pressure depletion mentioned by H&S is a red herring to distract the Court from real issues.

3) JMA has already drilled 5 vertical wells and 1 horizontal well. JMA now proposes to drill a second horizontal well. JMA notes H&S wants to limit their horizontal unit to the SE/4 which the OCC has never allowed. JMA believes that H&S merely wants to utilize their 66% ownership of the SE/4.

4) JMA asserts that a review of the ALJ Report will show the ALJ references the flowing tubing pressure as his basis for his recommendation. However, this data was gathered outside the official record.

5) JMA does not believe that a party would spend \$5 million to drill an 1800 foot lateral. The only way H&S can achieve what they propose is to drill off unit and then they have to create a boomerang to get what they want. JMA notes that 60% of the working interest owners supported JMA at the time of the hearing, contrary to H&S's urging.

6) JMA respectfully requests granting the 320 acre Tonkawa and Cleveland spacing relief or leave the area unspaced.

### **CONCLUSIONS**

**The Referee finds the Report of the Administrative Law Judge recommending the granting of the H&S horizontal spacing application and**

**the denial of JMA's horizontal spacing application should both be reversed.**

1) The Referee finds the ALJ's recommendations to grant H&S's application for 160-acre horizontal spacing for the SE/4 of Section 22 and deny JMA's application for 320-acre horizontal spacing for the E/2 of Section 22 do not prevent waste and therefore are not supported by the weight of the evidence, and by law. The Supreme Court in *Denver Producing and Refining Company v. State*, 184 P.2d 961 (Okl. 1947) found:

In striking a balance between conservation of natural resources and the protection of correlative rights, the latter is secondary and must yield to a reasonable exercise of the former.

It is the Referee's opinion that the facts of the instant cause require the granting of JMA's request for standup 320 acre horizontal drilling and spacing units as JMA's request conforms to the principles of preventing waste, including economic waste.

2) Title 52 O.S. Section 87.1 provides in relevant part:

(a) To prevent or to assist in preventing the various types of waste of oil or gas prohibited by statute, or any of said wastes, or to protect or assist in protecting the correlative rights of interested parties, the Corporation Commission, upon a proper application and notice given as hereinafter provided, and after a hearing as provided in said notice, shall have the power to establish well spacing and drilling units of specified and approximately uniform size and shape covering any common source of supply, or prospective common source of supply, of oil or gas within the State of Oklahoma;...

3) As stated in *Winters v. Corporation Commission of Oklahoma*, 660 P.2d 145 (Okl. 1983):

...having been given a choice of remedies it is incumbent upon the Commission to use the remedy which will best prevent waste and protect correlative rights.

There have been 7 vertical wells drilled in Section 22 and one horizontal well. All 7 vertical wells have produced from the Cleveland and 2 of the vertical wells

have produced from the Tonkawa. The only horizontal well has been completed in the Cleveland. Irregular standup 160 acre horizontal units for the Cleveland have been recently created covering the E/2 W/2 of Section 22 and the W/2 W/2 of Section 22. The existing horizontal Cleveland well, the Ferrell #7-22H, was spaced and drilled by JMA in the E/2 W/2 of Section 22. JMA has recently spaced and pooled the W/2 W/2 of Section 22 for an irregular elongated 160 acre horizontal unit for the Cleveland and is prepared to drill that proposed horizontal well, which has been supported by H&S.

4) Both JMA and H&S presented evidence that the Tonkawa and Cleveland underlie all or substantially all of the E/2 of Section 22 and that the Cleveland is the primary zone of interest.

5) H&S proposes a square 160 acre unit to underlie only the SE/4 of Section 22 while JMA proposes an elongated standup 320 acre unit covering the entire E/2 of Section 22. The testimony reflects that the NE/4 of Section 22 has a greater volume of Cleveland reserves than in the SE/4 of Section 22. H&S's Exhibit 1 map shows the NE/4 of Section 22 with 7,716 acre feet in the Cleveland and 4,985 acre feet in the Cleveland in the SE/4 of Section 22. JMA's Exhibit 18 map reflects there appears to be approximately 307,000 BO recoverable in the Cleveland underlying the NE/4 of Section 22 and approximately 176,000 BO recoverable in the Cleveland underlying the SE/4 of Section 22. There was evidence that the NE/4 had approximately 181,000 BO left to be developed in the Cleveland underlying the NE/4 of Section 22 and approximately 107,000 BO left to be developed in the Cleveland underlying the SE/4 of Section 22.

6) Both JMA and H&S presented evidence that it is important to obtain as long a lateral as possible in drilling for both the Tonkawa and Cleveland common sources of supply in the area. Exhibit 15, a multi-section map of the area, reflect that horizontal drilling in the Tonkawa and Cleveland is normally across two quarter sections with no example of horizontal drilling on a single square 160 acre quarter section as being requested by H&S. H&S proposes to drill a horizontal horseshoe or boomerang in the SE/4 to try to increase the lateral length for a square 160 acre unit. The evidence presented reflected that in a normal horizontal lateral you have one curve or bend into the formation and thereafter you try to drill as straight as practical because the more you steer or attempt to steer a lateral curve, the more risk of loss and costs are incurred. Additionally drilling in a horseshoe or boomerang defeats the purpose of trying to drill perpendicular to the fractures. H&S's geologic witness stated that Cleveland fractures run northeast/southwest and the boomerang lateral illustrated on Exhibit 7 appears to run southwest to northeast which would be parallel to the fracture orientation. In addition, the boomerang lateral proposed by H&S on its Exhibit 7 is going through the thinnest Cleveland sand as mapped in the SE/4.

7) JMA presented evidence that over 60% of the working interest owners in the E/2 of Section 22 support the proposed and elongated standup 320 acre horizontal units for the Tonkawa and Cleveland. Exhibit 15 reflects that the Cleveland is spaced as a 640 acre unit in every offset section to Section 22. Numerous wells have been drilled in offsetting sections across two quarter sections with laterals being 4000 feet or more. JMA's proposed 320 acre horizontal unit covering the E/2 of Section 22 would afford the operator an approximate 3,960 foot lateral.

8) The evidence reflected that creating two separate 160-acre units in the E/2 of Section 22 as opposed to one 320 acre unit would require significantly more costs to access the same reserves and would double the risk of developing the same reserves. If you have to drill two horizontal components to access the same reserves, you will incur almost twice the costs to produce the same reserves which results in economic waste. In addition you would double the risks which are inherent in drilling and completion operations. Two separate units also create a void in the middle of the E/2 where OCC rules would prohibit drilling by imposing a 300 foot setback on the north boundary of the SE/4 of Section 22 and the south boundary of the NE/4 of Section 22. If the NE/4 is forced into a 160 acre horizontal unit the 99,000 BO that underlie the NE/4 which won't be recovered by the existing wells will likely go undeveloped, again causing waste. See *Gilmore Oil Company v. Corporation Commission*, 61 P.2d 22 (Okl. 1936). The purpose of 52 O.S. Section 87.1 is to prevent the drilling of unnecessary wells. See *Atlantic Richfield Company v. Tomlinson*, 859 P.2d 1088 (Okl. 1983); *Ward v. Corporation Commission*, 501 P.2d 503 (Okl. 1972). JMA's proposed 360 E/2 horizontal standup unit is consistent with spacing in horizontal development authorized by the Oklahoma Corporation Commission's spacing in every offset section surrounding Section 22.

9) In making a correct spacing determination the expert opinion presented must be weighed and the Commission must follow the procedures set forth in *Haymaker v. Oklahoma Corporation Commission*, 731 P.2d 1008 (Ok1.App. 1986) wherein the Court stated:

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

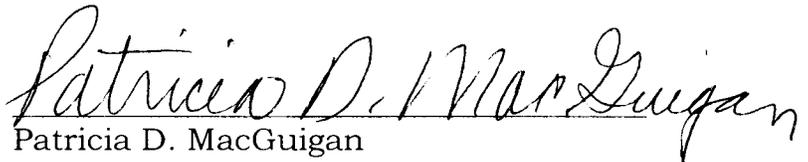
"The reasons given in support of the opinions [of an expert witness] rather than the abstract opinions are of importance, and the opinion is of no greater value than the reasons given in its support. If no rational basis for the opinion appears, or if

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."

Thus, on examination by the Referee, the weight of the evidence clearly reflects that the ALJ's finding that H&S's 160 acre horizontal unit was preferable is not supported by relevant, substantial, or credible evidence, and none that induces conviction. The substantial evidence suggests that waste will occur if the 320 acre standup horizontal well unit is not created as requested by JMA. Otherwise recoverable oil will be left in the ground and never recovered.

10) Therefore, for the above stated reasons, the Referee finds that there is substantial evidence showing that the prevention of waste will be better accomplished by the granting of the JMA relief rather than the H&S relief. Thus, the Referee finds the Report of the ALJ should be reversed.

**RESPECTFULLY SUBMITTED THIS 2<sup>nd</sup> day of August, 2011.**

  
Patricia D. MacGuigan  
OIL & GAS APPELLATE REFEREE

PM:ac

xc: Commissioner Murphy  
Commissioner Cloud  
Commissioner Anthony  
Jim Hamilton  
ALJ William L. Peterson  
Gregory L. Mahaffey  
Charles Helm  
John Mitchell  
Jack Mattingly, Jr.  
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