

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED  
BY THE OIL CONSERVATION COMMISSION FOR  
THE PURPOSE OF CONSIDERING:

APPLICATION OF SAMSON RESOURCES COMPANY,  
KAISER-FRANCIS OIL COMPANY AND CASE NO. 13492 (De Novo)  
MEWBOURNE OIL COMPANY FOR  
CANCELLATION OF TWO DRILLING PERMITS  
AND APPROVAL OF A DRILLING PERMIT, LEA  
COUNTY, NEW MEXICO

APPLICATION OF CHESAPEAKE OPERATING, INC.  
FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO CASE NO. 13493 (De Novo)  
MEXICO

ORDER NO. R-12343-E

**ORDER OF THE COMMISSION**

THIS MATTER, having come before the New Mexico Oil Conservation Commission (Commission) on January 11, 2007 at Santa Fe, New Mexico, on application of Samson Resources Company (Samson), Kaiser-Francis Oil Company (Kaiser-Francis) and Mewbourne Oil Company (Mewbourne) (Samson et al) for cancellation of two drilling permits and approval of a drilling permit and application of Chesapeake Operating, Inc. (Chesapeake) for compulsory pooling, Lea County, New Mexico, and the Commission, having carefully considered the evidence, the pleadings and other materials the parties submitted, now, on this 16<sup>th</sup> day of March, 2007,

**FINDS THAT:**

PRELIMINARY MATTERS

1. Notice has been given of the applications and the hearing on this matter, and the Commission has jurisdiction of the parties and the subject matter.

2. The New Mexico Oil and Gas Act, NMSA 1978, Section 70-2-17, provides that "Where, however, such owner or owners have not agreed to pool their interests, and where one such separate owner, or owners, who has the right to drill has drilled or proposes to drill a well on said unit to a common source of supply, the division, to avoid the drilling of unnecessary wells or to protect correlative rights, or to prevent

waste, shall pool all or any part of such lands, or interest or both in the spacing unit or proration unit as a unit".

3. NMSA 1978, Section 70-2-17, also provides that "For purposes of determining the portion of production owned by persons owning interests in the pooled oil or gas, or both, such production shall be allocated to the respective tracts within the unit in the proportion that the number of surface acres included within each tract bears to the number of surface acres included in the entire unit. The portion of production allocated to the owner or owners of each tract or interest included in a well spacing or proration unit formed by a pooling order shall, when produced, be considered as if produced from the separately owned tract or interest by a well drilled thereon. Such pooling order of the division shall make definite provision as to any owner, or owners, who elects not to pay his proportionate share in advance for the prorated reimbursement solely out of production to the parties advancing the costs of the development and operation, which shall be limited to the actual expenditures required for such purpose not in excess of what are reasonable, but which shall include a reasonable charge for supervision and may include a charge for the risk involved in the drilling of such well . . ."

4. Case No. 13492 concerns Samson et al's application before the Oil Conservation Division (Division) seeking cancellation of the Division's approval of an application for permit to drill filed on March 10, 2005 by Chesapeake for the KF 4 State Well No. 1 and an application for permit to drill filed on March 18, 2005 by Chesapeake for the Cattlemen 4 State Com Well No. 1. The Division permitted the KF 4 State Well No. 1 (KF 4 well) for a location in the southeast quarter, 660 feet from the South line and 990 feet from the East line of irregular Section 4, Township 21 South, Range 35 East, NMPM, in Lea County. The Division permitted the Cattlemen 4 State Com Well No. 1 for a location 3300 feet from the South line and 990 feet from the East line in the east half of the geographical middle third of irregular Section 4, Township 21 South, Range 35 East, NMPM.

5. Samson et al sought cancellation of the applications for permit to drill (APD) for the KF 4 well and the Cattlemen 4 State Com Well No. 1 on the ground that they own the entire working interest in the quarter sections containing the KF 4 well and the Cattlemen 4 State Com Well No. 1.

6. Case No. 13493 concerns Chesapeake's application to create a compulsory pooled lay-down unit consisting of the south half (geographical south third) of irregular Section 4, Township 21 South, Range 35 East, NMPM and dedicate it to Chesapeake's KF 4 well.

7. As a result of the factual relationship between the two cases, the Division and subsequently the Commission combined the two cases for hearing purposes.

8. The parties appeared at the hearing and presented evidence. Samson et al presented evidence in support of its application in Case No, 13492 and in opposition to

Chesapeake's application in Case No. 13493. Chesapeake presented evidence in support of its application and in opposition to Samson et al's application.

#### UNDISPUTED EVIDENCE

9. Section 4 of Township 21 South, Range 35 East, NMPM, in Lea County, is an irregular section consisting of approximately 950.8 acres, more or less, and is approximately one mile wide from east to west, and one and one-half miles long from north to south. The subdivisions of Section 4 are as follows:

a. the southeast quarter (geographically, the east half of the south one-third), consisting of lots 17, 18, 23 and 24;

b. the southwest quarter (geographically, the west half of the south one-third), consisting of lots 19 through 22;

c. Lots 9, 10, 15 and 16, being the quarter section immediately north of the southeast quarter, hereinafter called "the east half of the middle one-third";

d. Lots 11 through 14, being the quarter section immediately north of the southwest quarter, hereinafter called "the west half of the middle one-third";

e. Lots 1 through 8, consisting of 310.8 acres, more or less, being the two northern most quarter sections. Stipulation by the Parties as to Undisputed Evidence to be Considered by the Commission filed August 9, 2006 (Stipulation), pages 1 and 2.

10. The State of New Mexico owns the oil and gas minerals within the entire Section 4, Township 21 South, Range 35 East, NMPM (as well as the surface), and all acres have been leased. Lease status and ownership are as follows:

a. The southeast quarter is leased under State of New Mexico Lease No. BO-1481-14. Kaiser-Francis, Samson, and Mewbourne own all the working interest.

b. The southwest quarter is leased under State of New Mexico Lease No. VO-7063-2. Chesapeake owns all the working interest.

c. The middle one-third is leased under State of New Mexico Lease No. VO-7054. Samson owns all the working interest.

d. The northern one-third is leased under State of New Mexico Lease No. VO-7062-2. Chesapeake owns all the working interest. Stipulation, page 2.

11. Chesapeake does not own an interest in the southeast quarter of Section 4, Township 21 South, Range 35 East and has not owned such interest at any time relevant to this case. Chesapeake has no contractual right with respect to the mineral estate in the

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southeast quarter of Section 4, Township 21 South, Range 35 East, NMPM. Stipulation, page 2.

12. On February 27, 2005, Mewbourne ran electric logs showing over 40 feet of Morrow porosity on its Osudo 9 State Com. Well No. 1 (Osudo 9 well) located in the southeast quarter of the northeast quarter of Section 9, Township 21 South, Range 35 East, NMPM, being the quarter section immediately south of the southeast quarter of Section 4, Township 21 South, Range 35 East, NMPM. On March 8, 2005, Mewbourne placed that well on line and began selling natural gas. The Osudo 9 well is a prolific producer of natural gas from the Morrow formation and is owned by Mewbourne, Chesapeake, and Finley Resources. Stipulation, page 2.

13. On March 9, 2005, Chesapeake sent a letter to Samson (received on March 11, 2005) proposing the drilling of the KF 4 well "in the south half of Section 4" and requesting the recipient to elect whether or not to participate. The letter also invited Samson to enter into negotiations for sale of its interest to Chesapeake, but stated, "be advised that entering into negotiations to sell Samson's interest does not excuse or allow Samson to delay the required election under this well proposal". Chesapeake also sent a similar proposal letter to Kaiser-Francis. Chesapeake did not send a proposal letter to Mewbourne because Mewbourne had not yet obtained an interest in the proposed spacing unit. Stipulation, pages 2 and 3.

14. On March 10, 2005, Chesapeake Operating, Inc. filed an APD for the KF 4 well, designating a lay-down spacing unit consisting of the southeast and southwest quarters of Section 4, Township 21 South, Range 35 East, NMPM. Stipulation, page 2.

15. The Division approved Chesapeake's APD on March 11, 2005. Stipulation, page 2.

16. There was no operating agreement between Chesapeake and Samson or Kaiser-Francis that would require an election, and Chesapeake knew that there was no such agreement. Stipulation, page 3.

17. On March 22, 2005, Samson signed and returned Chesapeake's election letter and authorization for expenditures, indicating that it elected to participate in the proposed KF 4 well, but did not send its portion of the dry hole costs as requested in the letter. Stipulation, page 3.

18. On March 28, 2005, Mewbourne, as operator on behalf of Samson et al., filed an APD for its proposed Osudo 4 State Com. No. 1. The Mewbourne APD proposed a location in the southeast quarter and the east half of the middle third of Section 4, Township 21 South, Range 35 East, NMPM. The Division rejected Mewbourne's APD on March 30, 2005 because of its earlier approval of Chesapeake's APD. Stipulation, page 3.

19. On March 30, 2005, Samson sent a letter and fax to Chesapeake stating that "Samson hereby rescinds and revokes its invalid election to participate in [the KF 4 well]". Stipulation, page 3.

20. On April 15, 2005, Chesapeake began site construction for the KF 4 well. Stipulation, page 3.

21. On April 20, 2005, Mewbourne, as the last of the designated parties (Kaiser-Francis, Samson, and Mewbourne) signed a communitization agreement providing for a communitized unit in the Morrow consisting of the southeast quarter and the east half of the middle third of Section 4, Township 21 South, Range 35 East, NMPM. Stipulation, page 3.

22. On April 26, 2005, the applications in Case No. 13492 and Case No. 19493 were filed with the Division. Stipulation, page 3. In Case No. 13492 Samson et al sought cancellation of two drilling permits and approval of a drilling permit and in Case No. 193493 Chesapeake applied for compulsory pooling, Lea County, New Mexico.

23. On April 27, 2005, the New Mexico State Land Office approved the communitization agreement described above in paragraph 20, noting that, "[t]he effective date of this approval is April 1, 2005".

24. On April 27, 2005, Chesapeake spudded the KF 4 well. Stipulation, page 3.

25. Chesapeake completed the KF 4 well and placed it in production in January 2006. Stipulation, page 3.

26. As of April 2006, the KF 4 well had produced 270, 279 Mcf of gas and 2, 286 barrels of oil. Stipulation, page 3.

#### CONCLUSIONS REGARDING LEGAL ISSUES

27. It is undisputed that Chesapeake did not own, and does not own, title to the minerals or surface of the southeast quarter of Section 4, Township 21 South, Range 35 East, NMPM where it drilled the KF 4 well.

28. If Chesapeake had any contractual right in the southeast quarter of Section 4, Township 21 South, Range 35 East, NMPM, it arose by virtue of Samson's election letter and authorization for expenditures approval. Samson rescinded those prior to Chesapeake drilling the KF 4 well.

29. The facts existing at the time of the Division's approval of Chesapeake's SPD were materially distinguishable from the facts in Case No. 13153, *Application of Pride Energy Company, etc.*

30. In *Application of Pride Energy Company, etc.* the Commission found that an operator could file an application for permit to drill before it filed a pooling application. It did not find that an operator could actually drill a well on acreage in which it had no interest before the Division or Commission decided a pooling application.

31. In this matter Chesapeake drilled a well on acreage it did not have an interest in before the Division or Commission decided on the pooling application.

32. As such, since it is within the Commission's discretion whether to allow a risk charge for drilling the well, the Commission finds that Chesapeake should not be allowed a risk charge for drilling the KF 4 well on acreage it did not have an interest in prior to the Division or Commission deciding on the pooling application.

33. To prevent further misunderstandings in the interpretation of the Commission's orders, particularly in Case No. 13153, *Application of Pride Energy Company, etc.*, Order No. R-12108-C and *Application of TMBR/Sharp, Inc.*, Order R-11700-B, the Commission approves of the language on Division Form C-102, field 17, concerning the operator's certification and asks the Division to continue its use and to notify the Commission if it plans to discontinue its use. That certification states "I hereby certify that the information contained herein is true and correct to the best of my knowledge and belief and that the organization either owns a working interest or unleased mineral interest in the land, including the proposed bottomhole location, or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interests or in a voluntary pooling agreement or compulsory pooling order hereto entered by the Division".

34. Chesapeake indicated that it no longer intends to drill a well at the location of its proposed Cattlemen 4 State Com Well No. 1. See Order No. R-12343-B, page 20.

35. Accordingly, the application of Samson et al, in Case No. 13492, for cancellation of the permit to drill for the Cattleman 4 State Com Well No. 1 should be approved.

#### CONCLUSIONS REGARDING TECHNICAL ISSUES

36. The isopach maps (maps of the oil and gas producing layers that estimate the location and depth of those layers) created by the geologists of each party support their respective positions on what should be the correct orientation of the spacing unit. Each was bound by his interpretation of the existing well control (other existing wells in the vicinity that are drilled in the same formation that have production from that formation or did not have production) and was free to project contours into areas void of data based on an overall interpretation of general trends,

37. Both Chesapeake and Samson et al presented logical interpretations of the data in these cases. No effective well control exists either to the north or to the west that could preclude projection of the Osudo 9/KF 4 reservoir in either of those directions.

38. The parties interpreted the thickness of the Morrow sands (oil and gas producing layers) of several wells differently. Some of the older wells have only sonic logs, which are sometimes difficult to relate to neutron-density logs. In addition, a lime matrix was used to scale the neutron-density logs. These differences significantly affected the way the geologists drew the contours for the Morrow. The interpretations seemed to agree on the western edge of the maps (three to four miles west of the subject area) but disagreed locally over the area in question.

39. Both parties agree that the Central Basin Platform (CBP) exists to the east. Chesapeake's geologist testified that the CBP was a local source of Morrow sediments and influenced the local flow direction of the Morrow channels. Samson et al's geologist testified the Morrow sands originated from the Pedernal highlands to the north, and the CBP was too low and swampy in Morrowan times to contribute to the Morrow sands.

40. The Chesapeake geologist attempted to separate the Middle Morrow sands into layers and mapped each of these lenses using existing well control. Chesapeake did not relate the direction of the Morrow sand channels with the mapped top-of-Morrow structure or the north-south faulting and pointed out that one of the best Morrow wells, a well in Section 5, exists on a structural high (an elevated area within the geologic layer).

41. The Delaware Basin began forming in the late Mississippian period into the early Pennsylvanian period. Samson Exhibit 12, page 38.

42. The Delaware Basin's axis lies west of the KF 4 well area and trends in a north/northwest-south/southeast lineation. Samson Exhibit 12, pages 39 and 42.

43. Pennsylvanian age Morrowan sediments are fine-grained sandstone and shale that eroded from areas north, east and northwest of the Delaware Basin. See Chesapeake Rebuttal Exhibit 9.

44. The Pedernal highlands located northwest of the KF 4 well area were the primary source for Morrowan sediments. See Samson Exhibit 12, page 39.

45. The erosion of the Mississippian section off the exposed CBP provided additional sediments. See Samson Exhibit 12, page 39; Transcript, pages 761 through 767 and 788.

46. The Barnett shale, which consists of partly silty, brown shale and contains very fine-grained sandstone and siltstone, overlies the Mississippian limestone. See Sampson Exhibit 12, page 38 and Samson Exhibit 10, page 414.

47. The Midland Basin had not yet formed during the Morrowan period and was therefore an area of non-deposition. Transcript, page 724.

48. In addition, the CBP's western boundary contained greater structural relief and vertical separation than the eastern boundary so erosion would be to the west. See Samson Exhibit 16, page 163.

49. During lowstands during the Pennsylvanian period fluvial systems would have trended in an east-west direction with a possible southwesterly component. Transcript, page 785. Samson Exhibit 18, page 149.

50. In addition, fluvial systems from the Pedernal highlands would have been in a northwest to southeast direction and the two would have converged. Transcript, page 785; Samson Exhibit 18, page 149.

51. Both the Pedernal highlands and the CBP provided sediments to the subject area, and as a result the sands in the reservoir area are a coalescence of sands that are oriented both north-south/northwest-southeast and east-west. As a result the Commission should create a 640-acre proration unit consisting of the south two-thirds of Section 4, Township 21 South, Range 35 East, NMPM, in order to prevent waste and protect correlative rights.

52. The Commission also takes administrative notice that the special rules and regulations for the North Osudo-Morrow Gas Pool provide for a standard unit containing 640 acres.

**IT IS THEREFORE ORDERED THAT:**

1. All uncommitted mineral interests, whatever they may be, in the oil and gas from the top of the Wolfcamp formation to the base of the Morrow formation underlying the south two-thirds of irregular Section 4, Township 21 South, Range 35 East, NMPM, Lea County, New Mexico are hereby pooled forming a 640-acre, more or less, spacing unit in all pools or formations within that vertical extent, including but not limited to the South Osudo-Morrow Gas Pool (82200) (the Unit).

2. There may be up to four total wells drilled in the Unit including the KF 4 well. Future wells shall be located at standard locations.

3. While the Commission will not cancel the APD for the KF 4 well, effective on the date of this order, Samson is hereby designated the operator of the Unit, the KF 4 well and any subsequent wells in the Unit.

4. After pooling, uncommitted working interest owners are referred to as pooled working interest owners. ("Pooled working interest owners" are owners of working interests in the unit, including un-leased mineral interests, who are not parties to an operating agreement governing the unit as established by this order)

5. Chesapeake shall furnish the Commission and each known pooled working interest owner (including non-consenting working interest owners) an itemized

schedule of actual well costs for the KF 4 well, including invoices and other documentation, as well as sales documents within 30 days following this order. Pooled working interest owners shall file any objections to the documentation or well costs with the Commission within 30 days following receipt of the documentation. If there is an objection to actual well costs, the Commission will determine reasonable well costs at a regularly scheduled meeting after public notice and hearing.

6. Pursuant to NMSA 1978, Section 70-2-17, the well costs for the KF 4 well shall be divided according to the pooled working interest owners in the Unit, with all pooled working interest owners paying their pro rata share of the reasonable, actual well costs. Such costs shall not include a risk charge, but shall include reasonable, actually incurred charges for supervision. Pooled working interest owners shall offset costs and proceeds from production shall be credited to the parties from the date of first production of the KF 4 well.

7. Reasonable charges for supervision for the KF 4 well (combined fixed rates) shall not exceed \$7,000 per month while drilling and \$750 per month while producing, provided that these rates shall be adjusted annually pursuant to Section III, LA. of the COPAS form titled "*Accounting Procedure-Joint Operations*".

8. Except as provided above, all proceeds from the production from the KF 4 well that are not disbursed for any reason shall be placed in escrow in Lea County, New Mexico, to be paid to the true owner upon demand and proof of ownership. The operator shall notify the Commission of the name and address of the escrow agent within 30 days from the date of first deposit with the escrow agent.

9. For any additional wells that the operator may drill in the Unit (wells other than the KF 4 well), the operator shall furnish the Division and each known pooled working interest owner in the Unit an itemized schedule of estimated costs of drilling, completing and equipping the well ("well costs").

10. For additional wells, within 30 days from the date the operator furnishes the schedule of estimated well costs, a pooled working interest owner may pay its share of estimated well costs to the operator in lieu of paying its share of reasonable well costs out of production. Pooled working interest owners who elect to pay their share of estimated well costs shall remain liable for operating costs but shall not be liable for risk charges. Pooled working interest owners who elect not to pay their share of estimated well costs as provided in this paragraph shall thereafter be referred to as "non-consenting working interest owners".

11. For additional wells, the operator shall furnish the Division and each known pooled working interest owner (including non-consenting working interest owners) an itemized schedule of actual well costs within 90 days following completion of the well. If the Division does not receive an objection within 45 days following receipt of the schedule, the actual well costs shall be deemed to be the reasonable well

costs. If there is an objection to actual well costs within the 45-day period, the Division will determine reasonable well costs after public notice and hearing.

12. For additional wells, within 60 days following determination of reasonable well costs, any pooled working interest owner who has paid its share of estimated costs in advance shall pay to the operator its share of the amount that reasonable well costs exceed estimated well costs and shall receive from the operator the amount, if any, that the estimated well costs it has paid exceed its share of reasonable well costs.

13. For additional wells, the operator is hereby authorized to withhold the following costs from production:

(a) the proportionate share of reasonable well costs attributable to each non-consenting working interest owners; and

(b) as a charge for the risk involved in drilling the well, 200% of the above costs.

14. For additional wells, the operator shall distribute the costs and charges withheld from production, proportionately, to the parties who advanced the well costs.

15. For additional wells, reasonable charges for supervision (combined fixed rates) are hereby fixed at \$7,000 per month while drilling and \$750 per month while producing, provided that these rates shall be adjusted annually pursuant to Section III.A.3 of the COPAS form titled "*Accounting Procedure-Joint Operations*". The operator is authorized to withhold from production the proportionate share of both the supervision charges and the actual expenditures required for operating the well, not in excess of what are reasonable, attributable to pooled working interest owners.

16. Except as provided in Ordering Paragraphs 13 and 15 above, all proceeds from production of additional wells that are not disbursed for any reason shall be placed in escrow in Lea County, New Mexico, to be paid to the true owner upon demand and proof of ownership. The operator shall notify the Division of the name and address of the escrow agent within 30 days from the date of first deposit with the escrow agent,

17. Upon final plugging and abandonment of the KF 4 well and other wells drilled on the unit pursuant to Division rules, the Unit created by this order shall terminate, unless this order has been amended to authorize further operations.

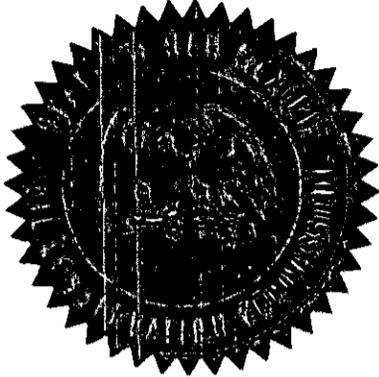
18. The permit to drill issued to Chesapeake for the Cattleman 4 State Com Well No. 1 is cancelled.

19. An operator shall not file an application for permit to drill or drill a well unless it owns an interest in the proposed well location or has a right to drill the well as stated in Division Form C-102.

20. The Commission retains jurisdiction of this matter for entry of such further orders as may be necessary.

DONE at Santa Fe, New Mexico on the 16th day of March 2007.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



A handwritten signature in cursive script, appearing to read "Jami Bailey".

JAMI BAILEY, C.P.G., MEMBER

A handwritten signature in cursive script, appearing to read "William Olson".

WILLIAM OLSON, MEMBER

A handwritten signature in cursive script, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P.E., CHAIR

SEAL