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:

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

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

ORDER NO. R-12343-B

CHESAPEAKE OPERATING, INC.'S PREHEARING STATEMENT

Chesapeake Operating, Inc. submits this Prehearing Statement in accordance with Rule 19.15.14.1211(B) NMAC (2006) of the New Mexico Oil Conservation Commission.

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APPEARANCES OF THE PARTIES

APPLICANT in Case 13493 OPPONENT in Case 13492	ATTORNEY
Chesapeake Operating, Inc. 6100 N. Western Ave Oklahoma City, OK 73118 Attn: Lynda Townsend 405-879-9414	Thomas Kellahin, Esq. P. O. Box 2265 Santa Fe, NM 87504 505-982-4285 and John R. Cooney, Esq. Earl E. DeBrine, Jr., Esq. Modrall, Sperling, Roehl, Harris & Sisk, P.A. P. O. Box 2168 Albuquerque NM 87103

OPPONENT in Case 13493 APPLICANT in Case 13492	ATTORNEY
Kaiser-Francis Oil Company	**J. Scott Hall, Esq.** **150 Washington Ave, Suite 300** **Santa Fe, NM 87501** **505-989-9857 (fx)** **505-988-4421 (ph)**
Samson Resources Company	**J. E "Gene" Gallegos, Esq.** **460 St. Michaels Dr. #300** **Santa Fe, NM 87505** **Fax: 505-986-1367**
Mewbourne Oil Company[1]	**James Bruce, Esq.** **P. O. Box 1056** **Santa Fe, NM 87504** **505-982-2043 (ph)** **505-982-2151 (fx)**

BACKGROUND

(1) In Case 13493, (the "Chesapeake Case") Chesapeake Operating, Inc. on behalf of Chesapeake Permian, L.P. (collectively "Chesapeake") seeks an order pooling all uncommitted mineral interests from the top of the Wolfcamp to the base of the Morrow formation underlying the S/2 of Irregular Section 4, Township 21 South, Range 35 East, NMPM, Lea County, New Mexico, to form a standard 320-acre gas spacing and proration unit ("GPU") for all formations or pools spaced on 320-acres within this vertical extent (for convenience referred to as the S/2 lay-down unit). This spacing unit is to be dedicated to its K-F State "4" Well No. 1 (API No. 30-025-

[1] Mewbourne Oil Company was a party below in Case Nos. 13492 and 13493. However, it did not appeal from the Division's Order No. R-12343-B and therefore has acquiesced in the ruling by the Division.

37129) that has been drilled from a surface location of 660 feet FSL and 990 feet FEL to a bottom hole location ("BHL") of 688 feet FSL and 1947 feet FEL (SE/4).

(2) In Case 13492, (the "Samson Case"), Mewbourne Oil Company ("Mewbourne") joined by Samson Resources Company ("Samson") and Kaiser-Francis Oil Company ("Kaiser") (collectively the "Samson Group") seek an order canceling the two drilling permits ("APDs") issued to Chesapeake for Chesapeake's K-F State "4" Well No. 1 and for Chesapeake's Cattleman "4" State Com Well No. 1 and the approval of Mewbourne's APD for Mewbourne's proposed Osudo "4" State Com Well No. 1 to be located 660 feet FSL and 1650 feet FEL of Section 4 (SE/4).

(3) During the August 22-23, 2005 hearing before the Division in Case No. 13492 Chesapeake withdrew its APD for the Cattleman "4" State Com Well No. 1. Because these two cases ultimately involve a dispute over the orientation a 320-acre spacing unit, they were consolidated for purposes of hearing. The granting of one application will require the denial of the other.

(4) Chesapeake spudded the K-F State "4" Well No. 1 on April 27, 2005. On April 28, 2005, Mewbourne file an Application for Emergency Order from the Division to prevent Chesapeake from continuing to drill the well. By Order entered May 5, 2005, the Division denied Mewbourne's application, ruling that Chesapeake could continue drilling and complete the well but not produce it until the Division ruled on the competing applications concerning the spacing units for the wells.

(5) On August 9, 2005, Chesapeake completed and tested the well at a rate of 2.6 MMcfpd and shut-in the well pending a ruling by the Division concerning the orientation of the spacing for the well.

(6) On August 22-23, 2005, these cases were heard by Division Examiner William E. Jones.

(7) By Order R-12343-B, dated January 10, 2006, the Division granted Chesapeake's application and denied the Samson Group's application. **See Exhibit "A" attached.**

(8) After entry of Order R-12343-B. Chesapeake completed and commenced production from the K-F State "4" Well No. 4.

(9) The K-F State "4" Well has produced at a rate of approximately 3 MMcfpd.

PARTIES AND INTERESTS

(10) In the SW/4 of Section 4, Chesapeake Permian, L.P. is the current holder of a State of New Mexico oil & gas lease No. V-7063 controlling 100% of the working interest ownership for that tract.

(11) In the SE/4 of Section 4, the Samson Group and Mewbourne currently share the working interest ownership in another State of New Mexico oil & gas lease No. B-1481 such that Kaiser has 36.5625%, Samson has 6.25% and Mewbourne has 7.1875%.

(12) In the middle one-third of Irregular Section 4, Samson controls 100% of the working interest ownership in another State of New Mexico oil & gas lease No. V-7054.

(13) In the northern one-third of Irregular Section 4 Chesapeake controls 100% of the working interest ownership in another State of New Mexico oil & gas lease No. V-7062.

(14) If the Commission, as did the Division, approves Chesapeake's proposed S/2 laydown spacing unit orientation, then the working interest unit ownership is Chesapeake with 50%, Samson with 6.25%, Mewbourne 7.1875% and Kaiser with 36.5625%

(15) However, if the Commission approves the Samson Group's E/2 stand-up spacing unit orientation, then Mewbourne and Kaiser's interests remain unchanged but Samson's interest is 56.25% and Chesapeake has no interest.

JURISDICTION

(16) The Division's jurisdiction in this matter is set forth in the Oil and Gas Act, including NMSA (1978), Section 70-2-17 and provides, in part, that:

> "Where, however, such owner or owners have not agreed to pool their interests, 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."
>
> "All orders effecting such pooling shall be made after notice and hearing, and shall be upon such terms and conditions as are just and reasonable and will afford to the owners of owners of each tract or interest in the unit the opportunity to recover or receive without unnecessary expense his just and fair share of the oil or gas, or both."

(17) The Commission is charged with the statutory duty of preventing waste and protecting correlative rights and any request by an operator to drill a well or form a spacing unit for the drilling of a well must be evaluated with respect to these criteria.

(18) The compulsory pooling statute does not limit the Commission's authority to order compulsory pooling when the owners of the interest sought to be pooled have entered into a voluntary communitization agreement involving some, but not all of the same interests. The Commissioner of Public Lands, who is a party to the Samson Group's communitization agreement, has expressed his position that the Commission should determine the orientation of the spacing unit for the well based upon the orientation that will result in the greater recovery of reservoir volume.

(19) When operators have proposed competing spacing units for the drilling of a well, each must be evaluated on its own merits and the Commission must approve the proposed spacing unit that presents the greatest potential for the recovery of reservoir volume, will best prevent the unnecessary drilling of wells, will prevent waste and will protect correlative rights.

PRECEDENTS

(20) In other cases, the Oil Conversation Commission ("OCC") has entered certain orders that established precedents that control the Division action in the subject cases:

(a) In TMBR/Sharp's permit dispute with Arrington, the OCC determined that an operator can drill first and obtain a compulsory pooling order afterwards stating that "It is the responsibility of the operator filing an application for a permit to drill to do so under a good faith claim of title and a good faith belief

that it is authorized to drill the well applied for." See Order R-11700-B, finding 28);

(b) In TMBR/Sharp's compulsory pooling dispute with Ocean, the OCC ultimately resolved the dispute over spacing unit orientation upon which orientation dedicated the greatest reservoir volume to the well. See Order R-11700-D, finding 16;

(c) In Pride, the OCC allowed Pride to: (a) re-enter a well on the Yates tract in which Pride had no interest; (b) compulsory pool a stand-up W/2 spacing unit dedicated to this well even though Yates had previously formed a lay-down N/2 spacing unit in which Pride had no interest; (c) compulsory pool Yates into the Pride spacing unit even though Yates had formed a voluntary spacing unit; (d) change the orientation of the Yates' spacing unit and (e) cause Yates' approved APD to be revoked and to obtain an approved APD for Pride to be reinstated. See Order R-12108.

(d) In Pride, the OCC determined that "the compulsory pooling statute NMSA 1978, 70-2-17, provided sufficient flexibility to allow the operator of a pooled unit to conduct operations anywhere on that unit, regardless of whether the owner of the land on which the well is located has consented thereto. See Order R-12108.C para 8 (i);

(e) In Valles Caldera Trust, Geoproducts of New Mexico, Inc. sought approval of APDs to re-enter some abandoned geothermal wells. The Samson Group relies upon this case. Despite having a mineral interest, Geoproducts did not have a surface use permit from the United States Forest Service. The Trust contented that federal law preempted OCC's jurisdiction. Significantly, the OCC decided not to issue a permit because Geoproducts clearly did not have the right to conduct the contemplated activity.

The OCC order in Pride was issued several months after its decision in Valles Caldera. See Order R-12093-A, dated February 12, 2004 and controls the legal issues in this case.

THE DIVISION'S CONCLUSIONS REGARDING THE VALIDITY OF CHESAPEAKE'S APPLICATION

(21) In its order entered in the subject cases, the Division resolved the various issues concerning the validity of Chesapeake's application favorably to Chesapeake, including, that:

(a) Chesapeake Operating, Inc. acted as agent for other Chesapeake entities in filing APDs and conducting operations. See Finding IV.D Order R-12343-B and including testimony and exhibits by Lynda Townsend. See Finding IV.D of Order R-12343-B

(b) By virtue of its ownership of an adjacent tract that could be pooled with the proposed drillsite tract to form a standard spacing unit, Chesapeake had a sufficient "good faith claim" to seek and obtain an approved APD. See Finding IV.C of Order R-12343-B

(c) By its subsequent entry and conduct of drilling operations on the non-Chesapeake tract, Chesapeake did not violate the Oil and Gas Act or Division rules. See Finding IV.E of Order R-12343-B

(d) The approval by the State Land Office of the Samson Group's Communitization Agreement for a stand-up unit did not preclude the Division from approving Chesapeake's lay-down unit. See Finding IV.F of Order R-123430-B

(22) Mr. Paul Kautz testified before the Examiner that his approval of Chesapeake's APD and C-102 was consistent with the OCD-Hobbs practice that the Division does not require ownership information for the proposed spacing unit, that ownership information is not a mandatory field for the electronic APD forms, and that the Division had never denied an APD for the reasons advanced by the Samson Group. To the contrary, he testified that Division had approved hundreds of APDs that did not

include information regarding ownership in the proposed spacing unit. See Chesapeake's Land Exhibit 16.

(23) The Division found that the Commission's ruling in the Pride Case conclusively established that Chesapeake had the authority required to file its APD and conduct drilling operations.

(24) Because the Division previously ruled on May 5, 2005 that Chesapeake could continue drilling the well, any issues regarding the validity of Chesapeake's APD were essentially rendered moot and no party sought an appeal of that order to Commission.

(25) The Commission should find that there is no material difference between what Chesapeake seeks in this proceeding and what was approved by the OCC in the Pride case. Chesapeake requests that the Commission affirm the Division's Order No. R-12343-B.

UNDISPUTED EVIDENCE

(26) Chesapeake, in an effort to minimize repetition, adopts as its summary the "Undisputed Evidence" set forth by the Division in Order R-12343-B, pages 2 thru 5.

EVIDENCE

LAND:

(27) In support of its application and in opposition to Samson, Chesapeake, as in did at the Examiner Hearing, will present testimony and exhibits from Lynda

Townsend, Cecil Gutierrez and Mike Hazlip concerning land issues as summarized in Finding III.A.1-3 of Order R-12343-B. **A list of Chesapeake's Land Exhibits is attached as Exhibit B.**

THE DIVISION'S CONCLUSIONS REGARDING TECHNICAL ISSUES

(28) In its order entered in the subject cases, the Division resolved the various Technical issues favorably to Chesapeake. See Finding V or Order R-12343-B at pages 17-20, including:

> "J. The coordination between Chesapeake's detailed geologic mapping and the interpreted pressure data, however, indicate that the reservoir producing in the KF 4 well most likely extends east-west and a lay-down spacing unit will best protect correlative rights."
>
> "K. More specifically, the poor performance of the wells in the south half of Section 9, south of the Osudo 9 well, and the pressure data indicating lack of communication between the wells in Section 9 and 10 and the wells farther south, are consistent with an east-west projection of the reservoir. Diminution in Morrow thickness moving north from the Osudo 9 well to the KF 4 well, coupled with the apparent lack of communication of this reservoir with the CC 3 well to the east, as indicated by both pressure data and gas analysis, suggest that any projection of the reservoir to the north would have to be along a very narrow channel."

GEOLOGY:

(29) As required by OCC precedent, the Division found that the key issue in dispute between Chesapeake and Samson Group is what orientation of the spacing unit for the K-F State 4-1 well will contain the greatest potential reservoir volume. See Order R-11700.D finding 16. The answer is dependent upon whether the primary pay sand in the Osudo 9-1 well is oriented north-south as contended by Samson or northwest to southeast as contended by Chesapeake. If Samson is correct then the

spacing unit for the K-F "4" State No.-1 well should be an E/2 stand-up, but if Chesapeake is correct then the spacing unit should be a S/2 lay-down.

(30) Chesapeake, in an effort to minimize repetition, adopts as its summary the "Evidence" set forth by the Division in Order R-1243-B, pages 5 thru 15. In addition, in support of its application and in opposition to Samson, Chesapeake, as in did at the Examiner Hearing, will present testimony and exhibits from David Godsey, Chesapeake's geologist, concerning the geologic issues as summarized in Finding III.A.4 (a) thru (j) of Order R-12343-B. **A list of Chesapeake's geological exhibits is attached as Exhibit C.**

(31) Mr. Godsey for Chesapeake will supplement as follows:

WELLBORE STATUS MAP:

(32) Chesapeake will present an updated status map showing all relevant deep gas wells. **(See Chesapeake Exhibit 1).**

REGIONAL GEOLOGIC FRAMEWORK:

(33) As it did before the Examiner, Chesapeake intends to submit evidence to demonstrate that its geologic interpretation for these cases is consistent with the regional geologic framework as established by the published literature and regional mapping. **(See Chesapeake Exhibits 12 through 17).**

DIFFERENCES IN LITHOLOGY VERSUS POROSITY:

(34) The differences between Chesapeake and Samson's ispopach maps are based upon significant differences in log analysis and the method used for determining sand content in a wellbore. **(See Chesapeake Geologic Exhibit 20).**

(35) At the examiner hearing, Samson based its determination of sand content in a wellbore by calculating the net clean sand as determined by GR log with x-plot porosity greater than or equal to 6%. The GR log is not a true lithology indicator, it is rather a shaliness indicator of a given rock type.

(36) Chesapeake determined the net clean sand thickness by Nerutron/Density sandstone crossover log character for lithology identification, the PE (photoelectric absorption coefficient) value for a secondary lithology indicator and the GR (gamma ray) curve as a clay volume indicator. **(See Chesapeake Exhibit 2 and 3).**

LOG DATA:

(37) Chesapeake and Samson arrived at different net thickness of sand for certain key wells (a) WEK#1, Unit F, Sec 15, (b) PQ Osudo #1, Unit G, Sec 16, (c) Hunger Buster #3, Unit I, Section 9, (d) Osudo 9-1, Unit H, Section 9 and (e) Apaches' State WEL Com #2, Unit E, Section 10 and others. **(See Chesapeake Exhibit 21 thru 29).**

(38) At the Examiner's hearing, Samson contended that the Hunger Buster 9 #3 has almost twice the thickness of sand as the KF 4 State #1 and nearly as much as the Osudo 9 State #1. Yet, the KF 4 State #1 tested from a natural completion at a rate of 2.23 MMcf per day with 2000# FTP on a 14/64" choke. The Osudo 9 State #1 wellbore was also a natural completion achieving rates of over 21 MMcf per day. The

Hunger Buster 9 State #3 has achieved a maximum rate of only 700 Mcf per day after fracture stimulation and has performed poorly. **(See Chesapeake Exhibit 23).**

(39) Samson calculates a thickness of 4 ft of sand in the recently P&A Apache State WEL Com #2 (10E). Chesapeake calculates 0 ft. Apache determined that there was no net pay in the wellbore and plugged the wellbore. With the proximity of the high rate Osudo well to the State WEL Com wellbore if there truly were 4 net ft. of sand greater than 6% porosity then Apache should have attempted a completion. **(See Chesapeake Exhibit 24).**

(40) Production and pressure data for the control wells, including the K-F "4" State Well No. 1, the Hunger Buster #3 and the Apache dry hole support Chesapeake's analysis. (Testimony to be provided by Rodney Johnson, PE for Chesapeake).

(41) Production and logging data for wells drilled since the Examiner's hearing in August 2005 confirms the correctness of Chesapeake's geological data clearly supporting a northwest to southeast trend for the Morrow sands in and around the K-F "4" State Well No. 1. **(See Chesapeake Exhibit 4).**

THE ISOPACH:

(42) Based upon Chesapeake's and Samson's difference in log analysis, each prepared and submitted isopachs that are substantially different.

(43) Chesapeake's isopachs were established by several mapping techniques including:

(a) Chesapeake's interpretation is based upon sand thickness data points that are clearly defined and repeatedly demonstrated from wireline log data. The Samson datum points are not.

(b) Chesapeake mapped net sand as determined by Neutron/Density log crossplot of sandstone crossover character for lithology identification, the established technical criteria used routinely throughout the industry. Samson did not. Chesapeake's Regional Gross Morrow Isopach **(See Chesapeake's Exhibit 8)** is in agreement with the literature. Samson submitted no regional geology.

(c) Chesapeake's isopach of the S. Osudo Upper Morrow, **(Exhibit 16 "Old"--submitted at Examiner hearing)** has been updated to include data obtained since that hearing. All that data confirms the accuracy of Chesapeake's Old map. **(See Chesapeake Exhibit 17--New map).**

(d) Chesapeake's isopach of the S. Osudo "New" Upper Morrow, **Exhibit 18** ("Old"--submitted as examiner hearing) has been updated to include data obtained since that hearing. All that data confirms the accuracy of Chesapeake's Old map**. (See Chesapeake Exhibit 19--New map).**

(e) Chesapeake's isopach of the S. Osudo Lower Morrow, **Exhibit 20** ("Old"--submitted as examiner hearing) has been updated to include data obtained since that hearing. All that data confirms the accuracy of Chesapeake's Old map. **(See Chesapeake Exhibit 21--New map).**

STRUCTURE:

(44) At the Examiner hearing, Samson premised its north-south orientation upon a Structure map, (its Exhibit "B") with sand diversion around the structural high stating that the sand trend would go through the low on the east side of the high.

(45) Samson stated that all the sediment source for the Morrow was the Pedernales Uplift, that the Central Basin Platform "CBP" was not a sediment source and therefore all sand trends was sourced from the north trending south.

(46) Chesapeake will demonstrate that this is in direct conflict with the proven regional geology, stating that immediately north of the Samson map, as seen on the Chesapeake's mapping of exhibits 4, 10 and in the industry literature in exhibits 12 thru 17 the CBP extends to the west, further than the KF State 4 #1 area. There is no Morrow present in this area.

ORIENTATION

(47) Chesapeake will demonstrate that its proposed orientation presents the greatest potential for the development of reservoir volume, would prevent waste and protect correlative rights, for reasons that include the following:

(a) The Net Middle Morrow Sand Isopach **(Exhibit 4)** indicates the regional trend of the sand deposition in an easterly to westerly orientation from the Central Basin Platform ("CBP") into the Delaware basin

(d) There is substantial evidence supporting the conclusion that the CBP is a local source for the deposition of sands in an east-west orientation and that sands were distributed in an east-west orientation through fluvial streams in and around Section 4.

(e) Chesapeake's geologic data and evaluation for the Morrow formation in the area, including Section 4, is superior to Samson's data and evaluation because:

i. Detailed stratigraphic correlations between the wellbores differentiating the distinct sand units yield net sand Isopach maps **(Exhibits 7, 8, 9)** in this same easterly to westerly sand orientation. Samson did not attempt to differentiate the individual sand units.

ii. Chesapeake's mapping fits well within the regional geologic framework as established by the published literature and the regional mapping submitted by Chesapeake. The industry literature **(Exhibits 12 thru 17)** indicates the nearest local depositional influence for Morrow sediment source is the CBP with sedimentation trending in an easterly to westerly direction from the CBP into the Delaware Basin. Chesapeake's Regional Gross Morrow Isopach **(Chesapeake's Exhibit**

10) and Regional Morrow X-Section **(Exhibit 11)** are in agreement with the literature.

PETROLEUM ENGINEERING EVIDENCE

(48) In support of its application and in opposition to Samson, Chesapeake, as in did at the Examiner Hearing, will present testimony and exhibits from Rodney Johnson, Chesapeake's reservoir engineering manager, concerning the petroleum engineering issues as summarized in Finding III.A.5 (a) thru (e) of Order R-12343-B. **(See Exhibit C, attached list of Chesapeake's PE exhibits #PE 1 thru 48).**

PRESSURE DATA:

(49) In addition, Mr. Johnson for Chesapeake will submit substantial petroleum engineering evidence that will demonstrate that:

(a) Chesapeake's geological interpretation is supported by the pressure data available in the area. Chesapeake's analysis **(For example, see Exhibits PE-6, PE-7, PE-9,** and **PE-10)** shows there are no north-south connection between producers in the vicinity of the KF 4 State #1, and in fact demonstrate east-west connection of reservoirs. The pressure data shows east-west connectivity between the WEK State Com #1, the State 15 #1; both in Sec. 15, and the PQ Osudo #1 in Sec. 16. **(See Exhibit PE-13)** Chesapeake's analysis further indicates connectivity in an east-west orientation from the WEL Com #1 (10K) to the Osudo 9 State #1 (9H) and the KF 4 State #1 (4W) as indicated by the subsurface isopach mapping. **(See Chesapeake PE-5).**

(b) The wells in Section 15 and 16 are in an East-West communication trend due to the pressure profiles of the WEK Well No. 1 (Unit F, Sec 15) the State "15" Well No. 1 (Unit N, Sec 15) and the PQ Osudo Well No. 1 (Unit G, Sec 16) are synonymous in time. **(See Chesapeake's Exhibit PE-13).**

(c) The State "15" Well No. 1 had a virgin bottom hole pressure but quickly dropped to fit the BHP vs Time profile of the WEL Com Well No. 1. **(See Chesapeake Exhibit PE-10).**

(d) The PQ Osudo Well No. 1, directly west of the WEK Well No 1, had an initial reservoir pressure of 5326# that exhibits depletion from the WEK Well No. 1 **(See Chesapeake Exhibit PE-4 and PE-12).**

(e) The PQ Osudo Well No 1 also quickly dropped to fit the BHP vs. Time profile of the WEK Well No. 1 and the State "15" Well No.1 **(See Chesapeake Exhibit PE-11).**

(f) The wells in Section 9 and 10 are not in a north-south communication trend because the BHP vs. Time profile of the State WEL Com Well No. 1 (Unit K, Section 10) and the profile of the WEK Well No. 1 (Unit F, Section 15) are not synonymous but would have been had the reservoir been orientated north-south. **(For example, see PE-7).**

(g) The K-F "4" State Well No. 1, the Osudo 9-1 well and the Hunger Buster State Well No. 3 all came in below virgin reservoir pressure due to the partial depletion from the State WEL Com Well No. 1. The CC "3" State Well No. 1 came in at virgin pressure and thirty days later had a BHP of 1264# resulting in a limited reservoir that is not connected with the K-F "4" State Well No. 1, the Hunger Buster Well No. 3 and the Osudo 9-1 Well. **(See Exhibit PE-2).**

(h) There is no nearby Morrow producer in the vicinity other than the State WEL Com Well No. 1 that could have reduced the reservoir pressure as seen in the K-F "4" State Well No. 1, the Osudo 9-1 well and the Hunger Buster State Well No. 3. **(See Exhibit PE-5).**

(i) The CC-3 and the Apache State WEL Com Well No. 2 are in essence dryholes. With these two dryholes, it is not reasonable to map this reservoir with a north-south orientation with the two dryholes directly north of the State WEL Com Well No. 1. **(See Exhibit PE-7, PE-17, PE-18, PE-19 PE-20).**

PRODUCTION DATA:

(50) Chesapeake will present production data that also will demonstrate that:

(a) The poor performance of the wells in the S/2 of Section 9, south of the Osudo 9 well is consistent with an east-west orientation of the reservoir.

(b) It is not probable that reservoir constricts at the location of the CC 3 State 1 Well to form a very narrow channel as Samson's north-south orientation requires.

(c) The poor performance of the Hunger Buster #3 is contrary to Samson's north-south orientation of the reservoir.

(d) The WEK Well No. 1, commenced production at virgin pressure (approx. 7354 #) produced 6.4 Bfc. This volume of gas removed from this Morrow reservoir had a direct impact upon the poor performance of the State "15" Well No. 1 and the PQ Osudo Well No.1

(See Chesapeake's Exhibits #PE-21-32).

GAS ANALYSIS

(51) Chesapeake will present gas analysis data that will demonstrate that the range of difference among the gas specific gravity of six wells supports Chesapeake's orientation of the reservoir and refutes that of Samson. **(See Chesapeake's Exhibits #PE-33-36.).**

RELATIVE VALUE OF THE 160-ACRE TRACTS IN SECTION 4:

(52) The Commission should find that another key issue is the relative "value" of each of the 160-acre. Chesapeake's calculation utilized a volumetric method and estimates that the recoverable gas in place volume for each of the six 160-acre tracts in Section 4 consisting of the following:

1. SW/4	6.41 Bcf
2. SE/4	2.56 Bcf
3. W/2 of middle third (lots 11, 12, 13 & 14)	1.20 Bcf
4. E/2 of middle third (lots 9, 10, 15, & 16)	0.04 Bcf
5. NE/4 (lots 1, 2, 7, & 8)	0.91 Bcf
6. NW/4 (lots 3, 4, 5, & 6)	3.23 Bcf

(See Chesapeake's Exhibits #PE-37-44).

(53) The Commission should find that this evidence is consistent with other evidence introduced at the hearing and is credible and reliable evidence of the estimated recoverable gas in place volumes for the six 160-acre tracts in Section 4.

SUMMARY

(54) The approval of Chesapeake's application will prevent waste and best protect correlative rights and is fair to all parties because it:

(a) allows Samson, Kaiser and Mewbourne to have the benefit of knowing the result of the drilling and completion of the K-F "4" State Well No.1 without having to share in any of the allocated risk.

(b) provides an opportunity to Samson, Kaiser and Mewbourne who hold 50% of the WIO in the S/2 of Section 4 to elect to participate after the well has been drilled, completed and tested and in fact each of them elected to participate after the Division issued its order approving Chesapeake's application.

(c) eliminates the risk of drainage of acreage owned in the S/2 of Section 4 through Chesapeake drilling the will because Chesapeake had a drilling rig ready to drill during a period of extremely tight demand for rigs.

CONCLUSION

(55) To avoid the drilling of unnecessary wells, protect correlative rights, prevent waste and afford to the owner of each interest in the Unit the opportunity to recover or receive without unnecessary expense its just and fair share of hydrocarbons in the reservoir in Section 4, Chesapeake's application should be approved by pooling all uncommitted interests, whatever they may be, in the oil and gas within the Unit.

(56) The application of Chesapeake should be granted and the application of Mewbourne should be denied.

(57) Chesapeake should be designated the operator of the well and of the proposed Unit.

(58) Any pooled working interest owner who does not pay its share of estimated well costs should have withheld from production its share of reasonable well costs plus an additional 200% thereof as a reasonable charge for the risk involved in drilling the well.

(59) Reasonable charges for supervision (combined fixed rates) should be fixed at $5,000 per month while drilling and $500 per month while producing, provided that these rates should be adjusted annually pursuant to Section III.1.A.3. of the COPAS form titled "*Accounting Procedure-Joint Operations.*"

PROPOSED EVIDENCE BY CHESAPEAKE

WITNESSES	EST. TIME	EST. EXHIBITS
Lynda Townsend (land)	**@ 30-40 minutes**	**@ 6-10**
Cecil Gutierrez (land)	**@ 20 minutes**	**@1**
Mike Hazlip (land)	**@ 20 minutes**	**@1**
Paul Kautz[2]	**@ 30-40 minutes**	**@ 4**
David Godsey (geologist)	**@ 60-90 minutes**	**@ 40**

[2] Mr. Kautz testified before the Division on August 23, 2005. Pursuant to Rule 19-15-3.102, Chesapeake designates his testimony from pages 118-144 of the hearing transcript as Land Exhibit 16.

Rodney Johnson (Petroleum Engineer) **@ 60-90 minutes** **@ 48**

PROCEDURAL MATTERS

None at this time.

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CERTIFICATE OF SERVICE

I certify that on August 3, 2006, I served a copy of the foregoing documents by:

[ ] US Mail, postage prepaid
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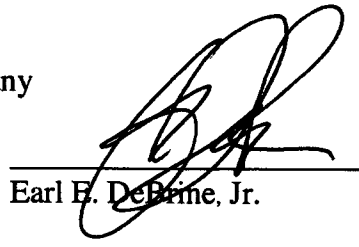

Earl E. DeBrine, Jr.

ATTACHMENT "A"

DIVISION ORDER NO. R-12343-B

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

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

CASE NO. 13492

APPLICATION OF SAMSON RESOURCES COMPANY, KAISER-FRANCIS OIL COMPANY, AND MEWBOURNE OIL COMPANY FOR CANCELLATION OF TWO PERMITS AND APPROVAL OF A DRILLING PERMIT, LEA COUNTY, NEW MEXICO.

CASE NO. 13493

APPLICATION OF CHESAPEAKE PERMIAN, L.P. FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO

ORDER NO. R-12343-B

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on August 22, 2005, at Santa Fe, New Mexico, before Examiner William V. Jones.

NOW, on this 10th day of January, 2006, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

I. Preliminary Matters

A. Due notice has been given, and the Division has jurisdiction of the parties to these cases and of the subject matter.

B. By their application in Case No. 13492, Samson Resources Company ("Samson"), Kaiser-Francis Oil Company ("Kaiser-Francis") and Mewbourne Oil Company ("Mewbourne"), [collectively hereinafter called "Samson et al"], seek cancellation of the Division's approval of two applications for permits to drill ("APDs")

filed on March 10, 2005 and March 18, 2005, respectively, by Chesapeake Operating, Inc. ("Chesapeake")[1] for its proposed KF 4 State Well No. 1 and Cattleman 4 State Com Well No. 1 respectively. The KF 4 State Well No. 1 ("the KF 4 well") (API No. 30-025-37129) was permitted for a location in the southeast quarter, 660 from the South line and 990 feet from the East line (Unit X) of irregular Section 4, Township 21S; Range 35E, NMPM, in Lea County. The Cattleman 4 State Com Well No. 1 (API No. 30-025-37150) was permitted for a location in the east half of the geographical middle third of said Section 4, being the 160-acre subdivision lying immediately north of the southeast quarter. The exact permitted location was 3300 feet from the South line and 990 feet from the East line (Unit P) of Section 4. Samson et al sought cancellation of these two APDs on the ground that they own the entire working interest in the quarter sections containing each of the proposed well sites, and that Chesapeake owns no interest therein. Samson et al sought approval of their own APD for their proposed Osudo 4 State Com Well No. 1 to be located in southeast quarter of said Section 4, which APD was rejected due to the prior approval of Chesapeake's APD for a well in the same quarter section.

C. By its application in Case No. 13493, Chesapeake asks the Division to create a compulsory pooled lay-down unit consisting of the south half (geographical south third) of irregular Section 4, and to dedicate that unit to Chesapeake's KF 4 well.

D. Due to the factual relationship between these cases, they were combined for purposes of hearing. A joint order should be entered as to both cases.

E. All parties appeared at the hearing and presented testimony. 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.

II. Undisputed Evidence.

The following facts appear to be undisputed:

A. 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,[2] 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:

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

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[1] All Chesapeake entities are herein called "Chesapeake" except where it is necessary to distinguish between them.

[2] There apparently was not a land plat introduced in evidence. Acreage is stated as recited in State of New Mexico oil and gas leases.

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

(3) 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"; and

(4) lots 11 through 14, being the quarter section immediately north of the southwest quarter, hereinafter called "the west half of the middle one-third."

(5) lots 1 through 8, consisting of 310.8 acres, more or less, being the two northern most quarter sections.

B. Oil and gas minerals within the entire Section 4 (as well as the surface) are owned by the State of New Mexico, and all acres have been leased. Lease status and ownership are as follows:

(1) The southeast quarter is leased under State of New Mexico Lease No. B-1481. Kaiser-Francis, Samson, and Mewbourne own all the working interest.

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

(3) The middle one-third of Section 4 is leased under State of New Mexico Lease No. VO-7054. Samson owns all the working interest.

(4) The northern one-third of Section 4 is leased under State of New Mexico Lease No. VO-7062. Chesapeake Permian LP owns all the working interest.

(5) Chesapeake does not own any interest in the southeast quarter of Section 4, and has not owned any such interest at any time relevant to this case. Chesapeake has no contractual right with respect to the mineral estate in the southeast quarter of Section 4 unless such right arises by virtue of approval by Samson of an AFE (authorization for expenditures) issued by Chesapeake for the KF 4 well, under circumstances detailed below.

C. On February 27, 2005, Mewbourne ran electric logs showing over 40 feet of Morrow porosity on its Osudo 9 State Com. Well No. 1 (API No. 30-025-36828) (the "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. 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.

D. 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. The Division approved Chesapeake's APD on March 11, 2005.

E. 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 their 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.

F. 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.

G. On March 18, 2005, Chesapeake Operating, Inc. filed APD applications for the following additional locations in irregular Section 4. Both APDs were approved by the OCD on March 21, 2005.

(1) Cattleman 4 State Com Well No. 1 (API No. 30-025-37150) to be located on acreage controlled by Samson in Unit P, 3,300 feet from the South line and 990 feet from the East line, to be dedicated to a 315.46 acre, more or less, stand-up spacing unit consisting of the E/2 of the northern 2/3rd (Lots 1, 2, 7, 8, 9, 10, 15, and 16); and the

(2) Cattleman 4 State Com Well No. 2 (API No. 30-025-37149) to be located on acreage controlled by Chesapeake in Unit D, 990 feet from the North line and 990 feet from the West line, to be dedicated to a 315.44 acre, more or less, stand-up spacing unit consisting of the W/2 of the northern 2/3rd (Lots 3, 4, 5, 6, 11, 12, 13, and 14).

H. On March 22, 2005 Samson signed and returned Chesapeake's election letter and AFE, 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.

I. 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 of Section 4 and a stand-up spacing unit comprised of the southeast quarter and the east half of the middle third of Section 4. The Division rejected Mewbourne's APD on March 30, 2005, by reason of the earlier approval of Chesapeake's APD.

J. 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]."

K. On April 15, 2005 Chesapeake began site construction for the KF 4 well.

L. 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.

M. On April 26, 2005 the applications in these cases were filed with the Division.

N. On April 27, 2005, the New Mexico State Land Office approved the Communitization Agreement described above, noting that, "[t]he effective date of this approval is April 1, 2005."

O. On April 27, 2005 Chesapeake spudded the KF 4 well.

P. The KF 4 well has been drilled and tested but not completed. The tests indicate that the well will be a commercial producer of natural gas from the Morrow formation.

III. The Evidence

A. In support of its application in Case No. 13493, and in opposition of the application of Samson, *et al.* in Case No. 13492, Chesapeake presented testimony from Linda F. Townsend, Cecil Gutierrez, Mike Hazlip, David A. Godsey, and Rodney Johnson, P.E.:

1. Linda F. Townsend is a Senior Landman employed by Chesapeake, with duties over southeast New Mexico and stationed in Oklahoma City, Oklahoma. In addition to matters recited above as undisputed facts, Ms. Townsend testified as follows:

(a) Chesapeake Operating, Inc. is the general partner for both Chesapeake Permian LP and for Chesapeake Exploration Limited Partnership.

(b) Chesapeake Operating, Inc. is the operating entity that is bonded with the Oil Conservation Division the State Land Office and conducts operations on leases held by other Chesapeake entities.

(c) Chesapeake's proposal, sent from their Oklahoma City office to Samson and Kaiser Francis for the KF 4 well did not specify the well location even though the well location was always intended to be in the SE/4. The APD application prepared in Chesapeake's Midland office contained the intended well location footages, and was within the SE/4. Exact well locations are not always stated in well proposals sent out by Chesapeake.

(d) An overhead rate of $7,000 per month while drilling and $750 per month while producing is reasonable and acceptable to Chesapeake.

(e) Chesapeake purchased Rubicon and obtained a lease assignment covering the SW/4 of Section 4 from Rubicon Oil & Gas I, L.P. Ms. Townsend identified the following title instruments that were admitted in evidence:

(i) a county form assignment of a 75% interest in the subject lease from Rubicon Oil & Gas I, L.P. to Chesapeake Exploration Limited Partnership, executed December 6, 2004 and recorded in Lea County on December 16, 2004.

(ii) a State Land Office form assignment from Rubicon Oil & Gas I, L.P. to Chesapeake Exploration Limited Partnership and Rubicon Oil & Gas I, L.P., executed on December 27, 2004 and accepted on January 11, 2005 by the Land Commissioner.

(iii) a State Land Office form assignment from Chesapeake Exploration Limited Partnership and Rubicon Oil & Gas I, L.P. to Chesapeake Permian, L.P., which was signed by Rubicon and by Chesapeake Exploration LP on April 27, 2005, and accepted on June 27, 2005 by the Land Commissioner.

(f) Chesapeake's primary reason for immediately drilling the KF 4 well was the potential for reservoir drainage by the prolific offsetting well to the south (the Osudo 9 well).

(g) Chesapeake had not sent Mewbourne a well proposal or proposed JOA prior to this hearing. At the time Chesapeake sent its proposal, on March 9, 2005, Mewbourne did not own an interest in the southwest quarter of Section 4.

2. Cecil Gutierrez, a landman employed by Chesapeake, testified that Chesapeake obtained a "surface damage and easement" agreement with Merchant Cattle Company, the surface lessee. The agreement was concluded verbally on

March 30, 2005, but was signed later, on June 3, 2005. Chesapeake did not obtain a surface access agreement from the State Land Office.

3. Mike Hazlip, Chesapeake's Land Manager for the Permian Basin, testified concerning Chesapeake's meeting with the assistant land commissioner to discuss "trespass" issues in this case and concerning a letter from the State Land Office which commented on those issues. The letter was offered as evidence, but was not admitted.

4. David A. Godsey, a geologist employed by Chesapeake, testified to the following:

(a) The target Morrow interval in this area consists of the various sands in the Middle Morrow. The Osudo 9 well has almost 54 feet of developed Morrow sands in the upper intervals of the Middle Morrow and is producing around 21 million cubic feet of gas per day. Most of these same sands exist in the KF 4 well, but are only 17 feet thick.

(b) Prior to drilling the KF 4 State Well No. 1, Chesapeake mapped the thick sand deposits which exist in the Osudo 9 well as a wide pod, extending west within Section 9 and also north into the middle, lower portion of Section 4.

(c) The KF 4 well No. 1 was drilled by Chesapeake almost due north of the Osudo 9 well in order to be as close as possible to that prolific well. The well location was also influenced by the CC 3 State Well No. 1, drilled in 2004 in Section 3 to the east, which confirmed the presence of a Morrow reservoir in this vicinity.

(d) The KF 4 well was deviated while drilling to the same bottomhole location proposed by Samson et al in order to dispel future concerns that Chesapeake had diminished the value of that lease by drilling at a less desirable location.

(e) Chesapeake believes the general trend of the numerous Morrow channel sands in this area is in an east to west direction, based on the following:

(i) The source rocks for the Morrow formation in this area originated from the Central Basin Platform (the "CBP"). The CBP is located within walking distance, directly east and northeast of this area, and its subcrop within Sections 11, 2, and 3, one to two miles east of this area, trends in a southeast to northwest direction.

(ii) Using electric log data on existing wells to correlate the various Morrow streams, Mr. Godsey has mapped sand channels which may be trending east to west in Sections 21 and 22, and in Sections 15 and 16, both lying to the south of the Osudo 9 well, and separated from the Osudo 9 well and from each other by known points with considerably less Morrow thickness. The mapping of these east-west channels is consistent with pressure data indicating probable communication between wells within the respective channels.

(iii) The east to west trend of Morrow deposition Chesapeake projects in this area is in very close agreement with published literature concerning the general trend of sands coming off the Central Basin Platform.

(f) After studying the logs of the KF 4 well, the Hunger Buster Well No. 3 in the south half of Section 9, south of the Osudo 9 well, and Apache's dry hole in Section 10 to the east, Mr. Godsey mapped the trend in Sections 4, 9, and 10 in more of a southeast to northwest direction. The thick Morrow channel that exists at the Osudo 9 well, as now mapped by Chesapeake, extends west and slightly northwest, including a significant part of the southwest quarter of Section 4. Chesapeake's present mapping indicates an expectation of thicker Morrow sands in the southwest quarter of Section 4 than in the southeast quarter.

(g) After redrawing the maps, Chesapeake is no longer interested in drilling the proposed Cattleman 4 State Com Well No. 1 which was to be located directly north of the KF 4 well. Also, Chesapeake is now interested in drilling a well in the northwest quarter of Section 9 but has not yet proposed a well to Mewbourne in that location under the JOA covering the N/2 of Section 9. Chesapeake remains interested in drilling the Cattleman 4 State Well No. 2 in the NW/4 of Section 4 as permitted. Chesapeake is also interested in a future well in the SW/4 of Section 4.

(h) The Jake Hammon State well located in the west half of the middle one-third of Section 4 penetrated the Morrow and encountered three feet of sand but was not completed in or produced from the Morrow. This indicates that the west half of the middle third is not particularly attractive, but, based on the presence of some Morrow sands, cannot be condemned. The need to honor this three feet of sand was Mr. Godsey's basis for projecting the Morrow up into that quarter section on his current map.

(i) Structure maps in the Morrow can be drawn automatically using a computer contouring algorithm, but thickness or isopach maps

require significant interpretation by the geologist. Geologic mapping has been done using well control and reservoir volume calculations.

(j) The available seismic in this area cannot be used to see even the 50 plus feet of Morrow sand interval as exists in the Osudo 9 well. Collapse features in the upper Permian cause problems with the deeper interpretation. There has been no 3-D seismic data gathered or interpreted in this area. Thus, seismic data was not a factor in forming Mr. Godsey's opinions.

5. Rodney Johnson, P.E. is a reservoir engineering manager for this area of southeast New Mexico and works for Chesapeake in Oklahoma. Mr. Johnson testified as follows:

(a) Within Sections 3, 4, 9, 10, 15, and 16 of Township 21 South, Range 35 East, Morrow drilling took place in this order:

(i) The State WE K Well No. 1 located in Unit F of Section 15, a little more than one and one-half miles south-southeast of the location of the KF 4 well, was the first Morrow well completed. That well was completed in 1967 and had a DST-measured pressure of 7,354 psi. This appears to establish virgin reservoir pressure in the area.

(ii) The second Morrow well completed in this area was the WE L Com Well No. 1 in Unit K of Section 10, approximately one mile southeast of the KF 4 location, and almost due north of the WE K No. 1. That well was completed in 1970 and had a DST pressure of 7,080 psi. It was a marginal producer for years but maintained its pressure, showing a possibility of being connected with a larger reservoir.

(iii) Next, the State 15 Well No. 1 was drilled, in April of 1976, in Unit N of Section 15, approximately one-half mile south of the WE K No. 1. That well showed a very high initially reported pressure of 7,636 psi, but the pressure and rate of production has declined rapidly.

(iv) In 1991, the P Q Osudo State Com Well No. 1 was drilled in Unit G of Section 16, approximately one and one-half miles south of the KF 4 location and approximately 3/4th mile west of the WE K No. 1. The initial pressure on that well was 5,326 psi, and it has been a marginal producer.

(v) The CC State 3 Well No. 1, located in Unit M of Section 3, approximately one-half mile east of the KF 4 location

and slightly west of the north-south axis of the earlier wells, was drilled in 2004 with a high initial pressure, approximately 7,300 psi, but declined rapidly after only slight gas production. This well was never fracture-stimulated.

(vi) The Osudo 9 well was drilled in Unit H of Section 9, one-half mile south-southeast of the KF 4 location, in March of 2005 and had a calculated bottom hole pressure from the 10.3 pounds per gallon ("ppg") mud weight, of 6,300 psi. That well was completed naturally, and the mud-weight-calculated pressure is considered to be reasonable. The lower pressure on initial completion indicates this location has been partially drained.

(vii) The Hunger Buster Well No. 3, located in Unit I of Section 9, approximately one-quarter mile south of the Osudo 9 well, was then drilled with a mud weight indicating an initial pressure of 6,600 psi. It is likely that the reservoir at this location is partially depleted.

(viii) The State WE L Com Well No. 2, located in Unit E of Section 10, approximately one-half mile east-southeast of the Osudo 9 well, was drilled as a dry hole in July of 2005. .

(ix) The KF 4 Well was the latest well drilled in this area. It has an initial static bottom hole pressure of 6,595 psi. The mud-weight-calculated pressure matches very well with the measured static pressure at this location.

(b) Comparing all available pressure behavior of these wells, it can be surmised that:

(i) The first well (WE K Well No. 1) and the second well (WE L Com Well No. 1) are north-south of each other and <u>are not</u> in pressure communication.

(ii) The two wells in Section 15 (the WE K and State 15 wells) and the first well drilled in Section 16 (PQ Osudo State Com Well No. 1) <u>are</u> in communication with each other.

(iii) The producing well in the SW/4 of Section 10 (the WE L No. 1 well) likely reduced the reservoir pressure on the Osudo 9 well and the KF 4 well, and account for the sub-virgin pressures encountered in those wells. The pressure data shows these three wells are likely in communication, just as the geologic map indicates. Gas analysis indicates the KF 4 well and the Osudo

9 well are producing from the same reservoir. Those two wells are essentially north and south of each other.

(iv) The gas analysis, pressure data, and production performance of the CC State 3 Well No. 1 indicate that well is producing from a very small isolated pod, and is not in communication with any of the others in any direction.

(c) It is still too early in production life of the Osudo 9 well to narrow the range of possible ultimate reserves. Current estimates could range from 7 to 17 bcf.

(d) The bottomhole-pressure-versus-time information supports the geologic maps showing the general reservoir trends in this area to be from east to west.

(e) The amount of reserves underlying each of the quarter sections could be calculated from the pressure data, assuming the correctness of Mr. Godsey's mapping.

B. In support of its application in Case No. 13492 and in opposition to Chesapeake's application in Case No. 13493, Samson et al presented the testimony of Rita A. Buress, James Wakefield, Paul Kautz, and Ronald Johnson.

1. Rita A. Buress, a Certified Petroleum Landman and employee of Samson, testified as to the history of ownership of Section 4, and the ownership of Section 4 at two specific dates: (i) the date when Chesapeake applied for its APD for the KF 4 well in the SE/4 of Section 4; and (ii) the date when Mewbourne applied for its APD for a Morrow well in the SE/4 of Section 4. Ms. Buress also presented a timeline of events and explained why Samson originally signed the Chesapeake AFE, but never paid dry hole costs, and rescinded the election after discovering there was no operating agreement in place. Ms. Buress testified that Chesapeake's proposal to Samson listed Chesapeake Operating, Inc. (on behalf of Chesapeake Permian LP) as the owner of the SW/4 of Section 4 when title was actually held in the name of Chesapeake Exploration Limited Partnership.

2. James Wakefield, a petroleum engineer and employee of KF Energy LLC, an affiliate of Kaiser-Francis, testified as follows:

(a) Kaiser-Francis has owned acreage in this area since the mid-1970s and has followed closely the regional Morrow development.

(b) Kaiser-Francis and Mewbourne finalized a property trade on March 10, 2005 and signed the agreement on March 16, 2005. This trade granted Mewbourne a portion of Kaiser-Francis' working interest in

the 160 acres consisting of the SE/4 of Section 4. Prior to that agreement, Mewbourne did not own an interest in the SE/4 of Section 4.

(c) Chesapeake proposed the KF 4 well to Kaiser-Francis and, in conversations concerning this proposal, indicated that Chesapeake had not finalized the well location but was considering locating the well in the SE/4 SW/4 of Section 4. Chesapeake decided later to move the well's surface location east, to the SE/4 SE/4 of Section 4. When Chesapeake drilled the well, they deviated it to a bottom-hole location in the SW/4 SE/4 of Section 4, which was the same location originally proposed by Mewbourne in their APD. In hindsight, the well might have been a better well if it had been drilled vertically in the SE/4 SE/4.

(d) In 2004, Samson had proposed the Hunger Buster Well No. 1 to be located in the NW/4 SW/4 of Section 9, approximately 3/4ths mile west-southwest of the location of the later-drilled Osudo 9 well. Kaiser-Francis opposed the Hunger Buster State Well No. 1, and Samson never drilled that well.

(e) In June of 2004 Mewbourne drilled the Dilly Bar 8 State Com Well No. 1 (API No. 30-025-36540) in the SW/4 SE/4 of Section 8, approximately one and one-half miles west-southwest of the location of the later-drilled Osudo 9 well. That well was considered not successful. [Division records indicate the well was reported on initial potential test in July of 2004 at 610 Mcf per day from a 120 feet gross perforated interval and with a 720-psi shut-in pressure.]

(f) The Hunger Buster State Well No. 3 (API No. 30-025-37177), operated by Kaiser-Francis, was drilled after the Osudo 9 well at a location in the NE/4 SE/4 of Section 9, more or less due south of the Osudo 9 well. The well is currently producing 750 Mcf gas per day [less than 1/20th the rate of production of the Osudo 9 well]. [Division records indicate the well was reported on initial potential test on August 5, 2005, at 969 Mcf gas per day from an 86 feet gross perforated interval and with a 2550 psi shut-in pressure.]

(g) Division records indicate the Wilson State Well No. 1 (API No. 30-025-25748) located in the NW/4 SE/4 of Section 9, 3/4th mile west-southwest of the Osudo 9 well, was drilled in 1978 to 12,250 feet. The well was drilled through the Morrow but reported "no shows at TD". It was tested in the Wolfcamp but never produced and was plugged as a dry hole.

(h) Division records indicate that no Morrow well has been drilled, or permitted in the NW/4 of Section 9. Chesapeake, Mewbourne and Finley Resources control the N/2 of Section 9, Morrow spacing unit.

(i) Within Section 4, the Morrow drilling so far has consisted of the following:

(i) The State E-8321 Well No. 1 (or the Jake Hamon Well No. 1) (API No. 30-025-20687) was drilled in 1964 to a depth of 11,350 feet and is located in Lot 12 at a location 3,222 feet from the North line and 660 feet from the West line, in the west half of the middle third of Section 4. The Morrow was drill-stem tested and may have also been perforated to test. The well was completed in the Wolfcamp and in the Strawn. The Division records contain no electric logs on this well, but Mr. Wakefield reported the Morrow in this well to be very thin.

(ii) The KF 4 well in the SE/4 SE/4 of Section 4 was spudded by Chesapeake on April 27, 2005, and drilled to a bottom-hole location in the SW/4 SE/4. Testimony was that this well is capable of producing at approximately 6 MMcf gas per day and had approximately 6,600 psi shut in pressure.

(j) Within the SW/4 SW/4 of Section 3, almost due east of the KF 4 well No. 1, Chesapeake drilled the CC 3 State Well No. 1 (API No. 30-025-36794) as a Morrow completion. It was not successful as a Morrow producer and was plugged back in January 2005 to recomplete in the Wolfcamp and Bone Spring. The middle Morrow was very thin in the well, but had a good show while drilling. Mr. Wakefield thinks that this well may be on the edge of a better reservoir to the west. [Division records show that the well was tested on October 29, 2004, at 2,538 Mcf gas per day with 2,450 psi flowing tubing pressure through 24 feet of gross pay interval.]

(k) Based on initial pressure data from Morrow wells in this area, the Morrow in the northeast quarter of Section 9 was partially pressure depleted, prior to the drilling of the Osudo 9 well, by earlier Morrow wells located to the southeast in Sections 10, 15, or 16.

(l) Kaiser-Francis does not consider the west half of Section 4 or the west half of Section 9 to be prospective for Morrow gas development. Mr. Wakefield believes that the reservoir connected to the KF 4 well likely extends north rather than west. Mr. Wakefield showed no maps of the reservoir to support his opinion and instead relied on his knowledge of the history of well successes and failures in this area. Mr. Wakefield said that previous drilling results have convinced scientists from Samson, Mewbourne and Kaiser-Francis that the predominant deposition pattern of the Morrow sands in this area is in a north-south direction.

3. The Division's Hobbs District geologist, Mr. Paul Kautz, was subpoenaed by Samson to present testimony. Mr. Kautz appeared at the hearing, represented by a Division attorney, and testified as follows:

(a) Applications for Permits to Drill ("APDs"), submitted to the Hobbs District office, are screened by an administrative staff, then are finalized by the District geologist or the District supervisor.

(b) Division Rule 1102.A requires the applicant, on Form C-102, to "show the ownership and the status of each lease contained in the dedicated acreage". This language is routinely not enforced by the Division.

(c) In addition, the approval of a drilling permit was, in the past, contingent on the applicant verifying the type of "consolidation" of leases within the proposed spacing unit that has been done or would be done. This requirement was dropped sometime in the past and is also not required on the newer online permitting system.

(d) The APD's from Chesapeake being contested in Case No. 13492 were submitted on-line and were approved by the Hobbs district office on-line. These applications were from Chesapeake Operating, Inc. and did not specify the type of lease "consolidation" that had occurred or would occur.

4. Ronald Johnson, who is employed by Samson Resources as a Senior Geologist in Midland, Texas, testified as follows:

(a) The Central Basin Platform was a low-relief, even swampy, feature during Morrowan time and had an influence on deposition but not much in the way of sedimentation. Most Morrow sediments are derived from the Pedernal massif to the north and northwest of the subject area.

(b) In this Osudo area, the structural top of the Morrow is in the northwest part of Section 4 and the west part of Section 32, approximately one and one-half to the north-northwest of the KF 4 well. That structural top determined the direction of Morrowan stream flow. The general dip direction seems to be south-southwest into the Delaware Basin.

(c) An isopach contour map of Morrow sands with greater than a 6 percent porosity cutoff shows a general, north to south trend. The isopach therefore agrees with the structure maps and north-south faulting, which extended to the basement. The general structure in this area may

have been consistent since the end of Devonian time – reference is made to a Devonian top structure map generated by Geomap.

(d) The Morrow pay interval should be mapped as a narrow channel extending north-south. The sand channels were laid-down by meandering streams during Morrowan time. The reason for the increased thickness at points is that some bar deposits became stacked on top of one another. For mapping purposes, isolating the Morrow interval into individual sands is unnecessary and can lead to many different interpretations.

(e) West and northwest of the Osudo 9 well, the sands are thinning, the structure is moving up-dip, and the Morrow could be non-productive.

IV. Conclusions Regarding Legal Issues

A. It is undisputed that Chesapeake did not own, and does not own, any title to the minerals or surface of the southeast quarter of Section 4 where it has drilled the KF 4 well.

B. If Chesapeake has any contractual right in the southeast quarter of Section 4, it arises by virtue of Samson's election letter and AFE approval. Whether those actions create any rights is an issue of contract law over which the Division does not have jurisdiction. For purposes of this order, the Division will assume that Chesapeake acquired no rights thereby. Chesapeake seeks to force pool Samson in this case, possibly implying that Chesapeake honors Samson's revocation of its signed AFE. Whether Chesapeake has accepted the attempted revocation, and whether it was otherwise valid, do not affect any of the findings or conclusions in this order.

C. Nevertheless, Chesapeake, at the time it filed its APD for the KF 4 well had a sufficient "good faith claim" to support approval of an APD by virtue of its ownership of an adjacent tract that could be pooled with the proposed drillsite tract to form a standard spacing unit in the objective pool under existing spacing rules. This conclusion is mandated by the Oil Conservation Commission's decision in Case No. 13153, *Application of Pride Energy Company, etc.* ("the Pride case). See Order No. R-12108-C, page 5, finding paragraph 8(g). The facts existing at the time of the Division's approval of Chesapeake's APD were not materially distinguishable from the facts of the Pride case.

D. The fact that the APD was filed by Chesapeake Operating, Inc. when the title to the adjoining tract that provided the basis for its claim was held by Chesapeake Exploration Limited Partnership is not relevant because the testimony indicated that Chesapeake Operating, Inc. acted as agent for other Chesapeake entities in filing APDs and conducting operations.

E. Whether Chesapeake's subsequent entry and conduct of drilling operations on the southeast quarter of Section 4 constituted a "trespass" or "bad faith trespass," as Samson et al claim, are issues for the courts which the Division has neither the competence nor the jurisdiction to decide. Clearly, since Chesapeake had an approved APD (properly approved according to the teaching of the *Pride* case), such actions did not constitute violations of the Oil and Gas Act or Division rules, and accordingly should not influence the Division's decision in these cases.

F. The approval by the State Land Office of a communitization agreement creating a stand-up unit excluding Chesapeake's southwest quarter likewise does not control the decision in these cases. The Land Commissioner did not approve the communitization agreement until April 27, the day after Chesapeake filed its compulsory pooling application in Case No. 13493. Accordingly the communitized unit created by the communitzation agreement did not yet exist when the application was filed, and could not preclude the Division from entertaining an application to form a lay down unit. Although the communitization agreement was made effective as of April 1, such retroactive action would be binding only as among the parties to the agreement. It is thus not necessary in this case to determine the effect that a preexisting communitization agreement would have in a compulsory pooling case.

G. The Commission's decision in the Pride case mandates that the Division consider Chesapeake' compulsory pooling application on its merits. The compulsory pooling statute, Section 70-2-17 NMSA 1978, as amended, provides that compulsory pooling is appropriate when the owners in a spacing unit have not agreed to pool their interests. In the Pride case, as here, one party proposed creation of a spacing unit in which the owners had not agreed to pool their interests, while the other party proposed creation of a spacing unit in which no such agreement was necessary. The Commission decided that the appropriate approach was to first decide, based on the geologic evidence presented, the appropriate configuration of the spacing unit. If the appropriate spacing unit is one in which the owners have not agreed to pool their interests, a compulsory pooling is appropriate. That is the approach that must be followed in this case.

H. In determining the issues raised by the compulsory pooling application, no weight should be given to the fact that Chesapeake filed its APD for the subject well first. As the Commission said in Order No. 11700-B, entered in Cases No. 12731 and 12744 ("the TMBRSharp case"):

> An application for a permit to drill serves different objectives than an application for compulsory pooling and the two proceedings should not be confused.
>
> Order No. R-11700-B, finding 33.

Furthermore, the Division recently said, in Order No. R-12451, issued in Cases Nos. 13537 and 13539, that:

> The mere fact that an applicant obtained an APD first which has not been revoked does not necessarily guarantee that the applicant should be designated the operator of the wells and of the units under compulsory pooling procedures.

Such a rule, the Division noted, "would encourage potential operators to file for APDs strategically, to block other potential operators." Order No. R-12451, finding (17)(a). For the same reason, the first party to file an APD should not be allowed to dictate the configuration of the spacing unit.

I. Similarly, no weight should be given to the fact that Chesapeake commenced drilling the KF 4 well without waiting for entry of an order in this compulsory pooling case. The Division should not encourage a race to get the drill bit in the ground any more than it should encourage a race to file an APD. In this case, however, the determination of the compulsory pooling application necessarily also determines whether or not Chesapeake's APD should be cancelled. If the Division grants compulsory pooling and appoints Chesapeake as operator of the unit, then Chesapeake's APD should stand. If the Division denies the compulsory pooling application, then Chesapeake's "good faith claim" based on its ownership of a tract that could be pooled with the drillsite tract is no longer viable, and its APD should be cancelled.

J. Section 70-2-17.C NMSA 1978, as amended, provides that the Division shall issue compulsory pooling orders "to avoid the drilling of unnecessary wells or to protect correlative rights, or to prevent waste." Thus Chesapeake, as applicant for compulsory pooling, bears the burden of proving, by appropriate geological and engineering evidence, that the establishment of a lay-down unit including its acreage in the southwest quarter is necessary for one or more of those reasons.

V Conclusions Regarding Technical Issues

A. The isopach maps created by the geologists 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 and was free to project contours into areas void of data based on an overall interpretation of general trends. The Chesapeake geologist chose not to project the contours for the productive Morrow sands north of the KF 4 well, but instead to project them in a westerly direction into the northwest quarter of Section 9 and the southwest quarter of Section 4. The Samson geologist chose to extend the Morrow north-northeast of the KF 4 well and not to widen the contours into the western portion of Section 4.

B. The parties interpreted the Morrow thickness of several wells differently. The Samson et al geologist found almost 32 feet of sand in the Hunger Buster Well No. 3, while the Chesapeake geologist, interpreting the same well logs, only found 11 feet of sand. 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. Also, both parties agree the Central Basin Platform ("CBP") exists to the east. Chesapeake's geologist believes the CBP was the primary local source of Morrow sediments and controlled the local flow direction of the Morrow channels. Samson's geologist, on the other hand, believes most Morrow sediments originated from the Pedernal highlands to the north, and the CBP was too low and swampy in Morrowan times to contribute significant Morrow deposits.

C. The Samson geologist honored the dry hole in the west half of the middle one-third of Section 4 and extended the Morrow channel into the northern edge of Section 3 and north into Section 33. This had the effect of adding reservoir volume north of the KF 4 well. However, the furthest extension of contours did not account for the pinchout of the Morrow against the CBP. The Samson interpretation honored existing well control, but was less detailed locally than the Chesapeake interpretation and assumed more of a general or regional Morrow direction. The Samson interpretation of Morrow channels was consistent with the north-south faulting and the long-term structural character of the Morrow.

D. Chesapeake's geologist attempted to separate the Middle Morrow sands into lenses 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.

E. The pressure interpretation by the Chesapeake engineer implied a local east-west connection of a reservoir in Sections 15 and 16 and showed that wells in these sections were not likely connected to the WEL Com #1 well in Section 10. The data indicated that production from the well in Section 10 may have partially drained the reservoir as it exists in the KF 4 well and the Osudo 9 well, accounting for less than virgin pressures encountered in those wells.

F. Most of the testimony from both sides was that the KF 4 well and the Osudo 9 well were communicated. The pressures were similar, and the gas analysis was identical. The Chesapeake maps show the KF 4 well to be primarily communicated in the "new" Morrow sand. However, the "lower" Morrow sand, as correlated by Chesapeake, is shown to be present in the KF 4 well but not in the Osudo 9 well.

G. Chesapeake's geologist stated that the contoured isopach map was constructed to take into account reservoir volume inferable from potential production shown in the existing wells. However, Chesapeake's engineer would not specifically commit to an ultimate gas recovery number for the Morrow reservoir producing from the Osudo 9 well. Until this reservoir's ultimate gas volume is more closely determined, the

mapped sand size will not be constrained, and therefore the exact sand orientation is difficult to determine.

H. The Chesapeake isopach map would indicate that at least one well could be drilled either in the northwest quarter of Section 9 or the southwest quarter of Section 4 with reasonable probability of success. Chesapeake's geologist stated these locations would be prospective, but Chesapeake has not proposed a well in either of these locations.

I Both Samson et al and Chesapeake presented logical interpretations of data in these cases. No effective well control exists either to the north or to the west that could preclude projection of the Osudo9/KF 4 reservoir in either of those directions. The evidence is clearly not sufficient for the Division to practicably determine the total gas reserves in this reservoir, or the gas reserves underlying any specific quarter section.

J. The coordination between Chesapeake's detailed geologic mapping and the interpreted pressure data, however, indicate that the reservoir producing in the KF 4 well most likely extends east-west, and a lay-down spacing unit will best protect correlative rights.

K. More specifically, the poor performance of the wells in the south half of Section 9, south of the Osudo 9 well, and the pressure data indicating lack of communication between the wells in Sections 9 and 10 and the wells farther south, are consistent with an east-west projection of the reservoir. Diminution in Morrow thickness moving north from the Osudo 9 well to the KF 4 well, coupled with the apparent lack of communication of this reservoir with the CC 3 well to the east, as indicated by both pressure data and gas analysis, suggest that any projection of the reservoir to the north would have to be along a very narrow channel.

L. Establishment of a stand-up spacing unit joining of the east half of the middle one-third to the southeast quarter, as proposed by Samson et al, would necessarily dictate inclusion of Chesapeake's southwest quarter in a stand-up spacing unit that would also include the west half of the middle one-third, the site of an existing Morrow dry hole. If the southwest quarter contains significant Morrow reserves, likely from the same reservoir as the reserves underlying the southeast quarter, as the above conclusions suggest, its inclusion in such a unit (with probably unproductive acreage owned by Samson et al), would likely impair Chesapeake's correlative rights.

M. Accordingly, Chesapeake's application in Case No. 13493 for a compulsory pooling order establishing a lay-down south-half unit should be approved, and the application of Samson et al, in Case No. 13492, for approval of a drilling permit for the Osudo 4 State Com Well No. 1 and for cancellation of the drilling permit for the KF 4 well should be denied.

N. Chesapeake indicated that it no longer intends to drill a well at the location of its proposed Cattleman 4 State Com Well No. 1.

O. 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 (API No. 30-025-37150) should be approved.

IT IS THEREFORE ORDERED THAT:

(1) Pursuant to the application of Chesapeake Permian, LP (hereinafter called "applicant") in Case No. 13493, 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 lots 17 through 24 (south half equivalent) of irregular Section 4, Township 21 South, Range 35 East, NMPM, Lea County, New Mexico, are hereby pooled, forming a standard 310.80-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 above-described unit ("the Unit") shall be dedicated to the applicant's KF 4 State Well No. 1 (API No. 30-025-37129) ("the well"), at a bottomhole location 711 feet from the South line and 1888 feet from the East line (Unit W) of Section 4.

(2) Chesapeake Operating, Inc. (OGRD 147179) is hereby designated the operator of the well and of the Unit.

(3) Upon final plugging and abandonment of the well and any other well drilled on the Unit pursuant to Division Rule 36 [19.15.1.36 NMAC], the pooled unit created by this Order shall terminate, unless this order has been amended to authorize further operations.

(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 unleased mineral interests, who are not parties to an operating agreement governing the Unit as established by this order.) After the effective date of this order, 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").

(5) Within 30 days from the date the schedule of estimated well costs is furnished, any pooled working interest owner shall have the right to pay its share of estimated well costs to the operator in lieu of paying its share of reasonable well costs out of production as hereinafter provided, and any such owner who pays its share of estimated well costs as provided above 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."

(6) 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 no objection to the actual well costs is received by the Division, and the Division has not objected 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.

(7) Within 60 days following determination of reasonable well costs, any pooled working interest owner who has paid its share of estimated costs in advance as provided above 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.

(8) The operator is hereby authorized to withhold the following costs and charges from production:

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

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

(9) The operator shall distribute the costs and charges withheld from production, proportionately, to the parties who advanced the well costs.

(10) 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.1.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.

(11) Except as provided in Ordering Paragraphs (8) and (10) above, all proceeds from production from the 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 thereof 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.

(12) Should all the parties to this compulsory pooling order reach voluntary agreement subsequent to entry of this order, this order shall thereafter be of no further effect.

(13) The operator of the well and Unit shall notify the Division in writing of the subsequent voluntary agreement of all parties subject to the forced pooling provisions of this order.

(14) The application of Samson, et al, in Case No. 13492, for approval of a drilling permit for its proposed Osudo 4 State Com Well No. 1 and for cancellation of the drilling permit for the KF 4 State Well No. 1 (API No. 30-025-37129) is denied.

(15) Pursuant to the application of Samson, et al in Case No. 13492, Chesapeake's APD for the Cattleman 4 State Com Well No. 1 (API No. 30-025-37150) is cancelled.

(16) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P.E.
Director

ATTACHMENT "B"

CHESAPEAKE'S LAND EXHIBITS:

1. Assignment of Oil and Gas Lease #V0-7063-1 Rubicon to Chesapeake Exploration Limited Partnership

2. Assignment of Oil and Gas Lease V0-7063-2 CELP to Chesapeake Permian, L.P.

3. APD KF "4" State Well (Approved 6/3/05) and Change of BHL

4. Electronic Form Application for Permit to Drill

5. Map of Proposed Spacing Unit with Ownership Summary

6. Pooling Application

7. Certificate of Mailing

8. Chronology of Events

9. Letter Dated March 9, 2005 Well Proposal KF 4 State No.1 with AFE

10. Letter Dated March 30, 2005 from Samson Attempting to Withdraw Election

11. Letter dated April 4, 2005 from Chesapeake to Samson Resources Enclosing Joint Operating Agreement

12. Letter dated April 5, 2005 from Samson Resources to Chesapeake Restating Attempt to Withdraw Election

13. Surface Damage Release and Easement

14. Affidavit of Clabe Pearson

15. Letter from Patrick H. Lyons, Commissioner of Public Lands

16. Testimony of Paul Kautz from 8-22-05 Division Hearing

ATTACHMENT "C"

CHEASPEAKE'S GEOLOGICAL EXHIBITS:

1. Index/Morrow Production Map
2. KF 4 State #1 Detail Log Section
3. Osudo 9 State #1 Detail Log Section
4. Updated Composite Morrow Map
5. Dip-Strike-Dip Stratigraphic X-Section
6. Detail Morrow Stratigraphic X-Section
7. Updated Isopach: Upper Sand (orange)
8. Updated Isopach: Upper New (green)
9. Updated Isopach: Osudo Lower (blue)
10. Regional Gross Morrow Isopach
11. Regional Morrow Structural X-Section
12. Regional Physiographic Map (Hill et al)
13. East – West Diagramatic X-Section (Hill et al)
14. Regional Morrowan Isopach (Meyer)
15. Morrow Depositional Environments (James)
16. Paleography SE US (Integ. Res. & CLI)
17. Paleogeography Delaware Basin (Integ. Res. & CLI)
20. Porosity Lithology Crossplot Chart
21. 9H Detail
22. Log Section CHK KF 4 State #1 (4W)
23. 9I Detail

24. 10E Detail

25. 16P Detail

26. 15F Detail

27. Log Section CHK San Simon 21 State #2 (21E)

28. Log Section Mewbourne Osudo 7 ST. #1 (7J)

29. Log Section Mewbourne San Simon 18 ST. #1 (18C)

"Addendum" Exhibits:

4a. Pre-Drill Composite Morrow Map

4b. Hearing Date Composite Morrow Map

7a. Isopach: Upper Sand (orange)

8a. Isopach: Upper New (green)

9a. Isopach: OSUDO LOWER (blue)

21a. Log Section Mewbourne 9 #1 (9H)

23a. Log Section Kaiser-Francis Hunger Buster #3 (9I)

24a. Log Section Apache Wel State #2 (10E)

25a. Log Section Devon PQ Osudo St. #2 (16P)

26a. Log Section Amerada State Wek #1 (15F)

ATTACHMENT "D"

CHESAPEAKE'S PETROLEUM ENGINEERING EXHIBITS

PRESSURE DATA (Exhibits 1 thru 20):

PE-1.	Cover sheet
PE-2.	BHP Vs. Time for 8 Key Wellbores
PE-3.	Map With Initial BHP of 7354 for State WEK #1 Well
PE-4.	BHP Vs. Time For State WEK #1 Well
PE-5.	Map With State WEL Com #1 Well with Initial BHP of 7080
PE-6.	BHP v Time Comparisons for WEK and WEL
PE-7.	Composite of CHK Geologic and Samson's map
PE-8.	Map with State 15-1 Well with Initial BHP of 7636
PE-9.	BHP vs. Time Comparisons of WEK and State 15-1 Wells
PE-10.	BHP vs. Time Comparison of WEL COM 1 and State 15-1 Wells
PE-11.	Map with PQ Osudo State Com with Initial BHP 6627
PE-12.	PQ Osudo State Com Well with Initial BHP of 6627
PE-13.	BHP vs. Time Comparison WEK#1, State 15-1 & PQ Osudo State Com
PE-14.	BHP vs. Time Comparisons for WEL Com #1 and PQ Osudo State Com
PE-15.	Composite of CHK and Samson's Geologic Maps
PE-16.	Map Highlighting CC 3 State 1 Well BHP of 7300 and Other Wells
PE-17.	CC 3 State 1 PBU Analysis-Cartesian Plot
PE-18.	CC 3 State PBU-Semi-Log Plot
PE-19.	CC 3 State PBU-Log-Log Plot
PE-20.	Composite of CHK and Samson's Geologic Maps for CC 3 State #1

PRODUCTION DATA (Exhibits 21 thru 32):

PE-21.	Cover sheet
PE-22.	Map with Osudo 9-1 with BHP of 6301
PE-23.	Osudo 9 Production Plot (Gas rate vs. Time)
PE-24.	Godsey's Map with Hunger Buster 3 with BHP of 6627
PE-25.	Hunger Buster #3 Production Plot (Gas rate vs. time)
PE-26.	Composite Map of CHK and Samson's Geologic Maps
PE-27.	Map with State WEL Com 2 (Dry Hole)
PE-28.	Composite Map of CHK and Samson's Geologic Maps
PE-29.	Map highlighting KF 4 State #1 with initial BHP of 6600
PE-30.	KF 4 State Production Plot (Gas Rate vs. Time) w/Comments
PE-31.	Comparison KF 4 State and Hunger Buster Production Plots
PE-32.	Composite of CHK and Samson's Geologic Maps

GAS ANALYSIS (Exhibits 33 thru 36):

PE-33. Cover sheet
PE-34. Sample of 6 Gas Specific Gravity Data
PE-35. Comparison Osudo 9, KF State 4, WEL Com 1, PQ Osudo and WEK
PE-36. CHK's Geologic Map with Specific Gravity ID per Wellbore

VOLUMETRICS (Exhibits 37 thru 44):

PE-37. Cover sheet
PE-38. Recoverable Gas in Place for Each of the Six 160-acre Tracts in Section 4 Using CHK's Map.
PE-39. Recoverable Gas in Place for Each of the Six 160-acre Tracts in Section 4 Using Samson's Map.
PE-40. CHK's Recoverable Gas vs. Samson's
PE-41. Recoverable Gas in Place for Area A Using CHK's Map: 26,002 ac-ft yields 33.4 BCF
PE-42. EUR for Area A Using CHK's Map
EUR is 27.4 BCF by Decline Curve vs. 33.4 Volumetric Calc.
PE-43. Recoverable Gas in Place Using Samson's Map (Area B)
24,408 ac-ft yields 33.9 BCF
PE-44. EUR for Area B Using Samson's Map
EUR is 37.1 BCF by Decline Curve vs. 33.9 Volumetric Calc

BACK-UP MAPS (Exhibits 45-48):

PE-46. CHK's Map with Net its Thickness Numbers
PE-47. CHK's Map with its Net Thickness Numbers
PE-48. Samson's Map with its Net Thickness Numbers