

October 6, 2011

**Rule 37 Case No. 0267504
District 09**

APPLICATION OF CHESAPEAKE OPERATING, INC. FOR A RULE 37 EXCEPTION FOR THE BARNES ASSEMBLY "A" LEASE, WELL NO. 3-H, NEWARK EAST (BARNETT SHALE) FIELD, DALLAS COUNTY, TEXAS.

APPEARANCES:

FOR APPLICANT:

Glenn Johnson, Attorney
Ray Oujesky, Attorney
David Triana
Bill Spencer
Isaac Jacobson
Allan Jackson
Dave Henson
Brian Boerner
Allyson Vistica

APPLICANT:

Chesapeake Operating, Inc.

FOR PROTESTANTS:

Louis McBee
Casey Harris
Ms. Billie Harris
Scott Cook
Neva Jane Carter

PROTESTANTS:

Mohamed Al Sharif
Ms. Billie Harris
Ms. Billie Harris
Scott Cook
Neva Jane Carter

PROPOSAL FOR DECISION

PROCEDURAL HISTORY

APPLICATION FILED:

October 5, 2010

NOTICE OF HEARING:

November 30, 2010

HEARD BY:

Marshall Enquist - Hearings Examiner
Donna Chandler - Technical Examiner

HEARING DATE :

February 1, 2011

PFD CIRCULATION DATE:

October 6, 2011

STATEMENT OF THE CASE

Chesapeake Operating, Inc. ("Chesapeake" or "Applicant"), seeks an amended drilling permit pursuant to the provisions of Statewide Rule 37 for the as-drilled location of the Barnes Assembly "A" Lease, Well No. 3-H, a horizontal well in the Newark, East (Barnett Shale) Field, Dallas County, Texas.

Chesapeake received a drilling permit on October 1, 2010 to drill its Well No. 3-H at a Rule 37 location with own-offset waivers on its 327.89-acre pooled unit. This permit was restricted by a “no perforation zone” (“NPZ”) and was approved administratively. The well, a 3598 foot lateral including a 1450 foot (plus or minus) NPZ at the terminus, has been drilled and the casing has been run and cemented in place. However, the well has not been completed with perforations and has not produced. Appendix I to this proposal for decision is a copy of the plat associated with the October 1, 2010 drilling permit, showing the well path and the 1450 foot (plus or minus) NPZ.

On October 5, 2010, Chesapeake applied to remove the 1450 foot (plus or minus) NPZ on its Well No. 3-H on the 327.89-acre pooled unit. In that application, Chesapeake noted on the plat that of the 327.89 acres in the Unit, 277.78 acres were leased. Appendix II to this proposal for decision is a copy of the plat showing the boundaries of the Unit and the proposed well with the 1450 foot (plus or minus) NPZ shaded in red. The surface location of Well No. 3-H is off-unit and is 540 feet east of the west line of the unit and 545.4 feet north of the easterly north line of the unit. The proposed upper penetration point is 330 feet south of the northerly north line of the unit and 51.6 feet from the east line of the unit. The terminus is 1098.5 feet from the west line of the unit and 1060.3 feet from the northwest line of the unit. The lateral runs on a north-south trend.

Special field rules for the Newark, East (Barnett Shale) Field provide for 330 foot lease line spacing. A Rule 37 exception is needed for the proposed Barnes Assembly “A” Lease, Well No. 3-H, because the section of the well proposed to be perforated is closer than 330 feet to the boundaries of certain tracts internal to the unit that are unleased. Notices of Intent to Appear in Protest of the application were filed by Mohamed Al-Sharif, Neva J. Carter, Ms. Billie Harris, Clay Newsome, Christopher Koss, Rosemary Reed, Kristi Chance Bradley and Scott Cook. Louis McBee appeared as a representative of Billie Harris and Mohamed Al-Sharif.

The examiners believe Chesapeake has proved that it cannot recover its fair share of the recoverable hydrocarbons in place beneath the Barnes Assembly “A” Lease with the current “no perforation zone” in place on its Well No. 3-H, and recommend that Chesapeake’s application be approved.

MATTERS OFFICIALLY NOTICED

Applicant Chesapeake requested the examiner take Official Notice of several prior dockets, those being: *Rule 37 Case No. 0265651: Application of XTO Energy, Inc. for a Rule 37 Exception for the TWUB Unit Lease, Well No. 1H, Newark, East (Barnett Shale) Field, Tarrant County, Texas.*; *Rule 37 Case No. 0264838: Application of XTO Energy, Inc. for a Rule 37 Exception for the Eden Southeast Unit, Well No. 1H, Newark, East (Barnett Shale) Field, Tarrant County, Texas.*; *Oil & Gas Docket No. 05-0265656: The Complaint of Ben Proctor and others Against Chesapeake Operating, Inc. Alleging That They Were Entitled To But Did Not Receive Notice of Rule 37 Spacing Exception Application of Chesapeake Concerning Well No. 1-H on the University West Unit, Newark, East (Barnett Shale) Field, Tarrant County, Texas.*; and *Oil & Gas Docket No. 09-0266449: The Application of Chesapeake Operating Company Pursuant to the Mineral Interest Pooling Act to Form a Unit for Well No. 1-H,*

University West Unit, Newark, East (Barnett Shale) Field, Tarrant County, Texas. Official Notice was taken by the examiner.

DISCUSSION OF THE EVIDENCE

CHESAPEAKE OPERATING, INC.

Special field rules for the Newark, East (Barnett Shale) Field provide for 330 foot lease line spacing. As to horizontal wells, where the horizontal portion of the well is cased and cemented back above the top of the Barnett Shale formation, the distance to any property line, lease line, or subdivision line is calculated based on the distance to the nearest perforation point in the well, and not based on the penetration point or terminus. Where an external casing packer is placed in a horizontal well and cement is pumped above the external casing packer to a depth above the top of the Barnett Shale formation, the distance to any property line, lease line, or subdivision line is calculated based on the top of the external casing packer or the closest open hole section in the Barnett Shale. The standard drilling and production unit for the Newark, East (Barnett Shale) Field is 320 acres. An operator is permitted to form optional drilling units of 20 acres.

Chesapeake seeks removal of the 1450 foot (plus or minus) “no perforation zone” (“NPZ”) on its Barnes Assembly “A” Lease, Well No. 3-H. Chesapeake believes removal of the NPZ is necessary to prevent the loss of roughly 1.74 BCF of gas that would otherwise be wasted and left in the ground. Chesapeake also believes removal of the NPZ is necessary to afford the mineral owners within the 327.89-acre Barnes Assembly “A” Lease a reasonable opportunity to recover their fair share of Barnett Shale reserves.

The total acreage within the perimeter of the Barnes Assembly “A” Lease is 327.89 acres. There are 770 tracts within the unit, 648 of which are leased and 122 of which are unleased. The 648 leased tracts contain a total of 277.78 acres. As a percentage, 84.1 percent of the unit acreage is leased and 15.9 percent is unleased. Chesapeake is engaged in ongoing leasing activities.

There are limited locations from which Chesapeake can drill a well. Chesapeake has an offsite surface pad, called the Campbell Pad, for the Barnes Assembly “A” Lease located approximately 540 feet east of the northerly portion of the unit. In addition to the Barnes Assembly “A” Lease, the pad site will serve the West Carpo and East Carpo Units. Pad sites are restricted in this area by a City of Grand Prairie ordinance which required Chesapeake to be 500 feet from any protected use structure. In addition, a flood plain and a floodway in this area have further restricted pad locations.

To establish the currently recoverable reserves under the 327.89-acre Barnes Assembly “A” Lease, Chesapeake offered an isopach map derived from the logs of nearby wells. The isopach map indicates the Barnett Shale is 375 feet to 400 feet thick under the unit. Based on a net thickness of 385 feet for the Barnett Shale, a porosity of 5.3%, a gas content of 56.1 SCF/ton (SCF = Standard Cubic Feet), a unit area of 327.89 acres and a recovery factor of 30%, Chesapeake estimated currently recoverable gas in place under the unit to be 23.5 BCF of gas.

Chesapeake reviewed the Newark, East (Barnett Shale) Field wells within a five mile radius of the proposed well, finding 55 wells within that radius. Using the estimated ultimate recovery (EUR) of each of the wells, Chesapeake developed a scatter diagram using the least squares regression method to produce a trend line to predict the ultimate recovery of a well based on its length. Based on the slope of the lateral length versus the EUR graph, Chesapeake calculates each incremental foot of wellbore will recover an additional 1.23 MMCF and estimates its proposed full-length lateral of 3598 feet will recover 4.6 BCF of gas. Absent the removal of the NPZ, Chesapeake would be left with a lateral 2181 feet in length, which would recover 2.86 BCF of gas, leaving 1.74 BCF unrecovered.

Chesapeake does not believe there is any way to recover the 1.74 BCF of gas other than to remove the NPZ from its proposed well. Even if removal of the NPZ from Chesapeake's Well No. 3-H is approved, its projected recovery of an estimated 4.6 BCF of gas is much less than the 23.5 Bcf of recoverable gas in place that Chesapeake calculates is beneath the 327.89-acre Barnes Assembly "A" Lease. Chesapeake will return to the Commission and seek permits to drill as many as five or six additional wells on the Barnes Assembly "A" Lease, which will be necessary to allow Chesapeake to recover its fair share of the recoverable gas in place beneath the Barnes Assembly "A" Lease.

As shown in Appendix II, the location of the available pad site and the locations of the unleased subdivision tracts make it difficult for a well to have any take points (perforations) anywhere in the subdivided area without a Rule 37 exception. Absent Rule 37 exceptions, Chesapeake will not be able to recover its fair share of the recoverable hydrocarbons beneath the Barnes Assembly "A" Lease.

In response to issues raised by the Protestants, Chesapeake states that it does not believe it is engaging in any sort of theft or violating Statewide Rule 37. Chesapeake believes it is in compliance with the rules of the Railroad Commission. Many of the issues raised by the protestants are issues the Commission has no jurisdiction over. Whether or not the City of Grand Prairie has sufficient ordinances in place cannot be decided by the Commission. Air quality issues are not decided by the Commission. As to protection of water, Chesapeake believes it has followed the water regulations of the Commission.

Chesapeake believes Protestant Neva Carter's complaints regarding the proximity of the wellbore for Well No. 3-H as being within 30 feet of her property is mistaken. Chesapeake points out that Ms. Carter's property, Tract No. 65 on the plat, is 153.4 feet from the proposed wellbore and the surface location of the well is over 2,000 feet away. Chesapeake also notes that its surface hole location is in compliance with the City of Grand Prairie drilling ordinance.

PROTESTANTS' POSITION AND EVIDENCE

Louis McBee

Mr. McBee states that is Chesapeake's burden to prove that it is entitled to an exception to Statewide Rule 37 to prevent confiscation. In order to do so it must show, first, that it will not be

afforded a reasonable opportunity to recover its fair share of hydrocarbons currently in place by drilling wells at regular locations, and second, that the proposed irregular location is reasonable.

It is the right of each mineral owner to a fair and equal opportunity to recover their fair share of the hydrocarbons under their tract. Mr. McBee contends that the act of issuing a Rule 37 exception, particularly 30 feet from a protestant's tract, is in itself confiscation and a denial of the rights of the mineral owner to produce his/her fair share of the minerals beneath his/her tract because he/she will not be able to get anyone else to produce it.

Mr. McBee notes that Chesapeake's estimated recovery of 30% of the gas in place leaves 70% of the gas in the ground. Mr. McBee also noted that Chesapeake has 84.1% of the total acreage in the Barnes Assembly "A" Lease leased and believes that Chesapeake's fair share should be calculated on the basis of that number rather than the entire 327.89 acres included within the boundaries of the unit.

Mr. McBee offered Rule 37 Case Nos. 0245869, 0251216 and 0206334¹ as exhibits. The cases involve an applicant's allegation that wells of a certain length were necessary to be economically viable. The PFDs find that an applicant's self-imposed requirements for economic viability cannot be the basis for the grant of a Rule 37 exception. Exceptions to Rule 37 are not granted to eliminate risk for an operator or to provide it with the best possible well.

Casey Harris

Casey Harris, on behalf of Ms. Billie Harris, objects to the "theft" of minerals belonging to the protestants if Chesapeake's applied-for Statewide Rule 37 exception is granted. Mr. Harris states that his right to hold his property in the form of mineral rights is no lesser or greater than any of his neighbors and is protected under the Texas Constitution and the United States Constitution. Mr. Harris additionally notes that the Railroad Commission has issued many rulings denying requests for exceptions based on the economic requirements and needs of various companies. In support of this, Mr. Harris cites Rule 37 Case Nos. 0251216 (the "Ramey" case), 0206334 and 0245869.

Mr. Harris also notes that Chesapeake has already acquired a regular drilling permit for the Well No. 3-H, as well as regular permits for three other wells on the Barnes Assembly "A" Lease, these being Well Nos. 1-H, 2-H and 4-H. Mr. Harris believes these four wells provide Chesapeake with a sufficient opportunity to recover its fair share of the minerals beneath the Barnes Assembly "A" Lease.

Mr. Harris states that if an exception to Statewide Rule 37 is granted, the state will have authorized a private company to take the property of property owners with no compensation, which

¹ Rule 37 Case No. 0206334: Application of Enron Oil & Gas Company for an Exception to Statewide Rule 37 to Drill its No. 17 Well, Frank Reed 117 Lease, Sawyer (Canyon) Field, Sutton County, Texas; Rule 37 Case No. 0251216: Application of Chesapeake Operating, Inc. For an Exception to Statewide Rule 37 to Drill Well No. 1H on the Ramey Unit, Newark, East (Barnett Shale) Field, Tarrant County, Texas; Rule 37 Case No. 0245869: Application of Chesapeake Operating, Inc. For an Exception to Statewide Rule 37 to Drill Well No. 4 on the Green Gas Unit Lease, Oak Hill (Cotton Valley) Field, Gregg County, Texas.

would be a theft authorized by the state, benefitting nobody except the private company acting as the thief.

Mr. Harris also notes that the drilling of Well No. 3-H commenced on September 25, 2010 and drilling was completed on October 10, 2010. If the wellbore has already been drilled to its full length, it is in violation of the permit granted to Chesapeake on October 1, 2010. Mr. Harris requests that Well No. 3-H be plugged back to the legal location indicated on the permit approved on September 20, 2010.

Neva Jane Carter

Ms. Carter believes Chesapeake's Well No. 3-H, as shown on the plat, will come within 30 feet of her unleased property. She does not believe Chesapeake can control the drilling process that accurately and may drill its well 29 or 25 feet from her property. Ms. Carter would like to know who oversees the drilling process to make sure that a driller does not come closer to property than allowed by the Commission.

Ms. Carter also notes the burden placed on the citizens of Texas when they are forced to take time off from work and drive to Austin to defend their rights. Ms. Carter stated she had never heard of Statewide Rule 37 and was forced to spend time on the Internet trying to figure out what Rule 37 and the application process meant. Ms. Carter states that she is sure the requirements for protesting a Rule 37 exception were not intended to be a preventive measure to keep citizens from protesting, but that is the effect of it.

Ms. Carter states that she has worked hard all her life to afford her home in the suburbs, close to a lake. She complained of harassment by landmen trying to obtain a lease from her, with constant letters, phone calls and knocks on the door.

Ms. Carter also believes that drilling in her city, Grand Prairie, will create the perception that Grand Prairie is an industrial city. Not only will property values decrease, but quality of life will suffer as well. There are plans for 196 wells in south Grand Prairie so far, which makes it obvious that industry will come before the Commission again, asking the Commission to waive the rights of affected citizens and confiscating their property.

EXAMINERS' OPINION

Part of the protestants' case relies on the fact situation and the Commission Final Order in Rule 37 Case No. 0251216 ("the Ramey case"). That case, and the present case, are distinguishable. In Rule 37 Case No. 0251216, Chesapeake had a permit to drill a lateral 1839 feet long. However, upon drilling, Chesapeake made a "business decision" and opted to ignore Commission rules and exceed its permit by drilling a 3553 foot lateral, which placed the lateral under a subdivision which had many unleased tracts. Chesapeake then came to the Commission after the fact and sought a Rule 37 exception permit despite the availability of regular locations in its unit. Much of Chesapeake's case was based on the argument that it required wells of a certain length in order that they be economic.

In the Ramey case, the Examiners' Opinion correctly stated:

Chesapeake's witnesses claim they need the applied-for irregular location to allow them to have a commercial well. However, neither Chesapeake nor any other operator is guaranteed a well that meets its self-imposed criteria for economic viability - each mineral interest owner is entitled to a fair and equal opportunity to recover its fair share of the hydrocarbons under its tract. Economic requirements: 1) vary from company to company (applicant to applicant); 2) are not evenly applied; 3) are not specific to the property rights of a given tract; and 4) are subject to unpredictable external market fluctuations in the price of oil and natural gas. An operator's economic requirements therefore cannot be the basis for granting an exception to statewide Rule 37 to protect correlative rights. See *Rule 37 Case No. 0206334: Application of Enron Oil & Gas Company for an Exception to Statewide Rule 37 to Drill Its No. 17 Well, Frank Reed 117 Lease, Sawyer (Canyon) Field, Sutton County, Texas*, and *Rule 37 Case No. 0245869: Application of Chesapeake Operating, Inc. For an Exception to Statewide Rule 37 to Drill Well No. 4 on the Green Gas Unit Lease, Oak Hill (Cotton valley) Fields, Gregg County, Texas* (Final Order entered January 15, 2009).

The present case is easily distinguishable. Chesapeake had a valid Commission permit to drill the entirety of its 3598 foot lateral with its included 1450 foot NPZ, and has legally done so, which was not the case in Chesapeake's *Ramey* case. In the present case, Chesapeake has made no argument regarding the economic viability of its Well No. 3-H on the Barnes Assembly "A" Lease.

To establish entitlement to an exception to Rule 37 to prevent confiscation, an applicant must show that, absent the applied-for well, it will be denied a reasonable opportunity to recover its fair share of hydrocarbons currently in place under the lease, or their equivalent in kind. The applicant must satisfy a two-pronged test: 1.) the applicant must show that it will not be afforded a reasonable opportunity to recover its fair share of hydrocarbons currently in place by drilling a well at a regular location; and 2.) the applicant must show that the proposed irregular location is reasonable.

It is the basic right of every landowner or lessee to a fair and reasonable chance to recover the oil and gas under their property as recognized by the Texas Supreme Court in *Gulf Land Co. v. Atlantic Refining Co.*, 131 S.W.2d 73, 80 (Tex. 1939). Denial of that fair chance is confiscation within the meaning of Rule 37. *Id.*

Fair share is based on recoverable reserves on the entire lease or unit. Chesapeake argues that it has demonstrated the presence of 23.5 BCF of currently recoverable gas under the 327.89 acre Barnes Assembly "A" Lease. The examiner differs slightly with Chesapeake and agrees with Protestant McBee, in that Chesapeake has stated that it has only 84.1% of the unit acreage leased. Chesapeake's fair share is then 84.1% of the 23.5 BCF of recoverable gas under the 327.89 acre unit, or 19.76 BCF.

Based on a least squares regression analysis, Chesapeake estimates that each incremental foot of wellbore will recover approximately 1.23 MMCF of gas. Removal of the 1450 foot (plus or minus) NPZ will allow Chesapeake 3598 feet of completed wellbore with a recovery of 4.6 BCF of gas. Absent removal of the NPZ, Chesapeake would be left with a wellbore that can be completed along 2181 feet

of its length, with an estimated recovery of 2.86 BCF, leaving 1.74 BCF unrecovered.

Appendix II demonstrates that there are no regular locations on the southern three quarters of the unit, due, in part, to the number of unleased tracts, and, in part, to the lack of available pad sites on the southern side of the unit. Appendix II also demonstrates that the other wells currently permitted for the Barnes Assembly "A" Lease, Well Nos. 1-H, 2-H and 4-H, are currently blocked from entering the southern area of the unit by unleased tracts.

The location of Well No. 3-H is reasonable. Chesapeake has no other surface location it can drill from to enter the Barnes Assembly "A" Lease and is confined to use of the Campbell Pad, which forces it to drill into the unit from the north. Without a Rule 37 exception, none of the reserves in the southern area of the unit will be recovered.

The examiners are not persuaded by protestants' argument that Chesapeake can recover its fair share from the existing locations of Well Nos. 1-H, 2-H, 3-H and 4-H. These wells are presently confined to the northernmost area of the 327.89 acre Barnes Assembly "A" Lease and will recover gas from only the northernmost portion of the unit. Limiting the laterals drilled in the Barnes Assembly "A" Lease to only those currently permitted would deprive the leased mineral owners in the Barnes Assembly "A" Lease of a reasonable opportunity to recover their fair share of the recoverable reserves beneath the unit.

The examiners are also unpersuaded by Protestant's arguments that granting a Rule 37 exception for Well No. 3-H would result in the "theft" of the protestant's minerals. The Rule of Capture has long been the law in Texas, refusing to impose liability for production of minerals across lease lines (see Bender v. Brooks, 127 S.W. 168 (Tex. 1910)). In the Barnett Shale, fracing has proved to be the best way to produce gas trapped in the shale. The Texas Supreme Court has ruled that subsurface hydraulic fracturing of a natural gas well that extends into another's property is not a trespass for which the value of the gas drained as a result may be recovered as damages, as the rule of capture bars such recovery of damages (see Coastal Oil & Gas Corp. v. Garza Energy Trust, 268 S.W.3d 1 (Tex. 2008)).

The examiners recommend that Chesapeake be granted an exception to Statewide Rule 37 for its Well No. 3-H on the 327.89 acre Barnes Assembly "A" Lease in Dallas County based on prevention of confiscation. Based on the record in this docket, the examiners recommend adoption of the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT

1. At least 10 days notice of this hearing was given to the designated operator, all offset operators, all lessees of record for tracts that have no designated operator, and all owners of record of unleased mineral interests for each affected adjacent tract.
2. Chesapeake Operating, Inc. ("Chesapeake" or "Applicant"), seeks an exception to Statewide Rule 37 for the as-drilled location of its Barnes Assembly "A" Lease, Well No. 3-H, in the

Newark, East (Barnett Shale) Field in Dallas County.

3. On October 1, 2010, Chesapeake obtained a permit to drill Well No. 3-H, at a Rule 37 location with own-offset waivers on the 327.89 acre Barnes Assembly "A" Lease, approved administratively with a 3598 foot lateral and a 1450 foot (plus or minus) no-perf zone at the terminal end of the lateral. The plat associated with that application is attached to this proposal for decision as Appendix I, which is incorporated into this finding by reference.
4. Chesapeake has drilled the Barnes Assembly "A" Lease, Well No. 3-H, but the well has not been completed with perforations and has not been produced.
5. On October 5, 2010, Chesapeake submitted an application to remove the 1450 foot (plus or minus) no-perf zone from the lateral of its Well No. 3-H on its 327.89 acre Barnes Assembly "A" Lease.
6. Special field rules for the Newark, East (Barnett Shale) Field provide for 330 foot lease line spacing. A Rule 37 exception is needed for the proposed Barnes Assembly "A" Lease, Well No. 3-H, because the section of the well proposed to be perforated is closer than 330 feet to the boundaries of certain tracts internal to the unit that are unleased.
7. Special field rules for the Newark, East (Barnett Shale) Field provide for 330 foot lease line spacing. As to horizontal wells, where the horizontal portion of the well is cased and cemented back above the top of the Barnett Shale formation, the distance to any property line, lease line, or subdivision line is calculated based on the distance to the nearest perforation point in the well, and not based on the penetration point or terminus. Where an external casing packer is placed in a horizontal well and cement is pumped above the external casing packer to a depth above the top of the Barnett Shale formation, the distance to any property line, lease line, or subdivision line is calculated based on the top of the external casing packer or the closest open hole section in the Barnett Shale. The standard drilling and proration unit for the Newark, East (Barnett Shale) Field is 320 acres. An operator is permitted to form optional drilling units of 20 acres.
8. The surface location of the Barnes Assembly "A" Lease, Well No 3-H is located off the unit, 540 feet (off lease) from the west line and 545.4 feet (off lease) from the south line of the W.H. Beeman Survey, A-126. The proposed upper perforation point is 330 feet south of the north line of the unit and 51.6 feet from the east line of the unit. The terminus is 1098.5 feet from the west line of the unit and 1060.3 feet from the northwest line of the unit.
9. The proposed surface location, the Campbell Pad, for Well No. 3-H is the only surface location available to Chesapeake for the drilling of wells on the Barnes Assembly "A" Lease. The pad site meets the requirements of the City of Grand Prairie.
10. The Chesapeake application is opposed by the owners of unleased tracts internal to the Barnes Assembly "A" Lease. Their tracts are within 330 feet of the as-drilled lateral.

11. The Barnett Shale formation is present and productive under the entirety of the Barnes Assembly “A” Lease. The formation is approximately 375 to 400 feet thick in the area of the unit.
12. To establish the currently recoverable reserves under the 327.89 acre Barnes Assembly “A” Lease, Chesapeake used a volumetric calculation:
 - a. Available well logs in the vicinity of the Barnes Assembly “A” Lease indicate the thickness of the Barnett Shale locally to be 375 to 400 feet.
 - b. Using a formation thickness of 385 feet, porosity of 5.3%, water saturation of 18.2%, a unit area of 327.89 acres, gas content in SCF/ton as 56.1, unit area as 327.89 acres, and a recovery factor of 30%, Chesapeake calculated total recoverable gas in place under the 327.89 acre Barnes Assembly “A” Lease to be 23.5 BCF.
 - c. Chesapeake has leased 84.1% of the acreage within the 327.89 acre Barnes Assembly “A” Lease, thus its fair share of the recoverable gas in place under the unit is 19.5 BCF.
13. Chesapeake plotted drainhole length versus estimated ultimate recovery for 55 wells with a five mile radius of the applied-for well. Using the least squares regression method, Chesapeake calculated that each incremental foot of wellbore will recover an additional 1.23 MMCF of gas.
14. The total length of the Well No. 3-H drainhole after removal of the 1450 foot NPZ as proposed by Chesapeake, from upper perforation to lower perforation, is 3598 feet. Applying Chesapeake’s calculated incremental recovery of 1.23 MMCF per foot of drainhole, Well No. 3-H is calculated to have an estimated ultimate recovery of 4.6 BCF of gas.
15. As permitted, Well No. 3-H has a “no perforation zone” (“NPZ”) at its terminus that is 1450 feet long. Removal of the NPZ would result in the recovery of 1.74 BCF of gas that would otherwise not be recoverable.
16. The only regular locations available to Chesapeake to recover its fair share of the currently recoverable reserves beneath the Barnes Assembly “A” Lease are shown on Chesapeake Exhibit 13, which is attached to this proposal for decision as Appendix II, which is incorporated into this finding by reference.
 - a. On Appendix II, the only regular locations accessible from the north end of the Barnes Assembly “A” Lease are in the northern quarter of the unit.
 - b. There are no regular drilling locations that Chesapeake can reach in the southern three quarters of the Barnes Assembly “A” Lease.

- c. Assuming that it would be feasible to drill wells on the Barnes Assembly “A” Lease where wells drilled from the single available surface location might remain regular, or at least 330 feet from any unleased mineral property line, these regularly located wells would not provide Chesapeake and its lessors a reasonable opportunity to recover their fair share of gas beneath the unit.
 - d. Chesapeake could drill three currently permitted parallel wells, Well No. 1-H, 2-H and 4-H, each with drainholes approximately 500 feet apart and each approximately 700 feet long within the “regular” area shown on Appendix II. Together, the three wells would recover much less than the 19.76 BCF of recoverable gas beneath the leased acreage of the Barnes Assembly “A” Lease.
- 17. The “no perforation zone” (“NPZ”) restriction placed on Well No. 3-H which prevents perforation of the lateral within 330 feet of any unleased tract will leave a substantial amount of gas unrecovered and preclude Chesapeake and its lessors from recovering their fair share of gas beneath the Unit.
 - a. Well No. 3-H, with NPZ in place, would be perforated over 2181 feet of its length from its first perforation point and would recover an estimated 2.86 BCF of gas.
 - b. Well No. 3-H, with the NPZ removed, would be perforated over 3598 feet of its length from its first perforation point and recover an estimated 4.6 BCF of gas.
 - c. The difference between the recoveries of Well No. 3-H, with the NPZ in place and with the NPZ removed, is approximately 1.74 BCF of gas. This additional gas would be recovered from the north half of the unit, and could not be recovered by any other well.
- 18. The as-drilled location of the Barnes Assembly “A” Lease, Well No. 3-H is reasonable.
 - a. The location of the well is consistent with the location of a well drilled as the first well in development plan requiring multiple parallel wells in a unit oriented north-south.
 - b. Movement of Well No. 3-H to the east or west would result in a shorter lateral due to the necessity of avoiding an impermissible mineral trespass against an unleased tract.
- 19. Chesapeake made several attempts to lease all of the unleased tracts and continues its attempt to sign the unleased mineral interest owners.

CONCLUSIONS OF LAW

1. Proper notice of hearing was timely given to all persons legally entitled to notice.
2. All things have occurred to give the Commission jurisdiction to decide this matter.
3. Approval of a Rule 37 exception for the as-drilled location of the Barnes Assembly "A" Lease, Well No. 3-H, as proposed to be perforated by Chesapeake Operating, Inc., is necessary to prevent confiscation and protect the correlative rights of the mineral owners.

RECOMMENDATION

The examiners recommend that the application of Chesapeake Operating, Inc., for a Statewide Rule 37 exception for the as-drilled location of the Barnes Assembly "A" Lease, Well No. 3-H in the Newark, East (Barnett Shale) Field, Dallas County, be granted as necessary to prevent confiscation and protect correlative rights.

Respectfully submitted,

Marshall Enquist
Hearings Examiner

Richard Atkins
Technical Examiner