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HEARINGS DIVISION

# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

May 30, 2014

**Rule 37 Case No. 0281891**  
**Status No. 731552**  
**District 09**

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**APPLICATION OF CHESAPEAKE OPERATING, INC. FOR A RULE 37 EXCEPTION FOR ITS LANCASTER LEASE, WELL NO. 2H, NEWARK EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS.**

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### APPEARANCES:

#### FOR APPLICANT:

Glenn Johnson, Attorney  
Ben Russ, Attorney  
David Triana, Petroleum Engineer  
Bill Spencer, Regulatory Consultant  
Melissa Condley, Reservoir Engineer

#### APPLICANT:

Chesapeake Operating, Inc.

#### FOR PROTESTANTS:

Kenneth Meisner

Mark Hixson

#### REPRESENTING:

Thirty-six Tract Owners

Himself and Twelve Tract Owners

### PROPOSAL FOR DECISION

### PROCEDURAL HISTORY

<b>APPLICATION FILED:</b>	May 21, 2013
<b>NOTICE OF HEARING:</b>	June 4, 2013
<b>HEARD BY:</b>	Marshall Enquist - Hearings Examiner Richard Atkins - Technical Examiner
<b>HEARING DATE :</b>	July 23, 2013
<b>PFD CIRCULATION DATE:</b>	May 30, 2014

STATEMENT OF THE CASE

In this case, Chesapeake seeks removal of “no perforation zones” (NPZs) imposed on Well No. 2H by earlier permits. The protestants argue that Chesapeake cannot complete its proposed wellbores without committing a mineral trespass due to drilling through, or completing under, unleased tracts.

Special field rules for the Newark, East (Barnett Shale) Field provide for 330 foot leaseline 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, leaseline, 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, leaseline, 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.

Rule 37 Case No. 0281891, Well No. 2H

Chesapeake Operating, Inc. seeks an amended drilling permit pursuant to the provisions of Statewide Rule 37 for its Lancaster Unit, Well No. 2H, a horizontal well in the Newark, East (Barnett Shale) Field, Tarrant County, Texas. Chesapeake previously received a drilling permit on May 17, 2013 to drill its Well No. 2H on its pooled unit, which consisted of 508.9 acres at that time. The permit was restricted by “no perforation zones” (“NPZs”) and was approved administratively.

After Chesapeake received its May 17, 2013 drilling permit restricted by NPZs, Chesapeake filed the present permit application for the 509.46 leased acres of the Lancaster Unit on May 21, 2013, seeking removal of the NPZs on its Well No. 2H. A plat is attached as **Exhibit I**.

The surface location of Well No. 2H is on-unit. It is 156 feet from the south line and 442 feet from the east line of the lease and 805 feet from the south line and 1953 feet from the east line of the S.G. Jennings Survey, Abstract A-843. The proposed penetration point is 677 feet from the south line and 651 feet from the east line of the lease. The terminus is 1267 feet from the south line and 1502 feet from the west line of the lease and 1185 feet from the north line and 2104 feet from the west line of the S. G. Jennings Survey, A-843. The lateral runs on a SSE-NNW trend.

A Rule 37 exception is needed for the proposed Lancaster Unit, Well No. 2H, because the section of the well proposed to be perforated is closer than 330 feet to the boundary of tracts which are internal to the unit and unleased. Mark Hixson appeared at the hearing in protest and represented himself and twelve lot owners. Kenneth Meisner appeared at the hearing representing thirty-six lot owners.

### MATTERS OFFICIALLY NOTICED

The examiners have taken Official Notice of Complaint File 2013-082, which is the complaint of Kenneth Meisner regarding Chesapeake Operating, Inc.'s Lancaster Lease, Well Nos. 1H and 2H. The examiners have also taken Official Notice of Complaint File 2013-089, which is the complaint of James Kirk Lancaster regarding Chesapeake Operating, Inc.'s Lancaster Lease, Well Nos. 1H and 2H. Those complaints relate directly to this permit application and the examiners have considered those complaints in reaching the recommendation in this docket.

The examiners have also taken Official Notice of the file in Rule 37 Case No. 0277186: Application of Chesapeake Operating, Inc. for a Rule 37 Exception for its Lancaster Lease, Well No. 1H, Newark, East (Barnett Shale) Field, Tarrant County, Texas. The PFD regarding Well No. 1H was issued on February 12, 2014 and a Final Order was signed at Conference on April 8, 2014.

### DISCUSSION OF THE EVIDENCE

#### CHESAPEAKE OPERATING, INC.

Chesapeake's initial application for the Lancaster Unit, Well No. 2H, was submitted on January 12, 2012 and approved on January 21, 2012. It was a surface location permit, on 443.84 leased acres, with only 234.66 feet available for perforation from Proposed Upper Perforation Point to Proposed Last Perforation Point. The second application was filed March 29, 2013 and approved on April 3, 2013 for 509.62 leased acres in a 604.075-acre unit. Only 467.04 feet of the lateral could be perforated. The third application was filed on April 8, 2013 and approved on May 17, 2013, for 508.9 leased acres in a 604.075-acre unit, with 678.29 feet of the overall lateral available to be perforated. Based on this permit, Chesapeake spudded Well No. 2H on May 16, 2013 and drilled, cased and cemented the well. Chesapeake perforated and fracked the toe of the well. The frac plugs have not been drilled out, so the well is not capable of production at this time.

In the present application, the fourth in the series, Chesapeake seeks removal of the two "no perforation zones" on its Lancaster Unit, Well No. 2H imposed on the well by Chesapeake's May 17, 2013 Commission-approved well permit. The NPZs are marked in red on the attached **Exhibit I**. At the time this permit was approved, the Lancaster Lease contained 508.9 leased acres in a 604.075-acre unit. At the time of the hearing in this docket, on July 23, 2013, the leased acreage increased to 549.249 acres in a 632.109-acre unit. Chesapeake notes that the unit is 86.9 percent leased.

An isopach map derived from the logs of nearby wells indicate the Barnett Shale is roughly 340 feet thick under the Lancaster Unit. Devon Energy Production Co., LLP conducted a study of the Tarrant/Denton/Wise County area which calculated total gas in place at 139 BCF per square mile in those counties, based on an average formation thickness of 433 feet, porosity of 0.04% and TOC (Total Organic Carbon) of 4%. Using that study, and correcting for the thickness of the Newark, East (Barnett Shale) Field under the Lancaster Unit and the leased acreage, Chesapeake calculated the original gas in place in the 549.249 leased acres of the Lancaster Unit to be 93.669 BCF. Assuming a recovery factor

of 46 percent, Chesapeake calculates there is 43.275 BCF of recoverable gas beneath the Lancaster Unit.

Chesapeake reviewed the Newark, East (Barnett Shale) Field wells within a 4-mile radius of the proposed well, finding 107 wells within that radius. Plotting the estimated ultimate recovery (EUR) of each of the wells, Chesapeake developed a scatter diagram and used a least squares regression method to produce a trend line to predict the ultimate recovery of a well in the area based on its length. Based on the scatter diagram, with the drainhole length as the “x” axis and the estimated EUR in MMCF as the “y” axis, Chesapeake derived a well recovery formula of “ $y = 0.6335x + 1494$ ”. This formula indicates each incremental foot of wellbore will recover 0.633 MMCF of gas. The 1494 is the amount of gas, in MMCF, that Chesapeake would expect to recover with a vertical wellbore and no incremental horizontal drainhole length. Thus, Chesapeake calculates its proposed full-length lateral of 4,119 feet will recover 4.103 BCF of gas.

The current NPZs affect 3,440 feet of the Lancaster Unit, Well No. 2H. Absent the removal of the NPZs, Chesapeake argues it would be left with a wellbore lateral available to perforate that is only 679 feet in length. The wellbore lateral available for perforation would recover only 1.924 BCF of gas, leaving 2.179 BCF unrecovered. Chesapeake argues that 2.179 BCF of gas is a significant quantity of hydrocarbons.

In its previous application for the Lancaster Unit Well No. 1H, Chesapeake estimated that the full-length wellbore of 5964 feet would recover 5.272 BCF of gas. If the permit for Well No. 2H on the Lancaster Unit is granted, the two wells together will recover 9.375 BCF of gas, still an amount much less than the recoverable reserves of 43.275 BCF beneath the Lancaster Unit.

Failure to remove the NPZs would deprive Chesapeake and its lessors of the opportunity to produce their fair share of the recoverable hydrocarbons in place beneath the 549.249 leased acres of the Lancaster Unit, which would be confiscation. Absent Rule 37 exceptions and the removal of the existing NPZs, Chesapeake and its lessors will not be able to recover their fair share of the recoverable hydrocarbons beneath the Lancaster Lease.

In regard to both of its permit applications, Chesapeake believes its leases are valid due to operations Chesapeake has conducted on the Lancaster Unit, specifically operations on the Lancaster Unit Well No. 1H, which was spudded on June 20, 2012 and completed on July 1, 2012, but not completely fracked. Chesapeake’s leases state:

Notwithstanding anything to the contrary contained in this lease, at the option of the Lessee, which may be exercised by Lessee giving notice to the Lessor, a well which has been drilled and Lessee intends to frac shall be deemed a well capable of producing in paying quantities and the date such well is shut-in shall be when drilling operations are completed.

Chesapeake believes its operations on the Lancaster Well No. 1H serve to maintain its leases in the Lancaster Unit. Chesapeake is aware that two of the protestants, Hixson and Meisner, believe that

many of Chesapeake's leases have lapsed. Chesapeake believes they are incorrect. In the very few cases in which leased tracts were foreclosed on, thus terminating the leases on those tracts, Chesapeake acted to re-lease those tracts and has filed subsequent applications for drilling permits. Chesapeake argues that the subsequently granted applications supercede and correct earlier granted applications that may have had defects. Chesapeake also argues that the protestants are asking the Commission to make property rights determinations regarding lease terminations which are more properly pursued in District Court. Disregarding the leases which were admittedly terminated by foreclosure, there has not been a determination by any court that Chesapeake's leases in the Lancaster Unit have terminated.

### PROTESTANTS' POSITION AND EVIDENCE

#### Mark Hixson

Mr. Hixson believes that Chesapeake's first permit for this well was based on fraud, in that Chesapeake had no intention of ever producing a short horizontal lateral only 234 feet long. In addition, he believes that Chesapeake does not have the right to drill under unleased property, and that Chesapeake has done so in regard to a mineral property that Mr. Hixson owns. That property is described as Tract 228B on the Chesapeake plat and as Tract 7 at 6613 Routt Street in the mineral deed acquired by Mr. Hixson from James Lancaster. This tract was previously leased by Double K Cattle Ranch, LLC, a James Lancaster company, to Paloma Barnett, LLC, a predecessor in interest to Chesapeake. The prior lease was entered into on November 5, 2007 and had a 5 year primary term, expiring November 5, 2012. That lease had an attached Exhibit B with additional paragraphs intended to modify the base lease. Paragraph 7 of the lease attachment states:

7.) In no event can this lease be extended after the primary term for more than two (2) years in total without actual, physical production of oil or gas in paying quantities and sold. In the event Lessee claims a right to extend this lease beyond the primary term without actual physical production of oil or gas Lessee shall notify Lessor in writing of such intention and state the reasons for such delay and the provision or provisions of the lease that lessee claims entitle lessee to extend this lease.

Mr. Hixson asserts that Chesapeake failed to comply with Paragraph 7 in that, first, there has not been any actual production of oil or gas on the Lancaster Unit to date and, second, that Chesapeake did not notify Lessor Double K Cattle Ranch, LLC in writing that it claimed a right to extend the lease beyond the five year primary term. Based on this, Mr. Hixson believes the prior lease terminated on November 5, 2012. On July 1, 2013, Mr. Hixson purchased a Mineral Deed from Double K Cattle Ranch, LLC for the tract at 6613 Routt Street (Tract 228B on the Chesapeake plat). This tract lies on the wellbore path of Well No. 2H in the present application and Mr. Hixson has not leased the minerals to Chesapeake. It is, therefore, his belief that Chesapeake would be drilling through, and perforating beneath, an unleased tract if the Commission grants the Chesapeake application. Mr. Hixson does not believe the Commission has the authority to grant a well permit that allows trespass under an unleased tract.

Kenneth Meisner

As described in another Proposal for Decision regarding a different well<sup>1</sup> on the Lancaster Unit, Mr. Meisner believes that Chesapeake's actions have caused a cascading series of lease terminations. In regard to that well, Well No. 1H on the Lancaster Unit, Mr. Meisner believes that well was drilled (spudded on June 20, 2012) under an invalid permit that the Commission should never have granted due to the presence of unleased tracts lying directly on the wellpath. Those tracts had been leased by Chesapeake, but the leases had terminated prior to Chesapeake's permit application by foreclosures on those tracts. Mr. Meisner believes that Well No. 1H on the Lancaster Unit was illegally drilled and that an illegally drilled well has no subsequent effect in maintaining Chesapeake's leases past their primary term. Mr. Meisner further believes that Chesapeake's leases began to terminate in the latter half of 2012, when Chesapeake failed to pay for lease extensions.

Turning to the subject Well No. 2H, Mr. Meisner believes that Chesapeake's problems in permitting Well No. 1H in the Lancaster Unit have also affected Well No. 2H. Chesapeake's failure to drill a validly permitted well and failure to pay lease extension bonuses have resulted in the loss of the numerous leases within the Lancaster Unit. Many of those unleased tracts lie across the wellpath of Well No. 2H, thus blocking the well. In Mr. Meisner's opinion, those unleased tracts render Chesapeake's application for a permit for Well No. 2H invalid.

Mr. Meisner states, "The real issue at hand here is whether Chesapeake can commit mineral trespass over unleased properties with the knowledge and approval of the Railroad Commission in the permitting of any well. And a resolution of this should be a prerequisite to the consideration of any subsidiary Rule 37 exception case including this hearing process." (Transcript, Page 36, lines 5-11.) Mr. Meisner represents Teresa Preston, who sent the Commission a protest on March 27, 2013. Ms. Preston believes the lease on her property terminated on November 26, 2012 (Tract No. 540). Ms. Preston's tract, Tract No. 540, lies directly on the wellpath of Well No. 2H. Despite her attempted protest, Chesapeake was granted a permit for Well No. 2H on April 3, 2013.

Mr. Meisner also represents James Lancaster, who believes that the lease on his former property at 2945 Handley Drive (Chesapeake Tract No. 228C) expired on November 4, 2012. (Mr. Lancaster apparently owns Tracts 228A through 228E, and believes that all leases on those tracts have expired. The mineral estate under Tract 228B was sold to Mark Hixson, who is representing himself at the hearing, and Mr. Lancaster is apparently being represented by Mr. Meisner as to the remaining tracts.)

Mr. Meisner claims that Tract No. 311 is unleased and belongs to Robert Enloe. Mr. Meisner objects to the fact that a perforation zone was drawn adjacent to Mr. Enloe's unleased tract on an administrative basis when a Rule 37 case had not been heard on the merits. There is also a Tract No. NL 108 that appears to belong to a Mr. Burger, who Mr. Meisner alleges protested the grant of a

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<sup>1</sup> Rule 37 Case No. 0277186: Application of Chesapeake Operating, Inc. For a Rule 37 Exception for its Lancaster Lease, Well No. 1H, Newark East (Barnett Shale) Field, Tarrant County, Texas.

previous permit to no avail. (Chesapeake counters that protests by Mr. Enloe and Mr. Burger were not timely received, and once a person has had an opportunity to protest and does not do so, they do not need to be noticed again once a permit has been granted against their property).

Mr. Meisner hopes the Commissioners will consider this statement, which he read into the record:

We protest the attempted confiscation and taking of our mineral rights by Chesapeake in its application for an exception to Statewide spacing rule 3.37. We declare that this action constitutes and is tantamount to a reversed force pooling on the unleased properties lying within an envelope which describes a distance of 330 feet from the perforated well path. We consider this to involve the involuntary appropriation of our mineral rights. We ask that if this course is forced upon us by the decision of the Commission, we be granted, at the very least and at our choosing, the terms prescribed by the Commission for a combined royalty and working interest in the final order of the Finley Resources case dated August 25, 2008.

#### EXAMINERS' OPINION

Chesapeake's application to perforate the entire wellbore of its Well No. 2H on the Lancaster Unit is a typical application as to the technical merits of the case. The case is complicated by allegations that leases apparently terminated by foreclosure have caused previously granted permits to be null and void. There are also allegations that additional leases terminated when they reached the end of their primary terms and lease extensions were not obtained by Chesapeake.

#### I. Chesapeake's Technical Case

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.* To obtain an exception to Statewide Rule 37 to protect correlative rights and prevent confiscation, the applicant must show that 1.) it is not possible for the applicant to recover its fair share of minerals under its tract from regular locations; and 2.) that the proposed irregular location is reasonable.

The examiners are of the opinion that approval of the Statewide Rule 37 exception requested by Chesapeake is necessary to prevent confiscation and protect correlative rights. Chesapeake and its lessors are entitled to recover their fair share of gas from beneath the Lancaster Unit. "Fair share" is measured by the currently recoverable reserves beneath the leased acreage, which in this case is 43.275 BCF. The evidence shows that it is not feasible for Chesapeake to recover its fair share of gas from regular locations in the unit. Approximately 86.9% of the acreage within the Lancaster Unit is under lease to Chesapeake.

The Lancaster Unit Well No. 2H, at its full length of 4,119 feet, is projected to recover 4.103 BCF over its useful life. Absent removal of the NPZs in place under the current permit, Well No. 2H would have a wellbore lateral available for perforation only 679 feet in length, capable of recovering only 1.924 BCF of gas, leaving 2.179 BCF of gas unrecovered. The examiners find that 2.179 BCF of gas is a substantial quantity of hydrocarbons.

The issues raised by Mr. Hixson and Mr. Meisner, regarding the alleged confiscation of their mineral rights, may be remedied in four ways. First, they have the option of leasing their minerals to Chesapeake so that they may receive royalty payments for the recovery of their proportional share of the minerals in the Lancaster Unit. Second, they may resort to District Court for a determination whether the leases for one or more tracts traversed by the wellbore have expired. Third, they have the right to choose to lease to another operator or to seek a permit to drill their own wells on their mineral property. Although the practicality of this remedy is doubtful due to the small size of the protestant's tracts, it is a potentially available remedy under the law. Fourth, they may file for a Mineral Interest Pooling Act hearing at the Commission and attempt to force pool their tracts into the Lancaster Unit. The remedy proposed by Mr. Hixson and Mr. Meisner, that they be included in the unit as both royalty owners and working interest owners as per the Commission's Final Order dated August 25, 2008 in the Finley Resources case, is not available in this docket. The Finley Resources case was heard pursuant to the Mineral Interest Pooling Act, while the present case is a Statewide Rule 37 exception case.

The examiners find that the location of Well No. 2H is reasonable as a second well in the development of a unit that will ultimately require as many as five wells in a development pattern designed to recover Chesapeake's fair share of the gas in place beneath the Lancaster Unit. If the location of the Lancaster Unit Well No. 2H were moved to the southwest, it would interfere with the future placement and recovery of Well No. 4H. If the location of the Lancaster Unit Well No. 2H were moved to the northeast, it would interfere with the future placement and recovery of Well No. 3H. It is evident that Chesapeake must continue to lease tracts in the Lancaster Unit in order to clear a wellpath for proposed Well Nos. 4H, 3H and 5H (see **Exhibit II**), or file MIPA applications for those wells. The examiners find that Chesapeake has demonstrated a good faith claim to the leases on 86.9% of the acreage within the Lancaster Unit.

The examiners recommend that Chesapeake's application to perforate the entire lateral of its Well No. 2H on the Lancaster Unit be approved. Imposition of wellbore restrictions on Well No. 2H on the Lancaster Unit would result in the confiscation of the fair share of reserves attributable to Chesapeake and its lessors.

## II. Invalid Permits and Lease Terminations.

Mr. Hixson states that Chesapeake's well application was based on a fraud, in that Chesapeake never intended to complete a very short lateral as its Well No. 2H. It should be obvious that Chesapeake has intended from the beginning to complete a well of sufficient length to be economical. Chesapeake's first, second and third applications were simply part of a series intended to achieve that objective. Mr. Hixson cross-examined Chesapeake's Engineering witness, Melisa Condley on the subject:

- Q. (Hixson) So when they drilled this well - my question to you is: When they drilled this well, they understood that they had only 678 - without this Rule 37 relief, 679 feet, let's round up, of the well that they could legally perforate?
- A. (Condley) Yes, this well was drilled under a permit that allowed for 679 feet of lateral to be perfed.
- Q. So as a business decision, the economic knowledge of the cost of the well and all this analysis that you took on to how much gas could be taken out of this drainhole that they completed, that they permitted to drill, Chesapeake was aware of how much gas that they could gain out of that hole?
- A. Chesapeake drilled under the permit for the 2H which allowed for 679 feet.
- Q. In your opinion, would they have drilled the well without obtaining the total drainhole?
- A. Yes. We did drill the well before we obtained a permit for the entire -
- Q. But you're here asking for the entire drainhole to be allowed to you?
- A. Yes. I think that if we do not get a permit for the full length - full drainhole length there will be waste. And we need to protect the correlative rights of our lessors as well.

Transcript, Volume I, pages 129-130, lines 14-25 (page 129) and lines 1-13 (page 130).

Mr. Hixson next asserts that Chesapeake's lease on Tract No. 228B expired November 5, 2012 and that the mineral owner, Mr. James Lancaster, subsequently granted a Mineral Deed to Mr. Hixson on July 1, 2013. This assertion depends, in part, on Mr. Hixson's belief that Chesapeake's drilling and completion of Well No. 1H, spudded on June 20, 2012 and completed on July 1, 2012, was an illegal well that does not hold the leases in the Lancaster Unit past their primary terms. The assertion also depends on the interpretation of the terms of the November 5, 2007 lease from "Double K Cattle Ranch, LLC in Care of James K Lancaster" to Paloma Barnett, LLC. The lease states:

If, at the expiration of the primary term, Lessee is conducting operations for drilling, completing or reworking a well, this lease nevertheless shall continue as long as such operations are prosecuted or additional operations are commenced and prosecuted (whether on the same or successive wells) with no cessation of more than 90 days, and if production is discovered, this lease shall continue as long thereafter as oil or gas, are produced.....Drilling operations or mining operations shall be deemed to be commenced when the first material is placed on the leased premises whether or not the well or wells are located thereon.

Mr. Hixson asserts the lease has expired because Chesapeake did not adhere strictly to a lease addendum, labeled Exhibit B, which contains the following language:

7.) In no event can this lease be extended after the primary term for more than two (2) years in total without actual, physical production of oil or gas in paying quantities and sold. In the event Lessee claims a right to extend this lease beyond the primary term without actual physical production of oil or gas Lessee shall notify Lessor in writing of such intention and state the reasons for such delay and the provision or provisions of the

lease that lessee claims entitle lessee to extend this lease.

The first sentence of Paragraph 7 can be read to indicate the lease can be extended two years past the primary term, but it is limited by a modifier indicating that at some unspecified point, there must be production and sale of oil or gas. The second sentence indicates Lessee must notify Lessor in writing of lessee's intent to extend the lease beyond the primary term, the reasons for delay, and provisions of the lease entitling Lessee to extend the lease. It can be argued that the second sentence seems to be satisfied by reference back to the first page of the body of the lease, which states that continuous operations with no cessation of more than 90 days will continue the lease. The only part of paragraph 7 that does not seem to be satisfied is Lessee's obligation to contact lessor and point out the appropriate language extending the primary term. Whether a court would find the lease valid or terminated based on this language is a question that cannot be answered by the Commission, as it is not within the Commission's jurisdiction. The Commission can only determine whether or not the lease amounts to a "good faith claim", which is a low hurdle, as opposed to the more significant burden of determining lease termination, which can only be adjudicated by a District Court. There is no dispute that Chesapeake leased Tract No. 228B. There is only a dispute as to the possible termination of that lease.

No doubt Mr. Hixson is sincere in his belief that the Chesapeake lease on Tract No. 228B has terminated, but the Commission is not the correct jurisdictional body in which to raise matter. "Of course, the Railroad Commission should not do the useless thing of granting a permit to one who does not claim the property in good faith. The Commission should deny the permit if it does not reasonably appear to it that the applicant has a good-faith claim in the property. If the applicant makes a reasonably satisfactory showing of a good-faith claim of ownership in the property, the mere fact that another in good faith disputes his title is not alone sufficient to defeat his right to the permit; neither is it ground for suspending the permit or abating the statutory appeal pending settlement of the title controversy." *Magnolia Petroleum v. Railroad Commission*, 170 S.W.2d 189, 191 (Tex. 1943). (emphasis added)

Mr. Meisner raises questions similar to those raised by Mr. Hixson regarding lease terminations and the answer to his concerns is the same as in the paragraph above. His opinion that leases have terminated is "...not alone sufficient to defeat his (Chesapeake's) right to the permit..." *Magnolia*, id. Mr. Meisner believes that the permit granted to Chesapeake on May 15, 2012 for the Lancaster Unit Well No. 1H was invalid because the wellbore passed through tracts that had been previously foreclosed on, which terminated the leases on those tracts. Believing that well to have been illegally drilled, Mr. Meisner further presumes that the drilling of Well No. 1H failed to hold Chesapeake's leases in the Lancaster Unit at the end of their primary terms. As indicated above, this is a question that must be answered by a District Court, not the Commission, and the title dispute does not prevent the Commission from granting a permit to Chesapeake.

In the present hearing, Mr. Meisner stated, "The real issue at hand here is whether Chesapeake can commit mineral trespass over unleased properties with the knowledge and approval of the Railroad Commission." Transcript, page 36, lines 5 - 8. The flaws in that statement are twofold.

First, the Commission had no knowledge that there were unleased properties on the wellpath of the Lancaster Unit Well No. 1H at the time the permit was granted on May 15, 2012. The suggestion

that some tracts had suffered foreclosure, thus terminating the leases on those tracts, did not come to the attention of the Commission until Mr. Meisner and the tract owners he represents contacted the Commission by letters dated October 17, 2012 and November 29, 2012, several months after the permit had been granted and the well had been drilled and completed. The October 17, 2012 letter referred to a foreclosed tract by its street address, 2854 Milam Street. The plats submitted by Chesapeake to the Commission refer to tracts of land by tract numbers. The connection between street addresses and tract numbers was not apparent to the Commission. The November 29, 2012 letter also referred to allegedly foreclosed tracts by street address, being 6716 Norma Street and 2817 Milam Street. This letter had an attached plat which shaded in the tracts alleged to be foreclosed, making it possible to establish a connection between street addresses and Chesapeake's tract identifiers. It was later found that 2854 Milam corresponded to Tract No. 652, 6716 Norma to Tract No. 762 and 2817 Milam Street to Tract No. 1063. By this time, Chesapeake had leased these tracts again, providing it a good faith claim to the minerals in those tracts in subsequent applications.

Second, the Commission has no knowledge that Chesapeake is preparing to commit mineral trespass in the present hearing. It may be Mr. Meisner's sincere opinion that many of Chesapeake's leases have terminated, but Chesapeake has demonstrated that it has at least a good faith claim that the leases remain valid.

Mr. Meisner also raised an issue relating to Tract No. NL 311, owned by Robert and Christine Enloe, and Tract No. NL 108, owned by James and Nancy Burger. It appears Mr. Meisner objects to the approval of a perforated interval adjacent to these tracts. Chesapeake points out that both tracts were on the Service List in the Notice of Hearing that led to the grant of the May 17, 2013 permit for Well No. 2H which was restricted by NPZs. Neither the Burgers nor the Enloes protested prior to the grant of the NPZ-restricted permit.

### III. Recommendation

The examiners recommend that Chesapeake be granted an exception to Statewide Rule 37 for its Well No. 2H on the 549.249 leased acres of the 632.109-acre Lancaster Unit in Tarrant 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 Lancaster Unit, Well No. 2H, in the Newark, East (Barnett Shale) Field in Tarrant County.
3. On May 17, 2013, Chesapeake obtained a permit to drill Well No. 2H, at a Rule 37 location on

the 508.9 leased acres of the 604.075-acre Lancaster Unit, approved administratively with a 4,119 foot lateral and NPZs totaling 3,440 feet. The plat associated with that application is attached to this proposal for decision as Exhibit I, which is incorporated into this finding by reference.

4. On May 21, 2013, Chesapeake submitted an application to remove the NPZs totaling 3,440 feet from the lateral of its Well No. 2H on its Lancaster Unit (see **Exhibit I**).
5. A Rule 37 exception is needed for the proposed Lancaster Unit, Well No. 2H, because sections of the well proposed to be perforated are closer than 330 feet to the boundaries of certain tracts internal to the unit that are unleased.
6. 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.
7. The surface location of the Lancaster Unit, Well No. 2H is located on-unit. It is 156 feet from the south line and 442 feet from the east line of the lease and 805 feet from the south line and 1953 feet from the east line of the S.G. Jennings Survey, Abstract A-843. The proposed penetration point is 677 feet from the south line and 651 feet from the east line of the lease. The terminus is 1267 feet from the south line and 1502 feet from the west line of the lease and 1185 feet from the north line and 2104 feet from the west line of the S. G. Jennings Survey, A-843. The lateral runs on a SSE-NNW trend.
8. The Chesapeake application is opposed by Mark Hixson, representing himself and twelve tract owners, and Kenneth Meisner, representing thirty-six tract owners.
9. The Barnett Shale formation is present and productive under the entirety of the Lancaster Unit.
10. At the time of the hearing, the leased acreage in the Lancaster Unit had increased from 508.9 leased acres in a 604.075-acre unit to 549.249 leased acres in a 632.109-acre unit. The unit is 86.9 percent leased.
11. To establish the currently recoverable reserves under the 549.249 leased acres of the Lancaster Unit, Chesapeake used a volumetric calculation:
  - a. Available well logs in the vicinity of the Lancaster Unit indicate the thickness of

the Barnett Shale locally to be 340 feet.

- b. A study conducted by Devon Energy Production Co., LLP for the Tarrant/Denton/Wise County calculated original gas in place at 139 BCF per square mile in those counties, based on an average formation thickness of 433 feet, porosity of 0.04 and %TOC (Total Organic Carbon) of 4%. Using that study, and correcting for the thickness of the Newark, East (Barnett Shale) Field under the Lancaster Unit and the leased acreage, Chesapeake calculated the original gas in place in the 549.249 leased acres of the Lancaster Unit to be 93.669 BCF. Assuming a recovery factor of 46%, Chesapeake calculates there is 43.275 BCF of recoverable gas beneath the Lancaster Unit.
12. Chesapeake plotted drainhole length versus estimated ultimate recovery for 107 wells within a 4 mile radius of the applied-for well on a scatter diagram. Using the least squares regression method, Chesapeake derived a well recovery formula of “ $y = 0.6335x + 1494$ ”, with drainhole length represented by “x” and estimated EUR in MMCF represented by “y”. This indicates that each incremental foot of horizontal wellbore will recover an additional 0.633 MMCF of gas, while a purely vertical well would recover 1,494 MMCF.
13. The total usable length of the Well No. 2H drainhole, after removal of the 3440 feet of NPZs placed on the subject well under the permit granted on May 17, 2013, is 4,119 feet. Applying Chesapeake’s calculated well recovery formula, Well No. 2H will have an estimated ultimate recovery of 4.103 BCF of gas.
14. As permitted on May 17, 2013, Well No. 2H had 3440 feet of NPZs. Removal of the NPZs would result in the recovery of 2.179 BCF that would otherwise not be recoverable.
15. The amount of gas that would go unrecovered absent removal of the 3,440 feet of NPZs, 2.179 BCF, is a significant quantity of hydrocarbons.
16. The proposed location of the Lancaster Unit Well No. 2H is reasonable.
  - a. Based on 500 foot well spacing, the Lancaster Unit will accommodate five wells.
  - b. If the location of the Lancaster Unit Well No. 2H were moved to the southwest, it would interfere with the future placement and recovery of Well No. 4H. If the location of the Lancaster Unit Well No. 2H were moved to the northeast, it would interfere with the future placement and recovery of Well No. 3H.
17. Chesapeake’s previously permitted Well No. 1H on the Lancaster Unit will be 5964 feet long and it is estimated that it will recover 5.272 BCF of gas. The Well No. 2H on the Lancaster Unit will be 4119 feet long and it is estimated it will recover 4.103 BCF of gas. The two wells together will recover 9.375 BCF of gas, still much less than the 43.275 BCF of recoverable gas beneath the Lancaster Unit.

**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 proposed location of the Lancaster Unit, Well No. 2H, as proposed by Chesapeake Operating, Inc. is necessary to prevent confiscation and protect the correlative rights of the mineral owners.

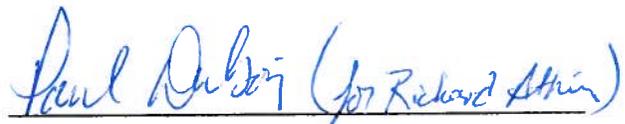
**RECOMMENDATION**

The examiners recommend that the application of Chesapeake Operating, Inc., for a Statewide Rule 37 exception for the proposed location of the Lancaster Unit, Well No. 2H in the Newark, East (Barnett Shale) Field, Tarrant County, be granted as necessary to prevent confiscation and protect correlative rights.

Respectfully submitted,



\_\_\_\_\_  
Marshall Enquist  
Hearings Examiner

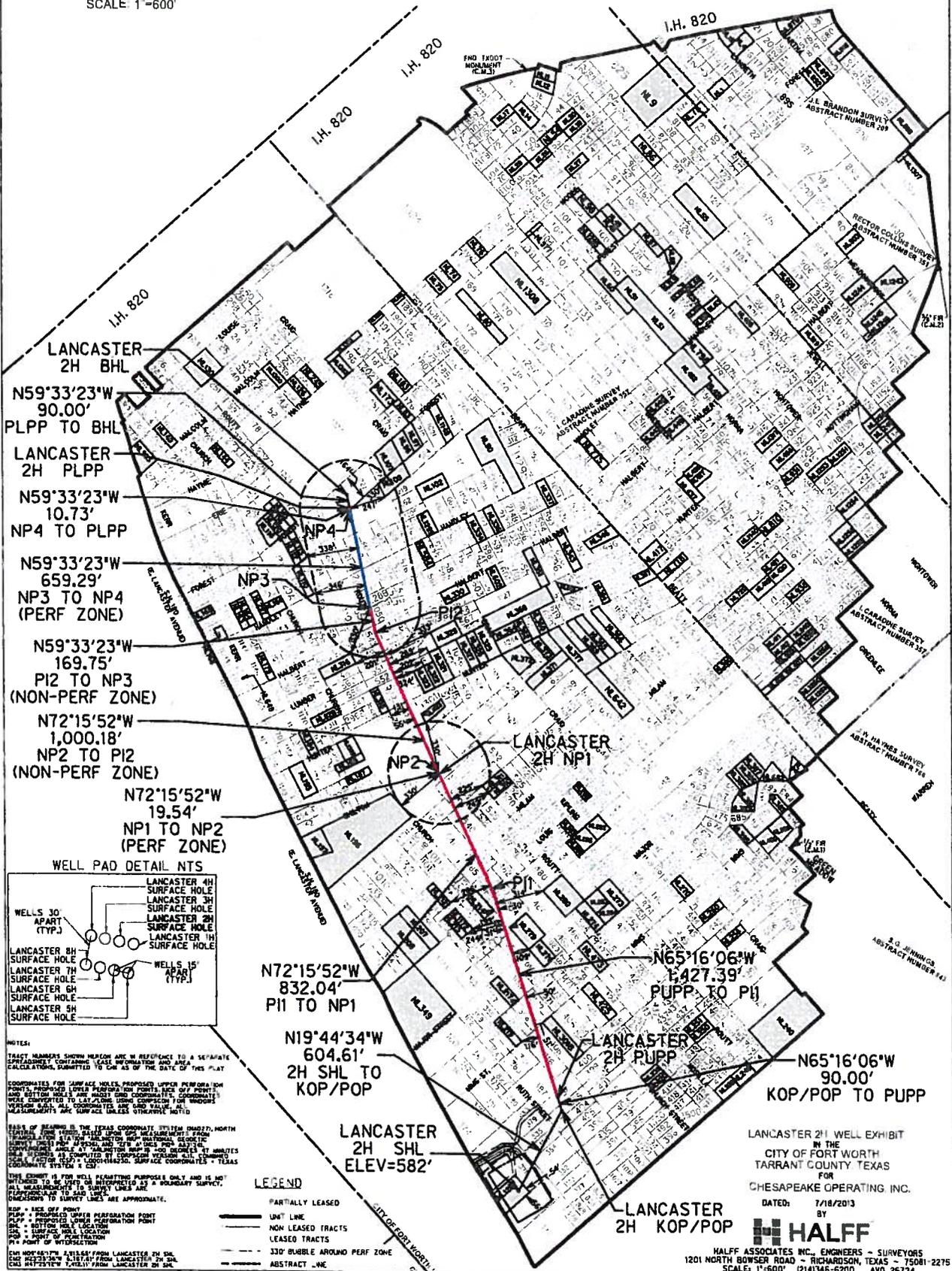


\_\_\_\_\_  
Richard Atkins  
Technical Examiner

# EXHIBIT I

## Rule 37 Case No. 0281891

TOTAL PERFORATED LENGTH	879.63
TOTAL NON-PERFORATED LENGTH	3,440.09
TOTAL LATERAL LENGTH	4,113.92
TOTAL LEASED ACREAGE	549.249
TOTAL NON-LEASED ACREAGE	82.860
TOTAL UNIT ACREAGE	632.109



LANCASTER 2H BHL  
 N59°33'23"W  
 90.00'  
 PLPP TO BHL

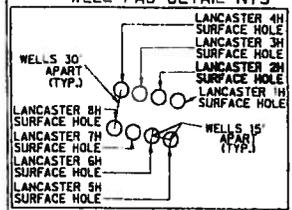
LANCASTER 2H PLPP  
 N59°33'23"W  
 10.73'  
 NP4 TO PLPP

N59°33'23"W  
 659.29'  
 NP3 TO NP4  
 (PERF ZONE)

N59°33'23"W  
 169.75'  
 PI2 TO NP3  
 (NON-PERF ZONE)

N72°15'52"W  
 1,000.18'  
 NP2 TO PI2  
 (NON-PERF ZONE)

N72°15'52"W  
 19.54'  
 NP1 TO NP2  
 (PERF ZONE)



NOTES:

TRACT BOUNDARIES SHOWN HEREON ARE IN REFERENCE TO A SEPARATE SURVEYMENT CONTAINING LEASE INFORMATION AND AREA CALCULATIONS, SUBMITTED TO US AS OF THE DATE OF THIS PLAN.

COORDINATES FOR SURFACE HOLES, PROPOSED UPPER PERFORATION POINTS, PROPOSED LOWER PERFORATION POINTS, KOP/POP AND BOTTOM HOLES ARE HORIZONTAL COORDINATES. COORDINATE SYSTEM CONVERSION TO LAT/LONG USING COMPASSION FOR HORIZONTAL VECTOR AND ALL COORDINATES ARE GRID WALL COORDINATES. ALL COORDINATE SYSTEMS ARE APPROXIMATE.

BASE OF BEARING IS THE TEXAS COORDINATE SYSTEM NORTH. NORTH VECTOR IS THE TEXAS COORDINATE SYSTEM NORTH VECTOR. THE COORDINATE SYSTEM IS THE TEXAS COORDINATE SYSTEM NORTH VECTOR. THE COORDINATE SYSTEM IS THE TEXAS COORDINATE SYSTEM NORTH VECTOR.

THE LOCATION OF THE WELL PERFORATION PURPOSE ONLY AND IS NOT INTENDED TO BE USED TO DETERMINE A PERMANENT SURVEY. PERMANENT SURVEY LINES ARE SHOWN IN RED AND PERFORATION TO SURVEY LINES ARE APPROXIMATE.

KOP = KICK OFF POINT  
 PLPP = PROPOSED UPPER PERFORATION POINT  
 PUPP = PROPOSED LOWER PERFORATION POINT  
 SHL = SURFACE HOLE LOCATION  
 SHL = SURFACE HOLE LOCATION

LANCASTER 2H SHL  
 ELEV=582'

LANCASTER 2H SHL TO KOP/POP  
 N19°44'34"W  
 604.61'

LANCASTER 2H PUPP  
 N65°16'06"W  
 1,427.39'

LANCASTER 2H PUPP TO PII  
 N65°16'06"W  
 90.00'

LANCASTER 2H PUPP TO KOP/POP  
 N65°16'06"W  
 90.00'

LEGEND

- PARTIALLY LEASED
- UNIT LINE
- NON-LEASED TRACTS
- LEASED TRACTS
- 330' BUBBLE AROUND PERF ZONE
- ABSTRACT - WC

LANCASTER 2H WELL EXHIBIT  
 IN THE  
 CITY OF FORT WORTH  
 TARRANT COUNTY TEXAS  
 FOR  
 CHESAPEAKE OPERATING, INC.  
 DATED: 7/18/2013  
 BY  
**HALFF**  
 HALFF ASSOCIATES INC., ENGINEERS - SURVEYORS  
 1201 NORTH BOWSER ROAD - RICHARDSON, TEXAS - 75081-2275  
 SCALE: 1"=600' (214346-6200) AVO. 26724

36

Exhibit No. 36  
 CHESAPEAKE OPERATING, INC.  
 Rule 37 Case No. 0281891  
 July 23, 2013

# EXHIBIT II Rule 37 Case No. 0281891



HWELL	DISTANCE	ZONE TYPE
BHL TO KOP	1,328.86'	-
KOP TO PLPP	95.00'	-
PLPP TO NP1	493.23'	NON-PERF ZONE
NP1 TO NP2	1.00'	PERF ZONE
NP2 TO NP3	801.91'	NON-PERF ZONE
NP3 TO NP4	355.62'	PERF ZONE
NP4 TO NP5	41.78'	NON-PERF ZONE
NP5 TO NP6	245.34'	PERF ZONE
NP5 TO P11	1,188.54'	NON-PERF ZONE
P11 TO P12	1,476.88'	NON-PERF ZONE
P12 TO P17	824.32'	NON-PERF ZONE
P17 TO NP8	332.90'	PERF ZONE
NP8 TO PLPP	180.00'	NON-PERF ZONE
PLPP TO BHL	90.00'	-

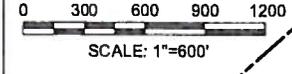
NP4 TO PLPP	12.72'	NON-PERF ZONE
PLPP TO BHL	90.00'	-

NP2 TO NP3	218.14'	PERF ZONE
NP3 TO P11	1,277.55'	NON-PERF ZONE
P11 TO PLPP	34.42'	NON-PERF ZONE
PLPP TO BHL	90.00'	-

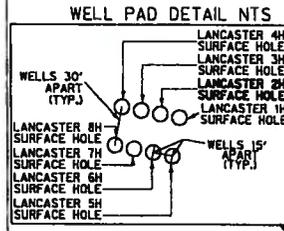
HWELL	DISTANCE	ZONE TYPE
BHL TO KOP	1,328.86'	-
KOP TO PLPP	95.00'	-
PLPP TO NP1	493.23'	NON-PERF ZONE
NP1 TO NP2	1.00'	PERF ZONE
NP2 TO NP3	801.91'	NON-PERF ZONE
NP3 TO NP4	355.62'	PERF ZONE
NP4 TO NP5	41.78'	NON-PERF ZONE
NP5 TO NP6	245.34'	PERF ZONE
NP5 TO P11	1,188.54'	NON-PERF ZONE
P11 TO P12	1,476.88'	NON-PERF ZONE
P12 TO P17	824.32'	NON-PERF ZONE
P17 TO NP8	332.90'	PERF ZONE
NP8 TO PLPP	180.00'	NON-PERF ZONE
PLPP TO BHL	90.00'	-

HWELL	DISTANCE	ZONE TYPE
BHL TO KOP	1,328.86'	-
KOP TO PLPP	95.00'	-
PLPP TO NP1	493.23'	NON-PERF ZONE
NP1 TO NP2	1.00'	PERF ZONE
NP2 TO NP3	801.91'	NON-PERF ZONE
NP3 TO NP4	355.62'	PERF ZONE
NP4 TO NP5	41.78'	NON-PERF ZONE
NP5 TO NP6	245.34'	PERF ZONE
NP5 TO P11	1,188.54'	NON-PERF ZONE
P11 TO P12	1,476.88'	NON-PERF ZONE
P12 TO P17	824.32'	NON-PERF ZONE
P17 TO NP8	332.90'	PERF ZONE
NP8 TO PLPP	180.00'	NON-PERF ZONE
PLPP TO BHL	90.00'	-

WELL	TOTAL PERFORATED LENGTH	TOTAL NON-PERFORATED LENGTH	TOTAL LATERAL LENGTH
1H	948.93'	5,014.66'	5,963.59'
2H	678.83'	3,440.09'	4,118.92'
3H	348.93'	7,056.59'	7,405.52'
4H	214.68'	3,930.04'	4,144.72'
5H	316.18'	6,214.86'	6,531.04'



TOTAL LEASED ACREAGE	549.249
TOTAL NON-LEASED ACREAGE	82.880
TOTAL UNIT ACREAGE	632.109



**NOTES:**

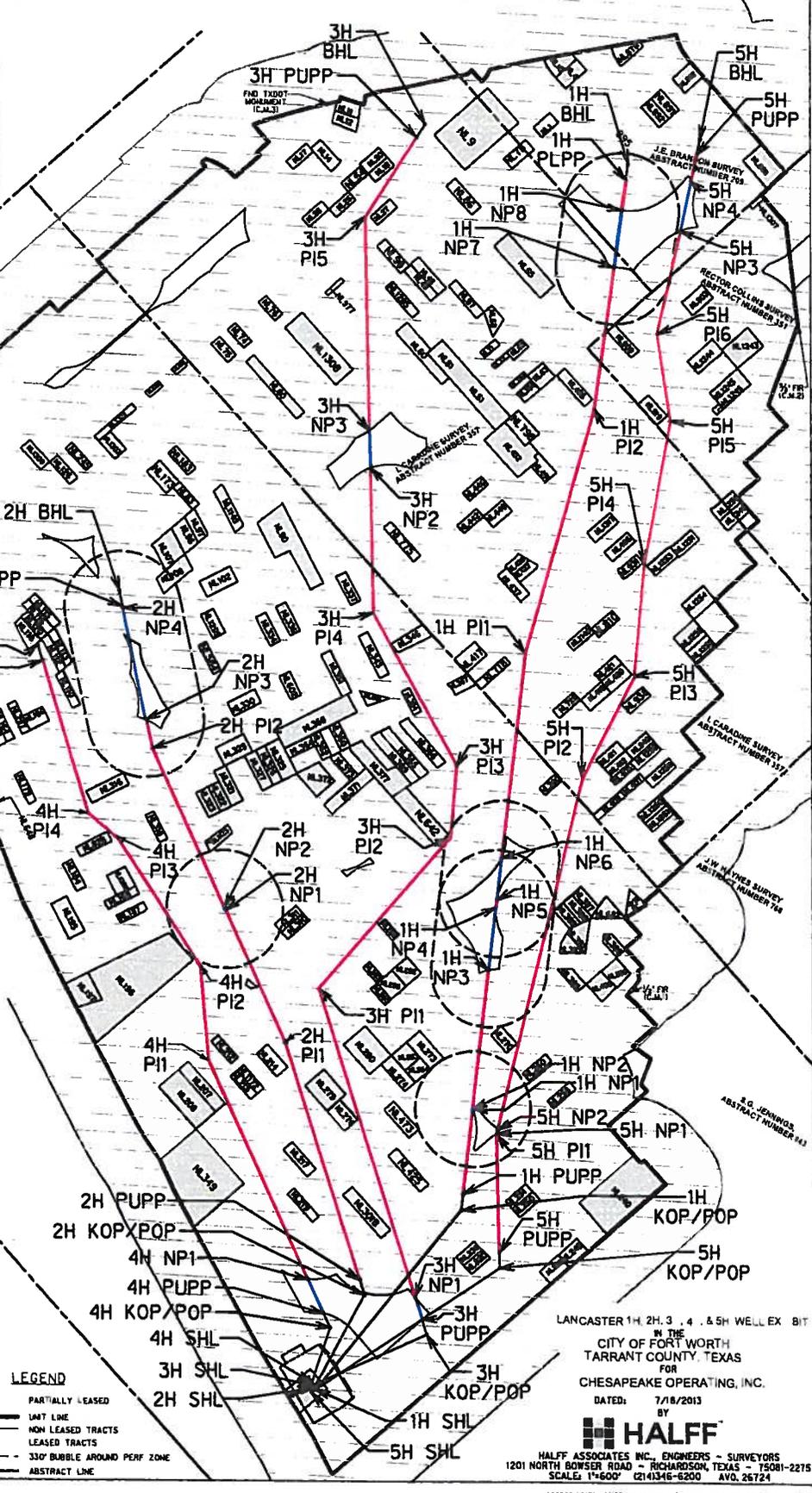
TRACT MEMBERS SHOWN HEREON ARE IN REFERENCE TO A SEPARATE SURVEY CONTAINED IN AN APPROPRIATE AND AVAILABLE PUBLIC RECORD. SUBMITTED TO ONE OF THE PARTS OF THIS PLAT.

COORDINATES FOR SURFACE HOLES, PROPOSED UPPER PERFORATION POINTS, PROPOSED LOWER PERFORATION POINTS, SIDE OFF POINTS, AND SECTION CORNERS ARE BASED ON THE 1983 NAD 83 DATUM. COORDINATES FOR SURFACE HOLES AND SECTION CORNERS ARE BASED ON THE 1983 NAD 83 DATUM. COORDINATES FOR PROPOSED UPPER PERFORATION POINTS AND PROPOSED LOWER PERFORATION POINTS ARE BASED ON THE 1983 NAD 83 DATUM. COORDINATES FOR SURFACE HOLES AND SECTION CORNERS ARE BASED ON THE 1983 NAD 83 DATUM. COORDINATES FOR PROPOSED UPPER PERFORATION POINTS AND PROPOSED LOWER PERFORATION POINTS ARE BASED ON THE 1983 NAD 83 DATUM.

THIS DOCUMENT IS FOR WELL PERMITTING PURPOSES ONLY AND IS NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE. IT DOES NOT CONSTITUTE AN OFFER OF ANY PRODUCT OR SERVICE. IT IS THE RESPONSIBILITY OF THE USER TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

**LEGEND**

- PARTIALLY LEASED
- LEASED TRACTS
- LEASED TRACTS
- 330' BUBBLE AROUND PERF ZONE
- ABSTRACT LINE



LANCASTER 1H, 2H, 3, 4, & 5H WELL EX BIT IN THE CITY OF FORT WORTH TARRANT COUNTY, TEXAS FOR CHESAPEAKE OPERATING, INC.

DATED: 7/18/2013 BY **HALFF**

HALFF ASSOCIATES INC., ENGINEERS - SURVEYORS  
1201 NORTH BOWSER ROAD - RICHARDSON, TEXAS - 75081-2275  
SCALE: 1"=600' (214346-6200) AVO. 26724

34

Exhibit No. 34  
CHESAPEAKE OPERATING, INC.  
Rule 37 Case No. 0281891  
July 23, 2013