



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

PROPOSAL FOR DECISION

OIL & GAS DOCKET NO. 09-0284751

APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE NORTH 7H MIPA UNIT, WELL NO. 7H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

OIL & GAS DOCKET NO. 09-0284752

APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE NORTH 8H MIPA UNIT, WELL NO. 8H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

OIL & GAS DOCKET NO. 09-0284753

APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE NORTH 9H MIPA UNIT, WELL NO. 9H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

OIL & GAS DOCKET NO. 09-0284754

APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE NORTH 10H MIPA UNIT, WELL NO. 10H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

APPEARANCES

FOR APPLICANT VANTAGE FORT WORTH ENERGY LLC:

John Hicks
Flip Whitworth
Matthew J. Montgomery
Worth Carlin
Rick Johnston

PROCEDURAL HISTORY

DATE APPLICATIONS FILED:	September 20, 2013
DATE OF NOTICE OF HEARING:	September 27, 2013
DATE OF HEARING:	October 31, 2013
HEARD BY:	Michael Crnich, Hearings Examiner Richard Atkins, Technical Examiner
DATE TRANSCRIPT RECEIVED:	January 14, 2014
DATE PFD CIRCULATED:	February 13, 2014

STATEMENT OF THE CASE

This Proposal for Decision addresses four applications filed by Vantage Fort Worth Energy LLC (“*Vantage*”) under the Texas Mineral Interest Pooling Act (the “*MIPA*”), Chapter 102 of the Texas Natural Resources Code. At the hearing, Vantage requested that the four separate docket numbers be consolidated for the purpose of the hearing record, and the examiners granted that request. By its applications, Vantage is requesting that the Commission enter an order creating four force-pooled units: the Rosedale North 7H MIPA Unit (the “*7H Unit*”) with its proposed Well No. 7H, the Rosedale North 8H MIPA Unit (the “*8H Unit*”) with its proposed Well No. 8H, the Rosedale North 9H MIPA Unit (the “*9H Unit*”) with its proposed Well No. 9H, and the Rosedale North 10H MIPA Unit (the “*10H Unit*”) with its proposed Well No. 10H. If the applications are approved, Vantage intends to drill the corresponding MIPA wells as horizontal wells in the Newark, East (Barnett Shale) Field in Tarrant County, Texas. After Vantage filed its applications, three unleased tract owners filed protests, one of which was subsequently withdrawn prior to hearing. No Protestants appeared at the hearing.

APPLICABLE LAW

The MIPA is a unique act forged by the legislature largely to protect small tract owners and operators in the wake of the *Normanna*¹ decision, which invalidated prorationing formulas with large per well allowable factors allowing substantial uncompensated drainage by wells on small tracts. Traditionally, the MIPA has been construed as limited in function to protect small tract lessees or owners rather than as a broad act designed to protect correlative rights generally, or as an act allowing large tract lessees or owners more flexibility in development. Smith and

¹ *Atlantic Ref. Co. v. R.R. Commn.*, 346 S.W.2d 801 (Tex. 1961).

Weaver, *Texas Law of Oil and Gas*, Vol. 3, Chapter 12, § 12.1(B) at page 12-5 (LexisNexis Matthew Bender 2013).

Subject to limitations found elsewhere in the act, Section 102.011 of the MIPA provides that when two or more separately owned tracts of land are embraced in a common reservoir of oil or gas for which the Commission has established the size and shape of proration units, whether by temporary or permanent field rules, and where there are separately owned interests in oil and gas within an existing or proposed proration unit in the common reservoir and the owners have not agreed to pool their interests, and where at least one of the owners of the right to drill has drilled or has proposed to drill a well on the existing or proposed proration unit to the common reservoir, the Commission, on the application of an owner specified in Section 102.012 of the act and for the purpose of avoiding the drilling of unnecessary wells, protecting correlative rights, or preventing waste, shall establish a unit and pool all of the interests in the unit within an area containing the approximate acreage of the proration unit, which unit shall in no event exceed 160 acres for an oil well or 640 acres for a gas well plus 10 percent tolerance.

DISCUSSION OF THE EVIDENCE

All four of the proposed MIPA units are located due east from downtown Fort Worth and immediately west of Lake Arlington. The proposed units adjoin one another. The proposed units for Well Nos. 7H, 8H, and 9H are located entirely within the boundaries of Vantage's Rosedale North Unit, which is the pooled unit that Vantage has designated in county records. The unit for Well No. 10H is almost entirely within the Rosedale North Unit, but the external boundary for the 10H Unit extends slightly outside the external boundary of the Rosedale North Unit. Vantage has acquired leases granting the right to develop this acreage located outside of the Rosedale North Unit but within the proposed 10H Unit. The Rosedale North Unit contains 464 acres, approximately 1,200 tracts, and one producing horizontal well, the No. 1H, at the far southern end of the unit. The surface location for the No. 1H and the proposed MIPA wells is a tract within the boundaries of the Rosedale North Unit.

The proposed 7H Unit contains 66.404 total acres and 307 separate tracts. At the time of hearing, Vantage had 290 tracts, containing 62.452 mineral acres and 94.05% of the total acreage, under lease. The proposed unit includes 17 unleased tracts, containing 3.952 acres and 5.95% of the total acreage.

The proposed 8H Unit contains 57.065 total acres and 252 separate tracts. At the time of hearing, Vantage had 241 tracts, containing 54.77 mineral acres and 95.98% of the total acreage, under lease. The proposed unit includes 11 unleased tracts, containing 2.295 acres and 4.02% of the total acreage.

The proposed 9H Unit contains 47.943 total acres and 240 separate tracts. At the time of hearing, Vantage had 234 tracts, containing 47.047 mineral acres and 98.13% of the total acreage, under lease. The proposed unit includes 6 unleased tracts, containing 0.896 acres and 1.87% of the total acreage.

The proposed 10H Unit contains 42.87 total acres and 110 separate tracts. At the time of hearing, Vantage had 108 tracts, containing 42.38 mineral acres and 98.86% of the total acreage, under lease. The proposed unit includes 2 unleased tracts, containing 0.49 acres and 1.14% of the total acreage.

The Voluntary Pooling Offer

On September 30, 2013, Vantage Energy sent a voluntary pooling offer to all owners of unleased tracts within the boundaries of the proposed units. Vantage Energy offered these unleased owners four options for inclusion of their interests in the respective proposed units: two lease options, a working-interest participation option, and a farm-out option.

The first lease option included a 25% royalty and a bonus offer of \$3,000 per net mineral acre. The oil, gas, and mineral lease attached to the offer letter had a primary term of three years and provided that Vantage was authorized to pool the tract owner's mineral interest into a pooled unit.

The second lease option included a 20% royalty and a bonus offer of \$3,500 per net mineral acre. Except for the different royalty and bonus amounts, this second lease option was identical to the first lease option.

The participation option provided each unleased owner an opportunity to participate as a working interest owner in the respective proposed unit. By electing this option, the owner would be responsible for his or her proportionate share of the costs of drilling and completing the well or wells in the unit and would share proportionately in the production from the well. Each offer letter had as an attachment an AFE (Authorization for Expenditure) indicating the estimated cost to complete and drill the relevant well. The estimated cost for Well No. 7H was \$4,952,300; for the 8H, \$4,098,202; for the 9H, \$4,129,400; and for the 10H, \$4,202,000. This option mandated that if the owner failed to fully pay his or her proportionate share of costs to Vantage within 15 days prior to commencement of actual drilling operations, then the owner would be subject to the non-consent penalties set forth in the standard Joint Operating Agreement (the "JOA") proposed by Vantage. Vantage represented to each owner that the proposed JOA would not contain any of the following: (1) a preferential right of the operator to purchase mineral interests in the unit; (2) a call on or option to purchase production from the unit; (3) operating charges that may include any part of district or central office expenses other than reasonable overhead charges; or (4) a prohibition against non-operators questioning the operation of the unit.

The farm-out option proposed to each unleased owner that he or she convey to Vantage an 80% net revenue interest attributable to his or her mineral interest and retain an overriding royalty interest equal to 20% of 8/8ths, proportionately reduced to the extent that each owner's mineral interest bears to all of the mineral interests in the unit, until payout of all well costs (to drill, test, fracture stimulate, complete, equip, and connect the well for production). At payout, the electing owner would have the option to convert the retained override to a 25% working interest, proportionately reduced.

In response to Vantage's voluntary pooling offer, a total of 16 unleased owners, throughout the four proposed units, accepted one of the options. Of these 16, one chose to participate as a working interest owner, and 15 chose one of the lease options. One unleased owner from the 8H Unit and one unleased owner from the 9H Unit affirmatively protested. The owners of 24 unleased tracts (10 from the 7H Unit, 6 from the 8H Unit, 6 from the 9H Unit, and 2 from the 10H Unit) received Vantage's offer but did not respond in any way to the offer. Vantage sent each of the offer letters via certified mail and, therefore, received signed certified-mail receipts for those unleased owners who accepted the mail. Vantage attempted to find an address for each unleased owner by searching deed records in Tarrant County, probate records, birth certificates, marriage records, and various online databases and subscription services. Despite this effort to obtain current addresses, Vantage was unable to locate a valid address for 10 unleased owners (6 from the 7H Unit and 4 from the 8H Unit).

Vantage believed that the lease terms included in its voluntary offer were fair and reasonable. Mr. Matthew Montgomery, Vantage's expert witness in the field of petroleum land management, testified that Vantage has been successfully signing leases on the same terms (\$3,000 per-acre bonus with a 25% royalty or \$3,500 per-acre bonus with a 20% royalty) since Spring 2012. The lease form attached to the offer letter was the same lease form that Vantage has used with the overwhelming number of lessors in the area, including the Rosedale North Unit. Montgomery considered Vantage's leasing terms competitive and consistent with the current market for Barnett Shale leases. He noted that the City of Fort Worth, whom he characterized as being abreast of current market conditions as one the largest mineral owners in Tarrant County, recently entered into the 25% royalty lease for a seven-acre tract within one of the proposed MIPA units. Montgomery explained that despite competition from Quicksilver Resources and Chesapeake Energy, Vantage has been able to acquire leases in the Rosedale North area.

Estimated Recovery of MIPA Wells

Vantage's expert petroleum engineering witness, Mr. Rick Johnston, prepared a model to predict recovery from Barnett Shale wells with varying drainhole length. Johnston first presented a map showing Barnett Shale wells within a five-mile radius of the terminus point of the Rosedale North Unit No. 1H. Within this five-mile radius, Johnston found 353 wells for which there was adequate production data to consider them as a data point. He calculated the estimated ultimate recoveries (the "EUR's") by decline curve analysis and the estimated lateral drainhole length for these 353 wells. Using the EUR as the y-coordinate and the estimated drainhole length as the x-coordinate, he then created a scatter plot of the data points. A computer-generated least-squares regression of the plotted data points resulted in a line through the points with a positive slope of 0.3965 and a y-intercept of 863.76. The inference of this resulting equation is that an average well within the five-mile radius will recover 0.3965 MMCF of gas for each incremental foot of drainhole length.

Johnston performed a volumetric calculation of gas in place beneath the four MIPA units. Relying on two cross-sections, he was confident that the Barnett Shale is approximately 330 feet thick throughout the MIPA units. Volumetric data introduced by Devon Energy at the 2005 field rules hearing indicated that original gas in place was 139 BCF per square mile (640 acres) where

the average thickness of the Barnett Shale was 433 feet. Accounting for 330 feet thickness and a recovery factor of 40 percent, Johnston was able to calculate the volume of recoverable gas beneath each MIPA unit.

With 62.452 leased acres, the 7H Unit has, according to Devon's data, 4.1 BCF of recoverable gas beneath the leased acreage. The No. 7H Well has a proposed drainhole length of 6,151 feet. Using this length, the equation derived from the least-squares regression predicts that the No. 7H will have an EUR of 3.3 BCF.

With 54.77 leased acres, the 8H Unit has, according to Devon's data, 3.6 BCF of recoverable gas beneath the leased acreage. The No. 8H Well has a proposed drainhole length of 5,064 feet. Using this length, the equation predicts that the No. 8H will have an EUR of 2.87 BCF.

With 47.047 leased acres, the 9H Unit has, according to Devon's data, 3.1 BCF of recoverable gas beneath the leased acreage. The No. 9H Well has a proposed drainhole length of 4,088 feet. Using this length, the equation predicts that the No. 9H will have an EUR of 2.48 BCF.

With 42.38 leased acres, the 10H Unit has, according to Devon's data, 2.8 BCF of recoverable gas beneath the leased acreage. The No. 10H Well has a proposed drainhole length of 3,277 feet. Using this length, the equation predicts that the No. 10H will have an EUR of 2.16 BCF.

Based on these predicted EUR's, Johnston testified that he believes the MIPA wells will efficiently and fully drain the entirety of their respective units. The EUR equation predicts what an average well within the entire five-mile radius will recover, and Johnston expects the MIPA wells to perform better than average because they are located in a relatively high-performing area of the Barnett Shale. He presented a map of the five-mile radius of review in which all wells having an EUR greater than 1.7 BCF were denoted with a blue dot. Almost all of the wells immediately to the east of the MIPA units, underneath Lake Arlington, had blue dots. These wells are some of the better-performing ones within the five-mile radius. Johnston thus expects the MIPA wells to have an EUR slightly higher than what the equation predicts. This expectation further supports his conclusion that each MIPA well will fully drain its respective MIPA unit.

Vantage's ideal development plan for the Rosedale North Unit is ultimately to drill 10 wells. The No. 1H has been drilled as the southernmost well on the Rosedale North Unit. Vantage's Well No. 21H has been drilled to the north, and outside, of the Rosedale North Unit. Vantage has proposed to space the four MIPA wells – and hopefully in the future Wells 2H through 6H – roughly 375 feet apart from one another. Vantage believes that this between-well spacing will result in the maximum recovery of the Barnett Shale gas reserves beneath each proposed unit and will allow the proposed wells to efficiently and effectively drain the entirety of the proposed units. This belief is based on Vantage's experience operating wells in the area, particularly to the east underneath Lake Arlington.

Risk Penalty

Vantage believes that there still exists a certain amount of risk that drilling a Barnett Shale well in the area of the MIPA units will be uneconomic, meaning the well will not recover the cost of drilling and completing the well. Using a cost of drilling and completing equal to roughly \$4 million and a gas price of \$3 per MCF, Johnston calculated that the break-even recovery point, at which this cost would be recouped, was roughly 1.7 BCF. Of the 353 wells studied within the five-mile radius, 176 have an EUR less than 1.7 BCF. Assuming that these wells cost roughly \$4 million, they would be uneconomic wells.

Vantage requested that the Commission's forced-pooling order include a 100% risk penalty attached to the working-interest component. Vantage argued that the overriding purpose of the MIPA is to encourage voluntary pooling. According to Vantage, without imposition of a risk penalty, unleased small-tract owners would be encouraged to refrain from voluntarily leasing and negotiating so that they might benefit from forced pooling. Vantage believes this result would be contrary to the purpose of the statute.

EXAMINERS' OPINION

Under the MIPA, the Commission may order compulsory pooling only if it is necessary to avoid the drilling of unnecessary wells, protect correlative rights, or prevent waste. Smith & Weaver, *Texas Law of Oil and Gas*, Chapter 12, § 12.3[A][6] at page 12-23. The evidence in this proceeding demonstrates that compulsory pooling is necessary to protect correlative rights.

Proposed MIPA Wells 7H, 8H, and 10H are wells that because of the locations of the unleased tracts within the respective proposed units, could not be drilled without compulsory pooling. Well 7H would cross five unleased tracts; Well 8H would cross three unleased tracts; and Well 10H would cross two unleased tracts. Vantage will not – and cannot – drill these wells, as proposed, unless compulsory pooling is ordered because of the impracticality, if not impossibility, of drilling around the unleased tracts. Therefore, in the absence of compulsory pooling, each mineral interest owner within these proposed units would not be afforded a reasonable opportunity to recover his fair share of hydrocarbons.

Proposed Well 9H could hypothetically be drilled without compulsory pooling because it would not traverse any unleased tracts despite coming close to several unleased tracts. If Vantage obtained a Rule 37 exception permit allowing the completed drainhole to be located at its proposed location, then it would be able to drill the well without compulsory pooling. Prior to the XTO *Wesco A1* MIPA case¹, the Commission had determined that compulsory pooling may not be ordered if the applicant has the ability to drill a well at a Rule 37 location on a voluntarily-formed unit that would serve the statutory purposes of the MIPA just as well as proposed MIPA well². In the *Wesco A1* case, the Commission (by a 2-1 vote) approved the application in which

¹ Oil & Gas Docket No. 09-0273417; *Application of XTO Energy, Inc. Pursuant to the Mineral Interest Pooling Act for the Proposed Page Street D1 Pooled Unit, Well No. 11H, Newark, East (Barnett Shale) Field, Tarrant County, Texas* (Final Order signed May 7, 2013).

² See Oil & Gas Docket No. 09-0260202; *Application of XTO Energy, Inc. for Creation of A Force Pooled Unit Pursuant to the Mineral Interest Pooling Act for the Texas Steel "A" Unit, Well No. 1H, Newark, East (Barnett Shale) Field, Tarrant County*.

the proposed well could have been drilled as a Rule 37 well. Based on the *Wesco AI* precedent, the examiners believe that the application for proposed Well 9H should not be denied solely on the basis that the well could be drilled with the benefit of a Rule 37 exception and without compulsory pooling. Approval of the 9H application would protect correlative rights by giving each mineral interest owner, including those owning an unleased tract located within 330 feet of the drainhole, a reasonable opportunity to recover his fair share of hydrocarbons.

Vantage's proposed compulsory pooling will protect correlative rights because the proposed wells will efficiently and effectively drain the proposed units. Forced pooling as proposed by Vantage, wherein the proposed well will drain the entire proposed unit, protects correlative rights because each tract owner, whether leased or unleased, will have his fair share of hydrocarbons produced. In contrast, forced pooling of tracts that will not be drained will not protect correlative rights because whatever reserves exist under those undrained tracts would remain unrecovered regardless of the drilling of the proposed MIPA well.¹ Vantage has undoubtedly learned from previous MIPA applications involving the Barnett Shale, and as a result, its applications do not suffer from this infirmity.

Furthermore, the wells and units proposed by Vantage would allow the Commission to fashion an order in compliance Section 102.017 of the MIPA, which requires that a compulsory pooling order be made on terms that are fair and reasonable and will afford the owner of each tract in the unit the opportunity to produce or receive his fair share. As all tracts within the proposed units would be drained by their respective wells, the owners of each tract would realize the opportunity to produce or receive their fair share. On the other hand, forced pooling of tracts that will not be drained – and thus will not contribute anything to total production – into a proposed unit would serve to dilute the interests of owners of tracts that would be contributing to production. With respect to Vantage's applications, each tract will contribute to the well's production; therefore, the Commission can rightfully avoid an order that gives to owners of non-producing tracts a portion of the fair share contributed by the owners of producing tracts.

The examiners believe that Vantage's voluntary pooling offer was fair and reasonable. Its offer followed the framework – providing a lease, participation, and farm-out option – that the Commission has determined to be fair and reasonable in other approved MIPA applications for the Barnett Shale. The one different element is that while the previously-approved offers gave unleased owners only one lease option to accept, Vantage offered two lease options involving a trade-off between lease bonus and royalty amounts. Assuming that the two offered lease options were comparable to one another and fair and reasonable, which the examiners believe they were, Vantage's offer appears even more flexible than the offers that provided only one lease option.

Texas (Final Order served February 10, 2010) wherein a MIPA application was denied based, in part, on Finding of Fact No. 22 to the effect that with a Rule 37 exception, and without compulsory pooling, a horizontal well could be drilled on a voluntarily pooled unit with drainhole length in excess of the proposed MIPA well. A similar finding was adopted in the Final Order served February 10, 2010, in Oil & Gas Docket No. 09-0261248; *Application of XTO Energy, Inc. Pursuant to the Mineral Interest Pooling Act for the Proposed Texas Steel "B" Pooled Unit, Newark, East (Barnett Shale) Field, Tarrant County, Texas* (Motion for Rehearing granted for the purpose of permitting applicant to withdraw application).

¹ Smith and Weaver comment that "if an additional well is necessary to drain the acreage sought to be forcibly pooled, then pooling should also be denied because the pooling would not avoid the drilling of unnecessary wells, prevent waste, or protect correlative rights." *Texas Law of Oil and Gas*, Vol. 3, Chapter 12, § 12.3[A][6] at pages 12-23 to 12-24.

Vantage has requested that a 100% risk penalty be assessed to the working interest portion of the force-pooling basis. The examiners believe that imposition of such a risk penalty based on the facts of this case is not fair and reasonable, as is required by Section 102.017 of the MIPA.

First, Commission precedent has been to not assess a risk penalty against unleased owners who are being forcibly pooled. The working-interest portion of the force-pooled basis has been subjected to a zero risk penalty in all of the MIPA applications starting with *Finley* that the Commission has approved.¹

Second, to support its position that there is an economic risk involved in drilling Barnett Shale wells in the area, Vantage demonstrated that if a well costs \$4 million to drill and complete, then 176 of 353 (about 50%) of the wells in the five-mile area would not recover their costs. However, this does not mean that only half of the 353 wells will be economic. To know or establish this, the actual costs of each well would have to be compared to the EUR for each well. For instance, at least four of the wells that this model characterizes as uneconomic are vertical wells, which likely had a cost to drill and complete of significantly less than \$4 million and thus have a break-even production point of less than 1.7 BCF. In addition, this calculation assumes a \$3 per MCF price for gas throughout the life of the well; it is highly unlikely that the price will remain at this level for the life of the well.

Third, even if it is assumed that 176 of the 353 wells drilled in the five-mile area will not recover their costs, a 100% risk penalty is not justified, especially not in close proximity to the Rosedale North Unit. Vantage's evidence shows that the Barnett Shale is productive and of consistent thickness beneath the acreage of the proposed MIPA units. According to Vantage's predictive model for EUR's, all of the proposed MIPA wells will have EUR's (3.3 BCF for the 7H; 2.87 BCF for the 8H; 2.98 BCF for the 9H; and 2.16 for the 10H) in excess of 1.7 BCF – the break-even production amount. Furthermore, based on the positive performance of wells nearby the Rosedale North Unit, Vantage reasonably expects the MIPA wells to have EUR's greater than those predicted by the equation, which predicts the yield of an average well. The reasonable expectation based on the evidence is that all of the MIPA wells will be economic. It does not appear that there is any risk, other than the normal risk associated with drilling a horizontal well in the Barnett Shale, involved in drilling the proposed MIPA wells. There is certainly insufficient evidence to justify the imposition of a 100% risk penalty on individual tract owners being "forced" to participate in the venture.

Another reason that imposition of 100% risk penalty would not be fair and reasonable is that it would effectively negate the 3/4th working-interest component of the force-pooling basis. In order for a force-pooled unleased owner to eventually receive any payout from a 3/4th working interest subject to a 100% risk penalty, the relevant MIPA well would have to recover

¹ The Commission has approved compulsory pooling in the Barnett Shale in the following dockets: Oil & Gas Docket No. 09-0252373, *Application of Finley Resources Inc. for the Formation of a Unit Pursuant to the Mineral Interest Pooling Act for the Proposed East Side Unit*; Oil & Gas Docket No. 09-0261375, *Application of XTO Energy Inc. Pursuant to the Mineral Interest Pooling Act for the Proposed Rosen Heights 262-Acre Pooled Unit, Well No. 1H*; Oil & Gas Docket No. 09-023416, *Application of XTO Energy Inc. Pursuant to the Mineral Interest Pooling Act for the Proposed Wesco A1 Pooled Unit, Well No. 10H*; Oil & Gas Docket No. 09-023417, *Application of XTO Energy Inc. Pursuant to the Mineral Interest Pooling Act for the Proposed Page Street D1 Pooled Unit, Well No. 11H*.

greater than 3.4 BCF. According to Vantage's model, none of the wells, if they perform averagely, would reach this point. In that situation, the force-pooled owner would receive only a royalty payment because his working interest would never pay out. Also, because the force-pooled unleased owner would not receive a lease bonus, he would receive significantly less than the force-pooled leased owner. Vantage does expect the MIPA wells to perform above-average, so some of the wells (at least the 7H and 9H, which have higher EUR's) might be expected to produce over 3.4 BCF. But, even if these wells moderately eclipsed the 3.4 BCF mark, it's not clear that the 3/4th working interest of a small tract owner would result in any significant benefit after the 100% penalty is paid out of production.

Based on the record in this case, the examiners recommend adoption of the following Findings of Fact and Conclusions of Law.

FINDINGS OF FACT

1. Notice of the hearing was mailed to all interested parties at mailing addresses provided by the Applicant, Vantage Fort Worth Energy ("*Vantage*"), at least 30 days prior to the hearing date.
2. Notice of the hearing was published in the Commercial Recorder on September 27, October 4, October 11, and October 18, 2013.
3. Appendix 1 to this proposal for decision, incorporated into this finding by reference, is a surveyed plat for the Rosedale North Unit (Vantage Exhibit No. 3), which also shows the external boundaries of the four proposed MIPA units, the proposed paths of the MIPA wells, and the unleased tracts within the Rosedale North Unit.
4. Appendix 2 to this proposal for decision, incorporated into this finding by reference, is a surveyed plat (Vantage Exhibit No. 11A) for the proposed Rosedale North 7H MIPA Unit (the "*7H Unit*") showing the proposed wellbore path of Well 7H and the unleased and partially-leased tracts within the 7H Unit.
5. Appendix 3 to this proposal for decision, incorporated into this finding by reference, is a surveyed plat (Vantage Exhibit No. 11B) for the proposed Rosedale North 8H MIPA Unit (the "*8H Unit*") showing the proposed wellbore path of Well 8H and the unleased and partially-leased tracts within the 8H Unit.
6. Appendix 4 to this proposal for decision, incorporated into this finding by reference, is a surveyed plat (Vantage Exhibit No. 11C) for the proposed Rosedale North 9H MIPA Unit (the "*9H Unit*") showing the proposed wellbore path of Well 9H and the unleased and partially-leased tracts within the 9H Unit.
7. Appendix 5 to this proposal for decision, incorporated into this finding by reference, is a surveyed plat (Vantage Exhibit No. 11D) for the proposed Rosedale North 10H MIPA Unit (the "*10H Unit*") showing the proposed wellbore path of Well 10H and the unleased tracts within the 10H Unit.

8. No person appeared at the hearing in opposition to Vantage's applications.
9. The Newark, East (Barnett Shale) Field was discovered on October 15, 1981. This field has special field rules providing for 330-foot lease-line spacing, and there is no between-well spacing requirement. 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 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.
10. The standard drilling and proration unit for the Newark, East (Barnett Shale) is 320 acres. An operator is permitted to form optional drilling units of 20 acres.
11. The four MIPA units are located within the city of Fort Worth and to the east of downtown.
12. On September 30, 2013 Vantage sent a voluntary pooling offer to all owners of unleased tracts within the boundaries of the proposed MIPA units. The unleased owners were offered four options for inclusion of their interests in the proposed units: two lease options, a working-interest participation option, and a farm-out option.
 - a. The first lease option included a 25% royalty and a bonus offer of \$3,000 per net mineral acre. The oil, gas, and mineral lease attached to the offer letter had a primary term of three years and provided that Vantage was authorized to pool the tract owner's mineral interest into a pooled unit.
 - b. The second lease option included a 20% royalty and a bonus offer of \$3,500 per net mineral acre. Except for the different royalty and bonus amounts, this second lease option was identical to the first lease option.
 - c. The participation option provided each unleased owner an opportunity to participate as a working interest owner in the respective proposed unit. By electing this option, the owner would be responsible for his or her proportionate share of the costs of drilling and completing the well or wells in the unit and would share proportionately in the production from the well. Each offer letter had as an attachment an AFE (Authorization for Expenditure) indicating the estimated cost to complete and drill the relevant well. The estimated cost for Well No. 7H was \$4,952,300; for the 8H, \$4,098,202; for the 9H, \$4,129,400; and for the 10H, \$4,202,000. This option mandated that if the owner failed to fully pay his or her proportionate share of costs to Vantage within 15 days prior to commencement of actual drilling operations, then the owner would be subject to the non-consent penalties set forth in the standard Joint Operating Agreement (the "JOA") proposed by Vantage. Vantage represented to each owner that the proposed JOA

would not contain any of the following: (1) a preferential right of the operator to purchase mineral interests in the unit; (2) a call on or option to purchase production from the unit; (3) operating charges that may include any part of district or central office expenses other than reasonable overhead charges; or (4) a prohibition against non-operators questioning the operation of the unit.

- d. The farm-out option proposed to each unleased owner that he or she convey to Vantage an 80% net revenue interest attributable to his or her mineral interest and retain an overriding royalty interest equal to 20% of 8/8ths, proportionately reduced to the extent that each owner's mineral interest bears to all of the mineral interests in the unit, until payout of all well costs (to drill, test, fracture stimulate, complete, equip, and connect the well for production). At payout, the electing owner would have the option to convert the retained override to a 25% working interest, proportionately reduced.
 - e. In response to Vantage's voluntary pooling offer, 16 unleased owners, throughout the four proposed units, accepted one of the options. Of these 16, one chose to participate as a working interest owner, and 15 chose one of the lease options.
 - f. The owners of 24 unleased tracts (10 from the 7H Unit, 6 from the 8H Unit, 6 from the 9H Unit, and 2 from the 10H Unit) received Vantage's voluntary pooling offer but did not respond in any way.
 - g. Vantage could not locate 10 unleased owners (6 from the 7H Unit and 4 from the 8H Unit).
 - h. The lease bonus and royalty amounts included in Vantage's voluntary pooling offer are the same as those on which Vantage has been signing leases since Spring 2012.
 - i. The lease form included in the voluntary pooling offer is the same form that Vantage entered into with the majority of lessors in the Rosedale North Unit and the surrounding area.
 - j. In the area of the Rosedale North Unit, Vantage has faced competition as a lessee from Chesapeake Energy and Quicksilver Resources.
 - k. The City of Worth accepted Vantage's offer to enter into a lease with a \$3,000 per-acre bonus and a 25% royalty.
13. The Barnett Shale is present and reasonably productive in the area of the proposed units.
14. The tracts within each proposed MIPA unit are embraced in the Newark, East (Barnett Shale) Field, a common reservoir of oil or gas for which the Commission has established the size and shape of proration units.
15. Vantage estimated the volumetrically-calculated gas in place beneath the leased acreage within four proposed units. Using a 40 percent recovery factor, Vantage calculated that

the recoverable gas in place beneath the leased acreage of the 7H Unit is 4.1 BCF; the 8H Unit is 3.6 BCF; the 9H Unit is 3.1 BCF; and the 10H Unit is 2.8 BCF.

16. Vantage created a scatter plot of the estimated ultimate recoveries (the “EUR’s”) versus the estimated drainhole length for 353 Barnett Shale wells within five miles of the Rosedale North Unit Well No. 1H. A computer-generated least-squares regression of the data points on the plot resulted in a line with a positive slope of 0.3965 and a y-intercept of 863.76. Vantage inferred that the equation for this line means that an average well in the area will recover 863.76 MMCF of gas plus an additional 0.3965 MMCF for each incremental foot of drainhole length.
 - a. The proposed length of Well No. 7H is 6,151 feet. Based on this length, the equation predicts an EUR of 3.3 BCF.
 - b. The proposed length of Well No. 8H is 5,064 feet. Based on this length, the equation predicts an EUR of 2.87 BCF.
 - c. The proposed length of Well No. 9H is 4,088 feet. Based on this length, the equation predicts an EUR of 2.48 BCF.
 - d. The proposed length of Well No. 10H is 3,277 feet. Based on this length, the equation predicts an EUR of 2.16 BCF.
17. The owners of unleased or non-participating tracts within the proposed units have not agreed to lease to Vantage or accept any other aspect of Vantage’s voluntary offer to pool their interests into the proposed units.
18. Vantage will not drill the four proposed wells unless compulsory pooling is ordered as requested.
19. Proposed Well 7H cannot be drilled without compulsory pooling of multiple tracts. The 7H would traverse five unleased tracts.
20. Proposed Well 8H cannot be drilled without compulsory pooling of multiple tracts. The 8H would traverse three unleased tracts.
21. Proposed Well 10H cannot be drilled without compulsory pooling of multiple tracts. The 10H would traverse two unleased tracts.
22. Proposed Well 9H would not traverse any unleased tracts but would be located within 330 feet of six unleased tracts and one partially leased tract.
23. There are no regular locations within the 9H Unit where a feasible horizontal well that would efficiently and effectively drain the proposed unit might be drilled.
24. A horizontal well drilled in the area of the Rosedale North Unit will efficiently and effectively drain tracts within approximately 188 feet on either side of the horizontal

drainhole. In this area, spacing horizontal wells approximately 375 feet from one another is optimal to achieve efficient and effective drainage of all tracts surrounding the drainhole.

25. Compulsory pooling within each of the four units as requested by Vantage will protect the correlative rights of the mineral interest owners within those units.
 - a. Pooling of the individual tracts within the proposed units will enable Vantage, owners of tracts that have been leased to Vantage, and owners of unleased tracts to receive their fair share of hydrocarbons from the reservoir.
 - b. Any horizontal well of typical length that might be drilled on the acreage within each unit would have the potential to drain hydrocarbons from beneath the unleased tracts within each unit, and in the absence of compulsory pooling, the unleased owners would not be compensated for such drainage.
26. Vantage did not present sufficient evidence to establish that force-pooled owners of unleased tracts should have their working interest subjected to a 100% risk penalty.
 - a. Vantage projects that all four wells will be economic. The approximate production required for each well to recover its costs of drilling and completing is 1.7 BCF. Each well has an estimated ultimate recovery in excess of 1.7 BCF.
 - b. Assessing a 100% risk penalty to the working-interest component of the ownership of a force-pooled tract owner would mean that the well would have to recover 3.4 BCF before the tract owner would receive any payout from his working interest. If each well has average production, then none of them would produce more than 3.4 BCF, and the involuntarily-pooled owners would receive nothing from the working-interest component of their mineral interest.

CONCLUSIONS OF LAW

1. Pursuant to Texas Natural Resources Code § 102.016, notice of the hearing was given to all interested parties by mailing the notices to their last known addresses at least 30 days before the hearing and, in the case of parties whose whereabouts were unknown, by publication of notice for four consecutive weeks in a newspaper of general circulation in the county where the proposed unit is located at least 30 days before the hearing.
2. The Commission has jurisdiction over the parties and the subject matter and has authority to issue a compulsory pooling order pursuant to Texas Natural Resources Code § 102.011.
3. Vantage made a fair and reasonable offer to pool voluntarily to the owners of the unleased tracts within each of the proposed units, as required by Texas Natural Resources Code § 102.013.
4. Compulsory pooling of the owners of the unleased tracts within each of the proposed proration units as owners of a 1/4th royalty and 3/4th working interest, proportionately

- reduced, with these owners' share of expenses, subject to a risk penalty of zero, payable only from 3/4ths of production, and subject to a no-surface-use restriction, is fair and reasonable within the meaning of Texas Natural Resources Code § 102.017.
5. Compulsory pooling of the mineral interests in all tracts within the boundaries of the 7H Unit, 8H Unit, 9H Unit, and 10H Unit will serve the purpose of protecting correlative rights.
 6. The terms and conditions of the Commission's Final Order in this proceeding are fair and reasonable and will afford the owner of each tract or interest in each respective unit the opportunity to produce or receive his fair share.

RECOMMENDATION

The examiners recommend that Vantage's applications be approved, subject to conditions, as set forth in the attached recommended Final Order.

Respectfully Submitted,



Michael R. Crnich
Hearings Examiner



Richard D. Atkins, PE
Technical Examiner