RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

PROPOSAL FOR DECISION

OIL & GAS DOCKET NO. 09-0301454: THE APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE SOUTH WEST MIPA 2H UNIT, WELL NO. 2H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

OIL & GAS DOCKET NO. 09-0301462: THE APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE SOUTH MIPA 13H UNIT, WELL NO. 13H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

OIL & GAS DOCKET NO. 09-0301463: THE APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE SOUTH MIPA 14H UNIT, WELL NO. 14H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

OIL & GAS DOCKET NO. 09-0301464: THE APPLICATION OF VANTAGE FORT WORTH ENERGY LLC PURSUANT TO THE MINERAL INTEREST POOLING ACT FOR THE FORMATION OF A POOLED UNIT FOR THE ROSEDALE SOUTH MIPA 13H UNIT, WELL NO. 15H, NEWARK, EAST (BARNETT SHALE) FIELD, TARRANT COUNTY, TEXAS

APPEARANCES

For Applicant Vantage Fort Worth Energy LLC:

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PROCEDURAL HISTORY

Date Applications Filed:	August 12, 2016
Date of Notice of Hearing:	September 14, 2016
Date of Hearing:	October 17, 2016
Transcript Received:	January 19, 2017
Record Closed:	January 19, 2017
Proposal for Decision Issued:	February 6, 2017
Heard by:	Ryan M. Lammert, Administrative Law Judge Brian Fancher, Technical Examiner

STATEMENT OF THE CASE

Vantage Fort Worth Energy LLC ("Vantage") has filed four applications under the Texas Mineral Interest Pooling Act (the "MIPA"), Chapter 102 of the Texas Natural Resources Code. The four dockets were consolidated for the purpose of a joint hearing record.[1] By its applications, Vantage is requesting that the Commission enter orders creating four force-pooled units: the Rosedale South West 2H MIPA Unit (the "2H Unit"), with its proposed Well No. 2H; the Rosedale South 13H MIPA Unit (the "13H Unit"), with its proposed Well No. 13H; the Rosedale South 14H MIPA Unit (the "14H Unit"), with its proposed Well No. 14H; and the Rosedale South 15H MIPA Unit (the "15H Unit"), with its proposed Well No. 15H. If the applications are approved, Vantage intends to drill the MIPA wells as horizontal wells in the Newark, East (Barnett Shale) Field (the "Field") in Tarrant County, Texas.

The applications are unprotested. The Administrative Law Judge and Technical Examiner recommend approval.

[1] Vantage filed a total of 10 MIPA applications. Six of the applications were protested by Mark D. Hixson, President of Metro Royalty, Inc. and Central Royalty, Inc. The 10 MIPA applications were heard at a consolidated hearing. The four unprotested MIPA applications are the subject of this Proposal for Decision and addressed herein. The remaining six protested applications will be addressed in a separate Proposal for Decision.

APPLICABLE LAW

Subject to limitations found elsewhere in the act, Section 102.011 of the MIPA provides that "[w]hen 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 MIPA] 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

Vantage's Evidence

All four of the proposed MIPA units are in the city of Fort Worth, Tarrant County, situated in the D. Dulany Survey, A-411; the JA. Creary Survey, A-269; the C. Phipps Survey, A-1224; the JQ St. Clair Survey, A-1914; the U. Wuthrick Survey, A-1693; the JM. Daniel Survey, A-395; and the GJ. Ashabranner Survey, A-7.[2] Each of the four proposed units includes some unleased acreage and acreage from one or more voluntary pooled units.[3]

The proposed 2H Unit contains 96.89 total acres comprised of multiple separate tracts.[4] Vantage has leases on multiple tracts containing 81.88 net mineral acres, which is 84.5% of the total acreage in the 2H Unit.[5] The 2H Unit includes 42 unleased (or, partially unleased) tracts, containing 15.01 net mineral acres, which is 15.5% of the total acreage.[6]

The proposed 13H Unit contains 77.22 total acres comprised of multiple separate tracts.[7] Vantage has leases on multiple tracts containing 71.85 net mineral acres, which is 93% of the total acreage in the 13H Unit.[8] The 13H Unit includes 22 unleased (or, partially unleased) tracts, containing 5.37 net mineral acres, which is 7% of the total acreage.[9]

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[2] Applicant's Exs. 6, 7, and 8.

[3] Applicant's Ex. 8.

[4] Applicant's Exs. 9A and 10A.

[5] Applicant's Ex. 8-2.

[6] Applicant's Exs. 8-2 and 9A.

[7] Applicant's Exs. 9H and 10H.

[8] Applicant's Ex. 8-2.

[9] Applicant's Exs. 8-2 and 9H.

The proposed 14H Unit contains 74.59 total acres comprised of multiple separate tracts.[10] Vantage has leases on multiple tracts containing 69.09 net mineral acres, which is 92.6% of the total acreage in the 14H Unit.[11] The 14H Unit includes 35 unleased (or, partially unleased) tracts, containing 5.5 net mineral acres, which is 7.4% of the total acreage.[12]

The proposed 15H Unit contains 39.99 total acres comprised of multiple separate tracts.[13] Vantage has leases on multiple tracts containing 35.83 net mineral acres, which is 89.6% of the total acreage in the 15H Unit.[14] The 15H Unit includes 26 unleased (or, partially unleased) tracts, containing 4.16 net mineral acres, which is 10.4% of the total acreage.[15]

Field, Discovery Date, and State of Texas Ownership

The MIPA does not apply in fields discovered and produced before March 8, 1961, and it does not apply to land in which the State of Texas has an interest unless the State has given consent.[16] These exceptions do not apply in this case—the proposed MIPA units lie within the productive limits of the Newark, East (Barnett Shale) Field, which was not discovered until 1981, and no State-owned minerals exist within the proposed MIPA units. [17, 18]

The Voluntary Pooling Offer

On or about October 11, 2016, Vantage sent a voluntary pooling offer to all mineral owners of unleased tracts within the boundaries of the proposed units.[19] Vantage offered these unleased mineral 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.[20]

One lease option included a 25% royalty and a bonus of $3,000 per net mineral acre.[21] The

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[10] Applicant's Exs. 9I and 10I.

[11] Applicant's Ex. 8-2.

[12] Applicant's Exs. 8-2 and 9I.

[13] Applicant's Exs. 9J and 10J.

[14] Applicant's Ex. 8-2.

[15] Applicant's Exs. 8-2 and 9J.

[16] MIPA §§ 102.003, 102.004.

[17] Applicant's Exs. 2A, 2H, 2I, and 2J.

[18] If granted, the 14H Unit will be drilled partially within the Lawhorn West Unit. The Lawhorn West Unit is a voluntary pooled unit which includes two Highway Right-of-Way Leases ("HROW") executed by the State of Texas, as Lessor. The HROW leases provide pooling authority by statute and School Land Board approval is not required to pool the HROW leases. Vantage offered into evidence a memorandum issued by the Texas General Land Office (signed by Commissioner George P. Bush) which grants Vantage the authority to proceed with the subject application to form the 14H Unit and to drill the Rosedale South 14H well. *See* Applicant Ex. 2I.

[19] Applicant's Exs. 11A, 11H, 11I, and 11J.

[20] *Id.*

[21] *Id.*

oil, gas, and mineral lease attached to the offer letter had a primary term of three years.[22] The second lease option was to lease with a 20% royalty and a bonus of $3,500 per net mineral acre.[23] Except for the different royalty and bonus amounts, the second lease option was identical to the first lease option. The oil, gas and mineral lease attached to the offer letter provided that Vantage was authorized to pool the tract owner's mineral interest into a pooled unit. The lease provided that the lessee could drill a horizontal well beneath the surface of the leased premises but could not conduct drilling operations on the surface of the lease.[24]

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 a 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. 2H is $2,699,856; for Well No. 13H, $2,440,835; for Well No. 14H, $2,446,003; and for Well No. 15H, $1,827,390.[25] This option stated 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 ("JOA") proposed by Vantage.[26] 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.[27]

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).[28] At payout, the electing owner would have the option to convert the retained override to a 25% working interest, proportionately reduced.[29]

Vantage asserts that the lease terms included in its voluntary offer were fair and

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[22] *Id.*

[23] *Id.*

[24] Applicant's Exs. 11A, 11H, 11I, and 11J.

[25] *Id.*

[26] *Id.*

[27] *Id.*

[28] *Id.*

[29] *Id.*

reasonable.[30] Vantage testified that the offers made in conjunction with these applications contained the same terms that Vantage used in previous MIPA applications that were found to be fair and reasonable.[31]

Need for MIPA Wells

Vantage offered into evidence a model to predict recovery from Barnett Shale wells with varying drainhole length.[32] Vantage also presented a map showing Barnett Shale wells within a six-mile radius of the proposed MIPA units.[33] Vantage also proffered a cross-section over that area showing the Barnett Shale formation.[34] From the location of existing wells and the study of the cross-section, Vantage concluded that the Barnett Shale formation is present throughout the proposed MIPA and expected to be productive over the entirety of the area within a six-mile radius, including the four proposed MIPA units.[35]

For every well within the six-mile study with sufficient data (587 wells), Vantage plotted the estimated drainhole length of the well versus the well's estimated ultimate oil recovery ("EUR"). Vantage then calculated the estimated ultimate recoveries (the "EURs") by decline curve analysis. Using the EUR as the y-coordinate and the estimated drainhole length as the x-coordinate, Vantage created a scatter plot of the data points.[36] A computer-generated least-squares regression of the plotted data points resulted in a line through the points with a positive slope of 0.637 and an R-squared coefficient of 0.0943.[37] The inference of this resulting equation is that an average well within the six-mile radius will recover 0.637 MMCF of gas for each incremental foot of drainhole length.[38]

Vantage's plats showed that, in spite of the percentage of acreage under lease, there was no path for the planned wellbores that would not encounter some unleased, unpooled interest.[39] Vantage contends that, absent MIPA approval of the proposed wells, the underlying reserves could not be recovered and would therefore be wasted.[40] Vantage also testified that MIPA approval was necessary to protect correlative rights by giving Vantage and its lessors a reasonable opportunity to recover their fair share of the oil and gas underlying the proposed units.[41]

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[30] Tr., pg. 139, lns. 3 – 8.

[31] *Id.*

[32] Applicant's Ex. 18.

[33] Applicant's Ex. 14.

[34] Applicant's Ex. 15.

[35] Tr., pg. 91, lns. 13 – 19.

[36] Applicant's Ex. 18.

[37] R-squared is a statistical measure of how close the data are to a fitted regression line. R-squared is measured on a scale of 0 – 100%. The "higher" the R-squared value, the better the regression line "fits" the data.

[38] Tr., pg. 74, lns. 16 – 20..

[39] Applicant's Exs. 20A, 20H, 20I, and 20J.

[40] *See* Tr., pgs. 84 – 89.

[41] Tr., pg. 102, lns. 7 - 10.

Vantage presented plats of the proposed MIPA units and associated wells, in each case showing the portion of the lateral that could not be drilled or perforated absent approval of the application.[42] In each case, absent approval of the application, the length of the well's completed lateral would be significantly shorter than planned.[43] Vantage then calculated the following amounts of lost reserves based on the lost perforated drainhole length of each well if the MIPA applications were not approved:[44]

Well	Lost drainhole length	Lost reserves if MIPA not approved
2H	6,460 feet	4,115 MMCF
13H	5,772 feet	3,677 MMCF
14H	6,166 feet	3,928 MMCF
15H	3,920 feet	2,497 MMCF

Charge for Risk

Vantage's applications requested that the Commission's MIPA pooling orders include a 100% charge for risk attached to the working-interest component, as authorized under Section 102.052 of MIPA.[45] In addition, the Notice of Hearing for the four MIPA applications gave notice that Vantage was seeking a 100% charge for risk[46]—but no party appeared to protest the 100% charge for risk, or any other aspect of the four applications.

Vantage offered into evidence an excerpt from *Texas Law of Oil and* Gas—a treatise authored by Professor Ernest E. Smith and Professor Jacqueline Lang Weaver.[47] The relevant section of the treatise follows:

> The [C]ommission's selection of a percentage risk factor will be determined by the riskiness of drilling in that area of the field, as evidenced by the number of dry holes, junked wells, and marginal or uneconomic well drilled, and by the percentage risk factor that appears in private joint operating agreements in the field. The risk factor in a [C]omission order may never exceed 100 percent, even though private joint operating agreements in the field may use even higher ratios.[48]

Vantage additionally offered into evidence copies of five Commission Final Orders[49] wherein a 100% charge for risk was approved, to wit:

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[42] Applicant's Exs. 20A, 20H, 20I, and 20J.

[43] *Id.*

[44] Applicant's Ex. 21.

[45] Applicant's Exs. 2A, 2H, 2I, and 2J.

[46] Applicant's Ex. 3.

[47] Applicant's Ex. 12.

[48] 3 Ernest E. Smith and Jacqueline Lang Weaver, Texas Law of Oil and Gas § 12.6(B) (LexisNexis Matthew Bender 2013).

[49] *See* Applicant's Exs. 12-1, 12-2, 12-3, 12-4, 12-5, and 12-6.

1. Oil & Gas Docket No. 8-76,921, styled *In Re the Application of Arco Oil and Gas Co. to Establish Two Pooled Units in the Moore-Hooper (Ellenburger) and (Fusselman) Fields, Loving County, Texas*, Final Order entered September 8, 1981;

2. Oil & Gas Docket No. 7C-79,134, styled *Application of Iverson Exploration, Inc. for a Mineral Interest Pooling Act Formed Unit in the JKT (Canyon) Field, Schleicher County, Texas*, Final Order entered November 19, 1984;

3. Oil & Gas Docket No. 3-81,363, styled *Application of Southwest Minerals, Inc. under the Mineral Interest Pooling Act to Pool into the American Company Lobit Gas Unit Well No. 1 in the League City Townsite (Andrau, U.) Field, Galveston County, Texas*, Final Order entered March 25, 1985;

4. Oil & Gas Docket No. 6-84,382, styled *Application of Taubert & Steed under the Mineral Interest Pooling Act to Pool into the W. N. Vickery Lease, Well No. 2 in the Neuhoff (Woodbine) Field, Wood County, Texas*, Final Order entered May 20, 1985; and

5. Oil & Gas Docket No. 2-82,022, styled *Application of Bill Forney, Inc. under the Mineral Interest Pooling Act to Pool into the Pend Oreille Oil and Gas Company, L L. Bennett, et al. Gas Unit, Well No. 1, Limes (Wilcox 9900) Field, Live Oak County, Texas*, Final Order entered August 24, 1987.

Vantage testified that private joint operating agreements in the area of the proposed MIPA units provide for non-consent penalties ranging from 300 – 400%.[50] To further support the proposed 100% charge for risk, Vantage offered testimony relating to the Society of Petroleum Evaluation Engineers' *Thirty-Fourth Annual Survey of Parameters Used in Property Evaluations*—summarily, a study conducted of reservoir reserves for purposes of determining fair market value of oil and gas assets or "risking" the reserves.[51] Vantage's testifying expert witness (a professional engineer) opined that the Newark, East (Barnett Shale) Field reserves in the area of the proposed MIPA units are most similar to the "proved undeveloped" reserve category identified on the "Unconventional Reserve Adjustment Factors" table.[52] Vantage's testifying expert opined that, "The purpose of this exhibit is to show that the industry standard for risking this category of reserves . . . is equivalent to asking for a charge for risk of 100 percent."[53]

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[50] *See* Tr., pgs. 58 – 62.

[51] Applicant's Ex. 22; *See* Tr., pg. 91, lns. 20 -24.

[52] Applicant's Ex. 22.

[53] Tr., pg. 93, lns. 5 – 8.

Vantage further testified that there are risks inherent to drilling in an unconventional reservoir such as the Barnett Shale development that are different than in a traditional reservoir.[54] Vantage asserts that there exists significant risk that 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.[55] Using an average cost of drilling and completing equal to roughly $2.4 million, a gas price of $2.50 per MCF, a severance tax rate of 5.6%, and a net revenue interest amount of 75%, Vantage concluded that the break-even gas recovery point, at which the well's cost would be recouped, was approximately 1.4 BCF.[56] Vantage estimated the volumetrically-calculated gas in place beneath the leased acreage within four proposed units. Using a 55 percent recovery factor, Vantage calculated that the recoverable gas in place beneath the leased acreage of the 2H Unit is 7.5 BCF; the 13H Unit is 6.5 BCF; the 14H Unit is 6.3 BCF; and the 15H Unit is 3.3 BCF.[57]

Of the 587 Barnett Shale wells within six miles of the proposed MIPA wells, approximately 40% had estimated ultimate recoveries of less than 1.4 BCF.[58] However, the scatter plot of the estimated ultimate recovery of wells within a six-mile radius shows significant variability in individual well performance.[59]

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. The evidence in this unprotested proceeding demonstrates that compulsory pooling is necessary to protect correlative rights.

Due to the locations of the unleased tracts within the respective proposed units, the MIPA wells could not be drilled as proposed without compulsory pooling. Well 2H would traverse or be less than the minimum spacing distance from 42 unleased (or, partially unleased) tracts inside the 2H Unit; Well 13H would traverse or be less than the minimum spacing distance from 22 unleased (or, partially unleased) tracts inside the 13H Unit; Well 14H would traverse or be less than the minimum spacing distance from 35 unleased (or, partially unleased) tracts inside the 14H Unit; and Well 15H would traverse or be less than the minimum spacing distance from 26 unleased (or, partially unleased) tracts inside the 15H Unit.[60] Vantage cannot drill these wells, as proposed, unless compulsory pooling is ordered because of the impracticality of drilling around the unleased tracts. Therefore, in the absence of compulsory pooling, each mineral interest owner within these proposed

[54] *See* Tr., pgs. 98 – 99.

[55] *See* Tr., pgs. 99 – 101.

[56] Applicant's Ex. 21; *See* Tr., pgs. 99 – 101.

[57] Applicant's Ex. 19.

[58] *See* Tr., pgs. 99 – 101.

[59] Applicant's Ex. 18.

[60] Applicant's Exs. 20A, 20H, 20I, and 20J.

units would not be afforded a reasonable opportunity to recover his fair share of hydrocarbons.

Compulsory pooling as proposed by Vantage, wherein the proposed horizontal wells will extend the length of the unit, protects correlative rights because all tract owners, whether leased or unleased, will have their fair share of hydrocarbons produced.

Furthermore, the wells and units proposed by Vantage would allow the Commission to fashion an order in compliance with Section 102.017 of the MIPA, which requires that a MIPA 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 and receive their fair share.

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 options—that the Commission has determined to be fair and reasonable in recent approved MIPA applications.

Charge for Risk

Section 102.052(a) of the MIPA provides, "As to an owner who elects not to pay his proportionate share of the drilling and completion costs in advance, the commission shall make provision in the pooling order for reimbursement solely out of production, to the parties advancing the costs, of all actual and reasonable drilling, completion, and operating costs plus a charge for risk not to exceed 100 percent of the drilling and completion costs."

Traditionally, Commission precedent has been to not assess a risk penalty against unleased owners who are forcibly pooled. The working-interest portion of the force-pooled basis has been subjected to a zero-risk penalty in the majority of the MIPA applications, starting with Finley, which the Commission has approved.[61] However, in the Commission's most recent Barnett Shale MIPA cases,[62] the Commission determined that a 50% risk penalty was fair and reasonable. At conference in discussing the assessment of the 50% risk penalty in the previous Vantage MIPA cases, the Commissioners indicated that a 50% risk penalty would establish precedent that the Commission will allow risk penalty in appropriate circumstances.[63]

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[61] 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.

[62] Oil & Gas Docket Nos. 09-0284751, 09-0284752, 09-0284753, and 09-0284754, Applications 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-10H MIPA Units, Well Nos. 7H-10H, Newark, East (Barnett Shale) Field, Tarrant County, Texas.

[63] RRC Conference of March 25, 2014, video transcript at 26 minutes, 15 seconds.

Vantage's unprotested applications requested a 100% charge for risk be applied to the working interest portion of an owner who elects not to pay his proportionate share of the drilling and completion costs in advance.

Here, while Vantage requested a 100% risk penalty be assessed to the working interest portion, the Examiners believe that such a high penalty is not supported either by precedent or the evidence provided by Vantage and therefore, it is not "fair and reasonable" as required by Section 102.017 of the MIPA. As explained below, the Examiners believe that imposition of a 50% risk penalty based on the facts of this case, is fair and reasonable.

The Commission first assessed a 50% charge for risk for the Newark, East (Barnett Shale) Field in Oil & Gas Docket Nos. 09-0284751, 09-0284752, 09-0284753, and 09-0284754, being the applications 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-10H MIPA Units, Well Nos. 7H-10H. It is important to note that the presiding Hearings Examiner proposed a zero percent charge for risk in those dockets.

To be sure, Finding of Fact No. 26 contained within the dockets' Proposal for Decision recites:

> 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.

However, the Commissioners declined to adopt Finding of Fact No. 26, and instead approved the following Substitute Finding of Fact:

> Vantage presented evidence supporting a charge for risk of 50 percent of the drilling and completion costs of the respective well.

a. Vantage's engineering expert calculated the estimated ultimate recoveries for 353 Barnett Shale wells within a five-mile radius that had adequate production information for estimating ultimate recovery and completion information for estimating drainhole length. Assuming a gas price of $3 per MCF and drilling and completion costs of $4 million, he calculated that the production amount needed to recover the drilling and completion costs would be 1.7 BCF of gas. Almost 50 percent of the 353 wells had estimated ultimate recoveries of less than 1.7 BCF.

b. The seven private joint operating agreements under which Vantage is the operator of wells in this area of the Barnett Shale contain a charge for risk of 300 percent.

In the precedent-setting dockets, the Commission assessed a charge for risk based on the number of "marginal or uneconomic" wells drilled in the area and the prevailing "percentage risk factor that appear[ed] in private joint operating agreements," as suggested by Professors Smith and Weaver. In the Newark, East (Barnett Shale) Field, it is clear that the Commission will provide for a 50% charge for risk when the evidence shows: 1) that (at least) 50% of the wells drilled (within a five-mile radius) and completed (in the same field as the proposed well) will not recover the drilling and completion costs associated with each well, given a well's estimated ultimate recovery, estimated drainhole length, and the price of gas at the time of application[64]; and 2) the existence of multiple joint operating agreements (covering similarly situated acreage and operations) which demonstrate a non-consent penalty of (at least) 300%.

The Examiners are of the opinion that similar facts are presented in the instant dockets. Here, Vantage concludes that approximately 40% of the wells within the six-mile study area have estimated ultimate recoveries of less than the production amount needed to recover drilling and completion costs—meaning 60% of the wells are projected to recoup drilling and completion costs (as compared to only 50%). Also, Vantage provided similar evidence of prevailing non-consent penalties contained in comparable joint operating agreements (300 – 400%).

Second, Vantage urges the Commission to consider the Society of Petroleum Evaluation Engineers' *Thirty-Fourth Annual Survey of Parameters Used in Property Evaluations* as evidence supporting the requested 100% charge for risk. However, the Examiners are not persuaded by that evidence and conclude that minimal consideration should be given to the survey. The survey cautions that, "The sample size for Unconventional RAFs is low

[64] *But see* Oil & Gas Docket Nos. 09-0295894, 09-0295895, and 09-0295896, *The Applications of Vantage Fort Worth Energy LLC Pursuant to the Mineral Interest Pooling Act for the Formation of a Pooled Unit for the Yeandale-MFH MIPA 5H, 6H, and 7H Wells in the Newark, East (Barnett Shale) Field, Tarrant County, Texas*, Final Orders entered October 20, 2015 (Commission assessed 50% charge for risk where evidence demonstrated that only "15% of these wells are expected ultimately to recover at least 4 BCF, which is the break-even point").

enough that the results may not be statistically significant", and concludes that, "These results should be used with caution because of the small sample size."[65]

Third, while Vantage argues that 100% charge for risk is appropriate in this case, the Examiners are unable to cite to any previous Commission docket—in the Newark, East (Barnett Shale) Field—which finds that 100% charge for risk is proper. Furthermore, evidence presented by Vantage indicated that (presumably) the most recent Final Order to approve the requested 100% charge for risk was entered by the Commission in June 1987, for a MIPA unit in the Neuhoff (Woodbine) Field.

Lastly, under the Commission's practice of providing the unleased owners with a cost-free royalty at the market rate for leases in the area, the unleased owners are in as good or better position than all of the other lessors in the MIPA units. The charge for risk is applicable only to the reimbursement to the parties advancing costs that is required under MIPA Section 102.052 and that is made solely out of production. This would apply only to the portion of the unleased owners' mineral interest that is treated as a cost-bearing working interest.

"Appendix 1" to this Proposal for Decision is a plat for the proposed Rosedale South West 2H MIPA Unit (the "2H Unit"), (Vantage Exhibit No. 9A), showing the proposed wellbore path of Well 2H and the unleased tracts and partially-leased within the 2H Unit. "Appendix 1A" to this Proposal for Decision is the legal description of the 2H Unit (Vantage Exhibit No. 10A).

"Appendix 2" to this Proposal for Decision is a plat for the proposed Rosedale South 13H MIPA Unit (the "13H Unit"), (Vantage Exhibit No. 9H), showing the proposed wellbore path of Well 13H and the unleased and partially-leased tracts within the 13H Unit. "Appendix 2A" to this Proposal for Decision is the legal description of the 13H Unit (Vantage Exhibit No. 10H).

"Appendix 3" to this Proposal for Decision is a plat for the proposed Rosedale South 14H MIPA Unit (the "14H Unit"), (Vantage Exhibit No. 9I), showing the proposed wellbore path of Well 14H and the unleased and partially-leased tracts within the 14H Unit. "Appendix 3A" to this Proposal for Decision is the legal description of the 14H Unit (Vantage Exhibit No. 10I).

"Appendix 4" to this Proposal for Decision is a plat for the proposed Rosedale South 15H MIPA Unit (the "15H Unit"), (Vantage Exhibit No. 9J), showing the proposed wellbore path of Well 15H and the unleased and partially-leased tracts within the 15H Unit. "Appendix 4A" to this Proposal for Decision is the legal description of the 15H Unit (Vantage Exhibit No. 10J).

Based on the record in this case, the Examiners recommend adoption of the following

[65] Applicant's Ex. 22, pg. 2.

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 LLC ("Vantage"), at least 30 days prior to the hearing date.[66]

2. Notice of the hearing was published in the Commercial Recorder on September 9, September 14, September 21, September 28, and October 5, 2016.[67]

3. No one appeared at the hearing in opposition to Vantage's applications.

4. On or about October 11, 2016, Vantage sent a voluntary pooling offer to all mineral owners of unleased tracts within the boundaries of the proposed MIPA units.[68] The unleased mineral 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, for a three-year primary term. The oil, gas, and mineral lease attached to the offer letter provided that Vantage was authorized to pool the tract owner's mineral interest into a pooled unit and drill a horizontal well beneath the surface of the leased premises but could not conduct drilling operations on the surface of the lease.

    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 choosing 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.

    d. The estimated cost for Well No. 2H is $2,699,856; for Well No. 13H, $2,440,835; for Well No. 14H, $2,446,003; and for Well No. 15H,

[66] Applicant's Ex. 3.

[67] Applicant's Ex. 4.

[68] Applicant's Exs. 11A, 11H, 11I, and 11J.

$1,827,390.[69] The participation option stated 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.

e. 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.

f. 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.

5. Vantage provided the essential terms of the participation option and the farm-out option in its offer letter. Vantage did not enclose copies of its participation agreement or farm-out agreement, but instead offered to provide a copy of its participation agreement and farm-out agreement to any mineral owner who was interested in one or both of those options. None of the mineral owners expressed an interest in either the participation option or the farm-out option.

6. The options included in the voluntary pooling offer made by Vantage contained the same options as the voluntary pooling offer the Commission found to be fair and reasonable in Vantage's prior MIPA applications.[70]

7. 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. The Newark, East (Barnett Shale) Field is present and reasonably productive in the area covering all of the proposed units.[71]

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[69] *Id.*

[70] *See* Oil & Gas Docket Nos. 09-0284751, 09-0284752, 09-0284753, 09-0284754, approved in April 2014; Docket Nos. 09-0288329, 09-0288331, 09-0288332, and 09-0288333, approved in January 2015; Docket Nos. 09-0295894, 09-0295895, and 09-0295896, approved in October 2015.

[71] Tr., pg. 91, lns. 13 – 19.

8. The Newark, East (Barnett Shale) Field was discovered in 1981. This field has special field rules providing for 330-foot lease-line spacing, and there is no between-well spacing requirement. 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.[72]

9. Vantage estimated the volumetrically-calculated gas in place beneath the leased acreage within the four proposed units. Using a 55 percent recovery factor, Vantage calculated that the recoverable gas in place beneath the leased acreage of the 2H Unit is 7.5 BCF; the 13H Unit is 5.57 BCF; the 14H Unit is 5.55 BCF; and the 15H Unit is 3.3 BCF.[73]

10. Vantage created a scatter plot of the estimated ultimate recoveries (the "EURs") versus the estimated drainhole length for Barnett Shale wells within six miles of the proposed MIPA units. A computer-generated least-squares regression of the plotted data points resulted in a line with a positive slope of 0.637 and an R-squared coefficient of 0.0943. The inference of this resulting equation is that an average well within the six-mile radius will recover 0.637 MMCF of gas for each incremental foot of drainhole length.[74]

11. Vantage cannot drill the four proposed wells unless compulsory pooling is ordered as requested. None of the four proposed wells can be drilled to its full planned length without traversing one or more unleased tracts. [75]

12. There are no regular locations within the proposed units where a feasible horizontal well could drain the proposed unit.[76]

13. Compulsory pooling within each of the four units as requested by Vantage will protect the correlative rights and prevent waste. Without compulsory pooling, Vantage will not be able to drill the proposed wells, Vantage and its lessees will not have a reasonable opportunity to recover their fair share of hydrocarbons from the reservoir, and the underlying hydrocarbons will be left unrecovered.

14. Vantage presented evidence supporting a charge for risk of 50 percent of the drilling and completion costs of the respective wells.

CONCLUSIONS OF LAW

1. Pursuant to Texas Natural Resources Code § 102.016, notice of the hearing was

[72] Applicant's Ex. 13.

[73] Applicant's Ex. 19.

[74] Applicant's Ex. 18.

[75] Applicant's Ex. 9A, 9H, 9I, and 9J.

[76] *Id.*

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 mineral 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 25% royalty and 75% working interest, proportionately reduced, with these owners' share of expenses, subject to a charge for risk of 50%, payable only from the owners' working-interest component, 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 2H Unit, 13H Unit, 14H Unit, and 15H 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 Orders.

Respectfully Submitted,

Ryan M. Lammert
Administrative Law Judge

Brian Fancher
Technical Examiner