STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT

In re the Matter of the Application of	:	
Chesapeake Exploration, L.L.C., for	:	
Unit Operation	:	Application Date: July 21, 2015
	:	
R Kirk South Unit	:	

APPLICATION OF CHESAPEAKE EXPLORATION, L.L.C.,
FOR UNIT OPERATION

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
STEPTOE & JOHNSON PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215

Attorneys for Applicant,
Chesapeake Exploration, L.L.C.

TABLE OF CONTENTS

APPLICATION

I. APPLICANT INFORMATION 1

II. PROJECT DESCRIPTION 2

III. TESTIMONY 2

IV. THE CHIEF SHOULD GRANT AN ORDER FOR THIS APPLICATION 3

A. Legal Standard 3

B. Chesapeake's Application Meets the Legal Standard 6

i. *The Unitized Formation is Part of a Pool* 6

ii. *Unit Operations Are Reasonably Necessary to Increase Substantially the Ultimate Recovery of Oil and Gas* 7

iii. *The Value of Additional Recovery Exceeds Its Additional Costs* 7

iv. *The Unit Plan Meets the Requirements of Ohio Revised Code § 1509.28* 8

V.

APPROVALS 9

VI. HEARING 9

VII. CONCLUSION 9

EXHIBITS

Exhibit 1 Unit Agreement
Exhibit 2 Unit Operating Agreement
Exhibit 3 Prepared Direct Testimony of Travis Glauser, Staff Geologist ("Geologist")
Exhibit 4 Prepared Direct Testimony of Drew Hopson, Reservoir Engineer II ("Reservoir Engineer")
Exhibit 5 Prepared Direct Testimony of Robert Highsaw, Landman II ("Landman")
Exhibit 6 Working Interest Owner Approvals
Exhibit 7 Adjacent Wells and Units

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Unit Operation	:	Application Date: July 21, 2015
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R Kirk South Unit	:	

APPLICATION

Pursuant to Ohio Revised Code Section 1509.28, Chesapeake Exploration, L.L.C. ("Chesapeake"), hereby respectfully requests the Chief of the Ohio Department of Natural Resources' Division of Oil and Gas Resources Management ("Division") to issue an order authorizing Chesapeake to operate the Unitized Formation and applicable land area in Jefferson County, Ohio (hereinafter, the "R Kirk South Unit") as a unit according to the Unit Plan attached hereto and as more fully described herein. Chesapeake makes this request for the purpose of substantially increasing the ultimate recovery of oil and natural gas, including related liquids, from the Unitized Formation, and to protect the correlative rights of unit owners, consistent with the public policy of Ohio to conserve and develop the state's natural resources and prevent waste.

I.
APPLICANT INFORMATION

Chesapeake Exploration, L.L.C., is a limited liability company organized under the laws of the State of Oklahoma and a wholly-owned subsidiary of Chesapeake Energy Corporation. Chesapeake has its principal office in Oklahoma City, Oklahoma, and local offices at 2321 Energy Drive, Louisville, OH 44641. Chesapeake is one of the most active drillers of horizontal wells in Northeast Ohio and is registered in good standing as an "owner" with the Division.

Chesapeake designates to receive service, and respectfully requests that all orders, correspondence, pleadings and documents from the Division and other persons concerning this filing be served upon, the following:

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
Steptoe & Johnson PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215
Tel. (614) 221-5100
Email: neal.pierce@steptoe-johnson.com
kathy.milenkovski@Steptoe-Johnson.com

Robert S. Highsaw
Landman II – Appalachia South
Chesapeake Energy Corporation
6100 N. Western Avenue
P.O. Box 18496
Oklahoma City, Oklahoma 73154-0496
Tel. (405) 935-2289
Email: robert.highsaw@chk.com

Serena Evans
Land Director, Utica
Ascent Resources – Utica, LLC
301 NW 63rd Street, Suite 600
Oklahoma City, OK 73116
Tel. (405) 418-8021
Email: serena.evans@aep-lp.com

II.
PROJECT DESCRIPTION

The R Kirk South Unit is located in Jefferson County, Ohio, and consists of fifty-one (51) separate tracts of land. See Exhibits A-1 and A-2 of the Unit Operating Agreement (showing the plat and tract participations, respectively). The total land area in the R Kirk South Unit is approximately 983.227883 acres and, at the time of this Application, Chesapeake and Ascent Resources – Utica have the right to drill on and produce from 953.564221[1] acres of the proposed unit – i.e., more than ninety-six percent (96%) of the unit area, above the sixty-five percent (65%) threshold required by Ohio Revised Code § 1509.28.[2] As more specifically described herein, Chesapeake seeks authority to drill and complete one or more horizontal wells in the Unitized Formation from a single well pad located offset on the northwest corner of the Unit to efficiently test, develop, and operate the Unitized Formation for oil, natural gas, and related liquids production.

Chesapeake's plan for unit operations (the "Unit Plan") is attached to this Application and consists of the Unit Agreement, attached as Exhibit 1; and the Unit Operating Agreement, attached as Exhibit 2. Among other things, the Unit Plan allocates unit production and expenses based upon each tract's surface acreage participation in the unit; includes a carry provision for those unit participants unable to meet their financial obligations, the amount of which is based upon the risks of and costs related to the project; and conforms to industry standards for the drilling and operating of horizontal wells generally used by the Applicant with other interest owners.

III.
TESTIMONY

The following pre-filed testimony has been attached to the Application supporting the R Kirk South Unit's formation: (i) testimony from a Geologist establishing that the Unitized Formation is part of a pool and supporting the Unit Plan's recommended allocation of unit produc-

[1] Chesapeake Exploration, LLC, as Operator, is authorized to file this application on behalf of TOTAL E&P USA, Inc. and CHK Utica, LLC as other working interest owners in this acreage. As of the date of this application, ARU has indicated that it would prefer to trade its working interest in the R Kirk South Unit to Chesapeake for like acreage in Jefferson County. ARU will not be signing and returning a Working Interest Owner Approval until such time as Chesapeake and ARU have entered into a Lease Exchange Agreement. In the event that ARU's approval is not obtained or Chesapeake has not agreed to acquire ARU's interest, this Application shall be amended accordingly no less than 45 days prior to the hearing date.
[2] See Prepared Direct Testimony of Robert S. Highsaw at 2, attached as Exhibit 5.

tion and expenses on a surface acreage basis;[3] (ii) testimony from a Reservoir Engineer establishing that unitization is reasonably necessary to increase substantially the recovery of oil and gas, and that the value of the estimated additional resource recovery from unit operations exceeds its additional costs;[4] and (iii) testimony from an operational Landman with firsthand knowledge of Chesapeake's Ohio development who describes the project generally, the Unit Plan, efforts to lease unleased owners, and the approvals received for unit development.[5,6]

IV.
THE CHIEF SHOULD GRANT AN ORDER FOR THIS APPLICATION

A. Legal Standard

Ohio Revised Code § 1509.28 requires the Chief of the Division to issue an order providing for the unit operation of a pool – or a part thereof – when the applicant shows that it is reasonably necessary to increase substantially the ultimate recovery of oil and gas, and the value of the estimated additional resource recovery from the unit's operations exceeds its additional costs. See Ohio Rev. Code § 1509.28(A).

The Chief's order must be on terms and conditions that are just and reasonable and prescribe a plan for unit operations. See Ohio Rev. Code § 1509.28(A). Chesapeake proposes the following conditions for its operation of the R Kirk South Unit that will satisfy the statutory requirements set forth below:

> (1) A description of the unit area.
>
> See the above section on "PROJECT DESCRIPTION."
>
> (2) A statement of the nature of the contemplated operations.
>
> Chesapeake anticipates drilling three (3) wells from a pad location located in the northwest area of the R Kirk South Unit for the purpose of recovering oil and gas. Drilling operations in the Unit will commence within twelve (12) months from the date of approval of the Division's Unitization Order. Notwithstanding any unforeseen developments, In Q4 of 2015, at the latest, Chesapeake intends to drill the initial well within the R Kirk South Unit. Thereafter, Chesapeake plans to drill the two (2) subsequent wells within four (4) years from the completion of the initial well.[7]
>
> (3) An allocation of production from the unit area not used in unit operations, or otherwise lost, to the separately owned tracts.
>
> Chesapeake's geology testimony illustrates that the Utica/Point Pleasant Formation uniformly underlies the Unit Area.[8] Therefore, the value of each separate tract in the Unit Area shall be determined by calculating the ratio of its surface acreage to the to-

[3] See Prepared Direct Testimony of Travis Glauser, attached as Exhibit 3.
[4] See Prepared Direct Testimony of Drew Hopson, attached as Exhibit 4.
[5] See Prepared Direct Testimony of Robert Highsaw, attached as Exhibit 5.
[6] Each of the witnesses is an employee of Chesapeake Energy Corporation, testifying on behalf of the Applicant, its wholly-owned subsidiary, Chesapeake Exploration, L.L.C., which operates Chesapeake's Ohio wells.
[7] Exhibit 5 at 4.
[8] Exhibit 3 at 2-3.

tal surface acreage of the Unit Area; this is known as "Unit Participation". The allocated share of production to each separate tract shall be equal to its Unit Participation.

(4) A provision addressing credits and charges to be made for the investment in wells, tanks, pumps, and other equipment contributed to unit operations by owners in the unit.

Owners in the Unit Area are responsible for their pro rata share of these credits and charges based upon their total Unit Participation within the Unit Area.

(5) A provision addressing how unit operation expenses shall be determined and charged to the separately owned tracts in the unit, and how they will be paid.

Expenses related to unit operations shall be charged to owners on a pro rata basis based upon their Unit Participation. These charges shall be just and reasonable.

(6) A provision, if necessary, for carrying someone unable to meet their financial obligations in connection with the unit.

Chesapeake will carry, or otherwise finance, an owner who is unable to meet its financial obligations in connection with unit operations. Chesapeake shall comply with the Unit Agreement and Unit Operating Agreement included in the subject unitization application should enactment of this provision become necessary.

(7) A provision for the supervision and conduct of unit operations in which each person has a vote with a value corresponding to the percentage of unit operations expenses chargeable against that person's interest.

Chesapeake, or its successors in interest, shall supervise and conduct all unit operations. Each working interest owner in the Unit Area shall have a voting interest equal to its Unit Participation. If the operator owns fifty-one percent (51%) or more of the Unit Area, unit operations shall not require an affirmative vote of all working interest owners. Otherwise, no unit operation shall be approved without an affirmative vote of at least fifty-one percent (51%) of the combined voting interest of the working interest owners.

(8) The time when operations shall commence and the manner in which, and circumstances under which, unit operations will terminate.

Unit operations may commence as of 7:00 a.m. on the day following the effective date of the Order, when and if one is issued by the Division, and may continue as long as oil and/or gas are produced. Working interest owners comprising at least fifty-one percent (51%) of the working interest owners in the Unit Area may terminate unit operations whenever they determine unit operations are no longer warranted. If unit operations are so terminated, Chesapeake shall provide written notice of the termination to the Division and to all unitized non-consenting working interest owners, as further defined in 9(b)(ii). In the event that termination of unit operations occurs prior to drilling and completing for production three (3) wells in the R Kirk South Unit, the Chief may issue an order reducing the Unit Area to the minimum amount of acreage necessary to support those wells that have been drilled and are producing.

(9) Such other provisions appropriate for engaging in unit operation and for the protection or adjustment of correlative rights.

Chesapeake proposes the following as additional provisions:

(a) No activity associated with the drilling, completion, or operation of the R Kirk South Unit shall be conducted on the surface of any unleased property without prior written consent of the landowner.

(b) If an Order is granted, Chesapeake shall present Unitized parties with the option to:

(i) lease their minerals to Chesapeake for a seventeen and one half percent (17.5%) royalty rate on production, and a lease bonus payment of two thousand dollars ($2,000) per net mineral acre. This lease option shall be for a non-surface use lease, meaning that Chesapeake shall not use the surface of the mineral owner's property without separate prior written consent by the mineral owner; or

(ii) participate in unit operations as a non-consenting working interest owner. The mineral owner shall receive a monthly cash payment equal to a one-eighth (1/8) landowner royalty interest calculated on gross revenues. The one-eighth (1/8) royalty interest shall be calculated based on the Unit Participation of the mineral owner's tract. Chesapeake shall make the royalty payment contemporaneously with those it makes to leased individuals within the Unit Area. In addition to the royalty payment, the non-consenting working interest owner shall have a working interest ownership in the well equal to seven-eighths (7/8) of the Unit Participation of his/her tract. This seven-eighths of his/her Unit Participation shall accrue based upon net production revenue until Chesapeake recovers 200% of the cost of drilling, testing, completing, and producing the initial well. Once Chesapeake recovers 200% of these costs, Chesapeake shall begin making monthly payments on net production revenue for that well equal to seven-eighths (7/8) of the non-consenting working interest owner's Unit Participation, while continuing the one-eighth (1/8) royalty interest in the well for the unitized party. For any subsequent wells drilled in the Unit Area, seven-eighths (7/8) of the non-consenting working interest owner's Unit Participation shall accrue until Chesapeake has recovered 150% of the cost of drilling, testing, completing, and producing the subsequent wells. Once Chesapeake recovers 150% of these costs, Chesapeake shall begin making monthly payments on net production revenue for the subsequent wells equal to seven-eighths (7/8) of the non-consenting working interest owner's Unit Participation, while continuing the one-eighth (1/8) royalty interest in the well for the unitized party. Once a specific cost is charged to a well, that same cost cannot be charged to the subsequent wells in the Unit Area.

(iii) Chesapeake shall present these options via certified mail. Should the Unitized Party not make an affirmative selection as to one of the two options, the Unitized Party will be deemed to have selected option 9(b)(i) to lease their tract under the terms of the lease form attached as Exhibit "B" to Exhibit 2 of this Application.

(c) If an Order is granted, Chesapeake shall present Unitized parties who are non-operator lessees with the option to:

(i) participate in unit operations by agreeing to pay such owner's proportionate part of the actual cost of such development and operation of the unit; or

(ii) participate in unit operations as a non-consenting working interest owner. The non-consenting working interest owner shall have a working interest ownership in the well equal to eight-eighths (8/8) of the Unit Participation per tract. This eight-eighths of Unit Participation shall accrue based upon net production revenue until Chesapeake recovers 500% of the cost of drilling, testing, completing, and producing the initial well. Once Chesapeake recovers 500% of these costs, Chesapeake shall begin making monthly payments on net production revenue for that well equal to eight-eighths (8/8) of the non-consenting working interest owner's Unit Participation. For any subsequent wells drilled in the Unit Area, eight-eighths (8/8) of the non-consenting working interest owner's Unit Participation shall accrue until Chesapeake has recovered 500% of the cost of drilling, testing, completing, and producing the subsequent wells. Once Chesapeake recovers 500% of these costs, Chesapeake shall begin making monthly payments on net production revenue for the subsequent wells

equal to eight-eighths (8/8) of the non-consenting working interest owner's Unit Participation. Once a specific cost is charged to a well, that same cost cannot be charged to the subsequent wells in the Unit Area.

(iii) Chesapeake shall present these options via certified mail. Should the Unitized Party not make an affirmative selection as to one of the two options, the Unitized Party will be deemed to have selected option 9(c)(ii) and shall relinquish its interest subject to the risk factor noted in 9(c)(ii).

(d) Unitized parties shall not incur liability for any personal or property damage associated with any drilling, testing, completing, producing, operating, or plugging activities within the GND Trust South Unit.

(e) If requested by an unleased mineral owner selecting option 9(b)(ii) above, or by the Division, Chesapeake shall provide, not later than thirty (30) days after receipt of the request, any of the following:

(10) The Order will become effective when Chesapeake provides the Chief with final written approval of the unit operations from sixty-five percent (65%) of the working interest owners in the Unit Area, and sixty-five percent (65%) of the royalty interest owners in the Unit Area. Upon receipt of these approvals, the Order shall become effective, and unit operations may commence as set forth above. Chesapeake will have six (6) months to provide these required approvals, and, if it does not do so, the Order will be deemed revoked, and the Chief shall provide notice of the revocation to Chesapeake and the unleased mineral interest owners in the Unit Area.

(11) Within twenty-one (21) days of the Order becoming effective, Chesapeake will file a copy of the Order with the Jefferson County Recorder's Office.

(12) Chesapeake requests that its Unit Agreement and Unit Operating Agreement are adopted by the Order. In the event of a conflict between the Plan for Unit Operations approved by the Chief and contained in the Order, and Chesapeake's Unit Agreement and Unit Operating Agreement, the Order shall take precedence and the Unit Agreement and Unit Operating Agreement shall conform to the Order.

B. Chesapeake's Application Meets the Legal Standard

i. *The Unitized Formation is Part of a Pool*

The "Unitized Formation" consists of the subsurface portion of the Unit Area (i.e., the lands shown on Exhibit A-1 and identified in Exhibit A-2 to the Unit Operating Agreement) at a depth located from fifty feet above the top of the Utica Shale to fifty feet below the base of the Point Pleasant formation, and frequently referred to as the Utica/Point Pleasant formation. The evidence presented in this Application establishes that the Unitized Formation is part of a pool and thus an appropriate subject of unit operation under Ohio Rev. Code § 1509.28.[9] Additionally, that evidence establishes that the Unitized Formation is likely to be reasonably uniformly distributed throughout the Unit Area – and thus that it is reasonable for the Unit Plan to allocate unit production and expenses to separately owned tracts on a surface acreage basis.[10]

[9] A "pool" is defined under Ohio law as "an underground reservoir containing a common accumulation of oil or gas, or both, but does not include a gas storage reservoir." Ohio Rev. Code § 1509.01(E). See also Exhibit 3 at 2-3.
[10] Exhibit 3 at 4-5.

ii. *Unit Operations Are Reasonably Necessary to Increase Substantially the Ultimate Recovery of Oil and Gas*

The evidence presented in this Application establishes that unit operations are reasonably necessary to increase substantially the ultimate recovery of oil and gas from the lands making up the R Kirk South Unit. The Unit Plan contemplates the drilling of three (3) horizontal wells from a single well pad, all with estimated lateral lengths of approximately 12,856 feet each.[11] Chesapeake estimates the total amount of gas in place ("GIP") through the planned unit development is approximately 102.5 billion cubic feet equivalent ("BCFE") of natural gas from the Unitized Formation, of which 61.3 BCFE is currently developable when considering regulatory setbacks.[12] Absent unit development contemplated in the unitized project, the recoverable GIP is substantially less: First, the evidence shows that it is unlikely that vertical development of the unit would ever take place because it is likely to be uneconomic – resulting in potentially no resource recovery from portions of the Unitized Formation.[13] Second, avoiding unleased tracts by relying on shorter horizontal laterals to develop the Unitized Formation underlying the R Kirk South Unit would result in a substantially lower ultimate recovery of oil and gas, as it would strand 12.9 BCFE.[14] Natural gas recovery from horizontal drilling methods is directly related to the length of the lateral. Chesapeake estimates the Anticipated Gas Recovery will increase from 48.5 BCFE to 61.3 BCFE if the unit is developed utilizing the proposed unit development.[15]

The evidence thus shows that the contemplated unit operations are reasonably necessary to increase substantially the recovery of oil and gas from the Unitized Formation.[16]

iii. *The Value of Additional Recovery Exceeds Its Additional Costs*

Capital expenditure ("CAPEX") to develop the unitized project ($37.1 mm) increases by $3.8 mm over CAPEX to develop the non-unitized project ($33.3 mm).[17] As set forth in Mr. Hopson's testimony, by using the current price of $3.390 per thousand cubic feet of natural gas, Chesapeake estimates that the value of the additional future cash flow from the unitized project, when compared to the cash flow generated by the non-unitized project, increases from $78.8 mm

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[11] See, e.g., Exhibit 5 at 4.
[12] Exhibit 4 at 2. We emphasize that these are only estimates, and like the rest of the estimates set forth in this Application, they should be treated as simply estimates based upon the best information available at the time.
[13] *Id.* at 3.
[14] *Id.*at 4-5.
[15] *Id.* at 4.
[16] There are also substantial benefits in the form of reduced surface impacts as a result of the contemplated unit operations. For example, the use of a single, centrally-located well pad to drill, for instance, six eventual horizontal wells causes significantly less surface disruption than a vertical well drilling program designed to recover the same resource volumes. See, e.g., Exhibit 5 at 5.
[17] Exhibit 4 at 3.

to $98.6 mm; an increase of $19.8 mm in potential value.[18] As expressed in Mr. Hopson's testimony, it is realistic to expect a recovery factor range from 30% to 70% in this area, while the R Kirk South Unit itself is estimated to yield a 61% recovery factor.[19] Thus, the evidence establishes that the value of the estimated additional recovery is expected to exceed the estimated additional costs incident to conducting unit operations.

iv. *The Unit Plan Meets the Requirements of Ohio Revised Code § 1509.28*

The Unit Plan proposed by Chesapeake meets the requirements set forth in Ohio Revised Code § 1509.28. The unit area is described in the Unit Agreement at Article 1, as well as on Exhibits A-1 and A-2 to the Unit Operating Agreement. The nature of the contemplated unit operations can be found generally in the Unit Agreement at Article 3, with greater specificity throughout the Unit Agreement and Unit Operating Agreement.[20] Unit production and unit expenses are allocated on a surface acreage basis as set forth in the Unit Agreement at Articles 3 through 5 (generally), except where otherwise allocated by the Unit Operating Agreement.[21] Payment of unit expenses is addressed generally in Article 3 of the Unit Agreement.[22] No provision for credits and charges related to contributions made by owners in the unit area regarding wells, tanks, pumps and other equipment for unit operations are addressed in the Unit Operating Agreement because none are contemplated.[23] The Unit Plan provides for various carries in the event a participant is unable to meet its financial obligations related to the unit – see, e.g., Article VI of the Unit Operating Agreement.[24] Voting provisions related to the supervision and conduct of unit operations are set forth in Article XVI of the Unit Operating Agreement, with each person having a vote that has a value corresponding to the percentage of unit expenses chargeable against that person's interest.[25] Commencement and termination of operations are addressed in Articles 11 and 12 of the Unit Agreement.

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[18] Exhibit 4 at 4.
[19] *Id.* at 4.
[20] See also, e.g., Exhibit 5 at 6-13.
[21] *Id.* at 6-8.
[22] *Id.* at 8.
[23] *Id.* at 10.
[24] *Id.* at 11.
[25] *Id.* at 12-13.

V.
APPROVALS

As of the filing of this Application, the Unit Plan has been agreed to or approved by approximately seventy-nine percent (79%) of Working Interest Owners.[26] See Exhibit 5 at 14, and Exhibit 6. This working interest owner approval exceeds the statutory minimum requirements set forth in Ohio Revised Code § 1509.28(B) for the Chief's order, if issued, to become effective.

VI.
HEARING

Ohio Revised Code § 1509.28 requires the Chief to hold a hearing to consider this Application, when requested by sixty-five percent (65%) of the owners of the land area underlying the proposed unit. Ohio Rev. Code § 1509.28(A). That threshold level is met here. See Note 2 above. Accordingly, Chesapeake respectfully requests that the Division schedule a hearing at an available hearing room located at the Division's Columbus complex on or before November 18, 2015, to consider the Application filed herein.

VII.
CONCLUSION

Ohio Revised Code § 1509.28 requires the Chief of the Division to issue an order for the unit operation of a pool – or a part thereof – if it is reasonably necessary to increase substantially the recovery of oil and gas, and the value of the estimated additional recovery from the unit's operations exceeds its additional costs. Chesapeake respectfully submits that the Application meets this standard, and that the terms and conditions of the Unit Plan are just and reasonable and satisfy the requirements of Ohio Revised Code § 1509.28(B). Chesapeake therefore asks the Chief to issue an order authorizing Chesapeake to operate the R Kirk South Unit according to the Unit Plan attached hereto.

Respectfully submitted,

_____

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
STEPTOE & JOHNSON PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215

Attorneys for Applicant,
Chesapeake Exploration, L.L.C.

[26] The Working Interest Owner Approval Forms for ARU is still pending as of the date of this Application. Chesapeake anticipates receiving ARU's working interest in this unit pursuant to mutually agreeable acreage trade.

UNIT AGREEMENT

THE R KIRK SOUTH UNIT
ROSS/SALEM/SPRINGFIELD TOWNSHIPS
JEFFERSON COUNTY, OHIO

THIS AGREEMENT, entered into as of this 21st day of July, 2015, by the parties subscribing, ratifying, approving, consenting to, or bound to the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto; and by those parties participating as a result of an order issued by the Division of Oil and Gas Resources Management ("Division") pursuant to Ohio Revised Code Section 1509.28.

W I T N E S S E T H:

WHEREAS, in the interest of the public welfare and to promote conservation and increase the ultimate recovery of oil, natural gas, and other substances from the R Kirk South Unit, in Ross/Salem/Springfield Townships, Jefferson County, Ohio, and to avoid waste and protect the correlative rights of the owners of interests therein, it is deemed necessary and desirable to enter into and approve this Agreement to create and establish a unit comprising the Unit Area under the applicable laws of the State of Ohio to unitize the Oil and Gas Rights in and to the Unitized Formation in order to conduct Unit Operations as herein provided; and,

WHEREAS, this Agreement allocates responsibility for the supervision and conduct of Unit Operations, and responsibility for the payment of Unit Expenses, to Working Interest Owners based upon each owner's pro rata interest in the unit acreage;

NOW THEREFORE, in consideration of the premises and of the mutual agreements herein contained, it is agreed and approved as follows:

ARTICLE 1: DEFINITIONS

As used in this Agreement:

Effective Date is the time and date this Agreement becomes effective as provided in Article 11.

Oil and Gas Rights are the rights to investigate, explore, prospect, drill, develop, market, transport, and operate within the Unit Area for the production of Unitized Substances, or to share in the production so obtained or the proceeds thereof, including without limitation the conducting of exploration, geologic and/or geophysical surveys by seismograph, core test, gravity and/or magnetic methods, the injecting of gas, water, air or other fluids into the Unitized Formation, the installation, operation and maintenance of monitoring facilities, the laying of pipelines, building of roads, tanks, power stations, telephone lines, and/or other structures.

Person is any individual, corporation, partnership, association, receiver, trustee, curator, executor, administrator, guardian, fiduciary, or other representative of any kind, any department, agency, or instrumentality of the state, or any governmental subdivision thereof, or any other entity capable of holding an interest in the Unitized Substances or Unitized Formation.

Royalty Interest means a right to or interest in any portion of the Unitized Substances or proceeds from the sale thereof other than a Working Interest.

Royalty Owner is a Person who owns a Royalty Interest.

Tract means the land identified by a tract number in Exhibit A-2 to the Unit Operating Agreement.

Tract Participation means the fractional interest shown on Exhibit A-2 to the Unit Operating Agreement for allocating Unitized Substances to a Tract.

Unit Area means the lands shown on the plat attached as Exhibit A-1 and identified on Exhibit A-2 to the Unit Operating Agreement, including also areas to which this Agreement may be extended as herein provided.

Unit Equipment means all personal property, lease and well equipment, plants, and other facilities and equipment taken over or otherwise acquired for the unit account for use in Unit Operations.

Unit Expense means all cost, expense, investment and indebtedness incurred by Working Interest Owners or Unit Operator pursuant to this Agreement and the Unit Operating Agreement for or on account of Unit Operations, but shall not include post-production costs attributable to Royalty Owner interests.

Unitized Formation means the subsurface portion of the Unit Area located from fifty feet above the top of the Utica Shale (at an approximate depth of 8,420 feet) to fifty feet below the base of the Point Pleasant formation (at an approximate depth of 8,787 feet).

Unit Operating Agreement means the modified A.A.P.L. Form 610-1989 Model Form Operating Agreement dated July 21, 2015, for the R Kirk South Unit, which is attached hereto. Such Unit Operating Agreement contains provisions for credits and charges among Working Interest Owners for their respective investments in, and expenses for, Unit Operations, including a provision, if necessary, for carrying any Person unable or electing not to participate in Unit Operations. In addition, the Unit Operating Agreement also contains provisions relating to the supervision and conduct of Unit Operations and the manner in which Working Interest Owners may vote. The Unit Operating Agreement is hereby confirmed and by reference made a part of this Agreement. In the event of a conflict between such agreements, the terms of the Unit Operating Agreement shall govern.

Unit Operations are all operations conducted pursuant to this Agreement and the Unit Operating Agreement.

Unit Operator is the Person designated by Working Interest Owners under the Unit Operating Agreement to conduct Unit Operations.

Unit Participation is the sum of the interests obtained by multiplying the Working Interest of a Working Interest Owner in each Tract by the Tract Participation of such Tract.

Unitized Substances are all oil, gas, gaseous substances, sulfur, condensate, distillate, and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Unitized Formation.

Working Interest means an interest in Unitized Substances in the Unit Area by virtue of a lease, operating agreement, fee title, or otherwise, including a carried interest, the owner of which is obligated to pay, either in cash or out of production or otherwise, a portion of the Unit Expense; however, Oil and Gas Rights that are free of a lease or other instrument creating a Working Interest and whose owner, under an Order by the Chief, either chooses to be treated as a Working Interest Owner or who is awarded a working interest by such Order shall be regarded as a Working Interest to the extent of seven-eighths (7/8) thereof and a Royalty Interest to the extent of the remaining one-eighth (1/8) thereof. Upon reaching a Unitization Order's prescribed payout period on a specific well, the owner of a Working Interest free of a lease or other instrument and created by virtue of the Unitization Order shall receive monthly payments on net production revenue equal to seven-eighths (7/8) of the owner's Unit Participation, while continuing the one-eighth (1/8) Royalty Interest. A Royalty Interest created out of a Working Interest subsequent to the participation of, subscription to, ratification of, approval by, or consent to this Agreement by the owner of such Working Interest shall continue to be subject to such Working Interest burdens and obligations that are stated in this Agreement and the Unit Operating Agreement.

Working Interest Owner is a Person who owns a Working Interest.

ARTICLE 2: CREATION AND EFFECT OF UNIT

Oil and Gas Rights Unitized. All Royalty Interests and Working Interests in Oil and Gas Rights in and to the lands identified on Exhibits A-1 and A-2 to the Unit Operating Agreement are hereby unitized insofar as, and only insofar as, the respective Oil and Gas Rights pertain to the Unitized Formation, so that Unit Operations may be conducted with respect to the Unitized Formation as if the Unit Area had been included in a single lease executed by all Royalty Owners, as lessors, in favor of all Working Interest Owners, as lessees, and as if the lease contained all of the provisions of this Agreement.

Personal Property Excepted. All lease and well equipment, materials, and other facilities heretofore or hereafter placed by any of the Working Interest Owners on the lands covered hereby shall be deemed to be and shall remain personal property belonging to, and may be removed by, Working Interest Owners with the prior consent of Unit Operator. The rights and interests therein, as among Working Interest Owners, are set forth in the Unit Operating Agreement.

Operations. If an order is issued granting Unit Operator the authority to conduct Unit Operations, the operations conducted pursuant to the order of the chief shall constitute a fulfillment of all the express or implied obligations of each lease or contract covering lands in the unit area to the extent of that compliance with such obligations cannot be had because of the order of the chief.

Continuation of Leases and Term Interests. Unit Operations conducted upon any part of the Unit Area or production of Unitized Substances from any part of the Unitized Formation, except for the purpose of determining payments to Royalty Owners, shall be considered as operations upon or production from each portion of each Tract, and such production or operations shall continue in effect each lease or term, mineral or Royalty Interest, as to all Tracts and formations covered or affected by this Unit Agreement just as if such Unit Operations had been conducted and a well had been drilled on and was producing from each portion of each Tract. It is agreed that each lease shall remain in full force and effect from the date of execution hereof until the Effective Date, and thereafter in accordance with its terms and this Agreement.

Titles Unaffected by Unitization. Nothing herein shall be construed to result in any transfer of title to Oil and Gas Rights by any Person to any other Person or to Unit Operator.

Pre-existing Conditions in Unit Area. Working Interest Owners shall not be liable for or assume any obligation with respect to (i) the restoration or remediation of any condition associated with the Unit Area that existed prior to the Effective Date of this Agreement, or (ii) the removal and/or plugging and abandonment of any wellbore, equipment, fixtures, facilities or other property located in, on or under the Unit Area prior to the Effective Date of this Agreement. Working Interest Owners reserve the right to elect, but shall not have the obligation, to use for injection and/or operational purposes any nonproducing or abandoned wells or dry holes, and any other wells completed in the Unitized Formation.

ARTICLE 3: UNIT OPERATIONS

Unit Operator. Unit Operator shall have the exclusive right to conduct Unit Operations, which shall conform to the provisions of this Agreement and the Unit Operating Agreement.

Unit Expenses. Except as otherwise provided in the Unit Operating Agreement, Unit Expenses shall be allocated to each Tract in the proportion that the surface acres of each Tract bears to the surface acres of the Unit Area, and shall be paid by the respective Working Interest Owners. Oil and Gas Rights that are free of a lease or other instrument creating a Working Interest and whose owner, under an Order by the Chief, either chooses to be treated as a Working Interest Owner or who is awarded a working interest by such Order shall be regarded as a Working Interest to the extent of seven-eighths (7/8) thereof and a Royalty Interest to the extent of the remaining one-eighth (1/8) thereof.

ARTICLE 4: TRACT PARTICIPATIONS

Tract Participations. The Tract Participation of each Tract is identified in Exhibit A-2 to the Unit Operating Agreement and shall be determined solely upon an acreage basis as the proportion that the Tract surface acreage bears to the total surface acreage of the Unit Area. The Tract Participation of each Tract has been calculated as follows: SURFACE ACRES IN EACH TRACT DIVIDED BY THE TOTAL SURFACE ACRES WITHIN THE UNIT AREA. The Tract Participations as shown in Exhibit A-2 to the Unit Operating Agreement are accepted and approved as being fair and equitable.

ARTICLE 5: ALLOCATION OF UNITIZED SUBSTANCES

Allocation of Unitized Substances. All Unitized Substances produced and saved shall be allocated to the several Tracts in accordance with the respective Tract Participations effective during the period that the Unitized Substances were produced. The amount of Unitized Substances allocated to each Tract, regardless of whether the amount is more or less than the actual production of Unitized Substances from the well or wells, if any, on such Tract, shall be deemed for all purposes to have been produced from such Tract.

Distribution Within Tracts. The Unitized Substances allocated to each Tract or portion thereof shall be distributed among, or accounted for to, the Persons entitled to share in the production from such Tract or portion thereof in the same manner, in the same proportions, and upon the same conditions as they would have participated and shared in the production from such Tract, or in the proceeds thereof, had this Agreement not been entered into, and with the same legal effect. If any Oil and Gas Rights in a Tract hereafter become divided and owned in

severalty as to different parts of the Tract, the owners of the divided interests, in the absence of an agreement providing for a different division, shall share in the Unitized Substances allocated to the Tract, or in the proceeds thereof, in proportion to the surface acreage of their respective parts of the Tract. Any royalty or other payment which depends upon per well production or pipeline runs from a well or wells on a Tract shall, after the Effective Date, be determined by dividing the Unitized Substances allocated to the Tract by the number of wells on the Tract capable of producing Unitized Substances on the Effective Date.

ARTICLE 6: USE OR LOSS OF UNITIZED SUBSTANCES

Use of Unitized Substances. Working Interest Owners may use or consume Unitized Substances for Unit Operations, including but not limited to, the injection thereof into the Unitized Formation.

Royalty Payments. No royalty, overriding royalty, production, or other payments shall be payable on account of Unitized Substances used, lost, or consumed in Unit Operations.

ARTICLE 7: TITLES

Warranty and Indemnity. Each Person who, by acceptance of produced Unitized Substances or the proceeds from a sale thereof, may claim to own a Working Interest or Royalty Interest in and to any Tract or in the Unitized Substances allocated thereto, shall be deemed to have warranted its title to such interest, and, upon receipt of the Unitized Substances or the proceeds from a sale thereof to the credit of such interest, shall indemnify and hold harmless all other Persons in interest from any loss due to failure, in whole or in part, of its title to any such interest.

Production Where Title is in Dispute. If the title or right of any Person claiming the right to receive in kind all or any portion of the Unitized Substances allocated to a Tract is in dispute, Unit Operator at the direction of Working Interest Owners may: Require that the Person to whom such Unitized Substances are delivered or to whom the proceeds from a sale thereof are paid furnish security for the proper accounting therefor to the rightful owner or owners if the title or right of such Person fails in whole or in part; or withhold and market the portion of Unitized Substances with respect to which title or right is in dispute, and hold the proceeds thereof until such time as the title or right thereto is established by a final judgment of a court of competent jurisdiction or otherwise to the satisfaction of Working Interest Owners, whereupon the proceeds so held shall be paid to the Person rightfully entitled thereto.

Transfer of Title. Any conveyance of all or any part of any interest owned by any Person hereto with respect to any Tract shall be made expressly subject to this Agreement. No change of title shall be binding upon Unit Operator, or upon any Person hereto other than the Person so transferring, until 7:00 a.m. on the first day of the calendar month next succeeding the date of receipt by Unit Operator of a certified copy of the recorded instrument evidencing such change in ownership.

ARTICLE 8: EASEMENTS, GRANTS, OR USE OF SURFACE

Grant of Easements. Subject to the terms and conditions of the various leases, Unit Operator shall have the right of ingress and egress along with the right to use as much of the surface of the land within the Unit Area as may be reasonably necessary for Unit Operations and the removal of Unitized Substances from the Unit Area.

Use of Water. Subject to the terms and conditions of the various leases, Unit Operator shall have and is hereby granted free use of water from the Unit Area for Unit Operations, except water from any well, lake, pond, or irrigation ditch of a Royalty Owner. Unit Operator may convert dry or abandoned wells in the Unit Area for use as water supply or disposal wells.

Surface Damages. Subject to the terms and conditions of the various leases, Working Interest Owners shall reimburse the owner for the market value prevailing in the area of growing crops, livestock, timber, fences, improvements, and structures on the Unit Area that are destroyed or damaged as a result of Unit Operations.

Unitized Property. Notwithstanding anything in this Article 8 to the contrary, and except where otherwise authorized by the Division, there shall be no Unit Operations conducted on the surface of any property located within the R Kirk South Unit, and there shall be no right of ingress and egress over and no right to use the surface waters of any surface lands located within the R Kirk South Unit, owned by an interest owner identified in Exhibit A-3(A) to the

Unit Operating Agreement.

ARTICLE 9: CHANGE OF TITLE

Covenant Running with the Land. This Agreement shall extend to, be binding upon, and inure to the benefit of, the respective heirs, devisees, legal representatives, successors, and assigns of the parties hereto, and shall constitute a covenant running with the lands, leases, and interests conveyed hereby.

Waiver of Rights of Partition. Each party to this Agreement understands and acknowledges, and is hereby deemed to covenant and agree, that during the term of this Agreement it will not resort to any action to, and shall not, partition Oil and Gas Rights, the Unit Area, the Unitized Formation, the Unitized Substances or the Unit Equipment, and to that extent waives the benefits of all laws authorizing such partition.

ARTICLE 10: RELATIONSHIPS OF PERSONS

No Partnership. All duties, obligations, and liabilities arising hereunder shall be several and not joint or collective. This Agreement is not intended to and shall not be construed to create an association or trust, or to impose a partnership or fiduciary duty, obligation, or liability. Each Person affected hereby shall be individually responsible for its own obligations.

No Joint or Cooperative Refining, Sale or Marketing. This Agreement is not intended and shall not be construed to provide, directly or indirectly, for any joint or cooperative refining, sale or marketing of Unitized Substances.

ARTICLE 11: EFFECTIVE DATE

Effective Date. This Agreement shall become effective, and operations may commence hereunder, as of the date of an effective order approving this unit by the Division in accordance with the provisions of Ohio Revised Code Section 1509.28; provided, however, that Working Interest Owners may terminate this Agreement in the event of a material modification by the Division of all or any part of this Agreement or the Unit Operating Agreement in such order by filing a notice of termination with the Division within thirty (30) days of such order becoming final and no longer subject to further appeal. In the event a dispute arises or exists with respect to this Agreement, the Unit Operating Agreement, or the order approving this unit issued by the Division, Unit Operator may, in its sole discretion, hold the revenues from the sale of Unitized Substances until such time as such dispute is resolved or, in the Unit Operator's opinion, it is appropriate to distribute such revenues.

ARTICLE 12: TERM

Term. This Agreement, unless sooner terminated in the manner hereinafter provided, shall remain in effect for five (5) years from the Effective Date and as long thereafter as Unitized Substances are produced, or are capable of being produced, in paying quantities from the Unit Area without a cessation of more than ninety (90) consecutive days, or so long as other Unit Operations are conducted without a cessation of more than ninety (90) consecutive days, unless sooner terminated by Working Interest Owners owning a combined Unit Participation of fifty-one percent (51%) or more whenever such Working Interest Owners determine that Unit Operations are no longer warranted. The date of any termination hereunder shall be known as the "Termination Date."

Effect of Termination. Upon termination of this Agreement, the further development and operation of the Unitized Formation as a unit shall cease. Each oil and gas lease and other agreement covering lands within the Unit Area shall remain in force for one hundred eighty (180) days after the date on which this Agreement terminates, and for such further period as is provided by the lease or other agreement. The relationships among owners of Oil and Gas Rights shall thereafter be governed by the terms and provisions of the leases and other instruments, not including this Agreement, affecting the separate Tracts.

Certificate of Termination. Upon termination of this Agreement, Unit Operator shall file with the Division and for record in the county or counties in which the land affected is located a certificate stating that this Agreement has terminated and the Termination Date.

Salvaging Equipment Upon Termination. If not otherwise granted by the leases or other instruments affecting the separate Tracts, Working Interest Owners shall have a period of six (6) months after the Termination Date within which to salvage and remove Unit Equipment.

ARTICLE 13: APPROVAL

Original, Counterpart, or Other Instrument. An owner of Oil and Gas Rights or its agent may approve this Agreement by signing the original, a counterpart thereof, or other instrument approving this Agreement. The signing of any such instrument shall have the same effect as if all Persons had signed the same instrument.

Commitment of Interests to Unit. The approval of this Agreement by a Person or their agent shall bind that Person and commit all interests owned or controlled by that Person as of the date of such approval, and additional interests thereafter acquired.

Joinder in Dual Capacity. Execution as herein provided by any Person, as either Working Interest Owner or a Royalty Owner, shall commit all interests owned or controlled by such Person as of the date of such execution and any additional interest thereafter acquired.

ARTICLE 14: MISCELLANEOUS

Determinations by Working Interest Owners. All decisions, determinations, or approvals by Working Interest Owners hereunder shall be made pursuant to the voting procedure of the Unit Operating Agreement unless otherwise provided herein.

Severability of Provisions. The provisions of this Agreement are severable and if any section, sentence, clause or part thereof is held to be invalid for any reason, such invalidity shall not be construed to affect the validity of the remaining provisions of this Agreement.

Laws and Regulations. This Agreement shall be governed by and subject to the laws of the State of Ohio, to the valid rules, regulations, orders and permits of the Division, and to all other applicable federal, state, and municipal laws, rules, regulations, orders, and ordinances. Any change of the Unit Area or any amendment to this Agreement or the Unit Operating Agreement shall be in accordance with Ohio law.

Submitted by:

CHESAPEAKE EXPLORATION, L.L.C.

By: _____

Robert S. Highsaw
Landman II – Appalachia South
Chesapeake Energy Corporation
6100 N. Western Avenue
P. O. Box 18496
Oklahoma City, Oklahoma 73154-0496
Tel. (405) 935-2289
E-mail: robert.highsaw@chk.com

This instrument prepared by:

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
STEPTOE & JOHNSON PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215
Tel. (614) 221-5100
E-mail:neal.pierce@steptoe-johnson.com

A.A.P.L. FORM 610 - 1989

MODEL FORM OPERATING AGREEMENT

OPERATING AGREEMENT

DATED

July 21 , **2015** ,
Year

OPERATOR **Chesapeake Exploration, L.L.C.**

CONTRACT AREA **The lands shown on the plat attached as Exhibit A-1 and described on Exhibit A-2 and generally known as the R Kirk South Unit.**

COUNTY OR PARISH OF **Jefferson** , STATE OF **Ohio**

UNIT NAME: R Kirk South

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AMERICAN ASSOCIATION OF PETROLEUM LANDMEN, 4100 FOSSIL CREEK BLVD. FORT WORTH, TEXAS, 76137, APPROVED FORM.

A.A.P.L. NO. 610 – 1989

Exhibit 2

TABLE OF CONTENTS

Article	Title	Page
I.	**DEFINITIONS**	1
II.	**EXHIBITS**	12
III.	**INTERESTS OF PARTIES**	23
	A. OIL AND GAS INTERESTS:	23
	B. INTERESTS OF PARTIES IN COSTS AND PRODUCTION:	23
	C. SUBSEQUENTLY CREATED INTERESTS:	23
IV.	**TITLES**	23
	A. TITLE EXAMINATION:	23
	B. LOSS OR FAILURE OF TITLE:	35
	1. Failure of Title	35
	~~2. Loss by Non-Payment or Erroneous Payment of Amount Due~~	~~35~~
	3. Other Losses	35
	4. Curing Title	35
V.	**OPERATOR**	46
	A. DESIGNATION AND RESPONSIBILITIES OF OPERATOR:	46
	B. RESIGNATION OR REMOVAL OF OPERATOR AND SELECTION OF SUCCESSOR:	46
	1. Resignation or Removal of Operator	46
	2. Selection of Successor Operator	46
	3. Effect of Bankruptcy	46
	C. EMPLOYEES AND CONTRACTORS:	46
	D. RIGHTS AND DUTIES OF OPERATOR:	46
	1. Competitive Rates and Use of Affiliates	46
	2. Discharge of Joint Account Obligations	46
	3. Protection from Liens	46
	4. Custody of Funds	57
	5. Access to Contract Area and Records	57
	6. Filing and Furnishing Governmental Reports	57
	7. Drilling and Testing Operations	57
	8. Cost Estimates	57
	9. Insurance	57
VI.	**DRILLING AND DEVELOPMENT**	57
	A. INITIAL WELL:	57
	B. SUBSEQUENT OPERATIONS:	58
	1. Proposed Operations	58
	2. Operations by Less Than All Parties	69
	3. Stand-By Costs	711
	4. Deepening	812
	5. Sidetracking	812
	6. Order of Preference of Operations	812
	7. Conformity to Spacing Pattern	913
	8. Paying Wells	913
	C. COMPLETION OF WELLS; REWORKING AND PLUGGING BACK:	913
	1. Completion	913
	2. Rework, Recomplete or Plug Back	913
	D. OTHER OPERATIONS:	913
	E. ABANDONMENT OF WELLS:	913
	1. Abandonment of Dry Holes	913
	2. Abandonment of Wells That Have Produced	1014
	~~3. Abandonment of Non-Consent Operations~~	~~1014~~
	F. TERMINATION OF OPERATIONS:	1014
	G. TAKING PRODUCTION IN KIND:	1014
	(Option 1) Gas Balancing Agreement	1014
	~~(Option 2) No Gas Balancing Agreement~~	~~11~~
VII.	**EXPENDITURES AND LIABILITY OF PARTIES**	1115
	A. LIABILITY OF PARTIES:	1115
	B. LIENS AND SECURITY INTERESTS:	1216
	C. ADVANCES:	1216
	D. DEFAULTS AND REMEDIES:	1216
	1. Suspension of Rights	1317
	2. Suit for Damages	1317
	3. Deemed Non-Consent	1317
	4. Advance Payment	1317
	5. Costs and Attorneys' Fees	1317
	E. RENTALS, SHUT-IN WELL PAYMENTS AND MINIMUM ROYALTIES:	1317
	F. TAXES:	1317
VIII.	**ACQUISITION, MAINTENANCE OR TRANSFER OF INTEREST**	1418
	A. SURRENDER OF LEASES:	1418
	B. RENEWAL OR EXTENSION OF LEASES:	1418
	C. ACREAGE OR CASH CONTRIBUTIONS:	1418

TABLE OF CONTENTS

D. ASSIGNMENT; MAINTENANCE OF UNIFORM INTEREST: ..... ~~15~~**19**
E. WAIVER OF RIGHTS TO PARTITION: ..... ~~15~~**19**
~~F. PREFERENTIAL RIGHT TO PURCHASE: ..... 15~~
IX. INTERNAL REVENUE CODE ELECTION ..... ~~15~~**19**
X. CLAIMS AND LAWSUITS ..... ~~15~~**19**
XI. FORCE MAJEURE ..... ~~16~~**20**
XII. NOTICES ..... ~~16~~**20**
XIII. TERM OF AGREEMENT ..... ~~16~~**20**
XIV. COMPLIANCE WITH LAWS AND REGULATIONS ..... ~~16~~**20**
A. LAWS, REGULATIONS AND ORDERS: ..... ~~16~~**20**
B. GOVERNING LAW: ..... ~~16~~**20**
C. REGULATORY AGENCIES: ..... ~~16~~**20**
XV. MISCELLANEOUS ..... ~~17~~**21**
A. EXECUTION: ..... ~~17~~**21**
B. SUCCESSORS AND ASSIGNS: ..... ~~17~~**21**
C. COUNTERPARTS: ..... ~~17~~**21**
D. SEVERABILITY ..... ~~17~~**21**
XVI. OTHER PROVISIONS ..... ~~17~~**21**

OPERATING AGREEMENT

THIS AGREEMENT, entered into by and between **Chesapeake Exploration, L.L.C., an Oklahoma limited liability company**, hereinafter designated and referred to as "Operator," and the signatory party or parties other than Operator, sometimes hereinafter referred to individually as "Non-Operator," and collectively as "Non-Operators."

WITNESSETH:

WHEREAS, the parties to this agreement are owners of Oil and Gas Leases and/or Oil and Gas Interests in the land identified in Exhibit "A," and the parties hereto have reached an agreement to explore and develop these Leases and/or Oil and Gas Interests for the production of Oil and Gas to the extent and as hereinafter provided,

NOW, THEREFORE, it is agreed as follows:

ARTICLE I.

DEFINITIONS

As used in this agreement, the following words and terms shall have the meanings here ascribed to them:

A. The term "AFE" shall mean an Authority for Expenditure prepared by a party to this agreement for the purpose of estimating the costs to be incurred in conducting an operation hereunder.

B. The term "Completion" or "Complete" shall mean a single operation intended to complete a well as a producer of Oil and Gas in one or more Zones, including, but not limited to, the setting of production casing, perforating, well stimulation and production testing conducted in such operation.

C. The term "Contract Area" shall mean all of the lands, Oil and Gas Leases and/or Oil and Gas Interests intended to be Developed and operated for Oil and Gas purposes under this agreement. Such lands, Oil and Gas Leases and Oil and Gas Interests are described in Exhibit "A", **Exhibit "A-1", Exhibit "A-2", and Exhibit "A-3". See also Article XVI.K.**

D. The term "Deepen" **, except as provided in Article I.X,** shall mean a single operation whereby a well is drilled to an objective Zone below the deepest Zone in which the well was previously drilled, or below the Deepest Zone proposed in the associated AFE, whichever is the lesser.

E. The terms "Drilling Party" and "Consenting Party" shall mean a party who agrees to join in and pay its share of the cost of any operation conducted under the provisions of this agreement.

F. The term "Drilling Unit" shall mean the area fixed for the drilling of one ~~well~~ **or more wells** by order or rule of any state or federal body having authority. If a Drilling Unit is not fixed by any such rule or order, a Drilling Unit shall be the drilling unit as established by the **Operator in its sole discretion so long as consistent with any restrictions in the Oil and Gas Leases or by applicable law,** ~~pattern of drilling in the Contract Area unless fixed by express agreement of the Drilling Parties.~~ **See also Article XVI.K.**

G. The term "Drillsite" shall mean the Oil and Gas Lease or Oil and Gas Interest on which a proposed well is to be located.

H. The term "Initial Well" shall mean the well required to be drilled by the parties hereto as provided in Article VI.A.

I. The term "Non-Consent Well" shall mean a well in which less than all parties have conducted an operation as provided in Article VI.B.2.

J. The terms "Non-Drilling Party" and "Non-Consenting Party" shall mean a party who elects not to participate in a proposed operation.

K. The term "Oil and Gas" shall mean oil, gas, casinghead gas, gas condensate, and/or all other liquid or gaseous hydrocarbons and other marketable substances produced therewith, unless an intent to limit the inclusiveness of this term is specifically stated.

L. The term "Oil and Gas Interests" or "Interests" shall mean unleased fee and mineral interests in Oil and Gas in tracts of land lying within the Contract Area which are owned by parties to this agreement.

M. The terms "Oil and Gas Lease," "Lease" and "Leasehold" shall mean the oil and gas leases or interests therein covering tracts of land lying within the Contract Area which are owned by the parties to this agreement.

N. The term "Plug Back" **, except as provided in Article I.Y,** shall mean a single operation whereby a deeper Zone is abandoned in order to attempt a Completion in a shallower Zone.

O. The term "Recompletion" or "Recomplete" shall mean an operation whereby a Completion in one Zone is abandoned in order to attempt a Completion in a different Zone within the existing wellbore.

P. The term "Rework" shall mean an operation conducted in the wellbore of a well after it is Completed to secure, restore, or improve production in a Zone which is currently open to production in the wellbore. Such operations include, but are not limited to, well stimulation operations but exclude any routine repair or maintenance work or drilling, Sidetracking, Deepening, Completing, Recompleting, or Plugging Back of a well.

Q. The term "Sidetrack" **, in the case of Vertical Wells,** shall mean the directional control and intentional deviation of a well from vertical so as to change the bottom hole location **and, in the case of Horizontal Wells (defined hereinafter), an operation by which a lateral wellbore is drilled off of the horizontal wellbore, in each case** unless done to straighten the hole or drill around junk in the hole **or** to overcome other mechanical difficulties.

R. The term "Zone" shall mean a stratum of earth containing or thought to contain a common accumulation of Oil and Gas separately producible from any other common accumulation of Oil and Gas.

S. The term "Lateral" shall mean that portion of a wellbore that deviates from approximate vertical orientation to approximate horizontal orientation and all wellbore beyond such deviation to Total Measured Depth.

T. The term "Vertical Well" shall mean any well other than a "Horizontal Well".

U. The term "Horizontal Well" shall mean a well containing a single Lateral in which the wellbore deviates at an angle of at least eighty degrees (80°) from true vertical and with a horizontal projection exceeding one hundred feet (100') measured from the initial point of penetration into a specific geological interval.

V. The term "Multi-lateral Well" shall mean a Horizontal Well which contains more than one Lateral.

W. The term "Total Measured Depth," when used in connection with a Multi-lateral or Horizontal Well, shall mean the distance from the surface of the ground to the terminus of the wellbore, as measured along the wellbore. Each Lateral taken together with the common vertical wellbore shall be considered a single wellbore and shall have a corresponding Total Measured Depth. When the proposed operation(s) is the drilling of, or operation on, a Multi-lateral or Horizontal Well, the term "depth" or "total depth" wherever used in the Agreement shall be deemed to read "Total Measured Depth" insofar as it applies to such well.

X. The term "Deepen" when used in conjunction with a Multi-lateral or Horizontal Well shall mean an operation whereby a lateral is drilled to a distance greater than the distance set out in the well proposal approved by the participating parties. This shall include reentry of a Vertical Well to convert the well to a Horizontal Well. See also Article XVI.E.2.

Y. For the purposes of this Agreement, as to a Multi-lateral or Horizontal Well, the term "Plug Back" shall mean an

operation to test or complete the well at a stratigraphically shallower geological horizon in which the operation has been or is being completed and which is not within an existing Lateral.

Z. The term "affiliate" shall mean any Person that, directly or indirectly, through one or more intermediaries, Controls or is Controlled by, or is under common Control with, another Person.

AA. The term "Control" and its derivatives with respect to any Person shall means the possession, directly or indirectly, of the power, directly or indirectly, to direct or cause the direction of the management or policies of the controlled Person, whether through the ownership of equity interests in or voting rights attributable to the equity interests in such Person, by contract or agency, by the general partner of a Person that is a partnership, or otherwise.

BB. The term "Person" shall mean any individual, corporation, company, partnership, limited partnership, limited liability company, trust, estate, governmental authority or any other entity.

Unless the context otherwise clearly indicates, words used in the singular include the plural, the word "person" includes natural and artificial persons, the plural includes the singular, and any gender includes the masculine, feminine, and neuter.

ARTICLE II.
EXHIBITS

The following exhibits, as indicated below and attached hereto, are incorporated in and made a part hereof:

_____ A. Exhibit "A," – **shall also mean all sub-exhibits as appropriate, including Exhibits "A-1", "A-2", and "A-3", and** shall include the following information:

(1) Description of lands subject to this agreement,

(2) Restrictions, if any, as to depths, formations, or substances,

(3) Parties to agreement with addresses and telephone numbers for notice purposes,

(4) Percentages or fractional interests of parties to this agreement,

(5) Oil and Gas Leases and/or Oil and Gas Interests subject to this agreement. **(also included on Exhibit "A-2")**

(6) Burdens on production.

(7) Addresses of parties for notice purposes (also included on Exhibit "A-3")

_____ **A-1. Plat of Contract Area.**

_____ **A-2. List of Contract Area Leases.**

_____ B. Exhibit "B," Form of Lease.

_____ C. Exhibit "C," Accounting Procedure.

_____ D. Exhibit "D," Insurance.

_____ E. Exhibit "E," Gas Balancing Agreement.

~~_____ F. Exhibit "F," Non-Discrimination and Certification of Non-Segregated Facilities.~~

~~_____ G. Exhibit "G," Tax Partnership.~~

~~_____ F. Other: **Model Form Recording Supplement to Operating Agreement and Financing Agreement.**~~

If any provision of any exhibit, except Exhibit~~s~~ "E~~,~~" ~~"F," and "G,"~~ is inconsistent with any provision contained in the body of this agreement, the provisions in the body of this agreement shall prevail.

ARTICLE III.
INTERESTS OF PARTIES

A. Oil and Gas Interests:

If any party owns **or hereafter acquires** / an Oil and Gas Interest in the Contract Area, that Interest shall be treated for all purposes of this agreement and during the term hereof as if it were covered by the form of Oil and Gas Lease attached hereto as Exhibit "B," and the owner thereof shall be deemed to own both royalty interest in such lease and the interest of the lessee thereunder.

B. Interests of Parties in Costs and Production:

Unless changed by other provisions, all costs and liabilities incurred in operations under this agreement shall be borne and paid, and all equipment and materials acquired in operations on the Contract Area shall be owned, by the parties as their interests are set forth in Exhibit "A." In the same manner, the parties shall also own all production of Oil and Gas from the Contract Area subject, however, to the payment of royalties and other burdens on production as **subject to burdens of record** ~~described hereafter~~.

Regardless of which party has contributed any Oil and Gas Lease or Oil and Gas Interest on which royalty or other burdens may be payable and except as otherwise expressly provided in this agreement, each party shall pay or deliver, or cause to be paid or delivered, all burdens on its share of the production from the Contract Area **as subject to burdens of record** ~~up to, but not in excess of~~ and shall indemnify, defend and hold the other parties free from any liability therefor. Except as otherwise expressly provided in this agreement, if any party has contributed hereto any Lease or Interest which is burdened with any royalty, overriding royalty, production payment or other burden on production in excess of the amounts stipulated above, such party so burdened shall assume and alone bear all such excess obligations and shall indemnify, defend and hold the other parties hereto harmless from any and all claims attributable to such excess burden. However, so long as the Drilling Unit for the productive Zone(s) is identical with the Contract Area, each party shall pay or deliver, or cause to be paid or delivered, all burdens on production from the Contract Area due under the terms of the Oil and Gas Lease(s) which such party has contributed to this agreement, and shall indemnify, defend and hold the other parties free from any liability therefor.

No party shall ever be responsible, on a price basis higher than the price received by such party, to any other party's lessor or royalty owner, and if such other party's lessor or royalty owner should demand and receive settlement on a higher price basis, the party contributing the affected Lease shall bear the additional royalty burden attributable to such higher price.

Nothing contained in this Article III.B. shall be deemed an assignment or cross-assignment of interests covered hereby, and in the event two or more parties contribute to this agreement jointly owned Leases, the parties' undivided interests in said Leaseholds shall be deemed separate leasehold interests for the purposes of this agreement.

C. Subsequently Created Interests:

If any party has contributed hereto a Lease or Interest that is burdened with an assignment of production given as security for the payment of money, or if, after the date of this agreement, any party creates an overriding royalty, production payment, net profits interest, assignment of production or other burden payable out of production attributable to its working interest hereunder, such burden shall be deemed a "Subsequently Created Interest." Further, if any party has contributed hereto a Lease or Interest burdened with an overriding royalty, production payment, net profits interests, or other burden payable out of production created prior to the date of this agreement, and such burden **is not recorded or is not referenced by another recorded instrument sufficient for notice purposes in the county records of the applicable county or** is not shown on Exhibit "A," such burden also shall be deemed a Subsequently Created Interest to the extent such burden causes the burdens on such party's Lease or Interest to exceed the amount stipulated in Article III.B. above.

The party whose interest is burdened with the Subsequently Created Interest (the "Burdened Party") shall assume and alone bear, pay and discharge the Subsequently Created Interest and shall indemnify, defend and hold harmless the other parties from and against any liability therefor. Further, if the Burdened Party fails to pay, when due, its share of expenses chargeable hereunder, all provisions of Article VII.B. shall be enforceable against the Subsequently Created Interest in the same manner as they are enforceable against the working interest of the Burdened Party. If the Burdened Party is required under this agreement to assign or relinquish to any other party, or parties, all or a portion of its working interest and/or the production attributable thereto, said other party, or parties, shall receive said assignment and/or production free and clear of said Subsequently Created Interest, and the Burdened Party shall indemnify, defend and hold harmless said other party, or parties, from any and all claims and demands for payment asserted by owners of the Subsequently Created Interest.

ARTICLE IV.
TITLES

A. Title Examination:

Title examination shall be made on the **wellbore path and** / Drillsite of any proposed well prior to commencement of drilling operations and, **thereafter** / if ~~a majority in interest of the Drilling Parties so requests or~~ Operator so elects, title examination shall be made on the entire Drilling Unit, or maximum anticipated Drilling Unit, of the well. The opinion will include the ownership of the working interest, minerals, royalty, overriding royalty and production payments under the applicable Leases. Each party contributing Leases and/or Oil and Gas Interests to be included in the Drillsite or Drilling Unit, if appropriate, shall furnish to Operator all abstracts (including federal lease status reports), title opinions, title papers and curative material in its possession free of charge. All such information not in the possession of or made available to Operator by the parties, but necessary for the examination of the title, shall be obtained by Operator. Operator shall cause title to be examined by attorneys on its staff or by outside attorneys. Copies of all title opinions shall be furnished to each Drilling Party. Costs incurred by Operator in procuring abstracts, fees paid ~~outside~~ attorneys **and field landmen and title specialists** / for title examination (including preliminary, supplemental, shut-in royalty opinions and division order title opinions) and other direct charges as provided in Exhibit "C" shall be borne by the Drilling Parties in the proportion that the interest of each Drilling Party bears to the total interest of all Drilling Parties as such interests appear in Exhibit "A." Operator shall make no charge for services rendered by its staff attorneys or other personnel in the performance of the above functions~~.~~ **that exceeds prevailing rates in the area. Operator may use staff field landmen and title specialists for abstracting and staff attorneys for title examination if such personnel are employed specifically for this purpose and are billed at rates no higher than third party rates billed for similar services in the state where the services are rendered. Operator may also charge a reasonable digital abstracting fee per tract if Operator has imaged and indexed the county records in which the Contract Area is located.**

Each party shall be responsible for securing curative matter and pooling amendments or agreements required in connection with Leases or Oil and Gas Interests contributed by such party. Operator shall be responsible for the preparation

and recording of pooling designations or declarations and communitization agreements as well as the conduct of hearings before governmental agencies for the securing of spacing or pooling orders or any other orders necessary or appropriate to the conduct of operations hereunder. This shall not prevent any party from appearing on its own behalf at such hearings. Costs incurred by Operator, including fees paid to outside attorneys, which are associated with hearings before governmental agencies, and which costs are necessary and proper for the activities contemplated under this agreement, shall be direct charges to the joint account and shall not be covered by the administrative overhead charges as provided in Exhibit "C."

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Operator shall make no charge for services rendered by its staff attorneys or other personnel in the performance of the above functions~~.~~**, except as provided herein.**

No well shall be drilled on the Contract Area until after (1) the title to the Drillsite / ~~or Drilling Unit, if appropriate, has~~ **and wellbore path have** been examined as above provided, and (2) the title has been approved by the examining attorney / or title has been accepted by ~~all of the Drilling Parties in such well.~~ **engaged or employed by the operator the Operator.**

B. Loss or Failure of Title:

1. Failure of Title: Should any Oil and Gas Interest or Oil and Gas Lease be lost through failure of title, which results in a reduction of interest from that shown on Exhibit "A," the party credited with contributing the affected Lease or Interest (including, if applicable, a successor in interest to such party) shall have ninety (90) days from final determination of title failure to acquire a new lease or other instrument curing the entirety of the title failure, which acquisition will not be subject to Article VIII.B., and failing to do so, this agreement, nevertheless, shall continue in force as to all remaining Oil and Gas Leases and Interests; and,

(a) The party credited with contributing the Oil and Gas Lease or Interest affected by the title failure (including, if applicable, a successor in interest to such party) shall bear alone the entire loss and it shall not be entitled to recover from Operator or the other parties any development or operating costs which it may have previously paid or incurred, but there shall be no additional liability on its part to the other parties hereto by reason of such title failure;

(b) There shall be no retroactive adjustment of expenses incurred or revenues received from the operation of the Lease or Interest which has failed, but the interests of the parties contained on Exhibit "A" shall be revised on an acreage basis, as of the time it is determined finally that title failure has occurred, so that the interest of the party whose Lease or Interest is affected by the title failure will thereafter be reduced in the Contract Area by the amount of the Lease or Interest failed;

(c) If the proportionate interest of the other parties hereto in any producing well previously drilled on the Contract Area is increased by reason of the title failure, the party who bore the costs incurred in connection with such well attributable to the Lease or Interest which has failed shall receive the proceeds attributable to the increase in such interest (less costs and burdens attributable thereto) until it has been reimbursed for unrecovered costs paid by it in connection with such well attributable to such failed Lease or Interest;

(d) Should any person not a party to this agreement, who is determined to be the owner of any Lease or Interest which has failed, pay in any manner any part of the cost of operation, development, or equipment, such amount shall be paid to the party or parties who bore the costs which are so refunded;

(e) Any liability to account to a person not a party to this agreement for prior production of Oil and Gas which arises by reason of title failure shall be borne severally by each party (including a predecessor to a current party) who received production for which such accounting is required based on the amount of such production received, and each such party shall severally indemnify, defend and hold harmless all other parties hereto for any such liability to account;

(f) No charge shall be made to the joint account for legal expenses, fees or salaries in connection with the defense of the Lease or Interest claimed to have failed, but if the party contributing such Lease or Interest hereto elects to defend its title it shall bear all expenses in connection therewith; and

(g) If any party is given credit on Exhibit "A" to a Lease or Interest which is limited solely to ownership of an interest in the wellbore of any well or wells and the production therefrom, such party's absence of interest in the remainder of the Contract Area shall be considered a Failure of Title as to such remaining Contract Area unless that absence of interest is reflected on Exhibit "A."

~~2. Loss by Non-Payment or Erroneous Payment of Amount Due: If, through mistake or oversight, any rental, shut-in well payment, minimum royalty or royalty payment, or other payment necessary to maintain all or a portion of an Oil and Gas Lease or interest is not paid or is erroneously paid, and as a result a Lease or Interest terminates, there shall be no monetary liability against the party who failed to make such payment. Unless the party who failed to make the required payment secures a new Lease or Interest covering the same interest within ninety (90) days from the discovery of the failure to make proper payment, which acquisition will not be subject to Article VIII.B., the interests of the parties reflected on Exhibit "A" shall be revised on an acreage basis, effective as of the date of termination of the Lease or Interest involved, and the party who failed to make proper payment will no longer be credited with an interest in the Contract Area on account of ownership of the Lease or Interest which has terminated. If the party who failed to make the required payment shall not have been fully reimbursed, at the time of the loss, from the proceeds of the sale of Oil and Gas attributable to the lost Lease or Interest, calculated on an acreage basis, for the development and operating costs previously paid on account of such Lease or Interest, it shall be reimbursed for unrecovered actual costs previously paid by it (but not for its share of the cost of any dry hole previously drilled or wells previously abandoned) from so much of the following as is necessary to effect reimbursement:~~

~~(a) Proceeds of Oil and Gas produced prior to termination of the Lease or Interest, less operating expenses and lease burdens chargeable hereunder to the person who failed to make payment, previously accrued to the credit of the lost Lease or Interest, on an acreage basis, up to the amount of unrecovered costs;~~

~~(b) Proceeds of Oil and Gas, less operating expenses and lease burdens chargeable hereunder to the person who failed to make payment, up to the amount of unrecovered costs attributable to that portion of Oil and Gas thereafter produced and marketed (excluding production from any wells thereafter drilled) which, in the absence of such Lease or Interest termination, would be attributable to the lost Lease or Interest on an acreage basis and which as a result of such Lease or Interest termination is credited to other parties, the proceeds of said portion of the Oil and Gas to be contributed by the other parties in proportion to their respective interests reflected on Exhibit "A"; and,~~

~~(c) Any monies, up to the amount of unrecovered costs, that may be paid by any party who is, or becomes, the owner of the Lease or Interest lost, for the privilege of participating in the Contract Area or becoming a party to this agreement.~~

3. Other Losses: All losses of Leases or Interests committed to this agreement, other than those set forth in Articles IV.B.1. and IV.B.2. above, shall be joint losses and shall be borne by all parties in proportion to their interests shown on Exhibit "A." This shall include but not be limited to the loss of any Lease or Interest through failure to develop or because express or implied covenants have not been performed (other than performance which requires only the payment of money), and the loss of any Lease by expiration at the end of its primary term if it is not renewed or extended. There shall be no readjustment of interests in the remaining portion of the Contract Area on account of any joint loss.

4. Curing Title: In the event of a Failure of Title under Article IV.B.1. or a loss of title under Article IV.B.2. above, any Lease or Interest acquired by any party hereto (other than the party whose interest has failed or was lost) during the ninety (90) day period provided by Article IV.B.1. and Article IV.B.2. above covering all or a portion of the interest that has failed or was lost shall be offered at cost to the party whose interest has failed or was lost, and the provisions of Article VIII.B. shall not apply to such acquisition.

ARTICLE V.

OPERATOR

A. Designation and Responsibilities of Operator:

Chesapeake Exploration L.L.C., by and though its agent Chesapeake Operating, Inc., shall be the Operator of the Contract Area, and shall conduct and direct and have full control of all operations on the Contract Area as permitted and required by, and within the limits of this agreement. In its performance of services hereunder for the Non-Operators, Operator shall be an independent contractor not subject to the control or direction of the Non-Operators except as to the type of operation to be undertaken in accordance with the election procedures contained in this agreement. Operator shall not be deemed, or hold itself out as, the agent of the Non-Operators with authority to bind them to any obligation or liability assumed or incurred by Operator as to any third party. Operator shall conduct its activities under this agreement as a reasonable prudent operator, in a good and workmanlike manner, with due diligence and dispatch, in accordance with good oilfield practice, and in compliance with applicable law and regulation, but in no event shall it have any liability as Operator to the other parties **, their officers, employees or agents,** / for losses sustained or liabilities incurred except such as may result from gross negligence or willful misconduct.

B. Resignation or Removal of Operator and Selection of Successor:

1. Resignation or Removal of Operator: Operator may resign at any time by giving written notice thereof to Non-Operators. If Operator terminates its legal existence, no longer owns an interest hereunder in the Contract Area, or is no longer capable of serving as Operator, Operator shall be deemed to have resigned without any action by Non-Operators, except the selection of a successor. Operator may be removed only for good cause by the affirmative vote of Non-Operators owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting interest of Operator; such vote shall not be deemed effective until a written notice has been delivered to the Operator by a Non-Operator detailing the alleged default and Operator has failed to cure the default within thirty (30) days from its receipt of the notice or, if the default concerns an operation then being conducted, within forty-eight (48) hours of its receipt of the notice. For purposes hereof, "good cause" shall mean not only gross negligence or willful misconduct but also the material breach of or inability to meet the standards of operation contained in Article V.A. or material failure or inability to perform its obligations under this agreement.

Subject to Article VII.D.1., such resignation or removal shall not become effective until 7:00 o'clock A.M. on the first day of the calendar month following the expiration of ninety (90) days after the giving of notice of resignation by Operator or action by the Non-Operators to remove Operator, unless a successor Operator has been selected and assumes the duties of Operator at an earlier date. Operator, after effective date of resignation or removal, shall be bound by the terms hereof as a Non-Operator. A change of a corporate name or structure of Operator or transfer of Operator's interest to any **affiliate,** / single subsidiary, parent or successor corporation shall not be the basis for removal of Operator.

2. Selection of Successor Operator: Upon the resignation or removal of Operator under any provision of this agreement, a successor Operator shall be selected by the parties. The successor Operator shall be selected from the parties owning an interest in the Contract Area at the time such successor Operator is selected. The successor Operator shall be selected by the affirmative vote of ~~two (2) or more~~ parties owning a majority interest based on ownership as shown on Exhibit "A"; provided, however, if an Operator which has been removed or is deemed to have resigned **or any of its affiliates** / fails to vote or votes only ~~to succeed itself,~~ **for itself or an affiliate,** / the successor Operator shall be selected by the affirmative vote of the party or parties owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting interest of the Operator that was removed or resigned **and its affiliates and, provided further, that the requirement for two (2) or more parties shall not apply in the event that two (2) or fewer parties are entitled to vote.** /. The former Operator shall promptly deliver to the successor Operator all records and data relating to the operations conducted by the former Operator to the extent such records and data are not already in the possession of the successor operator. Any cost of obtaining or copying the former Operator's records and data shall be charged to the joint account.

3. Effect of Bankruptcy: If Operator becomes insolvent, bankrupt or is placed in receivership, it shall be deemed to have resigned without any action by Non-Operators, except the selection of a successor. If a petition for relief under the federal bankruptcy laws is filed by or against Operator, and the removal of Operator is prevented by the **terms of the Bankruptcy Code or actions of the federal bankruptcy court, then, to the extent allowed by law,** / ~~federal bankruptcy court,~~ all Non-Operators and Operator shall comprise an interim operating committee to serve until Operator has elected to reject or assume this agreement pursuant to the Bankruptcy Code, and an election to reject this agreement by Operator as a debtor in possession, or by a trustee in bankruptcy, shall be deemed a resignation as Operator without any action by Non-Operators, except the selection of a successor. During the period of time the operating committee controls operations, all actions shall require the approval of two (2) or more parties owning a majority interest based on ownership as shown on Exhibit "A." In the event there are only two (2) parties to this agreement, during the period of time the operating committee controls operations, a third party acceptable to Operator, Non-Operator and the federal bankruptcy court shall be selected as a member of the operating committee, and all actions shall require the approval of two (2) members of the operating committee without regard for their interest in the Contract Area based on Exhibit "A."

C. Employees and Contractors:

The number of employees or contractors used by Operator in conducting operations hereunder, their selection, and the hours of labor and the compensation for services performed shall be determined Operator, and all such employees or contractors shall be the employees or contractors of Operator.

D. Rights and Duties of Operator:

1. Competitive Rates and Use of Affiliates: All **operations conducted in** / ~~wells drilled on~~ the Contract Area shall be ~~drilled~~ **conducted** / on a competitive contract basis at the usual rates prevailing in the **state where the services were rendered** / ~~area~~. If it so desires, Operator may employ its own tools and equipment in ~~the drilling of wells~~ **performing such operations** /, but its charges therefor shall not exceed the prevailing rates in the **state where the services were rendered** / ~~area and the rate of such charges shall be agreed upon by the parties in writing before drilling operations are commenced,~~ and such work shall be performed by Operator under the same terms and conditions as are customary and usual in the area in contracts of independent contractors who are doing work of a similar nature. All work performed or materials supplied by affiliates or related parties of Operator shall be performed or supplied at competitive rates, pursuant to written agreement, and in accordance with customs and standards prevailing in the industry.

2. Discharge of Joint Account Obligations: Except as herein otherwise specifically provided, Operator shall promptly pay and discharge expenses incurred in the development and operation of the Contract Area pursuant to this agreement and shall charge each of the parties hereto with their respective proportionate shares upon the expense basis provided in Exhibit "C." Operator shall keep an accurate record of the joint account hereunder, showing expenses incurred and charges and credits made and received.

3. Protection from Liens: Operator shall pay, or cause to be paid, as and when they become due and payable, all accounts of contractors and suppliers and wages and salaries for services rendered or performed, and for materials supplied on, to or in respect of the Contract Area or any operations for the joint account thereof, and shall keep the Contract Area free from

liens and encumbrances resulting therefrom except for those resulting from a bona fide dispute as to services rendered or materials supplied.

4. Custody of Funds: Operator shall hold for the account of the Non-Operators any funds of the Non-Operators advanced or paid to the Operator, either for the conduct of operations hereunder or as a result of the sale of production from the Contract Area, and such funds shall remain the funds of the Non-Operators on whose account they are advanced or paid until used for their intended purpose or otherwise delivered to the Non-Operators or applied toward the payment of debts as provided in Article VII.B. Nothing in this paragraph shall be construed to establish a fiduciary relationship between Operator and Non-Operators for any purpose other than to account for Non-Operator funds as herein specifically provided. Nothing in this paragraph shall require the maintenance by Operator of separate accounts for the funds of Non-Operators unless the parties otherwise specifically agree.

5. Access to Contract Area and Records: Operator shall, except as otherwise provided herein, permit each **Consenting Party** / ~~Non-Operator~~ or its duly authorized representative, at the **Consenting Party's** / ~~Non-Operator's~~ sole risk and cost, full and free access at all reasonable times to all operations of every kind and character being conducted for the joint account on the Contract Area and to the records of operations conducted thereon or production therefrom, including Operator's books and records relating thereto. Such access rights shall not be exercised in a manner interfering with Operator's conduct of an operation hereunder and shall not obligate Operator to furnish any geologic or geophysical data of an interpretive nature unless the cost of preparation of such interpretive data was charged to the joint account. Operator will furnish to each **Consenting Party** / ~~Non-Operator~~ upon request copies of any and all reports and information obtained by Operator in connection with production and related items, including, without limitation, meter and chart reports, production purchaser statements, run tickets and monthly gauge reports, but excluding purchase contracts and pricing information to the extent not applicable to the production of the Non-Operator seeking the information. Any audit of Operator's records relating to amounts expended and the appropriateness of such expenditures shall be conducted in accordance with the audit protocol specified in Exhibit "C."

6. Filing and Furnishing Governmental Reports: Operator will file, and upon written request promptly furnish copies to each requesting **Consenting Party** / ~~Non-Operator~~ not in default of its payment obligations, all operational notices, reports or applications required to be filed by local, State, Federal or Indian agencies or authorities having jurisdiction over operations hereunder. Each Non-Operator shall provide to Operator on a timely basis all information necessary to Operator to make such filings.

7. Drilling and Testing Operations: The following provisions shall apply to each well drilled **, Sidetracked, Deepened, Completed, Recompleted or Plugged Back** / ~~hereunder, including but not limited to the Initial Well:~~

(a) Operator will promptly advise **each Consenting Party** / ~~Non-Operators~~ of the date on which the well is spudded, or the date on which drilling operations are commenced.

(b) Operator will send to **each Consenting Party** / ~~Non-Operators~~ such reports, test results and notices regarding the progress of operations on the well as the **Consenting Parties** / ~~Non-Operators~~ shall reasonably request, including, but not limited to, daily drilling reports, completion reports, and well logs.

(c) Operator shall adequately test all Zones encountered which may reasonably be expected to be capable of producing Oil and Gas in paying quantities as a result of examination of the electric log or any other logs or cores or tests conducted hereunder.

8. Cost Estimates: Upon request of any Consenting Party, Operator shall furnish estimates of current and cumulative costs incurred for the joint account at reasonable intervals during the conduct of any operation pursuant to this agreement. Operator shall not be held liable for errors in such estimates so long as the estimates are made in good faith.

9. Insurance: At all times while operations are conducted hereunder, Operator shall comply with the workers compensation law of the state where the operations are being conducted; provided, however, that Operator may be a self-insurer for liability under said compensation laws in which event the only charge that shall be made to the joint account shall be as provided in Exhibit "C." Operator shall also carry or provide insurance for the benefit of the joint account of the parties as outlined in Exhibit "D" attached hereto and made a part hereof. Operator shall require all contractors engaged in work on or for the Contract Area to comply with the workers compensation law of the state where the operations are being conducted and to maintain such other insurance as Operator may require.

In the event automobile liability insurance is specified in said Exhibit "D," or subsequently receives the approval of the parties, no direct charge shall be made by Operator for premiums paid for such insurance for Operator's automotive equipment.

ARTICLE VI.
DRILLING AND DEVELOPMENT

A. Initial Well:

~~On or before the _____ day of _____, _____, Operator shall commence the drilling of the Initial Well at the following location:~~ **Operator anticipates commencing the drilling of the Initial Well within one (1) years of the effective date of the Unitization Order issued by the Division,**

and shall thereafter continue the drilling of the well with due diligence to **a depth sufficient in the Operator's reasonable opinion, to adequately test the Utica/Point Pleasant formation with the Initial Well.**

In the event a Party elects not to participate (a Non-Consenting Party) in the Initial Well proposed in the Contract Area pursuant to Article VI.A., upon the timely commencement of actual drilling operations on such Well, such Non-Consenting Party shall be deemed to have relinquished to the Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-Consenting Party's interest in the well and share of production therefrom until the proceeds of the sale of such share, calculated at the well, or market value thereof if such share is not sold, (after deducting production taxes, excise taxes, royalty, overriding royalty and other interests not excepted by Article III.D. payable out of or measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the following: (a) 500% of such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 500% of such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this Article, it being agreed that such Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning of the operations; and (b) 500% of that portion of the costs and expenses of drilling, testing and completing, after deducting any cash contributions received under Article III.C., and 500% of that portion of the cost of newly acquired equipment in the well (to and including wellhead connections), which would have been chargeable to such Non-Consenting Party if it had participated therein.

The drilling of the Initial Well and the participation therein by all parties is obligatory, subject to Article VI.C.1. as to participation in Completion operations and Article VI.F. as to termination of operations and Article XI as to occurrence of force majeure.

B. Subsequent Operations:

1. Proposed Operations: If **Operator** / ~~any party hereto~~ should desire to drill any well on the Contract Area other than the Initial Well, or if **Operator** / ~~any party~~ should desire to Rework, Sidetrack, Deepen, Recomplete or Plug Back a dry hole or a well no longer capable of producing in paying quantities in which such party has not otherwise relinquished its interest in the proposed objective Zone under this agreement, the party desiring to drill, Rework, Sidetrack, Deepen, Recomplete or Plug Back such a well shall give written notice of the proposed operation to the parties who have not otherwise relinquished their interest in such objective Zone

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under this agreement and to all other parties in the case of a proposal for Sidetracking or Deepening, specifying the work to be performed, the location, proposed depth, objective Zone and the estimated cost of the operation. The parties to whom such a notice is delivered shall have thirty (30) days after receipt of the notice within which to notify the party proposing to do the work whether they elect to participate in the cost of the proposed operation. If a drilling rig is on location, notice of a proposal to Rework, Sidetrack, Recomplete, Plug Back or Deepen may be given by telephone and the response period shall be limited to forty-eight (48) hours, **inclusive** ~~exclusive~~ of Saturday, Sunday and legal holidays. Failure of a party to whom such notice is delivered to reply within the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation. Any proposal by a party to conduct an operation conflicting with the operation initially proposed shall be delivered to all parties within the time and in the manner provided in Article VI.B.6. **No Party may elect to participate in any well proposed pursuant to this Agreement with less than its full and undivided working interest in the Contract Area.**

If all parties to whom such notice is delivered elect to participate in such a proposed operation, the parties shall be contractually committed to participate therein provided such operations are commenced within the time period hereafter set forth, and Operator shall, no later than ninety (90) days after expiration of the notice period of thirty (30) days (or as promptly as practicable after the expiration of the forty-eight (48) hour period when a drilling rig is on location, as the case may be), actually commence the proposed operation and thereafter complete it with due diligence at the risk and expense of the parties participating therein; provided, however, said commencement date may be extended upon written notice of same by Operator to the other parties, for a period of up to thirty (30) additional days if, in the sole opinion of Operator, such additional time is reasonably necessary to obtain permits from governmental authorities, surface rights (including rights-of-way) or appropriate drilling equipment, or to complete title examination or curative matter required for title approval or acceptance. If the actual operation has not been commenced within the time provided (including any extension thereof as specifically permitted herein or in the force majeure provisions of Article XI) and if any party hereto still desires to conduct said operation, written notice proposing same must be resubmitted to the other parties in accordance herewith as if no prior proposal had been made. Those parties that did not participate in the drilling of a well for which a proposal to Deepen or Sidetrack is made hereunder shall, if such parties desire to participate in the proposed Deepening or Sidetracking operation, reimburse the Drilling Parties in accordance with Article VI.B.4. in the event of a Deepening operation and in accordance with Article VI.B.5. in the event of a Sidetracking operation.

2. Operations by Less Than All Parties:

(a) Determination of Participation. If any party to whom such notice is delivered as provided in Article VI.B.1. or VI.C.1. (Option No. 2) elects not to participate in the proposed operation, then, in order to be entitled to the benefits of this Article, **Operator** ~~the party or parties giving the notice~~ and such other parties as shall elect to participate in the operation shall, no later than **one hundred eighty (180)** ~~ninety (90)~~ days after the expiration of the notice period of thirty (30) days (or as promptly as practicable after the expiration of the forty-eight (48) hour period when a drilling rig is on location, as the case may be) actually commence the proposed operation ***** and complete it with due diligence**; provided, however, said commencement date may be extended, upon written notice of same by Operator to the other parties, for a reasonable period if, in the sole opinion of Operator, such additional time is reasonably necessary to obtain permits from governmental authorities, surface rights (including rights-of-way) or appropriate drilling equipment, or to complete title examination or curative matter required for title approval or acceptance**. Operator shall perform all work for the account of the Consenting Parties; ~~provided, however, if no drilling rig or other equipment is on location, and if Operator is a Non-Consenting Party, the Consenting Parties shall either: (i) request Operator to perform the work required by such proposed operation for the account of the Consenting Parties, or (ii) designate one of the Consenting Parties as Operator to perform such work. The rights and duties granted to and imposed upon the Operator under this agreement are granted to and imposed upon the party designated as Operator for an operation in which the original Operator is a Non-Consenting Party. Consenting Parties, when conducting operations on the Contract Area pursuant to this Article VI.B.2., shall comply with all terms and conditions of this agreement.~~ ***Nothing contained herein shall prohibit Operator from actually commencing the proposed operation before the expiration of the notice period, nor shall such commencement affect in any way the validity of a party's election or deemed election.**

If less than all parties approve any proposed operation, ~~the proposing party~~ **Operator**, immediately after the expiration of the applicable notice period, shall advise all Parties of the total interest of the parties approving such operation and its recommendation as to whether the Consenting Parties should proceed with the operation as proposed. Each Consenting Party, within forty-eight (48) hours (exclusive of Saturday, Sunday, and legal holidays) after delivery of such notice, shall advise ~~the proposing party~~ **Operator** of its desire to (i) limit participation to such party's interest as shown on Exhibit "A" or (ii) carry only its proportionate part (determined by dividing such party's interest in the Contract Area by the interests of all Consenting Parties in the Contract Area) of Non-Consenting Parties' interests, or (iii) carry its proportionate part (determined as provided in (ii)) of Non-Consenting Parties' interests together with all or a portion of its proportionate part of any Non-Consenting Parties' interests that any Consenting Party did not elect to take. Any interest of Non-Consenting Parties that is not carried by a Consenting Party shall be deemed to be carried by the party proposing the operation if such party does not withdraw its proposal. Failure to advise the proposing party within the time required shall be deemed an election under (i). In the event a drilling rig is on location, notice may be given by telephone, and the time permitted for such a response shall not exceed a total of forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays). The **Operator** ~~proposing party~~, at its election, may withdraw such proposal if there is less than 100% participation and shall notify all parties of such decision within ten (10) days, or within twenty-four (24) hours if a drilling rig is on location, following expiration of the applicable response period. If 100% subscription to the proposed operation is obtained, the proposing party shall promptly notify the Consenting Parties of their proportionate interests in the operation and the party serving as Operator shall commence such operation within the period provided in Article VI.B.1., subject to the same extension right as provided therein.

(b) Relinquishment of Interest for Non-Participation. The entire cost and risk of conducting such operations shall be borne by the Consenting Parties in the proportions they have elected to bear same under the terms of the preceding paragraph. Consenting Parties shall keep the leasehold estates involved in such operations free and clear of all liens and encumbrances of every kind created by or arising from the operations of the Consenting Parties. If such an operation results in a dry hole, then subject to Articles VI.B.6. and VI.E.3., the Consenting Parties shall plug and abandon the well and restore the surface location at their sole cost, risk and expense; provided, however, that those Non-Consenting Parties that participated in the drilling, Deepening or Sidetracking of the well shall remain liable for, and shall pay, their proportionate shares of the cost of plugging and abandoning the well and restoring the surface location insofar only as those costs were not increased by the subsequent operations of the Consenting Parties. **The Consenting Parties shall bear proportionately the well costs attributed to any unleased or uncommitted owners in the Contract Area.** If any well drilled, Reworked, Sidetracked, Deepened, Recompleted or Plugged Back under the provisions of this Article results in a well capable of producing Oil and/or Gas in paying quantities, the Consenting Parties shall Complete and equip the well to produce at their sole cost and risk, and the well shall then be turned over to Operator (if the Operator did not conduct the operation) and shall be operated by it at the expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, Reworking, Sidetracking, Recompleting, Deepening or Plugging Back of any such well by Consenting Parties in accordance with the

provisions of this Article, each Non-Consenting Party shall be deemed to have relinquished to Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-Consenting Party's interest in the well and share of production therefrom or, in the case of a Reworking, Sidetracking,

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Deepening, Recompleting or Plugging Back, or a Completion pursuant to Article VI.C.1. Option No. 2, all of such Non-Consenting Party's interest in the production obtained from the operation in which the Non-Consenting Party did not elect to participate. Such relinquishment shall be effective until the proceeds of the sale of such share, calculated at the well, or market value thereof if such share is not sold (after deducting applicable ad valorem, production, severance, and excise taxes, royalty, overriding royalty and other interests not excepted by Article III.C. payable out of or measured by the production from such well accruing with respect to such interest until it reverts), shall equal the total of the following:

(i) **500** % of each such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections (including but not limited to stock tanks, separators, treaters, pumping equipment and piping), plus **500%** / ~~100%~~ of each such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this Article, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning of the operations; and

(ii) **500** % of (a) that portion of the costs and expenses of drilling, Reworking, Sidetracking, Deepening, Plugging Back, testing, Completing, and Recompleting, after deducting any cash contributions received under Article VIII.C., and **500%** / of (b) that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections), which would have been chargeable to such Non-Consenting Party if it had participated therein.

Notwithstanding anything to the contrary in this Article VI.B., if the well does not reach the deepest objective Zone described in the notice proposing the well for reasons other than the encountering of granite or practically impenetrable substance or other condition in the hole rendering further operations impracticable, Operator shall give notice thereof to each Non-Consenting Party who submitted or voted for an alternative proposal under Article VI.B.6. to drill the well to a shallower Zone than the deepest objective Zone proposed in the notice under which the well was drilled, and each such Non-Consenting Party shall have the option to participate in the initial proposed Completion of the well by paying its share of the cost of drilling the well to its actual depth, calculated in the manner provided in Article VI.B.4. (a). If any such Non-Consenting Party does not elect to participate in the first Completion proposed for such well, the relinquishment provisions of this Article VI.B.2. (b) shall apply to such party's interest.

(c) Reworking, Recompleting or Plugging Back. An election not to participate in the drilling, Sidetracking or Deepening of a well shall be deemed an election not to participate in any Reworking or Plugging Back operation proposed in such a well, or portion thereof, to which the initial non-consent election applied that is conducted at any time prior to full recovery by the Consenting Parties of the Non-Consenting Party's recoupment amount. Similarly, an election not to participate in the Completing or Recompleting of a well shall be deemed an election not to participate in any Reworking operation proposed in such a well, or portion thereof, to which the initial non-consent election applied that is conducted at any time prior to full recovery by the Consenting Parties of the Non-Consenting Party's recoupment amount. Any such Reworking, Recompleting or Plugging Back operation conducted during the recoupment period shall be deemed part of the cost of operation of said well and there shall be added to the sums to be recouped by the Consenting Parties **500** % of that portion of the costs of the Reworking, Recompleting or Plugging Back operation which would have been chargeable to such Non-Consenting Party had it participated therein. If such a Reworking, Recompleting or Plugging Back operation is proposed during such recoupment period, the provisions of this Article VI.B. shall be applicable as between said Consenting Parties in said well.

(d) Recoupment Matters. During the period of time Consenting Parties are entitled to receive Non-Consenting Party's share of production, or the proceeds therefrom, Consenting Parties shall be responsible for the payment of all ad valorem, production, severance, excise, gathering and other taxes, and all royalty, overriding royalty and other burdens applicable to Non-Consenting Party's share of production not excepted by Article III.C.

In the case of any Reworking, Sidetracking, Plugging Back, Recompleting or Deepening operation, the Consenting Parties shall be permitted to use, free of cost, all casing, tubing and other equipment in the well, but the ownership of all such equipment shall remain unchanged; and upon abandonment of a well after such Reworking, Sidetracking, Plugging Back, Recompleting or Deepening, the Consenting Parties shall account for all such equipment to the owners thereof, with each party receiving its proportionate part in kind or in value, less cost of salvage.

Within **one hundred eighty (180)** ~~ninety (90)~~ / days after the completion of any operation under this Article, the party conducting the operations for the Consenting Parties shall furnish each Non-Consenting Party with an inventory of the equipment in and connected to the well, and an itemized statement of the cost of drilling, Sidetracking, Deepening, Plugging Back, testing, Completing, Recompleting, and equipping the well for production; or, at its option, the operating party, in lieu of an itemized statement of such costs of operation, may submit a detailed statement of monthly billings. **At least each quarter** ~~Each month~~ / thereafter, during the time the Consenting Parties are being reimbursed as provided above, the party conducting the operations for the Consenting Parties shall furnish the Non-Consenting Parties with an itemized statement of all costs and liabilities incurred in the operation of the well, together with a statement of the quantity of Oil and Gas produced from it and the amount of proceeds realized from the sale of the well's working interest production during the preceding **quarter** ~~month~~ /. In determining the quantity of Oil and Gas produced ~~during any month~~, Consenting Parties shall use industry accepted methods such as but not limited to metering or periodic well tests. Any amount realized from the sale or other disposition of equipment newly acquired in connection with any such operation which would have been owned by a Non-Consenting Party had it participated therein shall be credited against the total unreturned costs of the work done and of the equipment purchased in determining when the interest of such Non-Consenting Party shall revert to it as above provided; and if there is a credit balance, it shall be paid to such Non-Consenting Party.

If and when the Consenting Parties recover from a Non-Consenting Party's relinquished interest the amounts provided for above, the relinquished interests of such Non-Consenting Party shall automatically revert to it as of 7:00 a.m. on the **first day of the month** / ~~day~~ following the day on which such recoupment occurs, and, from and after such reversion, such Non-Consenting Party shall own the same interest in such well, the material and equipment in or pertaining thereto, and the production therefrom as such Non-Consenting Party would have been entitled to had it participated in the drilling, Sidetracking, Reworking, Deepening, Recompleting or Plugging Back of said well. Thereafter, such Non-Consenting Party shall be charged with and shall pay its proportionate part of the further costs of the operation of said well in accordance with the terms of this agreement and Exhibit "C" attached hereto.

3. Stand-By Costs: When a well which has been drilled or Deepened has reached its authorized depth and all tests have been completed and the results thereof furnished to the parties, or when operations on the well have been otherwise terminated pursuant to Article VI.F., stand-by costs incurred pending response to a party's notice proposing a Reworking,

Sidetracking, Deepening, Recompleting, Plugging Back or Completing operation in such a well (including the period required under Article VI.B.6. to resolve competing proposals) shall be charged and borne as part of the drilling or Deepening operation just completed. Stand-by costs subsequent to all parties responding, or expiration of the response time permitted, whichever first occurs, and prior to agreement as to the participating interests of all Consenting Parties pursuant to the terms of the second grammatical paragraph of Article VI.B.2. (a), shall be charged to and borne as part of the proposed operation, but if the proposal is subsequently withdrawn because of insufficient participation, such stand-by costs shall be allocated between the Consenting Parties in the proportion each Consenting Party's interest as shown on Exhibit "A" bears to the total interest as shown on Exhibit "A" of all Consenting Parties.

In the event that notice for a Sidetracking operation is given while the drilling rig to be utilized is on location, any party may request and receive up to five (5) additional days after expiration of the forty-eight hour response period specified in Article VI.B.1. within which to respond by paying for all stand-by costs and other costs incurred during such extended response period; Operator may require such party to pay the estimated stand-by time in advance as a condition to extending the response period. If more than one party elects to take such additional time to respond to the notice, standby costs shall be allocated between the parties taking additional time to respond on a day-to-day basis in the proportion each electing party's interest as shown on Exhibit "A" bears to the total interest as shown on Exhibit "A" of all the electing parties.

4. Deepening: If less than all parties elect to participate in a drilling, Sidetracking, or Deepening operation proposed pursuant to Article VI.B.1., the interest relinquished by the Non-Consenting Parties to the Consenting Parties under Article VI.B.2. shall relate only and be limited to the lesser of (i) the total depth actually drilled or (ii) the objective depth or Zone of which the parties were given notice under Article VI.B.1. ("Initial Objective"). **Except as provided in Article XVI.E.2, such** / ~~Such~~ well shall not be Deepened beyond the Initial Objective without first complying with this Article to afford the Non-Consenting Parties the opportunity to participate in the Deepening operation.

In the event any Consenting Party desires to drill or Deepen a Non-Consent Well ~~to a depth below the Initial Objective~~, such party shall give notice thereof, complying with the requirements of Article VI.B.1., to all parties (including Non-Consenting Parties). Thereupon, Articles VI.B.1. and 2. shall apply and all parties receiving such notice shall have the right to participate or not participate in the Deepening of such well pursuant to said Articles VI.B.1. and 2. If a Deepening operation is approved pursuant to such provisions, and if any Non-Consenting Party elects to participate in the Deepening operation, such Non-Consenting party shall pay or make reimbursement (as the case may be) of the following costs and expenses.

(a) If the proposal to Deepen is made prior to the Completion of such well as a well capable of producing in paying quantities, such Non-Consenting Party shall pay (or reimburse Consenting Parties for, as the case may be) that share of costs and expenses incurred in connection with the drilling of said well from the surface to the Initial Objective which Non-Consenting Party would have paid had such Non-Consenting Party agreed to participate therein, plus the Non-Consenting Party's share of the cost of Deepening and of participating in any further operations on the well in accordance with the other provisions of this Agreement; provided, however, all costs for testing and Completion or attempted Completion of the well incurred by Consenting Parties prior to the point of actual operations to Deepen beyond the Initial Objective shall be for the sole account of Consenting Parties.

(b) If the proposal is made for a Non-Consent Well that has been previously Completed as a well capable of producing in paying quantities, but is no longer capable of producing in paying quantities, such Non-Consenting Party shall pay (or reimburse Consenting Parties for, as the case may be) its proportionate share of all costs of drilling, Completing, and equipping said well from the surface to the Initial Objective, calculated in the manner provided in paragraph (a) above, less those costs recouped by the Consenting Parties from the sale of production from the well. The Non-Consenting Party shall also pay its proportionate share of all costs of re-entering said well. The Non-Consenting Parties' proportionate part (based on the percentage of such well Non-Consenting Party would have owned had it previously participated in such Non-Consent Well) of the costs of salvable materials and equipment remaining in the hole and salvable surface equipment used in connection with such well shall be determined in accordance with Exhibit "C." If the Consenting Parties have recouped the cost of drilling, Completing, and equipping the well at the time such Deepening operation is conducted, then a Non-Consenting Party may participate in the Deepening of the well with no payment for costs incurred prior to re-entering the well for Deepening

The foregoing shall not imply a right of any Consenting Party to propose any Deepening for a Non-Consent Well prior to the drilling of such well to its Initial Objective without the consent of the other Consenting Parties as provided in Article VI.F.

5. Sidetracking: Any party having the right to participate in a proposed Sidetracking operation that does not own an interest in the affected wellbore at the time of the notice shall, upon electing to participate, tender to the wellbore owners its proportionate share (equal to its interest in the Sidetracking operation) of the value of that portion of the existing wellbore to be utilized as follows:

(a) If the proposal is for Sidetracking an existing dry hole, reimbursement shall be on the basis of the actual costs incurred in the initial drilling of the well down to the depth at which the Sidetracking operation is initiated.

(b) If the proposal is for Sidetracking a well which has previously produced, reimbursement shall be on the basis of such party's proportionate share of drilling and equipping costs incurred in the initial drilling of the well down to the depth at which the Sidetracking operation is conducted, calculated in the manner described in Article VI.B.4(b) above. Such party's proportionate share of the cost of the well's salvable materials and equipment down to the depth at which the Sidetracking operation is initiated shall be determined in accordance with the provisions of Exhibit "C."

6. Order of Preference of Operations. Except as otherwise specifically provided in this agreement, if any party desires to propose the conduct of an operation that conflicts with a proposal that has been made by a party under this Article VI, such party shall have fifteen (15) days from delivery of the initial proposal, in the case of a proposal to drill a well or to perform an operation on a well where no drilling rig is on location, or twenty-four (24) hours, exclusive of Saturday, Sunday and legal holidays, from delivery of the initial proposal, if a drilling rig is on location for the well on which such operation is to be conducted, to deliver to all parties entitled to participate in the proposed operation such party's alternative proposal, such alternate proposal to contain the same information required to be included in the initial proposal. Each party receiving such proposals shall elect by delivery of notice to Operator within five (5) days after expiration of the proposal period, or within twenty-four (24) hours (exclusive of Saturday, Sunday and legal holidays) if a drilling rig is on location for the well that is the subject of the proposals, to participate in one of the competing proposals. Any party not electing within the time required shall be deemed not to have voted. The proposal receiving the vote of parties owning the largest aggregate percentage interest of the parties voting shall have priority over all other competing proposals; in the case of a tie vote, the

initial proposal shall prevail. Operator shall deliver notice of such result to all parties entitled to participate in the operation within five (5) days after expiration of the election period (or within twenty-four (24) hours, exclusive of Saturday, Sunday and legal holidays, if a drilling rig is on location). Each party shall then have two (2) days (or twenty-four (24) hours if a rig is on location) from receipt of such notice to elect by delivery of notice to Operator to participate in such operation or to relinquish interest in the affected well pursuant to the provisions of Article VI.B.2.; failure by a party to deliver notice within such period shall be deemed an election not to participate in the prevailing proposal.

7. Conformity to Spacing Pattern. Notwithstanding the provisions of this Article VI.B.2., it is agreed that no wells shall be proposed to be drilled to or Completed in or produced from a Zone from which a well located elsewhere on the Contract Area is producing, unless such well conforms to the then-existing well spacing pattern for such Zone.

8. Paying Wells. No party shall conduct any Reworking, Deepening, Plugging Back, Completion, Recompletion, or Sidetracking operation under this agreement with respect to any well then capable of producing in paying quantities except with the consent of all parties that have not relinquished interests in the well at the time of such operation.

C. Completion of Wells; Reworking and Plugging Back:

1. Completion: Without the consent of all parties, no well shall be drilled, Deepened or Sidetracked, except any well drilled, Deepened or Sidetracked pursuant to the provisions of Article VI.B.2. of this agreement. Consent to the drilling, Deepening or Sidetracking shall include:

For Horizontal Wells and Multi-Lateral Wells , all

☒ Option No. 1: ~~All~~ / necessary expenditures for the drilling, Deepening, equipping of the well, including tankage and/or surface facilities. **See also Article XVI.E.**

For Vertical Wells, all

☒ Option No. 2: ~~All~~ / necessary expenditures for the drilling, Deepening or Sidetracking and testing of the well. When such well has reached its authorized depth, and all logs, cores and other tests have been completed, and the results thereof furnished to the parties, Operator shall give immediate notice to the Non-Operators having the right to participate in a Completion attempt whether or not Operator recommends attempting to Complete the well, together with Operator's AFE for Completion costs if not previously provided. The parties receiving such notice shall have forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) in which to elect by delivery of notice to Operator to participate in a recommended Completion attempt or to make a Completion proposal with an accompanying AFE. Operator shall deliver any such Completion proposal, or any Completion proposal conflicting with Operator's proposal, to the other parties entitled to participate in such Completion in accordance with the procedures specified in Article VI.B.6. Election to participate in a Completion attempt shall include consent to all necessary expenditures for the Completing and equipping of such well, including necessary tankage and/or surface facilities but excluding any stimulation operation not contained on the Completion AFE. Failure of any party receiving such notice to reply within the period above fixed shall constitute an election by that party not to participate in the cost of the Completion attempt; provided, that Article VI.B.6. shall control in the case of conflicting Completion proposals. If one or more, but less than all of the parties, elect to attempt a Completion, the provision of Article VI.B.2. hereof (the phrase "Reworking, Sidetracking, Deepening, Recompleting or Plugging Back" as contained in Article VI.B.2. shall be deemed to include "Completing") shall apply to the operations thereafter conducted by less than all parties; provided, however, that Article VI.B.2. shall apply separately to each separate Completion or Recompletion attempt undertaken hereunder, and an election to become a Non-Consenting Party as to one Completion or Recompletion attempt shall not prevent a party from becoming a Consenting Party in subsequent Completion or Recompletion attempts regardless whether the Consenting Parties as to earlier Completions or Recompletion have recouped their costs pursuant to Article VI.B.2.; provided further, that any recoupment of costs by a Consenting Party shall be made solely from the production attributable to the Zone in which the Completion attempt is made. Election by a previous Non-Consenting party to participate in a subsequent Completion or Recompletion attempt shall require such party to pay its proportionate share of the cost of salvable materials and equipment installed in the well pursuant to the previous Completion or Recompletion attempt, insofar and only insofar as such materials and equipment benefit the Zone in which such party participates in a Completion attempt. **See also Article XVI.E.**

2. Rework, Recomplete or Plug Back: No well shall be Reworked, Recompleted or Plugged Back except a well Reworked, Recompleted, or Plugged Back pursuant to the provisions of Article VI.B.2. of this agreement. Consent to the Reworking, Recompleting or Plugging Back of a well shall include all necessary expenditures in conducting such operations and Completing and equipping of said well, including necessary tankage and/or surface facilities.

D. Other Operations:

Operator shall not undertake any single project reasonably estimated to require an expenditure in excess of **Fifty Thousand** Dollars ($ **50,000.00**) except in connection with the drilling, Sidetracking, Reworking, Deepening, Completing, Recompleting or Plugging Back of a well that has been previously authorized by or pursuant to this agreement; provided, however, that, in case of explosion, fire, flood or other sudden emergency, whether of the same or different nature, Operator may take such steps and incur such expenses as in its opinion are required to deal with the emergency to safeguard life and property but Operator, as promptly as possible, shall report the emergency to the other parties. If Operator prepares an AFE for its own use, Operator shall furnish any Non-Operator so requesting an information copy thereof for any single project costing in excess of **Fifty Thousand** Dollars (**$50,000.00**). Any party who has not relinquished its interest in a well shall have the right to propose that Operator perform repair work or undertake the installation of artificial lift equipment or ancillary production facilities such as salt water disposal wells or to conduct additional work with respect to a well drilled hereunder or other similar project (but not including the installation of gathering lines or other transportation or marketing facilities, the installation of which shall be governed by separate agreement between the parties) reasonably estimated to require an expenditure in excess of the amount first set forth above in this Article VI.D. (except in connection with an operation required to be proposed under Articles VI.B.1. or VI.C.1. Option No. 2, which shall be governed exclusively be those Articles). Operator shall deliver such proposal to all parties entitled to participate therein. If within thirty (30) days thereof Operator secures the written consent of any party or parties owning at least **80** % of the interests of the parties entitled to participate in such operation, each party having the right to participate in such project shall be bound by the terms of such proposal and shall be obligated to pay its proportionate share of the costs of the proposed project as if it had consented to such project pursuant to the terms of the proposal.

E. Abandonment of Wells:

1. Abandonment of Dry Holes: Except for any well drilled or Deepened pursuant to Article VI.B.2., any well which has been drilled or Deepened under the terms of this agreement and is proposed to be completed as a dry hole shall not be

plugged and abandoned without the consent of all parties. Should Operator, after diligent effort, be unable to contact any party, or should any party fail to reply within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after delivery of notice of the proposal to plug and abandon such well, such party shall be deemed to have consented to the proposed abandonment. All such wells shall be plugged and abandoned in accordance with applicable regulations and at the cost, risk and expense of the parties who participated in the cost of drilling or Deepening such well. ~~Any party who objects to plugging and abandoning such well by notice delivered to Operator within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after delivery of notice of the proposed plugging shall take over the well as of the end of such forty-eight (48) hour notice period and conduct further operations in search of Oil and/or Gas subject to the provisions of Article VI.B.; failure of such party to provide proof reasonably satisfactory to Operator of its financial capability to conduct such operations or to take over the well within such period or thereafter to conduct operations on such well or plug and abandon such well shall entitle Operator to retain or take possession of the well and plug and abandon the well. The party taking over the well shall indemnify Operator (if Operator is an abandoning party) and the other abandoning parties against liability for any further operations conducted on such well except for the costs of plugging and abandoning the well and~~ restoring the surface, for which the abandoning parties shall remain proportionately liable.

2. Abandonment of Wells That Have Produced: ~~Except for any well in which a Non-Consent operation has been conducted hereunder for which the Consenting Parties have not been fully reimbursed as herein provided,~~ **A**ny well which has been completed as a producer shall not be plugged and abandoned without the consent of all parties **who participated in the cost of drilling the well** /. ~~If all parties consent to such abandonment, the well shall be plugged and abandoned in accordance with applicable regulations and at the cost, risk and expense of all the parties hereto. Failure of a party to reply within sixty (60) days of delivery of notice of proposed abandonment shall be deemed an election to consent to the proposal. If, within sixty (60) days after delivery of notice of the proposed abandonment of any well, all parties do not agree to the abandonment of such well, those wishing to continue its operation from the Zone then open to production shall be obligated to take over the well as of the expiration of the applicable notice period and shall indemnify Operator (if Operator is an abandoning party) and the other abandoning parties against liability for any further operations / on the well conducted by such parties. Failure of such party or parties to provide proof reasonably satisfactory to Operator of their financial capability to conduct such operations or to take over the well within the required period or thereafter to conduct operations on such well shall entitle operator to retain or take possession of such well and plug and abandon the well.~~

~~Parties taking over a well as provided herein shall tender to each of the other parties its proportionate share of the value of the well's salvable material and equipment, determined in accordance with the provisions of Exhibit "C," less the estimated cost of salvaging and the estimated cost of plugging and abandoning and restoring the surface; provided, however, that in the event the estimated plugging and abandoning and surface restoration costs and the estimated cost of salvaging are higher than the value of the well's salvable material and equipment, each of the abandoning parties shall tender to the parties continuing operations their proportionate shares of the estimated excess cost. Each abandoning party shall assign to the non-abandoning parties, without warranty, express or implied, as to title or as to quantity, or fitness for use of the equipment and material, all of its interest in the wellbore of the well and related equipment, together with its interest in the Leasehold insofar and only insofar as such Leasehold covers the right to obtain production from that wellbore in the Zone then open to production. If the interest of the abandoning party is or includes and Oil and Gas Interest, such party shall execute and deliver to the non-abandoning party or parties an oil and gas lease, limited to the wellbore and the Zone then open to production, for a term of one (1) year and so long thereafter as Oil and/or Gas is produced from the Zone covered thereby, such lease to be on the form attached as Exhibit "B." The assignments or leases so limited shall encompass the Drilling Unit upon which the well is located. The payments by, and the assignments or leases to, the assignees shall be in a ratio based upon the relationship of their respective percentage of participation in the Contract Area to the aggregate of the percentages of participation in the Contract Area of all assignees. There shall be no readjustment of interests in the remaining portions of the Contract Area.~~

~~Thereafter, abandoning parties shall have no further responsibility, liability, or interest in the operation of or production from the well in the Zone then open other than the royalties retained in any lease made under the terms of this Article. Upon request, Operator shall continue to operate the assigned well for the account of the non-abandoning parties at the rates and charges contemplated by this agreement, plus any additional cost and charges which may arise as the result of the separate ownership of the assigned well. Upon proposed abandonment of the producing Zone assigned or leased, the assignor or lessor shall then have the option to repurchase its prior interest in the well (using the same valuation formula) and participate in further operations therein subject to the provisions hereof.~~

~~3. Abandonment of Non-Consent Operations: The provisions of Article VI.E.1. or VI.E.2. above shall be applicable as between Consenting Parties in the event of the proposed abandonment of any well excepted from said Articles; provided, however, no well shall be permanently plugged and abandoned unless and until all parties having the right to conduct further operations therein have been notified of the proposed abandonment and afforded the opportunity to elect to take over the well in accordance with the provisions of this Article VI.E.; and provided further, that Non-Consenting Parties who own an interest in a portion of the well shall pay their proportionate shares of abandonment and surface restoration cost for such well as provided in Article VI.B.2.(b).~~

F. Termination of Operations:

Upon the commencement of an operation for the drilling, Reworking, Sidetracking, Plugging Back, Deepening, testing, Completion or plugging of a well, including but not limited to the Initial Well, such operation shall not be terminated without consent of parties bearing **80** % of the costs of such operation; provided, however, that in the event granite or other practically impenetrable substance or condition in the hole is encountered which renders further operations impractical, Operator may discontinue operations and give notice of such condition in the manner provided in Article VI.B.1, and the provisions of Article VI.B. or VI.E. shall thereafter apply to such operation, as appropriate.

G. Taking Production in Kind:

☒ **Option No. 1: Gas Balancing Agreement Attached**

Each party shall take in kind or separately dispose of its proportionate share of all Oil and Gas produced from the Contract Area, exclusive of production which may be used in development and producing operations and in preparing and treating Oil and Gas for marketing purposes and production unavoidably lost. Any extra expenditure incurred in the taking in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party. Any party taking its share of production in kind shall be required to pay for only its proportionate share of such part of Operator's surface facilities which it uses.

Each party shall execute such division orders and contracts as may be necessary for the sale of its interest in production from the Contract Area, and, except as provided in Article VII.B., shall be entitled to receive payment

directly from the purchaser thereof for its share of all production.

If any party fails to make the arrangements necessary to take in kind or separately dispose of its proportionate share of the Oil produced from the Contract Area, Operator shall have the right, subject to the revocation at will by the party owning it, but not the obligation, to purchase such Oil or sell it to others at any time and from time to time, for the account of the non-taking party. Any such purchase or sale by Operator may be terminated by Operator upon at least ten (10) days written notice to the owner of said production and shall be subject always to the right of the owner of the production upon at least ten (10) days written notice to Operator to exercise at any time its right to take in kind, or separately dispose of, its share of all Oil not previously delivered to a purchaser. Any purchase or sale by Operator of any other party's share of Oil shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the particular circumstances, but in no event for a period in excess of one (1) year.

Any such sale by Operator shall be in a manner commercially reasonable under the circumstances but Operator shall have no duty to share any existing market or to obtain a price equal to that received under any existing market. The sale or delivery by Operator of a non-taking party's share of Oil under the terms of any existing contract of Operator shall not give the non-taking party any interest in or make the non-taking party a party to said contract. No purchase shall be made by Operator without first giving the non-taking party at least ten (10) days written notice of such intended purchase and the price to be paid or the pricing basis to be used.

All parties shall give timely written notice to Operator of their Gas marketing arrangements for the following month, excluding price, and shall notify Operator immediately in the event of a change in such arrangements. Operator shall maintain records of all marketing arrangements, and of volumes actually sold or transported, which records shall be made available to Non-Operators upon reasonable request.

In the event one or more parties' separate disposition of its share of the Gas causes split-stream deliveries to separate pipelines and/or deliveries which on a day-to-day basis for any reason are not exactly equal to a party's respective proportionate share of total Gas sales to be allocated to it, the balancing or accounting between the parties shall be in accordance with any Gas balancing agreement between the parties hereto, whether such an agreement is attached as Exhibit "E" or is a separate agreement. Operator shall give notice to all parties of the first sales of Gas from any well under this agreement.

☐ ~~**Option No. 2: No Gas Balancing Agreement:**~~

~~Each party shall take in kind or separately dispose of its proportionate share of all Oil and Gas produced from the Contract Area, exclusive of production which may be used in development and producing operations and in preparing and treating Oil and Gas for marketing purposes and production unavoidably lost. Any extra expenditures incurred in the taking in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party. Any party taking its share of production in kind shall be required to pay for only its proportionate share of such part of Operator's surface facilities which it uses.~~

~~Each party shall execute such division orders and contracts as may be necessary for the sale of its interest in production from the Contract Area, and, except as provided in Article VII.B., shall be entitled to receive payment directly from the purchaser thereof for its share of all production.~~

~~If any party fails to make the arrangements necessary to take in kind or separately dispose of its proportionate share of the Oil and/or Gas produced from the Contract Area, Operator shall have the right, subject to the revocation at will by the party owning it, but not the obligation, to purchase such Oil and/or Gas or sell it to others at any time and from time to time, for the account of the non-taking party. Any such purchase or sale by Operator may be terminated by Operator upon at least ten (10) days written notice to the owner of said production and shall be subject always to the right of the owner of the production upon at least ten (10) days written notice to Operator to exercise its right to take in kind, or separately dispose of, its share of all Oil and/or Gas not previously delivered to a purchaser; provided, however, that the effective date of any such revocation may be deferred at Operator's election for a period not to exceed ninety (90) days if Operator has committed such production to a purchase contract having a term extending beyond such ten (10) -day period. Any purchase or sale by Operator of any other party's share of Oil and/or Gas shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the particular circumstances, but in no event for a period in excess of one (1) year.~~

~~Any such sale by Operator shall be in a manner commercially reasonable under the circumstances, but Operator shall have no duty to share any existing market or transportation arrangement or to obtain a price or transportation fee equal to that received under any existing market or transportation arrangement. The sale or delivery by Operator of a non-taking party's share of production under the terms of any existing contract of Operator shall not give the non-taking party any interest in or make the non-taking party a party to said contract. No purchase of Oil and Gas and no sale of Gas shall be made by Operator without first giving the non-taking party ten days written notice of such intended purchase or sale and the price to be paid or the pricing basis to be used. Operator shall give notice to all parties of the first sale of Gas from any well under this Agreement.~~

~~All parties shall give timely written notice to Operator of their Gas marketing arrangements for the following month, excluding price, and shall notify Operator immediately in the event of a change in such arrangements. Operator shall maintain records of all marketing arrangements, and of volumes actually sold or transported, which records shall be made available to Non-Operators upon reasonable request.~~

ARTICLE VII.
EXPENDITURES AND LIABILITY OF PARTIES

A. Liability of Parties:

The liability of the parties shall be several, not joint or collective. Each party shall be responsible only for its obligations, and shall be liable only for its proportionate share of the costs of developing and operating the Contract Area. Accordingly, the liens granted among the parties in Article VII.B. are given to secure only the debts of each severally, and no party shall have any liability to third parties hereunder to satisfy the default of any other party in the payment of any expense or obligation hereunder. It is not the intention of the parties to create, nor shall this agreement be construed as creating, a mining or other partnership, joint venture, agency relationship or association, or to render the parties liable as partners, co-venturers, or principals. In their relations with each other under this agreement, the parties shall not be considered fiduciaries or to have established a confidential relationship but rather shall be free to act on an arm's-length basis in accordance with their own respective self-interest, subject, however, to the obligation of the parties to act in good faith in their dealings with each other with respect to activities hereunder.

B. Liens and Security Interests:

Each party grants to the other parties hereto a lien upon any interest it now owns or hereafter acquires in Oil and Gas Leases and Oil and Gas Interests in the Contract Area, and a security interest and/or purchase money security interest in any interest it now owns or hereafter acquires in the personal property and fixtures on or used or obtained for use in connection therewith, to secure performance of all of its obligations under this agreement including but not limited to payment of expense, interest and fees, the proper disbursement of all monies paid hereunder, the assignment or relinquishment of interest in Oil and Gas Leases as required hereunder, and the proper performance of operations hereunder. Such lien and security interest granted by each party hereto shall include such party's leasehold interests, working interests, operating rights, and royalty and overriding royalty interests in the Contract Area now owned or hereafter acquired and in lands pooled or unitized therewith or otherwise becoming subject to this agreement, the Oil and Gas when extracted therefrom and equipment situated thereon or used or obtained for use in connection therewith (including, without limitation, all wells, tools, and tubular goods), and accounts (including, without limitation, accounts arising from gas imbalances or from the sale of Oil and/or Gas at the wellhead), contract rights, inventory and general intangibles relating thereto or arising therefrom, and all proceeds and products of the foregoing.

To perfect the lien and security agreement provided herein, each party hereto shall execute and acknowledge the recording supplement and/or any financing statement prepared and submitted by any party hereto in conjunction herewith or at any time following execution hereof, and Operator is authorized to file this agreement or the recording supplement executed herewith as a lien or mortgage in the applicable real estate records and as a financing statement with the proper officer under the Uniform Commercial Code in the state in which the Contract Area is situated and such other states as Operator shall deem appropriate to perfect the security interest granted hereunder. Any party may file this agreement, the recording supplement executed herewith, or such other documents as it deems necessary as a lien or mortgage in the applicable real estate records and/or a financing statement with the proper officer under the Uniform Commercial Code.

Each party represents and warrants to the other parties hereto that the lien and security interest granted by such party to the other parties shall be a first and prior lien, and each party hereby agrees to maintain the priority of said lien and security interest against all persons acquiring an interest in Oil and Gas Leases and Interests covered by this agreement by, through or under such party. All parties acquiring an interest in Oil and Gas Leases and Oil and Gas Interests covered by this agreement, whether by assignment, merger, mortgage, operation of law, or otherwise, shall be deemed to have taken subject to the lien and security interest granted by this Article VII.B. as to all obligations attributable to such interest hereunder whether or not such obligations arise before or after such interest is acquired.

To the extent that parties have a security interest under the Uniform Commercial Code of the state in which the Contract Area is situated, they shall be entitled to exercise the rights and remedies of a secured party under the Code. The bringing of a suit and the obtaining of judgment by a party for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the lien rights or security interest as security for the payment thereof. In addition, upon default by any party in the payment of its share of expenses, interests or fees, or upon the improper use of funds by the Operator, the other parties shall have the right, without prejudice to other rights or remedies, to collect from the purchaser the proceeds from the sale of such defaulting party's share of Oil and Gas until the amount owed by such party, plus interest as provided in "Exhibit C," has been received, and shall have the right to offset the amount owed against the proceeds from the sale of such defaulting party's share of Oil and Gas. All purchasers of production may rely on a notification of default from the non-defaulting party or parties stating the amount due as a result of the default, and all parties waive any recourse available against purchasers for releasing production proceeds as provided in this paragraph.

If any party fails to pay its share of cost within one hundred twenty (120) days after rendition of a statement therefor by Operator, the non-defaulting parties, including Operator, shall upon request by Operator, pay the unpaid amount in the proportion that the interest of each such party bears to the interest of all such parties. The amount paid by each party so paying its share of the unpaid amount shall be secured by the liens and security rights described in Article VII.B., and each paying party may independently pursue any remedy available hereunder or otherwise.

If any party does not perform all of its obligations hereunder, and the failure to perform subjects such party to foreclosure or execution proceedings pursuant to the provisions of this agreement, to the extent allowed by governing law, the defaulting party waives any available right of redemption from and after the date of judgment, any required valuation or appraisement of the mortgaged or secured property prior to sale, any available right **or moratorium** / to stay execution or to require a marshaling of assets **or sale in inverse order of alienation** / and any required bond in the event a receiver is appointed. In addition, to the extent permitted by applicable law, each party hereby grants to the other parties a power of sale as to any property that is subject to the lien and security rights granted hereunder, such power to be exercised in the manner provided by applicable law or otherwise in a commercially reasonable manner and upon reasonable notice.

Each party agrees that the other parties shall be entitled to utilize the provisions of Oil and Gas lien law or other lien law of any state in which the Contract Area is situated to enforce the obligations of each party hereunder. Without limiting the generality of the foregoing, to the extent permitted by applicable law, Non-Operators agree that Operator may invoke or utilize the mechanics' or materialmen's lien law of the state in which the Contract Area is situated in order to secure the payment to Operator of any sum due hereunder for services performed or materials supplied by Operator.

C. Advances:

Operator, at its election, shall have the right from time to time to demand and receive from one or more of the other parties payment in advance of their respective shares of the estimated amount of the expense to be incurred in operations hereunder during the next succeeding month, which right may be exercised only by submission to each such party of an itemized statement of such estimated expense, together with an invoice for its share thereof. Each such statement and invoice for the payment in advance of estimated expense shall be submitted on or before the 20th day of the next preceding month. Each party shall pay to Operator its proportionate share of such estimate within fifteen (15) days after such estimate and invoice is received. If any party fails to pay its share of said estimate within said time, the amount due shall bear interest as provided in Exhibit "C" until paid. Proper adjustment shall be made monthly between advances and actual expense to the end that each party shall bear and pay its proportionate share of actual expenses incurred, and no more.

D. Defaults and Remedies:

If any party fails to discharge any financial obligation under this agreement, including without limitation the failure to make any advance under the preceding Article VII.C. or any other provision of this agreement, within the period required for such payment hereunder, then in addition to the remedies provided in Article VII.B. or elsewhere in this agreement, the remedies specified below shall be applicable. For purposes of this Article VII.D., all notices and elections shall be delivered

only by Operator, except that Operator shall deliver any such notice and election requested by a non-defaulting Non-Operator, and when Operator is the party in default, the applicable notices and elections can be delivered by any Non-Operator. Election of any one or more of the following remedies shall not preclude the subsequent use of any other remedy specified below or otherwise available to a non-defaulting party.

1. Suspension of Rights: Any party may deliver to the party in default a Notice of Default, which shall specify the default, specify the action to be taken to cure the default, and specify that failure to take such action will result in the exercise of one or more of the remedies provided in this Article. If the default is not cured within thirty (30) days of the delivery of such Notice of Default, all of the rights of the defaulting party granted by this agreement may upon notice be suspended until the default is cured, without prejudice to the right of the non-defaulting party or parties to continue to enforce the obligations of the defaulting party previously accrued or thereafter accruing under this agreement. If Operator is the party in default, the Non-Operators shall have in addition the right, by vote of Non-Operators owning a majority in interest in the Contract Area after excluding the voting interest of Operator, to appoint a new Operator effective immediately. The rights of a defaulting party that may be suspended hereunder at the election of the non-defaulting parties shall include, without limitation, the right to receive information as to any operation conducted hereunder during the period of such default, the right to elect to participate in an operation proposed under Article VI.B. of this agreement, the right to participate in an operation being conducted under this agreement even if the party has previously elected to participate in such operation, and the right to receive proceeds of production from any well subject to this agreement.

2. Suit for Damages: Non-defaulting parties or Operator for the benefit of non-defaulting parties may sue (at joint account expense) to collect the amounts in default, plus interest accruing on the amounts recovered from the date of default until the date of collection at the rate specified in Exhibit "C" attached hereto. Nothing herein shall prevent any party from suing any defaulting party to collect consequential damages accruing to such party as a result of the default.

3. Deemed Non-Consent: The non-defaulting party may deliver a written Notice of Non-Consent Election to the defaulting party at any time after the expiration of the thirty-day cure period following delivery of the Notice of Default, in which event if the billing is for the drilling a new well or the Plugging Back, Sidetracking, Reworking or Deepening of a well which is to be or has been plugged as a dry hole, or for the Completion or Recompletion of any well, the defaulting party will be conclusively deemed to have elected not to participate in the operation and to be a Non-Consenting Party with respect thereto under Article VI.B. or VI.C., as the case may be, to the extent of the costs unpaid by such party, notwithstanding any election to participate theretofore made. If election is made to proceed under this provision, then the non-defaulting parties may not elect to sue for the unpaid amount pursuant to Article VII.D.2.

Until the delivery of such Notice of Non-Consent Election to the defaulting party, such party shall have the right to cure its default by paying its unpaid share of costs plus interest at the rate set forth in Exhibit "C," provided, however, such payment shall not prejudice the rights of the non-defaulting parties to pursue remedies for damages incurred by the non-defaulting parties as a result of the default. Any interest relinquished pursuant to this Article VII.D.3. shall be offered to the non-defaulting parties in proportion to their interests, and the non-defaulting parties electing to participate in the ownership of such interest shall be required to contribute their shares of the defaulted amount upon their election to participate therein.

4. Advance Payment: If a default is not cured within thirty (30) days of the delivery of a Notice of Default, Operator, or Non-Operators if Operator is the defaulting party, may thereafter require advance payment from the defaulting party of such defaulting party's anticipated share of any item of expense for which Operator, or Non-Operators, as the case may be, would be entitled to reimbursement under any provision of this agreement, whether or not such expense was the subject of the previous default. Such right includes, but is not limited to, the right to require advance payment for the estimated costs of drilling a well or Completion of a well as to which an election to participate in drilling or Completion has been made. If the defaulting party fails to pay the required advance payment, the non-defaulting parties may pursue any of the remedies provided in the Article VII.D. or any other default remedy provided elsewhere in this agreement. Any excess of funds advanced remaining when the operation is completed and all costs have been paid shall be promptly returned to the advancing party.

5. Costs and Attorneys' Fees: In the event any party is required to bring legal proceedings to enforce any financial obligation of a party hereunder, the prevailing party in such action shall be entitled to recover all court costs, costs of collection, and a reasonable attorney's fee, which the lien provided for herein shall also secure.

E. Rentals, Shut-in Well Payments and Minimum Royalties:

Rentals, shut-in well payments and minimum royalties which may be required under the terms of any lease shall be paid by the party or parties who ~~subjected~~ **contributed, or who is deemed to have contributed** such lease to this agreement at its or their expense. In the event two or more parties own and have contributed interests in the same lease to this agreement, such parties may designate one of such parties to make said payments for and on behalf of all such parties. Any party may request, and shall be entitled to receive, proper evidence of all such payments. In the event of failure to make proper payment of any rental, shut-in well payment or minimum royalty through mistake or oversight where such payment is required to continue the lease in force, any loss which results from such non-payment shall be borne in accordance with the provisions of Article IV.B.2.

Operator shall notify Non-Operators of the anticipated completion of a shut-in well, or the shutting in or return to production of a producing well, at least five (5) days (excluding Saturday, Sunday, and legal holidays) prior to taking such action, or at the earliest opportunity permitted by circumstances, but assumes no liability for failure to do so. In the event of failure by Operator to so notify Non-Operators, the loss of any lease contributed hereto by Non-Operators for failure to make timely payments of any shut-in well payment shall be borne jointly by the parties hereto under the provisions of Article IV.B.3.

F. Taxes:

Beginning with the first calendar year after the effective date hereof, Operator shall render for ad valorem taxation all property subject to this agreement which by law should be rendered for such taxes, and it shall pay all such taxes assessed thereon before they become delinquent. Prior to the rendition date, each Non-Operator shall furnish Operator information as to burdens (to include, but not be limited to, royalties, overriding royalties and production payments) on Leases and Oil and Gas Interests contributed by such Non-Operator. If the assessed valuation of any Lease is reduced by reason of its being subject to outstanding excess royalties, overriding royalties or production payments, the reduction in ad valorem taxes resulting therefrom shall inure to the benefit of the owner or owners of such Lease, and Operator shall adjust the charge to such owner or owners so as to reflect the benefit of such reduction. If the ad valorem taxes are based in whole or in part upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges to the joint account shall be made and paid by the parties hereto in accordance with the tax value generated by each party's working interest. Operator shall bill the other parties for their proportionate shares of all tax payments in the manner provided in Exhibit "C."

If Operator considers any tax assessment improper, Operator may, at its discretion, protest within the time and manner prescribed by law, and prosecute the protest to a final determination, unless all parties agree to abandon the protest prior to final determination. During the pendency of administrative or judicial proceedings, Operator may elect to pay, under protest, all such taxes and any interest and penalty. When any such protested assessment shall have been finally determined, Operator shall pay the tax for the joint account, together with any interest and penalty accrued, and the total cost shall then be assessed against the parties, and be paid by them, as provided in Exhibit "C."

Each party shall pay or cause to be paid all production, severance, excise, gathering and other taxes imposed upon or with respect to the production or handling of such party's share of Oil and Gas produced under the terms of this agreement.

ARTICLE VIII.
ACQUISITION, MAINTENANCE OR TRANSFER OF INTEREST

A. Surrender of Leases:

The Leases covered by this agreement, insofar as they embrace acreage in the Contract Area, shall not be surrendered in whole or in part unless all parties consent thereto~~.~~**; however, no consent shall be necessary to release a lease which has expired or otherwise terminated in accordance with its terms.**

~~However, should~~ **Should** / any party desire to surrender its interest in any Lease or in any portion thereof, such party shall give written notice of the proposed surrender to all parties, and the parties to whom such notice is delivered shall have thirty (30) days after delivery of the notice within which to notify the party proposing the surrender whether they elect to consent thereto. Failure of a party to whom such notice is delivered to reply within said 30-day period shall constitute a consent to the surrender of the Leases described in the notice. If all parties do not agree or consent thereto, the party desiring to surrender shall assign, without express or implied warranty of title, all of its interest in such Lease, or portion thereof, and any well, material and equipment which may be located thereon and any rights in production thereafter secured, to the parties not consenting to such surrender. If the interest of the assigning party is or includes an Oil and Gas Interest, the assigning party shall execute and deliver to the party or parties not consenting to such surrender an oil and gas lease covering such Oil and Gas Interest for a term of one (1) year and so long thereafter as Oil and/or Gas is produced from the land covered thereby, such lease to be on the form attached hereto as Exhibit "B." Upon such assignment or lease, the assigning party shall be relieved from all obligations thereafter accruing, but not theretofore accrued, with respect to the interest assigned or leased and the operation of any well attributable thereto, and the assigning party shall have no further interest in the assigned or leased premises and its equipment and production other than the royalties retained in any lease made under the terms of this Article. The party assignee or lessee shall pay to the party assignor or lessor the reasonable salvage value of the latter's interest in any well's salvable materials and equipment attributable to the assigned or leased acreage. The value of all salvable materials and equipment shall be determined in accordance with the provisions of Exhibit "C," less the estimated cost of salvaging and the estimated cost of plugging and abandoning and restoring the surface. If such value is less than such costs, then the party assignor or lessor shall pay to the party assignee or lessee the amount of such deficit. If the assignment or lease is in favor of more than one party, the interest shall be shared by such parties in the proportions that the interest of each bears to the total interest of all such parties. If the interest of the parties to whom the assignment is to be made varies according to depth, then the interest assigned shall similarly reflect such variances.

Any assignment, lease or surrender made under this provision shall ~~not reduce or~~ change the assignor's, lessor's or surrendering party's interest ~~as it was immediately before the assignment, lease or surrender~~ in the balance of the Contract Area**pursuant to Article XVI.M**/; and the acreage assigned, leased or surrendered, and subsequent operations thereon, shall ~~not~~ thereafter be subject to the terms and provisions of this agreement ~~but shall be deemed subject to an Operating Agreement in the form of this agreement~~.

B. Renewal or Extension of Leases:

If any party secures a renewal or replacement of an Oil and Gas Lease or Interest subject to this agreement, then all other parties shall be notified promptly upon such acquisition or, in the case of a replacement Lease taken before expiration of an existing Lease, promptly upon expiration of the existing Lease. The parties notified shall have the right for a period of thirty (30) days following delivery of such notice in which to elect to participate in the ownership of the renewal or replacement Lease, insofar as such Lease affects lands within the Contract Area, by paying to the party who acquired it their proportionate shares of the acquisition cost allocated to that part of such Lease within the Contract Area, which shall be in proportion to the interest held at that time by the parties in the Contract Area. Each party who participates in the purchase of a renewal or replacement Lease shall be given an assignment of its proportionate interest therein by the acquiring party~~.~~**, without warranty of title, except as to acts by, through or under the acquiring party.**/

If some, but less than all, of the parties elect to participate in the purchase of a renewal or replacement Lease, it shall be owned by the parties who elect to participate therein, in a ratio based upon the relationship of their respective percentage of participation in the Contract Area to the aggregate of the percentages of participation in the Contract Area of all parties participating in the purchase of such renewal or replacement Lease. The acquisition of a renewal or replacement Lease by any or all of the parties hereto shall ~~not~~ cause a readjustment of the interests of the parties stated in Exhibit "A" **pursuant to Article XVI.M** / ~~but~~ and any renewal or replacement Lease in which less than all parties elect to participate shall ~~not~~ be subject to this agreement ~~but shall be deemed subject to a separate Operating Agreement in the form of this agreement~~.

If the interests of the parties in the Contract Area vary according to depth, then their right to participate proportionately in renewal or replacement Leases and their right to receive an assignment of interest shall also reflect such depth variances.

The provisions of this Article shall apply to renewal or replacement Leases whether they are for the entire interest covered by the expiring Lease or cover only a portion of its area or an interest therein. Any renewal or replacement Lease taken before the expiration of its predecessor Lease, or taken or contracted for or becoming effective within six (6) months after the expiration of the existing Lease, shall be subject to this provision so long as this agreement is in effect at the time of such acquisition or at the time the renewal or replacement Lease becomes effective; but any Lease taken or contracted for more than six (6) months after the expiration of an existing Lease shall not be deemed a renewal or replacement Lease and shall not be subject to the provisions of this agreement.

The provisions in this Article shall **not** / ~~also~~ be applicable to extensions of Oil and Gas Leases.

C. Acreage or Cash Contributions:

While this agreement is in force, if any party contracts for a contribution of cash towards the drilling of a well or any other operation on the Contract Area, such contribution shall be paid to the party who conducted the drilling or other operation and shall be applied by it against the cost of such drilling or other operation. If the contribution be in the form of acreage, the party to whom the contribution is made shall promptly tender an assignment of the acreage, without warranty of title, to the Drilling Parties in the proportions said Drilling Parties shared the cost of drilling the well. Such acreage shall become a separate Contract Area and, to the extent possible, be governed by provisions identical to this agreement. Each party shall promptly notify all other parties of any acreage or cash contributions it may obtain in support of any well or any other operation on the Contract Area. The above provisions shall also be applicable to optional rights to earn acreage outside the Contract Area which are in support of well drilled inside Contract Area.

If any party contracts for any consideration relating to disposition of such party's share of substances produced hereunder, such consideration shall not be deemed a contribution as contemplated in this Article VIII.C.

D. Assignment; Maintenance of Uniform Interest:

~~For the purpose of maintaining uniformity of ownership in the Contract Area in the Oil and Gas Leases, Oil and Gas Interests, wells, equipment and production covered by this agreement no party shall sell, encumber, transfer or make other disposition of its interest in the Oil and Gas Leases and Oil and Gas Interests embraced within the Contract Area or in wells, equipment and production unless such disposition covers either:~~

~~1. the entire interest of the party in all Oil and Gas Leases, Oil and Gas Interests, wells, equipment and production; or~~

~~2. an equal undivided percent of the party's present interest in all Oil and Gas Leases, Oil and Gas Interests, wells, equipment and production in the Contract Area.~~

Every sale, encumbrance, transfer or other disposition made by any party shall be made expressly subject to this agreement and shall be made without prejudice to the right of the other parties, and any transferee of an ownership interest in any Oil and Gas Lease or Interest shall be deemed a party to this agreement as to the interest conveyed from and after the effective date of the transfer of ownership; provided, however, that the other parties shall not be required to recognize any such sale, encumbrance, transfer or other disposition for any purpose hereunder until thirty (30) days after they have received a copy of the instrument of transfer or other satisfactory evidence thereof in writing from the transferor or transferee. No assignment or other disposition of interest by a party shall relieve such party of obligations previously incurred by such party hereunder with respect to the interest transferred, including without limitation the obligation of a party to pay all costs attributable to an operation conducted hereunder in which such party has agreed to participate prior to making such assignment, and the lien and security interest granted by Article VII.B. shall continue to burden the interest transferred to secure payment of any such obligations.

If, at any time the interest of any party is divided among and owned by four or more co-owners, Operator, at its discretion, may require such co-owners to appoint a single trustee or agent with full authority to receive notices, approve expenditures, receive billings for and approve and pay such party's share of the joint expenses, and to deal generally with, and with power to bind, the co-owners of such party's interest within the scope of the operations embraced in this agreement; however, all such co-owners shall have the right to enter into and execute all contracts or agreements for the disposition of their respective shares of the Oil and Gas produced from the Contract Area and they shall have the right to receive, separately, payment of the sale proceeds thereof.

Also see Article XVI.D.

E. Waiver of Rights to Partition:

If permitted by the laws of the state or states in which the property covered hereby is located, each party hereto owning an undivided interest in the Contract Area waives any and all rights it may have to partition and have set aside to it in severalty its undivided interest therein.

~~**F. Preferential Right to Purchase**~~

~~☐ (Optional: Check if applicable)~~

~~Should any party desire to sell all or any part of its interests under this agreement, or its rights and interests in the Contract Area, it shall promptly give written notice to the other parties, with full information concerning its proposed disposition, which shall include the name and address of the prospective transferee (who must be ready, willing and able to purchase), the purchase price, a legal description sufficient to identify the property, and all other terms of the offer. The other parties shall then have an optional prior right, for a period of ten (10) days after notice is delivered, to purchase for the stated consideration on the same terms and conditions the interest which the other party proposes to sell; and, if this optional right is exercised, the purchasing parties shall share the purchased interest in the proportions that the interest of each bears to the total interest of all purchasing parties. However, there shall be no preferential right to purchase in those cases where any party wishes to mortgage its interests, or to transfer title to its interest to its mortgagee in lieu of or pursuant to foreclosure of a mortgage of its interests, or to dispose of its interests by merger, reorganization, consolidation, or by sale of all or substantially all of its Oil and Gas assets to any party, or by transfer of its interests to a subsidiary or parent company or to a subsidiary of a parent company, or to any company in which such party owns a majority of the stock.~~

ARTICLE IX.
INTERNAL REVENUE CODE ELECTION

If, for federal income tax purposes, this agreement and the operations hereunder are regarded as a partnership, and if the parties have not otherwise agreed to form a tax partnership pursuant to Exhibit "G" or other agreement between them, each party thereby affected elects to be excluded from the application of all of the provisions of Subchapter "K," Chapter 1, Subtitle "A," of the Internal Revenue Code of 1986, as amended ("Code"), as permitted and authorized by Section 761 of the Code and the regulations promulgated thereunder. Operator is authorized and directed to execute on behalf of each party hereby affected such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by Treasury Regulation §1.761. Should there be any requirement that each party hereby affected give further evidence of this election, each such party shall execute such documents and furnish such other evidence as may be required by the Federal Internal Revenue Service or as may be necessary to evidence this election. No such party shall give any notices or take any other action inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Contract Area is located or any future income tax laws of the United States contain provisions similar to those in Subchapter "K," Chapter 1, Subtitle "A," of the Code, under which an election similar to that provided by Section 761 of the Code is permitted, each party hereby affected shall make such election as may be permitted or required by such laws. In making the foregoing election, each such party states that the income derived by such party from operations hereunder can be adequately determined without the computation of partnership taxable income.

ARTICLE X.
CLAIMS AND LAWSUITS

Operator may settle any single uninsured third party damage claim or suit arising from operations hereunder if the expenditure does not exceed **Fifty Thousand** Dollars ($**50,000.00**) and if the payment is in complete settlement of such claim or suit. If the amount required for settlement exceeds the above amount, the parties hereto shall assume and take over the further handling of the claim or suit, unless such authority is delegated to Operator. All costs and expenses of handling settling, or otherwise discharging such claim or suit shall be a the joint expense of the parties participating in the operation from which the claim or suit arises. If a claim is made against any party or if any party is sued on account of any matter arising from operations hereunder over which such individual has no control because of the rights given Operator by this agreement, such party shall immediately notify all other parties, and the claim or suit shall be treated as any other claim or suit involving operations hereunder.

ARTICLE XI.
FORCE MAJEURE

If any party is rendered unable, wholly or in part, by force majeure to carry out its obligations under this agreement, other than the obligation to indemnify or make money payments or furnish security, that party shall give to all other parties prompt written notice of the force majeure with reasonably full particulars concerning it; thereupon, the obligations of the party giving the notice, so far as they are affected by the force majeure, shall be suspended during, but no longer than, the continuance of the force majeure. The term "force majeure," as here employed, shall mean an act of God, strike, lockout, or other industrial disturbance, act of the public enemy, war, blockade, public riot, lightening, fire, storm, flood or other act of nature, explosion, governmental action, governmental delay, restraint or inaction, unavailability of equipment, and any other cause, whether of the kind specifically enumerated above or otherwise, which is not reasonably within the control of the party claiming suspension.

The affected party shall use all reasonable diligence to remove the force majeure situation as quickly as practicable. The requirement that any force majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes, lockouts, or other labor difficulty by the party involved, contrary to its wishes; how all such difficulties shall be handled shall be entirely within the discretion of the party concerned.

ARTICLE XII.
NOTICES

All notices authorized or required between the parties by any of the provisions of this agreement, unless otherwise specifically provided, shall be in writing and delivered in person or by United States mail, courier service, **electronic mail,** telegram, telex, telecopier or any other form of facsimile, postage or charges prepaid, and addressed to such parties at the addresses listed on Exhibit "A." All telephone or oral notices permitted by this agreement shall be confirmed immediately thereafter by written notice. The originating notice given under any provision hereof shall be deemed delivered only when received by the party to whom such notice is directed, and the time for such party to deliver any notice in response thereto shall run from the date the originating notice is received. "Receipt" for purposes of this agreement with respect to written notice delivered hereunder shall be actual delivery of the notice to the address of the party to be notified specified in accordance with this agreement, or to the telecopy, **electronic mail** facsimile or telex machine of such party. The second or any responsive notice shall be deemed delivered when deposited in the United States mail or at the office of the courier or telegraph service, or upon transmittal by telex, **electronic mail,** telecopy or facsimile, or when personally delivered to the party to be notified, provided, that when response is required within 24 or 48 hours, such response shall be given orally or by telephone, telex, **electronic mail,** telecopy or other facsimile within such period. Each party shall have the right to change its address at any time, and from time to time, by giving written notice thereof to all other parties. If a party is not available to receive notice orally or by telephone when a party attempts to deliver a notice required to be delivered within 24 or 48 hours, the notice may be delivered in writing by any other method specified herein and shall be deemed delivered in the same manner provided above for any responsive notice.

ARTICLE XIII.
TERM OF AGREEMENT

This agreement shall remain in full force and effect as to the Oil and Gas Leases and/or Oil and Gas Interests subject hereto for the period of time selected below; provided, however, no party hereto shall ever be construed as having any right, title or interest in or to any Lease or Oil and Gas Interest contributed by any other party beyond the term of this agreement. **See Article XVI.N.**

☐ ~~Option No. 1: So long as any of the Oil and Gas Leases subject to this agreement remain or are continued in force as to any part of the Contract Area, whether by production, extension, renewal or otherwise~~

☒ ~~Option No. 2: In the event the well described in Article VI.A., or any subsequent well drilled under any provision of this agreement, results in the Completion of a well as a well capable of production of Oil and/or Gas in paying quantities, this agreement shall continue in force so long as any such well is capable of production, and for an additional period of~~ **ninety (90)** ~~days thereafter; provided, however, if, prior to the expiration of such additional period, one or more of the parties hereto are engaged in drilling, Reworking, Deepening, Sidetracking, Plugging Back, testing or attempting to Complete or Re-complete a well or wells hereunder, this agreement shall continue in force until such operations have been completed and if production results therefrom, this agreement shall continue in force as provided herein. In the event the well described in Article VI.A., or any subsequent well drilled hereunder, results in a dry hole, and no other well is capable of producing Oil and/or Gas from the Contract Area, this agreement shall terminate unless drilling, Deepening, Sidetracking, Completing, Re-completing, Plugging Back or Reworking operations are commenced within~~ **ninety (90)** ~~days from the date of abandonment of said well. "Abandonment" for such purposes shall mean either (i) a decision by all parties not to conduct any further operations on the well or (ii) the elapse of 180 days from the conduct of any operations on the well, whichever first occurs.~~

The termination of this agreement shall not relieve any party hereto from any expense, liability or other obligation or any remedy therefor which has accrued or attached prior to the date of such termination.

Upon termination of this agreement and the satisfaction of all obligations hereunder, in the event a memorandum of this Operating Agreement has been filed of record, Operator is authorized to file of record in all necessary recording offices a notice of termination, and each party hereto agrees to execute such a notice of termination as to Operator's interest, upon request of Operator, if Operator has satisfied all its financial obligations.

ARTICLE XIV.
COMPLIANCE WITH LAWS AND REGULATIONS

A. Laws, Regulations and Orders:

This agreement shall be subject to the applicable laws of the state in which the Contract Area is located, to the valid rules, regulations, and orders of any duly constituted regulatory body of said state; and to all other applicable federal, state, and local laws, ordinances, rules, regulations and orders.

B. Governing Law:

This agreement and all matters pertaining hereto, including but not limited to matters of performance, non-performance, breach, remedies, procedures, rights, duties, and interpretation or construction, shall be governed and determined by the law of the state in which the Contract Area is located. ~~If the Contract Area is in two or more states, the law of the state of _____ shall govern.~~

C. Regulatory Agencies:

~~Nothing herein contained shall grant, or be construed to grant, Operator the right or authority to waive or release any rights, privileges, or obligations which Non-Operators may have under federal or state laws or under rules, regulations or~~

~~orders promulgated under such laws in reference to oil, gas and mineral operations, including the location, operation, or production of wells, on tracts offsetting or adjacent to the Contract Area.~~

With respect to the operations hereunder, Non-Operators agree to release Operator from any and all losses, damages, injuries, claims and causes of action arising out of, incident to or resulting directly or indirectly from Operator's interpretation or application of rules, rulings, regulations or orders of the Department of Energy or Federal Energy Regulatory Commission or predecessor or successor agencies to the extent such interpretation or application was made in good faith and does not constitute gross negligence. Each Non-Operator further agrees to reimburse Operator for such Non-Operator's share of production or any refund, fine, levy or other governmental sanction that Operator may be required to pay as a result of such an incorrect interpretation or application, together with interest and penalties thereon owing by Operator as a result of such incorrect interpretation or application.

ARTICLE XV.
MISCELLANEOUS

A. Execution:

This agreement shall be binding upon each Non-Operator when this agreement or a counterpart thereof has been executed by such Non-Operator and Operator notwithstanding that this agreement is not then or thereafter executed by all of the parties to which it is tendered or which are listed on Exhibit "A" as owning an interest in the Contract Area or which own, in fact, an interest in the Contract Area. Operator may, however, by written notice to all Non-Operators who have become bound by this agreement as aforesaid, given at any time prior to the actual spud date of the Initial Well but in no event later than five days prior to the date specified in Article VI.A. for commencement of the Initial Well, terminate this agreement if Operator in its sole discretion determines that there is insufficient participation to justify commencement of drilling operations. In the event of such a termination by Operator, all further obligations of the parties hereunder shall cease as of such termination. In the event any Non-Operator has advanced or prepaid any share of drilling or other costs hereunder, all sums so advanced shall be returned to such Non-Operator without interest. In the event Operator proceeds with drilling operations for the Initial Well without the execution hereof by all persons listed on Exhibit "A" as having a current working interest in such well, Operator shall indemnify Non-Operators with respect to all costs incurred for the Initial Well which would have been charged to such person under this agreement if such person had executed the same and Operator shall receive all revenues which would have been received by such person under this agreement if such person had executed the same.

B. Successors and Assigns:

This agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, devisees, legal representatives, successors and assigns, and the terms hereof shall be deemed to run with the Leases or Interests included within the Contract Area.

C. Counterparts:

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

D. Severability:

For the purposes of assuming or rejecting this agreement as an executory contract pursuant to federal bankruptcy laws, this agreement shall not be severable, but rather must be assumed or rejected in its entirety, and the failure of any party to this agreement to comply with all of its financial obligations provided herein shall be a material default.

ARTICLE XVI.
OTHER PROVISIONS

A. Conflicts:

Notwithstanding anything herein contained to the contrary, it is understood and agreed that if there is any conflict between any part of or all of the terms and provisions of Article XVI and any other terms and provisions of this agreement, the terms and provisions of this Article XVI shall prevail and control.

This agreement is subject to all the terms and provisions of that certain Unit Agreement for the Development of the R Kirk South Unit dated July 21, 2015, to which a copy of this agreement is attached (hereinafter the "Unit Agreement"). In the event of a conflict between the provisions of this agreement, including this Article XVI, and the Unit Agreement, the provisions of this agreement, including this Article XVI, shall prevail and control.

This Operating Agreement is intended to cover the parties' respective interests in the Unitized Formation.

B. Priority of Operations:

If at any time there is more than one operation proposed in connection with any well subject to this agreement and if the Consenting Parties do not agree on the sequence of proposed operations, such proposed operations shall be conducted in the following sequence:

First: **testing, coring or logging;**
Second: **completion attempts without plugging back in ascending order from deepest to shallowest depths;**
Third: **sidetracking in the order of least deviation from the original bottom hole location to the greatest deviation;**
Fourth: **deepening of a well below the authorized depth in descending order from shallowest to deepest depths;**
Fifth: **plugging back and completion attempts in ascending order from deepest to shallowest depths.**

C. Netting and Setoff:

Except for any payments related to charges on any joint interest billing that a Non-Operator has disputed in good faith, in the event that Non-Operator does not remit payment for any operating costs or charges assessable to Non-Operators and permitted under this Operating Agreement within forty five (45) days after the date payment is due, Operator is authorized to deduct such costs or charges, and to remit to such Non-Operators their respective net share of any proceeds attributable to the interest of such Non-Operators being received directly from any purchasers of production from the Contract Area. The foregoing provisions shall not diminish Operator's lien rights contained within this agreement.

D. Multiple Billing:

In no event shall Operator be required to make more than four billings for the entire interest credited to each Non-Operator on Exhibit "A". If any Non-Operator to this agreement disposes of any part or all of the interest credited to it on Exhibit "A", hereinafter referred to as "Selling Party," such Selling Party shall be solely responsible for billing its assignee or assignees and shall remain primarily liable to the other Parties for the interest or interests assigned until such time as Selling Party has (1) designated and qualified the assignees to receive the billing for its interest, (2) designated assignees have been approved and accepted by Operator, and (3) has furnished to Operator written notice of the conveyance and photocopy of the recorded assignments by which the transfer is made. The

sale or other disposition of any interest in the leases covered by this agreement shall be made specifically subject to the provisions of this Article. Operator's approval shall not be unreasonably withheld.

E. Horizontal Wells:

1. Notwithstanding anything contained herein to the contrary, (i) the provisions of Article VI.C.I Option No. 1 shall apply to any Horizontal Well or Multi-lateral Well proposed hereunder, and (ii) the provisions of Article VI.C.1. Option No. 2 shall apply to all other wells proposed hereunder that are not expressly proposed as Horizontal Wells or Multi-lateral Wells. To be effective as a Horizontal Well Proposal, such proposal must include an AFE, the corresponding anticipated Unit and Contract Area size and dimensions within which the well will be drilled, and other accompanying documents that clearly indicate the well being proposed is a Horizontal Well or Multi-lateral Well . As to any possible conflicts that may arise during the completion phase of a Horizontal Well or Multi-lateral Well, priority shall be given first to a Lateral drain hole of the authorized depth, and then to objective formations in ascending order above the authorized depth, and then to objective formations in descending order below the authorized depth.

2. Operator shall have the right to cease drilling a Horizontal Well or Multi-lateral Well at any time, for any reason, and such Horizontal Well or Multi-lateral Well shall be deemed to have reached its objective depth so long as Operator has drilled such Horizontal Well or Multi-lateral Well to the objective formation and has drilled laterally in the objective formation for a distance which is at least equal to fifty percent (50%) of the length of the total horizontal drainhole displacement (displacement from true vertical) proposed for the operation. In like manner, Operator may continue drilling to extend a proposed lateral in a Horizontal Well or Multi-lateral Well up to 10% longer than the length proposed in the proposal approved by the Parties if in Operator's sole judgment, it would be reasonably prudent to do so.

F. Sidetracking:

Notwithstanding the provisions of Article VI.B(5), "Sidetracking", such paragraph shall not be applicable to operations in the lateral portion of a Horizontal Well or Multi-lateral Well. Drilling operations which are intended to recover penetration of the target interval which are conducted in a Horizontal Well or Multi-lateral Well shall be considered as included in the original proposed drilling operations.

G. Further Assurances:

In connection with this agreement, the parties agree to execute and deliver such additional documents and instruments and to perform such additional acts as may be necessary or appropriate to effectuate, carry out, and perform all the terms, provisions and conditions of this agreement.

H. Covenants Running with the Land:

The terms, provisions, covenants and conditions of this agreement shall be deemed to be covenants running with the lands, the lease or leases and leasehold estate covered hereby, and all of the terms, provisions, covenants and conditions of this agreement shall be binding upon and inure to the benefit of the parties hereto, their respective successors and assigns.

I. Headings:

All headings in this agreement are for reference purposes only and have no binding effect on the terms, conditions or provisions of this agreement.

J. Indemnity for Access to Contract Area:

Each Non-Operator shall indemnify and hold Operator harmless against any and all liability in excess of insurance coverage carried for the joint account for injury to each such Non-Operator's officers, employees and/or agents resulting from and in any way relating to such officers', employees', and/or agents' presence on the Contract Area. The Non-Operators indemnity to Operator shall also apply to any other person whose presence on the Contract Area is at the insistence of such Non-Operator.

K. Working Interest Adjustment:

Subject to approval by the State, any recalculation or adjustment of the Parties' Exhibit "A" working interests pursuant to Articles VIII.A, VIII.B, XVI.L or XVI.N of this Agreement shall be recalculated or adjusted after written notice is provided to the affected party(ies) of such recalculation or adjustment of working interest. Such recalculation or adjustment shall be made effective as of the date of the lease surrender, renewal, acquisition and/or Contract Area / Drilling Unit Adjustment; provided, however, any such recalculation or adjustment to the Parties' working interests prior to the date of the first sale of production from such Drilling Unit shall be made effective as of the date first costs were incurred on and for such Drilling Unit.

This Article XVI.M shall not apply to loss or failure of title pursuant to Article IV.B of this Agreement.

L. Contract Area / Drilling Unit Adjustment:

Subject to approval by the State, it is recognized by the Parties consenting to unit operations that it may be prudent and/or necessary to enlarge or reduce the size of an existing Contract Area / Drilling Unit and/or include within an existing Contract Area / Drilling Unit acreage which was not initially included therein. Without the consent of the Parties consenting to unit operations, an existing Contract Area / Drilling Unit may not be enlarged or reduced in size. Such consent shall not be unreasonably withheld, delayed or conditioned. The party proposing such enlargement or reduction to an existing Contract Area / Drilling Unit shall notify the other party(ies) consenting to unit operations in writing, providing an explanation for the Contract Area / Drilling Unit modification proposal. To the extent a Contract Area / Drilling Unit is modified pursuant to this Agreement, the working interests of the Parties consenting to unit operations shall be recalculated in the manner set forth in Article XVI L.4. and XVI.M and a modified declaration of pooled unit shall be prepared and filed of record.

To the extent the Contract Area is modified pursuant to this Agreement, this Agreement shall be amended with revised Exhibits "A," "A-1," and "A-2."

This Article XVI.L shall not apply to the loss or failure of title pursuant to Article IV.B of this Agreement.

M. Voting by the Parties

Unless otherwise provided for herein, each party to this agreement shall have a voting interest equal to its Unit Participation. All decisions, determinations, consents or approvals of the parties, unless otherwise provided for herein or in the Unit Agreement attached hereto, shall be made by the affirmative vote of one or more parties having a combined voting interest of at least fifty-one percent (51%).

N. Term

This Agreement shall continue in effect so long as the Unit Agreement remains in effect, and thereafter until (a) all wells in the Unit Area have been plugged and abandoned or turned over to Working Interest Owners; (b) all Unit Equipment and real property acquired for the joint account have been disposed of by Unit Operator in accordance with the instructions of Working Interest Owners; and (c) there has been a final accounting.

IN WITNESS WHEREOF, this agreement shall be effective as of the _____ day of _____,

_____.

Chesapeake Exploration, L.L.C., who has prepared and circulated this form for execution, represents and warrants that the form was printed from and, with the exception(s) listed below, is identical to the AAPL Form 610-1989 Model Form Operating Agreement, as published in computerized form by Forms On-A-Disk, Inc. No changes, alterations, or modifications, other than those made by strikethrough and/or insertion and that are clearly recognizable as changes. ~~in Articles _____, have been made to the form.~~

OPERATOR

ATTEST OR WITNESS

Chesapeake Exploration, L.L.C.
An Oklahoma limited liability company

_____ By: James K. Ary

Vice President – Land
Title: Chesapeake E&P Holding Corporation, Manager
_____ Address: 6100 North Western Ave., Oklahoma City, OK 73118

EXHIBIT "A"

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015, as approved by the Ohio Department of Natural Resources for the R Kirk South Unit

.

(1) **Identification of lands subject to this agreement**.

The Contract Area is shown on Exhibit "A-1" attached hereto.

(2) **Restrictions as to depths and formations**.

This Agreement shall cover the Unit Area from fifty feet above the top of the Utica Shale formation to fifty feet below the base of the Point Pleasant formation (as more particularly defined in Article 1 of the Unit Agreement).

(3) **Percentages or fractional interests of parties to this agreement***

The owners and interests of the owners are set forth in Exhibit "A-2" attached hereto.

(4) **Oil and gas leases and/or oil and gas interests subject to this agreement**.

See Exhibits "A-2" and "A-3(A)" for a list of the oil and gas leases and interests subject to this agreement.

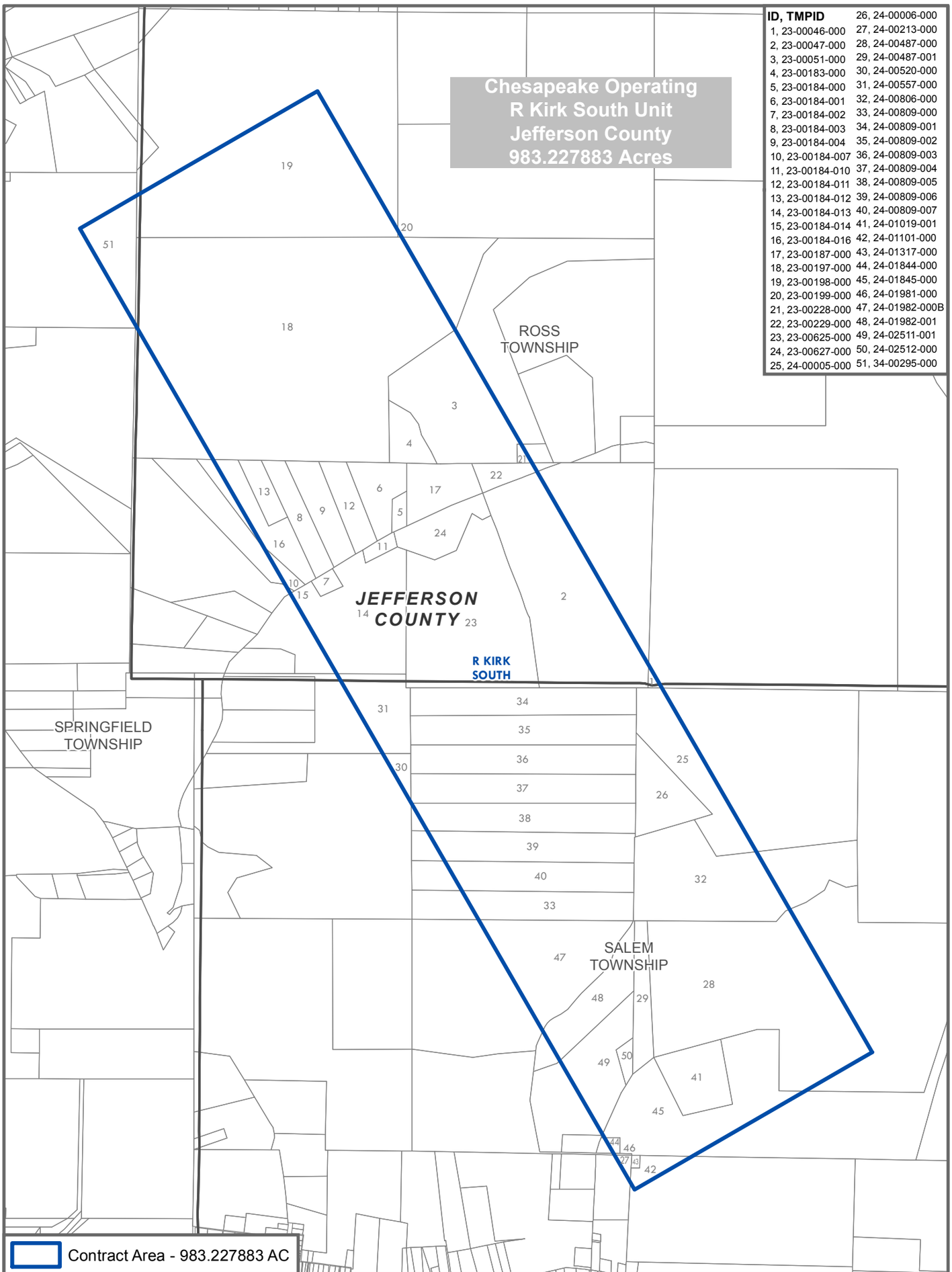
(5) **Addresses of parties for notice purposes**.

Chesapeake Exploration, L.L.C.
P. O. Box 18496
Oklahoma City, Oklahoma 73154-0496
Attention: Kirk Ary, Vice President – Land

The names and addresses of the remaining parties are set forth in Exhibit "A-3(A)" and Exhibit "A-3(B)" attached hereto.

*It is understood by the parties that the working interests listed in this Unit Operating Agreement (and any attachments hereto) are estimates only and are subject to change based upon final verification of title, due diligence, or surveying work that may be performed upon approval by the Ohio Department of Natural Resources. The parties' interests shall be adjusted to reflect the actual interest owned by the parties in the Contract Area.

Exhibit "A-1"



CONTRACT AREA

R KIRK SOUTH UNIT
Ross/Salem/Springfield Townships
Jefferson County, Ohio

Projection: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Path: C:\Users\GHakman\Desktop\PIUS.mxd

Prepared Date: 6/30/2015

Exhibit "A-2"

Leases Within the Contract Area

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015 as approved by the Ohio Department of Natural Resources for the R Kirk South Unit.

TRACT NUMBER	CHESAPEAKE LEASE ID NUMBER	LESSOR	LEASED YES/NO	SURFACE ACRES IN UNIT	TRACT PARTICIPATION	TAX MAP PARCEL ID NUMBERS	TOWNSHIP	COUNTY	STATE	UNIT WORKING INTEREST	CHESAPEAKE WORKING INTEREST	CHESAPEAKE UNIT PARTICIPATION	ARU WORKING INTEREST	ARU UNIT PARTICIPATION	ADDRESS	CITY	STATE	ZIP CODE
1	ARU	JAMES MILLS	Y	0.517895	0.0005267	23-00046-000	Ross	JEFFERSON	OH	0.05267%			100.00000%	0.05267%	1819 Township Road 219	Richmond	OH	43944
2	ARU	JAMES MILLS	Y	57.972837	0.0589618	23-00047-000	Ross	JEFFERSON	OH	5.89618%			100.00000%	5.89618%	1819 Township Road 219	Richmond	OH	43944
3	34-017032-000	JAMES P. MERIWETHER AND MARJORIE J. MERIWETHER	Y	33.548951	0.0341212	23-00051-000	Ross	JEFFERSON	OH	3.41212%	100.00000%	3.412124%			2115 Township Road 263	Bergholz	OH	43908
4	34-0002138-000	JAMES P. MERIWETHER AND MARJORIE J. MERIWETHER	Y	0.000000	0.0000000	23-00183-000	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.000000%			2116 Township Road 263	Bergholz	OH	43908
4	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	5.113953	0.0052012	23-00183-000	Ross	JEFFERSON	OH	0.52012%	100.00000%	0.520119%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
4	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.022791	0.0010402	23-00183-000	Ross	JEFFERSON	OH	0.10402%	100.00000%	0.104024%			906 NW 104th Street	Vancouver	WA	98685
5	34-004605-000	MILDRED E. HUBER	Y	0.000000	0.0000000	23-00184-000	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			7166 State Road 43	Bergholz	OH	43908
5	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	1.337671	0.0013605	23-00184-000	Ross	JEFFERSON	OH	0.13605%	100.00000%	0.136049%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
5	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	0.267534	0.0002721	23-00184-000	Ross	JEFFERSON	OH	0.02721%	100.00000%	0.027210%			906 NW 104th Street	Vancouver	WA	98685
6	34-0002138-000	JAMES P. MERIWETHER AND MARJORIE J. MERIWETHER	Y	0.000000	0.0000000	23-00184-001	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2116 Township Road 263	Bergholz	OH	43908

TRACT NUMBER	CHESAPEAKE LEASE ID NUMBER	LESSOR	LEASED YES/NO	SURFACE ACRES IN UNIT	TRACT PARTICIPATION	TAX MAP PARCEL ID NUMBERS	TOWNSHIP	COUNTY	STATE	UNIT WORKING INTEREST	CHESAPEAKE WORKING INTEREST	CHESAPEAKE UNIT PARTICIPATION	ARU WORKING INTEREST	ARU UNIT PARTICIPATION	ADDRESS	CITY	STATE	ZIP CODE
6	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	7.546695	0.0076754	23-00184-001	Ross	JEFFERSON	OH	0.76754%	100.00000%	0.76754%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
6	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.509339	0.0015351	23-00184-001	Ross	JEFFERSON	OH	0.15351%	100.00000%	0.15351%			906 NW 104th Street	Vancouver	WA	98685
7	34-0001980-000	JENNIFER M. HALL	Y	1.529934	0.0015560	23-00184-002	Ross	JEFFERSON	OH	0.15560%	100.00000%	0.15560%			2524 County Highway 59	Bergholz	OH	43908
8	34-001184-000	GEORGE A. POTKRAJAC	Y	0.000000	0.0000000	23-00184-003	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2413 County Road 59	East Springfield	OH	43925
8	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	7.016426	0.0071361	23-00184-003	Ross	JEFFERSON	OH	0.71361%	100.00000%	0.71361%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
8	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.403285	0.0014272	23-00184-003	Ross	JEFFERSON	OH	0.14272%	100.00000%	0.14272%			906 NW 104th Street	Vancouver	WA	98685
9	34-001184-000	GEORGE A. POTKRAJAC	Y	0.000000	0.0000000	23-00184-004	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2413 County Road 59	East Springfield	OH	43925
9	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	8.151022	0.0082901	23-00184-004	Ross	JEFFERSON	OH	0.82901%	100.00000%	0.82901%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
9	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.630204	0.0016580	23-00184-004	Ross	JEFFERSON	OH	0.16580%	100.00000%	0.16580%			906 NW 104th Street	Vancouver	WA	98685
10	34-001260-000	RONALD R. REASONER AND AMY D. REASONER	Y	0.000000	0.0000000	23-00184-007	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2617 County Road 59	Bergholz	OH	43908

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10	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	1.199459	0.0012199	23-00184-007	Ross	JEFFERSON	OH	0.12199%	100.00000%	0.12199%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
10	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	0.239892	0.0002440	23-00184-007	Ross	JEFFERSON	OH	0.02440%	100.00000%	0.02440%			906 NW 104th Street	Vancouver	WA	98685
11	34-008810-000	FREDERICK A. HUBER AND CYNTHIA A. HUBER	Y	1.634924	0.0016628	23-00184-010	Ross	JEFFERSON	OH	0.16628%	100.00000%	0.16628%			2040 County Road 59	Bergholz	OH	43908
12	34-013845-000	MARK A. KINCAID AND JILL A. KINCAID	Y	0.000000	0.0000000	23-00184-011	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2349 County Road 59	Bergholz	OH	43908
12	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	6.270030	0.0063770	23-00184-011	Ross	JEFFERSON	OH	0.63770%	100.00000%	0.63770%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
12	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.254006	0.0012754	23-00184-011	Ross	JEFFERSON	OH	0.12754%	100.00000%	0.12754%			906 NW 104th Street	Vancouver	WA	98685
13	34-001183-000	KELLY M. BETHEL	Y	0.000000	0.0000000	23-00184-012	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2251 County Road 59	East Springfield	OH	43925
13	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	3.837825	0.0039033	23-00184-012	Ross	JEFFERSON	OH	0.39033%	100.00000%	0.39033%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
13	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	0.767565	0.0007807	23-00184-012	Ross	JEFFERSON	OH	0.07807%	100.00000%	0.07807%			906 NW 104th Street	Vancouver	WA	98685
14	34-004212-000	CARYL A. TAYLOR AND FRANK PHILLIPS	Y	33.101256	0.0336659	23-00184-013	Ross	JEFFERSON	OH	3.36659%	100.00000%	3.36659%			2566 County Road 59	Bergholz	OH	43908
15	34-001260-000	RONALD R. REASONER AND AMY D. REASONER	Y	0.000000	0.0000000	23-00184-014	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2617 County Road 59	Bergholz	OH	43908

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15	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	0.046254	0.0000470	23-00184-014	Ross	JEFFERSON	OH	0.00470%	100.00000%	0.00470%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
15	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	0.009251	0.0000094	23-00184-014	Ross	JEFFERSON	OH	0.00094%	100.00000%	0.00094%			906 NW 104th Street	Vancouver	WA	98685
16	34-00183-000	KELLY M. BETHEL	Y	0.000000	0.0000000	23-00184-016	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2251 County Road 59	East Springfield	OH	43925
16	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	8.681560	0.0088297	23-00184-016	Ross	JEFFERSON	OH	0.88297%	100.00000%	0.88297%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
16	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.736312	0.0017659	23-00184-016	Ross	JEFFERSON	OH	0.17659%	100.00000%	0.17659%			906 NW 104th Street	Vancouver	WA	98685
17	34-0002137-000	ROBERT SENSIBAUGH AND CAROL SENSIBAUGH	Y	0.000000	0.0000000	23-00187-000	Ross	JEFFERSON	OH	0.00000%	100.00000%	0.00000%			2101 County Road 59	Bergholz	OH	43908
17	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	8.841945	0.0089928	23-00187-000	Ross	JEFFERSON	OH	0.89928%	100.00000%	0.89928%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
17	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.768389	0.0017986	23-00187-000	Ross	JEFFERSON	OH	0.17986%	100.00000%	0.17986%			906 NW 104th Street	Vancouver	WA	98685
18	34-011550-000	ROBERT H. AND DARLA KAY KIRK	Y	182.257790	0.1853668	23-00197-000	Ross	JEFFERSON	OH	18.53668%	100.00000%	18.53668%			7086 County Road 58	Bergholz	OH	43908
19	34-011550-000	ROBERT H. AND DARLA KAY KIRK	Y	74.801522	0.0760775	23-00198-000	Ross	JEFFERSON	OH	7.60775%	100.00000%	7.60775%			7086 County Road 58	Bergholz	OH	43908
20	34-011550-000	ROBERT H. AND DARLA KAY KIRK	Y	0.048111	0.0000489	23-00199-000	Ross	JEFFERSON	OH	0.00489%	100.00000%	0.00489%			7086 County Road 58	Bergholz	OH	43908
21	34-0002054-000	DAVID R. MCELWAIN AND EDWINNA MCELWAIN	Y	0.585161	0.0005951	23-00228-000	Ross	JEFFERSON	OH	0.05951%	100.00000%	0.05951%			1899 County Highway 59	Bergholz	OH	43908
22	34-0002949-000	DAVID R. MCELWAIN AND EDWINNA MCELWAIN	Y	1.894627	0.0019269	23-00229-000	Ross	JEFFERSON	OH	0.19269%	100.00000%	0.19269%			1899 County Highway 59	Bergholz	OH	43908
22	34-0003021-001	EDWARD MCLAIN AND PATRICIA MCLAIN	Y	1.894627	0.0019269	23-00229-000	Ross	JEFFERSON	OH	0.19269%	100.00000%	0.19269%			1681 State Route 43	Richmond	OH	43944

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23	34-004605-000	MILDRED E. HUBER	Y	55.898293	0.0568518	23-00625-000	Ross	JEFFERSON	OH	5.68518%	100.00000%	5.68518%			7166 State Road 43	Bergholz	OH	43908
24	34-004604-000	FREDERICK A. HUBER AND CYNTHIA A. HUBER	Y	9.943148	0.0101128	23-00627-000	Ross	JEFFERSON	OH	1.01128%	100.00000%	1.01128%			2040 County Road 59	Bergholz	OH	43908
25	ARU	PENNY L. MILLS	Y	20.619882	0.0209716	24-00005-000	Salem	JEFFERSON	OH	2.09716%			100.00000%	2.09716%	1251 Township Road 263	Bergholz	OH	43908
26	ARU	JAMES MILLS	Y	12.943073	0.0131639	24-00006-000	Salem	JEFFERSON	OH	1.31639%			100.00000%	1.31639%	1819 Township Road 219	Richmond	OH	43944
27	34-016745-000	JACK C. CAGOT	Y	0.746157	0.0007589	24-00213-000	Salem	JEFFERSON	OH	0.07589%	100.00000%	0.07589%			P.O. Box 154	East Springfield	OH	43925
28	34-017242-000	CHARLES W. CORDER, SR. AKA CHARLIE CORDER AND DIANA L. CORDER AKA DIANE CORDER	Y	81.133917	0.0825179	24-00487-000	Salem	JEFFERSON	OH	8.25179%	100.00000%	8.25179%			P.O. Box 128	East Springfield	OH	43925
29	UNLEASED	JEROME V. GUNDRUM, DECEASED	N	7.911914	0.0080469	24-00487-001	Salem	JEFFERSON	OH	0.80469%					c/o Jeffrey Gundrum 4589 Swonger Road NW Apt B	Dover	OH	44622
30	34-005006-001	ELIZABETH L. BOGGESS	Y	1.095477	0.0011142	24-00520-000	Salem	JEFFERSON	OH	0.11142%	100.00000%	0.11142%			147 Heights Street	Weirton	WV	26062
30	34-005006-002	EDGAR L. HARMON AND GLORIA F. HARMON	Y	1.095477	0.0011142	24-00520-000	Salem	JEFFERSON	OH	0.11142%	100.00000%	0.11142%			8674 Tanglewood Trail	Chagrin Falls	OH	44023
31	34-0003013-001	CHARLES WILLIAM CORDER, SR. AND DIANE L. CORDER	Y	6.402262	0.0065115	24-00557-000	Salem	JEFFERSON	OH	0.65115%	100.00000%	0.65115%			P.O. Box 128	East Springfield	OH	43925
31	34-0002263-000	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	Y	5.335218	0.0054262	24-00557-000	Salem	JEFFERSON	OH	0.54262%	100.00000%	0.54262%			c/o George Knapp 1637 Township Road 219	Richmond	OH	43944
31	34-0002969-001	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	Y	1.067044	0.0010852	24-00557-000	Salem	JEFFERSON	OH	0.10852%	100.00000%	0.10852%			906 NW 104th Street	Vancouver	WA	98685
32	ARU	JAMES MILLS	Y	36.762521	0.0373896	24-00806-000	Salem	JEFFERSON	OH	3.73896%			100.00000%	3.73896%	1819 Township Road 219	Richmond	OH	43944
33	34-004602-000	PHILLIP B. JORDAN	Y	15.061244	0.0153182	24-00809-000	Salem	JEFFERSON	OH	1.53182%	100.00000%	1.53182%			1004 Township Road 263	Bergholz	OH	43908
34	34-0002968-000	ROBERT W. YEAGER AND BETH A. YEAGER	Y	20.029212	0.0203709	24-00809-001	Salem	JEFFERSON	OH	2.03709%	100.00000%	2.03709%			1242 Township Road 263	Bergholz	OH	43908
35	34-022433-000	ROBERT H. AND LORI D. NEWLIN	Y	21.602109	0.0219706	24-00809-002	Salem	JEFFERSON	OH	2.19706%	100.00000%	2.19706%			1224 Township Road 263	Bergholz	OH	43908
36	34-0002035-000	ROBERT H. NEWLIN AND LORI D. NEWLIN	Y	21.299934	0.0216633	24-00809-003	Salem	JEFFERSON	OH	2.16633%	100.00000%	2.16633%			1224 Township Road 263	Bergholz	OH	43908
37	34-014048-000	THOMAS E. MCGAUGHEY	Y	21.054401	0.0214136	24-00809-004	Salem	JEFFERSON	OH	2.14136%	100.00000%	2.14136%			1136 Township Road 263	Bergholz	OH	43908
38	34-017035-000	ROBERT SERDAR AND JUDITH I. SERDAR	Y	20.294780	0.0206410	24-00809-005	Salem	JEFFERSON	OH	2.06410%	100.00000%	2.06410%			P.O. Box 205	East Springfield	OH	43925
39	34-017035-000	ROBERT SERDAR AND JUDITH I. SERDAR	Y	19.043146	0.0193680	24-00809-006	Salem	JEFFERSON	OH	1.93680%	100.00000%	1.93680%			P.O. Box 205	East Springfield	OH	43925
40	ARU	CHARLES J. AND SUSAN A. LONG	Y	17.195970	0.0174893	24-00809-007	Salem	JEFFERSON	OH	1.74893%			100.00000%	1.74893%	59 Quail Meadow Road	Plactis	NM	87043
41	34-015503-000	CHARLES W. CORDER, JR. AND NANCY S. CORDER	Y	12.523870	0.0127375	24-01019-001	Salem	JEFFERSON	OH	1.27375%	100.00000%	1.27375%			661 Township Road 261	Bergholz	OH	43908
42	34-017040-000	SALINE OIL COMPANY DBA SPRING HILLS GOLF CLUB, CHARLES W. CORDER, SR., PRESIDENT	Y	3.203635	0.0032583	24-01101-000	Salem	JEFFERSON	OH	0.32583%	100.00000%	0.32583%			P.O. Box 128	East Springfield	OH	43925
43	34-017242-000	CHARLES W. CORDER SR. AKA CHARLIE CORDER AND DIANA L. CORDER AKA DIANE CORDER	Y	0.344141	0.0003500	24-01317-000	Salem	JEFFERSON	OH	0.03500%	100.00000%	0.03500%			P.O. Box 128	East Springfield	OH	43925
44	34-015502-000	SHIRLEY A. MCCOURT AND LESTER P. MCCOURT	Y	0.559169	0.0005687	24-01844-000	Salem	JEFFERSON	OH	0.05687%	100.00000%	0.05687%			17 Township Road 261	Bergholz	OH	43908
45	34-017242-000	CHARLES W. CORDER SR. AKA CHARLIE CORDER AND DIANA L. CORDER AKA DIANE CORDER	Y	37.942244	0.0385895	24-01845-000	Salem	JEFFERSON	OH	3.85895%	100.00000%	3.85895%			P.O. Box 128	East Springfield	OH	43925
46	34-036194-000	MARIAN DECKER	Y	0.088929	0.0000904	24-01981-000	Salem	JEFFERSON	OH	0.00904%	100.00000%	0.00904%			P.O. Box 86	East Springfield	OH	43925
47	ARU	RANDY J. TINNEY	Y	14.831869	0.0150849	24-01982-000B	Salem	JEFFERSON	OH	1.50849%			100.00000%	1.50849%	556 Township Road 263	Bergholz	OH	43908
47	UNLEASED	MARY E. SCOTT FKA MARY E. SIMMONS	N	14.831869	0.0150849	24-01982-000B	Salem	JEFFERSON	OH	1.50849%					24192 Deep Branch Road	Georgetown	DE	19947
47	UNLEASED	RANDY J. TINNEY	N	0.000000	0.0000000	24-01982-000B	Salem	JEFFERSON	OH	0.00000%					556 Township Road 263	Bergholz	OH	43908
48	ARU	JAMES MILLS	Y	6.919878	0.0070379	24-01982-001	Salem	JEFFERSON	OH	0.70379%			100.00000%	0.70379%				
48	UNLEASED	MARY E. SCOTT FKA MARY E. SIMMONS	N	6.919878	0.0070379	24-01982-001	Salem	JEFFERSON	OH	0.70379%					24192 Deep Branch Road	Georgetown	DE	19947

TRACT NUMBER	CHESAPEAKE LEASE ID NUMBER	LESSOR	LEASED YES/NO	SURFACE ACRES IN UNIT	TRACT PARTICIPATION	TAX MAP PARCEL ID NUMBERS	TOWNSHIP	COUNTY	STATE	UNIT WORKING INTEREST	CHESAPEAKE WORKING INTEREST	CHESAPEAKE UNIT PARTICIPATION	ARU WORKING INTEREST	ARU UNIT PARTICIPATION	ADDRESS	CITY	STATE	ZIP CODE
48	UNLEASED	JAMES MILLS	N	0.000000	0.0000000	24-01982-001	Salem	JEFFERSON	OH	0.00000%					1819 Township Road 219	Richmond	OH	43944
49	1-301979-000	BETTY MAZUR AND ALFRED J. MAZUR, ACTING BY AND THROUGH HIS AGENT AND ATTORNEY-IN-FACT, FRANKLIN J. MAZUR	Y	15.712642	0.0159807	24-02511-001	Salem	JEFFERSON	OH	1.59807%	100.00000%	1.59807%			201 Township Road 263	Bergholz	OH	43908
50	34-015505-000	SCOTT M. RENFORTH AND CHRISTY M. RENFORTH	Y	1.560973	0.0015876	24-02512-000	Salem	JEFFERSON	OH	0.15876%	100.00000%	0.15876%			371 Township Road 259	Richmond	OH	43944
51	34-000880-000	GEORGE N. DAVIS	Y	11.814563	0.0120161	34-00295-000	Springfield	JEFFERSON	OH	1.20161%	100.00000%	1.20161%			2595 County Road 60	Bergholz	OH	43908
			TOTAL LEASED ACRES:	**953.564221**	**0.96983033**					**96.983033%**		**79.920465%**		**17.062568%**				
			TOTAL UNIT ACRES:	**983.227883**														

Exhibit "A-3(A)"
Unitized Parties

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015 as approved by the Ohio Department of Natural Resources for the R Kirk South Unit.

TRACT NUMBER	OWNER	ADDRESS	LEASED YES/NO	SURFACE ACRES IN UNIT	TRACT PARTICIPATION	TAX MAP PARCEL ID NUMBERS	TOWNSHIP	COUNTY	STATE	WORKING INTEREST	UNIT PARTICIPATION
29	JEROME V. GUNDRUM, DECEASED	c/o Jeffrey Gundrum 4589 Swonger Road NW, Apt B, Dover, OH 44622 Cc: Attorney Kristopher Haught Scarpone Law Offices 2021 Sunset Boulevard Steubenville, OH 43952	N	7.911914	0.0080469	24-00487-001	Salem	JEFFERSON	OH	100.00%	0.804690%
29	WELLS FARGO BANK, N.A.	3476 Stateview Boulevard Fort Mill, SC 29715 Cc: Attorney Jennifer Schaeffer Lerner, Sampson & Rothfuss Attorneys for Wells Fargo Bank, N.A. P.O. Box 5480 Cincinnati, OH 45201-5480	N	0.000000	0.0000000	24-00487-001	Salem	JEFFERSON	OH	0.00%	0.000000%
29	THE SECRETARY OF HOUSING AND URBAN DEVELOPMENT	451 Seventh Street, S.W. Washington, DC 20410 Cc: United States of America c/o U.S. Attorney 303 Marconi Boulevard, Suite 200 Columbus, OH 43215	N	0.000000	0.0000000	24-00487-001	Salem	JEFFERSON	OH	0.00%	0.000000%
47	MARY E. SCOTT FKA MARY E. SIMMONS	24192 Deep Branch Road Georgetown, DE 19947	N	14.831869	0.0150849	24-01982-000B	Salem	JEFFERSON	OH	100.00%	1.508490%
47	RANDY J. TINNEY	556 Township Road 263 Berghoz, OH 43908	N	0.000000	0.0000000	24-01982-000B	Salem	JEFFERSON	OH	100.00%	0.000000%
48	MARY E. SCOTT FKA MARY E. SIMMONS	24192 Deep Branch Road Georgetown, DE 19947	N	6.919878	0.0070379	24-01982-001	Salem	JEFFERSON	OH	100.00%	0.703790%
48	JAMES MILLS	1819 Township Road 219 Richmond, OH 43944	N	0.000000	0.0000000	24-01982-001	Salem	JEFFERSON	OH	100.00%	0.000000%
		TOTAL UNITIZED ACRES:		**29.663661**	**0.0301697**						
		TOTAL UNIT ACRES:		**983.227883**							

Exhibit "A-3(B)"

Leased Parties Included for Notice Purposes Due to Pooling Limitations

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015 as approved by the Ohio Department of Natural Resources for the R Kirk South Unit.

TRACT NUMBER	OWNER	ADDRESS	LEASED YES/NO	SURFACE ACRES IN UNIT	TRACT PARTICIPATION	TAX MAP PARCEL ID NUMBERS	TOWNSHIP	COUNTY	STATE	CHK WORKING INTEREST	CHK UNIT PARTICIPATION
34	ROBERT W. YEAGER AND BETH A. YEAGER*	1242 Township Road 263 Bergholz, OH 43908 Cc: THOMAS MCK. HAZLETT AS BANKRUPTCY TRUSTEE FOR ROBERT AND BETH YEAGER CASE NUMBER 2013-513518 185 W. Main Street St. Clairsville, OH 43950	Y	20.029212	0.0203709	24-00809-001	Salem	JEFFERSON	OH	100.00%	2.03709%
		TOTAL NON-CONFORMING LEASEHOLD ACRES:		**20.029212**	**0.0203709**						
		TOTAL UNIT ACRES:		**983.227883**							

*Robert W. Yeager and Beth A. Yeager are subject to an existing oil and gas lease with a pooling restriction of 640 acres, or such other larger unit as may be required by state law or regulation for the purpose of drilling a well thereon. Chesapeake is the owner of Tract 34 as defined by Chatper 1509.01(K) of the Ohio Revised Code and the above-listed fee mineral owners are shown for notice purposes only.

EXHIBIT "B"

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015, for the R Kirk South Unit.

PAID-UP
OIL & GAS LEASE

04/10 - OH

Lease No. _____

This Lease made this _____ day of _____, 20_____, by and between: _____, of _____ hereinafter collectively called "Lessor," and **CHESAPEAKE EXPLORATION, L.L.C.**, an Oklahoma limited liability company, 6100 N. Western Avenue, Oklahoma City, Oklahoma 73118, hereinafter called "Lessee."

WITNESSETH, that for and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and of the mutual covenants and agreements hereinafter set forth, the Lessor and Lessee agree as follows:

LEASING CLAUSE. Lessor hereby leases exclusively to Lessee all the oil and gas (including, but not limited to coal seam gas, coalbed methane gas, coalbed gas, methane gas, gob gas, occluded methane/natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced/originating within any formation, gob area, mined-out area, coal seam, and all communicating zones), and their liquid or gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, and from adjoining lands, using methods and techniques which are not restricted to current technology, including the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads, electric power and telephone facilities, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from neighboring lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment; to use and occupy the subsurface for a wellbore or wellbores to drill across, through and under the Leasehold.

DESCRIPTION. The Leasehold is located in the Township of _____, in the County of _____, in the State of Ohio, and described as follows:

Township: _____, Range:_____
Section _____: Tax Parcel No.: _____, Containing _____ acres

and is bounded formerly or currently as follows:

On the North by lands of _____;
On the East by lands of _____;
On the South by lands of _____;
On the West by lands of _____;

including lands acquired from _____, by virtue of deed dated _____, and recorded in _____ Book _____, at Page _____, and described for the purposes of this agreement as containing a total of _____ Leasehold acres, whether actually more or less, and including contiguous lands owned by Lessor. This Lease also covers and includes, in addition to that above described, all land, if any, contiguous or adjacent to or adjoining the land above described and (a) owned or claimed by Lessor, by limitation, prescription, possession, reversion or unrecorded instrument or (b) as to which Lessor has a preference right of acquisition. Lessor agrees to execute any supplemental instrument requested by Lessee for a more complete or accurate description of said land.

LEASE TERM. This Lease shall remain in force for a primary term of _____ (__) years from 12:00 A.M. _____ (effective date) to 11:59 P.M._____ (last day of primary term) and shall continue beyond the primary term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/unitized therewith in search of oil, gas, or their constituents, or (ii) a well deemed by Lessee to be capable of production is located on the Leasehold or lands pooled/unitized therewith, or (iii) oil or gas, or their constituents, are produced from the Leasehold or lands pooled/unitized therewith, or (iv) if the Leasehold or lands pooled/unitized therewith is used for the underground storage of gas, or for the protection of stored gas, or (v) if prescribed payments are made, or (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operation under any existing and effective lease, permit or authorization covering such operations on the leased premises or on other lands affecting the leased premises, such delay will automatically extend the primary or secondary term of this oil and gas lease without additional compensation or performance by Lessee for a period of time equal to any such delay, postponement or interruption.

If there is any dispute concerning the extension of this Lease beyond the primary term by reason of any of the alternative mechanisms specified herein, the payment to the Lessor of the prescribed payments provided below shall be conclusive evidence that the Lease has been extended beyond the primary term.

EXTENSION OF PRIMARY TERM. Lessee has the option to extend the primary term of this Lease for one additional term of five (5) years from the expiration of the primary term of this Lease; said extension to be under the same terms and conditions as contained in this Lease. Lessee may exercise this option to extend this Lease if on or before the expiration date of the primary term of this Lease, Lessee pays or tenders to the Lessor or to the Lessor's credit an amount equal to the initial consideration given for the execution hereof. Exercise of this option is at Lessee's sole discretion and may be invoked by Lessee where no other alternative of the Lease Term clause extends this Lease beyond the primary term.

NO AUTOMATIC TERMINATION OR FORFEITURE.

(A) CONSTRUCTION OF LEASE: The language of this Lease (including, but not limited to, the Lease Term and Extension of Term clauses) shall never be read as language of special limitation. This Lease shall be construed against termination, forfeiture, cancellation or expiration and in favor of giving effect to the continuation of this Lease where the circumstances exist to maintain this Lease in effect under any of the alternative mechanisms set forth above. In connection therewith, (i) a well shall be deemed to be capable of production if it has the capacity to produce a profit over operating costs, without regard to any capital costs to drill or equip the well, or to deliver the oil or gas to market, and (ii) the Lessee shall be deemed to be conducting operations in search of oil or gas, or their constituents, if the Lessee is engaged in geophysical and other exploratory work including, but not limited to, activities to drill an initial well, to drill a new well, or to rework, stimulate, deepen, sidetrack, frac, plug back in the same or different formation or repair a well or equipment on the Leasehold or any lands pooled/unitized therewith (such activities shall include, but not be limited to, performing any preliminary or preparatory work necessary for drilling, conducting internal technical analysis to initiate and/or further develop a well, obtaining permits and approvals associated therewith and may include reasonable gaps in activities provided that there is a continuum of activities showing a good faith effort to develop a well or that the cessation or interruption of activities was beyond the control of Lessee, including interruptions caused by the acts of third parties over whom Lessee has no control or regulatory delays associated with any approval process required for conducting such activities).

(B) LIMITATION OF FORFEITURE: This Lease shall never be subject to a civil action or proceeding to enforce a claim of termination, cancellation, expiration or forfeiture due to any action or inaction by the Lessee, including, but not limited to making any prescribed payments authorized under the terms of this Lease, unless the Lessee has received written notice of Lessor's demand and thereafter fails or refuses to satisfy or provide justification responding to Lessor's demand within 60 days from the receipt of such notice. If Lessee timely responds to Lessor's demand, but in good faith disagrees with Lessor's position and sets forth the reasons therefore, such a response shall be deemed to satisfy this provision, this Lease shall continue in full force and effect and no further damages (or other claims for relief) will accrue in Lessor's favor during the pendency of the dispute, other than claims for payments that may be due under the terms of this Lease.

PAYMENTS TO LESSOR. In addition to the bonus paid by Lessee for the execution hereof, Lessee covenants to pay Lessor, proportionate to Lessor's percentage of ownership, as follows:

(A) DELAY RENTAL: To pay Lessor as Delay Rental, after the first year, at the rate of five dollars ($5.00) per net acre per year payable in advance. **The parties hereto agree that this is a Paid-Up Lease with no further Delay Rental and/or Delay in Marketing payments due to Lessor during the primary term hereof.**

(B) ROYALTY: To pay Lessor as Royalty, less all taxes, assessments, and adjustments on production from the Leasehold, as follows:

1. OIL: To deliver to the credit of Lessor a Royalty equal to seventeen point five percent (17.5%) of the net revenue realized by Lessee for all oil and any constituents thereof produced and marketed from the Leasehold, less the cost to transport, handle, separate, meter, treat, process and market the oil.

2. GAS: To pay Lessor an amount equal to seventeen point five percent (17.5%) of the net revenue realized by Lessee for all gas and the constituents thereof produced and marketed from the Leasehold, less the cost to transport, gather, dehydrate, compress, market, meter, treat and process the gas and any losses in volumes to point of measurement that determines the revenue realized by Lessee. Lessee may withhold Royalty payment until such time as the total withheld exceeds fifty dollars ($50.00).

(C) DELAY IN MARKETING: In the event that Lessee drills a well on the Leasehold or lands pooled/unitized therewith that is awaiting completion (such as hydraulic fracture stimulation), or that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents therefrom and there is no other basis for extending this Lease, Lessee shall pay after the primary term and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

(D) SHUT-IN: In the event that production of oil, gas, or their constituents is interrupted and not marketed for a period of twelve (12) months, and there is no producing well on the Leasehold or lands pooled/unitized therewith, Lessee shall thereafter, as Royalty for constructive production, pay a Shut-in Royalty equal in amount and frequency to the annual Delay Rental payment until such time as production is re-established (or lessee surrenders the Lease) and this Lease shall remain in full force and effect. During Shut-in, Lessee shall have the right to rework, stimulate, or deepen any well on the Leasehold or to drill a new well on the Leasehold in an effort to re-establish production, whether from an original producing formation or from a different formation. In the event that the production from the only producing well on the Leasehold is interrupted for a period of less than twelve (12) months, this Lease shall remain in full force and effect without payment of Royalty or Shut-in Royalty.

(E) DAMAGES: Lessee will remove unnecessary equipment and materials and reclaim all disturbed lands at the completion of activities, and Lessee agrees to repair any damaged improvements to the land and pay for the loss of growing crops or marketable timber.

(F) MANNER OF PAYMENT: Lessee shall make or tender all payments due hereunder by check, payable to Lessor, at Lessor's last known address, and Lessee may withhold any payment pending notification by Lessor of a change in address. Payment may be tendered by mail or any comparable method (e.g., Federal Express), and payment is deemed complete upon mailing or dispatch. Where the due date for any payment specified herein falls on a holiday, Saturday or Sunday, payment tendered (mailed or dispatched) on the next business day is timely.

(G) CHANGE IN LAND OWNERSHIP: Lessee shall not be bound by any change in the ownership of the Leasehold until furnished with such documentation as Lessee may reasonably require. Pending the receipt of documentation, Lessee may elect either to continue to make or withhold payments as if such a change had not occurred.

(H) TITLE: If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessor until the adverse claim is fully resolved.

(I) LIENS: Lessee may at its option pay and discharge any past due taxes, mortgages, judgments, or other liens and encumbrances on or against any land or interest included in the Leasehold; and Lessee shall be entitled to recover from the debtor, with legal interest and costs, by deduction from any future payments to Lessor or by any other lawful means. In the event the leased lands are encumbered by a prior mortgage, then, notwithstanding anything contained herein to the contrary, Lessee shall have the right to suspend the payment of any royalties due hereunder, without liability for interest, until such time as Lessor obtains at its own expense a subordination of the mortgage in a form acceptable to Lessee.

(J) CHARACTERIZATION OF PAYMENTS: Payments set forth herein are covenants, not special limitations, regardless of the manner in which these payments may be invoked. Any failure on the part of the Lessee to timely or otherwise properly tender payment can never result in an automatic termination, expiration, cancellation, or forfeiture of this Lease. Lessor recognizes and acknowledges that oil and gas lease payments, in the form of rental, bonus and royalty, can vary depending on multiple factors and that this Lease is the product of good faith negotiations. Lessor hereby agrees that the payment terms, as set forth herein, and any bonus payments paid to Lessor constitute full consideration for the Leasehold. Lessor further agrees that such payment terms and bonus payments are final and that Lessor will not seek to amend or modify the lease payments, or seek additional consideration based upon any differing terms which Lessee has or will negotiate with any other lessor/oil and gas owner.

(K) PAYMENT REDUCTIONS: If Lessor owns a lesser interest in the oil or gas than the entire undivided fee simple estate, then the rentals (except for Delay Rental payments as set forth above), royalties and shut-in royalties hereunder shall be paid to Lessor only in the proportion which Lessor’s interest bears to the whole and undivided fee.

UNITIZATION AND POOLING. Lessor grants Lessee the right to pool, unitize, or combine all or parts of the Leasehold with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessee or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization. Pooling or unitizing in one or more instances shall not exhaust Lessee’s pooling and unitizing rights hereunder, and Lessee is granted the right to change the size, shape, and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production or the revenue realized from the production of such unit, such proportional share of the Royalty from each unit well as the number of Leasehold acres included in the unit bears to the total number of acres in the unit. Otherwise, as to any part of the unit, drilling, operations in preparation for drilling, production, or shut-in production from the unit, or payment of Royalty, Shut-in Royalty, Delay in Marketing payment or Delay Rental attributable to any part of the unit (including non-Leasehold land) shall have the same effect upon the terms of this Lease as if a well were located on, or the subject activity attributable to, the Leasehold. In the event of conflict or inconsistency between the Leasehold acres ascribed to the Lease, and the local property tax assessment calculation of the lands covered by the Lease, or the deeded acreage amount, Lessee may, at its option, rely on the latter as being determinative for the purposes of this paragraph.

FACILITIES. Lessee shall not drill a well on the Leasehold within 200 feet of any structure located on the Leasehold without Lessor's written consent. Lessor shall not erect any building or structure, or plant any trees within 200 feet of a well or within 25 feet of a pipeline without Lessee's written consent. Lessor shall not improve, modify, degrade, or restrict roads and facilities built by Lessee without Lessee's written consent.

CONVERSION TO STORAGE. Lessee is hereby granted the right to convert the Leasehold or lands pooled/unitized therewith to gas storage. At the time of conversion, Lessee shall pay Lessor's proportionate part for the estimated recoverable gas remaining in any well drilled pursuant to this Lease using methods of calculating gas reserves as are generally accepted by the natural gas industry and, in the event that all wells on the Leasehold and/or lands pooled/unitized therewith have permanently ceased production, Lessor shall be paid a Conversion to Storage payment in an amount equal to Delay Rental for as long thereafter as the Leasehold or lands pooled/unitized therewith is/are used for gas storage or for protection of gas storage; such Conversion to Storage payment shall first become due upon the next ensuing Delay Rental anniversary date. The use of any part of the Leasehold or lands pooled or unitized therewith for the underground storage of gas, or for the protection of stored gas will extend this Lease beyond the primary term as to all rights granted by this Lease, including but not limited to production rights, regardless of whether the production and storage rights are owned together or separately.

DISPOSAL AND INJECTION WELLS. Lessor hereby grants to Lessee the right to drill wells and/or re-enter existing wells, including necessary location, roadway and pipeline easements and rights of way, on any part of the Leasehold or lands pooled or unitized therewith for the disposal and/or injection into any subsurface strata, other than a potable water strata, of air, gas, brine, completion and production fluids, waste water and any hydrocarbon related substances from any source, including, but not limited to wells on the Leasehold or lands pooled or unitized therewith or from properties and lands outside the Leasehold or lands pooled or unitized therewith, and to conduct all operations as may be required, for so long as necessary and required by Lessee for purposes as herein provided. If, at the expiration of the primary term, Lessee is disposing and/or injecting into any subsurface strata underlying the

Leasehold or lands pooled or unitized therewith or conducting operations for such disposal and/or injection and this lease is not being maintained by any other provision contained herein and no other payments are being made to Lessor as prescribed hereunder, Lessee shall pay to Lessor the sum of one thousand dollars ($1,000.00) per year, proportionately reduced to Lessor's ownership in the Leasehold and surface as it bears to the full and undivided estate, beginning on the next anniversary date of this Lease and said payment and term of this Lease, insofar as to terms and provisions contained herein applicable to disposal and injection wells, shall continue annually thereafter for so long as necessary and required by Lessee for purposes as herein provided and until all disposal and/or injection wells located on the Leasehold or on lands pooled or unitized therewith are plugged and abandoned. Lessor agrees that if required by Lessee, regulatory agency or governmental authority having jurisdiction, Lessor shall enter a separate Disposal and Injection Agreement with Lessee for the purposes as herein provided.

TITLE AND INTERESTS. Lessor hereby warrants generally and agrees to defend title to the Leasehold and covenants that Lessee shall have quiet enjoyment hereunder and shall have benefit of the doctrine of after acquired title. Should any person having title to the Leasehold fail to execute this Lease, the Lease shall nevertheless be binding upon all persons who do execute it as Lessor.

LEASE DEVELOPMENT. There is no implied covenant to drill, prevent drainage, further develop or market production within the primary term or any extension of term of this Lease. There shall be no Leasehold forfeiture, termination, expiration or cancellation for failure to comply with said implied covenants. Provisions herein, including, but not limited to the prescribed payments, constitute full compensation for the privileges herein granted.

COVENANTS. This Lease and its expressed or implied covenants shall not be subject to termination, forfeiture of rights, or damages due to failure to comply with obligations if compliance is effectively prevented by federal, state, or local law, regulation, or decree, or the acts of God and/or third parties over whom Lessee has no control.

RIGHT OF FIRST REFUSAL. If at any time within the primary term of this Lease or any continuation or extension thereof, Lessor receives any bona fide offer, acceptable to Lessor, to grant an additional lease ("Top Lease") covering all or part of the Leasehold, Lessee shall have the continuing option by meeting any such offer to acquire a Top Lease on equivalent terms and conditions. Any offer must be in writing and must set forth the proposed Lessee's name, bonus consideration and royalty consideration to be paid for such Top Lease, and include a copy of the lease form to be utilized reflecting all pertinent and relevant terms and conditions of the Top Lease. Lessee shall have fifteen (15) days after receipt from Lessor of a complete copy of any such offer to advise Lessor in writing of its election to enter into an oil and gas lease with Lessor on equivalent terms and conditions. If Lessee fails to notify Lessor within the aforesaid fifteen (15) day period of its election to meet any such bona fide offer, Lessor shall have the right to accept said offer. Any Top Lease granted by Lessor in violation of this provision shall be null and void.

ARBITRATION. In the event of a disagreement between Lessor and Lessee concerning this Lease or the associated Order of Payment, performance thereunder, or damages caused by Lessee's operations, the resolution of all such disputes shall be determined by arbitration in accordance with the rules of the American Arbitration Association. Arbitration shall be the exclusive remedy and cover all disputes, including but not limited to, the formation, execution, validity and performance of the Lease and Order of Payment. All fees and costs associated with the arbitration shall be borne equally by Lessor and Lessee.

ENTIRE CONTRACT. The entire agreement between Lessor and Lessee is embodied herein and in the associated Order of Payment (if any). No oral warranties, representations, or promises have been made or relied upon by either party as an inducement to or modification of this Lease.

TITLE CURATIVE. Lessor agrees to execute affidavits, ratifications, amendments, permits and other instruments as may be necessary to carry out the purpose of this lease.

SURRENDER. Lessee, at any time, and from time to time, may surrender and cancel this Lease as to all or any part of the Leasehold by recording a Surrender of Lease and thereupon this Lease, and the rights and obligations of the parties hereunder, shall terminate as to the part so surrendered; provided, however, that upon each surrender as to any part of the Leasehold, Lessee shall have reasonable and convenient easements for then existing wells, pipelines, pole lines, roadways and other facilities on the lands surrendered.

SUCCESSORS. All rights, duties, and liabilities herein benefit and bind Lessor and Lessee and their heirs, successors, and assigns.

FORCE MAJEURE. All express or implied covenants of this Lease shall be subject to all applicable laws, rules, regulations and orders. When drilling, reworking, production or other operations hereunder, or Lessee's fulfillment of its obligations hereunder are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this Lease shall not terminate, in whole or in part, because of such prevention or delay, and, at Lessee's option, the period of such prevention or delay shall be added to the term hereof. Lessee shall not be liable in damages for breach of any express or implied covenants of this Lease for failure to comply therewith, if compliance is prevented by, or failure is the result of any applicable laws, rules, regulations or orders or operation of force majeure.

SEVERABILITY. This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and modify the provision so as to conform to applicable law if that can be done in a manner which does not frustrate the purpose of this Lease.

COUNTERPARTS. This Lease may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Lease and all of which, when taken together, will be deemed to constitute one and the same agreement.

IN WITNESS WHEREOF, Lessor hereunto sets hand and seal.

Witness _____ _____ (Seal)

Witness _____ _____ (Seal)

Witness _____ _____ (Seal)

Witness _____ _____ (Seal)

Document prepared by: Chesapeake Exploration, L.L.C., 6100 N. Western Avenue, Oklahoma City, Oklahoma 73118

ACKNOWLEDGMENT

STATE OF _____)
) SS:
COUNTY OF _____)

On this, the _____ day of _____ 20____, before me _____, the undersigned officer, personally appeared _____, known to me (or satisfactorily proven) to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged that _____ executed the same for the purposes therein contained.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: _____
Signature/Notary Public: _____
Name/Notary Public (print): _____

CORPORATE ACKNOWLEDGMENT

STATE OF _____)
) SS:
COUNTY OF _____)

On this, the _____ day of _____ 20____, before me _____, the undersigned officer, personally appeared _____, who acknowledged himself to be the _____ of _____, a corporation, and that he as such _____, being authorized to do so, executed foregoing instrument for the purpose therein contained by signing the name of the corporation by himself as _____.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: _____
Signature/Notary Public: _____
Name/Notary Public (print): _____

Recorder: Return to Chesapeake Exploration, L.L.C., Land Dept., P.O. Box 18496, Oklahoma City, Oklahoma 73154-0496.

COPAS

EXHIBIT "C"

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015, for the R Kirk South Unit.

ACCOUNTING PROCEDURE
JOINT OPERATIONS

I. GENERAL PROVISIONS

1. Definitions

"Joint Property" shall mean the real and personal property subject to the agreement to which this Accounting Procedure is attached.

"Joint Operations" shall mean all operations necessary or proper for the development, operation, protection and maintenance of the Joint Property.

"Joint Account" shall mean the account showing the charges paid and credits received in the conduct of the Joint Operations and which are to be shared by the Parties.

"Operator" shall mean the party designated to conduct the Joint Operations.

"Non-Operators" shall mean the Parties to this agreement other than the Operator.

"Parties" shall mean Operator and Non-Operators.

"First Level Supervisors" shall mean those employees whose primary function in Joint Operations is the direct supervision of other employees and/or contract labor directly employed on the Joint Property in a field operating capacity.

"Technical Employees" shall mean those employees having special and specific engineering, geological or other professional skills, and whose primary function in Joint Operations is the handling of specific operating conditions and problems for the benefit of the Joint Property.

"Personal Expenses" shall mean travel and other reasonable reimbursable expenses of Operator's employees.

"Material" shall mean personal property, equipment or supplies acquired or held for use on the Joint Property.

"Controllable Material" shall mean Material which at the time is so classified in the Material Classification Manual as most recently recommended by the Council or Petroleum Accountants Societies.

2. Statement and Billings

Operator shall bill Non-Operators on or before the last day of each month for their proportionate share of the Joint Account for the preceding month. Such bills will be accompanied by statements which identify the authority for expenditure, lease or facility, and all charges and credits summarized by appropriate classifications of investment and expense except that items of Controllable Material and unusual charges and credits shall be separately identified and fully described in detail.

3. Advances and Payments by Non-Operators

A. Unless otherwise provided for in the agreement, the Operator may require the Non-Operators to advance their share of estimated cash outlay for the succeeding month's operation within fifteen (15) days after receipt of the billing or by the first day of the month for which the advance is required, whichever is later. Operator shall adjust each monthly billing to reflect advances received from the Non-Operators.

B. Each Non-Operator shall pay its proportion of all bills within / ~~fifteen (15)~~ **thirty (30)** days after receipt. If payment is not made within such time, the unpaid balance shall bear interest monthly at the greater rate of prime plus 2% or at the rate of 12% per annum, compounded monthly, on the first day of the month in which delinquency occurs or the maximum contract rate permitted by the applicable usury laws in the state in which the Joint Property is located, whichever is the lesser, plus attorney's fees, court costs, and other costs in connection with the collection of unpaid amounts.

Operator may, at its option, choose to substitute other penalties described elsewhere in this Agreement for failure to pay bills within the / ~~fifteen (15)~~ **thirty (30)** day time frame described above.

4. Adjustments

Payment of any such bills shall not prejudice the right of any Non-Operator to protest or question the correctness thereof; provided, however, all bills and statements rendered to Non-Operators by Operator during any calendar year shall conclusively be presumed to be true and correct after twenty-four (24) months following the end of any such calendar year, unless within the said twenty-four (24) month period a Non-Operator takes written exception thereto and makes claim on Operator for adjustment. No adjustment favorable to Operator shall be made unless it is made within the same prescribed period. The provisions of this paragraph shall not prevent adjustments resulting from a physical inventory of Controllable Material as provided for in Section V.

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5. Audits

A. A Non-Operator, upon notice in writing to Operator and all other Non-Operators, shall have the right to audit Operator's accounts and records relating to the Joint Account for any calendar year within the twenty-four (24) month period following the end of such calendar year; provided, however, the making of an audit shall not extend the time for the taking of written exception to and the adjustments of accounts as provided for in Paragraph 4 of this Section I. Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct a joint audit in a manner which will result in a minimum of inconvenience to the Operator. Operator shall bear no portion of the Non-Operators' audit cost incurred under this paragraph unless agreed to by the Operator. The audits shall not be conducted more than once each year without prior approval of Operator, except upon the resignation or removal of the Operator, and shall be made at the expense of those Non-Operators approving such audit.

B. The Operator shall reply in writing to an audit report within 180 days after receipt of such report.

6. Approval By Non-Operators

Where an approval or other agreement of the Parties or Non-Operators is expressly required under other sections of this Accounting Procedure and if the agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, Operator shall notify all Non-Operators of the Operator's proposal, and the agreement or approval of a majority in interest of the Non-Operators shall be controlling on all Non-Operators.

II. DIRECT CHARGES

Operator shall charge the Joint Account with the following items:

1. Ecological and Environmental

Costs incurred for the benefit of the Joint Property as a result of governmental or regulatory requirements to satisfy environmental considerations applicable to the Joint Operations. Such costs may include surveys of an ecological or archaeological nature and pollution control procedures as required by applicable laws and regulations.

2. Rentals and Royalties

Lease rentals and royalties paid by Operator for the Joint Operations.

3. Labor

A. (1) Salaries and wages of Operator's field employees **and/or consultants** directly employed on the Joint Property in the conduct of Joint Operations.

(2) Salaries of First level Supervisors in the field.

(3) Salaries and wages of Technical Employees **and/or consultants** directly employed on the Joint Property if such charges are excluded from the overhead rates.

(4) Salaries and wages of Technical Employees **and/or consultants** either temporarily or permanently assigned to and directly employed in the operation or the Joint Property if such charges are excluded from the overhead rates.

B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to employees whose salaries and wages are chargeable to the Joint Account under Paragraph 3A of this Section II. Such costs under this Paragraph 3B may be charged on a "when and as paid basis" or by "percentage assessment" on the amount of salaries and wages chargeable to the Joint Account under Paragraph 3A of this Section II. If percentage assessment is used, the rate shall be based on the Operator's cost experience.

C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator’s costs chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II.

D. Personal Expenses of those employees whose salaries and wages are chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II.

4. Employee Benefits

Operator's current costs or established plans for employees' group life insurance, hospitalization, pension, retirement, stock purchase, thrift, bonus, and other benefit plans of a like nature, applicable to Operator's labor cost chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II shall be Operator's actual cost not to exceed the percent most recently recommended by the Council of Petroleum Accountants Societies.

5. Material

Material purchased or furnished by Operator for use on the Joint Property as provided under Section IV. Only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use and is reasonably practical and consistent with efficient and economical operations. The accumulation of surplus stocks shall be avoided.

6. Transportation

Transportation of employees and Material necessary for the Joint Operations but subject to the following limitations:

A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store where like material is normally available or railway receiving point nearest the Joint Property unless agreed to by the Parties.

B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store where like material is normally available, or railway receiving point nearest the Joint Property unless agreed to by the Parties. No charge shall be made to the Joint Account for moving Material to other properties belonging to Operator, unless agreed to by the Parties.

C. In the application of subparagraphs A and B above, the option to equalize or charge actual trucking cost is available when the actual charge is $400 or less excluding accessorial charges. The $400 will be adjusted to the amount most recently recommended by the Council of Petroleum Accountants Societies.

7. Services

The cost of contract services, equipment and utilities provided by outside sources, except services excluded by Paragraph 10 of Section II and Paragraph i, ii, and iii, of Section III. The cost of professional consultant services and contract services of technical personnel directly engaged on the Joint Property if such charges are excluded from the overhead rates. The cost of professional consultant services or contract services of technical personnel not directly engaged on the Joint Property shall not be charged to the Joint Account unless previously agreed to by the Parties.

8. Equipment and Facilities Furnished By Operator

A. Operator shall charge the Joint Account for use of Operator owned equipment and facilities at rates commensurate with costs of ownership and operation. Such rates shall include costs of maintenance, repairs, other operating expense, insurance, taxes, depreciation, and interest on gross investment less accumulated depreciation not to exceed ten percent (10%) per annum. Such rates shall not exceed average commercial rates currently prevailing in the immediate area of the Joint Property.

B. In lieu of charges in Paragraph 8A above, Operator may elect to use average commercial rates prevailing in the immediate area of the Joint Property ~~less 20%~~. For automotive equipment, Operator may elect to use rates published by the Petroleum Motor Transport Association.

9. Damages and Losses to Joint Property

All costs or expenses necessary for the repair or replacement of Joint Property made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or other cause, except those resulting from Operator's gross negligence or willful misconduct. Operator shall furnish Non-Operator written notice of damages or losses incurred as soon as practicable after a report thereof has been received by Operator.

10. Legal Expense

Expense of handling, investigating and settling litigation or claims, title and regulatory work, discharging of liens, payment of judgments and amounts paid for settlement of claims incurred in or resulting from operations under the agreement or necessary to protect or recover the Joint Property. ~~except that no charge for services of Operator's legal staff or fees or expense of outside attorneys shall be made unless previously agreed to by the Parties. All other legal expense is considered to be covered by the overhead provisions of Section III unless otherwise agreed to by the Parties, except as provided in Section I, Paragraph 3.~~

11. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Joint Property, the operation thereof, or the production therefrom, and which taxes have been paid by the Operator for the benefit of the Parties. If the ad valorem taxes are based in whole or in part upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges to the Joint Account shall be made and paid by the Parties hereto in accordance with the tax value generated by each party's working interest.

12. Insurance

Net premiums paid for insurance required to be carried for the Joint Operations for the protection of the Parties. In the event Joint Operations are conducted in a state in which Operator may act as self-insurer for Worker's Compensation and/or Employers Liability under the respective state's laws, Operator may, at its election, include the risk under its self-insurance program and in that event, Operator shall include a charge at Operator's cost not to exceed manual rates.

13. Abandonment and Reclamation

Costs incurred for abandonment of the Joint Property, including costs required by governmental or other regulatory authority.

14. Communications

Cost of acquiring, leasing, installing, operating, repairing and maintaining communication systems, including radio and microwave facilities directly serving the Joint Property. In the event communication facilities/systems serving the Joint Property are Operator owned, charges to the Joint Account shall be made as provided in Paragraph 8 of this Section II.

15. Other Expenditures

The cost of Operator's Field Offices not covered in Section III, or any
~~Any~~ other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III and which is of direct benefit to the Joint Property and is incurred by the Operator in the necessary and proper conduct of the Joint Operations.

III. OVERHEAD

1. Overhead - Drilling and Producing Operations

i. As compensation for administrative, supervision, office services and warehousing costs, Operator shall charge drilling and producing operations on either:

(X) Fixed Rate Basis, Paragraph lA, or
( ) Percentage Basis, Paragraph lB

Unless otherwise agreed to by the Parties, such charge shall be in lieu of costs and expenses of all offices and salaries or wages plus applicable burdens and expenses of all personnel, except those directly chargeable under Paragraph 3A, Section II. ~~The cost and expense of services from outside sources in connection with matters of taxation, traffic, accounting or matters before or involving governmental agencies shall be considered as included in the overhead rates provided for in the above selected Paragraph of this Section III unless such cost and expense are agreed to by the Parties as a direct charge to the Joint Account.~~

ii. The salaries, wages and Personal Expenses of Technical Employees and/or the cost of professional consultant services and contract services of technical personnel directly employed on the Joint Property:

( ) shall be covered by the overhead rates, or
(X) shall not be covered by the overhead rates.

iii. The salaries, wages and Personal Expenses of Technical Employees and/or costs of professional consultant services and contract services of technical personnel either temporarily or permanently assigned to and directly employed in the operation of the Joint Property:

( ) shall be covered by the overhead rates, or
(X) shall not be covered by the overhead rates.

A. Overhead - Fixed Rate Basis

(1) Operator shall charge the Joint Account at the following rates per well per month:

Drilling Well Rate $ 18,387.13
(Prorated for less than a full month)

Producing Well Rate $ 1,838.71

(2) Application of Overhead - Fixed Rate Basis shall be as follows:

(a) Drilling Well Rate

(1) Charges for drilling wells shall begin on the date **location work begins** ~~the well is spudded~~ and terminate on the date the drilling rig, completion rig, or other units used in completion of the well is released, whichever

is later, except that no charge shall be made during suspension of drilling or completion operations for fifteen (15) or more consecutive calendar days.

(2) Charges for wells undergoing any type of workover or recompletion for a period of five (5) consecutive work days or more shall be made at the drilling well rate. Such charges shall be applied for the period from date workover operations, with rig or other units used in workover, commence through date of rig or other unit release, except that no charge shall be made during suspension of operations for fifteen (15) or more consecutive calendar days.

(b) Producing Well Rates

(1) An active well either produced or injected into for any portion of the month shall be considered as a one-well charge for the entire month.

(2) Each active completion in a multi-completed well in which production is not commingled down hole shall be considered as a one-well charge providing each completion is considered a separate well by the governing regulatory authority.

(3) An inactive gas well shut in because of overproduction or failure of purchaser to take the production shall be considered as a one-well charge providing the gas well is directly connected to a permanent sales outlet.

(4) A one-well charge shall be made for the month in which plugging and abandonment operations are completed on any well. This one-well charge shall be made whether or not the well has produced except when drilling well rate applies.

(5) All other inactive wells (including but not limited to inactive wells covered by unit allowable, lease allowable, transferred allowable, etc.) shall not qualify for an overhead charge.

(3) The well rates shall be adjusted as of the first day of April each year following the effective date of the agreement to which this Accounting Procedure is attached **by the percent increase or decrease published by COPAS** /. ~~The adjustment shall be computed by multiplying the rate currently in use by the percentage increase or decrease in the average weekly earnings of Crude Petroleum and Gas Production Workers for the last calendar year compared to the calendar year preceding as shown by / the index of average weekly earnings of Crude Petroleum and Gas Production Workers as~~ **an approved and recorded by COPAS.** ~~published by the United States Department of Labor, Bureau of Labor Statistics, or the equivalent Canadian index as published by Statistics Canada, as applicable. The adjusted rates shall be the rates currently in use, plus or minus the computed adjustment.~~

~~B. Overhead - Percentage Basis~~

~~(1) Operator shall charge the Joint Account at the following rates:~~

~~(a) Development~~

~~_____Percent (_____%) of the cost of development of the Joint Property exclusive of costs provided under Paragraph 10 of Section II and all salvage credits.~~

~~(b) Operating~~

~~_____ Percent (_____%) of the cost of operating the Joint Property exclusive of costs provided under Paragraphs 2 and 10 of Section II, all salvage credits, the value of injected substances purchased for secondary recovery and all taxes and assessments which are levied, assessed and paid upon the mineral interest in and to the Joint Property.~~

~~(2) Application of Overhead - Percentage Basis shall be as follows:~~

~~For the purpose of determining charges on a percentage basis under Paragraph 1B of this Section III, development shall include all costs in connection with drilling, redrilling, deepening, or any remedial operations on any or all wells involving the use of drilling rig and crew capable of drilling to the producing interval on the Joint Property; also, preliminary expenditures necessary in preparation for drilling and expenditures incurred in abandoning when the well is not completed as a producer, and original cost of construction or installation of fixed assets, the expansion of fixed assets and any other project clearly discernible as a fixed asset, except Major Construction as defined in Paragraph 2 of this Section III. All other costs shall be considered as operating.~~

2. Overhead - Major Construction

To compensate Operator for overhead costs incurred in the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly discernible as a fixed asset required for the development and operation of the Joint Property, Operator shall either negotiate a rate prior to the beginning of construction, or shall charge the Joint Account for overhead based on the following rates for any Major Construction project in excess of $_____50,000.00__:

A. 5.0 % of first $100,000 or total cost if less, plus

B. 3.0 % of costs in excess of $100,000 but less than $1,000,000, plus

C. 2.0 % of costs in excess of $1,000,000.

Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single project shall not be treated separately and the cost of drilling and workover wells and artificial lift equipment shall be excluded.

3. Catastrophe Overhead

To compensate Operator for overhead costs incurred in the event of expenditures resulting from a single occurrence due to oil spill, blowout, explosion, fire, storm, hurricane, or other catastrophes as agreed to by the Parties, which are necessary to restore the Joint Property to the equivalent condition that existed prior to the event causing the expenditures, Operator shall either negotiate a rate prior to charging the Joint Account or shall charge the Joint Account for overhead based on the following rates:

A. 5.0 % of total costs through $100,000; plus

B. 3.0 % of total costs in excess of $100,000 but less than $1,000,000; plus

C. 2.0 % of total costs in excess of $1,000,000.

Expenditures subject to the overheads above will not be reduced by insurance recoveries, and no other overhead provisions of this Section III shall apply.

4. Amendment of Rates

The overhead rates provided for in this Section III may be amended from time to time only by mutual agreement between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

IV. PRICING OF JOINT ACCOUNT MATERIAL PURCHASES, TRANSFERS AND DISPOSITIONS

Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for all Material movements affecting the Joint Property. Operator shall provide all Material for use on the Joint Property; however, at Operator's option, such Material may be supplied by the Non-Operator. Operator shall make timely disposition of idle and/or surplus Material, such disposal being made either through sale to Operator or Non-Operator, division in kind, or sale to outsiders. Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus condition A or B Material. The disposal of surplus Controllable Material not purchased by the Operator shall be agreed to by the Parties.

1. Purchases

Material purchased shall be charged at the price paid by Operator after deduction of all discounts received. In case of Material found to be defective or returned to vendor for any other reasons, credit shall be passed to the Joint Account when adjustment has been received by the Operator.

2. Transfers and Dispositions

Material furnished to the Joint Property and Material transferred from the Joint Property or disposed of by the Operator, unless otherwise agreed to by the Parties, shall be priced on the following basis exclusive of cash discounts:

A. New Material (Condition A)

(1) Tubular Goods Other than Line Pipe

(a) Tubular goods, sized 2 3/8 inches OD and larger, except line pipe, shall be priced at Eastern mill published carload base prices effective as of date of movement plus transportation cost using the 80,000 pound carload weight basis to the railway receiving point nearest the Joint Property for which published rail rates for tubular goods exist. If the 80,000 pound rail rate is not offered, the 70,000 pound or 90,000 pound rail rate may be used. Freight charges for tubing will be calculated from Lorain, Ohio and casing from Youngstown, Ohio.

(b) For grades which are special to one mill only, prices shall be computed at the mill base of that mill plus transportation cost from that mill to the railway receiving point nearest the Joint Property as provided above in Paragraph 2.A.(1)(a). For transportation cost from points other than Eastern mills, the 30,000

pound Oil Field Haulers Association interstate truck rate shall be used.

(c) Special end finish tubular goods shall be priced at the lowest published out-of-stock price, f.o.b. Houston, Texas, plus transportation cost, using Oil Field Haulers Association interstate 30,000 pound truck rate, to the railway receiving point nearest the Joint Property.

(d) Macaroni tubing (size less than 2 3/8 inch OD) shall be priced at the lowest published out-of-stock prices f.o.b. the supplier plus transportation costs, using the Oil Field Haulers Association interstate truck rate per weight of tubing transferred, to the railway receiving point nearest the Joint Property.

(2) Line Pipe

(a) Line pipe movements (except size 24 inch OD and larger with walls ¾ inch and over) 30,000 pounds or more shall be priced under provisions of tubular goods pricing in Paragraph A.(l)(a) as provided above. Freight charges shall be calculated from Lorain, Ohio.

(b) Line Pipe movements (except size 24 inch OD) and larger with walls ¾ inch and over) less than 30,000 pounds shall be priced at Eastern mill published carload base prices effective as of date of shipment, / plus 20 percent, plus transportation costs based on freight rates as set forth under provisions of tubular goods pricing in Paragraph A.(1)(a) as provided above. Freight charges shall be calculated from Lorain, Ohio.

(c) Line pipe 24 inch OD and over and ¾ inch wall and larger shall be priced f.o.b. the point of manufacture at current new published prices plus transportation cost to the railway receiving point nearest the Joint Property.

(d) Line pipe, including fabricated line pipe, drive pipe and conduit not listed on published price lists shall be priced at quoted prices plus freight to the railway receiving point nearest the Joint Property or at prices agreed to by the Parties.

(3) Other Material shall be priced at the current new price, in effect at date of movement, as listed by a reliable supply store nearest the Joint Property, or point of manufacture, plus transportation costs, if applicable, to the railway receiving point nearest the Joint Property.

(4) Unused new Material, except tubular goods, moved from the Joint Property shall be priced at the current new price, in effect on date of movement, as listed by a reliable supply store nearest the Joint Property, or point of manufacture, plus transportation costs, if applicable, to the railway receiving point nearest the Joint Property. Unused new tubulars will be priced as provided above in Paragraph 2.A.(l) and (2).

B. Good Used Material (Condition B)

Material in sound and serviceable condition and suitable for reuse without reconditioning:

(1) Material moved to the Joint Property

At seventy-five percent (75%) of current new price, as determined by Paragraph A.

(2) Material used on and moved from the Joint Property

(a) At seventy-five percent (75%) of current new price, as determined by Paragraph A, if Material was originally charged to the Joint Account as new Material or

(b) At sixty-five percent (65%) of current new price, as determined by Paragraph A, if Material was originally charged to the Joint Account as used Material

(3) Material not used on and moved from the Joint Property

At seventy-five percent (75%) of current new price as determined by Paragraph A.

The cost of reconditioning, if any, shall be absorbed by the transferring property.

C. Other Used Material

(1) Condition C

Material which is not in sound and serviceable condition and not suitable for its original function until after reconditioning shall be priced at fifty percent (50%) of current new price as determined by Paragraph A. The cost of reconditioning shall be charged to the receiving property, provided Condition C value plus cost of reconditioning does not exceed Condition B value.

(2) Condition D

Material, excluding junk, no longer suitable for its original purpose, but usable for some other purpose shall be priced on a basis commensurate with its use. Operator may dispose of Condition D Material under procedures normally used by Operator without prior approval of Non-Operators.

(a) Casing, tubing, or drill pipe used as line pipe shall be priced as Grade A and B seamless line pipe of comparable size and weight. Used casing, tubing or drill pipe utilized as line pipe shall be priced at used line pipe prices.

(b) Casing, tubing or drill pipe used as higher pressure service lines than standard line pipe, e.g. power oil lines, shall be priced under normal pricing procedures for casing, tubing, or drill pipe. Upset tubular goods shall be priced on a non upset basis.

(3) Condition E

Junk shall be priced at prevailing prices. Operator may dispose of Condition E Material under procedures normally utilized by Operator without prior approval of Non-Operators.

D. Obsolete Material

Material which is serviceable and usable for its original function but condition and/or value of such Material is not equivalent to that which would justify a price as provided above may be specially priced as agreed to by the Parties. Such price should result in the Joint Account being charged with the value of the service rendered by such Material.

E. Pricing Conditions

(1) Loading or unloading costs may be charged to the Joint Account at the rate of twenty-five cents (25¢) per hundred weight on all tubular goods movements, in lieu of actual loading or unloading costs sustained at the stocking point. The above rate shall be adjusted as of the first day of April each year following January 1, 1985 by the same percentage increase or decrease used to adjust overhead rates in Section III, Paragraph 1.A.(3). Each year, the rate calculated shall be rounded to the nearest cent and shall be the rate in effect until the first day of April next year. Such rate shall be published each year by the Council of Petroleum Accountants Societies.

(2) Material involving erection costs shall be charged at applicable percentage of the current knocked-down price of new Material.

3. Premium Prices

Whenever Material is not readily obtainable at published or listed prices because of national emergencies. strikes or other unusual causes over which the Operator has no control, the Operator may charge the Joint Account for the required Material at the Operator's actual cost incurred in providing such Material, in making it suitable for use, and in moving it to the Joint Property; provided notice in writing is furnished to Non-Operators of the proposed charge prior to billing Non-Operators for such Material. ~~Each Non-Operator shall have the right, by so electing and notifying Operator within ten days after receiving notice from Operator, to furnish in kind all or part of his share of such Material suitable for use and acceptable to Operator.~~

4. Warranty of Material Furnished By Operator

Operator does not warrant the Material furnished. In case of defective Material, credit shall not be passed to the Joint Account until adjustment has been received by Operator from the manufacturers or their agents.

V. INVENTORIES

The Operator shall maintain detailed records of Controllable Material.

1. Periodic Inventories, Notice and Representation

At reasonable intervals, inventories shall be taken by Operator of the Joint Account Controllable Material. Written notice of intention to take inventory shall be given by Operator at least thirty (30) days before any inventory is to begin so that Non-Operators may be represented when any inventory is taken. Failure of Non-Operators to be represented at an inventory shall bind Non-Operators to accept the inventory taken by Operator.

2. Reconciliation and Adjustment of Inventories

Adjustments to the Joint Account resulting from the reconciliation of a physical inventory shall be made within six months following the taking of the inventory. Inventory adjustments shall be made by Operator to the Joint Account for

overages and shortages, but, Operator shall be held accountable only for shortages due to lack of reasonable diligence.

3. Special Inventories

Special inventories may be taken whenever there is any sale, change of interest, or change of Operator in the Joint Property. It shall be the duty of the party selling to notify all other Parties as quickly as possible after the transfer of interest takes place. In such cases, both the seller and the purchaser shall be governed by such inventory. In cases involving a change of Operator, all Parties shall be governed by such inventory.

4. Expense of Conducting Inventories

A. The expense of conducting periodic inventories shall not be charged to the Joint Account unless agreed to by the Parties.

B. The expense of conducting special inventories shall be charged to the Parties requesting such inventories, except inventories required due to change of Operator shall be charged to the Joint Account.

EXHIBIT "D"

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015, for the R Kirk South Unit.

1. Operator shall procure and maintain, at all times while conducting operations under this Agreement, the following insurance coverages with limits not less than those specified below:

A. Workers' Compensation Employer's Liability	Statutory $1,000,000 Each Accident
B. General Liability including bodily injury and property damage liability	$5,000,000 Combined Single Limit
C. Auto Liability	$1,000,000 Combined Single Limit
D. Excess or Umbrella Liability	$20,000,000 Combined Single Limit
E. Cost of Well Control and Care, Custody and Control	$5,000,000 Each Occurrence and $250,000 CCC
F. Pollution Liability	$20,000,000 Combined Single Limit

2. The insurance described in 1. above shall include Non-Operator as additional insured (except Workers' Compensation) and shall include a waiver by the insurer of all rights of subrogation in favor of Non-Operator. Such insurance shall be carried at the joint expense of the parties hereto and all premiums and other costs and expenses related thereto shall be charged to the Joint Account in accordance with the Accounting Procedure attached as Exhibit "C" to this Agreement, unless prior to spud a party hereto who desires to provide its own insurance or self-insurance provides Operator with a certificate of insurance evidencing such individual coverage.

3. Operator shall endeavor to have its contractors and subcontractors comply with applicable Workers' Compensation laws, rules and regulations and carry such insurance as Operator may deem necessary.

4. Operator shall not be liable to Non-Operator for loss suffered because of insufficiency of the insurance procured and maintained for the Joint Account nor shall Operator be liable to Non-Operator for any loss occurring by reason of Operator's inability to procure or maintain the insurance provided for herein. If, in Operator's opinion, at any time during the term of this Agreement, Operator is unable to procure or maintain said insurance on commercially reasonable terms, or Operator reduces the limits of insurance, Operator shall promptly so notify Non-Operator in writing.

5. In the event of loss not covered by the insurance provided for herein, such loss shall be charged to the Joint Account and borne by the parties in accordance with their respective percentage of participation as determined by this Agreement.

6. Any party hereto may individually and at its own expense procure such additional insurance as it desires; provided, however, such party shall provide Operator with a certificate of insurance evidencing such coverage before spud of the well and such coverage shall include a waiver by the insurer of all rights of subrogation in favor of the parties hereto.

End of Exhibit "D"

EXHIBIT "E"

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015, for the R Kirk South Unit ("Operating Agreement").

Gas Balancing Agreement

I. DEFINITIONS:

For the purposes of this Gas Balancing Agreement ("GBA") the following terms shall be defined as follows:

(a) "Affiliate" shall have the meaning ascribed to such term in the Operating Agreement.

(b) The "Allowable" is the maximum rate of Gas production from each Gas Well permitted from time to time by the regulatory authority having jurisdiction.

(c) "Balance" is the condition occurring when a party has utilized, sold or disposed of a Quantity of Gas equal to the same percentage of the cumulative Gas production as such party's Percentage Ownership during the period of such cumulative Gas production.

(d) "Deliverability" shall mean the maximum sustainable daily Gas withdrawal from a Gas Well which may be accomplished without detriment to ultimate recovery of reserves as determined by Operator acting in good faith and taking into account relevant operational factors including, but not limited to, pipeline capacity and pressure and the maximum producing capability of the Gas Well based on data reported to the appropriate governmental agency having jurisdiction.

(e) "Gas" shall mean all gaseous hydrocarbons produced from each Gas Well but shall not include liquid hydrocarbons.

(f) "Gas Well" shall mean each well subject to the Operating Agreement that produces gas. If a single Gas Well is completed in two or more reservoirs, such Gas Well will be considered a separate Gas Well with respect to, but only as to, each reservoir from which the Gas production is not commingled in the well bore.

(g) "MMBtu" shall mean one million British thermal units.

(h) "Operating Agreement" means the operating agreement between the Parties to which this GBA is attached.

(i) "Operator" means the Party designated as operator under the Operating Agreement.

(j) "Overproduced" is the condition occurring when a party has utilized, disposed of or sold a greater Quantity of Gas from a particular Gas Well at any given time (individually or through its gas purchaser) than if such party were in Balance.

(k) "parties" means the legal entities that are signatory to the Operating Agreement, or their successors and assigns. Parties shall be referred to individually as a party.

(l) "Percentage Ownership" is the percentage interest of each party in each Gas Well as set forth in or determined in accordance with the provisions of the Operating Agreement, as such interest may change from time to time.

(m) "Percentage of Proceeds Sale" means a sale of Gas processed in a gas processing plant the price for which is computed as a percentage of the proceeds from the resale of residue gas and natural gas liquids attributable to such Gas.

(n) "Quantity" shall mean the number of units of Gas expressed in MMBtus.

(o) "Underproduced" is the condition occurring when a party has utilized, disposed of or sold a lesser Quantity of Gas from a particular Well at any given time (individually or through its gas purchaser) than if such party were in Balance.

II. APPLICATION OF THIS AGREEMENT

The provisions of this GBA shall be separately applicable to each Gas Well to the end that Gas production from one Gas Well may not be utilized for the purposes of balancing underproduction of Gas from any other Gas Well.

III. OVERPRODUCTION

A. Right to Take All Gas Produced

Subject to the other provisions herein, during any period when any party hereto is not marketing or otherwise disposing of or utilizing its Percentage Ownership of the Allowable or Deliverability, as applicable, of Gas from any Gas Well, the other parties shall be entitled--but shall not have the obligation--to take, in addition to their own Percentage Ownership of Gas, that portion of such other party's Percentage Ownership of Gas which said party is not marketing, utilizing or otherwise disposing of, and shall be entitled to take such Gas production and deliver same to its or their purchasers in accordance with the provisions herein. Each such taking party shall have the right to take its pro rata portion of each such non-taking party's share, said pro rata portion being based on the ratio of its Percentage Ownership to the Percentage Ownership of all parties in the same balancing status (either Overproduced or Underproduced) who elect to take such non-taking party's share of gas; provided, however, an Underproduced party desiring to take a non-taking party's share of Gas shall take precedence over an Overproduced party which wishes to take such non-taking party's Gas, and an Overproduced party shall be entitled to take a non-taking party's share of Gas only to the extent that an Underproduced party has elected not to take said Gas. The Gas of a party not taking its production shall be allocated to a taking party hereunder prior to calculation of percentage entitlement to make up Gas from an Overproduced party under Article IV, below.

Notwithstanding the foregoing, all parties shall share in and own the liquid hydrocarbons recovered from Gas by primary separation equipment in accordance with their respective Percentage Ownership, which liquid hydrocarbon ownership shall be unaffected by this GBA. One or more parties may arrange to have their Gas processed in a gas processing plant for the recovery of liquefiable hydrocarbons. Nothing in this GBA shall afford a basis for balancing any liquefiable hydrocarbons recovered from a Gas processing plant. Each party taking Gas shall own all of the Gas delivered to its purchaser.

B. Limitation on Overproduced Party's Right to Take Gas

Notwithstanding the provisions of Article III.A., above, if during any time and from time to time an Overproduced party shall have taken more than one hundred percent (100%) of such party's Percentage Ownership share of the estimated ultimate recoverable reserves for a Gas Well as determined by Operator acting in good faith, said Overproduced party shall not, after receipt of written notice of said fact from Operator, be entitled to take, sell or otherwise dispose of Gas from such Gas Well until such time as said party is no longer Overproduced; provided, however, said Overproduced party may take Gas from such Gas Well without restriction if and for so long as the other parties are not taking Gas from such Gas Well their full share of the Gas or as otherwise authorized by all of the Underproduced parties. Also, no Overproduced party shall at any time be entitled to take, sell or otherwise dispose of more than 300% of its Percentage Ownership of the Allowable from a Gas Well or, if there is no Allowable established, of the Deliverability of a Gas Well.

C. Credit For Gas in Storage

Each party who markets less than its Percentage Ownership of the Gas produced shall be credited with Gas in storage equal to its Percentage Ownership share of the Gas produced, less the Gas actually marketed and taken by said party, and less such Party's Percentage Ownership share of the Gas, vented, used or lost in lease operations.

IV. RIGHT OF UNDERPRODUCED PARTY TO MAKE UP PRODUCTION

Any Underproduced party may commence making up its underproduction provided it has given written notice to the Operator not later than the fifth day of the month preceding the month in which it wishes to commence making up its underproduction, or within such other time as Operator may from time to time reasonably establish.

In addition to its Percentage Ownership and its rights to a non-taking party's Gas under Article III, above, each Underproduced party will be entitled to take up to an additional twenty-five percent (25%) of the monthly Quantity of each Overproduced party's Percentage Ownership in Gas produced during any month; provided, however, nothing in this Article IV shall reduce the right of any Overproduced party to take a Quantity of Gas available for sale during any month less than seventy-five percent (75%) of its Percentage Ownership in Gas produced in said month.

If at any time more than one Underproduced party is taking a Quantity of Gas in excess of its Percentage Ownership in Gas production in order to balance its Gas production account ("Makeup"), then each such Underproduced party shall be entitled to take such Makeup in proportion that its Percentage Ownership bears to the total Percentage Ownership of all Underproduced parties desiring to take Makeup from the Well. Any portion of the Makeup to which an Underproduced party is entitled and which is not taken by such Underproduced party may be taken by any other Underproduced party in the proportion that its Percentage Ownership bears to the total Percentage Ownership of all Underproduced parties desiring to take such untaken portion of Makeup.

V. MONTHLY DATA AND STATEMENTS TO BE PROVIDED

The Operator will establish and maintain a current Gas account which shows the Gas balance which exists for all the parties and will furnish each of these parties a monthly statement showing the total Quantity of Gas sold and taken in kind and the current and cumulative over and under account of each party within ninety (90) days following the end of each applicable month. Operator shall not incur any liability to any party for errors in the data provided by each party or third parties or for other matters pertaining to gas balancing statements (e.g., transporter's allocation of Gas). Each party shall be responsible for promptly providing written notification to Operator of any error(s) or inaccuracy(ies) contained in any gas balancing statement which it receives.

VI. PAYMENT OF ROYALTIES AND PRODUCTION TAXES

At all times while Gas is produced from a Well, each party hereto will make, or cause to be made, settlement with respective royalty owners to whom each is accountable in accordance with the actual volumes of Gas taken by such party. Upon written request from any party, any other party shall provide on a monthly basis, any additional information which such requesting party may require in order to comply with its obligation to pay royalty pursuant to the terms hereof including, without limitation, name, address, decimal interest, tax identification and, to the extent it has same, title opinions and abstracts of ownership. The term "royalty owner" includes owners of royalty, overriding royalties, production payments and similar interests. Each party agrees to indemnify and hold harmless each other party from any and all claims asserted by its royalty owners and its Gas Purchasers for which said indemnifying party is responsible. Each party producing and/or delivering Gas to its purchaser shall pay, or cause to be paid, any and all production, severance and other similar taxes due on such Gas in accordance with the actual volumes of Gas taken by such party.

VII. CASH SETTLEMENTS

A. Events Occasioning Cash Settlements

A cash settlement of any imbalance of Gas production: (i) shall be made when production from a Gas Well permanently ceases or the Operating Agreement otherwise terminates (each being referred to herein as "Termination"); and (ii) shall be made by an Overproduced party at the request and option of any Underproduced party or parties upon the sale, transfer, assignment, mortgage or other disposition to an unaffiliated entity (herein individually or collectively referred to as a "Transfer"), by an Overproduced party of all or any portion of its Percentage Ownership in any Gas Well unless (x) the Transfer documentation clearly provides that the assignee has expressly assumed the gas balance position of, and the liability for gas imbalances from, the assignor, and (y) the assignee is not a known credit risk and the assignor has provided to the other parties evidence of the creditworthiness of assignee prior to the date that the applicable Transfer becomes effective taking into account the potential liability associated with the applicable gas imbalance. (A cash settlement pursuant to clause (ii) above may hereinafter be referred to as an "Optional Cash Settlement".) The parties acknowledge that a cash settlement may be made on more than one occasion pursuant to the terms of this GBA.

B. Notification of Proposed Transfer By Overproduced Party

When an Overproduced party elects to Transfer all or a portion of its Percentage Ownership (except to an Affiliate, or where the liability for prior period gas imbalances is assumed by an assignee), it shall give notice to all other parties to the Operating Agreement of its intended Transfer and the anticipated closing date. Each Underproduced party shall have fifteen (15) days from the receipt of such notice in which to elect to receive a cash settlement from the transferring party for the transferring party's share of overproduction allocable to the Underproduced party. Such election shall be made in writing and sent to the transferring party and Operator. An Underproduced party's election not to request a cash settlement at the time of Transfer by an Overproduced party shall not, subject to the provisions of Article VII.E, below, preclude said Underproduced party from sharing in cash settlement at Termination or from requesting a cash settlement upon subsequent Transfer by an Overproduced party.

C. Quantity of Gas

Within one hundred twenty (120) days after Termination, Operator shall provide a statement captioned "Final Quantity Statement" showing on a party-by-party basis the net unrecouped underproduction, the overproduction and the months and years in which such underproduction and overproduction occurred. Quantities of Gas for which settlement is due shall be determined by accruing the monthly overproduction and underproduction in the order of accrual of said overproduction and underproduction; i.e. makeup Quantities taken by an Underproduced party shall be applied against the oldest overproduction and underproduction then outstanding. In the event an Optional Cash Settlement is requested, Operator shall provide to the parties, within fifteen business days, an Interim Quantity Statement through the end of the last quarter for which Operator has production data, which shall contain similar information as would be contained within a Final Quantity Statement.

D. Pricing

1. For Overproduction Sold

The amount to be paid by an Overproduced party to an Underproduced party for such Underproduced party's Gas upon cash settlement shall, where the Overproduced party has sold the Gas to an unaffiliated third party, be based upon the price received by the Overproduced party at the time such overproduction occurred (the "price received") shall be the gross proceeds received, less the following:

(a) production and/or severance taxes attributable to said Gas production paid by the Overproduced party;

(b) royalties, if any, paid by the Overproduced party to an Underproduced party's royalty owner(s) to the extent said payments amounted to a discharge of said Underproduced party's royalty obligation;

(c) any other payments made by the Overproduced party to obligees of the Underproduced party to the extent said payments by the Overproduced party were required by law and/or amounted to discharge of the obligations of the Underproduced party; and

(d) all reasonable costs and expenses incurred to third parties in connection with the sale of said Gas; e.g., gathering, transportation, compression, storage, marketing and similar fees.

In the event sales by the Overproduced party were made to an Affiliate and the price paid by such Affiliate was less than the prevailing market price in the area of the Well at the time of the sale, then the price received shall be deemed to be the Dominion Transmission Inc. South Point Index price found inside the Federal Energy Regulatory Commission's Gas Market Report for the applicable month of overproduction, calculated from a pricing bulletin published at the time such overproduction occurred, less those items set forth in a-d above (the "Adjusted South Point Index Price"). Any Underproduced party that is entitled to payment with respect to the applicable cash settlement may, based upon competent evidence, object that sales by the Overproduced party to an Affiliate were at a price less than the prevailing market price in the area of the Well at the time of the sale, in which case the Adjusted South Point Index Price shall be used to price such sales in accordance with the prior sentence.

2. For Overproduction Taken or Utilized and Not Sold

If there is no actual sale to establish the amount received by the Overproduced party because the Overproduced party took such Gas for its own purposes instead of selling it, the amount to be paid by an Overproduced party to an Underproduced party for such Underproduced party's Gas upon cash settlement shall be based upon the Adjusted South Point Index Price.

3. Proceeds for Liquefiable Hydrocarbons Not Included

The parties agree that the terms "price received by an Overproduced party" and "weighted average price received" shall not include any compensation received by a party for liquid hydrocarbons derived from processing its Gas in a Gas processing plant, unless the overproduction for which the Overproduced party is accounting was sold under a Percentage of Proceeds Sale.

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E. Calculation, Collection and Distribution of Payments

1. For Cash Settlements at Termination

In the event of a cash settlement at Termination, within ten (10) days after receipt of the Final Quantity Statement from the Operator, each Overproduced party shall furnish to the Operator and the other parties a statement showing the price received for its overproduction on a monthly basis. Within ten (10) days after receipt of such pricing information from all parties, Operator shall submit to each party a statement showing the calculations and the total amount to be paid by each Overproduced party and to be received by each Underproduced party. Cash settlement shall be calculated on the "FIFO" accounting method.

Within twenty (20) days after receipt of said statement from Operator by an Overproduced party, the Overproduced party shall pay all amounts due and owing as

reflected on such statement to the Underproduced parties. In the event that all sums due and owing are not paid by an Overproduced party to the applicable Underproduced parties within the time periods set forth in this provision, interest shall accumulate on such unpaid amounts as provided herein. The amount to be received by each Underproduced party shall be determined by apportioning the total amount to be received by all Underproduced parties from all Overproduced parties among all Underproduced parties in proportion to the total sum to be received by each Underproduced party as a percent of the total sum to be received by all Underproduced parties. The amount to be paid by each Overproduced party to each Underproduced party shall be determined by apportioning the total amount to by paid by all Overproduced parties to each such Underproduced party among all Overproduced parties in proportion to the total sum to be paid by each such Overproduced party to all Underproduced parties as a percent of the total sum to be paid by all Overproduced parties to all Underproduced parties.

2. Optional Cash Settlement Pursuant to Article VII.A.(ii) from an Overproduced party Who Seeks to Transfer an Interest

In the event of a request for an Optional Cash Settlement by an Underproduced party pursuant to Article VII.A.(ii) from an Overproduced party who wishes to Transfer all or a portion of its Percentage Ownership, within twenty (20) working days after receipt of Operator's Interim Quantity Statement, the Overproduced party from whom cash settlement is sought shall provide to Operator a statement showing the price received for its overproduction on a monthly basis. Within ten (10) working days after receipt of such pricing information, Operator shall: (a) calculate the total amount due and owing by the Overproduced party and the total amount to be received by each Underproduced party requesting cash settlement based on the “FIFO” accounting method; and (b) provide the Overproduced party and each such Underproduced party with a statement showing the calculations and the total sum to be paid to said Underproduced party. The Overproduced party shall pay to each such Underproduced party the total amount due and owing as reflected in said statement within twenty (20) working days after receipt of said statement. In the event that all sums due and owing are not paid by an Overproduced party to the applicable Underproduced parties within the time periods set forth in this provision, interest shall accumulate on such unpaid amounts as provided herein.

The parties acknowledge that production and sales data may not be available for a brief period immediately preceding the closing date and prior to the effective date of the Transfer, and the transferring Overproduced party agrees to cash settle for any Gas produced during said period promptly after closing. In the event that said transferring Overproduced party for any reason fails to make all cash settlement payments required under this GBA, the transferee shall be obligated to make said payments.

3. Procedures Applicable to All Cash Settlements

For purposes of all price calculations the overproduction of each Overproduced party shall be apportioned to each Underproduced party in proportion to each Underproduced party's underproduction as a percent of the sum of the underproduction of all Underproduced parties. Overproduced volumes shall be matched to Underproduced volumes based on the order in which the overproduction and underproduction arose. The parties recognize that the months of overproduction by an Overproduced party may not coincide with the months of underproduction by an Underproduced party.

4. Amount Subject to Refund May Be Withheld.

In the event that any portion of the price actually received by an Overproduced party shall be subject to possible refund pursuant to rules and regulations issued by the Federal Energy Regulatory Commission ("FERC"), any state, administrative agency or successor governmental authority having jurisdiction, or any court order, the amount which may be ultimately required to be refunded by FERC or any other entity may be withheld without interest by the Overproduced party until such time as a final determination is made with respect thereto or until the party to whom payment is to be made provides a bond or other security to indemnify the party obligated to make such payments in form satisfactory to the

latter.

F. Operator's Liability

Except as otherwise provided herein, Operator is obligated to administer the provisions of this GBA, but shall have no liability to the other parties for losses sustained or liability incurred which arise out of or in connection with the performance of Operator's duties hereunder except such as may result from Operator's gross negligence or willful misconduct.

VIII. OPERATING EXPENSES

The operating expenses are to be borne as provided in the Operating Agreement, regardless of whether all parties are selling or using Gas or whether the sales and use of each are in proportion to their Percentage Ownership.

IX. DELIVERABILITY TESTS

Nothing herein shall be construed to deny any party the right from time to time to produce and take or deliver to the purchaser its full share of the Gas production to meet the deliverability test required by its purchaser. Also, nothing herein shall: (a) require the Operator to produce a Gas Well in excess of its deliverability or the applicable maximum allowable rate where such rate is established by regulatory authority having jurisdiction from time to time; or (b) prevent an Operator from operating the Gas Well in order to conduct such tests as may be required by any applicable regulatory authority from time to time.

X. NOMINATIONS

For each party wishing to sell, utilize or dispose of Gas from a Gas Well subject to this GBA, Operator shall provide each party an initial nomination by well/delivery point(s) six working days prior to the beginning of each month. Operator shall provide each party a revised nomination by well/delivery point as necessary during the month to reflect any change in production. Allocation of gas production in any month in which the total nominations vary from the total production shall be by the Operator according to such procedures as Operator from time to time may reasonably establish. Each non-operator party agrees to indemnify Operator for any charges or penalties incurred because of over or underdeliveries as compared to its nominations, except where such charges or penalties are solely attributable to action taken by Operator in total disregard of such nominations.

XI. TERM

This GBA shall remain in full force and effect for so long as the Operating Agreement is in effect and thereafter until the gas balance accounts are settled in full.

XII. SUCCESSORS AND ASSIGNS

The terms, covenants and conditions of this GBA shall be binding upon and shall inure to the benefit of the parties hereto and their respective legal representatives, successors and assigns. The parties hereto agree to give notice of the existence of this GBA to any successor in interest and to make any transfer of any interest subject to the Operating Agreement, or any part thereof, expressly subject to the terms of this GBA.

XIII. AUDITS

Any Underproduced party shall have the right for a period of two (2) years after receipt of payment pursuant to a final accounting and after giving written notice to all parties, to audit an Overproduced party's accounts and records relating to such payment. The party conducting such audit shall bear its costs of the audit.

XIV. MISCELLANEOUS

A. No assignment shall relieve the assignor from any obligation to the other parties with respect to any overproduction taken by assignor to such assignment.

B. Any amount remaining unpaid under the GBA more than thirty (30) days after it is due shall bear interest (commencing the day after said payment was due) at the rate set forth in the Accounting Procedure (Exhibit C to the Operating Agreement).

C . Unless the context otherwise clearly indicates, words used in the singular include the plural, and the plural includes the singular.

D. Each party agrees to maintain the necessary records and documents to enable the gas balancing and cash settlements contemplated hereby to be made.

E. If any party hereto fails to timely provide to Operator the data required hereby to enable gas balancing statements and cash settlements to be promptly made, Operator, or any other party, without prejudice to other remedies, is authorized to audit the records of the non-providing party and such audit shall be at the expense of the audited party.

F. To the extent permitted by law, this GBA shall be in lieu of and take precedence over any law, statute, rule or regulation requiring Gas balancing, revenue sharing or marketing of Gas.

G. In the event that any party is in default of any payment required by this GBA or fails to provide information required under this GBA, Operator is authorized--but not required--upon thirty (30) days notification to said defaulting party, without prejudice to any other remedies it may have, to curtail said party's Gas production from any and all Gas Wells subject to this GBA and such gas may be taken by the other parties in accordance with III.B. above.

H. In the event of a conflict between the terms of this GBA and the Operating Agreement, the terms of this GBA shall govern except where the conflict is between Article VI of this GBA and the Operating Agreement, in which event the Operating Agreement shall govern.

I. Nothing in this GBA shall be construed as precluding cash balancing at any time as may be agreed by the parties.

J. Nothing contained in this GBA shall require an Overproduced Party to pay to an Underproduced Party a sum which would be violative of any law, rule or regulation.

End of Exhibit “E”

STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT

In re the Matter of the Application of	:	
Chesapeake Exploration, L.L.C., for	:	
Unit Operation	:	Application Date: July 21, 2015
	:	
R Kirk South Unit	:	

PREPARED TESTIMONY OF TRAVIS GLAUSER
ON BEHALF OF CHESAPEAKE EXPLORATION, L.L.C.

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
STEPTOE & JOHNSON PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215

Attorneys for Applicant,
Chesapeake Exploration, L.L.C.

Date: July 21, 2015

Exhibit 3

PREPARED DIRECT TESTIMONY OF TRAVIS GLAUSER

INTRODUCTION.

Q1. Please state your name and business address.

A1. My name is Travis Glauser and my business address is 6100 N. Western Avenue, Oklahoma City, Oklahoma 73118.

Q2. Who is your employer?

A2. Chesapeake Energy Corporation.

Q3. What is your position with Chesapeake?

A3. I am a Staff Geologist with Chesapeake's Northern Division.

Q4. Please describe your professional responsibilities at Chesapeake.

A4. My general responsibilities include: exploring for new accumulations of oil and gas in the on-shore United States, evaluating prospects in different formations in the Appalachian Basin, planning and monitoring horizontal drilling of wells and mentoring less experienced geoscientists. Additionally, as an operations geologist, I monitor drilling reports and well logs from active drilling of wells to ensure the wellbore stays in the target formation.

Q5. Starting with college, would you describe your education background?

A5. I have a Bachelor's degree in Geology from the University of Kansas (2006) and a Master's Degree in Geology from the University of Kansas (2010).

Q6. Would you briefly describe your professional experience?

A6. I have 6 years of petroleum industry experience, all at Chesapeake. Over that time, I worked plays in the mid-continent region and the Appalachian Basin in the United States. I worked as operations geologist, of which duties included well planning and monitoring horizontal drilling of the Des Moines Granite Wash, Hogshooter, Tonkawa, Cleveland and Woodford Formations in Oklahoma and Texas. I created geological maps and provided prospect evaluations for the Des Moines Granite Wash, Tonkawa and Woodford Shale in Oklahoma. I currently work as an operations geologist with a focus on the development of Chesapeake's Utica Shale assets in Ohio.

Q7. Are you a member of any professional associations?

A7. Yes. I am an active member of the American Association of Petroleum Geologists,

Ohio Geological Society, Oklahoma City Geological Society and Oklahoma Energy Explorers.

Q8. Are you familiar with Chesapeake Exploration, L.L.C.'s Application for Unit Operations with respect to the R Kirk South Unit?

A8. Yes.

Q9. Could you please describe the R Kirk South Unit, in terms of its general location, surface acreage, and subsurface depth?

A9. The R Kirk South Unit consists of fifty-one (51) separate tracts of land totaling approximately 983.227883 acres in northwestern Jefferson County, Ohio. Exhibit TG-1 to the Application shows the geographical location of the proposed unit in Jefferson County and in relation to the surrounding counties. The Unitized Formation described in the Application is the subsurface portion of the R Kirk South Unit at a depth located from 50' above the top of the Utica Shale, to 50' below the base of the Point Pleasant formation.

UNITIZED FORMATION IS PART OF A POOL.

Q10. In geological terms, what does "pool" mean in connection with unitization?

A10. A pool is generally understood to be a common source of supply in pores of a rock that yields hydrocarbons on drilling.

Q11. Ohio Revised Code § 1509.01(E) defines the term "pool" as follows: "'Pool' means an underground reservoir containing a common accumulation of oil or gas, or both, but does not include a gas storage reservoir. Each zone of a geological structure that is completely separated from any other zone in the same structure may contain a separate pool." Does this definition of "pool" apply to the R Kirk South Unit?

A11. Yes. As part of a larger hydrocarbon pool, an equal accumulation of hydrocarbons are expected to be in place throughout the R Kirk South Unit. Furthermore, the hydrocarbon pool would extend beyond the currently defined unit in each direction, North, South, East, and West. Interpretation of data indicates that the Utica formation has consistent characteristics across the R Kirk South Unit. Geological mapping suggests that the Unitized Formation constitutes a common source of supply, meaning any portion of the R Kirk South Unit would be geologically

equivalent to another portion of the R Kirk South Unit. Stated another way, the formation shows very similar traits from one well location to the next, which suggests the production is likely to be similar from all wells drilled in the unit. Therefore, the Unitized Formation qualifies as part of a pool.

Q12. Generally speaking, what sources of data would you review and analyze in order to assess the geologic characteristics of a potential shale play?

A12. Wireline well log data and core data. Both public and proprietary logs are analyzed by Chesapeake Energy petrophysicists and geologists. Cores are analyzed by scientists at the Chesapeake Reservoir Technology Center.

Q13. How is this data obtained, and what is it meant to show about the formation?

A13. Chesapeake geologists have used public well logs and recently drilled Chesapeake Energy well logs to pick rock formation tops across the basin. After picking formation tops, such as the Queenston Shale, Utica Shale, Point Pleasant Shale, and Trenton Limestone, maps are made to show the thickness of each formation across Ohio. This mapping indicates equal thickness of the Utica and Point Pleasant shales over the R Kirk South Unit. The industry jargon has come to call this entire interval the "Utica Formation", and in our testimony we will often adopt this naming convention.

Q14. What data sources did you use in determining the geologic features of the R Kirk South Unit?

A14. Wireline well log data and Gamma Ray data, which we used to compile Exhibits TG-1 and TG-2 to the Application for Unit Operation.

Q15. What do these exhibits tell us about the R Kirk South Unit?

A15. Exhibits TG-1 and TG-2 are a map and cross section that show wireline well logs. The logs are annotated with formation names. The cross section offsetting the R Kirk South Unit suggests approximately equal thickness of the Utica formation, including the Point Pleasant Shale. The three-well cross section displays wireline Gamma Ray data on a 0-200 API scale, Resistivity data on a 0.2-2,000 OHMM scale, and Bulk Density data on a 2.00-3.00 g/cm^3 scale. As shown on Exhibit TG-1, one of the three wells is located approximately 2.7 miles west of the R Kirk South Unit pad site, one well is located approximately 4.3 miles south of the R Kirk

South Unit pad site, and the other well is approximately 4.1 miles northeast of the R Kirk South Unit pad site. Interpreted formation tops based on Gamma Ray, Resistivity and Bulk Density electric log curves are shown on the cross section in Exhibit TG-2. Because of the location of the three evaluation wells and limited variation of the log data across the three wells, as displayed on the cross section, the log data indicates that the Utica Shale is predicted to have similar characteristics and be of uniform thickness across the R Kirk South Unit.

Q16. What is the approximate depth of the Utica/Point Pleasant formation under the R Kirk South Unit?

A16. The top of the Utica formation is expected around 8,470' feet True Vertical Depth.

Q17. Which formations are included in the proposed R Kirk South Unit?

A17. The Unitized Formation described in the Application is the subsurface portion of the R Kirk South Unit at a depth located from 50' above the top of the Utica Shale to 50' below the base of the Point Pleasant formation.

Q18. How and why were these formations chosen?

A18. Chesapeake Engineers' fracture models, derived from the measured rock properties obtained from well logs and core data, suggest fractures are contained 50' above the top of the Utica Shale and 50' below the top of the Trenton Limestone.

Q19. Based on the data you analyzed, should the area be considered a pool?

A19. Yes, it is part of a pool.

Q20. Could you please explain why?

A20. Well log analysis and mapping based on core data indicates that reservoir characteristics are very similar over a unit area for the Utica/Point Pleasant formations. Formation thickness, saturation, and porosity should be roughly equivalent across the formation. Geologically, this would qualify the area being considered as part of a pool.

ALLOCATION METHODOLOGY

Q21. Are you generally familiar with the manner in which unit plans allocate production and unit expenses to parcels within the unit?

A21. Yes.

Q22. You testified earlier that the Utica/Point Pleasant formation underlying the R Kirk South Unit has a relatively uniform thickness and reservoir quality. Given those characteristics, what would be an appropriate method of allocating production and unit expenses among the parcels contained in the R Kirk South Unit?

A22. An appropriate method of allocation would be on a surface-acreage basis. The formation thickness and reservoir quality of the Utica formation is expected to be consistent across the unit. I do not expect any substantial variations across the proposed unit. Therefore, there is no geological reason to allocate by a method other than on a surface-acreage basis.

Q23. Is this method used elsewhere?

A23. Yes. In fact, this method is employed in Ohio's pooling statute.

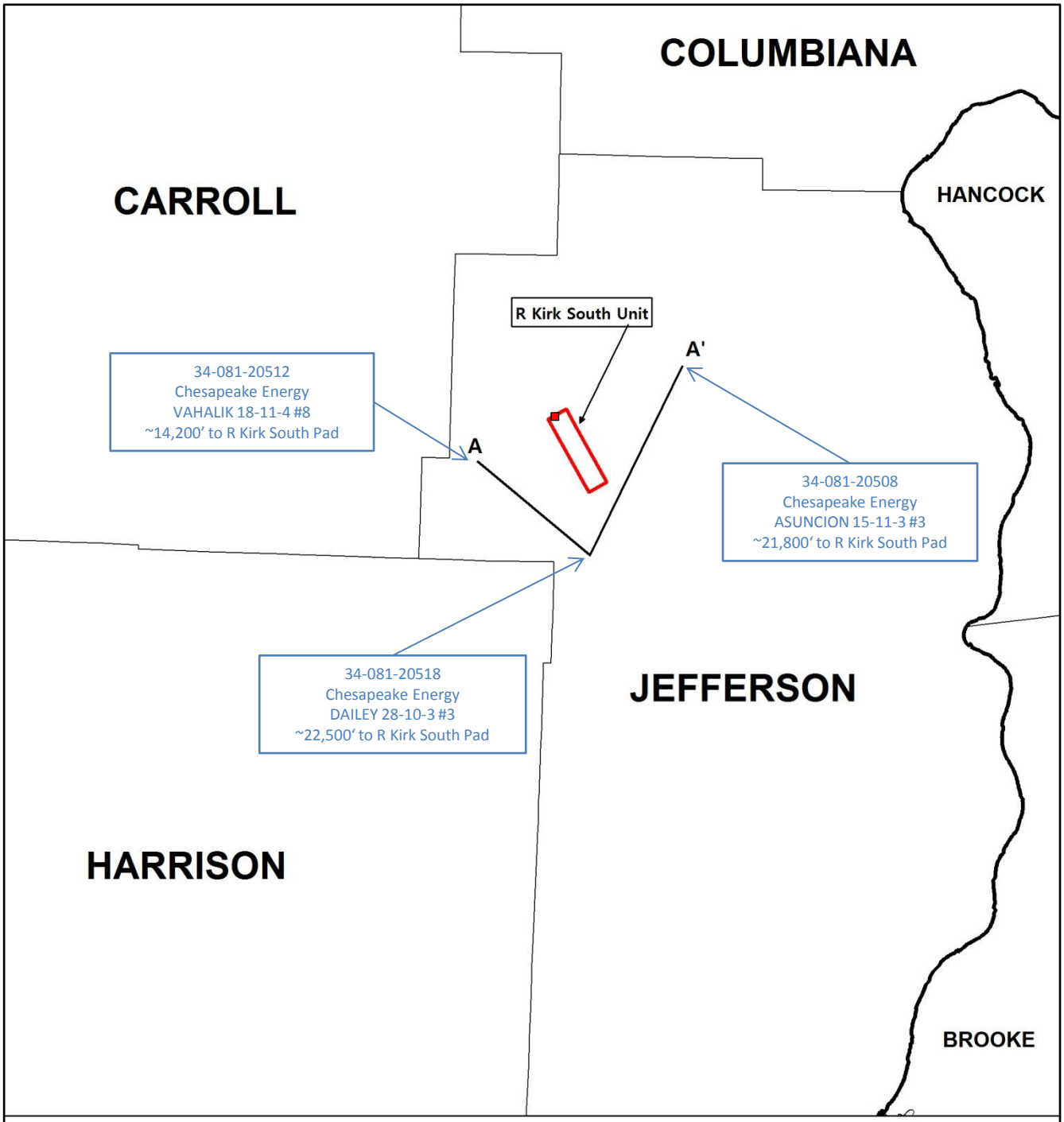
Q24. What method of allocation is utilized in the unit plan for the R Kirk South Unit?

A24. Based on the testimony of Robert Highsaw attached to the Application, the method of allocation utilized is on a surface-acreage basis.

Q25. Does this conclude your testimony?

A25. Yes.

Exhibit "TG-1"



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Well Pad

Chesapeake ENERGY

CHESAPEAKE OPERATING, INC.

R KIRK SOUTH UNIT
AND LINE OF CROSS SECTION

JEFFERSON COUNTY, OHIO

Date: 7 July, 2015 | **Geologist:** Travis Glauser

Exhibit "TG-2"

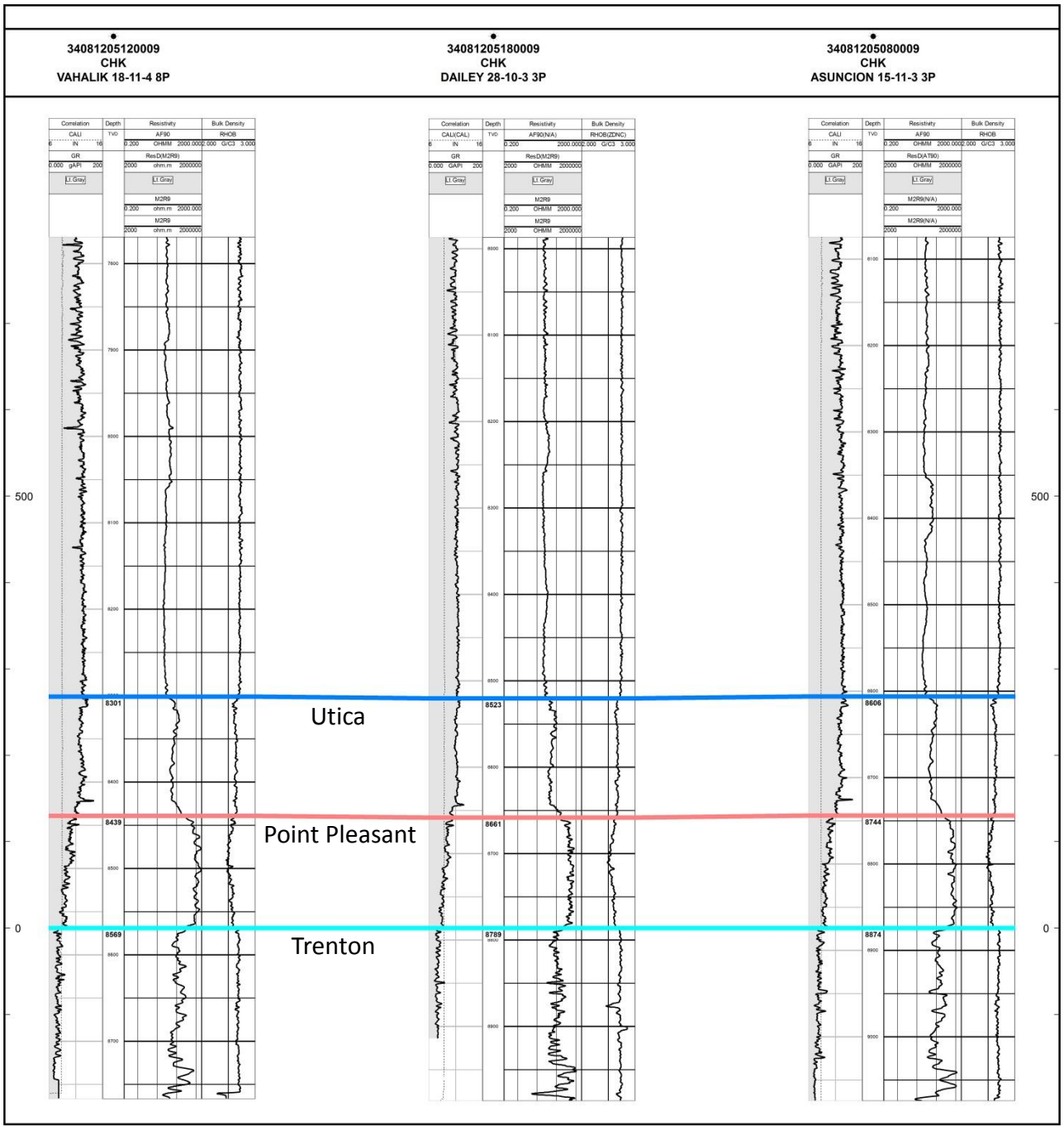
R Kirk South Offset Stratigraphic Cross Section

Gamma Ray Logs (0-200 API)

Resistivity Logs (0.2 – 2000 OHMM)

Bulk Density (2.00-3.00 g/cm^3)

A **A'**



STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT

In re the Matter of the Application of	:	
Chesapeake Exploration, L.L.C., for	:	
Unit Operation	:	Application Date: July 21, 2015
	:	
R Kirk South Unit	:	

PREPARED TESTIMONY OF ANDREW W. HOPSON
ON BEHALF OF CHESAPEAKE EXPLORATION, L.L.C.

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
STEPTOE & JOHNSON PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, OH 43215

Attorneys for Applicant,
Chesapeake Exploration, L.L.C.

Date: July 21, 2015

Exhibit 4

PREPARED DIRECT TESTIMONY OF ANDREW W. HOPSON

Q1. Please introduce yourself.

A1. My name is Andrew Hopson and my business address is 6100 N. Western Avenue, Oklahoma City, Oklahoma 73154-0496. I am a Reservoir Engineer for Chesapeake Energy Corporation.

Q2. What is the purpose of your testimony today?

A2. I am testifying in support of the Application of Chesapeake Exploration, L.L.C., for Unit Operation filed with respect to the R Kirk South Unit. My testimony addresses the following: (1) that unit operations for the R Kirk South Unit are reasonably necessary to increase substantially the recovery of oil and gas, protect the correlative rights of the mineral owners, and (2) that the estimated additional revenue, due to unit operations, exceeds the estimated additional capital investment.

Q3. Can you summarize your educational experience for me?

A3. I hold a Bachelor's of Science degree from Texas A&M University, College Station.

Q4. Are you a member of any professional associations?

A4. I am a member of the Society of Petroleum Engineers.

Q5. How long have you been a Reservoir Engineer for Chesapeake?

A5. Approximately a year and a half.

Q6. What other work experiences have you had?

A6. Prior to working that asset I supported the Utica team as a Field Engineer in Canton, OH.

Q7. What do your job responsibilities entail?

A7. I am responsible for the strategy and development of Chesapeake's Utica asset. In addition to providing reserve estimates it is my job to drive development that optimizes oil and gas recovery in an efficient and responsible manner. Finally I am responsible for the preparation of expert engineering testimony for the Utica play in Ohio.

Q8. How do you do that?

A8. I use public and proprietary information, coupled with sound engineering practices to audit the value of Chesapeake assets. Practices include, but are not limited to, volumetrics, material balance, Arps (decline curve) analysis, as well as other forms of rate-time analysis and analytical models.

Q9. Did you perform any analysis to support Chesapeake's application for unitization for the proposed R Kirk South Unit?

A9. Yes.

Q10. What sort of analysis did you perform?

A10. Using volumetric analysis, based on provided petrophysical data, I estimated the original gas-in-place. Then, using estimates of ultimate production from analogy wells in the area, I estimated the recoverable hydrocarbons (gas, condensate, and natural gas liquids) foregoing unitization, observing current regulatory setbacks. Next, I calculated the recoverable hydrocarbons pursuant to a unitization order. Recovery factors (RF %) for the project, both unitized and abbreviated were calculated. And lastly I calculated an estimate of future cashflow associated with the extracted hydrocarbons, based on current SEC pricing.

Q11. Why is Chesapeake looking at drilling horizontal wells?

A11. The permeability of unconventional resource plays is so low (in nano-darcy units (nd), i.e. 1.0×10^{-9} darcies) that the hydrocarbons cannot be economically produced without the use of horizontal drilling, coupled with massive stimulation treatments (i.e. hydraulic fracturing). Horizontal drilling is the predominant method used to develop shale formations such as the Utica/Point Pleasant.

Q12. Turning specifically to the R Kirk South Unit, have you made an estimate of the production you anticipate from the proposed unit's operations?

A12. Yes. I have estimated the GIP from the proposed Unit Area in the R Kirk South Unit to be 102.5 BCFE. Likewise I have estimated the recoverable gas to be 61.3 BCF, recoverable condensate to be 0 MBBLS, and recoverable natural gas liquids to be 0 MBBLS, if unitization is granted.

Q13. How did you make those estimates?

A13. I used isopleth maps of petrophysical data, obtained from other wells in the area, to estimate the anticipated GIP. Then I used forecasted recoveries from all producing wells within a 5 mile radius to estimate expected recovery from this unit.

Q14. Once you had that data from the other Utica/Point Pleasant wells, what did you do with it?

A14. I used the porosity, water saturations, net pay, formation pressures, etc. to do volumetric calculations of the GIP based on industry accepted methodologies. The RF % was then calculated by dividing the estimated ultimate recovery (BCFE) by the GIP (BCF).

Q15. Why do you qualify your calculations as an estimate?

A15. There is always the possibility that the petrophysical and geological data used from offset wells may be slightly different than the characteristics of the productive horizon at this location. However, the volumetric calculations of GIP should be a reasonably certain estimate in this statistical unconventional play.

Q16. In your professional opinion, would it be economic to develop the R Kirk South Unit using traditional vertical drilling?

A16. Absolutely not.

Q17. Are the estimates that you made based on good engineering practices and accepted methods in the industry?

A17. Yes.

Q18. Do you have the calculations you performed?

A18. The results of my calculations are attached to this prepared testimony as Exhibit AWH-1.

Q19. Can you summarize what your calculations show?

A19. The results of my prior stated methodology are;

1) Capital expenditure (CAPEX) to develop the unitized project is $37.1 million. Anticipated recoverable gas from the project is 61.3 BCFE and future cashflow (CF) (using current SEC pricing of $3.390/Mcf (no btu adjustments)) is $98.6 million. A recovery factor (RF) of 61.3% is anticipated.

2) CAPEX to develop the abbreviated project is $33.3 million. GIP from the project is 48.5 BCFE and future CF (using current SEC pricing of $3.39/Mcf (no btu adjustments)) are $78.8 million. A recovery factor (RF) of 50.8% is anticipated.

Q20. Can you briefly explain why you are using current SEC pricing in this application?

A20. Every company has its own ideas of economic indicators by which it decides to invest in an opportunity or not. Current SEC pricing, un-escalated, eliminates all the issues associated with corporate decision trees and reduces the evaluation of corporate assets, and projects, to a single deterministic standard. We have no clear crystal ball into the future of oil and gas prices. What we do know, and can verify, is the price we currently and historically get for each barrel of oil and each MMbtu of gas.

Q21. Can you briefly discuss why your analysis in this application considers natural gas as the only product to be produced?

A21. We know that the products ultimately purchased from these wells will be comprised of natural gas, condensate, and natural gas liquids. However, for the purpose of conducting a volumetric analysis of the reservoir at initial conditions, there is only natural gas in the reservoir. The condensates and natural gas liquids are separated out at the surface and sold separately, when economic to do so, in an attempt to maximize cash flow. Ultimately, as the reservoir pressure drops below the dew point, condensate will drop out in the reservoir. However, under initial conditions the reservoir is only natural gas. Therefore to determine an estimate of the RF % we need to begin with initial conditions in the reservoir.

Q22. Can you briefly comment on the anticipated range of recovery factors that Chesapeake would expect to achieve for the R Kirk South Unit?

A22. Based upon the current statistical distribution of known data, a range of 30% to 70% is anticipated. The statistical mean of the data is 49%. I expect a 61 % recovery, of original hydrocarbon, from this location.

Q23. Based on this information and your professional judgment, do unit operations increase substantially the ultimate recovery of oil and gas?

A23. Yes. The recoverable gas in the unitized project increases by approximately 27% from 48.5 BCFE to 61.3 BCFE.

Q24. Based on this information and your professional judgment, does the value of the estimated additional recovery of hydrocarbons from the unitized project exceed its estimated costs?

A24. Yes. CAPEX increases by $3.8 million for the unitized project from the non-unitized project. The estimated additional cashflow from the proposed R Kirk South Unit is approximately $19.9 million as compared to what could be realized if the ODNR does not grant this application for unit operations.

Q25. In your professional opinion, do you believe that the proposed unit operations for the R Kirk South Unit are reasonably necessary to increase substantially the ultimate recovery of oil and gas from the unit area?

A25. Yes. The unitization of the R Kirk South Unit is definitely needed to maximize the economic benefit to the interest owners, and protect the correlative rights of the mineral owners. If the project is not unitized it will strand 21.0% of the recoverable gas, or 12.9

BCFE in the ground from which mineral owners would, most likely, never see financial benefit, nor Chesapeake, nor the State of Ohio.

Q26. Does this conclude your testimony?

A26. Yes.

EXHIBIT "AWH-1"

R Kirk South Unit

UNITIZED

Well Name	Lateral Length (ft)	Anticipated Gas Recovery, BCFE	Capital (MM$)
R KIRK 32-11-3 6H	12586	20.4	$12.37
R KIRK 32-11-3 8H	12586	20.4	$12.37
R KIRK 32-11-3 10H	12586	20.4	$12.37
Unitized Totals	**37,758**	**61.3**	**$37.1**

NON-UNITIZED

Well Name	Lateral Length (ft)	Anticipated Gas Recovery, BCFE	Capital (MM$)
R KIRK 32-11-3 6H	9057	12.3	$10.18
R KIRK 32-11-3 8H	9687	15.7	$10.74
R KIRK 32-11-3 10H	12586	20.4	$12.37
Abbreviated Totals	**31,330**	**48.5**	**$33.3**

	Unitized	Non-Unitized	Increases due to Unitization
Total Capital (MM$) *	$37.11	$33.29	$3.82
Anticipated Recoverable Gas, BCFE	61.35	48.48	12.87
Anticipated Recoverable Gas, BCF	61.3	50.9	10.44
Anticipated Recoverable Oil, MBBL	0.0	0.0	0.00
Anticipated Recoverable NGLs, MBBL	0.0	0.0	0.00
Estimated Project CF, (MM$) @ SEC Prices	$98.64	$78.75	$19.89

** CAPEX for compression and pipeline will be burden of midstream operator*

% increase in Total Capital due to Unitization:	11%
% increase in CF due to Unitization:	25%
Est. Disc. Time to PO (Unitized), Yrs:	3.7
Est. Disc. Time to PO (Abbreviated), Yrs:	3.8
Anticipated Initial LOE per well, $/month:	$19,326
Est. RF% due to Unitization:	**61%**
Est. Abbreviated RF%:	**51%**

* Used Toe Setback of 150 '

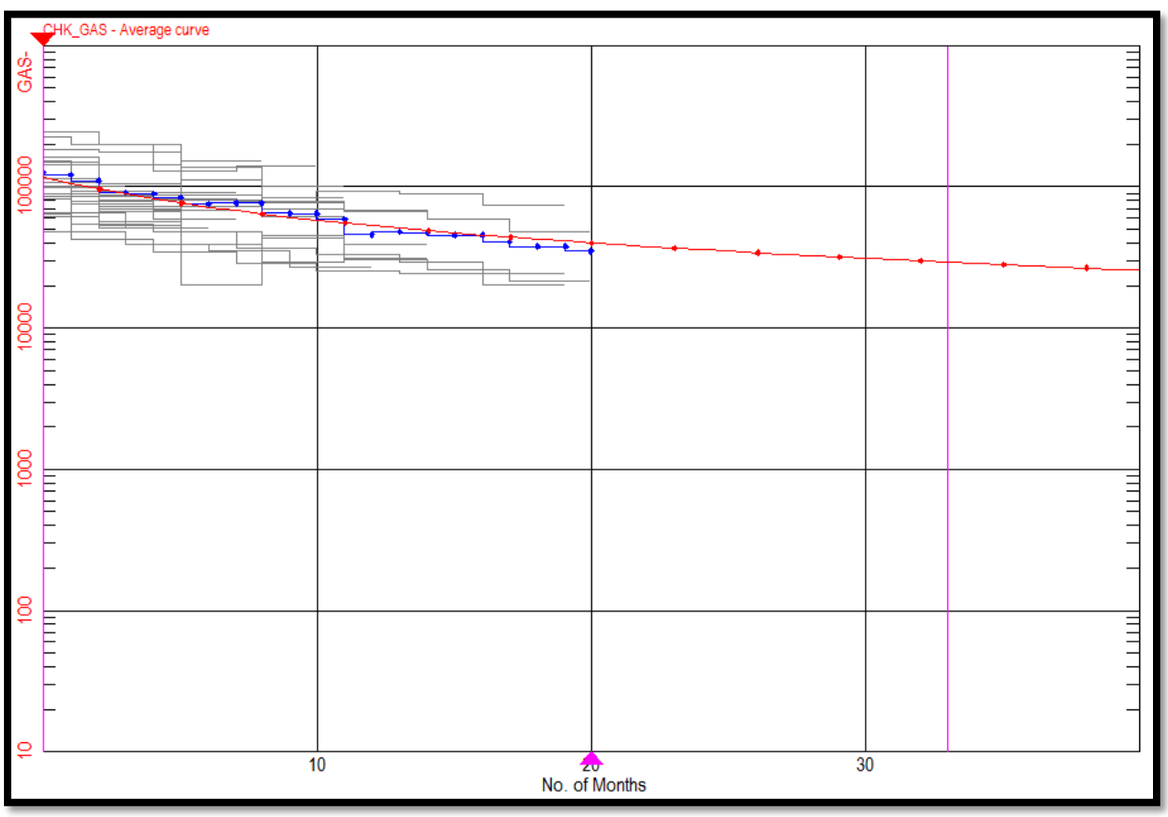
1 ** Used Heel Setback of 150 '

EXHIBIT "AWH-2"

Support Data

R Kirk South Unit

LEASE	API	OPERATOR	LL, FT.	MILES
EVANS 21-12-4 3H	3401922319	CHESAPEAKE EXPLORATION LLC	7,439	3.3
CAIN SOUTH 16-12-4 8H	3408120520	CHESAPEAKE EXPLORATION LLC	4,896	3.4
CAIN 16-12-4 3H	3408120514	CHESAPEAKE EXPLORATION LLC	4,081	3.4
WOODLAND 26-12-4 6H	3401922418	CHESAPEAKE EXPLORATION LLC	5,172	4.1
WOODLAND 26-12-4 3H	3401922447	CHESAPEAKE EXPLORATION LLC	4,897	4.1
SUNNYBROOK 25-12-4 6H	3401922321	CHESAPEAKE EXPLORATION LLC	4,035	4.2
BOOTH 23-11-4 6H	3408120541	CHESAPEAKE EXPLORATION LLC	6,757	4.3
ELWOOD SOUTH 32-12-4 8H	3401922181	CHESAPEAKE EXPLORATION LLC	5,150	4.6
ELWOOD SOUTH 32-12-4 10H	3401922182	CHESAPEAKE EXPLORATION LLC	5,320	4.6
ELWOOD 32-12-4 5H	3401922204	CHESAPEAKE EXPLORATION LLC	4,222	4.6
ELWOOD SOUTH 32-12-4 6H	3401922205	CHESAPEAKE EXPLORATION LLC	5,220	4.6
ELWOOD 32-12-4 1H	3401922199	CHESAPEAKE EXPLORATION LLC	4,222	4.6
ELWOOD 32-12-4 3H	3401922150	CHESAPEAKE EXPLORATION LLC	4,114	4.6
BROWN 36-11-3 10H	3408120507	CHESAPEAKE EXPLORATION LLC	3,836	4.3
BROWN 36-11-3 3H	3408120542	CHESAPEAKE EXPLORATION LLC	5,392	4.3
CIACCI 22-11-4 6H	3408120545	CHESAPEAKE EXPLORATION LLC	5,209	4.9
CIACCI 22-11-4 1H	3408120544	CHESAPEAKE EXPLORATION LLC	6,392	4.9



A. Hopson

STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT

In re the Matter of the Application of	:	
Chesapeake Exploration, L.L.C., for	:	
Unit Operation	:	Application Date: July 21, 2015
	:	
R Kirk South Unit	:	

PREPARED TESTIMONY OF ROBERT S. HIGHSAW
ON BEHALF OF CHESAPEAKE EXPLORATION, L.L.C.

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
STEPTOE & JOHNSON PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215

Attorneys for Applicant,
Chesapeake Exploration, L.L.C.

Date: July 21, 2015

Exhibit 5

PREPARED DIRECT TESTIMONY OF ROBERT S. HIGHSAW

INTRODUCTION.

Q1. Please state your name and business address.

A1. My name is Robert S. Highsaw and my business address is 6100 N. Western Avenue, Oklahoma City, Oklahoma 73154-0496.

Q2. Who is your employer?

A2. Chesapeake Energy Corporation.

Q3. What is your position with Chesapeake?

A3. My official title at Chesapeake Energy Corporation is Landman II.

Q4. Please describe your professional responsibilities at Chesapeake.

A4. I am responsible for assisting with our oil and gas development program in eastern Ohio in Chesapeake's Appalachia South business unit.

Q5. Starting with college, please describe your educational background.

A5. I hold a Bachelor of Arts from the University of Oklahoma and a Juris Doctor from University of Oklahoma College of Law.

Q6. Please briefly describe your professional experience.

A6. After graduation from law school, I worked for a number of months as a contract attorney with a downtown Oklahoma City law firm performing title work. Following this brief period, I have worked for Chesapeake since January 2011.

Q7. What do you do as a Landman II?

A7. I essentially engage in what can be considered "prospect building." After our geology department identifies a play, I help execute the company's leasing and development efforts in a particular area. I help facilitate development of the Utica play through lease acquisitions and negotiations, joint operation negotiations, title review, unit formation, wellbore planning, various permitting activities, drilling wells, and other related operational activities.

Q8. Are you a member of any professional associations?

A8. Yes. The American Association of Professional Landmen and the Oklahoma Bar Association.

Q9. Were you involved in the preparation of Chesapeake Exploration, L.L.C.'s Application for unitization with respect to the R Kirk South Unit?

A9. Yes. I also am familiar with the efforts made by Chesapeake to put the R Kirk South Unit together and the Unit Plan that Chesapeake is proposing.

Q10. Can you generally describe the R Kirk South Unit?

A10. Yes. The R Kirk South Unit consists of fifty-one (51) separate tracts of land totaling approximately 983.227883 acres in Jefferson County, Ohio.

EFFORTS MADE BY CHESAPEAKE TO LEASE UNIT TRACTS.

Q11. The Application submitted by Chesapeake indicates that it owns the oil and gas rights to 785.800295 acres of the proposed 983.227883-acre unit. Would you describe how Chesapeake acquired its rights?

A11. Chesapeake acquired its working interest in this unit through acquisitions and a ground floor leasing effort. In the leasing effort, Chesapeake assigned field title and leasing agents to research the county records for a specific area and then secure oil and gas leases with the relevant mineral owners for those particular tracts. As for the acquisitions, Chesapeake purchased some of its leasehold interest in the R Kirk South Unit from Cavalier Energy.

Q12. What percentage of the total acreage of the R Kirk South Unit is represented by the oil and gas rights held by Chesapeake and its working interest partners?

A12. Chesapeake and other operators control over 96% of the acreage in the unit, with Chesapeake holding 79.920465% and Ascent Resources – Utica, LLC ("ARU") holding 17.062568% of the acreage in the R Kirk South Unit. Not including the non-operated acreage of ARU, Chesapeake alone accounts for over 79% of this Unit which still substantially exceeds the 65% statutory minimum requirement for seeking unitization.

Q13. Why was Chesapeake not able to acquire the oil and gas rights to all of the acreage in the proposed unit?

A13. There is one (1) wholly unleased tract owned of record by Jerome V. Gundrum, who is deceased (Unit Tract 29) in the R Kirk South Unit. Also, there are two (2) partially unleased tracts which are affected by a Dormant Mineral Act ("DMA") title issue (Unit Tracts 47 and 48). Mary E. Scott, f/k/a Mary E. Simmons, is the holder of a one-half (1/2) mineral interest underlying Unit Tracts 47 and 48. She is

presently unleased. Under one theory, Mary E. Scott f/k/a Mary E. Simmons may have lost her severed mineral interest to the surface owner. Likewise, Randy J. Tinney (owner of the surface of Tract 47) and James Mills (owner of the surface of Tract 48) were originally only leased as to an undivided one-half (1/2) interest in their respective tracts. As to the other undivided one-half (1/2) interest, which they may potentially own under one very specific theory about how the DMA works, they both may have unknowingly and unwittingly acquired an additional one-half (1/2) interest in the oil and gas underlying their respective tracts of land. If this is indeed the case, they are both likewise unleased as to their other respective undivided one-half (1/2) interest. Lease negotiations are ongoing concerning each of the above tracts.

Q14. Have you prepared affidavits detailing Chesapeake's efforts to obtain a lease from the unleased mineral owners in the proposed unit?

A14. Yes. As just discussed, Exhibit RH-1 contains four (4) affidavits which identify lease efforts which were made with the unleased mineral owners. Additionally, there are two (2) affidavits which identify that lease efforts have not yet been undertaken insofar as two (2) additional parties which may have an interest in Tract 29.

Q15. If the unleased tract owners in the unit were to ask to lease with Chesapeake, would Chesapeake be likely to agree?

A15. Absolutely. As Chesapeake has demonstrated on a number of occasions with its previous unitization applications, Chesapeake remains willing to lease on reasonable, fair market value terms.

Q16. Could you describe the location of the leased and unleased tracts within the R Kirk South Unit?

A16. Yes. Exhibit RH-2, which is attached to my testimony, is a colored plat showing each of the tracts in the R Kirk South Unit, along with the wellbores in same. The tracts in yellow indicate that Chesapeake has acquired the necessary mineral interests for those particular tracts. The tracts in red and cross-hatched in orange indicate that those tracts are still open or partially open and unleased for purposes of putting this unit together. The orange cross-hatch specifically denotes those

parcels which are partially unleased and subject to title issues caused by uncertainty surrounding the application of the DMA. The tract in green indicates the acreage owned by ARU in the R Kirk South Unit. Further, the cross-hatched green and olive portions of Exhibit RH-3 depict the approximate 153.54784-acre area of leasehold that is currently stranded from development due to the aforementioned unleased tracts within the R Kirk South Unit.

UNIT PLAN PROVISIONS.

Q17. Would you describe generally the development plan for the R Kirk South Unit?

A17. Chesapeake plans to develop the R Kirk South Unit from a pad site located in the northwest portion of the Unit, which would facilitate drilling three (3) planned horizontal wells in the Unit. The Unit is configured to accommodate three (3) horizontal wellbores, all with projected lateral lengths of 12,856 feet. These planned wellbores will be drilled to the southeast from the aforementioned pad site. If an Order is granted for this application, and depending upon rig availability and other logistical considerations, Chesapeake intends to drill the R Kirk South initial well beginning sometime in Q4 2015, at the latest.

Q18. Can you describe the location of the proposed wellbore within the R Kirk South Unit?

A18. Yes, the above-referenced Exhibit RH-2 depicts the configuration I just mentioned. As you can see, it illustrates that we anticipate using a surface location in the northwest portion of the R Kirk South Unit, and then drilling three (3) wells in the Unit Area to the southeast. Additionally, in a separate unit or units which are outside of the scope of this hearing, Chesapeake anticipates drilling an additional three (3) wells off of the same surface location to the northwest. Using one centrally located pad site to drill up to six (6) potential wellbores minimizes surface disturbance in the region by fully developing multiple unit areas from only one surface location. I have also attached to my testimony an aerial map illustrating the pad location, identified as Exhibit RH-4.

Q19. Do you know with certainty today where the drilling and completion equipment will be located on the pad?

A19. We have negotiated surface rights with a leased party for the area indicated on Exhibit RH-4. A surface use agreement has been agreed upon and signed between the surface owner and Chesapeake. At their closest point, the nearest unleased or partially unleased parcels are over 9,500 Feet away from Chesapeake's planned surface location. Furthermore, Chesapeake has no plans to utilize the surface of any presently unleased or partially unleased parcel.

Q20. What are the benefits to this type of unit development?

A20. Developing the R Kirk South Unit in the manner previously described not only protects the correlative rights of the unit participants, but has substantial economic and environmental benefits as well. Drilling, completing and producing multiple wells from a single surface location significantly reduces the impact on the surface. Only one access road is constructed instead of several, the need for separate tank batteries at multiple locations is eliminated, traffic to and from the area is significantly reduced, and it allows development of acreage that might not otherwise be developed with traditional drilling methods due to surface limitations, such as local water features and residential and commercial activities. There is a significant amount of acreage in eastern Ohio, where operators like Chesapeake believe the Utica formation is prospective. Development through vertical wells would not be practicable for two reasons: (1) because unconventional reservoirs cannot be produced at economic flow rates or volumes with vertical drilling (as described by Drew Hopson); and (2) because vertical wells, even if they were practical, require numerous surface locations spaced at consistent intervals, which become impractical in areas where the surface is already occupied with other uses (such as residential and commercial activities, existing surface waters, and, occasionally, timber activities). In contrast, horizontal drilling is expected to be both economically practical and physically viable, since it allows operators to locate surface operations on strategically located properties, which can serve as centralized access points used to develop mineral acreage underlying otherwise inaccessible lands.

Q21. So is it fair to say that the benefits of this type of development are substantial?

A21. Yes, the type of development planned by Chesapeake for the R Kirk South Unit,

and its adjacent units, offers significant benefits not only to the operator, but also to the landowners in the unit and the surrounding area.

Q22. Are you familiar with the Unit Plan proposed by Chesapeake for the R Kirk South Unit?

A22. Yes. The Unit Plan proposed by Chesapeake is set out in two documents attached to the Application – the Unit Agreement, which establishes the non-operating relationship between the parties in the unit; and a Unit Operating Agreement and related exhibits, which establish how the unit is going to be explored, developed, and produced.

Q23. Let's turn first to the Unit Agreement, marked as Exhibit 1 to the Application. Would you describe briefly what it does?

A23. Yes. The Unit Agreement in effect combines the oil and gas rights in the R Kirk South Unit so that they can be uniformly developed as if they were part of a single oil and gas lease.

Q24. Are mineral rights to all geological formations combined under the Unit Agreement?

A24. No. The Unit Agreement only unitizes the oil and gas rights located fifty feet above the top of the Utica Shale to fifty feet below the base of the Point Pleasant formation, defined in the Agreement as the "Unitized Formation," to allow development of the Utica Shale formation.

Q25. How will production proceeds from the R Kirk South Unit be allocated among royalty interest owners and working interest owners in the Unit?

A25. On a surface-acreage basis. Under Article 4 of the Unit Agreement, every tract is assigned a tract participation percentage based on surface acreage and shown on Exhibit A-2 to the Unit Operating Agreement. Article 5 of the Unit Agreement allocates production based on that tract participation.

Q26. Why use a surface-acreage basis as the method of allocation?

A26. Based on the testimony of Travis Glauser attached to the Application as Exhibit 3, a surface-acreage basis is an appropriate method of allocation because the formation thickness and reservoir quality of the Utica formation is expected to be consistent across the unit.

Q27. Would you go through an example from Exhibit A-2 to the Unit Operating Agreement to illustrate how a surface-acreage basis would be applied to the R Kirk South Unit?

A27. Yes. If you look at the fifth column on Exhibit A-2 to the Unit Operating Agreement entitled "Surface Acres in Unit," it shows the number of surface acres in each tract of land within the R Kirk South Unit. Column 6 on Exhibit A-2 shows the related tract participation of each tract, which is calculated by taking the total number of surface acres in the tract and dividing it by the total number of surface acres in the unit. So, for example, if you look at Tract Number 29 on page 5 of Exhibit A-2, it shows that this particular tract owned of record by Jerome V. Gundrum comprises 7.911914 surface acres in the 983.227883 acre R Kirk South Unit, which equates to a tract participation of approximately 0.80469% (7.911914 ÷ 983.227883).

Q28. What does that mean in terms of production allocated to that particular tract?

A28. It would mean this particular tract owned of record by Jerome V. Gundrum would have allocated to it roughly 0.80469% of all production from the R Kirk South Unit, which would then be distributed based on the terms of the lease or other relevant document affecting ownership to production proceeds from the tract.

Q29. Does it work the same way for an unleased mineral interest, that is, for the tract of a person or entity which did not lease its property in the unit?

A29. Yes. If you take a look at Exhibit A-3(A) to the Unit Operating Agreement, you will see that it lists, among other things, the surface acreage, tract participation and related working interest and unit participations of each unleased or partially unleased parcel in the proposed unit. In the fifty-one-tract R Kirk South Unit, Tracts 29, 47 & 48 are the three unleased or partially unleased parcels in the unit area. The minerals under these tracts are currently owned or potentially owned by four (4) different landowners. Specifically, an estimated 7.911914 acres are owned of record by Jerome V. Gundrum, 14.813869 and 6.919878 net acres are owned of record by Mary E. Scott, f/k/a Mary E. Simmons; however, based upon one very specific interpretation of the Ohio DMA, Randy J. Tinney and James Mills could actually be the owners of these mineral interests owned of record by Mary E. Scott,

f/k/a Mary E. Simmons. If the unleased acreage is divided by the full surface acreage comprising the unit (983.227883 acres), the result gives a tract participation of approximately 0.80469% for Jerome V. Gundrum, 2.21228 % for Mary E. Scott, f/k/a Mary E. Simmons; however, Mary E. Scott, f/k/a Mary E. Simmons' interest may have automatically reverted to each respective surface owner. Under the Unit Agreement, should the unleased landowners affirmatively select the non-consenting working interest option if one is provided for in the Order, the landowners would receive a 7/8 working interest and a 1/8 royalty interest on its respective tract participation. The landowner's royalties would be calculated on the net proceeds received by Chesapeake at the well in accordance with the royalty provision contained in Exhibit B to the Unit Operating Agreement and rulings in the majority of gas producing jurisdictions that royalty owners are responsible for their proportionate share of post-production expenses. Allowing deduction of post-production expenses for purposes of royalty calculation provides incentive to producers to add value to their product by post-production treatment and transportation. If producers are not allowed to deduct a proportionate share of royalty owners' post-production expenses that enhance the value of the product, an economic loss to all parties results and the incentive to generate additional value disappears because producers are required to pay for *all* post-production expenses, and also surrender one-eighth of the final proceeds received.

Q30. In your experience, is surface acreage allocation a customary way to allocate production in a unit?

A30. In my experience, surface-acreage allocation is both fair and customary for horizontal shale development.

Q31. How are unit expenses allocated?

A31. Like production in the unit, unit expenses are allocated generally on a surface-acreage basis. Article 3 of the Unit Agreement provides that expenses, unless otherwise allocated in the Unit Operating Agreement, will be allocated to each tract of land within the unit in the proportion that the surface acres of each tract bears to the surface acres of the entire unit.

Q32. Who pays the unit expenses?

A32. Working interest owners.

Q33. Do the royalty owners pay any part of the unit expenses?

A33. No. Royalty interest owners are responsible only for their proportionate share of taxes and post-production costs, payable only from their share of the proceeds from sales of production from the unit area.

Q34. Let's turn to the Unit Operating Agreement, marked as Exhibit 2 to the Application. It appears to be based upon a form document. Could you please identify that form document?

A34. Yes. The Unit Operating Agreement is based upon *A.A.P.L. Form 610 – Model Form Operating Agreement – 1989*. We typically use a modified version of that form agreement when we enter into joint operating agreements with other parties.

Q35. Are you familiar with the custom and usage of the Form 610 and other similar agreements in the industry?

A35. Yes. The Form 610, together with its exhibits, is a commonly used form in the industry and is frequently modified to fit the needs of the parties and circumstances.

Q36. Turning to the Unit Operating Agreement in particular, does it address how unit expenses are determined and paid?

A36. Yes. Article III of the Unit Operating Agreement provides that all costs and liabilities incurred in operations shall be borne and paid proportionately by the working interest owners, according to their Unit Participation percentages. Those percentages can be found in Exhibits A-2 and A-3(A) to the Unit Operating Agreement. Moreover, the Unit Operating Agreement has attached to it an accounting procedure identified as Exhibit C.

Q37. What is the purpose of the document marked Exhibit C in connection with the R Kirk South Unit?

A37. The document provides greater details regarding how unit expenses are determined and paid.

Q38. At the top of each page of Exhibit C, there appears a label that reads: "COPAS 1984 ONSHORE Recommended by the Council of Petroleum

Accountants Societies." Are you familiar with this society?

A38. Yes, COPAS stands for the Council of Petroleum Accountants Societies.

Q39. Is this COPAS document used in oil and gas operations across the country?

A39. Yes. This form is commonly used in the industry.

Q40. In your opinion, is this COPAS document generally accepted in the industry?

A40. Yes. Drafted by an organization that includes members from many different companies in diverse sections of the industry, it was designed to be generally fair to the parties. Chesapeake, in fact, is frequently subject to the COPAS in its operations with other producers.

Q41. Will there be in-kind contributions made by owners in the unit area for unit operations, such as contributions of equipment?

A41. No, Chesapeake Energy does not anticipate in-kind contributions for the Unit Operations.

Q42. Are there times when a working interest owner in the unit chooses not to – or cannot – pay their allocated share of the unit expenses?

A42. Yes, such a situation is not uncommon in the industry. Joint operating agreements contemplate that there will be times when less than all of the working interest owners choose to participate in operations on the Contract Area. The agreements are drafted to allow the parties flexibility. That includes flexibility for one or more working interest owners to decline to participate in an operation that they may not believe will be a profitable venture or one that they cannot afford, as well as flexibility for the remaining parties to proceed with such operation at their own risk and expense if they wish to do so.

Q43. Generally, how is the working interest accounted for when an owner chooses not to participate in an operation?

A43. A working interest owner who cannot or chooses not to participate is considered a non-consenting party. If the remaining working interest owners decide to proceed with an operation, then the consenting parties bear the full costs and expenses of that operation. A non-consenting party is deemed to have relinquished its interest in that operation until such time as the well pays out the costs that would have been payable by that party, plus some sort of risk factor, sometimes called a risk penalty

or non-consent penalty.

Q44. What is a risk penalty or non-consent penalty, and why are they included in the agreement?

A44. A risk penalty or non-consent penalty is a mechanism which recognizes that in instances when a working interest owner chooses not to agree in advance to pay its share of the costs of drilling a well, the other working interest owners should be compensated for the financial risks they undertake in paying the costs of drilling a well considering that the well may be a non-producer. Additionally, a non-consent penalty can serve as a means to allow a working interest owner to finance participation in a well when unable to advance its share of drilling costs.

Q45. Can a working interest owner choose to go non-consent in the initial well in the R Kirk South Unit?

A45. Yes. If a working interest owner fails to participate in the unit's initial well, and if that working interest owner is not a party to a separate Joint Operating Agreement with Chesapeake, then Article VI.A of the Unit Operating Agreement attached to this application provides that the working interest owner shall be deemed to have relinquished to the other parties its working interest in the unit with a back-in provision that includes a risk factor of 500%.

Q46. Does the Unit Operating Agreement treat the initial well and subsequent operations differently in terms of non-consent penalties, and if so, why?

A46. No. A risk factor of 500% applies to the initial well and subsequent operations.

Q47. But if the working interest owner still has a royalty interest in the unit, that royalty interest would remain in place and be paid?

A47. Yes. The royalty interest would still be paid even if the working interest is being used to pay off a risk factor.

Q48. Are the risk penalty/non-consent penalty percentages included in the Unit Operating Agreement unusual?

A48. No. A risk penalty of 500% is fair and reasonable for working interest owners in the Utica who have acquired their rights as lessees under current oil and gas leases. While Chesapeake and its peers in the industry are optimistic about development of the Utica and other shale formations, the projects proposed are significant capital

investments (often exceeding $7,000,000 per well to plan, drill and complete). In addition, unconventional plays like the Utica are not simple, homogeneous plays. Within the boundaries of the play (here, the Utica Shale generally), there are likely to be areas of uneven geological performance. Therefore, given the inherent risks and significant capital outlays, it is common for companies to incorporate a higher risk factor in their joint operating agreements.

Q49. Is a risk factor level of 500% common among the industry or in other jurisdictions?

A49. Typically within the Utica operators have pre-negotiated Joint Operating Agreements which contain risk factors of 500% or sometimes even higher.

Q50. How are decisions made regarding unit operations?

A50. Article V of the Unit Operating Agreement designates Chesapeake Exploration, L.L.C., as the Unit Operator, with full operational authority for the supervision and conduct of operations in the unit. Additionally, except where otherwise provided, Article XVI of the Unit Operating Agreement states that any decision, determination or action to be taken by the unit participants shall be based on a voting procedure in which each unit participant has a vote that corresponds in value to that participant's allocated responsibility for the payment of unit expenses.

Q51. I believe you've already described generally the documents in Exhibits A and C to the Unit Operating Agreement. Let's turn therefore to Exhibit B of the Unit Operating Agreement. What is it?

A51. Exhibit B is a standard oil and gas lease form that is attached to the joint operating agreement to govern any unleased interests owned by the parties. Article III.A of the Unit Operating Agreement provides that if any party owns or acquires an oil and gas interest in the Contract Area, then that interest shall be treated for all purposes of the Unit Operating Agreement as if it were covered by the form of lease attached as Exhibit B.

Q52. Does this oil and gas lease contain standard provisions that Chesapeake uses in connection with its drilling operations in Ohio and elsewhere?

A52. Yes.

Q53. Moving on to Exhibit D of the Unit Operating Agreement, would you describe

what it is?

A53. Yes, Exhibit D is the insurance exhibit to the joint operating agreement. It sets forth coverage amounts and limitations, and the insurance terms for operations conducted under the Unit Operating Agreement. It requires the operator, to obtain General Liability coverage, including bodily injury and property damage liability, in an amount of five million dollars, which is substantially similar to those employed in connection with Chesapeake's other unitized projects in the State of Ohio.

Q54. Would you next describe Exhibit E of the Unit Operating Agreement?

A54. Yes. Exhibit E is the Gas Balancing Agreement, which further details the rights and obligations of working interest parties with respect to marketing and selling any production from the Contract Area. It would normally not come in to play with an unleased landowner, but only with a working interest owner who desired to market their share of production separately from the Operator.

Q55. Has Chesapeake documented which of the working interest owners included within the R Kirk South Unit have given their consent to the proposed unitization?

A55. Yes. Exhibit 6 to the Application documents the approvals for the Unit Plan received from working interest owners included within the R Kirk South Unit, up to the time that the Application was filed. Exhibit 6 gives the approval of working interest owners approving the Unit Plain; currently, that being Chesapeake as owner of 79.920465%. ARU's approval is still pending as of the date of this Application. The tracts in which Chesapeake has a working interest are depicted in Exhibit 6-1.

Q56. Does the Application contain a list of the fee interest owner and mineral reservation holders who have not previously agreed to enter into any oil and gas lease with respect to the tracts they own, or possibly own, within the R Kirk South Unit?

A56. Yes. Exhibit A-3(A) to the Unit Operating Agreement lists the "unitized parties," that is, the fee interest owner and mineral reservation holders who have not leased their mineral interests to any party. For notice purposes, the proper addresses for

these unleased parties are listed on Exhibit A-3(A) as well. Exhibit A-3(B) lists the proper address for notice purposes of the Tract or Tracts of the fee interest owner whose current lease contains a pooling limitation that does not conform to the development plan. It is important to emphasize that the party or parties listed on Exhibit A-3(B) are already leased and are hence not unitized parties.

Q57. In your professional opinion, given your education and experience, are unit operations for the proposed R Kirk South Unit reasonably necessary to increase substantially the ultimate recovery of oil and gas?

A57. Yes. Unit operations for the proposed R Kirk South Unit are reasonably necessary to increase substantially the ultimate recovery of oil and gas. As testified by my colleagues Mr. Glauser and Mr. Hopson, unit operations will promote a rational and efficient development of the Utica formation underlying the R Kirk South Unit. In addition, as a land professional I am supportive of any efforts to reduce waste by minimizing the number of wells and surface locations utilized for drilling operations. I understand that land is a valuable commodity and that horizontal drilling is an excellent way to accommodate both the rights of the mineral owner and the rights of the surface owner to accomplish reasonable development.

Q58. Does this conclude your testimony?

A58. Yes.

Exhibit "RH-1"

AFFIDAVIT OF EFFORTS TO LEASE JEROME V. GUNDRUM

STATE OF OHIO)
) SS
COUNTY OF JEFFERSON)

Tax Parcel # 24-00487-001

Township of Salem

Section 30, Township 10N, Range 3W

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Robert Highsaw, is employed by Chesapeake Energy Corporation ("Chesapeake") as a Landman II. Affiant's job responsibilities include the acquisition of leases in certain areas of Ohio, including Harrison County, Ohio. Affiant has personal knowledge of the matters set forth in this affidavit, and the following information is true to the best of Affiant's knowledge and belief.

2. The oil and gas interest in the above-referenced parcel of land is owned of record by Jerome V. Gundrum, deceased ("Mineral Owner"), and is currently unleased. Affiant has personal knowledge of the efforts by Chesapeake and its independent contractors (collectively, "Chesapeake Representative") to lease the above referenced parcel of land from Mineral Owner's heirs, successors, or assigns. Those efforts are described as follows.

3. On February 26, 2015, a Chesapeake Representative, John Mahoney of DPS Land Services, attempted to visit the home of Jeffrey Gundrum, Jerome V. Gundrum's only living son, but apparently went to an incorrect address.

4. On February 26, 2015, Mr. Mahoney received a call from Jeffrey Gundrum who told Mr. Mahoney that the land is in foreclosure as Jerome V. Gundrum had taken out a reverse mortgage on the property prior to his death.

5. On March 5, 2015, Mr. Mahoney reported that he could find no probate in Jefferson County, Ohio but that he was, however, able to obtain a death certificate from the Stark County Health Department.

6. On March 12, 2015, Mr. Mahoney attempted to contact Jeffrey Gundrum to discuss obtaining on an oil and gas lease covering the land; however, he resorted to leaving a voicemail requesting that Jeffrey Gundrum call him back to discuss leasing his property to Chesapeake.

7. On March 14, 2015, Mr. Mahoney spoke with Jeffrey Gundrum by phone. Jeffrey Gundrum told Mr. Mahoney that he had advised by attorney not to sign a lease. Mr. Mahoney requested that Jeffrey Gundrum have his attorney call Mr. Mahoney to discuss any leasing concerns.

8. On April 23, 2015, Mr. Mahoney reported that he had attempted to speak with Jeffrey Gundrum multiple times by phone since March 14, but had been unable to reach him.

9. On April 23, 2015, Mr. Mahoney was able to speak with Jeffrey Gundrum later in the day. Jeffrey Gundrum would not immediately state who was representing him but promised to call his attorney the next day and then call Mr. Mahoney back thereafter.

10. On May 4, 2015, Mr. Mahoney called Jeffrey Gundrum by telephone, but resorted to leaving a voicemail requesting that he return the phone call to discuss leasing his property to Chesapeake.

11. On May 6, 2015, Mr. Mahoney called Linda Gundrum, Jeffrey Gundrum's sister-in-law, in order to speak with her to see if she could help him get back in touch with Jeffrey Gundrum.

12. On May 6, 2015, Mr. Mahoney spoke with Jeffrey Gundrum who advised that Kristopher Haught of Steubenville, Ohio is his attorney.

13. On May 8, 2015, Kaylee Miller, Field Landman II of Chesapeake Energy Corporation spoke with Mr. Haught about Chesapeake's desire to obtain an oil and gas lease covering the land.

14. On May 13, 2015, Ms. Miller emailed an offer to lease and a proposed lease form to Mr. Haught for his review.

15. On June 11, 2015, Mr. Haught emailed Ms. Miller a copy of Jerome V. Gundrum's last will and testament, which to date has still not been admitted to probate, evidencing that Jeffrey Gundrum is Jerome V. Gundrum's sole surviving residuary beneficiary.

16. On June 16, 2015, Ms. Miller called Mr. Haught to discuss the proposed oil and gas lease but resorted to leaving a voicemail.

17. On June 19, 2015, Ms. Miller sent an e-mail to Mr. Haught requesting a follow up conversation concerning the proposed lease.

18. On June 19, 2015, Ms. Miller also called Jeffrey Gundrum to speak about the status of the proposed oil and gas lease offer, but resorted to leaving a voicemail.

19. On July 1, 2015, Ms. Miller sent an e-mail to Mr. Haught to follow up on the proposed oil and gas lease.

20. On July 7, 2015, Affiant spoke with Mr. Haught about the proposed oil and gas lease offer and the pending reverse mortgage foreclosure. Mr. Haught informed Affiant that Jeffrey Gundrum was contemplating Chesapeake's offer. Affiant verbally agreed to a price of $3,000 per net acre. Mr. Haught said that Jeffrey Gundrum and he were discussing options concerning probating the last will and testament of Jerome V. Gundrum and settling with the current mortgagee.

21. On July 9, 2015, Ms. Miller spoke with Mr. Haught who informed her that he had spoken with the attorney representing the mortgagee and that and that Mr. Haught and the attorney for the mortgagee were discussing hopefully working out a deal.

22. On July 9, 2015, Ms. Miller e-mailed an updated copy of the proposed oil and gas lease to Mr. Haught.

Further Affiant sayeth naught.

Dated this 17th day of July, 2015.

Robert Highsaw, Affiant
Landman II
Chesapeake Energy Corporation

ACKNOWLEDGEMENT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

The foregoing instrument was sworn to before me, a Notary Public in and for the State of Oklahoma, and subscribed in my presence this 17th day of July, 2015, by Robert Highsaw, known to me or satisfactorily proven to be the Affiant in the foregoing instrument, who acknowledged the above statements to be true as Affiant verily believes.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:
5/12/18

Notary Public

Adam Schaefer
Printed Name of Notary

(S E A L)

ADAM SCHAEFER
NOTARY
14004312
EXP. 05/12/18
PUBLIC
STATE OF OKLAHOMA

Exhibit "RH-1"

AFFIDAVIT OF EFFORTS TO LEASE RANDY J. TINNEY

STATE OF OHIO)
) SS
COUNTY OF JEFFERSON)

Tax Parcel # 24-01982-000B

Township of Salem

Section 36, Township 10N, Range 3W

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Robert Highsaw, is employed by Chesapeake Energy Corporation ("Chesapeake") as a Landman II. Affiant's job responsibilities include the acquisition of leases in certain areas of Ohio, including Jefferson County, Ohio. Affiant has personal knowledge of the matters set forth in this affidavit, and the following information is true to the best of Affiant's knowledge and belief.

2. An undivided one half (1/2) oil and gas interest in the above-referenced parcel of land may be owned by Randy J. Tinney ("Mineral Owner"), and is currently unleased. Affiant has personal knowledge of the efforts by Chesapeake and its independent contractors (collectively, "Chesapeake Representative") to lease the above referenced parcel of land from Mineral Owner. Those efforts are described as follows.

3. On May 28, 2015, a Chesapeake Representative, Benjamin Taylor of DPS Land Services attempted to speak with Mr. Tinney by telephone, but resorted to leaving a voicemail requesting that he return the phone call to discuss leasing his property with Chesapeake.

4. On June 1, 2015, Mr. Taylor attempted to speak with Mr. Tinney by telephone, but resorted to leaving a voicemail requesting that he return the phone call to discuss leasing his property with Chesapeake.

5. On June 2, 2015, Mr. Taylor received a voicemail from Mr. Tinney in the morning stating that he was heading to work but would try to call Mr. Taylor back again later in the day. Mr. Taylor tried to return Mr. Tinney's call but reached his voicemail which was full.

6. On June 18, 2015, Mr. Tinney left a voicemail for Mr. Taylor. Mr. Taylor attempted to call back Mr. Tinney on two different phone numbers but resorted to leaving a voicemail at both numbers stating that he was going to get the paperwork together for Mr. Tinney to review.

7. On June 2, 2015, Mr. Taylor talked to Mr. Tinney to try to determine how many net acres were unleased. Mr. Tinney said that he would look through his records to determine what he owns that is unleased and call back Mr. Taylor after work.

8. On June 25, 2015, Mr. Taylor attempted to call Mr. Tinney; however, the phone was off and the mailbox was full. Mr. Taylor tried a second number for Mr. Tinney, but resorted to leaving a voicemail requesting a call back.

9. On July 1, 2015, Mr. Taylor attempted to speak with Mr. Tinney by phone, but the phone was off and the mailbox was full. Mr. Taylor tried to call Mr. Tinney at a second number; however, he resorted to leaving aa voicemail requesting that Mr. Tinney call back Mr. Taylor to discuss leasing his property with Chesapeake.

10. On July 6, 2015, Mr. Taylor received a voicemail from Randy Tinney stating that he wanted to add certain lease provisions and was uncertain about the deferred bonus price. Mr. Taylor attempted to give Mr. Tinney a call back, but he did not answer and the voicemail was full.

Further Affiant sayeth naught.

Dated this 17th day of July, 2015.

Robert Highsaw, Affiant
Landman II
Chesapeake Energy Corporation

ACKNOWLEDGEMENT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

The foregoing instrument was sworn to before me, a Notary Public in and for the State of Oklahoma, and subscribed in my presence this 17th day of July, 2015, by Robert Highsaw, known to me or satisfactorily proven to be the Affiant in the foregoing instrument, who acknowledged the above statements to be true as Affiant verily believes.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:
5/12/18

Notary Public

Adam Schaefer
Printed Name of Notary

(S E A L)

ADAM SCHAEFER
NOTARY
14004312
EXP. 05/12/18
PUBLIC
STATE OF OKLAHOMA

Exhibit "RH-1"

AFFIDAVIT OF EFFORTS TO LEASE MARY E. SCOTT

STATE OF OHIO)
) SS
COUNTY OF JEFFERSON)

Tax Parcel # 24-01982-000B, 24-01982-001

Township of Salem

Section 36, Township 10N, Range 3W

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Robert Highsaw, is employed by Chesapeake Energy Corporation ("Chesapeake") as a Landman II. Affiant's job responsibilities include the acquisition of leases in certain areas of Ohio, including Jefferson County, Ohio. Affiant has personal knowledge of the matters set forth in this affidavit, and the following information is true to the best of Affiant's knowledge and belief.

2. An undivided one half (1/2) oil and gas interest in the above-referenced parcels of land may be owned by Mary E. Scott, formally known as Mary E. Simmons ("Mineral Owner"), and is currently unleased. Affiant has personal knowledge of the efforts by Chesapeake and its independent contractors (collectively, "Chesapeake Representative") to lease the above referenced parcel of land from Mineral Owner. Those efforts are described as follows.

3. On April 9, 2015, a Chesapeake Representative, Benjamin Taylor of DPS Land Services, attempted to speak with Mrs. Scott by telephone, but resorted to leaving a voicemail requesting that he return the phone call to discuss leasing his property with Chesapeake. He also attempted to reach her daughter, Deborah Lynn Kwatia, formerly Simmons, by phone, but resorted to leaving a message requesting she call back. Mr. Taylor also attempted to visit the home of Mrs. Scott, but apparently went to the incorrect address.

4. On April 10, 2015, Mr. Taylor attempted to contact Gary Cain, a local realtor and the witness to the reservation deed, to see if he may have contact information for Mrs. Scott, but he was out of the office.

5. On April 10, 2015, Mr. Taylor called a number for Erik Simmons in Cleveland, the name of Mrs. Scott' former step-son; however, a woman he spoke to informed Mr. Taylor that it was not the same Erik Simmons.

6. On April 10, 2015, Mr. Taylor attempted to speak with Mrs. Scott by telephone; however, the number was disconnected. Mr. Taylor attempted to call Mrs. Scott on a different phone number, but there was no answer and no voicemail set up.

7. On April 10, Mr. Taylor attempted to contact Mary's first husband, John C. Mallett, in the Steubenville, OH, area; however, both contact numbers were disconnected.

8. On April 14, 2015, Mr. Taylor attempted to call Mr. Cain again. Mr. Cain's secretary said that he was out of the office but should be back later in the afternoon.

9. On April 14, 2015, Mr. Taylor spoke with Mr. Cain who said he was familiar with the Simmons family but is not sure if he has any current contact information. He informed Mr. Taylor that Earl W. Simmons, Mrs. Scott' ex-husband and adoptive father to Deborah Lynn Kwatia, formerly Simmons, has a brother that may still be in the area. Mr. Cain stated that he would try to locate the brother's contact information.

10. On April 16, 2015, Mr. Taylor spoke with Mr. Cain again who heard rumor Earl W. Simmons' brother may have moved to North Carolina or South Carolina and provided two possible contacts, one in Greenville, NC, and one in Farmersville, NC. He said he is having his secretary look into any other properties he may have bought or sold for the family for other possible contacts.

11. On April 21, 2015, Mr. Taylor sent a letter to a possible address for Earl W. Simmons at 805 S. 2nd Street, Coshocton, OH 43812.

12. On April 22, 2015, Mr. Taylor sent a letter to a possible address for Earl S. Simmons that may be the son of Earl W. Simmons, at 2015 E. Walnut Street, Barnesville, OH.

13. On April 22, 2015, Mr. Taylor called and spoke to Randy Tinney, one of the current surface owners of the property, to ask if he knew of the Simmons family. He did not. He also said that he did not believe that any of his neighbors had lived there for 40+ years and, thus, might know the Simmons family.

14. On April 22, 2015, Mr. Taylor attempted to call Martin D. Simmons, who sold Mrs. Scott and Earl W. Simmons the property, at two separate numbers, but both numbers were disconnected.

15. On May 13, 2015, Mr. Taylor attempted to call two numbers for Patricia A. Simmons, who was also listed as a party deeding the property to Mrs. Scott and Earl W. Simmons; however, both numbers were disconnected. Mr. Taylor also sent letters to possible addresses for Patricia A. Simmons at Duvall Trailer Park, Lot 8, Brilliant, OH 43913; 1421 Hill Street, Brilliant, OH 43913; and 172 Crawford Avenue, Steubenville, OH 43953.

16. On May 14, 2015, Mr. Taylor tried to call a possible contact number for Sharon Simmons, possible surviving spouse of Martin Simmons. Tammy Hashbarger, Sharon Simmons' daughter-in-law answered the phone. She was unsure if Sharon Simmons had been married to a Martin Simmons, as she had been married about four times. Mr. Taylor left his phone number to pass on to Sharon Simmons.

17. On May 14, 2015, Mr. Taylor tried to call two phone numbers for Martin Simmons. Both numbers were not in service. Mr. Taylor attempted to call a third phone number, but it rang a few times and then went dead. Mr. Taylor believes that this number is also not in service.

18. On May 18, 2015, Mr. Taylor spoke with Troy Simmons, the son of Martin Simmons and nephew of Earl Simmons, in regard to the property. He gave Mr. Taylor the number for Earl Simmons. Mr. Taylor called the number for Earl Simmons, but resorted to leaving a voicemail requesting that he return the phone call and mentioning that it was in regard to property he once owned with Mary

Simmons in Jefferson County, OH. Troy Simmons said that he is also going to speak with his aunt to see if she knows how to reach Mrs. Scott.

19. On May 19, 2015, Mr. Taylor received a call back from Earl Simmons. Mr. Taylor explained that Chesapeake is looking into property he once owned with Mrs. Scott. Earl Simmons said he does not have contact with her, but he will call relative of hers, Doug and Rebecca Lash, to see if he can find any contact information. Earl Simmons said that last he heard, Mrs. Scott was living in Delaware.

20. On May 20, 2015, Troy Simmons called Mr. Taylor saying that he had spoken with Stan Simmons, Earl and Martin's other brother in North Dakota, who believes that Mrs. Scott is now remarried. She may be living in Connecticut.

21. On May 21, 2015, Earl Simmons called Mr. Taylor saying that he found Mrs. Scott. She is now lives in Georgetown, Delaware. Earl Simmons gave Mr. Taylor a contact number for Mrs. Scott.

22. On May 21, 2015, Mr. Taylor called Mrs. Scott and left a message. Mrs. Scott returned his call. Mr. Taylor explained that Chesapeake discovered a ½ oil and gas reservation from her property. Mr. Taylor explained the Domestic Mineral Act and the possibility that the surface owners could reclaim the severed minerals. Mr. Taylor told Mrs. Scott that he would look into it further and call her back.

23. On June 1, 2015, Mr. Taylor called and spoke to Mrs. Scott and offered her an oil and gas lease. She said that she first wanted to speak with the surface owner and see if he will "honor" the original reservation. Mr. Taylor explained that the gentleman she sold the property to is no longer the current owner. Mrs. Scott wanted more money for a contingency lease and asked Mr. Taylor to call back in a couple of days.

24. On June 2, 2015, Mr. Taylor attempted to reach Mrs. Scott by phone but resorted to leaving her a voicemail requesting a call back and informing Mrs. Scott that Mr. Taylor would be sending out paperwork with another offer. Mrs. Scott called back Mr. Taylor and said she would review the paperwork with her husband and give Mr. Taylor a call with any questions.

25. On June 8, 2015, Mr. Taylor called and spoke with Mrs. Scott. Mrs. Scott stated that they sent the paperwork to Attorney Piergallini for review. Mr. Taylor sent Attorney Piergallini an email requesting a phone call once he reviewed the lease.

26. On June 17, 2015, Mr. Taylor received an email from Attorney Piergallini's office stating that a letter was sent out on June 12, 2015, explaining the Dormant Mineral Act (DMA) to Mrs. Scott and are awaiting her response.

27. On June 17, 2015, Mr. Taylor called and spoke with Mrs. Scott and her husband, Charles Scott. They had just talked with Attorney Piergallini in regard to the DMA issues and retained his services for the lease negotiations. Attorney Piergallini is to contact Mr. Taylor once her reviews the lease.

28. On June 25, Mr. Taylor emailed Attorney Piergallini to see if he had reviewed the lease.

29. On July 26, 2015, Mr. Taylor received an email for Attorney Piergallini's office saying that they dictated a letter to Mrs. Scott the day before but that work has not yet been given to her, likely to go over Attorney Piergallini's recommendations of the lease with Mrs. Scott before submitting them to Chesapeake.

30. On July 1, 2015, Mr. Taylor spoke with Attorney Piergallini's office which is still drafting a letter explain the DMA and contingency lease to Mrs. Scott.

31. On July 1, 2015, Mr. Taylor spoke with Mrs. Scott and her husband again. They said they are willing to sign an oil and gas lease for an extra $500 per acre. Mr. Taylor said he would call back the next day in regard to the counter offer. Mrs. Scott and her husband said there has been a lot of confusion between them and Attorney Piergallini's office, and they would now like to proceed without Attorney Piergallini.

32. On July 2, 2015, Mr. Taylor attempted to phone Mrs. Scott but resorted to leaving a voicemail requesting that she return the phone call to discuss leasing her property to Chesapeake.

33. On July 2, 2015, Mrs. Scott called back Mr. Taylor. Mr. Taylor said he would send the documents for the higher price.

34. On July 8, Mr. Taylor spoke to Mrs. Scott who said she received the documents and would have them signed and sent back by the end of the week. Mrs. Scott said she would phone Mr. Taylor when the documents were put in the mail.

Further Affiant sayeth naught.

Dated this 17 day of July, 2015.

Robert Highsaw, Affiant
Landman II
Chesapeake Energy Corporation

ACKNOWLEDGEMENT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

The foregoing instrument was sworn to before me, a Notary Public in and for the State of Oklahoma, and subscribed in my presence this 17th day of July, 2015, by Robert Highsaw, known to me or satisfactorily proven to be the Affiant in the foregoing instrument, who acknowledged the above statements to be true as Affiant verily believes.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:
5/12/18

Notary Public

Adam Schaefer
Printed Name of Notary

(S E A L)

ADAM SCHAEFER
NOTARY
14004312
EXP. 05/12/18
PUBLIC
STATE OF OKLAHOMA

Exhibit "RH-1"

AFFIDAVIT OF EFFORTS TO LEASE JAMES MILLS

STATE OF OHIO)
) SS
COUNTY OF JEFFERSON)

Tax Parcel # 24-01982-001

Township of Salem

Section 36, Township 10N, Range 3W

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Robert Highsaw, is employed by Chesapeake Energy Corporation ("Chesapeake") as a Landman II. Affiant's job responsibilities include the acquisition of leases in certain areas of Ohio, including Jefferson County, Ohio. Affiant has personal knowledge of the matters set forth in this affidavit, and the following information is true to the best of Affiant's knowledge and belief.

2. An undivided one half (1/2) oil and gas interest in the above-referenced parcel of land may be owned by James Mills ("Mineral Owner"), and is currently unleased. Affiant has personal knowledge of the efforts by Chesapeake and its independent contractors (collectively, "Chesapeake Representative") to lease the above referenced parcel of land from Mineral Owner. Those efforts are described as follows.

3. On June 24, 2015, A Chesapeake Representative, Benjamin Taylor of DPS Land Services, mailed an offer letter to Mr. Mills at 1819 TR 219, Richmond, OH 43944 seeking to enter into a lease agreement covering the above-referenced parcel of land.

4. On July 1, 2015, Mr. Taylor attempted to speak with Mr. Mills by telephone, but there was no answer and no voicemail set up.

5. On July 2, 2015, Mr. Taylor stopped by Mr. Mills' residence and met with Mr. Mills. They discussed the mineral reservation on his property and the possibility of a problem with the Dorman Mineral Act. Mr. Taylor presented Mr. Mills with an oil and gas lease offer. Mr. Mills said he would have his cousin who is an attorney review the paperwork and give Mr. Taylor a call.

Further Affiant sayeth naught.

Dated this 17th day of July, 2015.

Robert Highsaw, Affiant
Landman II
Chesapeake Energy Corporation

ACKNOWLEDGEMENT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

The foregoing instrument was sworn to before me, a Notary Public in and for the State of Oklahoma, and subscribed in my presence this 17th day of July, 2015, by Robert Highsaw, known to me or satisfactorily proven to be the Affiant in the foregoing instrument, who acknowledged the above statements to be true as Affiant verily believes.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:
5/12/18

Notary Public

Adam Schaefer
Printed Name of Notary

(S E A L)

ADAM SCHAEFER
NOTARY
14004312
EXP. 05/12/18
PUBLIC
STATE OF OKLAHOMA

Exhibit "RH-1"

AFFIDAVIT OF EFFORTS TO LEASE
THE UNITED STATES OF AMERICA, SECRETARY OF HOUSING AND URBAN DEVELOPMENT

STATE OF OHIO)
) SS
COUNTY OF JEFFERSON)

Tax Parcel # 24-00487-001

Township of Salem

Section 30, Township 10N, Range 3W

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Robert Highsaw, is employed by Chesapeake Energy Corporation ("Chesapeake") as a Landman II. Affiant's job responsibilities include the acquisition of leases in certain areas of Ohio, including Jefferson County, Ohio. Affiant has personal knowledge of the matters set forth in this affidavit, and the following information is true to the best of Affiant's knowledge and belief.

2. The oil and gas interest in the above-referenced parcel of land ("the Land") is owned of record by Jerome V. Gundrum ("Mineral Owner"), and is currently unleased. Further, the above-referenced parcel of land is subject to a reverse mortgage which is presently pending a foreclosure action in the Jefferson County Court of Common Pleas. The United States of America, Secretary of Housing and Urban Development ("HUD") may have an interest in this property pursuant to an instrument recorded at Book 857, Page 315 of the Jefferson County Records. Affiant has personal knowledge of the efforts by Chesapeake and its independent contractors (collectively, "Chesapeake Representative") to lease the above referenced parcel of land. Those efforts are described as follows.

3. To date no Chesapeake Representative has attempted to lease HUD. Chesapeake is familiar through previous leasing activities in Ohio that HUD will not execute oil and gas leases.

4. Furthermore, HUD is not the owner of the executive right to execute oil ad gas leases covering the Land and any oil and gas lease obtained by Chesapeake from HUD would be ineffective to lease the Land. Jerome V. Gundrum, deceased, is still the record owner of the Land, and his heirs, executors, successors, or assigns would still possess the executive right to execute a lease and would be the appropriate party to lease at the present time.

5. A summation of Chesapeake's attempts to lease Jerome V. Gundrum are detailed in "Affidavit of Efforts to Lease Jerome V. Gundrum" contained within this Application.

Further Affiant sayeth naught, this 17th day of July, 2015.

Robert Highsaw, Affiant
Landman II
Chesapeake Energy Corporation

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

The foregoing instrument was sworn to before me, a Notary Public in and for the State of Oklahoma, and subscribed in my presence this 17th day of July, 2015, by Robert Highsaw, known to me or satisfactorily proven to be the Affiant in the foregoing instrument, who acknowledged the above statements to be true as Affiant verily believes.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:
5/12/18

Notary Public

(S E A L)

Adam Schaefer
Printed Name of Notary

ADAM SCHAEFER
NOTARY
14004312
EXP. 05/12/18
PUBLIC
STATE OF OKLAHOMA

Exhibit "RH-1"

AFFIDAVIT OF EFFORTS TO LEASE WELLS FARGO BANK, N.A.

STATE OF OHIO)
) SS
COUNTY OF JEFFERSON)

Tax Parcel # 24-00487-001

Township of Salem

Section 30, Township 10N, Range 3W

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Robert Highsaw, is employed by Chesapeake Energy Corporation ("Chesapeake") as a Landman II. Affiant's job responsibilities include the acquisition of leases in certain areas of Ohio, including Jefferson County, Ohio. Affiant has personal knowledge of the matters set forth in this affidavit, and the following information is true to the best of Affiant's knowledge and belief.

2. The oil and gas interest in the above-referenced parcel of land ("the Land") is owned of record by Jerome V. Gundrum ("Mineral Owner"), and is currently unleased. Further, the above-referenced parcel of land is subject to a reverse mortgage in favor of Wells Fargo Bank, N.A. as mortgagee and recorded at Book 857, Page 327 of the Jefferson County Records. The mortgage is presently pending a foreclosure action in the Jefferson County Court of Common Pleas. Affiant has personal knowledge of the efforts by Chesapeake and its independent contractors (collectively, "Chesapeake Representative") to lease the above referenced parcel of land. Those efforts are described as follows.

3. To date no Chesapeake Representative has attempted to lease Wells Fargo Bank, N.A..

4. Furthermore, until such time as the foreclosure action might be finalized and a Sheriff's Deed would potentially be issued and recorded, Wells Fargo Bank, N.A. will not be the owner of the oil and gas underlying the Land and, presently, Wells Fargo Bank, N.A. is not the owner of the executive right to execute oil ad gas leases covering the Land. Any oil and gas lease obtained by Chesapeake from Wells Fargo Bank, N.A. would, in and of itself, be ineffective to lease the Land. Jerome V. Gundrum, deceased, is still the record owner of the Land, and his heirs, executors, successors, or assigns would still possess the executive right to execute a lease and would be the appropriate party to lease at the present time.

5. A summation of Chesapeake's attempts to lease Jerome V. Gundrum are detailed in "Affidavit of Efforts to Lease Jerome V. Gundrum" contained within this Application.

Further Affiant sayeth naught, this 17th day of July, 2015.

Robert Highsaw, Affiant
Landman II
Chesapeake Energy Corporation

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

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IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires:
5/12/18

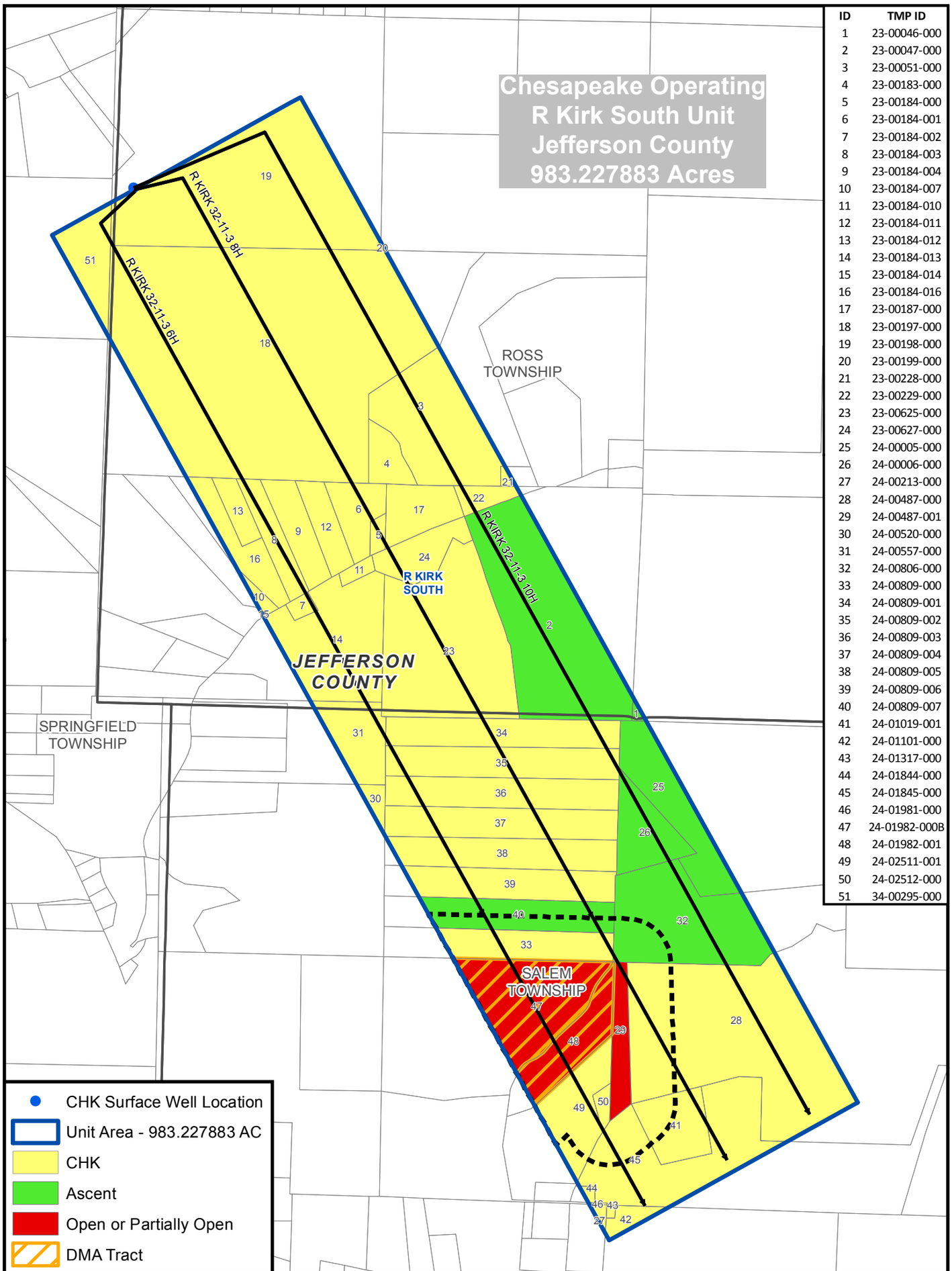
Notary Public

(S E A L)

Adam Schaefer
Printed Name of Notary

ADAM SCHAEFER
NOTARY
14004312
EXP. 05/12/18
PUBLIC
STATE OF OKLAHOMA

Exhibit "RH-2"



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0 1,350 2,700 Feet

UNIT PLAT

R Kirk South Unit
Ross, Salem, & Springfield Townships
Jefferson Co., OH

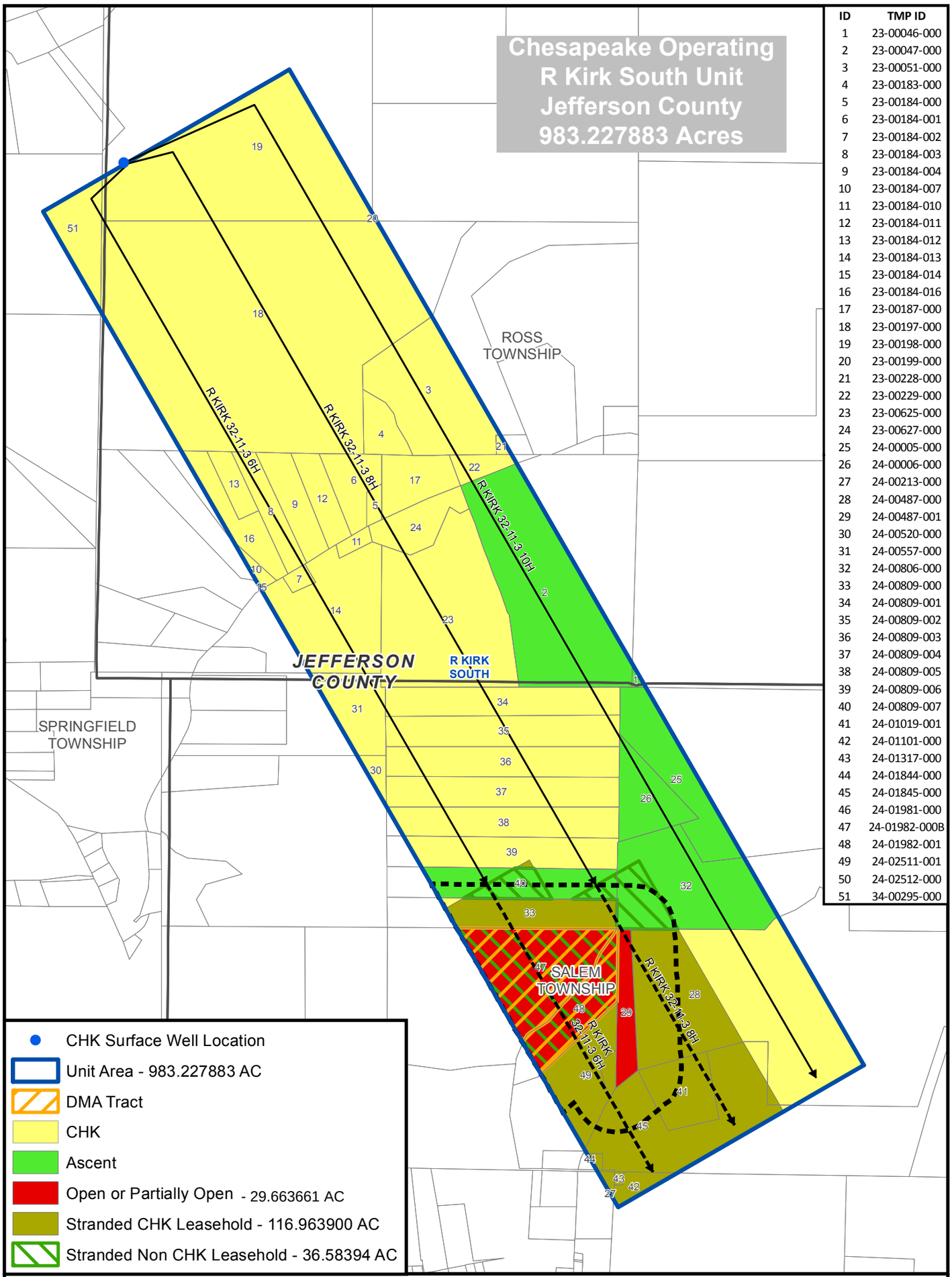
1 inch = 1,350 feet

Chesapeake ENERGY

Projection: NAD 1983 UTM Zone 17N

Prepared Date: 7/17/2015

Exhibit "RH-3"



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51	34-00295-000

0 1,000 2,000 Feet

UNIT PLAT

R Kirk South Unit
Ross, Salem, & Springfield Townships
Jefferson Co., OH

1 inch = 1,350 feet

Chesapeake ENERGY

Projection: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
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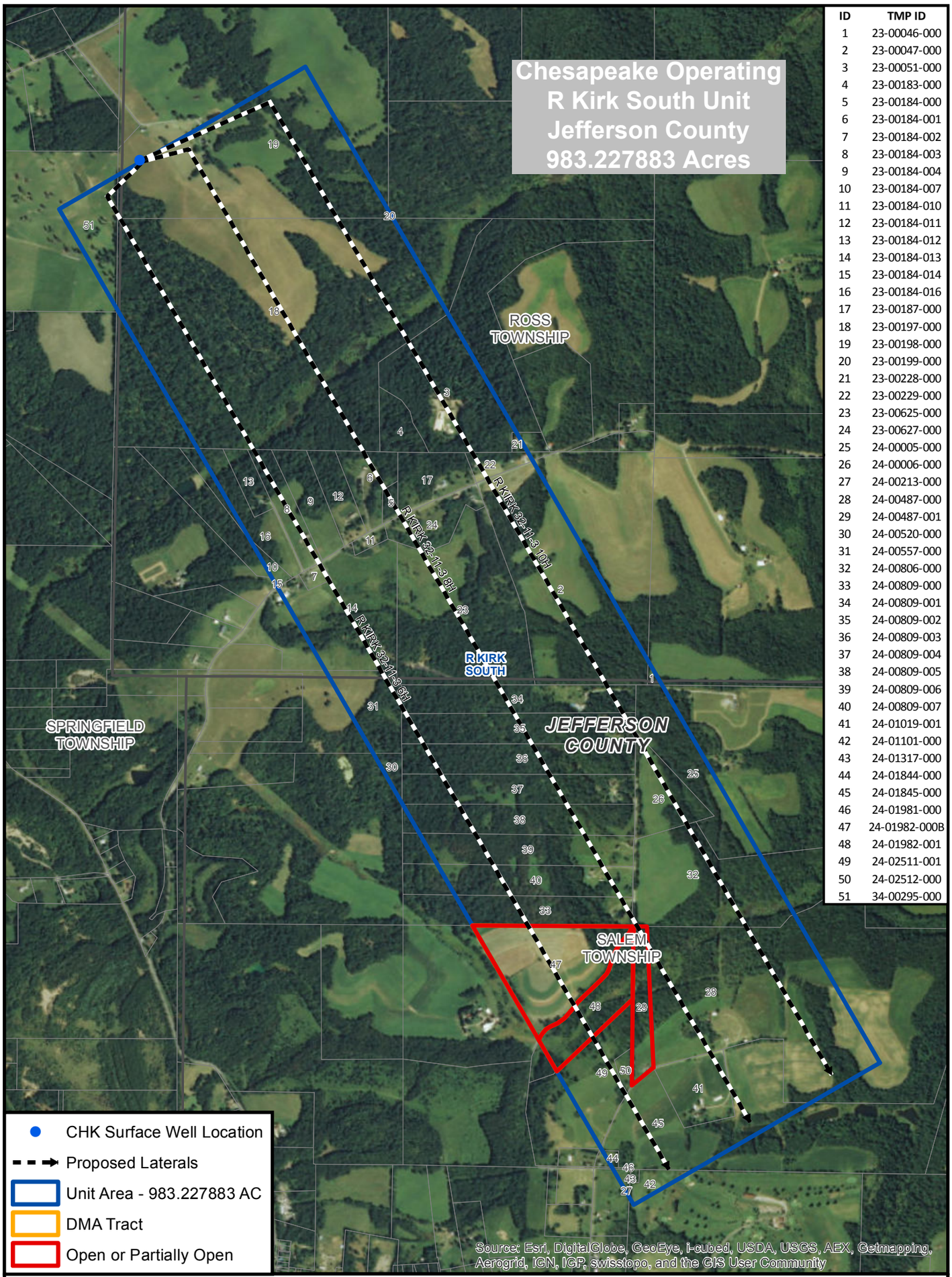
Prepared Date: 7/17/2015

Exhibit "RH-4"



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50	24-02512-000
51	34-00295-000

UNIT PLAT

R Kirk South Unit
Ross, Salem, & Springfield Townships
Jefferson Co., OH

1 inch = 1,350 feet

0 1,350 2,700 Feet

Chesapeake ENERGY

Projection: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
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Prepared Date: 7/17/2015

WORKING INTEREST OWNER

APPROVAL OF

UNIT PLAN FOR THE

R KIRK SOUTH UNIT

Ross/Salem/Springfield Townships

Jefferson County, Ohio

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, a Unit Plan has been prepared for the testing, development, and operation of certain Tracts identified therein, which Plan consists of an agreement entitled, "Unit Agreement, The R Kirk South Unit, Ross/Salem/Springfield Townships, Jefferson County, Ohio," dated July 21, 2015 (the "Unit Agreement"); and an agreement entitled, "A.A.P.L. Form 610-1989 Model Form Operating Agreement," also regarding the R Kirk South Unit and of like date (the "Unit Operating Agreement"); and,

WHEREAS, the undersigned is the owner of a Working Interest in and to one or more of the Tracts identified in said Unit Plan, namely, the Tracts identified below (hereinafter, the "Owner").

NOW, THEREFORE, the Owner hereby approves the Unit Plan and acknowledges receipt of full and true copies of both the Unit Agreement and the Unit Operating Agreement.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the date set forth opposite the signature of its representative.

WORKING INTEREST OWNER

TRACT NO. (see attached)

TRACT ACREAGE 785.800295

RELATED WORKING INTEREST PERCENTAGE 79.920465%

CHESAPEAKE EXPLORATION, L.L.C.

Date 7/17/2015 By: Robert Highsaw

Robert Highsaw, Landman II – Appalachia South

Exhibit 6

Exhibit 1

Working Interest Owners

Attached to and made a part of that certain Unit Operating Agreement dated July 21, 2015 as approved by the Ohio Department of Natural Resources for the R Kirk South Unit.

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	TAX MAP PARCEL ID NUMBERS
3	JAMES P. MERIWETHER AND MARJORIE J. MERIWETHER	33.548951	23-00051-000
4	JAMES P. MERIWETHER AND MARJORIE J. MERIWETHER	0.000000	23-00183-000
4	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	5.113953	23-00183-000
4	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.022791	23-00183-000
5	MILDRED E. HUBER	0.000000	23-00184-000
5	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	1.337671	23-00184-000
5	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	0.267534	23-00184-000
6	JAMES P. MERIWETHER AND MARJORIE J. MERIWETHER	0.000000	23-00184-001

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	TAX MAP PARCEL ID NUMBERS
6	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	7.546695	23-00184-001
6	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.509339	23-00184-001
7	JENNIFER M. HALL	1.529934	23-00184-002
8	GEORGE A. POTKRAJAC	0.000000	23-00184-003
8	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	7.016426	23-00184-003
8	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.403285	23-00184-003
9	GEORGE A. POTKRAJAC	0.000000	23-00184-004

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	TAX MAP PARCEL ID NUMBERS
9	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	8.151022	23-00184-004
9	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.630204	23-00184-004
10	RONALD R. REASONER AND AMY D. REASONER	0.000000	23-00184-007
10	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	1.199459	23-00184-007
10	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	0.239892	23-00184-007
11	FREDERICK A. HUBER AND CYNTHIA A. HUBER	1.634924	23-00184-010
12	MARK A. KINCAID AND JILL A. KINCAID	0.000000	23-00184-011

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	TAX MAP PARCEL ID NUMBERS
12	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	6.270030	23-00184-011
12	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.254006	23-00184-011
13	KELLY M. BETHEL	0.000000	23-00184-012
13	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	3.837825	23-00184-012
13	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	0.767565	23-00184-012
14	CARYL A. TAYLOR AND FRANK PHILLIPS	33.101256	23-00184-013
15	RONALD R. REASONER AND AMY D. REASONER	0.000000	23-00184-014

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15	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	0.046254	23-00184-014
15	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	0.009251	23-00184-014
16	KELLY M. BETHEL	0.000000	23-00184-016
16	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	8.681560	23-00184-016
16	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.736312	23-00184-016
17	ROBERT SENSIBAUGH AND CAROL SENSIBAUGH	0.000000	23-00187-000

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17	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	8.841945	23-00187-000
17	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.768389	23-00187-000
18	ROBERT H. AND DARLA KAY KIRK	182.257790	23-00197-000
19	ROBERT H. AND DARLA KAY KIRK	74.801522	23-00198-000
20	ROBERT H. AND DARLA KAY KIRK	0.048111	23-00199-000
21	DAVID R. MCELWAIN AND EDWINNA MCELWAIN	0.585161	23-00228-000
22	DAVID R. MCELWAIN AND EDWINNA MCELWAIN	1.894627	23-00229-000
22	EDWARD MCLAIN AND PATRICIA MCLAIN	1.894627	23-00229-000
23	MILDRED E. HUBER	55.898293	23-00625-000
24	FREDERICK A. HUBER AND CYNTHIA A. HUBER	9.943148	23-00627-000
27	JACK C. CAGOT	0.746157	24-00213-000
28	CHARLES W. CORDER, SR. AKA CHARLIE CORDER AND DIANA L. CORDER AKA DIANE CORDER	81.133917	24-00487-000
30	ELIZABETH L. BOGGESS	1.095477	24-00520-000
30	EDGAR L. HARMON AND GLORIA F. HARMON	1.095477	24-00520-000
31	CHARLES WILLIAM CORDER, SR. AND DIANE L. CORDER	6.402262	24-00557-000
31	GEORGE KNAPP, INDIVIDUALLY AND AS AUTHORIZED AGENT AND ATTORNEY-IN-FACT FOR MARTHA A. KNAPP, WIFE OF GEORGE W. KNAPP, GEORGE E. CORROCCI AND ROSARIE M. CORROCCI, HUSBAND AND WIFE, ROBERT G. LEWIS AND L. JANE LEWIS, HUSBAND AND WIFE, CARL L. GRIMM AND DEBRA A. GRIMM HUSBAND AND WIFE, WILLIAM H. WESTLAKE, A SINGLE MAN, LARRY P. CORROCCI, JR., A SINGLE MAN, DALE M. WESTLAKE AND DEMENICA M. WESTLAKE, HUSBAND AND WIFE, JAMES MICHAEL LEMAL, JR. AND RENEE LYNN LEMAL, HUSBAND AND WIFE, KENNETH LEE LEMAN AND THERESA RENFRO LEMAL, HUSBAND AND WIFE, ROBERT LEMAN AND MELISSA C. LEMAL, HUSBAND AND WIFE, MICHELLE LEMAL, A SINGLE WOMAN, JOHN FRANCIS LEMAL AND BUNNY LEE LEMAL, HUSBAND AND WIFE, CARRIE ANN MCCLELLAN AND JOHN RICHARD MCCLELLAN, WIFE AND HUSBAND, CAROLINE CHRISTINE CARDWELL AND JAMES DOUGLAS CARDWELL, WIFE AND HUSBAND, PAUL EDWARD LEMAN AND ELEANOR LEMAL, HUSBAND AND WIFE	5.335218	24-00557-001
31	MEGAN ANN PAUL FKA MEGAN ANN MORRISON AND KENNETH W. PAUL	1.067044	24-00557-002
33	PHILLIP B. JORDAN	15.061244	24-00809-000
34	ROBERT W. YEAGER AND BETH A. YEAGER	20.029212	24-00809-001
35	ROBERT H. AND LORI D. NEWLIN	21.602109	24-00809-002
36	ROBERT H. NEWLIN AND LORI D. NEWLIN	21.299934	24-00809-003
37	THOMAS E. MCGAUGHEY	21.054401	24-00809-004

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	TAX MAP PARCEL ID NUMBERS
38	ROBERT SERDAR AND JUDITH I. SERDAR	20.294780	24-00809-005
39	ROBERT SERDAR AND JUDITH I. SERDAR	19.043146	24-00809-006
41	CHARLES W. CORDER, JR. AND NANCY S. CORDER	12.523870	24-01019-001
42	SALINE OIL COMPANY DBA SPRING HILLS GOLF CLUB, CHARLES W. CORDER, SR., PRESIDENT	3.203635	24-01101-000
43	CHARLES W. CORDER SR. AKA CHARLIE CORDER AND DIANA L. CORDER AKA DIANE CORDER	0.344141	24-01317-000
44	SHIRLEY A. MCCOURT AND LESTER P. MCCOURT	0.559169	24-01844-000
45	CHARLES W. CORDER SR. AKA CHARLIE CORDER AND DIANA L. CORDER AKA DIANE CORDER	37.942244	24-01845-000
46	MARIAN DECKER	0.088929	24-01981-000
49	BETTY MAZUR AND ALFRED J. MAZUR, ACTING BY AND THROUGH HIS AGENT AND ATTORNEY-IN-FACT, FRANKLIN J. MAZUR	15.712642	24-02511-001
50	SCOTT M. RENFORTH AND CHRISTY M. RENFORTH	1.560973	24-02512-000
51	GEORGE N. DAVIS	11.814563	34-00295-000
		785.800295	

STATE OF OHIO
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT

In re the Matter of the Application of	:	
Chesapeake Exploration, L.L.C., for	:	
Unit Operation	:	Application Date: July 21, 2015
	:	
R Kirk South Unit	:	

AFFIDAVIT OF OWNERSHIP

I, Robert Highsaw, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Robert Highsaw and I am a Landman II with Chesapeake Energy Corporation ("Applicant"). My day-to day responsibilities include assisting with our oil and gas development program in eastern Ohio in the Appalachia South business unit for the Applicant, and I have personal knowledge of the facts stated herein.

2. Pursuant to Ohio Revised Code § 1509.28, the Applicant has filed an application with the Chief of the Division of Oil and Gas Resources Management requesting an order authorizing Applicant to operate the Unitized Formation and applicable land area, identified as the R Kirk South Unit, according to the Unit Plan attached thereto (the "Application") (as those terms are used and defined therein). The R Kirk South Unit is located in Jefferson County, Ohio, and consists of fifty-one (51) separate tracts of land covering approximately 983.227883 acres.

3. As of the Application Date set forth above, the Applicant is the owner, as that term is defined in Ohio Revised Code § 1509.01(K), of at least 65% of the land overlying the Unitized Formation, as outlined in Exhibit A attached hereto.

Further Affiant sayeth naught.

Robert Highsaw – Landman II

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

The foregoing instrument was sworn to before me, a Notary Public in and for the State of Oklahoma, and subscribed in my presence this 17th day of July, 2015, by Robert Highsaw, known to me or satisfactorily proven to be the Affiant in the foregoing instrument, who acknowledged the above statements to be true as Affiant verily believes.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

My Commission Expires: 5/12/18

Notary Public

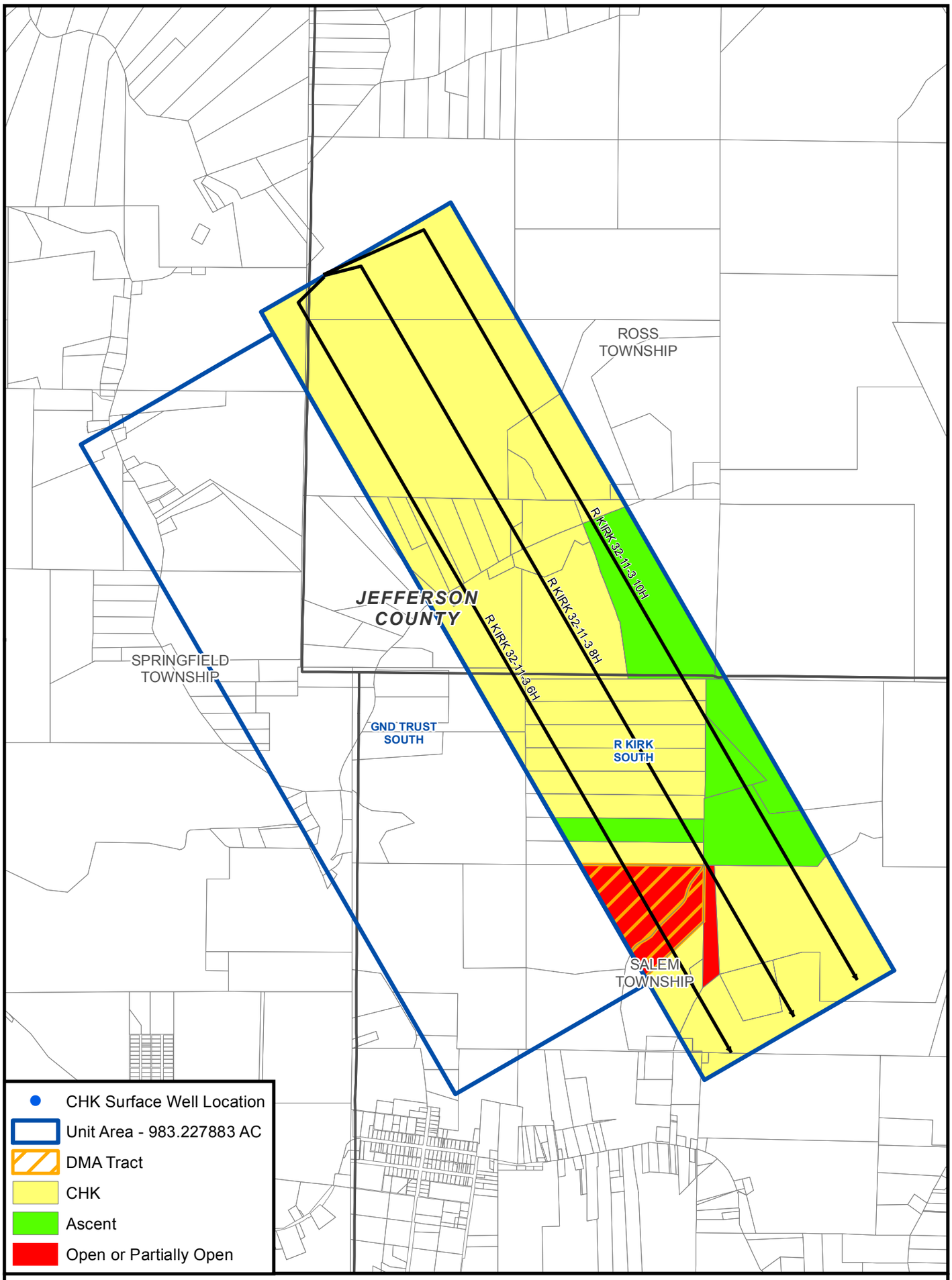
(S E A L)

Adam Schaefer
Printed Name of Notary

ADAM SCHAEFER
NOTARY
14004312
EXP. 05/12/18
PUBLIC
STATE OF OKLAHOMA

Exhibit 6.2

Exhibit 7 to
R Kirk South
Unitization Application



UNIT PLAT

R Kirk South Unit
Ross, Salem, & Springfield Townships
Jefferson Co., OH

1 inch = 1,750 feet

Projection: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
Path: X:\GIS_Management\Northern_Division\Appalachia_South\Utica\Exhibits\P-T\R_Kirk\R Kirk South Adjacent Wells 20150702.mxd

Prepared Date: 7/17/2015