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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	:	
	:	Application Date: November 10, 2014
Vaughn Northeast Unit	:	

APPLICATION OF R.E. GAS DEVELOPMENT, LLC ("REX")
FOR UNIT OPERATION

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Division of Oil and Gas
Resources Management
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APPLICATION

Pursuant to Ohio Revised Code Section 1509.28, R.E. Gas Development, LLC ("Rex") hereby respectfully requests the Chief of the Division of Oil and Gas Resources Management ("Division") for an order authorizing Rex to operate the Unitized Formation and applicable land area in Carroll County, Ohio, (hereinafter, the "Vaughn Northeast Unit") as a unit according to the Unit Plan attached hereto and as more fully described herein. Rex makes this request for, and unitization is necessary 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

Rex is a corporation organized under the laws of the State of Delaware, with its principal office located at 366 Walker Drive, State College, Pennsylvania 16801. Rex is registered in good standing as an "owner" with the Division.

Rex 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:

Suzanne Reynolds
Manager, Permitting
R.E. Gas Development, LLC
366 Walker Drive
State College, Pennsylvania 16801
Tel. (814) 278-7149
Email: sreynolds@rexenergycorp.com

II.
PROJECT DESCRIPTION

The Vaughn Northeast Unit is located in Carroll County, Ohio, and consists of seventy (70) separate tracts of land. See Exhibit A-1 and Exhibit A-2 to the Unit Operating Agreement (showing the plat and tract participations, respectively). The total land area in the Vaughn Northeast Unit is approximately 612 acres and, at the time of this Application, Rex and other working interest owners participating in this Application have the right to drill on and produce from approximately 544 acres of the proposed unit – i.e., approximately eighty-eight percent (88%) of the unit area, well above the sixty-five percent (65%) threshold required by Ohio Revised Code § 1509.28. As more specifically described herein, Rex seeks authority to drill and complete one or more horizontal wells in the Unitized Formation, from fifty (50) feet above the top of the Utica formation to fifty (50) feet below the base of Point Pleasant formation, from two well pads the first located outside the unit to the southwest and the second located on the southeastern portion of the Vaughn Northeast Unit, to efficiently test, develop, operate and produce the Unitized Formation for oil, natural gas, and related liquids production.

Rex's plan for unit operations (the "Unit Plan") is attached to this Application as Attachment 1. 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, and which determines reimbursement, in part, based upon the costs of and risks related to the project; and conforms to industry standards for the drilling and operating of horizontal wells.

III.
TESTIMONY

The following pre-filed testimony has been attached to the Application supporting the creation of the Vaughn Northeast Unit: (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 production and expenses on a surface acreage basis;[1] (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

[1] See Attachment 2.

exceeds its estimated additional costs;[2] and (iii) testimony from a Landman describing the project generally and the terms of the Unit Plan.[3]

IV.
THE CHIEF SHOULD GRANT 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 – if 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 that includes the following:

> (1) a description of the unit area;
>
> (2) a statement of the nature of the contemplated operations;
>
> (3) an allocation of production from the unit area not used in unit operations, or otherwise lost, to the separately owned tracts;
>
> (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;
>
> (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;
>
> (6) a provision, if necessary, for carrying someone unable to meet their financial obligations in connection with the unit;
>
> (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;
>
> (8) the time when operations shall commence and the manner in which, and circumstances under which, unit operations will terminate; and
>
> (9) such other provisions appropriate for engaging in unit operations and for the protection or adjustment of correlative rights.

See Ohio Rev. Code § 1509.28(A). The Chief's order becomes effective once approved in writing by those owners who will be responsible for paying at least sixty-five percent of the costs of the unit's operations and by royalty and unleased fee-owners of sixty-five percent of the unit's acreage. Once effective, production that is "allocated to a separately owned tract shall be

[2] See Attachment 3.
[3] See Attachment 4.

deemed, for all purposes, to have been actually produced from the tract, and all operations ***[conducted] upon any portion of the unit area shall be deemed for all purposes the conduct of such operations and production from any lease or contract for lands any portion of which is included in the unit area." Ohio Rev. Code § 1509.28(B)(2).

B. Rex's Application Meets this 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 an approximate depth of fifty (50) feet above the top of the Utica formation to fifty (50) feet below the base of the Point Pleasant formation, believed to be approximately 7,325' to 7,620' TVD (true vertical depth) within the Vaughn Northeast Unit. The evidence presented with 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.[4] Additionally, that evidence establishes that the Unitized Formation is likely to be reasonably uniformly distributed throughout the Unit Area and thus, it is reasonable for the Unit Plan to allocate unit production and expenses to separately owned tracts on a surface acreage basis.[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 Vaughn Northeast Unit. The Unit Plan contemplates the potential drilling of as many as five (5) horizontal wells, with laterals in ranging in approximate length from 5,000 feet to 5,400 feet.[6] Rex estimates that the ultimate recovery from this unit development, if all unit wells are drilled, could be as much as between 30 and 35 billion cubic feet equivalent (Bcfe) of natural gas from the Unitized Formation.[7] Due to the location of the unleased tracts within the Unit Area, only two wells could be produced absent unit operations. The evidence will further show developing the Vaughn Northeast Unit absent unit operations will reduce ultimate recovery from the Unit Area to between 12 and 14 (Bcfe) of natural gas.[8]

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[4] 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 Attachment 2.
[5] *Id.*
[6] See Attachment 3.
[7] See Attachment 3. 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.
[8] *Id.*

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

The evidence shows that the estimated recovery from unit operations has a net present value between $1,000,000 and $5,000,000.[9] Absent unit operations, the estimated recovery has a net present value between negative $1,100,000 and $500,000.[10] Moreover, see Attachment 3 – Exhibit AA-2, showing for each proposed well the estimated value of the well's production and the estimated drilling and operating costs (incorporated here as if fully rewritten herein). The evidence accordingly establishes that the value of the estimated additional recovery exceeds 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 Rex meets the requirements set forth in Ohio Revised Code § 1509.28. The unit area is described in the Unit Plan 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 Plan at Article 3, with greater specificity throughout, including the Unit Operating Agreement. Unit production and unit expenses are allocated on a surface acreage basis as set forth in the Unit Plan at Articles 3 through 5 (generally), except where otherwise allocated by the Unit Operating Agreement. Payment of unit expenses is addressed generally in Article 3 of the Unit Plan. The Unit Plan provides for payment of costs by other working interest owners 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. Voting provisions related to the supervision and conduct of unit operations are set forth in Article 14 of the Unit Plan, with each person having a vote that has a value corresponding to the percentage of unit expenses chargeable against that person's interest. And the commencement and termination of operations are addressed in Articles 11 and 12 of the Unit Plan.[11]

V.
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 Attachment

[9] See Attachment 3. 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.
[10] See Attachment 3 – Exhibit AA-2.
[11] See Attachment 4 generally.

4 – Exhibit MM-1. Accordingly, Rex respectfully requests that the Division schedule a hearing at an available hearing room located at the Division's Columbus complex on or before March 11, 2015 to consider the Application filed herein.

VI.
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 estimated additional costs. Rex respectfully submits that the Application meets this standard, and that the terms and conditions of the proposed Unit Plan are just and reasonable and satisfy the requirements of Ohio Revised Code § 1509.28(B). Rex therefore asks the Chief to issue an order authorizing Rex to operate the Vaughn Northeast Unit according to the Unit Plan attached hereto.

1

PLAN FOR UNIT OPERATIONS
THE VAUGHN NORTHEAST UNIT
AUGUSTA, EAST AND WASHINGTON TOWNSHIPS
CARROLL COUNTY, OHIO

The following shall constitute the Plan for Unit Operations applicable to the Vaughn Northeast Unit in Augusta, East and Washington Townships, Carroll County, Ohio, and having as its purpose the unitized management, operation, and development of the Unitized Formation as herein defined, to advance the public welfare and promote conservation, to increase the ultimate recovery of oil, natural gas, and other substances therefrom, and to avoid waste and protect the correlative rights of the owners of interests therein.

ARTICLE 1: DEFINITIONS

As used in this Plan for Unit Operations:

Division refers to the Ohio Department of Natural Resources' Division of Oil and Gas Resources Management.

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

Oil and Gas Rights are the rights to investigate, explore, prospect, drill, develop, produce, 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.

Plan means this Plan for Unit Operations for the Vaughn Northeast Unit, Augusta, East and Washington Townships, Carroll County, Ohio, including, unless otherwise expressly mentioned, any and all attachments and exhibits hereto.

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.

Uncommitted Working Interest Owner is a Working Interest Owner, other than an Unleased Mineral Owner, who has not agreed to, ratified or otherwise approved this Plan. Uncommitted Working Interest Owners are likely, but not necessarily, to have obtained their interest by lease.

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 Plan 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 Plan for or on account of Unit Operations.

Unitized Formation means the subsurface portion of the Unit Area located from 50' feet above the top of the Utica formation to 50' feet below the base of the Point Pleasant formation, believed to be approximately 7,325 feet subsurface to 7,620 feet subsurface TVD ("True Vertical Depth").

Unit Operating Agreement means the modified A.A.P.L. Form 610-1989 Model Form Operating Agreement that is attached hereto as Exhibit 1 and incorporated herein by reference as if fully re-written herein and to which all Working Interest Owners are deemed to be parties; provided, however, that in the event two or more Working Interest Owners have agreed to a separate joint operating agreement relating to the supervision and conduct of unit operations contemplated herein, such operating agreement shall control. The 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. In the event of a conflict between the terms of the Unit Operating Agreement and the other terms of this Plan, excluding the Unit Operating Agreement, such other terms of this Plan shall govern.

Unit Operations are all operations conducted pursuant to this Plan.

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.

Unleased Mineral Owner is a Person who owns Oil and Gas Rights free of a lease or other instrument conveying all or any portion of the Working Interest in such rights to another.

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 shall be regarded as a Working Interest to the extent of 87.5% thereof and a Royalty Interest to the extent of the remaining 12.5% thereof, such Royalty Interest to be subject to any post-production costs, taxes, assessments and other fees as may be set forth in the Unit Operating Agreement. A Royalty Interest created out of a Working Interest subsequent to the participation of, subscription to, ratification of, approval by, or consent to this Plan by the owner of such Working Interest shall continue to be subject to such Working Interest burdens and obligations that are stated in this Plan.

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 Plan.

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.

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 Plan 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. 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 Plan.

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 Plan, 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 Plan.

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 Plan.

Unit Expenses. All Unit Expenses shall be just and reasonable, and shall be charged as set out in the Unit Operating Agreement. Except as otherwise provided in the Unit Operating Agreement, Unit Expenses shall be allocated to each Tract based upon its Tract Participation, and shall be paid by the Tract's Working Interest Owners.

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 inside the Unit Area bears to the total surface acreage of the Unit Area. The Tract Participation of each Tract has been calculated as follows: TRACT SURFACE ACRES WITHIN THE UNIT AREA DIVIDED BY THE TOTAL SURFACE ACRES WITHIN THE UNIT AREA.

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 Plan 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; however, if any Tract has no well thereon capable of producing Unitized Substances on the Effective Date, the Tract shall, for the purpose of this determination, be deemed to have one (1) such well thereon.

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,

including without limitation the testing of the productivity of any wells drilled in the Unit Area. Royalty payments shall be made to Unleased Mineral Owners beginning with the initial distribution date for production of Unitized Substances from any well within the Vaughn Northeast Unit.

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; provided, however, that nothing in this provision shall apply to Unleased Mineral Owners.

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 Plan. 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. The following shall apply 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.

Unleased 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 Vaughn Northeast 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 Vaughn Northeast Unit, owned by a non-consenting Unleased Mineral Owner.

ARTICLE 9: CHANGE OF TITLE

Covenant Running with the Land. This Plan shall extend to, be binding upon, and inure to the benefit of the owners of the Royalty Interests and Working Interests in Oil and Gas Rights unitized hereby, and the respective heirs, devisees, legal representatives, successors, and assigns thereof, and shall constitute a covenant running with the lands, leases, and interests impacted hereby.

Waiver of Rights of Partition. No Person affected hereby shall 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.

ARTICLE 10: RELATIONSHIPS OF PERSONS

No Partnership. All duties, obligations, and liabilities arising hereunder shall be several and not joint or collective. This Plan 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 Plan 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 Plan shall become effective as of, and operations may commence hereunder as of, 7:00 A.M. on 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 Plan in the event of a material modification by the Division of all or any part of this Plan 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 Plan, 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 Plan, 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 one hundred and eighty (180) consecutive days, or so long as other Unit Operations are conducted without a cessation of more than one hundred and eighty (180) 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 Plan, 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 Plan 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 Plan, affecting the separate Tracts.

Certificate of Termination. Upon termination of this Plan, 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 Plan 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 Plan by signing the original, a counterpart thereof, or other instrument approving this Plan. 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 Plan 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. Each Working Interest Owner shall have a voting interest equal to its Unit Participation. All decisions, determinations, or approvals by Working Interest Owners hereunder shall be made by the affirmative vote of one or more parties having a combined voting interest of at least fifty one percent (51%). No vote, however, is required for such determinations if the Unit Operator owns or controls fifty one percent (51%) or more of the Working Interest in the Unit Area.

Severability of Provisions. The provisions of this Plan 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 Plan.

Laws and Regulations. This Plan 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 Plan shall be in accordance with Ohio law.

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

MODEL FORM OPERATING AGREEMENT

UNIT NAME: VAUGHN NORTHEAST UNIT

OPERATING AGREEMENT

DATED

October 9, **2014**,
year

OPERATOR **R.E. GAS DEVELOPMENT, LLC**

CONTRACT AREA **The lands shown on the plat attached hereto as Exhibit "A-1" and described on Exhibit "A-2" and covering the "Unitized Formation".**

COUNTY OR PARISH OF **CARROLL**, STATE OF **OHIO**

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

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OPERATING AGREEMENT

THIS AGREEMENT, entered into by and between R.E. GAS DEVELOPMENT, LLC, 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 / well capable of production 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."

D. The term "Deepen" 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.

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 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 pattern of drilling in the Contract Area unless fixed by express agreement of the Drilling Parties.

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" 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" shall mean the directional control and intentional deviation of a well from / the originally intended wellbore so as to change the bottom hole location unless done to straighten the hole or drill around junk in the hole 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.

SEE ADDITIONAL DEFINITIONS IN ARTICLE XVI. OTHER PROVISIONS

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 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 / (physical mailing and e-mail) 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,

(6) Burdens on production.

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

_____ C. Exhibit "C," Accounting Procedure.

_____ D. Exhibit "D," Insurance.

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

_____ H Exhibit "H" Memorandum of Operating Agreement and Financing Statement.

_____ ._____

If any provision of any exhibit, except Exhibits "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 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 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 up to, / but not in excess of, 16.5 % 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 shown on Exhibit "A," such burden also shall be deemed a Subsequently Created Interest to.

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 Drillsite of any proposed well prior to commencement of drilling operations and, , title examination shall be made on the surface of drillsite, 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 other than an Unleased Mineral Owner, 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 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.

Each party other than an Unleased Mineral Owner / 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."

Operator shall make no charge for services rendered by its staff attorneys or other personnel in the performance of the above functions.

No well shall be drilled on the Contract Area until after (1) the title to the Drillsite or Drilling Unit, if appropriate, has 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.

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 the parties whose lease or interest is affected by the title failure, other than Unleased Mineral Owners, in the same proportions in which they bear such title failure and such party or parties affected by such title failure, other than Unleased Mineral Owners, hereby agree to by reason of title failure shall be borne / 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:

R.E. GAS DEVELOPMENT, LLC 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 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: SEE ARTICLE XVI. OTHER PROVISIONS

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 by 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 wells drilled on the Contract Area shall be drilled on a competitive contract basis at the usual rates prevailing in the area. If it so desires, Operator may employ its own tools and equipment in the drilling of wells, but its charges therefor shall not exceed the prevailing rates in the 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 in Article XVI. herein, permit each consenting Non-Operator or its duly authorized representative, at the Non-Operator's sole risk and cost, and subject to the Non-Operator or its duly authorized representative complying with Operator's safety policies 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 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 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 hereunder, including but not limited to the Initial Well:

(a) Operator will promptly advise 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 Non-Operators such reports, test results and notices regarding the progress of operations on the well as the 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:

Operator anticipates commencing the drilling of the Initial Well within one (1) year of the effective date of a final and non-appealable Unitization Order issued by the Division of Oil and Gas Resources Management

and shall thereafter continue the drilling of the well with due diligence to depth sufficient, in Operator's reasonable opinion, to adequately test the Unitized Formation.

SEE ADDITIONAL REFERENCE TO THE INITIAL WELL IN ARTICLE XVI. OTHER PROVISIONS.

B. Subsequent Operations:

1. Proposed Operations: If any party hereto, except an Unleased Mineral Owner, should desire to drill any well on the Contract Area other than the Initial Well, or if 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

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 confirmed with some form of facsimile/electronic mail transmission within 24 hours of the telephone notice / and the response period shall be limited to forty-eight (48) hours, 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.

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 one hundred eighty (180) 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 reasonable / period of / if, in the time 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, the party or parties giving the notice and such other parties as shall elect to participate in the operation shall, no later than 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.

If less than all parties approve any proposed operation, the proposing party, 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 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 confirmed with some form of facsimile/electronic mail transmission within 24 hours of the telephone notice / 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 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. 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,

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, (after deducting applicable ad valorem, production, severance, and excise taxes, and assessments 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) 125 % 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 125 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) 200 % 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 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.

(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 200 % 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 assessments, 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) 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. Each year 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 year. In determining the quantity of Oil and Gas produced, 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 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 / or Deepening 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 / shall be paid 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"). 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.I. 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. SEE ARTICLE XVI. OTHER PROVISIONS

7. Conformity to Spacing Pattern. Notwithstanding the provisions of this Article VI.B.2., it is agreed that no wells shall 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 / or such well has been approved as an exception to the then-existing spacing pattern for such Zone by the appropriate regulatory agency /.

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:

☑ Option No. 1: / All necessary expenditures for the drilling, Deepening or Sidetracking, testing, Completing and equipping of the well, including necessary tankage and/or surface facilities. Option No. 1 shall be applicable as to all horizontal well proposals.

☑ 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. Operator shall deliver any such Completion proposal, to the other parties entitled to participate. 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;. 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.

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 _____ One Hundred Fifty Thousand _____ Dollars ($ 150,000.00 _____) 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 One Hundred Fifty Thousand _____ Dollars ($ 150,000.00 _____). 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 50 % 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, any well which has been completed as a producer shall not be plugged and abandoned without the consent of all parties. 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;. 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, other than an Unleased Mineral Owner, shall have the right to 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 the testing, 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 thirty (30) 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 thirty (30) 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.

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 thirty (30) day period.

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 thirty (30) 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.

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:

See Article XVI.

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 ~~With the exception of situations where the party is an Unleased Mineral Owner each~~ / payment in advance of their respective shares, other than parties that are Unleased Mineral Owners, 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 thirty (30) / 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: Upon request by any party, Operator will 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.

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 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 and assessments 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, should any party, except an Unleased Mineral Owner, 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.

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; 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, except an Unleased Mineral Owner, 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.

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," but 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 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. Interest:

Disposition of Any / sale, encumbrance, transfer or other disposition made by any party / affecting any of that party's interest in the Contract Area 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.

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 the 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 interests 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 at 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, 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 in the form of facsimile or electronic mail. 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, 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, 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, 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

The term of this agreement shall be as provided in the Unit Plan.

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 OHIO 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, other than Unleased Mineral Owners, 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, other than an Unleased Mineral Owner, 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

In the event of a conflict between the terms and provisions of this Article XVI and the other terms and conditions in this Operating Agreement, the terms and conditions of this Article XVI shall prevail.

A. Additional Definitions

a. The term "lateral" shall mean that portion of a well bore that deviates from an approximate vertical orientation to an approximate horizontal orientation and thereafter all portions of the well bore beyond such deviation to total depth.

b. The term "horizontal well" shall mean a well drilled, completed or recompleted in a manner in which the horizontal component of the completion interval in the objective formation(s) exceeds the vertical component thereof and which horizontal component exceeds a minimum of one hundred feet (100') in the objective formation(s).

c. The term "multi-lateral well" shall mean a well which contains more than one (1) lateral and in wbich the well bores deviate from approximate vertical orientation to approximate horizontal orientation in order to drill within and test a specific geological interval, utilizing deviation equipment, services and technology. This shall include similar operations in the re-entry of an existing well bore.

d. The term "total depth" applied to all multi-lateral or horizontal wells drilled pursuant to this agreement, shall mean the distance from the surface of the ground to the terminus of the well bore. Each lateral taken together with the common vertical well bore shall be considered a single well bore and shall have a corresponding total depth. The term "depth" wherever used in the agreement shall be deemed to read "total depth" insofar as it applies to such well.

e. 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 Consenting Parties, or to a horizontal distance greater than the horizontal distance to which the lateral was previously drilled.

f. For the purposes of this agreement, as to a horizontal or multi-lateral 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.

g. In addition to the above, the definitions set forth in the Unit Plan for the Vaughn Northeast Unit are hereby adopted and incorporated as if fully rewritten herein.

h. The term "Unitized Formation" means that portion of the subsurface underlying the Unit Area as to those formations from the 50' above the top of the Utica formation or the stratigraphic equivalent thereof, to 50' below the base of the Point Pleasant formation or the stratigraphic equivalent thereof.

B. Resignation or Removal of Operator and Selection of Successor

a. 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 if it fails or refuses to carry out its duties hereunder, or becomes insolvent, bankrupt or is placed in receivership, by the affirmative vote of two (2) or more Non-Operators owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting interest of Operator. 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 the effective date of resignation or removal, shall be bound by the terms hereof as a Non-Operator. A change of corporate name or structure or transfer of Operator's interest to any single subsidiary, parent or successor corporation shall not be the basis for removal of Operator.

b. Selection of Successor Operator: Upon the resignation or removal of Operator, 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 fails to vote or votes only to succeed itself, 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" remaining after excluding the voting interest of the Operator that ws removed.

c. 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 federal bankruptcy court, all Non-Operators and Operator shall form an interim operating committee to serve until Operator has elected to reject or resume 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 in 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. Non-Consenting of 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 interests, calculated at the well (after deducting production taxes, excise taxes and assessments, 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) 125% 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 125% of such Non-Consenting Party's share of the cost of the 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 that would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning of the operations; and b) 300% of that portion of the costs and expenses of drilling, testing and completing, after deducting any cash contributions received under Article III.C., and 300% 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.

D. Sequence of Further Operations

In the event a well drilled under the terms of this Operating Agreement has achieved the authorized depth or the objective formation and the parties participating in such well cannot agree on the sequence and timing of further operations regarding such well, the following elections shall control in the order detailed below:

a. An election to conduct additional logging, coring or testing operations;
b. An election to attempt to complete the well at the thus achieved authorized depth or objective depth;
c. An election to further extend the lateral length;
d. An election to drill a new lateral to a different direction;
e. an election to plug back and attempt a completion at a depth above the objective depth;
f. An election to deepen the well;
g. An election to sidetrack the well; and
h. An election to plug and abandon the well.

E. Subsequent Operation Proposal Prior to Recovery of Costs and Penalties

Notwithstanding anything to the contrary in Article VI.B.2 and VII.D.2, the share of production from a well which a Non-Consenting Party shall be deemed to have relinquished to the Consenting Party in any reworking, deepening, plugging back or completion of a well (as such items are defined and used in Article VI.B.2 and VII.D) shall be the Non-Consenting Party's share of production only from the interval or intervals of the formation or formations from which production is obtained or increased as a result of the operation in which the Non-Consenting Party did not participate. In the event a subsequent operation is proposed for such well by the Consenting Party prior to the recovery of all costs and penalties recoverable from the relinquished interest of the Non-Consenting Party in said interval or formation, the Non-Consenting Party shall be entitled to participate therein to the extent of its interest prior to relinquishment.

F. Estimates

Non-Operators hereby acknowledge that Operator's estimate of well costs contained in any Authority for Expenditure are estimated costs and are, therefore, subject to adjustments as actual conditions dictate. Non-Operators shall be liable for their pro-rata share of all costs, irrespective of whether or not actual costs are greater or lesser than the estimated costs shown on the Authority for Expenditure.

G. Invalid Provisions

In the event any provision contained in this Operating Agreement is contrary to any law, rule, regulation or order and is held to be invalid, void, illegal

or unenforceable, the parties shall either modify the provisions to properly conform with such law, rule, regulation or order, or delete such provision from this Operating Agreement, and in either case the remaining provisions hereof shall remain unaffected and will continue in force and effect.

H. Agreement Binding on Heirs, Representative, Successors and Assigns

This Agreement shall be binding upon the heirs and personal representatives (if applicable) and upon the successors and assigns of the parties hereto. In the event any party, other than an Unleased Mineral Owner, hereunder assigns its interest in the Contract Area such assignment shall specifically provide that the Assignor shall remain subject to the terms and conditions of this Agreement. No such assignment shall relieve the Assignor thereunder of any accrued liability hereunder notwithstanding the subsequent acts or conduct of Operator in dealing with the Assignee or Assignees of such party unless Operator shall expressly release the Assignor from any such liability in writing.

I. Prepayment of Costs and Expenses

Notwithstanding any other provisions of this agreement, and without prejudice to any other rights of the Operator, Operator will have the right to request and receive from each Non-Operator, other than from an Unleased Mineral Owner, payment in advance of its respective share of (i) all or part of the completed well cost for an Initial Well to which such Non-Operator has consented or is deemed to have consented, and (ii) the cost of any drilling and completion, reworking, recompletion, sidetracking, deepening, plugging back operation or any other operation hereunder to which such Non-Operator has consented or is deemed to have consented hereunder (any such operation under clause (i) or (ii) being herein called a "Drilling Operation").

A Non-Operator receiving a request for advance payment will within thirty (30) days of the receipt of such request in all other cases, pay to operator in cash the full amount of such request. Operator will credit the amount to the Non-Operator's account for the payment of such Non-Operator's share of costs of such Drilling Operation and, following the end of each month, Operator will charge such account with such Non-Operator's share of actual costs incurred during such month.

Payment of an advance will not relieve a Non-Operator of the obligation to pay such Non-Operator's share of the actual cost of a Drilling Operation and, when the actual costs have been determined, Operator will adjust the accounts of the parties by refunding any net amounts due or invoicing the parties for additional sums owing, which additional sums shall be paid in accordance with the accounting procedure proscribed in the Agreement.

J. Confidentiality

Any information forwarded to or obtained by a Non-Operator concerning the wells and operations in the Contract Area shall be maintained as confidential by the Non-Operator and shall not be disclosed by the Non-Operator without the prior written consent of the Operator.

K. 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 to perform all the terms, provision and conditions of this agreement.

L. New Releases

Except for Operator, any party hereto or any related party desiring to issue a news release concerning operations conducted within the Contract Area shall provide the other party(ies) hereto with copies of the proposed release and no such news release shall be issued without first obtaining the written consent of all parties thereto. Notwithstanding the foregoing sentence, no prior consent shall be required for any news release(s) issued by Operator, or required by law and/or the Securities and Exchange Commission.

M. Netting and Setoff

Except for any payments related to charges on any joint interest billing that a Non-Operator has disputed in good faith, Operator is authorized to deduct such operating costs and charges assessable to Non-Operators and permitted under this Operating Agreement, 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. Operator may also withhold any money payable by it to a Non-Operator hereunder and apply same to the payment of any obligation owed by a Non-Operator to the Operator or to any other Non-Operators hereunder. The foregoing provision shall additionally not diminish Operator's lien rights contained within this agreement.

To the extent that an Unleased Mineral Owner is a Non-Consenting Party hereunder, any related financial obligation owed by such Unleased Mineral Owner hereunder shall be paid out of such owner's proportionate share of Working Interest revenues only. This payment method shall continue even after such owner's relinquished interest reverts back to it; provided, however, that nothing in this Article XVI.M shall prevent Operator from reserving, and Operator shall be allowed to reserve, reasonable amounts from such owner's proportionate share of Working Interest revenues to pay for such owner's share of anticipated plugging abandonment and reclamation costs.

N. 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.

O. Liens and Security Interests

With the exception of situations where the party is an Unleased Mineral Owner, 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 property performance of operations hereunder. Operator does hereby grant, bargain, sell, mortgage, assign, transfer, convey and pledge to Non-Operator all of Operator's right title and interest in and to the real and personal property, rights, titles, interests and estates making up Mortgaged Property and Collateral. Non-Operator does hereby grant, bargain, sell, mortgage, assign, transfer, and pledge to Operator all of Non-Operator's right title and interest in and to the real and personal property, rights, titles, interests and estates making up Mortgaged Property and Collateral.

"Mortgaged Property" shall mean, collectively, the following real property located in the State of Ohio, (1) the Oil and Gas Leases, Oil and Gas Interests and other interests comprising the Contract Area, including operating rights, working interests, royalty interests, overriding royalty interests, non-participating royalty interests, production payments, net profits interests, or any other interest measured by or payable out of production of hydrocarbons, and all renewals and extension thereof (collectively, the "Oil and Gas Property") (2) the oil and gas in, on, under, and that may be produced from the Oil and Gas Property, including, without limitation, all contractual rights, operating rights, leasehold interests, working interests, royalty interests, overriding royalty interests, non-participating royalty interests, mineral interests, production payments, net profits interests, or any other interest measured by or payable out of production of hydrocarbons (as such interests may be enlarged by the discharge of any payments out of production or by the removal of any charges or encumbrances), and all other as-extracted collateral, (3) all wells (oil, gas, oil/gas injection, water or disposal), equipment, machinery and appurtenances, including fixtures, located upon and used in connection with such Oil

and Gas Property, (4) all easements, rights of way and other real property interests located upon and primarily used in connection with the Oil and Gas Property, (5) all permits, licenses, and servitudes used in connection with the Oil and Gas Property and (6) all geological, geophysical, engineering, accounting, title, legal and other technical and business data relating to the other Mortgaged Property.

"Collateral" shall mean, collectively: (A) all equipment, accounts, contract rights, general intangibles, chattel paper, commercial tort claims, documents, instruments, goods, inventory, insurance contracts, insurance proceeds, inventory, hydrocarbons, as-extracted collateral, operating rights, working interests, royalty interests, overriding royalty interests, non-participating royalty interests, production payments, net profits interests, or any other interest measured by or payable out of production of hydrocarbons (as such interests may be enlarged by the discharge of any payments out of production or by the removal of any charges or encumbrances) and fixtures of any kind and character to the extent such items relate to the Mortgaged Property or are attributable to the Mortgaged Properties, or used in connection with the ownership, use or exploitation of the Mortgaged property and (B) all the proceeds and products of the items described in preceding clause (A), and all substitutions therefor, replacements thereof, or accessions thereto, all of which, whether now owned or hereafter acquired, whether now or hereafter acquired by operation of law or otherwise.

To perfect the lien and security agreement provided herein, each party hereto shall execute and acknowledge an instrument in the form attached Exhibit "H" and/or any UCC financing statement prepared and submitted by any party hereto in conjunction herewith or at any time following execution hereof, and each party is authorized to file an instrument in the form attached Exhibit "H" executed herewith as a lien or mortgage in the applicable real estate records and to file UCC financing statements with the proper officer(s) under the Uniform Commercial Code where such party deems reasonably appropriate to perfect the security interests and liens granted hereunder. Any party may file an instrument in the form attached Exhibit "H" executed herewith, or such other documents as it deems necessary as a lien or mortgage in the applicable real estate records and/or a UCC 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 the Collateral and Mortgaged Property covered by this agreement by, through or under such party. All parties acquiring an interest in the Collateral and Mortgaged Property 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 the Article XVI.O. as to all obligations attributable to such interest hereunder whether or not such obligations arise before or after such interest is acquired.

The parties hereto shall be entitled to exercise the rights and remedies of a secured party under the Uniform Commercial 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, 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 XVI.O. , 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 to stay execution or to require a marshaling of assets and any required bond in the event a receiver is appointed.

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 the Operator of any sum due hereunder for services performed or materials supplied by Operator.

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

[SIGNATURE BLOCKS ON PAGE 18]

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

ATTEST OR WITNESS:

_____

_____

OPERATOR

_____

By _____

_____
Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

NON-OPERATORS

_____

_____

_____

By _____

_____
Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

_____

_____

_____

By _____

_____
Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

_____

_____

_____

By _____

_____
Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

ACKNOWLEDGMENTS

Note: The following forms of acknowledgment are the short forms approved by the Uniform Law on Notarial Acts. The validity and effect of these forms in any state will depend upon the statutes of that state.

Individual acknowledgment:

State of _____)

) ss.

County of _____)

This instrument was acknowledged before me on

_____ by _____

(Seal, if any) _____

Title (and Rank) _____

My commission expires: _____

Acknowledgment in representative capacity:

State of _____)

) ss.

County of _____)

This instrument was acknowledged before me on

_____ by _____ as

_____ of _____.

(Seal, if any) _____

Title (and Rank) _____

My commission expires: _____

Exhibit A

EXHIBIT "A"

Attached to and made a part of that certain Unit Operating Agreement for the Vaughn Northeast Unit

I. Identification of Lands Subject to this Agreement:

612.60022 acres of land, more or less, located in Augusta, East and Washington Townships, Carroll County, Ohio, as such lands are depicted in Exhibit "A-1" and as particularly defined in the Unit Plan.

II. Restrictions, if any, as to Depths, Formations or Substances:

This Agreement covers rights for the Unitized Formation, described as that portion of the Utica / Point Pleasant formation found in the subsurface portion of the Vaughn Northeast Unit at an approximate depth of fifty (50) feet above the top of the Utica formation to fifty (50) feet below the base of the Point Pleasant formation, believed to be approximately 7,325 feet subsurface to 7,620 feet subsurface TVD ("True Vertical Depth").

III. Parties to Agreement with Addresses and Telephone Numbers for Notice Purposes:

Operator:
R.E. Gas Development, L.L.C.
Attention: F. Scott Hodges,
Senior Vice President, Land & Business Development
366 Walker Drive
State College, PA 16801
Telephone: 814-278-7279
Fax: 814-278-7286
Email: fshodges@rexenergycorp.com

Non-Operator(s):
Chesapeake Exploration, LLC & CHK Utica, LLC
Attention: Dan Weinmeister, Land Manager, Appalachia South
P. O. Box 18496
Oklahoma City, Oklahoma 73154-0496

TOTAL E&P USA, Inc.
Attention: Pierre Germain
1201 Louisiana, Suite 1800
Houston, TX 77002

EnerVest Energy Institutional Fund XI-A, LP, EnerVest Energy Institutional Fund XI-WI, LP and CGAS Properties, L.P.
c/o EnerVest Operating, LLC
Attention: James D. McKinney, Senior Vice President & General Manager
300 Capitol Street, Suite 200
Charleston, WV 52301
Telephone: 304-343-5505
Fax: 304-343-5525

IV. Percentage or Fractional Interests of Parties to this Agreement:

As to the Unitized Formation:

	Before Payout Working Interest	After Payout Working Interest
R.E. Gas Development, LLC	.54473363	.54473363
Chesapeake Exploration, LLC	.00048974	.00048974
CHK Utica, LLC	.00563171	.563171
TOTAL E&P USA, Inc.	.00204048	.00204048
EnerVest Energy Institutional Fund XI-A, LP	.12459292	.12459292
EnerVest Energy Institutional Fund XI-WI, LP	.05597847	.05597847

CGAS Properties, L.P.	.15475154	.15475154
Unleased	.11178153	.11178153
TOTAL:	**100.00000000%**	**100.00000000%**

*It is understood by the Parties hereto that the working interests listed in this agreement (an 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 the approval by the Division. The Parties' interests shall be modified accordingly in order to accurately reflect the actual interest owned by the Parties in the Contract Area.

V. Oil and Gas Lease(s) and/or Oil and Gas Interests Subject to this Agreement (including Burdens on Production):

Please refer to Exhibits "A-2", "A-3" and "A-4" for a list of the oil and gas leases and interests subject to this agreement

Exhibit A-1

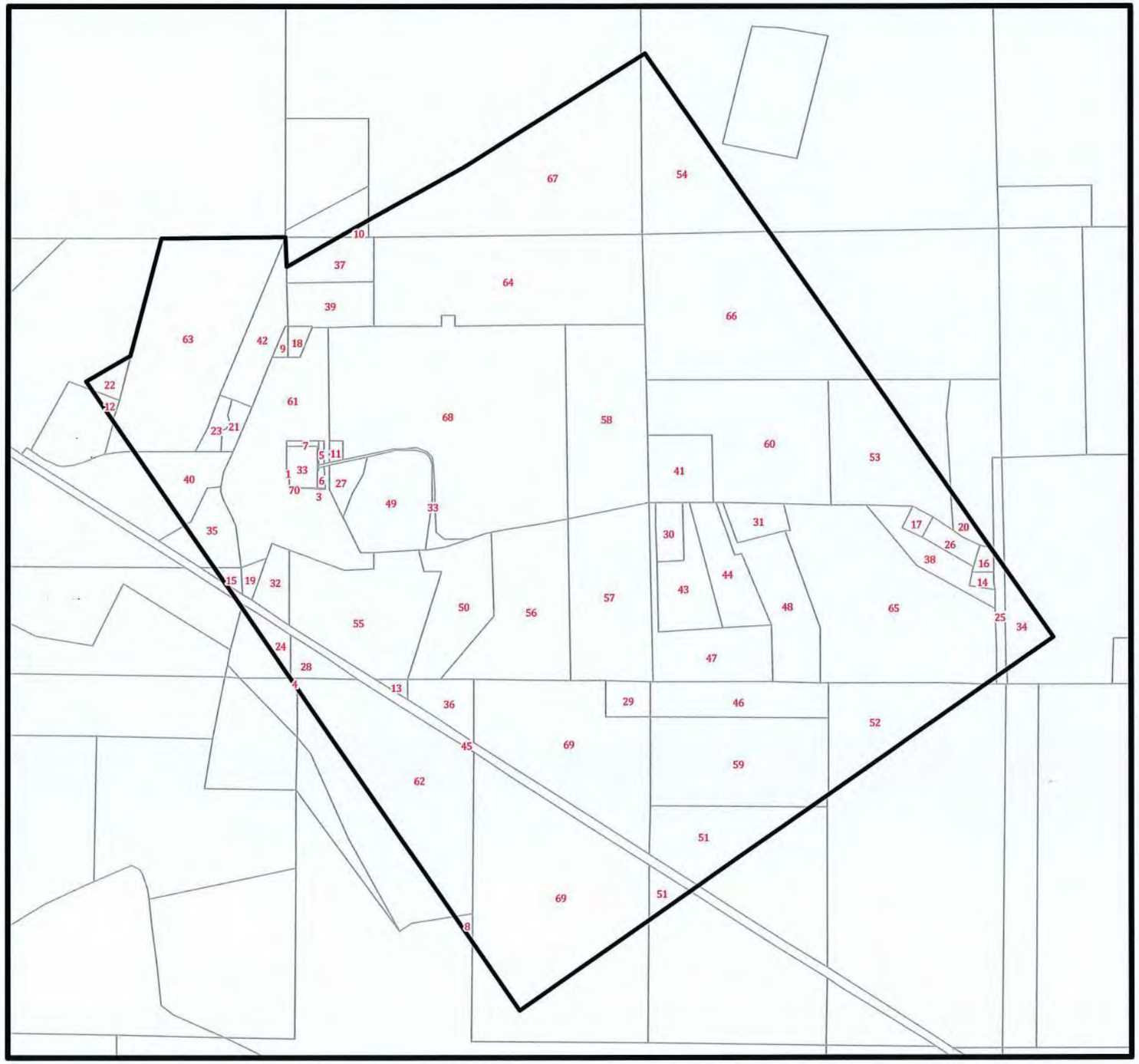

Exhibit "A-1"

Vaughn NE Unit

Unit Acres: 612.60022

Vaughn NE Unit
Augusta, Washington &
East Townships
Carroll County, OH

Unit

N
W E
S
1 inch = 999 feet

REX ENERGY®
366 Walker Drive
State College, PA 16801
Phone: (814) 278-7267 Fax: (814) 278-7286
www.RexEnergy.com

NAD_1983_StatePlane_Ohio_North_Feet
Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983

R:\Ohio\Warrior_North\Units\Vaughn NE\Vaughn NE.mxd

Exhibit A-2

Exhibit "A-2"

Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	R.E. Gas Working Interest[2]	R.E. Gas Unit Participation	CGAS Working Interest[3]	CGAS Unit Participation	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Unit Participation	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Unit Participation	Chspk. Working Interest[6]	Chspk. Unit Participation	CHKU Working Interest[7]	CHKU Unit Participation	Total E&P Working Interest[8]	Total E&P Unit Participation	Parcel ID	Township	Address
OHCAR1348	1	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.00300	0.00000490	0.00000000	0.00000000	1.00000000	0.00000490	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.001	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1348	2	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.00800	0.00001306	0.00000000	0.00000000	1.00000000	0.00001306	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000738.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1348	3	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.02000	0.00003265	0.00000000	0.00000000	1.00000000	0.00003265	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.002	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
UNLEASED	4	NATURE CONSERVANCY	No	0.03766	0.00006148	1.00000000	0.00006148	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0060009.000	Washington	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
OHCAR1348	5	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.16400	0.00026771	0.00000000	0.00000000	1.00000000	0.00026771	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000739.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1348	6	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.18700	0.00030526	0.00000000	0.00000000	1.00000000	0.00030526	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000737.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1366	7	HERRINGTON CEMETERY ASSOCIATION	Yes	0.26300	0.00042932	0.00000000	0.00000000	1.00000000	0.00042932	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060024.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
ENERVEST	8	RICHARD F & LORETTA E VONKANEL	Yes	0.30537	0.00049848	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.00023005	0.37156100	0.00018522	0.16693900	0.00008322	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000509.000	Washington	207 California Ave, Louisville OH 44641
OHCAR1181	9	GARY W & LINDA J BORLAND & JOSHUA W CUTLIP	Yes	0.25000	0.00040810	0.00000000	0.00000000	1.00000000	0.00040810	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000146.000	Augusta	5130 Andora Road NE, Mechanicstown OH 44651
ENERVEST	10	DAVID P. MCCULLOUGH	Yes	0.36731	0.00059959	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.00027671	0.37156100	0.00022278	0.16693900	0.00010010	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000043.000	Augusta	6002 Andora Rd NE, Mechanicstown OH 44651
OHCAR1367	11	HERRINGTON BETHEL UNITED METHODIST CHURCH, IN TRUST FOR THE EAST OHIO CONFERENCE OF THE UNITED METHODIST CHURCH	Yes	0.38100	0.00062194	0.00000000	0.00000000	1.00000000	0.00062194	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000665.002	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651

Exhibit "A-2"

Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	R.E. Gas Working Interest[2]	R.E. Gas Unit Participation	CGAS Working Interest[3]	CGAS Unit Participation	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Unit Participation	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Unit Participation	Chspk. Working Interest[6]	Chspk. Unit Participation	CHKU Working Interest[7]	CHKU Unit Participation	Total E&P Working Interest[8]	Total E&P Unit Participation	Parcel ID	Township	Address
OHCAR1135	12	RICHARD W GORDON REVOCABLE LIVING TRUST U/A/D MAY 3, 1993	Yes	0.39650	0.00064724	0.00000000	0.00000000	1.00000000	0.00064724	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.007	Augusta	Richard W. Gordon, Trustee, 3257 Arbor Road, Carrollton OH 44615
UNLEASED	13	KENT STATE UNIVERSITY	No	0.35000	0.00057134	1.00000000	0.00057134	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0060011.000	Washington	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR1042	14	ROBERT M & MARTA M LONG	Yes	0.47200	0.00077049	0.00000000	0.00000000	1.00000000	0.00077049	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.003	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
UNLEASED	15	NATURE CONSERVANCY	No	0.53461	0.00087269	1.00000000	0.00087269	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060011.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203
OHCAR1042	16	ROBERT M & MARTA M LONG	Yes	0.57758	0.00094283	0.00000000	0.00000000	1.00000000	0.00094283	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000294.000	Augusta	4256 Arbor Road NE, Mechanicstown OH 44651
OHCAR1092	17	LYNN D & AUDREY R WOOD	Yes	0.69100	0.00112798	0.00000000	0.00000000	1.00000000	0.00112798	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000567.000	Augusta	4230 Arbor Rd NE, Mechanicstown OH 44651
OHCAR1181	18	GARY W & LINDA J BORLAND & JOSHUA W CUTLIP	Yes	0.81000	0.00132223	0.00000000	0.00000000	1.00000000	0.00132223	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000147.000	Augusta	5130 Andora Road NE, Mechanicstown OH 44651
UNLEASED	19	KENT STATE UNIVERSITY	No	0.72000	0.00117532	1.00000000	0.00117532	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060019.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR0953	20	GLEN K DRAY & MARGARET E DRAY REVOCABLE TRUST, DATED OCTOBER 31, 2001	Yes	1.01239	0.00165261	0.00000000	0.00000000	1.00000000	0.00165261	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000129.002	Augusta	9734 Louisville St NE, Louisville OH 44641
OHCAR0971	21	ELON D & MARY L HUNSBERGER	Yes	1.02900	0.00167973	0.00000000	0.00000000	1.00000000	0.00167973	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000404.000	Augusta	5097 Andora Road, Mechanicstown OH 44651
OHCAR1135	22	RICHARD W GORDON REVOCABLE LIVING TRUST U/A/D MAY 3, 1993	Yes	1.15116	0.00187914	0.00000000	0.00000000	1.00000000	0.00187914	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.000	Augusta	Richard W. Gordon, Trustee, 3257 Arbor Road, Carrollton OH 44615
OHCAR0971	23	ELON D & MARY L HUNSBERGER	Yes	1.23600	0.00201763	0.00000000	0.00000000	1.00000000	0.00201763	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000404.001	Augusta	5097 Andora Road, Mechanicstown OH 44651
UNLEASED	24	NATURE CONSERVANCY	No	1.39540	0.00227783	1.00000000	0.00227783	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060012.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
OHCAR0809	25	BRAD & STEPHANIE A OCEL	Yes	1.46669	0.00239420	0.00000000	0.00000000	0.50000000	0.00119710	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000479.000	Augusta	5515 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0809	25	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	1.46669	0.00239420	0.00000000	0.00000000	0.25000000	0.00059855	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000479.000	Augusta	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0809	25	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	1.46669	0.00239420	0.00000000	0.00000000	0.25000000	0.00059855	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000479.000	Augusta	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR1090	26	HEATH L & STARZETTA A WOOD	Yes	1.59500	0.00260366	0.00000000	0.00000000	1.00000000	0.00260366	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000566.001	Augusta	4240 Arbor Rd, Mechanicstown OH 44651

Exhibit "A-2"

Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	R.E. Gas Working Interest[2]	R.E. Gas Unit Participation	CGAS Working Interest[3]	CGAS Unit Participation	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Unit Participation	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Unit Participation	Chspk. Working Interest[6]	Chspk. Unit Participation	CHKU Working Interest[7]	CHKU Unit Participation	Total E&P Working Interest[8]	Total E&P Unit Participation	Parcel ID	Township	Address
OHCAR1367	27	HERRINGTON BETHEL UNITED METHODIST CHURCH, IN TRUST FOR THE EAST OHIO CONFERENCE OF THE UNITED METHODIST CHURCH	Yes	1.61900	0.00264283	0.00000000	0.00000000	1.00000000	0.00264283	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000666.001	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
UNLEASED	28	NATURE CONSERVANCY	No	1.89096	0.00308678	1.00000000	0.00308678	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060013.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
OHCAR1222	29	ROBERT GENE JR & DARLA S CARRICK	Yes	2.00000	0.00326477	0.00000000	0.00000000	1.00000000	0.00326477	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000045.000	Washington	4139 Arbor Rd., Mechanicstown OH 44651
OHCAR0899	30	SONJA KERSCHENSKE	Yes	2.00000	0.00326477	0.00000000	0.00000000	1.00000000	0.00326477	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.004	Augusta	4150 Arbor Rd NE, Mechanicstown OH 44651
OHCAR1258	31	NATHAN A & ASHLEY N GARRETT	Yes	2.43900	0.00398139	0.00000000	0.00000000	1.00000000	0.00398139	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.000	Augusta	4184 Arbor Road NE, Mechanicstown OH 44651
UNLEASED	32	KENT STATE UNIVERSITY	No	1.46000	0.00238328	1.00000000	0.00238328	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060020.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR1365	33	TRUSTEES OF HERRINGTON METHODIST CHURCH	Yes	1.98000	0.00323212	0.00000000	0.00000000	1.00000000	0.00323212	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060021.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR0809	34	BRAD & STEPHANIE A OCEL	Yes	3.01857	0.00492747	0.00000000	0.00000000	0.50000000	0.00246374	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	11-0000348.001	East	5515 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0809	34	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	3.01857	0.00492747	0.00000000	0.00000000	0.25000000	0.00123187	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	11-0000348.001	East	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0809	34	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	3.01857	0.00492747	0.00000000	0.00000000	0.25000000	0.00123187	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	11-0000348.001	East	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
UNLEASED	35	KENT STATE UNIVERSITY	No	3.45461	0.00563926	1.00000000	0.00563926	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060018.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR1387	36	JONAS & ELLEN BURKHOLDER	Yes	3.72300	0.00607737	0.00000000	0.00000000	0.33340000	0.00202586	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000063.000	Washington	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1387	36	JONAS J JR BURKHOLDER	Yes	3.72300	0.00607737	0.00000000	0.00000000	0.33330000	0.00202586	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000063.000	Washington	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1387	36	DANIEL J & RUTHIE W BURKHOLDER	Yes	3.72300	0.00607737	0.00000000	0.00000000	0.33330000	0.00202585	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000063.000	Washington	8101 Ravlin Hill Road, Panama NY 14767
ENERVEST	37	DAVID P. MCCULLOUGH	Yes	4.05996	0.00662742	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.00305856	0.37156100	0.00246249	0.16693900	0.00110638	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000042.000	Augusta	6002 Andora Rd NE, Mechanicstown OH 44651
OHCAR1092	38	LYNN D & AUDREY R WOOD	Yes	3.99500	0.00652138	0.00000000	0.00000000	1.00000000	0.00652138	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000566.000	Augusta	4230 Arbor Rd NE, Mechanicstown OH 44651
CHK	39	HELEN I FRY	Yes	5.00000	0.00816193	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.06000240	0.00048974	0.68999760	0.00563171	0.25000000	0.00204048	01-0000159.000	Augusta	5144 Andora Rd NE, Mechanicstown OH 44651
OHCAR1131	40	MINERAL ACQUISITION COMPANY I, LP	Yes	4.78171	0.00780560	0.00000000	0.00000000	0.90000000	0.00702504	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.005	Augusta	PO Box 18201, Oklahoma City OK 73154
OHCAR1131	40	MAC-LP, LLC	Yes	4.78171	0.00780560	0.00000000	0.00000000	0.10000000	0.00078056	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.005	Augusta	PO Box 18201, Oklahoma City OK 73154

Exhibit "A-2"

Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	R.E. Gas Working Interest[2]	R.E. Gas Unit Participation	CGAS Working Interest[3]	CGAS Unit Participation	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Unit Participation	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Unit Participation	Chspk. Working Interest[6]	Chspk. Unit Participation	CHKU Working Interest[7]	CHKU Unit Participation	Total E&P Working Interest[8]	Total E&P Unit Participation	Parcel ID	Township	Address
OHCAR1133	41	EDWIN RAY KUHNS & REBECCA M DETWEILER	Yes	5.51700	0.00900587	0.00000000	0.00000000	1.00000000	0.00900587	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.001	Augusta	4149 Arbor Road NE, Mechanicstown OH 44651
OHCAR0937	42	HAROLD C & FAYE E BAKER	Yes	6.39700	0.01044237	0.00000000	0.00000000	1.00000000	0.01044237	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000463.000	Augusta	5125 Andora Road NE, Mechanicstown OH 44651
OHCAR1130	43	SHARI L SHANKEL	Yes	6.00000	0.00979432	0.00000000	0.00000000	0.50000000	0.00489716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.006	Augusta	6109 Andora Rd NE, Mechanicstown OH 44651
OHCAR1130	43	LAURA A GINGERICH	Yes	6.00000	0.00979432	0.00000000	0.00000000	0.50000000	0.00489716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.006	Augusta	8247 Pittsburg Ave, N Canton OH 44720
OHCAR1130	44	SHARI L SHANKEL	Yes	6.00000	0.00979432	0.00000000	0.00000000	0.50000000	0.00489716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.007	Augusta	6109 Andora Rd NE, Mechanicstown OH 44651
OHCAR1130	44	LAURA A GINGERICH	Yes	6.00000	0.00979432	0.00000000	0.00000000	0.50000000	0.00489716	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.007	Augusta	8247 Pittsburg Ave, N Canton OH 44720
UNLEASED	45	OHIO RAIL CORP	No	6.00795	0.00980729	1.00000000	0.00980729	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0090014.000; 01-0090013.000	Augusta & Washington	P.O. Box 728, Steubenville, Ohio 43952 C/O Elaine Smith
OHCAR1222	46	ROBERT GENE JR & DARLA S CARRICK	Yes	8.00000	0.01305909	0.00000000	0.00000000	1.00000000	0.01305909	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000046.000	Washington	4139 Arbor Rd., Mechanicstown OH 44651
OHCAR0938	47	STEVEN LYNN ZWAHLEN	Yes	8.92800	0.01457394	0.00000000	0.00000000	0.33340000	0.00485814	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.005	Augusta	409 East St, Minerva OH 44657
OHCAR0938	47	LORI ANN COOPER	Yes	8.92800	0.01457394	0.00000000	0.00000000	0.33330000	0.00485814	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.005	Augusta	409 East St, Minerva OH 44657
OHCAR0938	47	MARK CHRISTIAN ZWAHLEN	Yes	8.92800	0.01457394	0.00000000	0.00000000	0.33330000	0.00485814	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.005	Augusta	409 East St, Minerva OH 44657
UNLEASED	48	MICHAEL A SOMMER	No	9.24500	0.01509141	1.00000000	0.01509141	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.008	Augusta	4172 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0913	49	CHRISTOPHER M CLARK	Yes	9.30200	0.01518445	0.00000000	0.00000000	1.00000000	0.01518445	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000666.000	Augusta	4107 Arbor Rd NE, Mechanicstown OH 44651
OHCAR1392	50	NATHAN J & MARY ANN MILLER	No	9.82800	0.01604309	0.00000000	0.00000000	1.00000000	0.01604309	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.000	Augusta	8265 Mark Rd, Kensington OH 44427
ENERVEST	51	MEGAN E & JAMES R VAUGHN	Yes	10.85735	0.01772339	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.00817934	0.37156100	0.00658532	0.16693900	0.00295872	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000014.000	Washington	9246 Ruby Ridge Street NW, Canal Fulton OH 44614
OHCAR0809	52	BRAD & STEPHANIE A OCEL	Yes	11.10184	0.01812249	0.00000000	0.00000000	0.50000000	0.00906124	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000334.000	Washington	5515 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0809	52	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	11.10184	0.01812249	0.00000000	0.00000000	0.25000000	0.00453062	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000334.000	Washington	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0809	52	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	11.10184	0.01812249	0.00000000	0.00000000	0.25000000	0.00453062	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000334.000	Washington	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0930	53	DAVID A & PAMELA R DRAY	Yes	14.51793	0.02369887	0.00000000	0.00000000	1.00000000	0.02369887	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000129.000	Augusta	4237 Arbor Rd, Mechanicstown OH 44651
ENERVEST	54	LEVI L JR & CORA K MILLER (remainderman) AND LEVI S & EVA Y MILLER (life estate)[9]	Yes	14.90582	0.02433205	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.01122924	0.37156100	0.00904084	0.16693900	0.00406197	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000186.000	Augusta	6092 Mirth Rd NE, Mechanicstown OH 44651
UNLEASED	55	KENT STATE UNIVERSITY	No	18.81000	0.03070518	1.00000000	0.03070518	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060017.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski

Exhibit "A-2"

Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	R.E. Gas Working Interest[2]	R.E. Gas Unit Participation	CGAS Working Interest[3]	CGAS Unit Participation	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Unit Participation	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Unit Participation	Chspk. Working Interest[6]	Chspk. Unit Participation	CHKU Working Interest[7]	CHKU Unit Participation	Total E&P Working Interest[8]	Total E&P Unit Participation	Parcel ID	Township	Address
OHCAR1387	56	JONAS & ELLEN BURKHOLDER	Yes	16.88300	0.02755957	0.00000000	0.00000000	0.33340000	0.00918683	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.001	Augusta	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1387	56	JONAS J JR BURKHOLDER	Yes	16.88300	0.02755957	0.00000000	0.00000000	0.33330000	0.00918682	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.001	Augusta	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1387	56	DANIEL J & RUTHIE W BURKHOLDER	Yes	16.88300	0.02755957	0.00000000	0.00000000	0.33330000	0.00918682	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.001	Augusta	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1222	57	ROBERT GENE JR & DARLA S CARRICK	Yes	18.00000	0.02938295	0.00000000	0.00000000	1.00000000	0.02938295	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000075.000	Augusta	4139 Arbor Rd., Mechanicstown OH 44651
OHCAR1222	58	ROBERT GENE JR & DARLA S CARRICK	Yes	18.00000	0.02938295	0.00000000	0.00000000	1.00000000	0.02938295	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000074.000	Augusta	4139 Arbor Rd., Mechanicstown OH 44651
ENERVEST	59	MEGAN E & JAMES R VAUGHN	Yes	19.78815	0.03230190	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.01490733	0.37156100	0.01200213	0.16693900	0.00539245	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000013.000	Washington	9246 Ruby Ridge Street NW, Canal Fulton OH 44614
OHCAR0931	60	JAMES K DRAY	Yes	22.87000	0.03733267	0.00000000	0.00000000	1.00000000	0.03733267	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000129.001	Augusta	1055 Tumbleweed Ave, Uniontown OH 44685
OHCAR0928	61	JOHN R & MARILYN THOMPSON[10]	Yes	22.91400	0.03740449	0.00000000	0.00000000	1.00000000	0.03740449	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.000	Augusta	3255 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0928	61	HERRINGTON BETHEL UNITED METHODIST CHURCH, IN TRUST FOR THE EAST OHIO CONFERENCE OF THE UNITED METHODIST CHURCH[10]	Yes	0.14400	0.00023506	0.00000000	0.00000000	1.00000000	0.00023506	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
UNLEASED	62	NATURE CONSERVANCY	No	24.57120	0.04010968	1.00000000	0.04010968	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0060010.000	Washington	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
OHCAR1013	63	EAGLE MINERALS, LTD	Yes	28.43301	0.04641365	0.00000000	0.00000000	0.60000000	0.02784819	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	9800 N. Oklahoma Ave, Oklahoma City OK 73106
OHCAR1013	63	WAYNE BISSETT	Yes	28.43301	0.04641365	0.00000000	0.00000000	0.18000000	0.00835446	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 2101, Midland TX 79702-2101
OHCAR1013	63	DOUGLAS KOCH	Yes	28.43301	0.04641365	0.00000000	0.00000000	0.09000000	0.00417723	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 540244, Houston TX 77254-0244
OHCAR1013	63	SUZANNE B. KOCH	Yes	28.43301	0.04641365	0.00000000	0.00000000	0.09000000	0.00417723	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 270475, Houston TX 77277
OHCAR1013	63	MARTIN LIVING TRUST DATED 11/2/2010, AMENDED	Yes	28.43301	0.04641365	0.00000000	0.00000000	0.02000000	0.00092827	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	Robert & Kimberly Martin, Trustees, 2114 Lytham Lane, Katy TX 77450-8571
OHCAR1013	63	ANDREW LATHAM	Yes	28.43301	0.04641365	0.00000000	0.00000000	0.02000000	0.00092827	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 10220, Midland TX 79702-0220
ENERVEST	64	JAMES NEIL & LAURIE ANN MCCLESTER	Yes	30.00000	0.04897158	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.02260038	0.37156100	0.01819593	0.16693900	0.00817527	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000363.000	Augusta	363 West Lincoln Way, Lisbon OH 44432
ENERVEST	65	DANIEL L & MICHELLE L GROOMS	Yes	32.64324	0.05328637	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.02459166	0.37156100	0.01979914	0.16693900	0.00889557	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.002	Augusta	9449 Maple Avenue SE, East Sparta OH 44626
OHCAR0809	66	BRAD & STEPHANIE A OCEL	Yes	32.70055	0.05337992	0.00000000	0.00000000	0.50000000	0.02668996	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000480.000	Augusta	5515 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0809	66	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	32.70055	0.05337992	0.00000000	0.00000000	0.25000000	0.01334498	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000480.000	Augusta	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651

Exhibit "A-2"

Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	R.E. Gas Working Interest[2]	R.E. Gas Unit Participation	CGAS Working Interest[3]	CGAS Unit Participation	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Unit Participation	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Unit Participation	Chspk. Working Interest[6]	Chspk. Unit Participation	CHKU Working Interest[7]	CHKU Unit Participation	Total E&P Working Interest[8]	Total E&P Unit Participation	Parcel ID	Township	Address
OHCAR0809	66	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	32.70055	0.05337992	0.00000000	0.00000000	0.25000000	0.01334498	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000480.000	Augusta	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
ENERVEST	67	JAMES NEIL & LAURIE ANN MCCLESTER	Yes	32.79537	0.05353470	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.02470626	0.37156100	0.01989141	0.16693900	0.00893703	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000365.000	Augusta	363 West Lincoln Way, Lisbon OH 44432
OHCAR0913	68	CHRISTOPHER M CLARK	Yes	50.87800	0.08305253	0.00000000	0.00000000	1.00000000	0.08305253	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000665.001	Augusta	4107 Arbor Rd NE, Mechanicstown OH 44651
ENERVEST	69	MEGAN E & JAMES R VAUGHN	Yes	59.69633	0.09744745	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.04497200	0.37156100	0.03620767	0.16693900	0.01626778	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000016.000	Washington	9246 Ruby Ridge Street NW, Canal Fulton OH 44614
OHCAR1407	70	JOHN R & MARILYN THOMPSON	Yes	0.02000	0.00003265	0.00000000	0.00000000	1.00000000	0.00003265	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000736.000	Augusta	3255 Arbor Rd NE, Mechanicstown OH 44651

[1] "Tract Participation" was calculated by dividing "Surface Acres In Unit" by 612.60022 (unit acreage).

[2] "R.E. Gas" refers to R. E. Gas Development, LLC.

[3] "CGAS" refers to CGAS Properties, L.P.

[4] "EnerVest XI-A LP" refers to EnerVest Energy Institutional Fund IX-A, LP

[5] "EnerVest XI-WI LP" refers to EnerVest Energy Institutional Fund XI-WI, LP

[6] "Chspk." refers to Chesapeake Exploration, L.L.C.

7 "CHKU" refers to CHK Utica, LLC

[8] "Total E&P" refers to Total E&P USA, Inc.

[9] Tract 54 Levi S & Eva Y Miller conveyed to Levi L Jr & Cora K Miller and reserved a Life Estate.

[10] Tract 61 Parcel 01-0000500.000 is split into 2 tracts. Each owning 100% of their tract.

Exhibit A-3

Exhibit "A-3"

Unleased Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	Parcel ID	Township	Address
UNLEASED	4	NATURE CONSERVANCY	No	0.03766	0.00006148	1.00000000	0.00006148	34-0060009.000	Washington	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
UNLEASED	13	KENT STATE UNIVERSITY	No	0.35000	0.00057135	1.00000000	0.00057135	34-0060011.000	Washington	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
UNLEASED	15	NATURE CONSERVANCY	No	0.53461	0.00087272	1.00000000	0.00087272	01-0060011.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
UNLEASED	19	KENT STATE UNIVERSITY	No	0.72000	0.00117536	1.00000000	0.00117536	01-0060019.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
UNLEASED	24	NATURE CONSERVANCY	No	1.39540	0.00227791	1.00000000	0.00227791	01-0060012.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
UNLEASED	28	NATURE CONSERVANCY	No	1.89096	0.00308688	1.00000000	0.00308688	01-0060013.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
UNLEASED	32	KENT STATE UNIVERSITY	No	1.46000	0.00238336	1.00000000	0.00238336	01-0060020.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
UNLEASED	35	KENT STATE UNIVERSITY	No	3.45461	0.00563944	1.00000000	0.00563944	01-0060018.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
UNLEASED	45	OHIO RAIL	No	6.00795	0.00980761	1.00000000	0.00980761	RR	Augusta & Washington	P.O. Box 728, Steubenville, Ohio 43952 C/O Elaine Smith
UNLEASED	48	MICHAEL A SOMMER	No	9.24500	0.01509190	1.00000000	0.01509190	01-0000202.008	Augusta	4172 Arbor Rd NE, Mechanicstown OH 44651
UNLEASED	55	KENT STATE UNIVERSITY	No	18.81000	0.03070618	1.00000000	0.03070618	01-0060017.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski

Exhibit "A-3"

Unleased Tracts Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Tract Participation[1]	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	Parcel ID	Township	Address
UNLEASED	62	NATURE CONSERVANCY	No	24.57120	0.04011099	1.00000000	0.04011099	34-0060010.000	Washington	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
				68.47739						

[1] "Tract Participation" was calculated by multiplying "Mineral Ownership" by "Surface Acres In Unit" and then dividing by 612.58022 (unit acreage).

Total leased Acres	544.10283
Total Unleased Acres	68.47739
Total Acres	612.58022

Exhibit A-4

Exhibit "A-4"

Working Interest Owners Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Current Mineral Owner Working Interest	Current Mineral Owner Net Mineral Acres[1]	R.E. Gas Working Interest[2]	R.E. Gas Net Mineral Acres	CGAS Working Interest[3]	CGAS Net Mineral Acres	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Net Mineral Acres	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Net Mineral Acres	Chspk. Working Interest[6]	Chspk. Net Mineral Acres	CHKU Working Interest[7]	CHKU Net Mineral Acres	Total E&P Working Interest[8]	Total E&P Net Mineral Acres	Parcel ID	Township	Address
OHCAR1348	1	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.00300	0.00000000	0.00000000	1.00000000	0.00300000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.001	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1348	2	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.00800	0.00000000	0.00000000	1.00000000	0.00800000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000738.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1348	3	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.02000	0.00000000	0.00000000	1.00000000	0.02000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.002	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
UNLEASED	4	NATURE CONSERVANCY	No	0.03766	1.00000000	0.03766000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0060009.000	Washington	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
OHCAR1348	5	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.16400	0.00000000	0.00000000	1.00000000	0.16400000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000739.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1348	6	HERRINGTON BETHEL UNITED METHODIST CHURCH	Yes	0.18700	0.00000000	0.00000000	1.00000000	0.18700000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000737.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1366	7	HERRINGTON CEMETERY ASSOCIATION	Yes	0.26300	0.00000000	0.00000000	1.00000000	0.26300000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060024.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
ENERVEST	8	RICHARD F & LORETTA E VONKANEL	Yes	0.30537	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.14092826	0.37156100	0.11346358	0.16693900	0.05097816	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000509.000	Washington	207 California Ave, Louisville OH 44641
OHCAR1181	9	GARY W & LINDA J BORLAND & JOSHUA W CUTLIP	Yes	0.25000	0.00000000	0.00000000	1.00000000	0.25000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000146.000	Augusta	5130 Andora Road NE, Mechanicstown OH 44651
ENERVEST	10	DAVID P. MCCULLOUGH	Yes	0.36731	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	0.16951357	0.37156100	0.13647807	0.16693900	0.06131836	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000043.000	Augusta	6002 Andora Rd NE, Mechanicstown OH 44651

Exhibit "A-4"

Working Interest Owners Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Current Mineral Owner Working Interest	Current Mineral Owner Net Mineral Acres[1]	R.E. Gas Working Interest[2]	R.E. Gas Net Mineral Acres	CGAS Working Interest[3]	CGAS Net Mineral Acres	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Net Mineral Acres	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Net Mineral Acres	Chspk. Working Interest[6]	Chspk. Net Mineral Acres	CHKU Working Interest[7]	CHKU Net Mineral Acres	Total E&P Working Interest[8]	Total E&P Net Mineral Acres	Parcel ID	Township	Address
OHCAR1367	11	HERRINGTON BETHEL UNITED METHODIST CHURCH, IN TRUST FOR THE EAST OHIO CONFERENCE OF THE UNITED METHODIST CHURCH	Yes	0.38100	0.00000000	0.00000000	1.00000000	0.38100000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000665.002	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR1135	12	RICHARD W GORDON REVOCABLE LIVING TRUST U/A/D MAY 3, 1993	Yes	0.39650	0.00000000	0.00000000	1.00000000	0.39650000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.007	Augusta	Richard W. Gordon, Trustee, 3257 Arbor Road, Carrollton OH 44615
UNLEASED	13	KENT STATE UNIVERSITY	No	0.35000	1.00000000	0.35000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0060011.000	Washington	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR1042	14	ROBERT M & MARTA M LONG	Yes	0.47200	0.00000000	0.00000000	1.00000000	0.47200000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.003	Augusta	4256 Arbor Road NE, Mechanicstown OH 44651
UNLEASED	15	NATURE CONSERVANCY	No	0.53461	1.00000000	0.53461000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060011.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203
OHCAR1042	16	ROBERT M & MARTA M LONG	Yes	0.57758	0.00000000	0.00000000	1.00000000	0.57758000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000294.000	Augusta	4256 Arbor Road NE, Mechanicstown OH 44651
OHCAR1092	17	LYNN D & AUDREY R WOOD	Yes	0.69100	0.00000000	0.00000000	1.00000000	0.69100000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000567.000	Augusta	4230 Arbor Rd NE, Mechanicstown OH 44651
OHCAR1181	18	GARY W & LINDA J BORLAND & JOSHUA W CUTLIP	Yes	0.81000	0.00000000	0.00000000	1.00000000	0.81000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000147.000	Augusta	5130 Andora Road NE, Mechanicstown OH 44651
UNLEASED	19	KENT STATE UNIVERSITY	No	0.72000	1.00000000	0.72000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060019.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR0953	20	GLEN K DRAY & MARGARET E DRAY REVOCABLE TRUST, DATED OCTOBER 31, 2001	Yes	1.01239	0.00000000	0.00000000	1.00000000	1.01239000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000129.002	Augusta	9734 Louisville St NE, Louisville OH 44641
OHCAR0971	21	ELON D & MARY L HUNSBERGER	Yes	1.02900	0.00000000	0.00000000	1.00000000	1.02900000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000404.000	Augusta	5097 Andora Road, Mechanicstown OH 44651
OHCAR1135	22	RICHARD W GORDON REVOCABLE LIVING TRUST U/A/D MAY 3, 1993	Yes	1.15116	0.00000000	0.00000000	1.00000000	1.15116000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.000	Augusta	Richard W. Gordon, Trustee, 3257 Arbor Road, Carrollton OH 44615
OHCAR0971	23	ELON D & MARY L HUNSBERGER	Yes	1.23600	0.00000000	0.00000000	1.00000000	1.23600000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000404.001	Augusta	5097 Andora Road, Mechanicstown OH 44651

Exhibit "A-4"

Working Interest Owners Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Current Mineral Owner Working Interest	Current Mineral Owner Net Mineral Acres[1]	R.E. Gas Working Interest[2]	R.E. Gas Net Mineral Acres	CGAS Working Interest[3]	CGAS Net Mineral Acres	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Net Mineral Acres	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Net Mineral Acres	Chspk. Working Interest[6]	Chspk. Net Mineral Acres	CHKU Working Interest[7]	CHKU Net Mineral Acres	Total E&P Working Interest[8]	Total E&P Net Mineral Acres	Parcel ID	Township	Address
UNLEASED	24	NATURE CONSERVANCY	No	1.39540	1.00000000	1.39540000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060012.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
OHCAR0809	25	BRAD & STEPHANIE A OCEL	Yes	1.46669	0.00000000	0.00000000	0.50000000	0.73334500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000479.000	Augusta	5515 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0809	25	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	1.46669	0.00000000	0.00000000	0.25000000	0.36667250	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000479.000	Augusta	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0809	25	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	1.46669	0.00000000	0.00000000	0.25000000	0.36667250	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000479.000	Augusta	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR1090	26	HEATH L & STARZETTA A WOOD	Yes	1.59500	0.00000000	0.00000000	1.00000000	1.59500000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000566.001	Augusta	4240 Arbor Rd, Mechanicstown OH 44651
OHCAR1367	27	HERRINGTON BETHEL UNITED METHODIST CHURCH, IN TRUST FOR THE EAST OHIO CONFERENCE OF THE UNITED METHODIST CHURCH	Yes	1.61900	0.00000000	0.00000000	1.00000000	1.61900000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000666.001	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
UNLEASED	28	NATURE CONSERVANCY	No	1.89096	1.00000000	1.89096000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060013.000	Augusta	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
OHCAR1222	29	ROBERT GENE JR & DARLA S CARRICK	Yes	2.00000	0.00000000	0.00000000	1.00000000	2.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000045.000	Washington	4139 Arbor Rd., Mechanicstown OH 44651
OHCAR0899	30	SONJA KERSCHENSKE	Yes	2.00000	0.00000000	0.00000000	1.00000000	2.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.004	Augusta	4150 Arbor Rd NE, Mechanicstown OH 44651
OHCAR1258	31	NATHAN A & ASHLEY N GARRETT	Yes	2.43900	0.00000000	0.00000000	1.00000000	2.43900000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.000	Augusta	4184 Arbor Road NE, Mechanicstown OH 44651
UNLEASED	32	KENT STATE UNIVERSITY	No	1.46000	1.00000000	1.46000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060020.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR1365	33	TRUSTEES OF HERRINGTON METHODIST CHURCH	Yes	1.98000	0.00000000	0.00000000	1.00000000	1.98000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060021.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
OHCAR0809	34	BRAD & STEPHANIE A OCEL	Yes	3.01857	0.00000000	0.00000000	0.50000000	1.50928500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	11-0000348.001	East	5515 Arbor Rd NE, Mechanicstown OH 44651

Exhibit "A-4"

Working Interest Owners Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Current Mineral Owner Working Interest	Current Mineral Owner Net Mineral Acres[1]	R.E. Gas Working Interest[2]	R.E. Gas Net Mineral Acres	CGAS Working Interest[3]	CGAS Net Mineral Acres	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Net Mineral Acres	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Net Mineral Acres	Chspk. Working Interest[6]	Chspk. Net Mineral Acres	CHKU Working Interest[7]	CHKU Net Mineral Acres	Total E&P Working Interest[8]	Total E&P Net Mineral Acres	Parcel ID	Township	Address
OHCAR0809	34	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	3.01857	0.00000000	0.00000000	0.25000000	0.75464250	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	11-0000348.001	East	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0809	34	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	3.01857	0.00000000	0.00000000	0.25000000	0.75464250	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	11-0000348.001	East	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
UNLEASED	35	KENT STATE UNIVERSITY	No	3.45461	1.00000000	3.45461000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060018.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR1387	36	JONAS & ELLEN BURKHOLDER	Yes	3.72300	0.00000000	0.00000000	0.33340000	1.24100000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000063.000	Washington	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1387	36	JONAS J JR BURKHOLDER	Yes	3.72300	0.00000000	0.00000000	0.33330000	1.24100000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000063.000	Washington	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1387	36	DANIEL J & RUTHIE W BURKHOLDER	Yes	3.72300	0.00000000	0.00000000	0.33330000	1.24100000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000063.000	Washington	8101 Ravlin Hill Road, Panama NY 14767
ENERVEST	37	DAVID P. MCCULLOUGH	Yes	4.05996	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	1.87367154	0.37156100	1.50852280	0.16693900	0.67776566	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000042.000	Augusta	6002 Andora Rd NE, Mechanicstown OH 44651
OHCAR1092	38	LYNN D & AUDREY R WOOD	Yes	3.99500	0.00000000	0.00000000	1.00000000	3.99500000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000566.000	Augusta	4230 Arbor Rd NE, Mechanicstown OH 44651
CHK	39	HELEN I FRY	Yes	5.00000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.06000244	0.30001220	0.68999760	3.44998800	0.24999996	1.24999980	01-0000159.000	Augusta	5144 Andora Rd NE, Mechanicstown OH 44651
OHCAR1131	40	MINERAL ACQUISITION COMPANY I, LP	Yes	4.78171	0.00000000	0.00000000	0.90000000	4.30353900	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.005	Augusta	PO Box 18201, Oklahoma City OK 73154
OHCAR1131	40	MAC-LP, LLC	Yes	4.78171	0.00000000	0.00000000	0.10000000	0.47817100	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.005	Augusta	PO Box 18201, Oklahoma City OK 73154
OHCAR1133	41	EDWIN RAY KUHNS & REBECCA M DETWEILER	Yes	5.51700	0.00000000	0.00000000	1.00000000	5.51700000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.001	Augusta	4149 Arbor Road NE, Mechanicstown OH 44651
OHCAR0937	42	HAROLD C & FAYE E BAKER	Yes	6.39700	0.00000000	0.00000000	1.00000000	6.39700000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000463.000	Augusta	5125 Andora Road NE, Mechanicstown OH 44651
OHCAR1130	43	SHARI L SHANKEL	Yes	6.00000	0.00000000	0.00000000	0.50000000	3.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.006	Augusta	6109 Andora Rd NE, Mechanicstown OH 44651
OHCAR1130	43	LAURA A GINGERICH	Yes	6.00000	0.00000000	0.00000000	0.50000000	3.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.006	Augusta	8247 Pittsburg Ave, N Canton OH 44720
OHCAR1130	44	SHARI L SHANKEL	Yes	6.00000	0.00000000	0.00000000	0.50000000	3.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.007	Augusta	6109 Andora Rd NE, Mechanicstown OH 44651
OHCAR1130	44	LAURA A GINGERICH	Yes	6.00000	0.00000000	0.00000000	0.50000000	3.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.007	Augusta	8247 Pittsburg Ave, N Canton OH 44720

Exhibit "A-4"

Working Interest Owners Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Current Mineral Owner Working Interest	Current Mineral Owner Net Mineral Acres[1]	R.E. Gas Working Interest[2]	R.E. Gas Net Mineral Acres	CGAS Working Interest[3]	CGAS Net Mineral Acres	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Net Mineral Acres	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Net Mineral Acres	Chspk. Working Interest[6]	Chspk. Net Mineral Acres	CHKU Working Interest[7]	CHKU Net Mineral Acres	Total E&P Working Interest[8]	Total E&P Net Mineral Acres	Parcel ID	Township	Address
UNLEASED	45	OHIO RAIL CORP	No	6.00795	1.00000000	6.00795000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0090014.000; 01-0090013.000	Augusta & Washington	P.O. Box 728, Steubenville, Ohio 43952 C/O Elaine Smith
OHCAR1222	46	ROBERT GENE JR & DARLA S CARRICK	Yes	8.00000	0.00000000	0.00000000	1.00000000	8.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000046.000	Washington	4139 Arbor Rd., Mechanicstown OH 44651
OHCAR0938	47	STEVEN LYNN ZWAHLEN	Yes	8.92800	0.00000000	0.00000000	0.33340000	2.97600000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.005	Augusta	409 East St, Minerva OH 44657
OHCAR0938	47	LORI ANN COOPER	Yes	8.92800	0.00000000	0.00000000	0.33330000	2.97600000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.005	Augusta	409 East St, Minerva OH 44657
OHCAR0938	47	MARK CHRISTIAN ZWAHLEN	Yes	8.92800	0.00000000	0.00000000	0.33330000	2.97600000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.005	Augusta	409 East St, Minerva OH 44657
UNLEASED	48	MICHAEL A SOMMER	No	9.24500	1.00000000	9.24500000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.008	Augusta	4172 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0913	49	CHRISTOPHER M CLARK	Yes	9.30200	0.00000000	0.00000000	1.00000000	9.30200000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000666.000	Augusta	4107 Arbor Rd NE, Mechanicstown OH 44651
OHCAR1392	50	NATHAN J & MARY ANN MILLER	No	9.82800	0.00000000	0.00000000	1.00000000	9.82800000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.000	Augusta	8265 Mark Rd, Kensington OH 44427
ENERVEST	51	MEGAN E & JAMES R VAUGHN	Yes	10.85735	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	5.01066703	0.37156100	4.03416782	0.16693900	1.81251515	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000014.000	Washington	9246 Ruby Ridge Street NW, Canal Fulton OH 44614
OHCAR0809	52	BRAD & STEPHANIE A OCEL	Yes	11.10184	0.00000000	0.00000000	0.50000000	5.55092000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000334.000	Washington	5515 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0809	52	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	11.10184	0.00000000	0.00000000	0.25000000	2.77546000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000334.000	Washington	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0809	52	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	11.10184	0.00000000	0.00000000	0.25000000	2.77546000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000334.000	Washington	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0930	53	DAVID A & PAMELA R DRAY	Yes	14.51793	0.00000000	0.00000000	1.00000000	14.51793000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000129.000	Augusta	4237 Arbor Rd, Mechanicstown OH 44651
ENERVEST	54	LEVI L JR & CORA K MILLER (remainderman) AND LEVI S & EVA Y MILLER (life estate)[9]	Yes	14.90582	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	6.87903593	0.37156100	5.53842139	0.16693900	2.48836268	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000186.000	Augusta	6092 Mirth Rd NE, Mechanicstown OH 44651
UNLEASED	55	KENT STATE UNIVERSITY	No	18.81000	1.00000000	18.81000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0060017.000	Augusta	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
OHCAR1387	56	JONAS & ELLEN BURKHOLDER	Yes	16.88300	0.00000000	0.00000000	0.33340000	5.62767000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.001	Augusta	8101 Ravlin Hill Road, Panama NY 14767

Exhibit "A-4"

Working Interest Owners Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Current Mineral Owner Working Interest	Current Mineral Owner Net Mineral Acres[1]	R.E. Gas Working Interest[2]	R.E. Gas Net Mineral Acres	CGAS Working Interest[3]	CGAS Net Mineral Acres	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Net Mineral Acres	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Net Mineral Acres	Chspk. Working Interest[6]	Chspk. Net Mineral Acres	CHKU Working Interest[7]	CHKU Net Mineral Acres	Total E&P Working Interest[8]	Total E&P Net Mineral Acres	Parcel ID	Township	Address
OHCAR1387	56	JONAS J JR BURKHOLDER	Yes	16.88300	0.00000000	0.00000000	0.33330000	5.62767000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.001	Augusta	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1387	56	DANIEL J & RUTHIE W BURKHOLDER	Yes	16.88300	0.00000000	0.00000000	0.33330000	5.62766000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000652.001	Augusta	8101 Ravlin Hill Road, Panama NY 14767
OHCAR1222	57	ROBERT GENE JR & DARLA S CARRICK	Yes	18.00000	0.00000000	0.00000000	1.00000000	18.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000075.000	Augusta	4139 Arbor Rd., Mechanicstown OH 44651
OHCAR1222	58	ROBERT GENE JR & DARLA S CARRICK	Yes	18.00000	0.00000000	0.00000000	1.00000000	18.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000074.000	Augusta	4139 Arbor Rd., Mechanicstown OH 44651
ENERVEST	59	MEGAN E & JAMES R VAUGHN	Yes	19.78815	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	9.13223123	0.37156100	7.35250480	0.16693900	3.30341397	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000013.000	Washington	9246 Ruby Ridge Street NW, Canal Fulton OH 44614
OHCAR0931	60	JAMES K DRAY	Yes	22.87000	0.00000000	0.00000000	1.00000000	22.87000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000129.001	Augusta	1055 Tumbleweed Ave, Uniontown OH 44685
OHCAR0928	61	JOHN R & MARILYN THOMPSON[10]	Yes	22.91400	0.00000000	0.00000000	1.00000000	22.91400000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.000	Augusta	3255 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0928	61	HERRINGTON BETHEL UNITED METHODIST CHURCH, IN TRUST FOR THE EAST OHIO CONFERENCE OF THE UNITED METHODIST CHURCH[10]	Yes	0.14400	0.00000000	0.00000000	1.00000000	0.14400000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000500.000	Augusta	Mark C. Reed, Robert M. Long, Louis G. Kava, Trusteees, 4009 Arbor Rd. NE, Mechanicstown OH 44651
UNLEASED	62	NATURE CONSERVANCY	No	24.57120	1.00000000	24.57120000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0060010.000	Washington	4245 N Fairfax Dr, Ste 100, Arlington VA 22203
OHCAR1013	63	EAGLE MINERALS, LTD	Yes	28.43301	0.00000000	0.00000000	0.60000000	17.05980600	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	9800 N. Oklahoma Ave, Oklahoma City OK 73106
OHCAR1013	63	WAYNE BISSETT	Yes	28.43301	0.00000000	0.00000000	0.18000000	5.11794180	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 2101, Midland TX 79702-2101
OHCAR1013	63	DOUGLAS KOCH	Yes	28.43301	0.00000000	0.00000000	0.09000000	2.55897090	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 540244, Houston TX 77254-0244
OHCAR1013	63	SUZANNE B. KOCH	Yes	28.43301	0.00000000	0.00000000	0.09000000	2.55897090	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 270475, Houston TX 77277
OHCAR1013	63	MARTIN LIVING TRUSST DATED 11/2/2010, AMENDED	Yes	28.43301	0.00000000	0.00000000	0.02000000	0.56866020	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	Robert & Kimberly Martin, Trustees, 2114 Lytham Lane, Katy TX 77450-8571
OHCAR1013	63	ANDREW LATHAM	Yes	28.43301	0.00000000	0.00000000	0.02000000	0.56866020	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000419.006	Augusta	PO Box 10220, Midland TX 79702-0220
ENERVEST	64	JAMES NEIL & LAURIE ANN MCCLESTER	Yes	30.00000	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	13.84500000	0.37156100	11.14683000	0.16693900	5.00817000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000363.000	Augusta	363 West Lincoln Way, Lisbon OH 44432
ENERVEST	65	DANIEL L & MICHELLE L GROOMS	Yes	32.64324	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	15.06485526	0.37156100	12.12895490	0.16693900	5.44942984	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000202.002	Augusta	9449 Maple Avenue SE, East Sparta OH 44626

Exhibit "A-4"

Working Interest Owners Within The Vaughn NE Unit Contract Area

	Tract	Current Mineral Owner	Leased Yes/No	Surface Acres In Unit	Current Mineral Owner Working Interest	Current Mineral Owner Net Mineral Acres[1]	R.E. Gas Working Interest[2]	R.E. Gas Net Mineral Acres	CGAS Working Interest[3]	CGAS Net Mineral Acres	EnerVest XI-A LP Working Interest[4]	EnerVest XI-A LP Net Mineral Acres	EnerVest XI-WI LP Working Interest[5]	EnerVest XI-WI LP Net Mineral Acres	Chspk. Working Interest[6]	Chspk. Net Mineral Acres	CHKU Working Interest[7]	CHKU Net Mineral Acres	Total E&P Working Interest[8]	Total E&P Net Mineral Acres	Parcel ID	Township	Address
OHCAR0809	66	BRAD & STEPHANIE A OCEL	Yes	32.70055	0.00000000	0.00000000	0.50000000	16.35027500	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000480.000	Augusta	5515 Arbor Rd NE, Mechanicstown OH 44651
OHCAR0809	66	JOHN T. OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	32.70055	0.00000000	0.00000000	0.25000000	8.17513750	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000480.000	Augusta	John T. Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
OHCAR0809	66	MARY ELNORA OCEL REVOCABLE TRUST DATED FEBRUARY 1, 2000	Yes	32.70055	0.00000000	0.00000000	0.25000000	8.17513750	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000480.000	Augusta	Mary Elnora Ocel, Trustee, 5515 Arbor Road NE, Mechanicstown OH 44651
ENERVEST	67	JAMES NEIL & LAURIE ANN MCCLESTER	Yes	32.79537	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	15.13506326	0.37156100	12.18548047	0.16693900	5.47482627	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000365.000	Augusta	363 West Lincoln Way, Lisbon OH 44432
OHCAR0913	68	CHRISTOPHER M CLARK	Yes	50.87800	0.00000000	0.00000000	1.00000000	50.87800000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000665.001	Augusta	4107 Arbor Rd NE, Mechanicstown OH 44651
ENERVEST	69	MEGAN E & JAMES R VAUGHN	Yes	59.69633	0.00000000	0.00000000	0.00000000	0.00000000	0.46150000	27.54985630	0.37156100	22.18082807	0.16693900	9.96564563	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	34-0000016.000	Washington	9246 Ruby Ridge Street NW, Canal Fulton OH 44614
OHCAR1407	70	JOHN R & MARILYN THOMPSON	Yes	0.02000	0.00000000	0.00000000	1.00000000	0.02000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	0.00000000	01-0000736.000	Augusta	3255 Arbor Rd NE, Mechanicstown OH 44651

[1] "Net Mineral Acres" was calculated by multiplying "Surface Acres In Unit" by the applicable party's working interest.

[2] "R.E. Gas" refers to R. E. Gas Development, LLC.

[3] "CGAS" refers to CGAS Properties, L.P.

[4] "EnerVest XI-A LP" refers to EnerVest Energy Institutional Fund IX-A, LP

[5] "EnerVest XI-WI LP" refers to EnerVest Energy Institutional Fund XI-WI, LP

[6] "Chspk." refers to Chesapeake Exploration, L.L.C.

7 "CHKU" refers to CHK Utica, LLC.

[8] "Total E&P" refers to Total E&P USA, Inc.

[9] Tract 54 Levi S & Eva Y Miller conveyed to Levi L Jr & Cora K Miller and reserved a Life Estate.

[10] Tract 61 Parcel 01-0000500.000 is split into 2 tracts. Each owning 100% of their tract.

Summary of Exhibit "A-4"
Working Interest Owners Within The Vaughn NE Unit Contract Area

Working Interest Owner	Committed Yes/No	Total Net Acreage	Address
R. E. Gas Development, LLC	Yes	333.70393000	F. Scott Hodges 366 Walker Drive, State College, PA 16801
CGAS Properties, L.P.	Yes	94.80082235	James D. McKinney 300 Capitol Street, Suite 200 Charleston, WV 52301
EnerVest Energy Institutional Fund XI-A, LP	Yes	76.32565190	James D. McKinney 300 Capitol Street, Suite 200 Charleston, WV 52301
EnerVest Energy Institutional Fund XI-WI, LP	Yes	34.29242575	James D. McKinney 300 Capitol Street, Suite 200 Charleston, WV 52301
Chesapeake Exploration, L.L.C	Yes	0.30001220	Dan Weinmeister P.O. Box 18496 Oklahoma City, OK 73154
CHK Utica, LLC	Yes	3.44998800	Dan Weinmeister P.O. Box 18496 Oklahoma City, Oklahoma 73154
Total E&P USA, Inc.	Yes	1.24999980	Pierre Germain 1201 Louisiana, Suite 1800 Houston, TX 77002
Nature Conservancy	No	28.42983000	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
Michael A. Sommer	No	9.24500000	4172 Arbor Rd. NE Mchanicstown, OH 44651

Summary of Exhibit "A-4"
Working Interest Owners Within The Vaughn NE Unit Contract Area

Working Interest Owner	Committed Yes/No	Total Net Acreage	Address
R. E. Gas Development, LLC	Yes	333.70393000	F. Scott Hodges 366 Walker Drive, State College, PA 16801
CGAS Properties, L.P.	Yes	94.80082235	James D. McKinney 300 Capitol Street, Suite 200 Charleston, WV 52301
EnerVest Energy Institutional Fund XI-A, LP	Yes	76.32565190	James D. McKinney 300 Capitol Street, Suite 200 Charleston, WV 52301
EnerVest Energy Institutional Fund XI-WI, LP	Yes	34.29242575	James D. McKinney 300 Capitol Street, Suite 200 Charleston, WV 52301
Chesapeake Exploration, L.L.C	Yes	0.30001220	Dan Weinmeister P.O. Box 18496 Oklahoma City, OK 73154
CHK Utica, LLC	Yes	3.44998800	Dan Weinmeister P.O. Box 18496 Oklahoma City, Oklahoma 73154
Total E&P USA, Inc.	Yes	1.24999980	Pierre Germain 1201 Louisiana, Suite 1800 Houston, TX 77002
Nature Conservancy	No	28.42983000	4245 N Fairfax Dr, Ste 100, Arlington VA 22203 C/O Terry Sidell
Michael A. Sommer	No	9.24500000	4172 Arbor Rd. NE Mchanicstown, OH 44651

Kent State University	No	24.79461000	P.O. Box 5190, Kent, Ohio 44242 C/O Doug Kubinski
Ohi-Rail Corporation	No	6.00795000	P.O. Box 728, Steubenville, Ohio 43952 C/O Elaine Smith
TOTAL:		***612.60022000***	

Exhibit B

EXHIBIT B

Attached to and made a part of that certain Unit Operating Agreement for the Vaughn Northeast Unit

OIL AND GAS LEASE

This oil and gas lease (the "Lease") made this day of , 2014, between herein called "Lessor" (collectively if there is more than one) whose address is , and R.E. Gas Development, LLC, a Delaware limited liability company, hereinafter called "Lessee", whose address is 366 Walker Dr., State College, Pennsylvania 16801.

ARTICLE I. GRANT OF LEASE

Lessor, in consideration of the payments described herein and the covenants and agreements hereinafter contained, does hereby lease to the Lessee the land described below exclusively for the purpose of carrying on geophysical and other exploratory work, including core drilling, and the drilling, operating for, and producing of all the oil, gas, casinghead gas, casinghead gasoline and all other gases and their respective constituent vapors, liquid or gaseous hydrocarbons produced in association therewith other than as reserved unto Lessor herein below (herein called "Lease Products").

1. **Description of the Land Included in this Lease**

The land included in this Lease, herein called the "Leased Premises" is located in the State of Ohio, County of , Township of , parcel number(s) . A legal description (metes and bounds) is attached hereto as Exhibit A.

2. **Limitations on Grant of Lease**

(a) Lessor's Reserved Rights. Lessor reserves all rights not specifically granted to Lessee in this Lease. Specifically reserved by Lessor are all oil, gas and other mineral rights from the surface to the top of the Queenston Shales, other than such rights allowed to Lessee to drill through such reserved portions as are necessary for Lessee to have access to the Queenston Shales and below.

(b) Lessor Structures and Improvements. Lessor reserves the right to construct any structure or other improvements at any location selected by Lessor anywhere on the Leased Premises provided the exercise of such reserved rights by Lessor does not impair the exercise and enjoyment of rights granted Lessee hereunder. If prior to Lessee coordinating site location for any operations of Lessee's on the Leased Premises pursuant to Article V, Section (1)(q) of this lease, Lessor commences construction of a structure or other improvement on the Leased Premises, Lessee will not locate any equipment, nor conduct any operations within 300 feet of the proposed structure or improvement (within 500 feet if a habitable structure) without Lessor's prior written permission.

(c) Agricultural Activities. Lessor reserves the right to initiate or continue irrigation and agricultural activities (including timbering) on the Leased Premises. If Lessor decides to conduct agricultural activities on the Leased Premises, Lessee will accommodate Lessor's agricultural use to the extent practical in light of the rights granted to Lessee hereunder and the potential use of the property for the purposes set forth in the Lease.

(d) Other Minerals Reserved. This Lease does not include and there is hereby excepted and reserved unto Lessor all of the sulfur, coal, lignite, uranium, and other fissionable material, geothermal energy, base and precious metals, rock, stone, gravel, and any other mineral substances (excepting those described above in the Grant of Lease) presently owned by Lessor in, under, or upon the Leased Premises, together with rights of ingress and egress and use of the Leased Premises by Lessor or its lessees or assignees for purposes of exploration for and production and marketing of the materials and minerals reserved hereby.

3. **Unitization – Pooled Units**

Subject to any limitations below, Lessee is granted the right, at its option, to pool or unitize any land covered by this Lease with any other contiguous lands included with other leases as to any or all horizons or gas, oil, or other minerals described above in the Grant of Lease in this Lease so as to establish pooled units. No pooled unit for any vertical well with no horizontal drilling component which includes any portion of the Leased Premises shall exceed eighty (80) acres. No pooled unit for any well that includes lateral or horizontal well shall exceed six hundred forty (640) acres plus ten percent (10%) tolerance. Lessee shall furnish to Lessor a copy of the declaration of the unit of which any portion of the Leased Premises shall be a part, including a copy of all plats, maps, and exhibits to such application or declaration. For the purposes of this Lease, operations on and production from any lands which are included in a pooled unit with the Leased Premises shall be considered operations on and production from the Leased Premises. The payment of royalty or other like payments due under this Lease shall be proportionately reduced to such proportional share from, or attributable to, each well unit as the number of acres covered by this Lease and included in the unit bears to the total number of acres in the unit.

4. **Unit Configuration**

Insofar as possible, taking into consideration the productive limits of the producing interval, the configuration of the mineral ownership boundaries and the unit configuration for the Leased Premises, the lands included within the production unit for a well shall be in the form of a square or rectangle. Reasonable efforts shall be made by Lessee in designating production units to avoid excluding small or irregular shaped portions of the Leased Premises. Units assigned to wells producing from different zones may overlap, and shall overlap when necessary to comply with the requirements of this section. If a well is producing from more than one formation, its production unit's size and configuration shall conform to the to the limitations set forth herein or the Ohio Department of Natural Resources ("ODNR") (or other government entity with jurisdiction) rules applicable to the well which provides the largest production unit (subject to the size limitations stated above). If all or a portion of the Leased Premises is included in a pooled unit, then for purposes of this paragraph all the lands within the pooled unit shall be considered a part of the Leased Premises, and the size and configuration of the production unit(s) must conform to the requirements of this paragraph for a production unit if such unit is established by Lessee. Lessor specifically recognizes that Lessee, at Lessee's option, may drill multiple wells within a unit provided that such is permitted by the ODNR.

5. **Top Lease; First Right of Refusal**

In the event Lessor chooses to grant any remaining rights reserved by Lessor under this Lease to any party other than Lessee, then before any such grant Lessor shall provide Lessee with a writing setting forth all terms and conditions of such other grant, or a true copy of any lease or other document reflecting such grant. Lessee shall be afforded a period of at least thirty (30) calendar days following receipt of such written notice, during which time Lessee may elect to exercise this first right of refusal to assume the obligations of lessee or grantee under such other proposed grant on the same terms and conditions contained therein. Should Lessee so elect, Lessee shall notify Lessor in writing within such thirty (30) day period, and submit therewith any up-front payments or other considerations described in such proposal, along with a signed lease or grant document accordingly.

6. **Definitions**

(a) Operations. "Operations" shall mean only (a) the production of oil, gas or other liquid hydrocarbons in paying quantities subsequent to drilling or (b) the actual drilling, completing, stimulating, reworking, recompleting, deepening, plugging back or repairing of a well in search for or in an endeavor to obtain production of oil or gas, conducted in good faith and with due diligence.

(b) Division Order. Documents setting forth the proportional ownership of Lessor in Lease Products.

ARTICLE II. TERM OF LEASE

1. **Primary Term**

This Lease shall become effective on the date of signing, which date will be inserted where provided below the title of this document ("Effective Date"). Except as provided herein, this Lease shall remain in full force and effect for a period of five (5) years from such date (hereinafter referred to as "Primary Term").

2. **Extension of Primary Term**

This Lease may be extended beyond the Primary Term only under the condition that an active deep well (into regions below the top of the Queenston Shales) has been commenced to the extent that the bit has hit the ground prior to the end of the Primary Term, or by the other terms and conditions contained herein, including, but not limited to, the provisions of Article II. Section 3 below, or if at the expiration of the Primary Term, or any extension thereof, Lessee is then engaged in drilling, deepening, plugging back or reworking operations, then this Lease, as to all acreage covered hereby, shall remain in full force and effect so long as: (i) the drilling, deepening, plugging back or reworking operations are prosecuted to completion with due diligence; and (ii) no cessation of more than ninety (90) consecutive days occur from the completion of the operations and the commencement of drilling, deepening, plugging back or reworking operations of a different well; and (iii) Lessee continues to commence the drilling, deepening, plugging back or reworking of a well within ninety (90) days after the completion of operations on the prior well.

3. **Option To Renew**

Lessee is hereby given the option to extend by renewal the Primary Term of this Lease for one (1) additional three (3) year period. This option may be exercised by Lessee by notifying Lessor in writing of Lessee's intent to exercise its option and simultaneously therewith paying to Lessor in full, prepaid at any time prior to termination of the Primary Term a lease bonus for the 3 year renewal period equal to the 5 year Primary Term bonus paid by Lessee under Article III, Section 1 herein (thus,

effectively $_____ per net acre per year for the three year renewal period). Such payment shall be based upon the net acres then covered by this Lease and not at such time being maintained by other provisions hereof. Should this option be exercised, it shall be considered for all purposes as though this Lease originally provided for a Primary Term of eight (8) years.

4. **Shut-In Limitation**

In the event all wells drilled upon the Leased Premises is shut-in, the lease will continue in force and effect while production is shut in; provided, however, this Lease may not be maintained in force for any continuous period of time longer than thirty-six (36) consecutive months or forty-eight (48) cumulative months after the expiration of the Primary Term hereof solely by provision of the shut-in royalty clause. The shut-in status of any well shall persist only so long as it is necessary to correct, through the exercise of good faith and due diligence, the condition giving rise to the shut-in of the well.

5. **Pugh Clause**

(a) As to any acreage of the Leased Premises which is not included within any production unit at the expiration of the Primary Term, including any extension of the Primary Term in accordance with Article II, Section 2 and/or Section 3 of this lease, this lease shall automatically terminate and be of no further force or effect as to any acreage not within such designated units.

(b) In addition, at the end of the Primary Term or extension thereof, this Lease shall terminate as to all depths and horizons under each production unit below two hundred (200) feet below the stratigraphic equivalent of the base (bottom) of the deepest formation from which production of oil or gas in paying quantities is being maintained (or, in the case of a shut-in gas well, can be maintained) in the well on such production unit if Lessor makes a demand in writing to Lessee that Lessee commence development of such lower depths and horizons, and Lessee has not within one hundred eighty (180) calendar days following such demand, commenced development efforts at least to the extent of application for a permit for a well into such depths and horizons.

(c) Notwithstanding Article II(5)(a) and (b) above, Lessee may continue to utilize access roads, pipelines, or other surface use in effect at the time of termination described above, with Lessee deemed to hold such rights by surface easement so long as such use by Lessee shall continue. Lessee's rights shall not prevent Lessor from re-leasing rights terminated as described above, so long as Lessee's retained surface rights are not disrupted.

6. **Held by Production**

This Lease may be held in force after the termination of the Primary Term, including any extensions in accordance with Article II, Section 2 and/or Section 3 of this Lease, only by terms and conditions contained herein, including but not limited to production from, or operations conducted on the Leased Premises or any units in which the Leased Premises is included.

7. **Partial Releases**

Lessee shall have the right at any time during this Lease to release from the lands covered hereby any lands subject to this Lease and thereby may be relieved of all obligations hereafter accruing as to the acreage so released, provided that (a) Lessee may not release any portion of this Lease included in a pooled unit so long as operations are being conducted on such unit, and (b) any such partial release must release all depths in and under the lands so released except as provided in Article II, Section 5(b) above.

8. **Termination of Record**

Upon termination of this Lease as to any portion of the Leased Premises, Lessee shall promptly deliver to Lessor a plat showing the designated production units around each well and a partial release containing a description (metes and bounds and map) of the acreage and depths not retained, in form suitable for recording. In addition, Lessee shall peaceably surrender the released premises to Lessor and remove any and all facilities, equipment and machinery from the site within 90 days at Lessee's expense if the same are not necessary for continued operations as described in Article II, Section 5(c) above. Further, the affected land shall be reclaimed in accordance with Article V, Section 1(m) of this Lease.

Upon termination of this Lease or any portion thereof, or upon expiration of this Lease, Lessee shall provide Lessor documentation in recordable form of such termination or expiration within thirty (30) calendar days after the date of termination or expiration. Should Lessee fail to provide such documentation, Lessee hereby grants to Lessor the right and authority, after thirty (30) days prior written notice delivered to Lessee by certified mail at the address shown on this lease, or such other address as has been subsequently provided by Lessee to Lessor, to file an affidavit on record reflecting such expiration or termination, which filing shall be binding upon Lessee.

9. **Default**

(a) Examples of Default. In addition to any incidents of default described throughout this Lease, the occurrence of any of the following shall be deemed a default:

(i) If any creditor of Lessee, its agents, and/or assigns, shall take any action to execute on, garnish or attach the assets of Lessee located upon the Leased Premises, or

(ii) If a request or petition for liquidation, reorganization, adjustment of debts, arrangement, or similar relief under the bankruptcy, insolvency or similar laws of the United States or any state or territory thereof, or any foreign jurisdiction shall be filed by or against Lessee, or any formal or informal proceeding for the reorganization, dissolution or liquidation or settlement of claims against, or winding up of affairs of Lessee; or the garnishment, attachment, or taking by governmental authority of any collateral or other property of Lessee.

(b) Notice of Default or Breach of Lease. In the event Lessor considers that Lessee is in default under this Lease or that Lessee has not complied with its obligations hereunder, both express and implied, including the non-payment of royalty or rent, Lessor shall notify Lessee in writing, setting out specifically in what respects Lessee is in default or Lessee has breached this Lease. Lessee shall then have forty-five (45) days after date of receipt of said notice within which to meet or commence to meet all or any part of the breaches alleged by Lessor, or to correct any default. The service of said notice shall be precedent to the bringing of any claim or action by Lessor on this Lease for any cause, and no such claim or action shall be brought until the lapse of forty-five (45) days after service of such notice on Lessee. Neither the service of said notice nor the doing of any acts by Lessee aimed to meet all or any of the alleged breaches or the default shall be deemed an admission or presumption that Lessee has failed to perform all of its obligations hereunder.

(c) Termination for Default. Upon the occurrence of the event of default, and after notice thereof and opportunity but failure to cure or commence to cure as set forth above, the Lease shall be terminated and the Lessee shall become a tenant at will for the conduct of operations on the Leased Premises. If evicted, Lessee agrees to surrender possession of the Leased Premises, or of the portion of the Leased Premises included in such termination. If Lessee should fail to deliver documents reflecting termination or expiration of this Lease or if Lessee fails to surrender possession of the Leased Premises as required under this Lease, Lessor may institute proceedings necessary to clear title or to take possession, and in that event, in addition to all other relief that may be granted to Lessor, Lessor shall be entitled to recover against Lessee all attorney fees, investigation charges, court costs and expert fees thus expended by Lessor.

(d) Other Remedies. Upon default by Lessee, Lessor shall be entitled to exercise any and all remedies available at law, in equity or otherwise, each such remedy being considered cumulative. No single exercise of any remedy set forth herein shall be deemed an election to forego any other remedy.

ARTICLE III. PAYMENT TO LESSOR

1. **Bonus Payment**

Lessee agrees to pay Lessor a signing bonus of ____ Thousand _____ Hundred Dollars ($_____.00) for each net acre contained within the Leased Premises (effectively $_____.00 per acre per year for the Primary Term). The bonus payment shall be paid to Lessor within ninety (90) days following the date Lessee signs this Lease, subject to Lessee's determination that title to the Leased Premises is acceptable to Lessee in accordance with standards previously agreed to by the parties ("Due Diligence"). By Lessor's signing this Lease, Lessor promises to proceed with this Lease and be bound thereby, conditioned only upon Lessee's paying the full amount of the bonus payment (subject to the reduction for title failure) within ninety calendar day period. A Memorandum of Lease shall be recorded upon issuance of the full bonus payment. All bonus payments, rentals and royalty payments made to Lessor under this Lease are non-refundable. Failure by Lessee to pay the bonus payment within the time described herein shall render this Lease null and void.

2. **Royalty Payment**

(a) Percentage. The royalties payable to the Lessor under this Lease shall be on a well by well basis. As to each and every well completed as a producer of oil and/or gas on the Leased Premises or on lands pooled therewith, the royalties paid to Lessor shall be Twenty percent (20%) of all the oil, gas and casinghead gas and casinghead gasoline removed or recovered from the Leased Premises or, at Lessor's option (which shall be presumed to be exercised unless Lessor advises Lessee to the contrary prior to any applicable production month) the Gross

Proceeds (as hereinafter defined in paragraph (d) of the total gross production attributable to the applicable well.

(b) Determination of Royalty Amount

Lessee covenants and agrees:

(i) To sell and execute division orders for the sale of all oil, condensate, casinghead gasoline and liquid hydrocarbons produced and saved by Lessee from the Leased Premises, including Lessor's share with Lessee's share and shall pay Lessor royalty (in accordance with paragraph (a) above), where applicable, based on the Gross Proceeds paid to Lessee from the sale. From time to time, at the option of Lessor, to deliver or cause to be delivered to the credit of Lessor, in the pipeline or tanks to which Lessee may connect its wells, percentages (in accordance with paragraph (a) above) of all oil, condensate, casinghead gasoline and liquid hydrocarbons produced and saved from the Leased Premises;

(ii) To pay Lessor on gas and casinghead gas produced from the Leased Premises, percentages of proceeds (in accordance with paragraph (a) above) based on:

(1) the Gross Proceeds paid to Lessee from the sale of such gas and casinghead gas when sold by Lessee in an arms-length sale to an unaffiliated third party, or if sold to an affiliate, the price upon which such gas and casinghead gas was sold so long as such price is not less than that which would be received from a sale to an unaffiliated third party in an arms length transaction considering the volume available, quality, location and length of term of the proposed sale; or,

(2) the market value at the point of use, when used by Lessee.

(iii) To pay Lessor on all other byproducts and/or constituents sold or utilized by Lessee from the Leased Premises, in accordance with paragraph (a), the percentages of the Gross Proceeds received by Lessee.

(c) Affiliates. For purposes of this Lease, an "Affiliate of Lessee" is any corporation, firm or other entity in which Lessee, or any parent company, subsidiary or affiliate of Lessee, owns an interest of more than ten percent (10%) whether by stock ownership or otherwise, or over which Lessee or any parent company or Affiliate of Lessee exercises any degree of control, directly or indirectly, by ownership, interlocking directorate, or in any other manner; and any corporation, firm or other entity which owns any interest in Lessee, whether by stock ownership or otherwise, or which exercises any degree of control, directly or indirectly, over Lessee, by stock ownership, interlocking directorate, or in any other manner.

(d) Gross Proceeds. For purposes of this Lease, "Gross Proceeds" means the total consideration paid for the sale of oil, gas, casinghead gas, casinghead gasoline, associated hydrocarbons, and marketable by-products, produced from the Leased Premises or payments for future production or delivery of production at a future time, or sums paid to compromise claims relating to payment obligations associated with the sale of oil, gas, casinghead gas, casinghead gasoline, associated hydrocarbons, and marketable by-products with the following exceptions:

(i) If gas produced from the Leased Premises is processed for the recovery of liquefiable hydrocarbon products prior to sale, and if such processing plant is not owned by Lessee or any Affiliate of Lessee, Lessor's royalty shall be calculated based upon the consideration paid to Lessee from Lessee's sale of such liquefiable hydrocarbons and residue gas.

(ii) If gas produced from the Leased Premises is processed for the recovery of liquefiable hydrocarbon products prior to sale, and if such processing plant is owned by Lessee or any Affiliate of Lessee, the price upon which royalty shall be based shall not be less than that which would be obtained from an unaffiliated third party processor in an arms length transaction involving similar gas volumes, quality, location and length of term of the contract.

(iii) If oil or gas production from the Leased Premises is produced in a plant for the extraction of gasoline, hydrocarbons or other products, the value of the Gross Production shall, for purposes of determining royalty due, never be less than if such gas had not been processed.

(iv) Lessee shall pay to the Lessor royalty at the applicable royalty rate (paragraph (a)) on any monetary settlement received by Lessee from any breach of contract by

Lessee's purchaser relating to the marketing, pricing, or taking of oil or gas production from the Leased Premises.

(e) Costs of Production. Lessee shall place oil and gas produced from the Leased Premises in marketable condition and shall market same as agent for Lessor. Except as expressly provided in (d) above, Lessor's royalty shall not be charged directly or indirectly with any expense required to make gas marketable, including but not limited to the following: expenses of production, gathering, dehydration, compression, manufacturing, processing, treating, transporting or marketing of gas, oil, or any liquefiable hydrocarbons extracted therefrom.

(f) When Royalties Must Be Paid. All royalties that may become due hereunder shall commence to be paid on the first well completed on the Leased Premises within one hundred-twenty (120) days after the first day of the month following the month during which any well is completed and commences production into a pipeline or oil into transport for sale of such production. On each subsequent well, royalty payments must commence within ninety (90) days after the first day of the month following the month during which any well is completed and commences production into a pipeline for sale or oil into transport of such production. Thereafter, all royalties on oil shall be paid to Lessor on or before the last day of the second month following the month of production, and all royalties on gas shall be paid to Lessor on or before the last day of the third month following the month of production. Royalties not paid when due shall bear interest at the prime rate as published by the Wall Street Journal as of the date payment is first due, plus five percent (5%) per annum.

(g) Delinquency in Payment. If royalty is not paid by the date due, Lessor may give Lessee written notice of nonpayment of royalty, by certified mail, return receipt requested, and if Lessor's royalty is not paid on or before expiration of forty-five (45) days after Lessee's receipt of such notice, interest shall commence accruing on the due date and be payable by Lessee to Lessor on the delinquent balance at the rate of five percent (5%) per annum above prime interest rate (as defined above). However, Lessee may avoid any interest obligation if prior to the expiration of such forty-five (45) days Lessor is furnished an attorney's written opinion citing a bona fide dispute or a good faith question of royalty entitlement (either as to ownership or as to amount), Lessee pays to Lessor the undisputed portion and Lessee pays the disputed royalty to an escrow account to be administered by a trustee agreed to by both parties or by the American Arbitration Association, if such trustee cannot be found. If practical, such escrow funds shall be invested in interest-bearing accounts pending resolution of the entitlement issue, with the interest to follow the distribution of escrow.

(h) Split Royalties. If, by reason of assignments of undivided interests in Lessee's interest in this lease, more than one party becomes entitled to a portion of Lessee's share of gas produced from any well on the Leased Premises, and if any or all of such co-owners elect to take their share of gas in kind, resulting in split-stream deliveries of gas to different purchasers, Lessor shall be entitled, at Lessor's election, to require the operator of the Leased Premises to pay and account to Lessor for all royalties due on gas production from the well or wells from which split-stream deliveries are being made, so that Lessor shall not be required to receive royalties from more than one (1) purchaser or party on the same gas stream. If Lessor exercises such election, the operator of the Leased Premises (or of that portion of the Leased Premises upon which the split-stream production is located) shall pay to Lessor all royalties due on such gas production and shall provide production statements from all purchasers of such gas showing the amounts sold and the price paid therefore, with any applicable adjustments. Such election, if made, shall not relieve any party otherwise liable for payment of royalties from such liability, and all parties owning an undivided interest in all or any portion of the Leased Premises shall be and remain jointly and severally liable for the payment of all royalties due on production therefrom.

3. **Audit Rights**

Lessee grants to Lessor or Lessor's designee the right at Lessor's expense, to examine, audit, copy or inspect books, records, and accounts of Lessee pertinent to the audit purpose of verifying the accuracy of the reports and statements furnished to Lessor, and for checking the amount of payments lawfully due to Lessor under the terms of this agreement. In exercising this right, Lessor shall give reasonable notice to Lessee of its intended audit and such audit shall be conducted during normal business hours at the office of Lessee at the sole cost and expense of Lessor. Lessor shall not have the right to audit more than once every twelve (12) month period. However, if the amount of exceptions or deficiencies in royalty payments revealed by the audit equal or exceed 125% of the cost and expense of the audit, then the Lessee shall bear the cost and expense of the audit and all monies due as a result of the audit findings (audit exceptions, costs, and expenses) shall be payable within 30 days of the final determination of the amounts due.

4. **Security Interest**

Lessor hereby retains a security interest in (a) the portion of the oil and gas produced and saved from the Leased Premises or lands pooled therewith associated with the royalty payments due under and pursuant to this Lease, and (b) the portion of the proceeds of sale of such oil and gas and all accounts arising therefrom associated with the royalty payments due under and pursuant to this Lease (the "Collateral"), to secure Lessee's payment of royalties and compliance with the other terms and provisions of this Lease. In the event of default by Lessee, Lessor shall have the right to take possession of the Collateral, and to receive the proceeds attributable thereto and to hold same as security for Lessee's obligations or to apply it on the amounts owing to Lessor hereunder. The collateral includes oil, casinghead gas, casinghead gasoline, condensate, distillate, gas and natural gas liquids, including any hydrocarbon or non-hydrocarbon minerals or products that may be associated with oil or gas to be financed at the wellhead of the wells and accounts from the sale thereof. This Lease, or memorandum thereof, (which shall contain the provisions of this paragraph) when filed in the real property records where the Leased Premises are located, shall constitute a financing statement. Additionally, Lessee agrees to cooperate with any UCC-1 filing requested by the Lessor.

5. **Payment to Lessor in Lieu of Free Gas**

In the event any well is drilled upon the Leased Premises or any portion thereof, and the Lessor is the owner of the surface where the well is located, Lessee shall pay annually to Lessor in lieu of any right to free gas a sum equal to the value of the first three hundred fifty thousand (350,000) cubic feet of natural gas produced from each such well, up to a maximum of four (4) wells. Said amount shall be paid in quarterly installments, with the value based upon the prior twelve (12) months average price received by Lessee for gas sold from the Leased Premises, as of January 1 of each calendar year in which the payments are made.

6. **Shut-In and Minimum Royalties**.

(a) Payment Amount. If all wells on the Leased Premises capable of producing gas or gas and condensate in paying quantities, are shut-in for any reason and neither gas nor condensate is sold or used off the Leased Premises (which wells are herein sometimes called a "shut-in" gas well), for longer than sixty (60) consecutive days, Lessee shall pay or tender to Lessor, as shut-in gas well royalty, a yearly sum (payable quarterly or at the end of the shut-in period, whichever first occurs) equal to Twenty-Five and 00/100 Dollars ($25.00), indexed to the Producers Price Index for All Commodities issued for the anniversary month by the U.S. Department of Labor, Bureau of Labor Statistics, and recalculated every five (5) years thereafter, multiplied by the number of acres subject to this Lease at the time such payment is made. The first such payment of shut-in gas well royalty is to be made on or before thirty (30) days after the end of the above referenced sixty (60) day period. Succeeding payments may be made annually thereafter on or before the anniversary of the due date of such payment. Notwithstanding the making of such shut-in gas well royalty payments, Lessee shall be and remain under the continuing obligation to (a) use all reasonable efforts to find a market for said gas and to commence or resume marketing same when a market is available, (b) reasonably develop the lands then subject to this Lease, and (c) drill all such wells on the lands then subject to this lease as may be reasonably necessary to protect same from drainage by wells on adjoining or adjacent lands.

(b) Limited Duration. After expiration of the Primary Term, or extension thereof, the portion of the Leased Premises being held by the Lessee solely by the payment of shut-in royalty, shall be released after a period of thirty-six (36) consecutive months or a cumulative total of forty-eight (48) months, unless given written consent by the Lessor to continue the well to be shut-in.

7. **Sitting/Spud Fee**

Lessee shall pay to Lessor in consideration for damages to the Leased Premises the sum of Thirty Thousand Dollars ($30,000.00) prior to commencement of drilling of any well on the Leased Premises, such payment to be considered a "pad" payment. A "pad" for purposes hereof is defined as a preparation designed to facilitate one or more wells in a concentrated surface area not to exceed five (5) acres. If Lessee should locate more than one pad on the Leased Premises, a separate pad payment shall be paid for each pad. Lessee shall not be required to pay any separate per-well payment for additional wells drilled in sequence after the completion of drilling the initial well on a pad. In the event Lessee reclaims the well location pad after drilling the initial well or group of wells as the case may be, and then at any time thereafter returns to the pad for the purpose of drilling an additional well or wells on that pad, Lessee shall pay to Lessor an additional full pad payment. Furthermore, upon prior separate written consent and agreement of Lessor, Lessee shall pay Lessor an amount of at least Ten Thousand Dollars ($10,000.00)

for each post-drilling pit, pond or other in-ground containment excavation in which fluids or liquids pertaining to and involved with operations are to be stored (other than drilling pits) located on the Leased Premises.

8. **Ad Valorem Taxes**

Lessee shall pay all Ad Valorem taxes or assessment of Lease Products or Lease Product reserves made by any local, state or federal entity or governmental unit attributable to, or resulting from the assessment of Lease Products from the Leased Premises regardless of the percentage of royalty paid to Lessor. Lessee shall, in addition, pay any and all severance taxes or other excise taxes arising out of or relating to this Lease and/or the Lease Products.

9. **Property Taxes**

In the event real property taxes pertaining to or attributable to the Leased Premises are increased in any manner by reason of the operations of Lessee on the Leased Premises, including, but not limited to any structures or improvements constructed on the Leased Premises, Lessee shall be responsible for the amount of any such tax increase attributable to such operations or improvements. Lessee shall reimburse Lessor for the amount of such increase within thirty (30) days after Lessor provides Lessee with written documentation reflecting such increase and the basis thereof.

10. **Agricultural Programs**

In the event the Leased Premises is subject to any federal, state, local and/or agricultural assistance program (CAUV, CRP or Forest Land Program, including any interest and penalties thereon), and any roll-back or reimbursement or recoupment or retroactive assessment is made against the Leased Premises on account of, arising out of, or relating to the operations of Lessee on the Leased Premises, Lessee shall be responsible for paying any and all of such amounts, but only insofar as such amounts imposed result from operations on the portion of the Leased Premises actually utilized in Lessee's operations. Lessee shall reimburse Lessor for the amount of such increase within thirty (30) days after Lessor provides Lessee with written documentation reflecting such increase and the basis thereof.

11. **Method of Payments**

All rents and royalties (except payment by gas in kind at the election of Lessor as may be provided herein) and any and all sums due hereunder from Lessee to Lessor shall be paid at the option of Lessee by one of the following methods:

(a) By check tendered directly from Lessee to Lessor at Lessor's address as stated in this Lease.

(b) As soon as Lessee is capable, and upon written election by Lessor, by direct deposit by depositing the payment to the credit of the Lessor in the bank and account number as provided in writing by Lessor to Lessee prior to such payment (which bank shall continue as depository for all sums payable hereunder until any subsequent written notice otherwise is provided by Lessor to Lessee).

No payment not timely made or not made in the correct amount shall constitute a waiver by Lessor of any rights or remedies of Lessor under this Lease. A payment submitted electronically shall be considered timely paid if such payment is successfully transmitted to Lessor's account on or before the due date. A payment not submitted electronically shall be considered timely paid if delivered to the Lessor on or before the applicable due date or if deposited in a postpaid, properly addressed wrapper with a post office or official depository marked as so deposited by the United States postal service before the applicable due date.

12. **Due Date**

Any payment hereunder from Lessee to Lessor as required under this Lease (such as royalty payments or shut-in fee) shall unless otherwise specifically provided in this Lease be paid within thirty (30) calendar days following the end of the month or annual period which constitutes the period of time on which the payment is based.

13. **Default**

Failure of Lessee to timely pay Lessor any amounts required under this Lease shall be deemed a default by Lessee.

ARTICLE IV. TITLE ISSUES

1. **Lessor's Representation Regarding Title to Leased Premises**

Lessor makes no representation or warranty as to Lessor's title to the Leased Premises other than that Lessor warrants and represents that Lessor is not aware of any unrecorded encumbrances, or encroachments or conditions affecting title to the Leased Premises other than those that would be observed on a location survey. It shall be Lessee's burden and obligation to assure itself of the quality of title to the Leased Premises. Upon this Lease taking effect (thus upon Lessor's receipt of the bonus payment), to the extent Lessee's obligations under this Lease are diminished or affected by any title encumbrance on the Leased Premises, including but not limited to any mineral lease or mortgage of record that existed as of the date this Lease became effective, provided however, in the event that by operation of law Lessee is no longer afforded protection under Ohio Revised Code Section 1509.31(D), then Lessee shall have a right to demand Lessor obtain a subordination from the mortgage holder and/or Lessee shall: (i) be afforded the right to pay proceeds payable to Lessor under this Lease to the mortgagee; and/or (ii) make payment in full for amounts due mortgagee in the event Lessor defaults in its payments to mortgagee, and deduct such amounts from future payments payable to Lessor pursuant to this Lease.

2. **Lessor Encumbrances After Lease Effective**

Any mortgage, lease, easement, or other interest granted by Lessor voluntarily after this Lease becomes effective shall be subject to this Lease. In the event Lessor should become in default of any obligation of Lessor that is secured by any lien or encumbrance on the Leased Premises during the term of this Lease, Lessee may, at its option, pay and discharge any such obligation on behalf of Lessor after Lessee gives Lessor at least thirty (30) calendar days prior written notice of such intention to pay, and if, after Lessor's receipt of such notice, Lessor makes no arrangement otherwise to address the amount in default. Should Lessee make such payment on behalf of Lessor, or by any other lawful means, Lessee shall, in addition to any other legal remedies, be entitled to recover from Lessor by deduction from any future payments to Lessor, with interest at Ohio's legal rate for judgments and amounts actually paid by Lessee for such obligations.

3. Liens against Lessee

In the event any lien or encumbrance (except and not including any lien or encumbrance in the nature of a security interest conveyed by Lessee for purposes of financing operations on the Leased Premises) is filed against the Leased Premises out of or pertaining to the operations by Lessee, Lessee shall within forty-five (45) calendar days following the date such lien or encumbrance is recorded cause such lien or encumbrance to be released from record, and Lessee shall provide Lessor written evidence of such release. Lessee's contention that the lien or encumbrance arises from a bona fide dispute shall not be grounds for Lessee's failure or refusal to remove the lien or encumbrance as required herein.

ARTICLE V. IMPACTS AND EFFECTS

1. **Surface Issues**

The following provisions shall apply under this Lease:

(a) Compliance with Laws. Lessee shall be responsible for any and all acts or matters arising out of or pertaining to Lessee's operations on the Leased Premises whether reasonably foreseen or unforeseen. All operations conducted by Lessee shall comply with federal, state and local law, statute, regulation and/or order, and the terms of this Lease, whichever is more strict. Lessee's failure to comply with any federal, state or local law or any regulation or order of any enforcement agency having jurisdiction over Lessee's operations shall be a default under this Lease.

(b) Degree of Care. Lessee shall at all times use the highest degree of care utilized in the industry in the region where the Leased Premises is located (such region including Ohio, Pennsylvania and West Virginia), and use all reasonable care and safeguards to prevent its operations from:

(i) causing or contributing to soil erosion;

(ii) polluting or contaminating any environmental medium including the surface or subterranean soils and/or waters and ambient atmosphere in, on, under, or about the Leased Premises and surrounding properties;

(iii) decreasing the fertility of the soil;

(iv) damaging crops, native or cultivated grasses, trees, or pastures;

(v) harming or in any way injuring animals, whether domestic or wild on the Leased Premises;

(vi) damaging buildings, roads, structures, improvements, farm implements, gates or fences.

(vii) Lessee shall dispose of salt water, frac water or liquid waste oil and other waste in accordance with the rules and regulations of the Ohio Department of Natural Resources and all other applicable governmental authorities.

(viii) Lessee shall clean up, remove, remedy and repair any soil or ground water contamination and damage caused by Lessee or release of any contaminant in, on, under, or about the Leased Premises, whether or not caused by the negligence of Lessee. Lessee shall pay to any person beneficially interested in the harmed object all damages caused by Lessee's operations.

(c) Disposal. Lessee shall not use the Leased Premises for the permanent disposal of any drill cuttings, or the storage or disposal of residual wastes. No disposal wells or any other devices or means of disposal of wastes or drilling liquids are permitted on the Leased Premises.

(d) No Gas Storage. Lessee shall have no right to use the Leased Premises or any portion thereof, surface or subsurface, for gas, oil, or brine storage purposes.

(e) Replace Barriers and Drain Tile. Lessee shall promptly replace any barriers, including but not limited to fences, gates and walls removed by Lessee during its operations on the Leased Premises. Lessee shall construct gates on all access roads upon written request from Lessor, and provide an access key or double lock system allowing access by both Lessor and Lessee. Gates are to be closed and locked when Lessee personnel are not on the Leased Premises. Lessee shall promptly replace any drain tile removed or damaged by Lessee during its operations.

(f) Timber. Lessee shall notify Lessor in writing at least forty-five (45) calendar days prior to any removal by Lessee of marketable timber (marketability to be within the discretion of Lessor). At Lessor's option, Lessor may choose to harvest timber, or Lessor may require an appraisal of the timber by a qualified independent appraiser, at Lessee's expense, and Lessee shall pay Lessor the appraised value for the timber identified prior to its removal by Lessee.

(g) Use of Surface or Subsurface Water. Lessee is not permitted to use water from Lessor's surface wells, ponds, lakes, springs, creeks, water courses or reservoirs on the Leased Premises without prior written consent and agreement with Lessor, separate from this Lease. Lessee shall not drill or operate any water well, take water, or inject any substance into the subsurface, or otherwise use or affect water in subsurface water formations.

(h) Crops. Lessee will plan its surface operations in a manner that will reduce or minimize intrusion into crop fields. In the event such an intrusion cannot be avoided, Lessee shall compensate Lessor for the damage or loss of growing crops at current market value.

(i) Fencing by Lessee.

Lessee shall

(i) fence all wells and well sites, tank batteries, pits, separators, drip stations, pump engines, and other equipment placed on the Leased Premises with a fence capable of turning livestock;

(ii) keep such fences in good repair; and

(iii) keep all gates and fences closed at all times, or in lieu of gates, install cattle guards.

(j) Pipelines and Excavations.

The top of any pipelines installed in Lessee's operations shall be a minimum of forty-eight (48) inches from the surface where practical in areas subject to agricultural cultivation, and below local freeze levels in any event. Lessee shall utilize a double ditch method for construction of pipelines as well as any other excavation (such as drilling pits) on the Leased Premises, in which topsoil is segregated from subsoil, and when the excavation is backfilled, the subsoil is replaced first and the topsoil is placed on the top. Lessor shall have the right, subject to forty-five (45) days advance notice to Lessee, to construct and lay drainage and other utility pipes, wires, and lines across or under Lessee pipelines in a manner which does not interfere with Lessee's use thereof and Lessor's construction of which strictly complies with Lessee's construction and safety standards.

(k) Roads. Roadways or drives constructed by Lessee on the Leased Premises during active drilling or development phases shall not exceed fifty (50) feet in width, or a minimum

width required to perform required operations without prior written consent of Lessor, which consent shall not be unreasonably withheld, conditioned or delayed. In the event of a producing well on the Leased Premises, any permanent access road for well servicing purposes shall be a maximum width of twenty (20) feet, or a minimum width required to perform maintenance and other operations without prior written consent of Lessor, which consent shall not be unreasonably withheld, conditioned or delayed.

Lessee agrees to construct or maintain all roads used by it in good repair utilizing shale, gravel, or crushed stone, culverts, and supports as necessary to provide normal use under all reasonable weather conditions, and when such roads are no longer being used, Lessee agrees upon Lessor's request, to remove toppings and to restore the surface as nearly as possible to its former condition. Lessee shall not use shale, gravel or crushed stone from the Leased Premises without the prior written consent of Lessor. Lessee shall prevent its employees, agents and contractors from operating vehicles in a negligent manner or at speeds in excess of 25 miles per hour while on the Leased Premises.

(l) Utilities. Lessee's rights hereunder may include burying or otherwise constructing necessary phone, electric, and data collection lines on the Leased Premises in connection with production from the Leased Premises, but such rights may not be assigned to a utility company, pipeline company, or anyone else who owns no interest in the Leased Premises or is otherwise not contracted or affiliated with Lessee for the purpose of carrying out the rights and obligations under this Lease. The right to use said pipelines terminates when production from the Leased Premises ceases and all wells associated therewith are plugged and abandoned.

(m) Restoration of Leased Premises. On completion of any operations on the Leased Premises, Lessee shall restore the Leased Premises to as near as practical the pre-drilling conditions, remove all debris, equipment and personal property which Lessee placed on the Leased Premises (except for equipment needed for the operation of producing wells, which shall be removed within six (6) months after a well permanently ceases to produce). For purposes hereof, "completion of operations" shall mean the completion of drilling operations, including initial stimulation, as to equipment and facilities relating to drilling, including any associated pits, tanks (or other excavations or facilities no longer needed for production), or in the event of a dry hole, all such facilities. Lessee shall keep the Leased Premises in a neat and clean condition. "Completion of operations" with respect to a multi-well pad shall not occur until the last well drilled from the pad has been completed.

(n) Hazardous Materials. Lessee shall not use, dispose of or release on the Leased Premises or permit to exist or to be used, disposed of or released on the Leased Premises as a result of its operations any substances (other than those Lessee has been licensed or permitted by applicable public authorities to use on the Leased Premises) which are defined as "hazardous materials", "toxic substances" or "solid wastes" in federal, state or local laws, statutes or ordinances. Should any pollutant, hazardous material, toxic substances, contaminated waste or solid waste be accidentally released on the Leased Premises, Lessee shall notify Lessor immediately after notifying the applicable governmental body of such event. Lessee shall be responsible for and timely pay all costs of clean-up, remediation, and other costs related to and arising from the event, including but not limited to penalties.

(o) Firewalling and Maintenance of Production Equipment. Dikes, firewalls or other methods of secondary containment must be constructed and maintained at all times around all tanks, separators and receptacles so as to contain a volume of liquid equal to at least 1.25 times the total volume of such tanks, separators and other receptacles located within the boundaries of the firewall. Lessee shall keep all tanks and other equipment at each well location painted, and shall keep the well site and all roads leading thereto free of noxious weeds and debris.

(p) Pits. Lessee shall have no right to dig any pits other than drilling pits (not storage pits) on the Leased Premises except with Lessor's prior written consent. Any pit so permitted shall: (i) conform to all applicable regulatory requirements (state, local and federal), (ii) be planned to be deep enough to allow at least thirty-six (36) inches of back fill over the liner after grading to surrounding pre-drill contour and (iii) promptly after completion of operations any backfill and the liners shall be removed and the pits shall be drained, prepared for burial, back filled, graded and planted within ninety (90) days (weather permitting). Lessee shall immediately notify Lessor and all applicable regulatory authorities if any pit lining is torn, punctured, or otherwise breached, allowing any fluid contained in a pit or designated to be contained in a pit to seep, leak or overflow through or around the liner.

(q) Mutual Agreement as to Location of Operations. Before commencing surface disturbing operations on the Leased Premises, Lessee and Lessor shall mutually agree in writing on the location of all wells, roads, pipelines, gates, and other equipment so as to minimize disruption of Lessor's use of the Leased Premises. To the degree practicable, operations shall be designed and laid out to be concentrated in a single area so as to avoid unnecessary utilization of surface areas. To the degree practicable, pipelines and roadways are to be within the same corridor. Lessor's agreement shall not be unreasonably withheld, conditioned or delayed assuming the preceding standards are followed. Without a separate written agreement between Lessor and Lessee, no pump stations, tank batteries, pipelines, dryers or separators shall be located on the Leased Premises unless they are for the sole purpose of transporting, processing or treating gas from the Leased Premises or lands pooled or unitized therewith, and those shall not be located nearer than, (and no well shall be drilled nearer than) five hundred (500) feet from any dwelling or residential structure or three hundred (300) feet from any barn or other non-residential structure then on the Leased Premises without the Lessor's written consent. There shall be no compressors located on the Leased Premises, except those for the sole purpose of compressing gas from the Leased Premises and lands pooled therewith, without a prior separate written agreement with Lessor. Any compressor operations permitted herebyshall be designed and installed utilizing means to minimize noise, including but not limited to, sound enclosures and barriers, and electrical motors if reasonably possible.

2. **Water Quality**

Lessee shall maintain the quality and quantity of Lessor's water supply to be measured by testing any supply within 1,500 feet of Lessee's proposed well, pit, pond, roadway, pipeline, pumping or processing facilities, or other facilities installed by Lessee prior to and at the completion of drilling or other operations on the Leased Premises or on any land in the unit of which any of the Leased Premises is a part and as deemed necessary by Lessor due to changes in flow (subject to natural seasonal variations) or quality, including but not limited to color, smell or taste. Should Lessor's water supply be polluted or reduced as a result of Lessee's operations, Lessee shall take any and all steps to restore water quality and quantity to its pre-existing condition or fully compensate Lessor for the damage and inconvenience caused thereby. During the period of remediation, Lessee shall supply Lessor with an adequate supply of potable water consistent with Lessor's use of the damaged water supply prior to Lessee's operation. Any pollution or reduction of any water supply after any operations commence will be presumed to be the result of Lessee's operation unless Lessee can prove otherwise, with Lessee having the burden of proof by a preponderance of the evidence. Until Lessee can prove otherwise as to cause, Lessee shall provide the required replacement supply, beginning immediately upon Lessor's providing evidence to Lessee of the water quality and quantity condition causing concern.

Testing of Lessor's water supply shall be conducted by an independent testing laboratory approved in writing by Lessor qualified to test water for the entire array of chemicals and agents utilized by Lessee in its operations. Lessor's approval shall not be unreasonably withheld, conditioned or delayed so long as the testing laboratory is so qualified, and is not an Affiliate as defined in Article III, Section (3)(c) of this Lease. The burden shall be upon Lessee to provide evidence of all such chemicals and agents in order for the testing agent to adequately test the water. Lessee shall pay all costs of testing. Lessor shall be provided complete copies of any and all testing results and data, and shall have full rights to contact the testing lab for inquiry and information.

3. **Notice to Drill**

Lessee shall provide at least ten (10) calendar days prior written notice to Lessor before Lessee commences any actual drilling (bit in the ground) on the Leased Premises.

ARTICLE VI. LIABILTY ISSUES

1. **Indemnity**

Lessee agrees to defend, indemnify and hold harmless Lessor and Lessor's heirs, successors, representatives, agents and assigns ("Indemnitees"), from and against any and all claims, demands and causes of action for injury (including death) or damage to persons or property or fines or penalties, or environmental matters arising out of, incidental to or resulting from the operations of or for Lessee or Lessee's servants, agents, employees, guests, licensees, invitees or independent contractors, and from and against all costs and expenses incurred by Indemnitees by reason of any such claim or claims, including attorneys' fees; and each assignee of this Lease, or an interest therein, agrees to indemnify and hold harmless Indemnitees in the same manner provided above. Such indemnity shall apply to any claim arising out of operations conducted under or pursuant to this Lease, however caused and whether based upon negligence, contract, statute, strict liability or other grounds or reasons, provided, however, such indemnity shall not apply to claims arising out of the negligence of Lessor, Lessor's guests or invitees not arising out of, incidental to, or resulting from, the operations of or for Lessee.

2. **Insurance**

(a) A company licensed by the Ohio Department of Insurance to do business in the state shall underwrite all policies required by this Lease. Provided however, such insurance requirements may be met by a combination of self-insurance, primary and excess insurance policies.

(b) Lessee shall assure that Lessee and any person acting on Lessee's behalf under this Lease carries the following insurance with one or more insurance carriers at any and all times such party or person is on or about the Leased Premises or acting pursuant to this Lease, in such amounts as from time to time reasonably required by Lessor.

(i) Workers Compensation and Employer's Liability Insurance;

(ii) Commercial General Liability and Umbrella Liability Insurance; ($5,000,000.00 Minimum coverage)

(iii) Business auto and Umbrella Liability Insurance; ($5,000,000.00 Minimum coverage)

(iv) Environmental Liability; ($5,000,000.00 Minimum coverage)

Within six (6) months of the five (5) year anniversary date of this Lease and each subsequent fifth (5th) anniversary, Lessor may request in writing and Lessee shall agree to institute new insurance amounts based on the original insurance amounts indexed to the Producers Price Index for All Commodities, issued for the anniversary month by the U.S. Department of Labor, Bureau of Labor Statistics. Should such index be discontinued and/or replaced, a conversion to a substitute or replacement index shall be accomplished using normally accepted conversion factors. Such adjusted amounts shall be rounded off to the nearest Thousand Dollar ($1,000) amount. Failure of Lessor to request an adjustment for any five (5) year period shall not preclude a full adjustment at a subsequent five (5) year anniversary if requested.

The Lessee shall cause Certificates of Insurance evidencing the above coverage to be provided promptly upon request to Lessor, or to such other representative of Lessor as Lessor may from time to time designate. The insurance policies required under this section, shall cover the Lessor as additional insureds with regard to the Leased Premises, and shall reflect that the insurer has waived any right of subrogation against the Lessor. Failure to comply with this Insurance section shall be basis of default and all operations on the Leased Premises shall cease immediately.

ARTICLE VII. OTHER MATTERS

1. **Arbitration**

Any questions concerning this Lease or performance thereunder shall be ascertained and determined by three disinterested arbitrators, one thereof to be appointed by the Lessor, one by the Lessee and the third by the two so appointed, and the majority vote award of such collective group shall be final and conclusive. In the event that the two appointees of Lessor and Lessee cannot agree upon the third, the parties shall thereupon submit to the rules and procedures of the American Arbitration Association. Arbitration proceedings shall be conducted at the county seat of the county where the leased property is located or such other place as the parties to such arbitration shall all mutually agree. Each party shall pay its own arbitrator and the costs of the third arbitrator (umpire) shall be borne equally. The determination rendered by the arbitrators may be entered in the court of general jurisdiction in the county where the Leased Premises is located.

Either party may apply to the arbitrators seeking injunctive relief until the arbitration award is rendered or the controversy is otherwise resolved. Either party also may, without waiving any remedy under this agreement, seek from the court of general jurisdiction in the county where the Leased Premises is located any interim or provisional relief that is necessary to protect the rights of property of that party, pending the establishment of the arbitration tribunal and its decision.

The arbitrators shall consider dispute issues in accordance with and subject to the terms of this Lease.

2. **Force Majeure**

Should Lessee be prevented from complying with any express or implied covenant of this Lease (except payment of money), from conducting drilling (including fracturing) or reworking

operations thereon or from producing oil and gas therefrom by reason of inability to obtain or to use equipment or material, or by operation of force majeure, any federal or state law or any order, rule or regulation of governmental authority ("force majeure event"), then while so prevented Lessee's obligation to comply with such covenant shall be suspended, and Lessee shall not be liable in damages for failure to comply therewith; and this Lease shall be extended while and so long as Lessee is prevented by any such force majeure event from conducting drilling or reworking operations on or from producing oil or gas from the Leased Premises. The period of extension by reason of force majeure shall be limited to a cumulative total of forty-eight (48) months. Any delay beyond one hundred twenty (120) days from the date of application to obtain any required permit to drill, complete or re-work a well shall be grounds to invoke force majeure until the permit is granted. If this Lease is subject matter of any lawsuit, arbitration proceeding or action, and Lessee is ordered therein to forego or suspend its operations on the Leased Premises, or Lessee in its discretion foregoes or suspends operations solely by reason of such lawsuit, proceeding or action, then this Lease shall not expire during the pendency of such lawsuit, proceeding or action, or any appeal thereof, and the period of the lawsuit, arbitration proceeding or action, or any appeal thereof, shall be added to the term of this Lease.

3. **Governing Law**

This Lease shall be governed in accordance with the laws of the State of Ohio.

4. **Due Diligence**

If oil or gas is discovered on the Leased Premises, Lessee shall develop the Leased Premises as a reasonable and prudent operator and exercise due diligence in drilling such additional well or wells as may be necessary to fully develop the Leased Premises. Lessee shall protect the oil and gas in and under the Leased Premises from drainage by wells on adjoining or adjacent tracts or leases, including those held by Lessee or any affiliate of Lessee.

5. **Notices**

Notices, consents, or other documents required or permitted by this Lease must be given by personal delivery, facsimile, reputable overnight courier (Federal Express or other), or sent by USPS registered or certified mail, return receipt requested, and postage paid. For purposes of notice, Lessor's information is as follows:

Name
Address

Phone No.

Lessee's information is as follows:

Name	Mary Ann Fox, Vice President, Land
Address	366 Walker Dr.
	State College, PA 16801
Fax No.	(814) 278-7286

Either party's notice information may be changed upon prior written notice delivered to the other party.

Lessee shall designate a person who will be a point of contact for Lessor. Lessee shall provide Lessor such person's name, address, telephone number, email address, and facsimile number. Such person shall be knowledgeable as to operations on the Lease, and have sufficient authority from Lessee to reasonably respond and address Lessor concerns.

6. **Reports and Documents**

Upon Lessor's written request, Lessee shall furnish Lessor copies of all title opinions covering the Leased Premises and promptly upon receipt by Lessee, notify Lessor of any judicial proceedings brought to the attention of Lessee affecting its position and rights under the Lease or the interest of Lessor in the Leased Premises as well as copies of all filings, statements, and reports made by Lessee with the Ohio Department of Natural Resources or other government agency pertinent to drilling, completing and equipping wells. Upon Lessor's written request, Lessee shall provide to the Lessor information relevant to the production, use, transfer, disposal and sale from wells on the Leased Premises or lands pooled or unitized therewith. Such production information shall be strictly confidential and Lessor agrees to not provide any such information to any party without prior written consent of Lessee. Lessor shall have the right to inspect, audit Article III, Section 3 and copy all records of Lessee pertaining to the production and sale of oil and gas from the Leased Premises and the calculation and payment of Lessor's royalty hereunder. A single written request for the information referred to in this paragraph will

require the information to be supplied on a continuing basis until such time as Lessee receives a written request from the Lessor to stop providing such information.

7. **Assignments**

The rights and estate of any party hereto may be assigned from time to time in whole or in part and as to any horizon, subject to the written consent of the Lessor. Lessor's consent shall not be unreasonably withheld, conditioned or delayed. Provided, however, that consent from the Lessor shall not be required in the event of an assignment by Lessee: to an affiliate, subsidiary, or internal partner, joint venture partners or in consequence of a merger or amalgamation. All of the covenants, obligations, and considerations of this Lease shall extend to and be binding upon the parties hereto, their heirs, successors, assigns, and successive assigns. No assignment by Lessee (or any assignee of Lessee) of all or any part of or interest in this Lease shall relieve Lessee (or any assignee of Lessee) of any liability for breach of any covenant, warranty or other obligation of Lessee hereunder, whether theretofore or thereafter accrued. Each assignee of all or any portion of the rights of Lessee hereunder agrees to be bound by the provisions of this lease to the same extent as if such assignee were an original party to this Lease. Notwithstanding any assignment by Lessee of a segregated portion of this Lease, default by Lessee or any assignee or subassignee of Lessee in any covenant or condition in this Lease shall constitute default as to the entire Lease. Lessee shall notify Lessor of such assignment and furnish Lessor a true copy of any assignment. Until Lessee, or any assignee of Lessee, has given Lessor written notice of the assignment by such Lessee or assignee of Lessee of all its right and interest under this lease, all notices to Lessee hereunder may be given to the Lessee named herein, despite the assignment of part of the Lease. No change or division in the ownership of the Leased Premises, royalties, or other moneys, or any part thereof, howsoever affected, shall increase the obligations or diminish the rights of Lessee, including, but not limited to, the location and drilling of wells and the measurement of production. Notwithstanding any other actual or constructive knowledge or notice thereof to Lessee, its successors or assigns, no change or division in the ownership of the Leased Premises or of the royalties or other moneys, or the right to receive the same, howsoever effected, shall be binding upon the then record owner of this Lease until thirty (30) days after there has been furnished to such record owner at his or its principal place of business by Lessor or Lessor's heirs, successor, or assigns, notice of such change or division, supported by either originals or copies of the instruments which have been properly filed for record and which evidence such change or division, and of such court records and proceedings, transcripts, or other documents as shall be necessary in the opinion of such record owner to establish the validity of such change or division. If any such change in ownership occurs by reason of the death of the Lessor, Lessee may nevertheless pay or tender such royalties or other moneys, or part thereof, to Lessor or Lessor's estate.

8. **Authorship**

For the purpose of construction, interpretation, arbitration or adjudication, it shall be deemed that Lessee and Lessor contributed equally to the drafting of this instrument.

9. **Condemnation**

Any and all payments made by a Condemnor on account of a taking by eminent domain shall be the property of Lessor, except to the extent such condemnation or taking diminishes the rights granted Lessee hereunder or if such condemnation or taking reduces or otherwise devalues Lessee's interest in the oil and gas estate. In such event, Lessee shall be necessary party to any condemnation proceeding and shall have a right to independently seek compensation for its rights and interest, subject to applicable law.

10. **Severability**

If any portion of this Lease is held invalid or unenforceable by arbitration or any court of competent jurisdiction, the other provisions of this agreement will remain in full force and effect. Any provision of this agreement held invalid or unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

IN WITNESS WHEREOF, the parties have signed this Lease.

LESSOR:

_____

WITNESS:

Name:

_____

_____

Name:

LESSEE:

WITNESS:

_____

_____

By: Mary Ann Fox
Title: Vice President, Land

State of Ohio

County of

The foregoing instrument was acknowledged before me this day of , 2014

by .

_____, Notary

Serial Number: _____

Commonwealth of Pennsylvania

County of Centre

The foregoing instrument was acknowledged before me this ____ day of _____, 2014 by Mary Ann Fox, Vice President, Land of R.E. Gas Development, LLC, a Delaware limited liability company, on behalf of the corporation.

_____, Notary

Serial Number: _____

EXHIBIT B

Attached to and made a part of that certain Unit Operating Agreement for the Vaughn Northeast Unit

EXHIBIT A.

(Article I, Section 1)

Copy of legal description to Leased Premises as reflected in Deed to Lessor will be attached here as Exhibit A upon completion of due diligence by Lessee.

Exhibit C

EXHIBIT "C"

Attached to and made a part of that certain Unit Operating Agreement for the Vaughn Northeast 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 and shall include the supervisor in charge of the Operations Center and those foremen reporting to him if their primary function in the Joint Operations is the direct supervision of other employees or contract labor directly employed on the Joint Property.

"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) days after receipt. If payment is not made within such time, the unpaid balance shall bear interest monthly at the prime rate in effect at J P Morgan Chase & Co on the first day of the month in which delinquency occurs plus 1% 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.

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 and other costs incurred by a reasonably prudent operator or as a matter of prudent operation / to satisfy Environmental and safety related / 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 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 directly employed on the Joint Property if such charges are excluded from the overhead rates.

(4) Salaries and wages of Technical Employees 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 twelve percent (12%) 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, 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

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, or accounting 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:

(X) shall be covered by the overhead rates, or
( ) 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 $ 15,000
(Prorated for less than a full month)

Producing Well Rate $ 1,500

(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 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

~~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 $ 25,000 :

A. 5 % of first $100,000 or total cost if less, plus

B. 3 % of costs in excess of $100,000 but less than $1,000,000, plus

C. 2 % 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 % of total costs through $100,000; plus

B. 3 % of total costs in excess of $100,000 but less than $1,000,000; plus

C. 2 % 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 the percent most recently recommended by COPAS / 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 C-1

TECHNICAL EMPLOYEES EXCLUDED FROM OVERHEAD RATES

Title	Category
ASSOCIATE GEOLOGIST	Technical Labor
ASSOCIATE GEOPHYSICIST	Technical Labor
GEOLOGIST	Technical Labor
GEOPHYSICIST	Technical Labor
SR GEOLOGIST	Technical Labor
SR GEOPHYSICIST	Technical Labor
ASSET MANAGER	Technical Labor
ASSOCIATE ASSET MANAGER	Technical Labor
DRILLING ENGINEER I	Technical Labor
DRILLING ENGINEER II	Technical Labor
FIELD ENGINEER	Technical Labor
SR ASSET MANAGER	Technical Labor
SR DRILLING ENGINEER	Technical Labor
SR. ASSET MGR	Technical Labor

Exhibit D

EXHIBIT "D"

Attached to and made a part of that certain Unit Operating Agreement for the Vaughn Northeast Unit

INSURANCE PROVISION

At all times while operations are conducted hereunder, Operator shall comply with all applicable federal and state insurance requirements and Workers' Compensation Laws where the operations are being conducted and include Employer's Liability with a limit of $1,000,000 including, if applicable, Marine and Voluntary Compensation (including but not limited to General Maritime Law, Jones Act, Transporation, Wages, Maintenance and Cure); provided, however, that Operator may qualify as a self-insurer for liability under the appropriate state and federal workers' compensation laws in which event the only charge that shall be made to the joint account shall be in an amount equivalent to the premium which would have been paid had such insurance been obtained. Operator shall require all contractors engaged in work on or for the contract area to comply with all state and federal workers' compensation laws where the operations are being conducted and to maintain such other insurance as Operator may require.

It is further understood and agreed that Operator is not a warrantor of the financial responsibility of the insurer with whom such insurance is carried, and Operator shall not be liable to any Party for any loss suffered on account of the insufficiency of the insurance carried, or of insurer with whom carried. Operator shall not be liable to any Party for any loss accruing by reason of Operator's inability to procure or maintain the insurance mentioned above. Operator agrees that if at any time during the life of this agreement it is unable to obtain or maintain such insurance it shall immediately notify in writing such Parties of such fact.

No other insurance shall be purchased, or carried, by the Operator for the benefit of the Parties hereto unless mutually agreed in writing by all Parties. Any liability, loss, damage, claim or expense resulting from occurrences not covered by or in the excess of insurance required under this provision shall be borne by parties hereto, other than Unleased Mineral Owners, in the same proportion as their interests may appear at the time of the loss.

Each Party may procure and maintain, at its own cost and expense, such public liability, third party property damage, fire and extended coverage and/or other insurance as it shall determine necessary. Any such insurance so procured and maintained shall inure solely to the benefit of the Party procuring such insurance and such Party, other than an Unleased Mineral Owner, shall indemnify and hold harmless Operator and other Parties to this agreement against any claim of such insurance carrier arising against such other Party by subrogation, or otherwise, in connection with operations hereunder. In addition, any such additional insurance, other than such insurance procured and maintained by an Unleased Mineral Owner, shall contain waiver of subrogation rights in favor of the remaining Parties, but only to the extent of those liabilities assumed by the Party purchasing said insurance.

Exhibit E

EXHIBIT "E"

Attached to and made a part of that certain Unit Operating Agreement for the Vaughn Northeast Unit

Gas Balancing Agreement

The signatory "Party" or "Parties" hereto are also parties to the Operating Agreement dated covering the land and lease(s) described therein as the same may be amended from time to time (the "Operating Agreement").

The Parties recognize that imbalances may occur from time to time between them in their separate disposition of Gas. The Parties hereby agree to handle such Gas imbalances as follows:

ARTICLE I - Definitions:

1.01 As used in this Agreement the terms set forth below shall have the following meanings:

(a) "Balance" is the condition existing when a Party has disposed of a cumulative volume of Gas from a Well which is equal to such Party's Percentage Ownership of the total cumulative volume of Gas disposed of by all Parties from such Well.

(b) "Gas" shall mean the total volume of Gas in Btu's available to the Parties to this Agreement at the Measurement Point from a Well remaining after removal of all liquids by primary field separation and the extraction of any liquid hydrocarbons upstream of the Measurement Point less gas vented flared lost or used in joint operations.

(c) "Make-Up Gas" refers to that incremental volume of Gas in excess of a Party's Percentage ownership which an Underproduced Party is entitled to under this Agreement in order to achieve a Balance.

(d) "Measurement Point" shall mean unless otherwise agreed to in writing between the Parties the point at the gas discharge side of the primary field separation facility where a meter for measurement of Gas to be disposed of is installed unless such separation facilities are not installed in which event the point shall be the meter at the wellhead of each Well.

(e) "Operator" shall mean the Operator designated in the Operating Agreement.

(f) "Overproduced" is the condition existing when a Party has disposed of a cumulative volume of Gas from a Well at anytime that is greater than its Percentage Ownership of the total cumulative volume of Gas disposed of by all Parties from such Well Reference to overproduction is to such greater volume.

(g) The "Percentage Ownership" of each party is equal to that Party's working interest in a Well as determined under the terms of the Operating Agreement.

(h) "Underproduced" is the condition occurring when a party has disposed of a cumulative volume of Gas from a Well at anytime that is less than its Percentage Ownership of the total cumulative volume of gas disposed by all Parties from such Well Reference to "underproduction" is to such lesser volume.

(i) "Well" means a well drilled on the lands and leases covered by the Operating Agreement and capable of producing Gas. For the purposes hereof, a Well separately produced and measured for more than one zone will be considered a separate Well for each zone.

(l) To dispose of Gas or Gas disposed of shall mean all methods of disposition of Gas, including taking in kind, delivering in kind to a Lessor, sales to a Party or third Party

or affiliate or gas used by a Party for purposes other than joint operations.

1.02 Terms not defined in this Agreement shall have the meaning commonly ascribed to them in the natural gas sales industry.

ARTICLE II - Scope and Term

2.01 This Agreement establishes a separate gas balancing agreement for each Well.

2.02 This Agreement shall be effective as of the date of first Gas sales by a Party from any Well or if sooner the date of the Operating Agreement. This Agreement shall terminate separately as to each Well when production from such Well permanently ceases and the Gas accounts for such Well are brought into Balance Pursuant to this Agreement.

ARTICLE III - Right to Produce and Ownership of Gas

3.01 During any month when a Party does not dispose of its Percentage Ownership of Gas the Parties that dispose of their Percentage Ownership shall be entitled to dispose of all or any portion of such Underproduced Gas. To the extent the Parties desire to dispose of more Underproduced Gas than is available, they shall share in such Gas in the proportion that each such Party's Percentage Ownership bears to the combined Percentage Ownership of all parties desiring to dispose of such Gas. However, unless otherwise approved by all parties, no party shall be entitled to dispose of more than two hundred percent (200%) of its Percentage Ownership of Gas that month.

3.02 Each Party shall own and be entitled to the Gas disposed of by such party pursuant to this Agreement and the proceeds thereof, including constituents contained therein that are recovered downstream from the Measurement Point. If a Party is Underproduced with respect to a Well its underproduction shall be deemed to remain in the reservoir subject to the right of disposal of such Underproduced Gas at a later time.

3.03 Nothing in this Agreement shall require or permit any production from a Well in excess of the maximum efficient rate at which such Well can be produced for a sustained period of time without resulting in underground waste in the form of reduced ultimate recovery of hydrocarbons.

ARTICLE IV - Make-Up Gas

4.01 Each Underproduced Party in a Well shall have the right to dispose of Make-Up Gas and each Overproduced Party shall have the obligation to furnish Make-Up Gas as follows:

(a) An Underproduced Party shall provide at least twenty (20) days written notice to the Operator of its intent to dispose of Make-Up Gas and specify the period of such make up which in no event shall be less than one calendar month. Make-Up Gas shall not be made available to an Underproduced Party until the first day of the month following timely notice to the Operator.

(b) An Overproduced Party shall not be required to furnish Make-Up Gas unless an Underproduced Party is first disposing of its Percentage Ownership of Gas.

(c) An Overproduced Party shall not be required to provide as Make-Up Gas more than twenty five percent (25%) of its Percentage Ownership of Gas during the month of January, February, March, November and December. For all other months an Overproduced Party shall not be required to provide as Make-Up Gas more than fifty percent (50%) of its Percentage Ownership of the Gas.

(d) If there is more than one Overproduced Party the Make-Up Gas will be furnished by the Overproduced Parties in the proportion that each Overproduced Party's Percentage Ownership in a Well bears to the total Percentage Ownership of all Overproduced Parties

in the Well. Likewise, if there is more than one Underproduced Party exercising its right to dispose of Make-Up Gas in a month, each Underproduced Party will share in the Make-Up Gas in the proportion which its Percentage Ownership in a Well bears to the total percentage Ownership of all Underproduced Parties in that Well disposing of make-Up Gas that month.

4.02 Nothing herein shall be construed to deny any Party the right from time to time to dispose of its Percentage Ownership of Gas in a Well for the purpose of conducting deliverability tests pursuant to its gas purchase contracts.

ARTICLE V - Balancing of Gas Accounts

5.01 The Operator shall have the duty of administering the provisions of this Agreement. The Operator shall use its good faith efforts to cause Gas to be delivered as may be required to give effect to the intent that there be a Balance between the Parties in accordance with the provisions hereof. The Operator shall only be liable for its failure to make deliveries of Gas in accordance with the terms of this Agreement if such failure is due to its gross negligence or willful misconduct.

5.02 The Operator shall promptly forward notice to all affected Parties, and each month the Operator will furnish each Party a report showing for the prior month the total volume of gas in Btu's produced from each Well, including the volumes vented, flared lost or used in joint operations; the volume of Gas disposed by each Party; each Party's overproduction or underproduction for the month, and the cumulative overproduction or underproduction of each Party in each Well. In the event that production from each well is not separately measured, then the Operator will allocate production to each Well on the basis of periodic tests or such other methods as are commonly used and accepted in the industry. Make-Up Gas disposed of by an Underproduced Party shall offset underproduction in the order in which such underproduction accrued, i.e. First in, First out.

5.03 During the term of this Agreement and for a period of two (2) years thereafter, each Party shall retain all data, information and records pertaining to the Gas disposed of by such Party in a Well. Each Party shall have the right to audit the records retained hereunder. Any audit shall be conducted at the expense of the Party or Parties desiring such audit after reasonable notice and during normal business hours in the office of the Party whose records are being audited. No more than one audit of a Party shall be conducted in any twelve (12) month period.

ARTICLE VI - Cash Settlement of Imbalance

6.01 When production from a Well permanently ceases there shall be a cash settlement between the Parties hereto for any Gas not in Balance. Within sixty (60) days after notice from the Operator that a well has permanently ceased to produce, each Overproduced Party shall pay to the Operator the proceeds received at the Measurement Point for the overproduction which remains accrued to such party, less taxes, royalties and other reasonable charges in fact paid on the overproduced volumes by such Overproduced Party. The Operator shall distribute the total of such amounts so collected among the Underproduced Parties' in the proportion of each such Parties underproduction.

6.02 The price of Gas for cash settlement by an Overproduced Party shall be the price actually or constructively received at the Measurement Point in arm's length transactions for the overproduction, less any taxes, royalties and other reasonable charges in fact paid on the overproduced volumes. If a proportion of an Overproduced Party's Gas production is disposed of for its own use, the price for such Gas will be the price received for any Gas disposed of by such Party in arm's length transactions. During periods when an Overproduced Party disposed of Gas for its own use and had no arm's length gas sales overproduction will be valued at the weighted average price received simultaneously by all Parties for Gas disposed of in arm's length transactions. If no Party sold Gas when the overproduction occurred then the price shall be the last price received by any Party making

sales. A price determined for Gas production not sold by the Overproduced Party shall be deemed to have been constructively received by such Party.

6.03 If any portion of the price which is to be paid to an Underproduced Party is subject to refund by a governmental authority then the Overproduced Party may withhold the amount subject to refund until that portion of the price is finally approved. If any governmental agency requires an Overproduced Party to refund any portion of a price used to make payment hereunder, then the Underproduced parties shall reimburse the Overproduced Parties for such refund including any interest. This Paragraph 6.03 shall survive the termination of this Agreement.

6.04 If an Overproduced Party sells or assigns any or all of its interest to an independent unaffiliated third party which is subject to the terms hereof the selling/assigning party shall immediately make a cash settlement in accordance with this Article VI to any Underproduced Parties in proportion to the volume which each party is underproduced to the total underproduction of all parties in the Well.

ARTICLE VII – Cost of Ownership for Liquids

All operating costs, expenses and liabilities shall be borne and paid by the Parties in accordance with the provisions of the Operating Agreement, regardless of which Parties are disposing of Gas from a Well at any given time. Liquid hydrocarbons of a well separated from the Gas upstream of the Measurement Point shall be owned by all parties in accordance with their Percentage Ownership in the Well.

ARTICLE VIII - Indemnity

Each Party, other than an Unleased Mineral Owner, hereby indemnifies and agrees to hold the other Parties harmless from all claims, costs and liabilities arising out of the operation of this Agreement and the performance of obligations hereunder by the indemnifying Party.

ARTICLE IX – Payment of Lease Burdens

Each Party shall be responsible for and shall pay or cause to be paid all royalties, production payments and other similar burdens on production due on its Percentage Ownership of Gas production from a Well and shall hold the other Parties free from any liability therefor. The Parties disposing of Gas from a Well shall pay or cause to be paid all production, severance, ad valorem or any other taxes, fees or levies on such production.

ARTICLE X – Binding Effect

This Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns. This Agreement may be executed in multiple counterparts.

ARTICLE XI - Notices

Any notices or other communications required or permitted hereunder shall be in writing and shall be deemed given only when received by the Party to whom the same is directed at the addresses and in the manner then provided under the Operating Agreement.

IN WITNESS HEREOF the Parties hereto have caused this Agreement to be duly signed and sealed in duplicate originals.

OPERATOR

Company: R.E. Gas Development, LLC

By: _____

Its: _____

NON-OPERATORS

Company: _____

By: _____

Its: _____

Company: _____

By: _____

Its: _____

Company: _____

By: _____

Its: _____

Company: _____

By: _____

Its: _____

Exhibit H

EXHIBIT "H"

Attached to and made a part of that certain Unit Operating Agreement for the Vaughn Northeast Unit.

MEMORANDUM OF OPERATING AGREEMENT AND FINANCING STATEMENT

This Memorandum of Operating Agreement and Financing Statement entered into by and between the undersigned parties, witnesseth, that:

1.0 This Memorandum of Operating Agreement and Financing Statement (hereinafter called "Memorandum") shall be effective when the Operating Agreement referred to in Paragraph 2.0 below becomes effective.

2.0 The parties hereto have entered into an Operating Agreement, providing for the development and production of crude oil, natural gas and associated substances from the lands described in Exhibit " A" attached hereto (hereinafter called the "Contract Area"), and designating **R.E. Gas Development, LLC,** as Operator, to conduct such operations.

3.0 The Operating Agreement provides for certain liens and/or security interests to secure payment by the parties of their respective share of costs under the Operating Agreement. The Operating Agreement contains an Accounting Procedure along with other provisions which supplement the lien and/or security interest provisions, including non-consent clauses which provide that parties who elect not to participate in certain operations shall be deemed to have relinquished their interest until the consenting parties are able to recover their costs of such operations plus a specified amount. Should any person or firm desire additional information regarding the Operating Agreement or wish to inspect a copy of the Operating Agreement, said person or firm should contact the Operator.

4.0 The purpose of this Memorandum is to more fully describe and implement the liens and/or security interests provided for in the Operating Agreement, and to place third parties on notice thereof.

5.0 In consideration of the mutual rights and obligations of the parties hereunder, the parties hereto agree as follows:

5.1 The Operator 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 the Operating Agreement.

5.2 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 costs.

5.3 Each Non-Operator, **other than an Unleased Mineral Owner,** grants to Operator a lien upon its oil and gas rights in the Contract Area, and a security interest in its share of oil and or gas when extracted and its interest in all equipment, to secure payment of its share of expense, together with interest thereon at the rate provided in the Accounting Procedure referred to in Paragraph 3.0 above. To the extent that Operator has a security interest under the Uniform Commercial Code of the state, Operator 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 Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the rights or security interest of the payment thereof.

5.4 If any Non-Operator, **other than an Unleased Mineral owner,** fails to pay its share of costs when due. Operator may require other Non-Operators to pay

their proportionate part of the unpaid share,

whereupon the other Non-Operators shall be subrogated to Operator's lien and security interest.

5.5 The Operator grants to Non-Operators, **other than Unleased Mineral Owners,** a lien and security interest equivalent to that granted to Operator as described in Paragraph 5.3 above, to secure payment by Operator of its own share of costs when due.

6.0 For purposes of protecting said liens and security interest, the parties hereto, **other than Unleased Mineral Owners,** agree that this Memorandum shall cover all right, title and interest of the debtor(s) in:

6.1 Property Subject to Security Interests:

(A) All personal property located upon or used in connection with the Contract Area.

(Il) All fixtures on the Contract Area.

(C) All oil, gas and associated substances of value in, on or under the Contract Area which may be extracted therefrom.

(D) All accounts resulting from the sale of the items described in subparagraph (C) at the wellhead of every well located on the Contract Area or on lands pooled therewith.

(E) All items used, useful, or purchased for the production, treatment, storage, transportation, manufacture, or sale of the items described in subparagraph (C).

(F) All accounts, contract rights, rights under any gas balancing agreement, general intangibles, equipment, inventory, farmout rights, option farmout rights, acreage and/or cash contributions, and conversion rights, whether now owned or existing or hereafter acquired or arising, including but not limited to all interest in any partnership, limited partnership, association, joint venture, or other entity or enterprise that holds, owns, or controls any interest in the Contract Area or in any property encumbered by this Memorandum.

(G) All severed and extracted oil, gas, and associated substances now or hereafter produced from or attributable to the Contract Area, including without limitation oil, gas and associated substances in tanks or pipelines or otherwise held for treatment, transportation, manufacture, processing or sale.

(H) All the proceeds and products of the items described in the foregoing paragraphs now existing or hereafter arising, and all substitutions therefor, replacements thereof, or accessions thereto.

(I) All personal property and fixtures now and hereafter acquired in furtherance of the purposes of this Operating Agreement. Certain of the above-described item are or are to become fixtures on the Contract Area.

(J) The proceeds and products of collateral are also covered.

6.2 Property Subject to Liens:

(A) All real property within the Contract Area, including all oil, gas and associated substances of value in, on or under the Contract Area which may be extracted therefrom.

(B) All fixtures within the Contract Area.

(C) All real property and fixtures now and hereafter acquired in furtherance of the purposes of this Operating Agreement.

7.0 The above items will be financed at the wellhead of the well or wells located on the Contract Area, and this Memorandum is to be filed for record in the real estate records of the county or counties in which the Contract Area is located, and in the Uniform Commercial Code records.. All parties who have executed the Operating Agreement and all farmors and option farmors who have granted support within the Contract Area are identified on Exhibit "A".

8.0 On default of any covenant or condition of the Operating Agreement, in addition to any other remedy afforded by law or the practice of this state, each party to the agreement and any successor to such party by assignment, operation of law, or otherwise, shall have, and is hereby given and vested with, the power and authority to take possession of and sell any interest which the defaulting party has in the subject lands and to foreclose this lien in the manner provided by law.

9.0 Upon expiration of the subject Operating Agreement and the satisfaction of all debts, the Operator shall file of record a release and termination on behalf of all parties concerned. Upon the filing of such release and termination, all benefits and obligations under this Memorandum shall terminate as to all parties who have executed or ratified this Memorandum. In addition, the Operator shall have the right to file a continuation statement on behalf of all parties who have executed or ratified this Memorandum.

10.0 It is understood and agreed by the parties hereto that if any part, term or provision of this Memorandum is by the courts held to be illegal or in conflict with any law of the state where made, the validity of the remaining portions or provisions shall not be affected, the rights and obligations of the parties shall be construed and enforced as if the Memorandum did not contain the particular part, term or provision held to be invalid..

11.0 This Memorandum shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns. The failure of one or more persons owning an interest in the Contract Area to execute this Memorandum shall not in any manner affect the validity of the Memorandum as to those persons who have executed this Memorandum.

12.0 A party having an interest in the Contract Area can ratify this Memorandum by execution and delivery of an instrument of ratification, adopting and entering into this Memorandum, and such ratification shall have the same effect as if the ratifying party had executed this Memorandum or a counterpart thereof. By execution or ratification of this Memorandum, such party hereby consents to its ratification and adoption by any party who may have or may acquire any interest in the Contract Area.

13.0 This Memorandum may be executed or ratified in one or more counterparts and all of the executed or ratified counterparts shall together constitute one instrument. For purposes of recording, only one copy of this Memorandum with individual signature pages attached thereto needs to be filed of record.

14.0 As reflected above, either or both Operator and Non-Operator(s) become Debtors if they default in their payment obligations under the terms of the Operating

Agreement. Similarly, the non-defaulting party(ies) will be considered secured party(ies).

15.1 The parties hereto agree to execute, acknowledge and deliver or cause to be executed, acknowledged and delivered any instrument, or take any action necessary or appropriate to effectuate the terms of the Operating Agreement or any Exhibit, instrument, certificate or other document pursuant thereto.

Effective as of the_____day of_____, 20__

Non-Operators:

_____
_____
_____
_____
_____

Operator:

R.E. Gas Development, LLC

By: _____
Attorney-in-Fact

ACKNOWLEDGMENT

State of_____}

County of _____}

This instrument was acknowledged before me on this _____ day of _____, 20____. by _____, as _____ of _____, a _____ Corporation, on behalf of said corporation.

My Commission Expires:_____ _____
Notary Public

State of ____

County of_____

The forgoing instrument was acknowledged before me this _____ day of _____. 20__, by_____

My Commission Expires:_____ _____
Notary Public

State of _____ ____

County of_____

The forgoing instrument was acknowledged before me this _____ day of _____. 20__. by_____

My Commission Expires:_____ _____
Notary Public

EXHIBIT "A"

Attached to and made a part of that certain
Memorandum of Operating Agreement and Financing Statement
Dated October 9, 2014, by and between
R.E. Gas Development, LLC, as Operator, and
Chesapeake Exploration, LLC, et al, as Non-Operators

I. Description of Lands Subject to this Agreement:

612.60022 acres of land, more or less, located in Augusta, East, Harrison and Washington Townships, Carroll County, Ohio, as such lands are depicted in Exhibit "A-1" and as particularly defined in the Unit Plan.

II. Restrictions as to Depths, Formations or Substances:

This Agreement covers rights for the Unitized Formation, described as that portion of the Utica Shale / Point Pleasant formation found in the subsurface portion of the Vaughn Northeast Unit at an approximate depth of fifty (50) feet above the top of the Utica Shale formation to fifty (50) feet below the base of the Point Pleasant formation, believed to be approximately 7,325 feet subsurface to 7,620 feet subsurface TVD ("True Vertical Depth").

III. Percentage or Fractional Interests of Parties to this Agreement:**

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

IV. Oil and Gas Lease(s) and/or Oil and Gas Interests Subject to this Agreement:

Please refer to Exhibit "A-2" and Exhibit "A-3" for a list of the oil and gas leases and interests subject to this agreement.

V. Addresses of the Parties for Notice Purposes:

R.E. Gas Development, L.L.C.
Attention: F. Scott Hodges,
Senior Vice President, Land & Business Development
366 Walker Drive
State College, PA 16801
Telephone: 814-278-7279
Fax: 814-278-7286
Email: fshodges@rexenergycorp.com

Chesapeake Exploration, LLC & CHK Utica, LLC
Attention: Dan Weinmeister, Land Manager, Appalachia South
P. O. Box 18496
Oklahoma City, Oklahoma 73154-0496

TOTAL E&P USA, Inc.
Attention: Pierre Germain
1201 Louisiana, Suite 1800
Houston, TX 77002

EnerVest Energy Institutional Fund IX, LP, EnerVest Energy Institutional Fund IX-WI, LP, EnerVest Energy Institutional Fund XI-A, LP, EnerVest Energy Institutional Fund XI-WI, LP and CGAS Properties, L.P.
c/o EnerVest Operating, LLC
Attention: James D. McKinney, Senior Vice President & General Manager
300 Capitol Street, Suite 200
Charleston, WV 52301
Telephone: 304-343-5505
Fax: 304-343-5525

The names and addresses of the remaining parties are set forth in Exhibit "A-2" attached hereto.

**It is understood by the parties hereto that the working interests listed in this 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 the approval by the Division. The parties' interests shall be modified accordingly in order to accurately reflect the actual interest owned by the parties in the Contract Area.

2

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

In re the Matter of the Application of	:	
R.E. Gas Development, LLC, for	:	
Unit Operation	:	Application Date: November 10, 2014
	:	
Vaughn Northeast Unit	:	

PREPARED TESTIMONY OF DAVID PRATT
ON BEHALF OF R.E. GAS DEVELOPMENT, LLC ("REX")
(GEOLOGIST)

Date: November 10, 2014

Attachment 2

PREPARED TESTIMONY OF DAVID PRATT

INTRODUCTION

Q1. Please introduce yourself to the Division.

A1. My name is David Pratt and my business address is 366 Walker Drive, State College, Pennsylvania 16801. I am Senior Vice President and Exploration Manager for Rex.

Q2. What is your educational background?

A2. I received a Bachelor of Science degree in geology from the State University of New York at Albany in 1974 and a Masters degree in geology from Rice University in 1978.

Q3. Would you briefly describe your professional experience?

A3. I have worked as a petroleum geologist from 1978 to 1999 for various companies in Houston, Texas; Midland, Texas; Denver, Colorado; and Pittsburgh, Pennsylvania. From 2000 to 2007, I was a Mineral Resources Specialist at the New York State Department of Environmental Conservation, Division of Mineral Resources, Bureau of Oil and Gas Regulation. Since 2008, I have been employed at Rex, in State College, Pennsylvania.

Q4. Do you have experience in other shale basins?

A4. I have worked in the Permian Basin of West Texas, the D-J Basin of Colorado and Wyoming and the Williston Basin of North Dakota.

Q5. What do you do as a Senior Vice President and Exploration Manager for Rex?

A5. I supervise seven geologists and technicians with respect to our development the activity in the Illinois and Appalachian basins. I also contribute to the geological analysis of our various exploration and development projects.

Q6. What type of geological analysis?

A6. Analyzing well log information from previously drilled wells and available seismic data. From these analyses, I work with my staff to construct geological maps and cross sections to determine areas of interest for leasing and recommend locations for the drilling of wells.

Q7. Are you a member of any professional associations?

A7. Yes. I am a member of the American Association of Petroleum Geologists.

Q8. What is the purpose of your testimony today?

A8. I am testifying in support of the *Application of R.E. Gas Development, LLC for Unit Operation* filed with respect to the Vaughn Northeast Unit, consisting of seventy (70) separate tracts of land totaling approximately 612 acres in Carroll County, Ohio. My testimony will show that the Unitized Formation described in the Application is part of a pool and thus an appropriate subject of unitization. Additionally, my testimony will support the Unit Plan's allocation of unit production and expenses to separately owned tracts on a surface-acreage basis, based on the unit area's nearly uniform thickness and substantially identical geological characteristics throughout.

UNITIZED FORMATION IS PART OF A POOL.

Q9. To begin, would you tell me what a "pool" is?

A9. In common usage, a pool is understood to be an accumulation of hydrocarbons trapped in the pore spaces of a rock unit. This is consistent with the Ohio statutory definition of a pool as "an underground reservoir containing a common accumulation of oil or gas, or both, but does not include a gas storage reservoir."

Q10. Is this definition understood the same way for conventional and unconventional resources?

A10. No, it is not. In a conventional reservoir, the reservoir rock has enough porosity (the measure of the void space in the rock) and permeability (the measure of how well connected the pores are) to flow oil and gas under the natural reservoir energy. In unconventional reservoirs, while there is sufficient porosity to hold oil and gas, the reservoir lacks permeability so that oil and gas cannot flow naturally from one pore to another and into the well bore. Modern hydraulic fracturing techniques create permeability within the unconventional reservoir rock by cracking the rock and filling the fractures with sand. These fractures allow the entrapped hydrocarbons to flow from the pore spaces in the reservoir rock into the sand-filled fractures and then into the well bore.

Q11. How is the Unitized Formation defined for the Vaughn Northeast Unit?

A11. It is defined as the subsurface portion of the Vaughn Northeast Unit located from fifty (50) feet above the top of the Utica formation to fifty (50) feet below the base

of the Point Pleasant formation, an interval believed to be approximately 7,325 feet true vertical depth (TVD) to 7,620 feet TVD in the subsurface portion of the Vaughn Northeast Unit.

Q12. Is the Unitized Formation considered to be a conventional or unconventional resource, and why?

A12. The Unitized Formation is considered an unconventional resource since the reservoir rock contains insufficient permeability to flow hydrocarbons without hydraulic fracturing.

Q13. Generally, what kind of analysis, including what type of data, would a geologist review in order to assess whether an unconventional resource is a pool or part of a pool?

A13. A geologist would use wireline logs to determine the thickness, porosity, hydrocarbon content and geographic distribution of an unconventional resource. Additionally, core samples are taken from wells and analyzed for porosity, permeability, mineral content and hydrocarbon saturations.

Q14. Did you do that here with respect to the Vaughn Northeast Unit?

A14. Yes.

Q15. Do you have an opinion on whether or not the Unitized Formation contemplated by the Vaughn Northeast Unit constitutes a pool or part of a pool?

A15. Based on my education and professional experience, it is my opinion that the Unitized Formation qualifies as part of a pool.

Q16. Why?

A16. My interpretation of the geologic data that I mentioned above, such as wireline well logs, indicates that Utica / Point Pleasant formations should be present across the Vaughn Northeast Unit. This indicates to me that the Unitized Formation is part of a pool.

Q17. And is this a commonly accepted method of analysis in your profession for determining whether a pool or part of a pool exists?

A17. Yes.

Q18. The definition of the Unitized Formation above references both the Utica and

Point Pleasant formations. Do you anticipate production from both formations?

A18. Yes. The Utica / Point Pleasant formation is one continuous section of hydrocarbon bearing rock. Accordingly, we anticipate producing hydrocarbons from both the Utica formation and the Point Pleasant formation. Further, it will be impossible to identify whether the hydrocarbons were originally in place in the Utica or the Point Pleasant.

ALLOCATION METHODOLOGY

Q19. Production and expenses are allocated to the separate tracts in the Vaughn Northeast Unit under the Unit Plan on a surface-acreage basis. Do you have an opinion on whether that allocation method is appropriate, given your education and professional experience?

A19. Yes. In my opinion, and my experience, that allocation method is appropriate and consistent with that of other states that have pooling and unitization rules in their oil and gas statutes.

Q20. Why?

A20. It is appropriate here because the Utica and Point Pleasant formations are expected to be of similar thickness across the unit.

Q21. In your experience, is this a common method for allocating production and expenses?

A21. Yes.

Q22. Have you seen this allocation method used in other shale basins?

A22. Yes. I have seen production and expenses allocated on a surface-acreage basis in the Permian Basin, the D-J Basin and the Williston Basin.

Q23. Does this conclude your testimony?

A23. Yes.

Exhibit DP-1

GEOLOGIC CROSS-SECTION
CARROLL COUNTY, OHIO
LATERO/INDUCTION LOGS

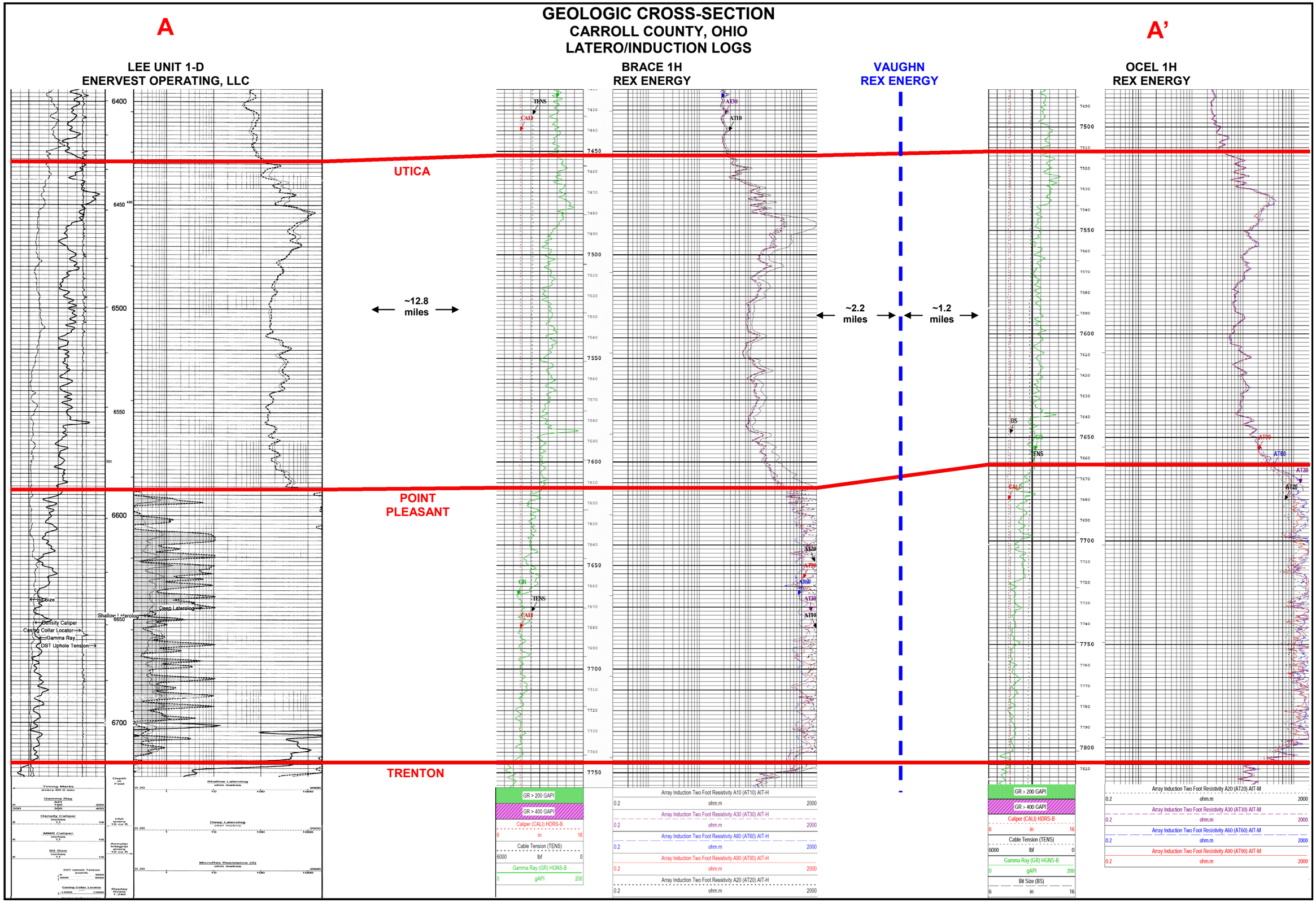
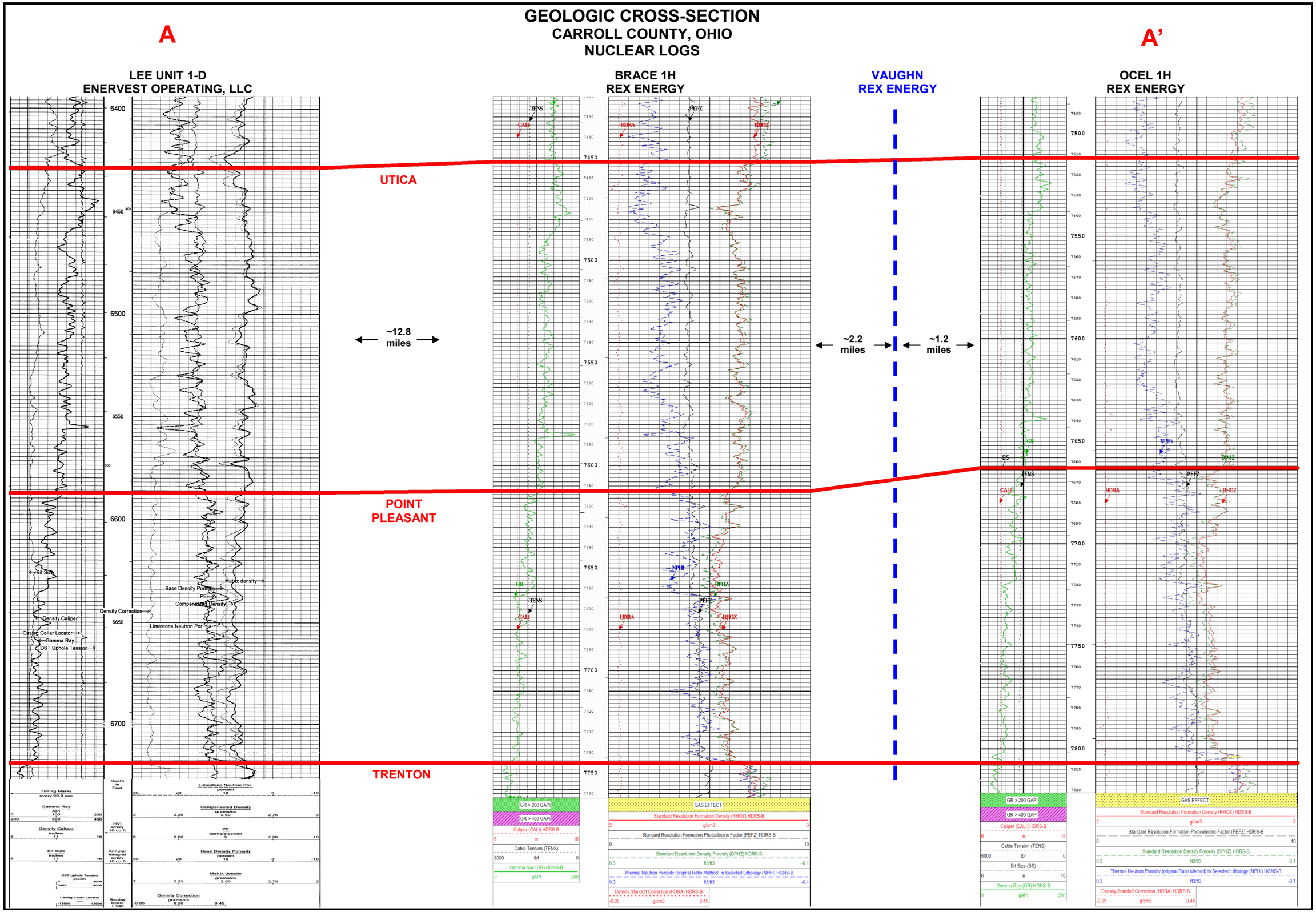


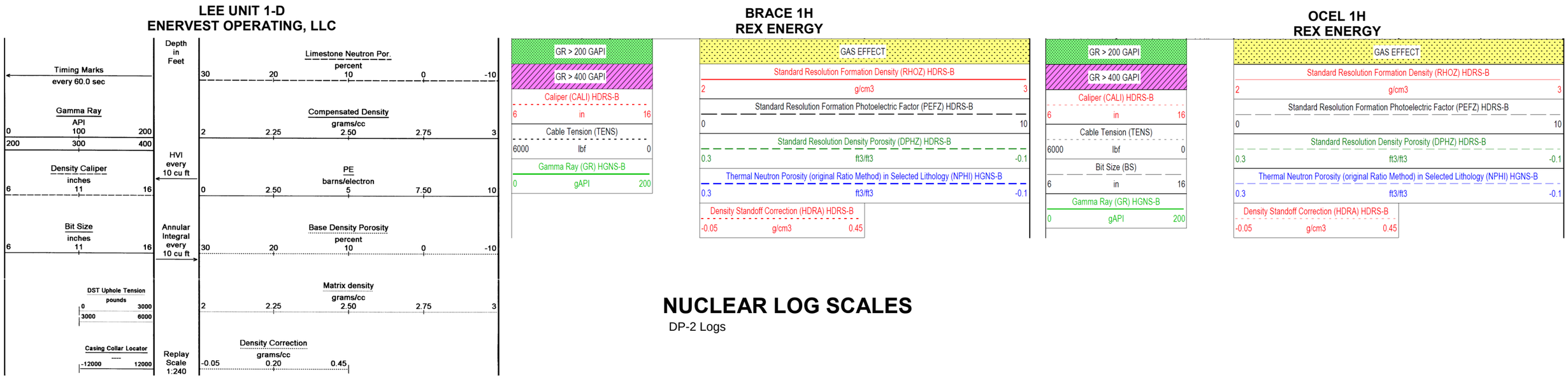
Exhibit DP-2

GEOLOGIC CROSS-SECTION
CARROLL COUNTY, OHIO
NUCLEAR LOGS



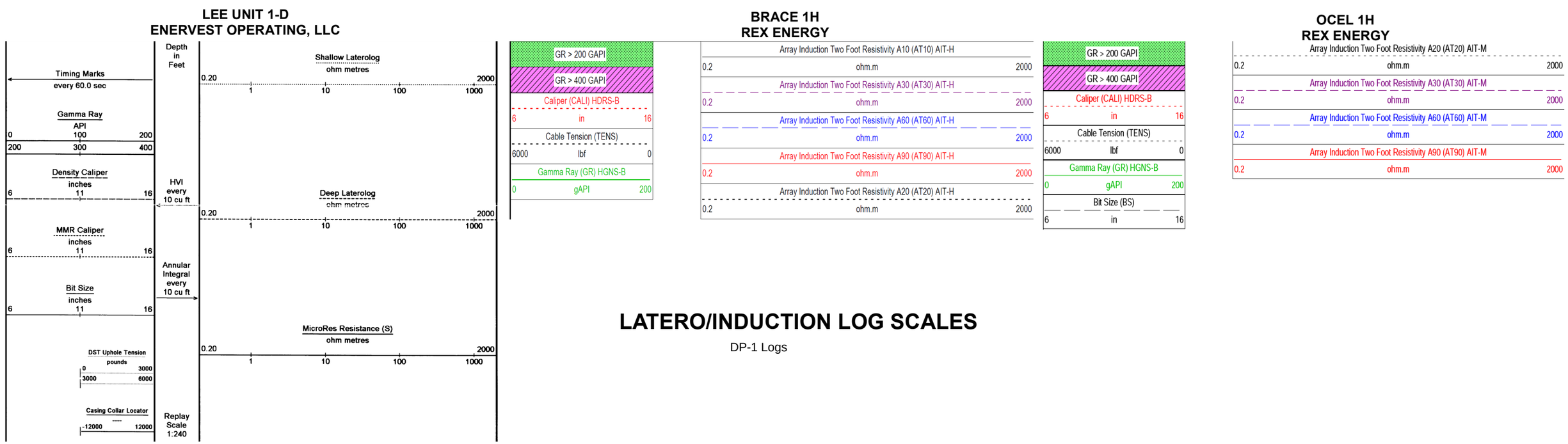
GEOLOGIC CROSS-SECTION
CARROLL COUNTY, OHIO
LOG SCALES

A **A'**



NUCLEAR LOG SCALES

DP-2 Logs

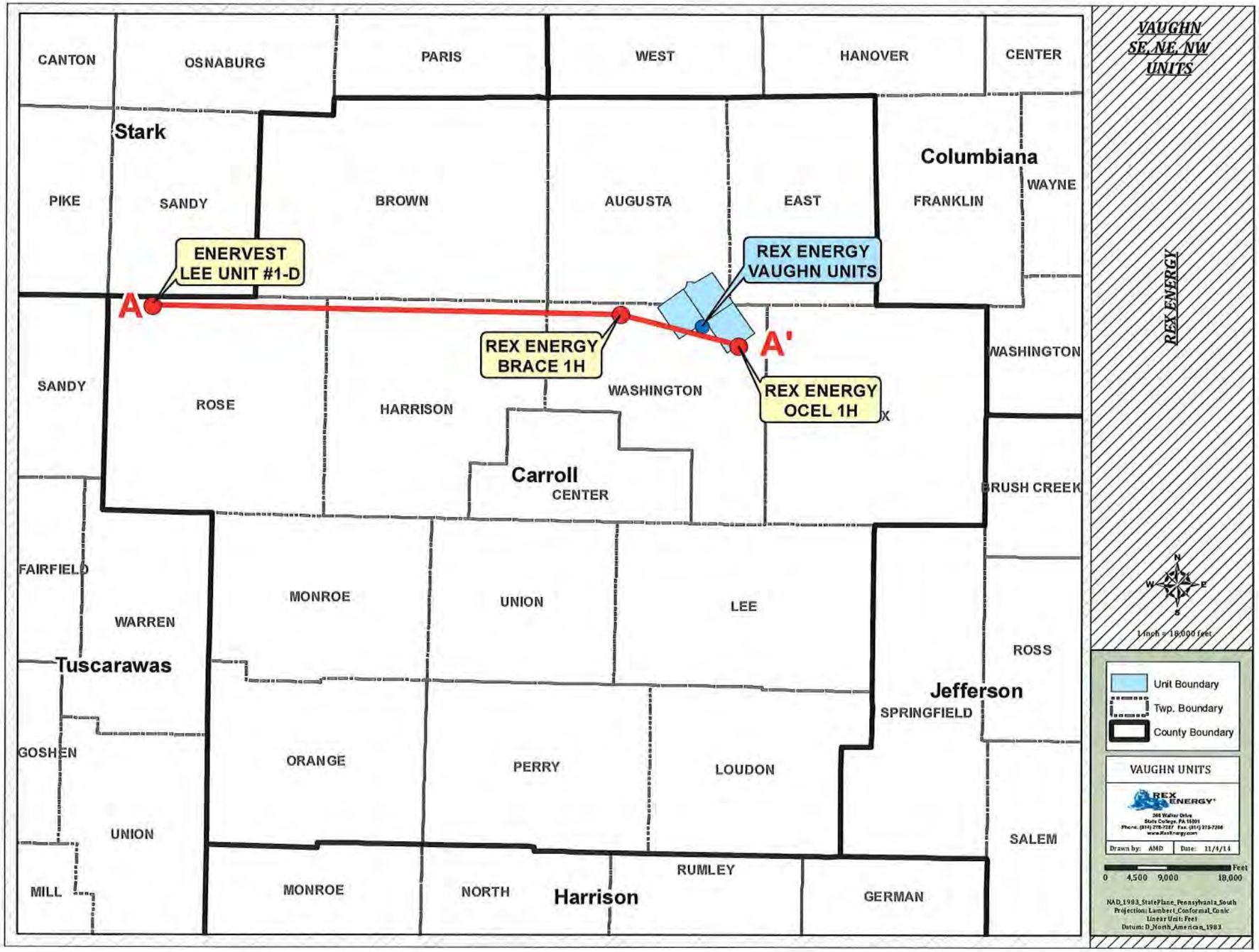


LATERO/INDUCTION LOG SCALES

DP-1 Logs

Exhibit DP-3

Exhibit DP-3


CANTON
OSNABURG
PARIS
WEST
HANOVER
CENTER
Stark
PIKE
SANDY
BROWN
AUGUSTA
EAST
Columbiana
FRANKLIN
WAYNE
ENERVEST
LEE UNIT #1-D
REX ENERGY
VAUGHN UNITS
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BRACE 1H
REX ENERGY
OCEL 1H
SANDY
ROSE
HARRISON
WASHINGTON
WASHINGTON
Carroll
CENTER
BRUSH CREEK
FAIRFIELD
WARREN
MONROE
UNION
LEE
Tuscarawas
ROSS
Jefferson
SPRINGFIELD
GOSHEN
ORANGE
PERRY
LOUDON
UNION
SALEM
MILL
MONROE
NORTH
Harrison
RUMLEY
GERMAN
VAUGHN
SE, NE, NW
UNITS
REX ENERGY
N
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E
S
1 inch = 18,000 feet
Unit Boundary
Twp. Boundary
County Boundary
VAUGHN UNITS
REX ENERGY
Drawn by: AMD
Date: 11/4/14
Feet
0 4,500 9,000 18,000
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Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983

3

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

In re the Matter of the Application of	:	
R.E. Gas Development, LLC for	:	
Unit Operation	:	Application Date: November 10, 2014
	:	
Vaughn Northeast Unit	:	

PREPARED TESTIMONY OF ALEX AZIZI
ON BEHALF OF R.E. GAS DEVELOPMENT, LLC ("REX")
(RESERVOIR ENGINEER)

Date: November 10, 2014

Attachment 3

PREPARED TESTIMONY OF ALEX AZIZI

INTRODUCTION.

Q1. Please introduce yourself to the Division.

A1. My name is Alex Azizi. I am the Director of Reservoir Engineering for Rex. My business address is 366 Walker Drive, State College, Pennsylvania 16801.

Q2. What are your job responsibilities as Director of Reservoir Engineering?

A2. My job responsibilities include understanding reservoirs in the Appalachian Basin, including, the Marcellus, Upper Devonian and Utica/Point Pleasant shales. I'm focused on the evaluation of the reserves and the economic evaluations of our projects.

Q3. What is your educational background?

A3. I earned a Bachelor of Science in Petroleum Engineering from the University of Texas at Austin in 2003.

Q4. How long have you worked for Rex?

A4. I have worked for Rex for the last four years. At Rex I have done some work in secondary and tertiary recovery in our Illinois Basin assets, however, I am focused primarily on Appalachian unconventional reservoirs.

Q5. Would you briefly describe your professional experience?

A5. I have worked in the oil and gas industry for approximately 10 years. During that time, I have worked for various oil and gas producers spending the first six years at Cano Petroleum in Fort Worth, Texas, where I was involved mostly in secondary water flood and tertiary recovery projects in Texas, Oklahoma and New Mexico.

Q6. And is that work similar to the work you now do for Rex?

A6. Yes. That work is similar in terms of evaluating resources in the area and understanding well behavior.

Q7. Are you a member of any professional associations?

A7. Yes. I am a member of the Society of Petroleum Engineers.

Q8. What is the purpose of your testimony today?

A8. I am testifying in support of the *Application of R.E. Gas Development, LLC for Unit Operation* filed with respect to the Vaughn Northeast Unit, consisting of seventy (70) separate tracts of land totaling approximately 612 acres in Carroll

County, Ohio. My testimony addresses the following: (i) that unit operations for the Vaughn Northeast Unit are reasonably necessary to increase substantially the recovery of oil and gas; and (ii) that the value of the estimated additional recovery due to unit operations exceeds its estimated additional costs.

UNIT OPERATIONS ARE REASONABLY NECESSARY TO INCREASE SUBSTANTIALLY THE RECOVERY OF OIL AND GAS.

Q9. I'd like to begin by addressing whether unit operations in the Vaughn Northeast Unit are reasonably necessary to increase substantially the recovery of oil and gas from those properties. Would you describe briefly how Rex anticipates developing the Vaughn Northeast Unit?

A9. The actual total number of wells will be dependent on production results. However, Rex anticipates drilling up to five wells ranging in approximate lateral length from 5,000' to 5,450' running from the southeast to the northwest. The Vaughn Northeast Unit will be drilled from two separate well pads the first located on lands outside the unit to the southwest of the unit while the second is on the southeast portion of the Vaughn Northeast Unit as shown in Exhibit AA-1.

Q10. Do you have an opinion on whether unit operations in the Vaughn Northeast Unit are reasonably necessary to increase substantially the recovery of oil and gas from those properties, and if so, what is your opinion?

A10. Yes. It is my opinion that unit operations are reasonably necessary to increase substantially the recovery of oil and gas from the unit. Given the location of the unleased tracts and the applicable regulatory setbacks, it is only possible to drill two laterals without an order authorizing unit operations. However, should an order authorizing unit operations be granted, it is possible to drill the five (5) wells depicted on Exhibit AA-1 which will be accompanied by a substantial increase in recovery of oil and gas.

Q11. Have you made an estimate of the production you anticipate from the proposed unit operations?

A11. Yes. The estimated ultimate recovery from the proposed Vaughn Northeast Unit development could be as much as between 30 and 35 billion cubic feet equivalent (Bcfe). This estimate is presented in greater detail on the attached Exhibit AA-2,

which includes an estimate of the recoverable reserves for each of the Vaughn Northeast Unit wells.

Q12. Have you made an estimate of the production you anticipate without an order authorizing unit operations?

A12. Yes. The estimated ultimate recovery from the Vaughn Northeast Unit without an order authorizing unit operations is between 12 and 14 Bcfe.

Q13. Are the estimates that you made based on good engineering practices and accepted methods in the industry?

A13. Yes. They are based on initial results from analog wells in the area.

Q14. Can you calculate the production from these wells ahead of time with mathematical certainty?

A14. No. It is impossible at this early stage in the development of the area to calculate the well performance with mathematical certainty.

Q15. Is horizontal drilling technology, including hydraulic fracturing the formation, required to economically develop unconventional resources?

A15. Yes.

Q16. Is horizontal drilling common in the oil and gas industry?

A16. Yes. It has been common in the industry for the last few decades and it has become particularly common in the last five to ten years.

Q17. In your professional opinion, would it be economic to develop the Vaughn Northeast Unit using vertical drilling?

A17. No. In a vertical well, the area of the well exposed to the producing reservoir will be considerably less than in a horizontal well, thus reducing the production and ultimate recovery of the well. When you take into account that reduction of reserves together with the capital investment required for a vertical well, the development of the area using vertical technology becomes uneconomical.

VALUE OF ESTIMATED ADDITIONAL RECOVERY EXCEEDS ITS ESTIMATED ADDITIONAL COSTS

Q18. Let's turn to the financial side of the project. Generally, in your professional experience, how would the economics of a development project such as the development of the Vaughn Northeast Unit be evaluated?

A18. First you need to estimate the production profile expected of the horizontal wells. You do that by taking into account accepted practices in the industry and using analog wells in the vicinity. You also need to estimate the total capital expenditure required for the drilling, completion and production of the well. When you combine those two estimates with the expected cost of operating the well during its life, you can evaluate the economics.

Q19. Did you do that here?

A19. Yes.

Q20. Would you walk us through your economic evaluation, beginning with your estimate of the anticipated revenue stream from the Vaughn Northeast Unit's development?

A20. We estimate that, based on the lateral lengths of these wells, the cost of drilling in the Vaughn Northeast Unit will be between $7,000,000 and $8,000,000 for each well. Once you combine that cost with the cost of operating a typical well in the area, we believe that the Net Present Value for each of these wells is between $200,000 and $1,000,000. For additional details regarding the estimates for the wells within the Vaughn Northeast Unit, see attached Exhibit AA-2.

Q21. What price scenario did you use for the anticipated revenue stream?

A21. We assumed gas prices to be on average $4.00/mcf and oil prices to be $80/bbl for the life of the project. This is consistent with the values on the NYMEX futures markets during the first week of November 2014. For natural gas liquids, typically the market prices these liquids at a differential with respect to NYMEX pricing for oil. We have seen in the recent market trends for natural gas liquids values between 10% and 55% of the NYMEX oil value. We took this variation into account in making value estimates for the Vaughn Northeast Unit.

Q22. What about anticipated capital and operating expenses?

A22. You work in cooperation with the drilling and completion engineers, as well as with the geologist, all of whom determine the expected depth and pay of the area. Once you understand the depth of the formation and the total lateral length that you need to recover the reserves, you use the latest figures from recent wells regarding the cost of drilling per foot in order to calculate total capital cost. The operating expenses are calculated in a similar manner. Here, as shown on Exhibit AA-2, assuming full development of the Vaughn Northeast Unit, the estimated capital costs will range between $35,000,000 and $40,000,000 while, the life of well estimated operating expense for each well in the unit $10,000,000. In making cost estimates, the capital cost of building the well pads is distributed equally among the wells. Without unitization, the capital cost of both well pads construction burdens two wells instead of five wells.

Q23. Based on this information and your professional judgment, does the value of the estimated additional recovery from the operations proposed for the Vaughn Northeast Unit exceed its estimated additional costs, and if so, would you explain why?

A23. Yes. As indicated on Exhibit AA-1, there are three additional wells that could be drilled in the unit if the proposed unit operations are allowed. The value of the additional recovery from those unit operations, when compared to their associated additional costs, is reflected in the estimated net present value for each additional well set forth on Exhibit AA-2. That estimated net present value is between $200,000 and $1,000,000 per well. The fact that this range of numbers is positive means that the estimated revenue generated from each well exceeds the estimated costs of drilling and operating that well. And the fact that the total amount when summed across all of these wells is positive indicates that the value of the estimated additional recovery from unit operations exceeds its estimated additional costs. If an order authorizing unit operations was not granted, economies of scale would be lost. For instance, the pad construction costs would burden two wells. This means a 3-5% reduction in the expected rate of return, not to mention the waste of the oil and gas resources left in the ground. This means that very likely that the Vaughn

Northeast Unit would not be developed, stranding all of the resources in the Vaughn Northeast Unit.

Q24. And your opinions are based on your education and professional experience?

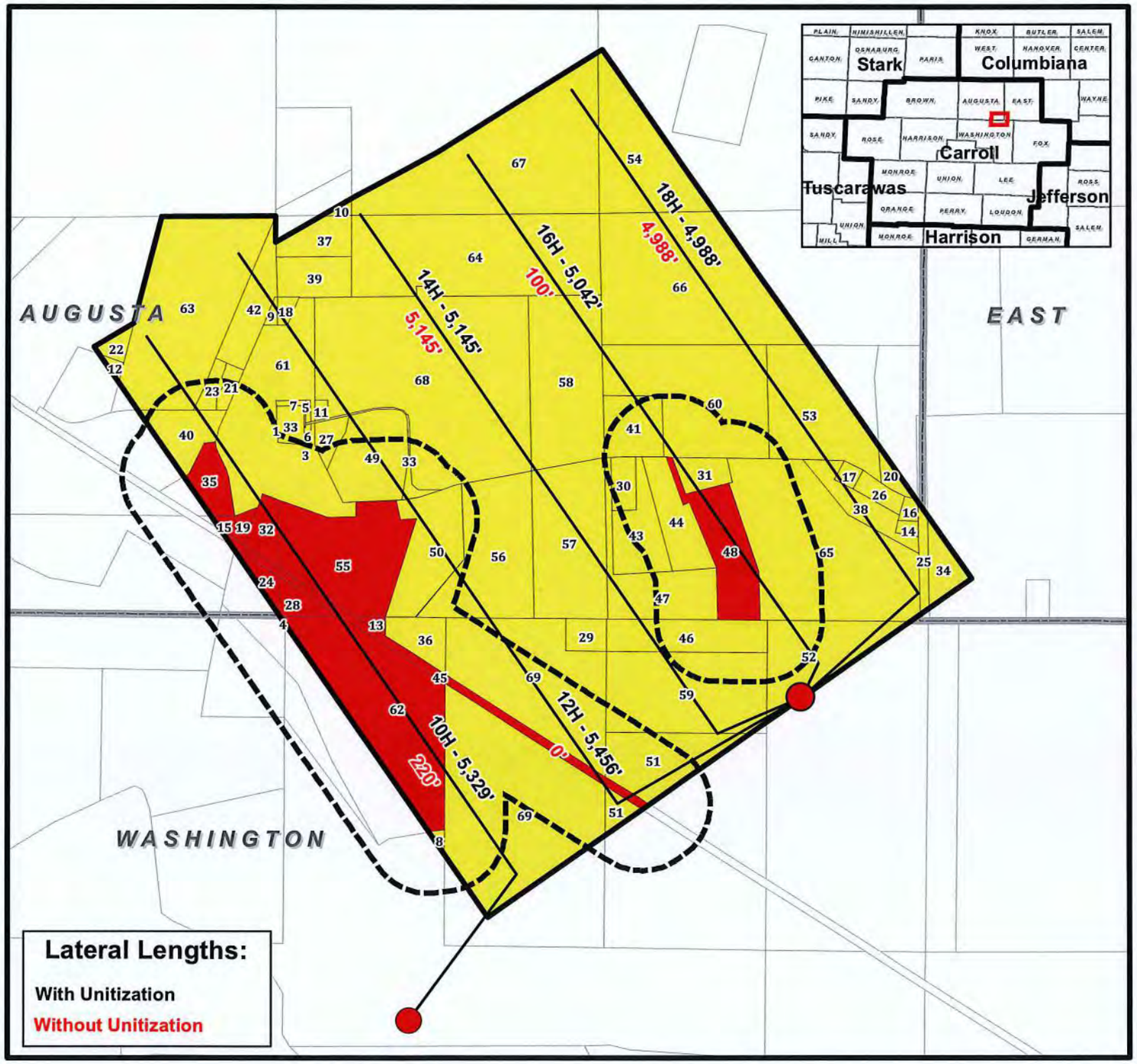
A24. Yes.

Q25. Does this conclude your testimony?

A25. Yes.

Exhibit AA-1

Exhibit AA-1



Land Exhibit 3

Vaughn NE Unit
Augusta,Washington
& East Townships
Carroll County, OH

- Pad Sites
- 500' Set-Back
- Laterals
- Unit Boundary
- REX/WI OWNERS
- OPEN

1 inch = 1,100 feet
1,000 Feet

REX ENERGY®
366 Walker Drive
State College, PA 16801
Phone: (814) 278-7267 Fax: (814) 278-7286
www.RexEnergy.com

NAD_1983_StatePlane_Ohio_North_Feet
Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983

R:\Ohio\Warrior_North\Units\Vaughn NE\Unitization\
Vaughn NE Land Exhibit 3.mxd

Exhibit AA-2

Reservoir Engineering Exhibits
Vaughn NE
Economics w/ Approved Unitization

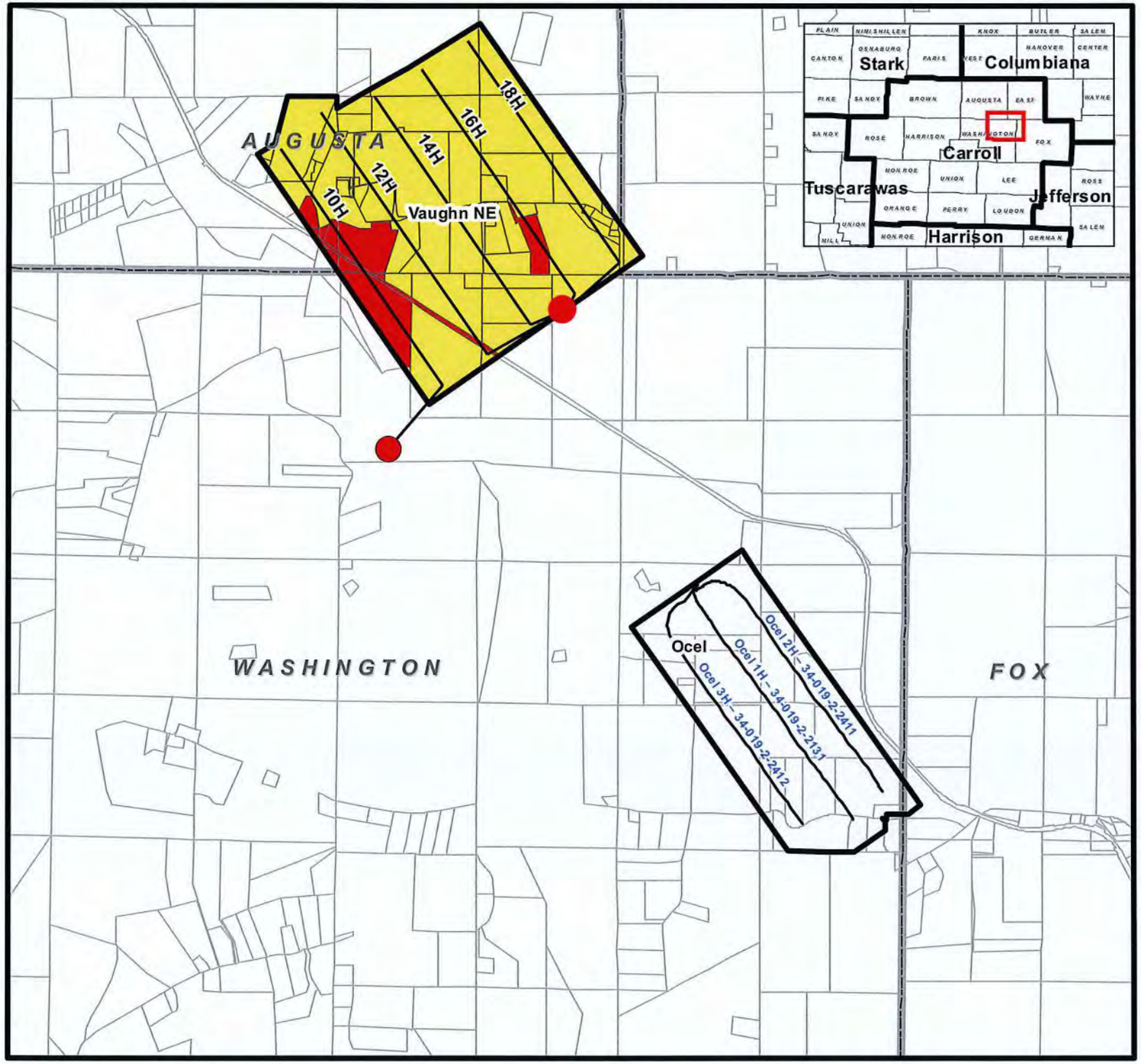
	Lateral Length (Feet)	EUR	Capital Cost ($)	Life of Well Estimated Operating Expense	Net Present Value ($) Discounted @ 10%
Vaughn NE 10H	5,329	6-7 Bcfe	$7 - 8 MM	$10.0 MM	$0.2 - 1.0 MM
Vaughn NE 12H	5,456	6-7 Bcfe	$7 - 8 MM	$10.0 MM	$0.2 - 1.0 MM
Vaughn NE 14H	5,145	6-7 Bcfe	$7 - 8 MM	$10.0 MM	$0.2 - 1.0 MM
Vaughn NE 16H	5,042	6-7 Bcfe	$7 - 8 MM	$10.0 MM	$0.2 - 1.0 MM
Vaughn NE 18H	4,988	6-7 Bcfe	$7 - 8 MM	$10.0 MM	$0.2 - 1.0 MM
Total	N/A	30-35 Bcfe	$35.0 - 40.0 MM	$50.0 MM	$1.0 - 5.0 MM

Reservoir Engineering Exhibits
Vaughn NE
Economics w/out Approved Unitization

	Lateral Length (Feet)	EUR	Capital Cost ($)	Life of Well Estimated Operating Expense	Net Present Value ($) Discounted @ 10%
Vaughn NE 10H	220	0 Bcfe	$0.5 MM	$0.0MM	($0.5 MM)
Vaughn NE 12H	0	0 Bcfe	$0.5 MM	$0.0MM	($0.5 MM)
Vaughn NE 14H	5,145	6-7 Bcfe	$7 - 8 MM	$10.0MM	$0.2 - 1.0 MM
Vaughn NE 16H	100	0 Bcfe	$0.5 MM	$0.0MM	($0.5 MM)
Vaughn NE 18H	4,988	6-7 Bcfe	$7 - 8 MM	$10.0MM	$0.2 - 1.0 MM
Total	N/A	12-14 Bcfe	$15.5 - 17.5 MM	$20.0MM	($1.1) - 0.5 MM

Exhibit AA-3

Exhibit AA-3



Adjacent Wells

Vaughn NE Unit
Augusta, Washington & East Townships
Carroll County, OH

- Pad Sites
- Laterals
- Units
- REX/WI OWNERS
- OPEN

1 inch = 2,511 feet
3,000 Feet

REX ENERGY®
366 Walker Drive
State College, PA 16801
Phone: (814) 278-7267 Fax: (814) 278-7286
www.RexEnergy.com

NAD_1983_StatePlane_Ohio_North_Feet
Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983

R:\Ohio\Warrior_North\Units\Vaughn NW\Unitization\Vaughn NW Adjacent Wells.mxd

4

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

In re the Matter of the Application of	:	
R.E. Gas Development, LLC for	:	
Unit Operation	:	Application Date: November 10, 2014
	:	
Vaughn Northeast Unit	:	

PREPARED TESTIMONY OF MATTHEW METHENEY
ON BEHALF OF R.E. GAS DEVELOPMENT, LLC ("REX")
(LANDMAN)

Date: November 10, 2014

Attachment 4

PREPARED TESTIMONY OF MATTHEW METHENEY

INTRODUCTION.

Q1. Please introduce yourself to the Division.

A1. My name is Matthew Metheney and I am a Senior Landman for Rex.

Q2. What is your educational background?

A2. I received a Bachelor of Arts Degree in Economics and Business from the Virginia Military Institute ("VMI") in 1991.

Q3. Would you briefly describe your professional experience?

A3. I am currently Rex's Senior Landman in Carrollton, Ohio. Prior to becoming an "in-house" landman for Rex, I was an independent landman working on a contract basis for approximately five years, four of which as a contractor for Rex. During my time as a contractor, I worked in West Virginia, Ohio and Pennsylvania; however, my work was focused primarily on leasing in Pennsylvania and Ohio as a contractor for Rex. Prior to working in the Oil and Gas industry, I was a certified Police Officer in the City of Morgantown, West Virginia for approximately 14.5 years. I worked various assignments during my time at the police department. Those assignments include working as a uniformed police officer and working for the detective bureau, drug task force officer and finally as Operations Supervisor for the entire department.

Q4. How long have you worked for Rex?

A4. I have worked for Rex since November of 2013.

Q5. What are your job responsibilities as Senior Landman for Rex?

A5. I am the primary point of contact for landowners residing within Rex's Ohio area of operations. I also oversee all of Rex's Ohio contractors who are performing lease and other land associated activities. In that regard, I create spreadsheets that the contractors utilize to capture leasing contacts. I also assist with leasing efforts, securing right of ways for waterlines, negotiating well sites, negotiating damage settlements and promoting a positive relationship between Rex Energy and local residents of the areas that Rex is active.

Q6. Are you a member of any professional associations?

A6. Yes, I am a member of the American Association of Professional Landmen

(AAPL) and the Ohio Oil and Gas Association.

Q7. What is the purpose of your testimony today?

A7. I am testifying in support of the *Application of R.E. Gas Development, LLC for Unit Operation* filed with respect to the Vaughn Northeast Unit, consisting of seventy (70) separate tracts of land totaling approximately 612 acres in Carroll County, Ohio. In particular, I will describe the efforts made by Rex to put the Vaughn Northeast Unit together and the Unit Plan that Rex is proposing.

EFFORTS MADE BY REX TO LEASE UNIT TRACTS.

Q8. The Application submitted by Rex indicates that it owns the oil and gas rights to approximately 333 acres of the proposed 612.60022 acre unit. Would you describe how Rex acquired those rights?

A8. Rex has leased over 16,000 acres in Carroll County since June 2011, and inside the Vaughn Northeast Unit, Rex has leased approximately 333.70393 acres.

Q9. And that represents what percentage of the unit acreage?

A9. As reflected on Exhibit A-2 and Exhibit A-4 to the Unit Operating Agreement, that's approximately 54.47336% of the Vaughn Northeast Unit.

Q10. Are there other operators in the unit, and if so, have they agreed to participate in its development?

A10. Yes. There are two other operators in the Vaughn Northeast Unit: EnerVest Energy Institutional Fund XI-A, LP, EnerVest Energy Institutional Fund XI-WI, LP, CGAS Properties, L.P., CHK Utica, LLC, Chesapeake Exploration, L.L.C. and Total E&P USA, Inc. Collectively, they own 210.4189 acres of land, which represents 34.3484% of the total acreage of the Vaughn Northeast Unit. Each of the other operators has agreed to participate in its development and has agreed to support this unitization application.

Q11. Is it accurate to say then that the owners of more than eighty-eight percent (88%) of the unit have approved the filing of this Application?

A11. Yes. Please see Exhibit DR-1, which includes working interest approvals from EnerVest Energy Institutional Fund XI-A, LP, EnerVest Energy Institutional Fund XI-WI, LP, CGAS Properties, L.P., Chesapeake Utica, L.L.C., Chesapeake Exploration, L.L.C. and Total E&P USA, Inc.

Q12. How many unleased mineral owners are there in the Vaughn Northeast Unit?

A12. There are four (4) unleased mineral owners in the Vaughn Northeast Unit, and they own Tract 4, Tract 13, Tract 15, Tract 19, Tract 24, Tract 28, Tract 32, Tract 35, Tract 45, Tract 48, Tract 55, and Tract 62. The interest controlled by these unleased mineral owners represents 68.47739 acres or 11.178153% of the Vaughn Northeast Unit.

Q13. Have affidavits detailing Rex's efforts to obtain leases from the unleased mineral owners been prepared?

A13. Yes. Please refer to attached Exhibit MM-2.

Q14. Do you have an exhibit to your testimony that illustrates the leased and unleased tracts within the Vaughn Northeast Unit?

A14. Yes. Attached Exhibit MM-3 is a plat showing each of the tracts in the Vaughn Northeast Unit. The unleased tracts appear in red whereas the leased tracts appear in yellow.

Q15. Do you have an aerial plat of the Vaughn Northeast Unit?

A15. Yes. Attached Exhibit MM-4 is an aerial plat of the Vaughn Northeast Unit.

UNIT PLAN PROVISIONS.

Q16. Would you generally describe the development plan for the Vaughn Northeast Unit?

A16. Rex plans to develop the Vaughn Northeast Unit from a two well pads, one being located on lands located outside and south of the Unit, the other being located on lands within the unit and along the southeast side of the Unit. From these well pads, Rex intends to drill up to five (5) horizontal wells with projected lateral lengths of approximately 5,000 feet to 5,300 feet, as depicted on Exhibit MM-3.

Q17. Does Rex have a specific timeline for drilling the wells in the Vaughn Northeast Unit?

A17. Rex plans to drill the initial well within twelve (12) months of the effective date of an order authorizing unit operations. Upon evaluating the results of the first well, Rex anticipates drilling the subsequent well within five years of the effective date of an order authorizing unit operations, depending on results, rig availability, and the availability of markets for the hydrocarbons.

Q18. Does Rex have any other development activity in the immediate area?

A18. Yes. Please see attached Exhibit MM-5, which depicts the units bordering the Vaughn Northeast Unit.

Q19. Are you familiar with the Unit Plan proposed by Rex for the Vaughn Northeast Unit?

A19. Yes. The Unit Plan proposed by Rex is attached to the Application and consists of an initial document that establishes the non-operating relationship between the parties in the Unit, and an operating agreement and related exhibits that establish how the Unit is going to be explored, developed and produced.

Q20. Turning first to the body of the Unit Plan, marked as Attachment 1 to the Application. Would you describe briefly what it does?

A20. Yes. The general intent of the Unit Plan is to effectively combine the oil and gas rights and interests in the Vaughn Northeast Unit in a uniform manner so that they can be developed as though each of the tracts were covered by a single lease.

Q21. Are all of the oil and gas rights in the proposed unit combined?

A21. No. The Unit Plan only unitizes the oil and gas rights in and related to the Unitized Formation.

Q22. How would production from the Vaughn Northeast Unit be allocated?

A22. On a surface-acreage basis consistent with Article 4 and Article 5 of the Unit Plan.

Q23. Why use a surface-acreage basis as the method of allocation?

A23. We believe it is the most efficient and fair manner in which the landowners, Unleased Mineral Owners and the other operators can share in production from the Vaughn Northeast Unit.

Q24. Would you go through an example from Exhibit A-2 to the Unit Operating Agreement to illustrate what you mean?

A24. Yes. If you refer to Exhibit A-2 of the Unit Operating Agreement, the column entitled "Surface Acres in Unit" reflects the number of surface acres in each tract included within the Vaughn Northeast Unit. The column entitled "Tract Participation" shows the related tract participation of each tract, which is calculated by taking the number of surface acres in each tract included within the unit and dividing it by the total number of surface acres in the unit. For example, if you refer

to Tract 23 on Exhibit A-2 to the Unit Operating Agreement, it shows that Elon D. and Mary L. Hunsberger are the current mineral owners of 1.236 acres in the 612.60022 acre Vaughn Northeast Unit. This equates to a Tract Participation of 0.00201763 (1.236/612.60022 = 0.00201763).

Q25. What does that mean in terms of production allocated to that particular tract?

A25. It would mean that approximately 0.201763% of all production from the Vaughn Northeast Unit would be allocated to Tract 23.

Q26. Does it work the same way for an unleased mineral interest, that is, for the tract of a person who did not lease the property in the unit?

A26. Yes.

Q27. In your experience, is that an unusual way to allocate production in a unit?

A27. No. In my experience, surface-acreage allocation is both fair and customary for horizontal shale development. It is also the standard practice exercised in the industry as a whole.

Q28. How are unit expenses allocated?

A28. Like production in the unit, generally on a surface-acreage basis. Article 3 of the Unit Plan 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 included within the unit bears to the surface acres of the entire unit.

Q29. Who pays the unit expenses?

A29. According to the terms of the proposed Unit Plan, the working interest owners.

Q30. Do the royalty owners pay any portion of the unit expenses?

A30. No, unless the terms and conditions of the royalty owner's oil and gas lease dictate otherwise. 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.

Q31. Let's turn to the Unit Operating Agreement. It appears to be based upon A.A.P.L. Form 610 – 1989 Model Form Operating Agreement, is that correct?

A31. Yes. We typically use a modified version of the 1989. 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.

Q32. Turning to the Unit Operating Agreement in particular, does it address how unit expenses are determined and paid?

A32. 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 Exhibit A-2 and Exhibit A-4 to the Unit Operating Agreement. Moreover, the Unit Operating Agreement has attached to it an accounting procedure identified as Exhibit C that offers greater details regarding how unit expenses are determined and paid.

Q33. That's commonly referred to as the COPAS?

A33. Yes. COPAS stands for the Council of Petroleum Accountants Societies and is a commonly used form in the industry.

Q34. Will there be in-kind contributions made by owners in the unit area for unit operations, such as contributions of equipment?

A34. No. Rex does not anticipate any in-kind contributions for Unit Operations.

Q35. Are there times when a working interest owner in the unit chooses not to – or cannot – pay their allocated share of the unit expenses?

A35. Yes, such a situation is not uncommon in the industry. The Unit Operating Agreement gives working interest owners the flexibility to decline participation in any operation that they either cannot afford or believe is not likely to be profitable. The remaining parties can then proceed at their own risk and expense.

Q36. Generally, how is the working interest accounted for when an owner chooses not to participate in an operation?

A36. A working interest owner who cannot or chooses not to participate in an operation is considered a non-consenting party. If the remaining working interest owners decide to proceed with the operation, the consenting parties alone will bear the full cost and expense of the operations. A non-consenting party is deemed to have relinquished its interest in that operation until the well revenues pay out the costs that would have been attributed to that party, plus a prescribed risk penalty or non-consent penalty.

Q37. Can a working interest owner choose to go non-consent in the initial well in the Vaughn Northeast Unit?

A37. Yes. If a working interest owner chooses not to participate in the unit's initial well, Article XVI(C) of the Unit Operating Agreement provides that the working interest owner shall be deemed to have relinquished its working interest to the other parties in the unit, in proportion to their respective working interests, with a back-in provision and risk factor of 300%.

Q38. Does the Unit Operating Agreement treat the initial well and subsequent operations differently in terms of going non-consent, and if so, why?

A38. Yes. In this case, there are no wells in the unit that could be classified as extremely high risk. However, there are still operational risks and therefore there is still a risk factor penalty involved should a party go non-consent. Subsequent operations have a smaller risk factor of 200%.

Q39. But if the working interest owner still has a royalty interest in the unit, that royalty interest would remain in place and be paid?

A39. Yes. That royalty interest would still be paid according to the terms and conditions of the agreement that give rise to the royalty.

Q40. Where are the risk factors for subsequent operations set out in the Unit Operating Agreement?

A40. They are set out in Article VI.B of the Unit Operating Agreement.

Q41. 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?

A41. 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."

Q42. Does this oil and gas lease contain standard provisions that Rex uses in connection with its operations in Ohio?

A42. It is a standard agreement Rex has used in the State of Ohio.

Q43. Based upon your education and professional experience, do you view the terms of Exhibit B as reasonable?

A43. Yes.

Q44. Moving on to Exhibit D of the Unit Operating Agreement, would you describe what it is?

A44. Yes. Exhibit D is the insurance exhibit to the Unit Operating Agreement. It sets forth coverage amounts and limitations, and the insurance terms for operations conducted under the Unit Operating Agreement. For example, it requires that operator shall comply with all applicable federal and state insurance and Worker's Compensation Laws.

Q45. Based upon your education and professional experience, do you view the terms of Exhibit D as reasonable?

A45. Yes.

Q46. Would you next describe to the Division Exhibit E of the Unit Operating Agreement?

A46. Yes. Exhibit E is the Gas Balancing Agreement, which further details the rights and obligations of the parties with respect to marketing and selling any production from the Contract Area.

Q47. In your professional opinion, given your education and experience, are the terms of the Unit Plan, including the terms of the exhibits just discussed, just and reasonable?

A47. Yes.

Q48. Does this conclude your testimony?

A48. Yes.

Exhibit MM-1

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

In re the Matter of the Application of	:	
R.E. Gas Development, LLC for	:	Application Date: November 10, 2014
Unit Operation	:	
	:	
Vaughn Northeast Unit	:	

AFFIDAVIT OF OWNERSHIP

I, Matt Metheney, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Matt Metheney and I am a Senior Landman with R.E. Gas Development, LLC ("Applicant"). My day-to-day responsibilities include work as the primary point of contact for landowners in the Ohio area of operations. I also assist with leasing, rights-of-way for waterlines, negotiating well sites, damage settlements and promoting a positive relationship between Applicant and landowners. My duties regularly require me to coordinate my efforts with contractors associated with multi-well field development efforts, for the Applicant in the State of Ohio, 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 Vaughn Northeast Unit, according to the Unit Plan attached thereto (the "Application") (as those terms are used and defined therein). The Vaughn Northeast Unit is located in Carroll County, Ohio, and consists of seventy (70) separate tracts of land covering approximately 612.6 acres.

3. As of the Application Date set forth above, the Applicant and the Working Interest Owners supporting the Application are the owners, 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 sayeth Affiant naught.

Matt Metheney

Matt Metheney

Sworn to and subscribed before me this 6th day of November, 2014.

DEBBIE HERRINGTON
NOTARY PUBLIC • STATE OF OHIO
Recorded in Carroll County
My commission expires Nov. 17, 2016

Debbie Herrington

Notary Public

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	:	Application Date: November 10, 2014
Vaughn Northeast Unit	:	

LEASE AFFIDAVIT

I, Matt Metheney, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Matt Metheney and I am a Senior Landman with R.E. Gas Development, LLC ("Applicant"). My day-to-day responsibilities include work as the primary point of contact for landowners in the Ohio area of operations. I also assist with leasing, rights-of-way for waterlines, negotiating well sites, damage settlements and promoting a positive relationship between Applicant and landowners. My duties regularly require me to coordinate my efforts with contractors associated with multi-well field development efforts, for the Applicant in the State of Ohio, 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 Vaughn Northeast, according to the Unit Plan attached thereto (the "Application") (as those terms are used and defined therein). The Vaughn Northeast Unit is located in Carroll County, Ohio, and consists of seventy (70) separate tracts of land covering approximately 612.6 acres.

3. To my knowledge the Applicant holds a valid lease agreement pertaining to all of the Applicant's acreage that is held under lease, as described in Exhibit A-2 and A-4 of the Unit Operating Agreement attached to the Application.

Further sayeth Affiant naught.

DEBBIE HERRINGTON
NOTARY PUBLIC • STATE OF OHIO
Recorded in Carroll County
My commission expires Nov. 17, 2016

Matt Metheney

Sworn to and subscribed before me this 6th day of November, 2014.

Notary Public

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	: : : :	Application Date: September 16, 2014

Vaughn NE Unit

WORKING INTEREST OWNER APPROVAL

R.E. Gas Development, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Vaughn NE Unit, located in Carroll County, Ohio, and consisting of Sixty Nine (69) separate tracts of land covering approximately 612.58022 acres, according to the Unit Plan attached thereto (the "Application").

CGAS Properties, L.P. is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of 10 tract(s) of land covering approximately 205.4189 acres contained in the Vaughn NE Unit, or 15.4757% of the lands in the unit, all as more specifically described on attached Exhibit 1.

CGAS Properties, L.P. hereby approves, and supports the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledges receipt of full and true copies thereof.

CGAS Properties, L.P.

By: _____ CA
James D. McKinney,
Senior VP & General Manager

Date: 10/9/2014

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
8	Richard F. & Loretta VonKanel	.30537	34-0000509.000
10	David P. McCullough	.36731	01-0000043.000
37	David P. McCullough	4.05996	01-0000042.000
51	Megan E. & James R. Vaughn	10.85735	34-0000014.000
54	Levi L. Jr. & Cora K. Miller and Levi S. & Eva Y. Miller (life estate)	14.90582	01-0000186.000
59	Megan E. & James R. Vaughn	19.78815	34-0000013.000
64	James Neil & Laurie Ann McClester	30.00000	01-0000363.000
65	Daniel L. & Michelle L. Grooms	32.64324	01-0000202.002
67	James Neil & Lurie Ann McClester	32.79537	01-0000365.000
69	Megan E. & James R. Vaughn	59.69633	34-0000016.000

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	: : : :	Application Date: September 16, 2014

Vaughn NE Unit

WORKING INTEREST OWNER APPROVAL

R.E. Gas Development, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Vaughn NE Unit, located in Carroll County, Ohio, and consisting of Sixty Nine (69) separate tracts of land covering approximately 612.58022 acres, according to the Unit Plan attached thereto (the "Application").

Chesapeake Exploration, LLC is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of 1 tract(s) of land covering approximately 5 acres contained in the Vaughn NE Unit, or .0490% of the lands in the unit, all as more specifically described on attached Exhibit 1.

Chesapeake Exploration, LLC hereby approves, and supports the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledges receipt of full and true copies thereof.

Chesapeake Exploration, LLC

By: _____
Dan Weinmeister,
Land Manager, Appalachia South

Date: 10/13/2014

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
39	Helen I. Fry	5	01-0000159.000

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

In re the Matter of the Application of	:	
R.E. Gas Development, LLC for	:	Application Date: September 16, 2014
Unit Operation	:	
	:	

Vaughn NE Unit

WORKING INTEREST OWNER APPROVAL

R.E. Gas Development, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Vaughn NE Unit, located in Carroll County, Ohio, and consisting of Sixty Nine (69) separate tracts of land covering approximately 612.58022 acres, according to the Unit Plan attached thereto (the "Application").

CHK Utica, LLC. is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of 1 tract(s) of land covering approximately 5 acres contained in the Vaughn NE Unit, or .5632% of the lands in the unit, all as more specifically described on attached Exhibit 1.

CHK Utica, LLC hereby approves, and supports the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledges receipt of full and true copies thereof.

CHK Utica, LLC.

By: _____
Dan Weinmeister,
Land Manager, Appalachia South

Date: 10/13/2014

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
39	Helen I. Fry	5	01-0000159.000

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	: : : :	Application Date: September 16, 2014

Vaughn NE Unit

WORKING INTEREST OWNER APPROVAL

R.E. Gas Development, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Vaughn NE Unit, located in Carroll County, Ohio, and consisting of Sixty Nine (69) separate tracts of land covering approximately 612.58022 acres, according to the Unit Plan attached thereto (the "Application").

EnerVest Energy Institutional Fund XI-WI, LP is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of 10 tract(s) of land covering approximately 205.4189 acres contained in the Vaughn NE Unit, or 5.5980% of the lands in the unit, all as more specifically described on attached Exhibit 1.

EnerVest Energy Institutional Fund XI-WI, LP hereby approves, and supports the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledges receipt of full and true copies thereof.

EnerVest Energy Institutional Fund XI-WI, LP

By: _____
James D. McKinney,
Senior VP & General Manager

Date: 10/9/2014

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
8	Richard F. & Loretta VonKanel	.30537	34-0000509.000
10	David P. McCullough	.36731	01-0000043.000
37	David P. McCullough	4.05996	01-0000042.000
51	Megan E. & James R. Vaughn	10.85735	34-0000014.000
54	Levi L. Jr. & Cora K. Miller and Levi S. & Eva Y. Miller (life estate)	14.90582	01-0000186.000
59	Megan E. & James R. Vaughn	19.78815	34-0000013.000
64	James Neil & Laurie Ann McClester	30.00000	01-0000363.000
65	Daniel L. & Michelle L. Grooms	32.64324	01-0000202.002
67	James Neil & Lurie Ann McClester	32.79537	01-0000365.000
69	Megan E. & James R. Vaughn	59.69633	34-0000016.000

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	: : : :	Application Date: September 16, 2014

Vaughn NE Unit

WORKING INTEREST OWNER APPROVAL

R.E. Gas Development, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Vaughn NE Unit, located in Carroll County, Ohio, and consisting of Sixty Nine (69) separate tracts of land covering approximately 612.58022 acres, according to the Unit Plan attached thereto (the "Application").

EnerVest Energy Institutional Fund XI-A, LP is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of 10 tract(s) of land covering approximately 205.4189 acres contained in the Vaughn NE Unit, or 12.4597% of the lands in the unit, all as more specifically described on attached Exhibit 1.

EnerVest Energy Institutional Fund XI-A, LP hereby approves, and supports the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledges receipt of full and true copies thereof.

EnerVest Energy Institutional Fund XI-A, LP

By: _____
James D. McKinney,
Senior VP & General Manager

Date: 10/9/2014

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
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59	Megan E. & James R. Vaughn	19.78815	34-0000013.000
64	James Neil & Laurie Ann McClester	30.89047	01-0000363.000
65	Daniel L. & Michelle L. Grooms	32.00000	01-0000202.002
67	James Neil & Lurie Ann McClester	32.79537	01-0000365.000
69	Megan E. & James R. Vaughn	59.69633	34-0000016.000

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	: : : :	Application Date: September 16, 2014

Vaughn NE Unit

WORKING INTEREST OWNER APPROVAL

R.E. Gas Development, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Vaughn NE Unit, located in Carroll County, Ohio, and consisting of Sixty Nine (69) separate tracts of land covering approximately 612.58022 acres, according to the Unit Plan attached thereto (the "Application").

TOTAL E&P USA, Inc. is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of 1 tract(s) of land covering approximately 5 acres contained in the Vaughn NE Unit, or .2041% of the lands in the unit, all as more specifically described on attached Exhibit 1.

TOTAL E&P USA, Inc. hereby approves, and supports the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledges receipt of full and true copies thereof.

TOTAL E&P USA, Inc.

By: _____

Date: 10/28/14

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
39	Helen I. Fry	5	01-0000159.000

Exhibit MM-2

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	:	Application Date: November 10, 2014
Vaughn Northeast Unit	:	

AFFIDAVIT OF MATT METHENEY
(CONTACTS – UNLEASED MINERAL OWNERS AND UNCOMMITTED WORKING INTEREST OWNERS)

I, Matt Metheney, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Matt Metheney and I am a Senior Landman with R.E. Gas Development, LLC ("Applicant"). My day-to-day responsibilities include work as the primary point of contact for landowners in the Ohio area of operations. I also assist with leasing, rights-of-way for waterlines, negotiating well sites, damage settlements and promoting a positive relationship between Applicant and landowners. My duties regularly require me to coordinate my efforts with contractors associated with multi-well field development efforts, for the Applicant in the State of Ohio, and I have personal knowledge of the facts stated herein.

2. As part of those responsibilities, I work with and supervise contractors representing Applicant who contact landowners and obtain oil and gas leases on behalf of Applicant, including individuals from Western Land Services ("Contractor")].

3. I have received reports of contacts and attempts to contact that Contractor has made to lease unleased lands within the Vaughn Northeast Unit. Further, I have personal knowledge of contacts that I have made and attempted to make on behalf of Applicant to lease unleased lands within the Vaughn North-east. Those efforts are detailed below.

4. Regarding the following tract, the following contacts were made or attempted:

Parcel Nos. 34-0090014.000 & 01-0090013.000 (Tract 45-NE Unit)
Owner's Name: Ohi-Rail Corporation ("Current Owners")

Date	Party Contacted	By Whom	Method	Address of Contact	Response
8/4/14	Denny Varian (GM)	Matt Metheney	Email	P.O. Box 728, Steubenville, OH 43952	Mr. Varian emailed Matt Metheney in response to an email sent to him by Matt. Mr. Varian told Matt to contact Elaine Smith about leasing and cc'd Elaine Smith on this email. Matt then also sent an email to Elaine Smith on this date.
8/7/14	Elaine Smith	Matt Metheney	Email	P.O. Box 728, Steubenville, OH 43952	Follow up email sent to Ms. Smith containing a complete lease offer including "No Surface Use" provision, and an above market rate for both bonus and royalty.
10/20/14	Elaine Smith	Matt Metheney	Email	P.O. Box 728, Steubenville, OH 43952	Follow up email sent to Ms. Smith concerning the prior offer receiving no response.

Further sayeth Affiant naught.

Matt Metheney

Sworn to and subscribed before me this 6th day of November, 2014.

Notary Public

DEBBIE HERRINGTON
NOTARY PUBLIC • STATE OF OHIO
Recorded in Carroll County
My commission expires Nov. 17, 2016

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	:	Application Date: November 10, 2014
Vaughn Northeast Unit	:	

AFFIDAVIT OF MATT METHENEY
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3. I have received reports of contacts and attempts to contact that Contractor has made to lease unleased lands within the Vaughn Northeast Unit. Further, I have personal knowledge of contacts that I have made and attempted to make on behalf of Applicant to lease unleased lands within the Vaughn Northeast. Those efforts are detailed below.

4. Regarding the following tract, the following contacts were made or attempted:

Parcel No. 01-0000202.008 (Tract 48-NE Unit)
Owner's Name: Michael A. Sommer ("Current Owners")

Date	Party Contacted	By Whom	Method	Address of Contact	Response
8/18/14	Michael A. Sommer	Paul Meyers (Western Land)	Phone	4172 Arbor Road NE, Mechanicstown, Ohio 44651	Mr. Sommer requested an offer to review Mr. Meyers prepared and delivered an offer to lease.
9/16/14	Michael A. Sommer	Paul Meyers (Western Land)	Phone	4172 Arbor Road NE, Mechanicstown, Ohio 44651	Follow up call concerning August offer Mr. Sommer advised his attorney was reviewing the proposal.
10/9/14	Michael A. Sommer	Paul Meyers (Western Land)	Phone	4172 Arbor Road NE, Mechanicstown, Ohio 44651	Mr. Sommer requested changes to several lease clauses including ingress/egress across the property, a clause addressing water quality and changes to the definition of Royalties in the lease offer. Mr. Meyers told Mr. Sommer he would discuss these changes with Rex and get back to him.

10/10/14	Michael A. Sommer	Paul Meyers (Western Land)	Phone	4172 Arbor Road NE, Mechanicstown, Ohio 44651	Follow up concerning 10/9/14 discussion. Offered a " No Surface Use" provision, which would address his ingress/egress concerns, but that Rex would not alter its approved addendum language on the water issues and Royalty definitions. Mr. Sommer conveyed that this was not adequate. Mr. Meyers asked for a face to face meeting to discuss the issues which was rejected Mr. Meyers asked Mr. Sommer to contact him if he changed his mind because Rex was still interested in leasing.

Further sayeth Affiant naught.

DEBBIE HERRINGTON
NOTARY PUBLIC • STATE OF OHIO
Recorded in Carroll County
My commission expires Nov. 17, 2016

Matt Metheney

Sworn to and subscribed before me this 6th day of November, 2014.

Notary Public

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	:	Application Date: November 10, 2014
Vaughn Northeast Unit	:	

AFFIDAVIT OF MATT METHENEY
(CONTACTS – UNLEASED MINERAL OWNERS AND UNCOMMITTED WORKING INTEREST OWNERS)

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4. Regarding the following tract, the following contacts were made or attempted:

Parcel Nos. 34-0060011.000, 01-0060019.000, 01-0060020.000, 01-0060018.000, & 01-0060017.000 (Tracts 13, 19, 32, 35 & 55-NE Unit)
Owner's Name: Kent State University ("Current Owners")

Date	Party Contacted	By Whom	Method	Address of Contact	Response
Prior to 6/16/14	Doug Kubinski (Associate Counsel)	Paul Meyers (Western Land)	Phone	P.O. Box 5190, Kent, Ohio 44242	Several attempts to contact Mr. Kubinski by phone prior to 6/16/14, there were no conversations as such dates were not logged.
6/16/14	Doug Kubinski (Associate Counsel)	Matt Metheney	Certified Mail	P.O. Box 5190, Kent, Ohio 44242	Certified letter was sent explaining Rex's interest in leasing.
7/31/14	Doug Kubinski	Paul Meyers (Western Land)	Phone	P.O. Box 5190, Kent, Ohio 44242	Mr. Kubinski called Mr. Meyers and explained that leasing would need to be discussed with Connie Hawke and that mailing had been forwarded to Ms. Hawke.

8/6/14	Connie Hawke	Paul Meyers (Western Land)	Phone	P.O. Box 5190, Kent, Ohio 44242	Ms. Hawke stated that the University's position was not to move forward with any leasing. She requested a lease proposal to review, but that it was doubtful that the position on leasing would change.
8/7/14	Connie Hawke	Matt Metheney	Email	P.O. Box 5190, Kent, Ohio 44242	Emailed a lease proposal to Ms. Hawke. The offer contained a "No Surface Use" provision and above market rate for bonus and royalty.
10/20/14	Connie Hawke	Matt Metheney	Email	P.O. Box 5190, Kent, Ohio 44242	Follow up email concerning the offer on 8/7/14, no response.

Further sayeth Affiant naught.

DEBBIE HERRINGTON
NOTARY PUBLIC • STATE OF OHIO
Recorded in Carroll County
My commission expires Nov. 17, 2016

Matt Metheney

Sworn to and subscribed before me this 6th day of November, 2014.

Notary Public

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

In re the Matter of the Application of R.E. Gas Development, LLC for Unit Operation	:	Application Date: November 10, 2014
Vaughn Northeast Unit	:	

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(CONTACTS – UNLEASED MINERAL OWNERS AND UNCOMMITTED WORKING INTEREST OWNERS)

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4. Regarding the following tract, the following contacts were made or attempted:

Parcel Nos. 34-0060009.000, 01-0060011.000, 01-0060012.000, 01-0060013.000, & 34-0060010.000 (Tracts 4, 15, 24, 28 & 62-NE Unit)
Owner's Name: Nature Conservancy ("Current Owners")

Date	Party Contacted	By Whom	Method	Address of Contact	Response
6/11/14	Terry Sidell	Paul Meyers (Western Land)	Phone	6375 Riverside Drive, Suite 100, Dublin, Ohio 43017	Call to Nature Conservancy office and was informed that Mr. Sidell handles all issues dealing with Nature Conservancy land. A message was left for Mr. Sidell
6/16/14	Terry Sidell	Matt Metheney	Certified Mail	6375 Riverside Drive, Suite 100, Dublin, Ohio 43017	An initial contact letter via certified mail. There was no response.
7/31/14	Terry Sidell	Paul Meyers (Western Land)	Phone	6375 Riverside Drive, Suite 100, Dublin, Ohio 43017	Left a voice message for Mr. Sidell seeking to discuss leasing.
8/8/14	Nature Conservancy Main Office	Matt Metheney	Certified Mail	4245 North Fairfax Drive, Suite 100, Arlington, Virginia 22203-1606	Complete lease package was mailed including an offer to lease which contained a "No Surface Use" provision, and above market rate for bonus and royalty.

Further sayeth Affiant naught.

Matt Metheney

Sworn to and subscribed before me this 6th day of November, 2014

Notary Public

DEBBIE HERRINGTON
NOTARY PUBLIC • STATE OF OHIO
Recorded in Carroll County
My commission expires Nov. 17, 2016

Exhibit MM-3

Exhibit MM-3

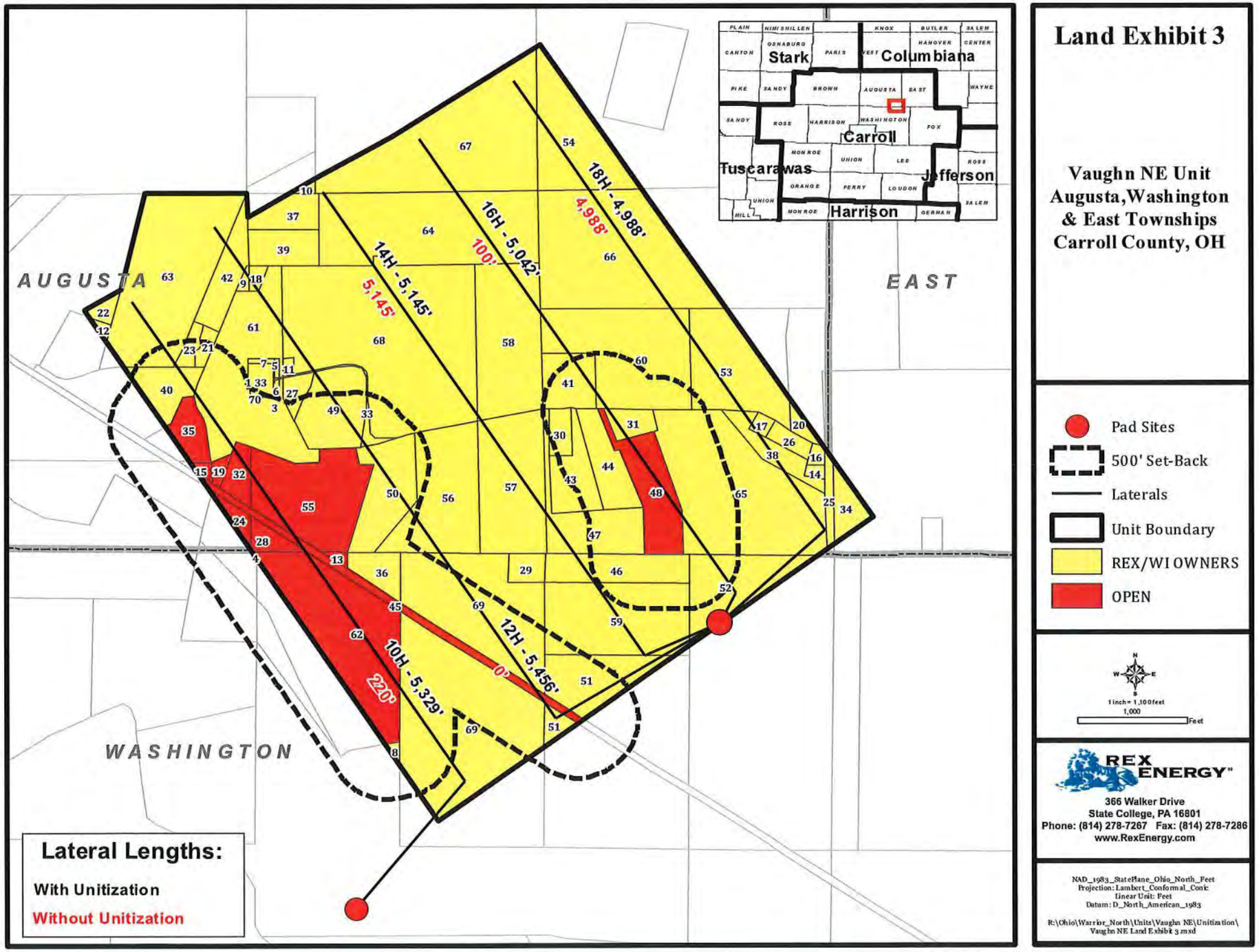
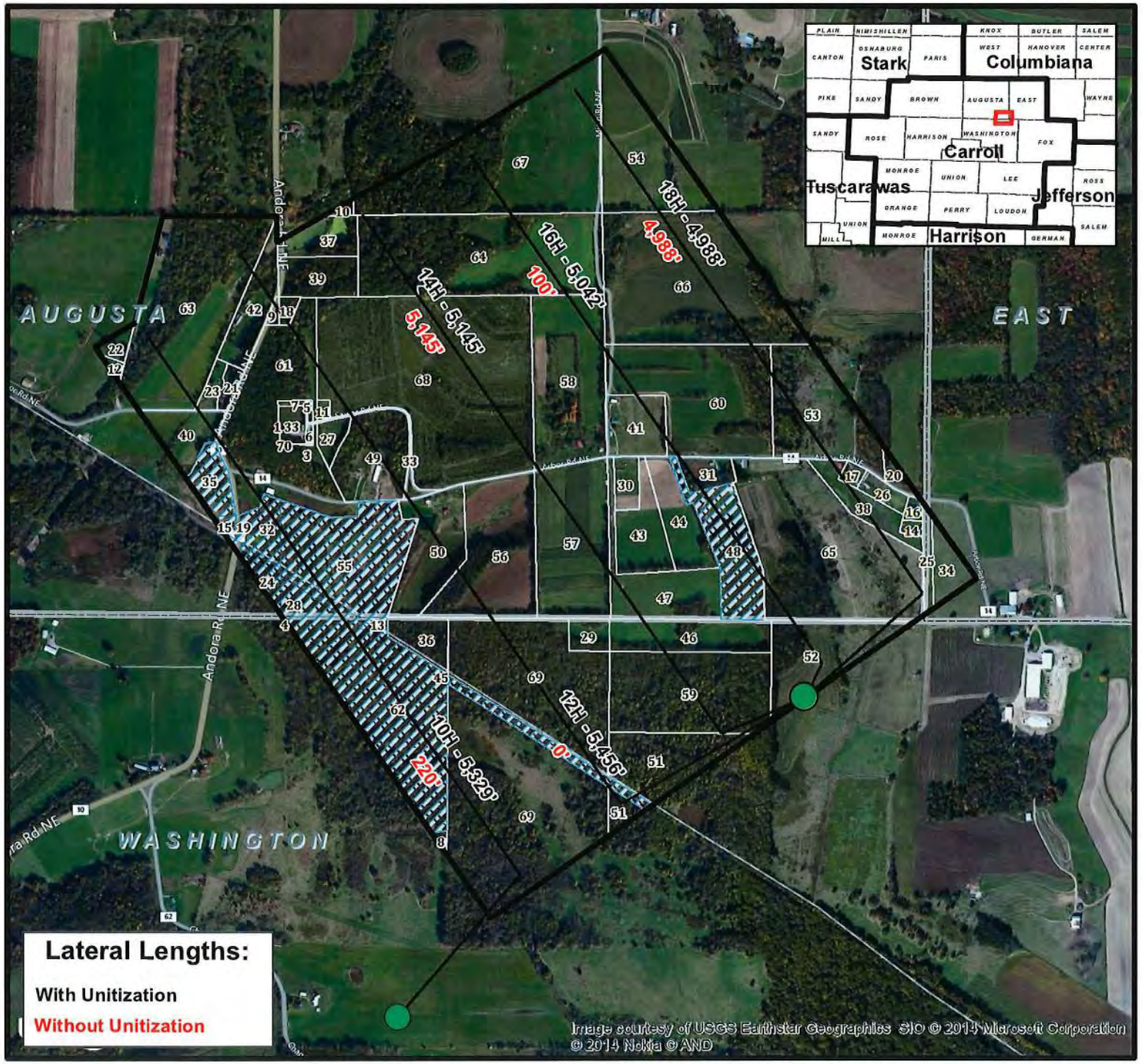

Land Exhibit 3
Vaughn NE Unit
Augusta, Washington
& East Townships
Carroll County, OH
Pad Sites
500' Set-Back
Laterals
Unit Boundary
REX/WI OWNERS
OPEN
1 inch = 1,100 feet
1,000
Feet
REX ENERGY
366 Walker Drive
State College, PA 16801
Phone: (814) 278-7267 Fax: (814) 278-7286
www.RexEnergy.com
NAD_1983_StatePlane_Ohio_North_Feet
Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983
R:\Ohio\Warrior_North\Units\Vaughn NE\Unitization\
Vaughn NE Land Exhibit 3.mxd
Stark
Columbiana
Carroll
Tuscarawas
Jefferson
Harrison
AUGUSTA
EAST
WASHINGTON
18H - 4,988'
4,988'
16H - 5,042'
100'
14H - 5,145'
5,145'
12H - 5,456'
0'
10H - 5,329'
220'
Lateral Lengths:
With Unitization
Without Unitization

Exhibit MM-4

Exhibit MM-4



Land Exhibit 4

Vaughn NE Unit
Augusta, Washington & East Townships
Carroll County, OH

- Pad Sites
- Laterals
- Unit Boundary
- LEASED
- OPEN

1 inch = 1,100 feet
1,000 Feet

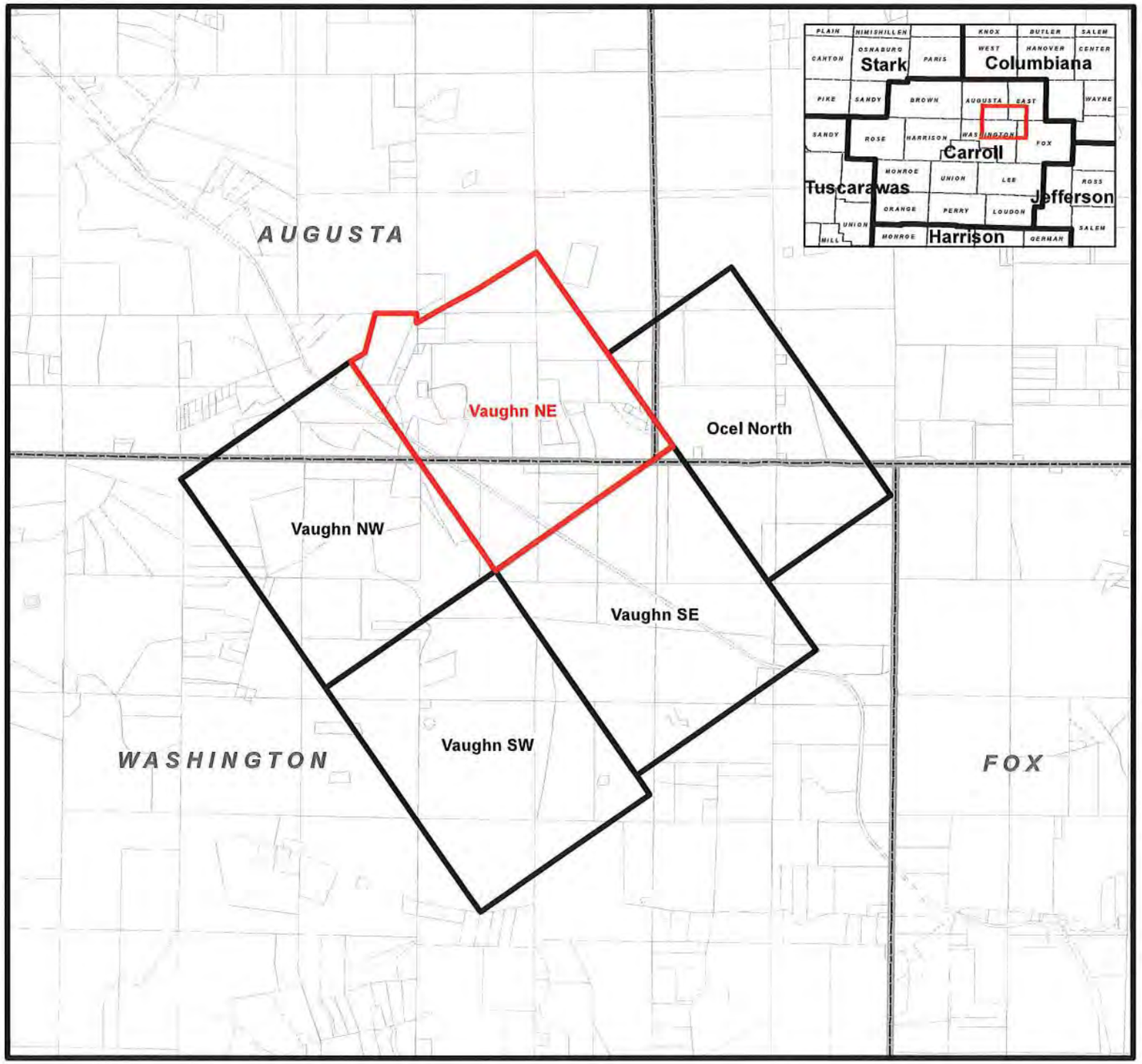
REX ENERGY
366 Walker Drive
State College, PA 16801
Phone: (814) 278-7267 Fax: (814) 278-7286
www.RexEnergy.com

NAD_1983_StatePlane_Ohio_North_Feet
Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983

R:\Ohio\Warrior_North\Units\Vaughn NE\Unitization\
Vaughn NE Land Exhibit 4.mxd

Exhibit MM-5

Exhibit MM-5



Land Exhibit 5

Vaughn NE Unit
Washington, Augusta & East Townships
Carroll County, OH

Vaughn NE

Adjacent Units

1 inch = 3,000 feet
3,000 Feet

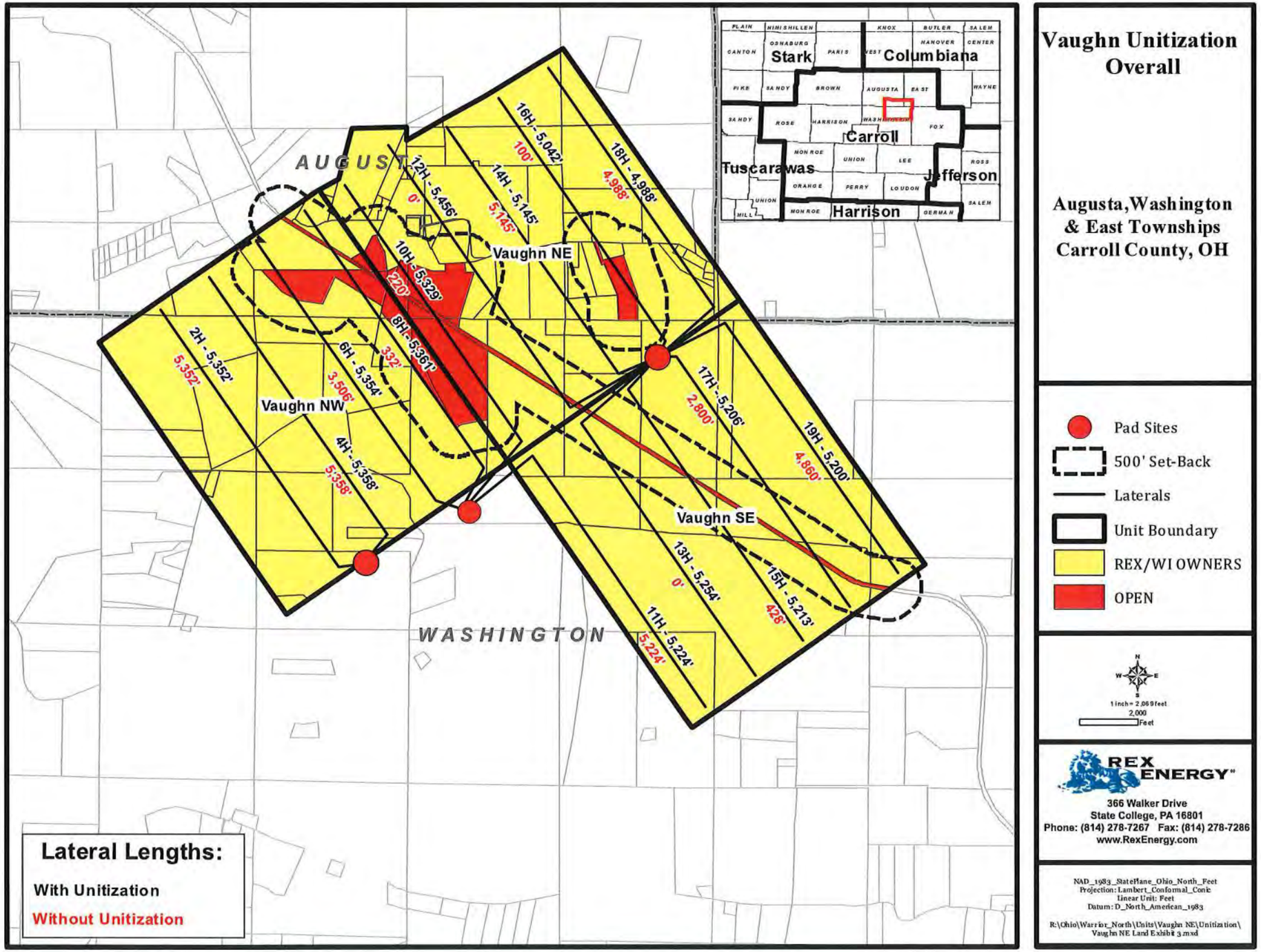
REX ENERGY®
366 Walker Drive
State College, PA 16801
Phone: (814) 278-7267 Fax: (814) 278-7286
www.RexEnergy.com

NAD_1983_StatePlane_Ohio_North_Feet
Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983

R:\Ohio\Warrior_North\Units\Vaughn NE\Unitization\
Vaughn NE Land Exhibit 5.mxd

Exhibit MM-6

Exhibit MM-6


Vaughn Unitization Overall
Augusta, Washington & East Townships Carroll County, OH
Pad Sites
500' Set-Back
Laterals
Unit Boundary
REX/WI OWNERS
OPEN
1 inch = 2,069 feet
2,000 Feet
REX ENERGY
366 Walker Drive
State College, PA 16801
Phone: (814) 278-7267 Fax: (814) 278-7286
www.RexEnergy.com
NAD_1983_StatePlane_Ohio_North_Feet
Projection: Lambert_Conformal_Conic
Linear Unit: Feet
Datum: D_North_American_1983
R:\Ohio\Warrior_North\Units\Vaughn NE\Unitization\Vaughn NE Land Exhibit 3.mxd
Lateral Lengths:
With Unitization
Without Unitization
AUGUST
WASHINGTON
Vaughn NE
Vaughn NW
Vaughn SE
2H - 5,352'
5,352'
4H - 5,358'
5,358'
6H - 5,354'
3,506'
8H - 5,361'
332'
10H - 5,329'
220'
12H - 5,456'
0'
14H - 5,145'
5,145'
16H - 5,042'
100'
18H - 4,988'
4,988'
11H - 5,224'
5,224'
13H - 5,254'
0'
15H - 5,213'
428'
17H - 5,206'
2,800'
19H - 5,200'
4,860'
Stark
Columbiana
Carroll
Tuscarawas
Jefferson
Harrison