

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

In re the Matter of the Application of PDC
Energy, Inc. for Unit Operation

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Application Date: November 10, 2014

Neff Unit



**APPLICATION OF PDC ENERGY, INC. ("PDC")
FOR UNIT OPERATION**

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TABLE OF CONTENTS

APPLICATION

I.	APPLICANT INFORMATION.....	1
II.	PROJECT DESCRIPTION.....	2
III.	TESTIMONY	2
IV.	THE CHIEF SHOULD GRANT THIS APPLICATION.....	3
	A. Legal Standard	3
	B. PDC’s Application Meets this Standard	4
	i. <i>The Unitized Formation is Part of a Pool</i>	4
	ii. <i>Unit Operations Are Reasonably Necessary to Increase Substantially the Ultimate Recovery of Oil and Gas</i>	4
	iii. <i>The Value of Additional Recovery Exceeds Its Additional Costs</i>	5
	iv. <i>The Unit Plan Meets the Requirements of Ohio Revised Code § 1509.28</i>	5
V.	HEARING.....	5
VI.	CONCLUSION.....	6

ATTACHMENTS

Attachment 1	Unit Plan
Attachment 2	Prepared Direct Testimony of Joseph P. Smith, II (“Geologist”)
Attachment 3	Prepared Direct Testimony of Antonio Vizurraga (“Reservoir Engineer”)
Attachment 4	Prepared Direct Testimony of Sarah Garrett (“Landman”)

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APPLICATION

Pursuant to Ohio Revised Code Section 1509.28, PDC Energy, Inc. (“PDC”) hereby respectfully requests the Chief of the Division of Oil and Gas Resources Management (“Division”) for an order authorizing PDC to operate the Unitized Formation and applicable land area in Guernsey County, Ohio, (hereinafter, the “Neff Unit”) as a unit according to the Unit Plan attached hereto and as more fully described herein. PDC 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

PDC is a corporation organized under the laws of the State of Nevada, with its principal office located at 1775 Sherman Street, Suite 3000, Denver, Colorado 80203. PDC is registered in good standing as an “owner” with the Division.

PDC 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:

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II. PROJECT DESCRIPTION

The Neff Unit is located in Guernsey County, Ohio, and consists of eighteen (18) 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 Neff Unit is approximately 576 acres and, at the time of this Application, PDC and other working interest owners participating in this Application have the right to drill on and produce from approximately 557 acres of the proposed unit – i.e., or more than ninety-six percent (96%) of the unit area, well above the sixty-five percent (65%) threshold required by Ohio Revised Code § 1509.28. As more specifically described herein, PDC seeks authority to drill and complete one or more horizontal wells in the Unitized Formation, defined to be fifty (50) feet above the top of the Utica formation to fifty (50) feet below the base of the Point Pleasant formation, from one well pad located on the central southern portion of the Neff Unit, to efficiently test, develop, operate and produce the Unitized Formation for oil, natural gas, and related liquids production.

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

¹ See Attachment 2.

² See Attachment 3.

³ See Attachment 4.

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 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. PDC’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 6,596’ to 7,240’ TVD (true vertical depth) within the Neff 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 Neff Unit. The Unit Plan contemplates the potential drilling of as many as three (3) horizontal wells, with laterals in approximate length of 9,100 feet.⁶ PDC estimates that the ultimate recovery from this unit development, if all unit wells are drilled, could be as much as 2,889 thousand barrels of oil equivalent (MBOE) from the Unitized Formation.⁷ Because of the location of the unleased tracts within the Unit Area, two of the contemplated wells will be shortened to approximately 7,000 feet and 6,800 feet respectively absent unit operations. The evidence will further show developing the Neff Unit absent unit operations will reduce ultimate recovery to approximately 2,532 MBOE of production.⁸

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 See Attachment 3 - Exhibit AV-2.

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

The evidence shows that the net present value of the estimated additional recovery is calculate to be approximately \$2,000,000.⁹ Moreover, see Attachment 3 – Exhibit AV-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 PDC 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 Exhibit A-1 and Exhibit 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.¹⁰

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 4 – Exhibit SG-1. Accordingly, PDC respectfully requests that the Division schedule a hearing

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 4 generally.

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. PDC 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). PDC therefore asks the Chief to issue an order authorizing PDC to operate the Neff Unit according to the Unit Plan attached hereto.

Respectfully submitted,



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Attorneys for Applicant,
PDC Energy, Inc.

1

PLAN FOR UNIT OPERATIONS
THE NEFF UNIT
WILLS TOWNSHIPS
GUERNSEY COUNTY, OHIO

The following shall constitute the Plan for Unit Operations applicable to the Neff Unit in Wills Township, Guernsey 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 Neff Unit, Wills Township, Guernsey 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 6,596 feet subsurface to 7,240 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 Neff 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 Neff 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 Neff 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.

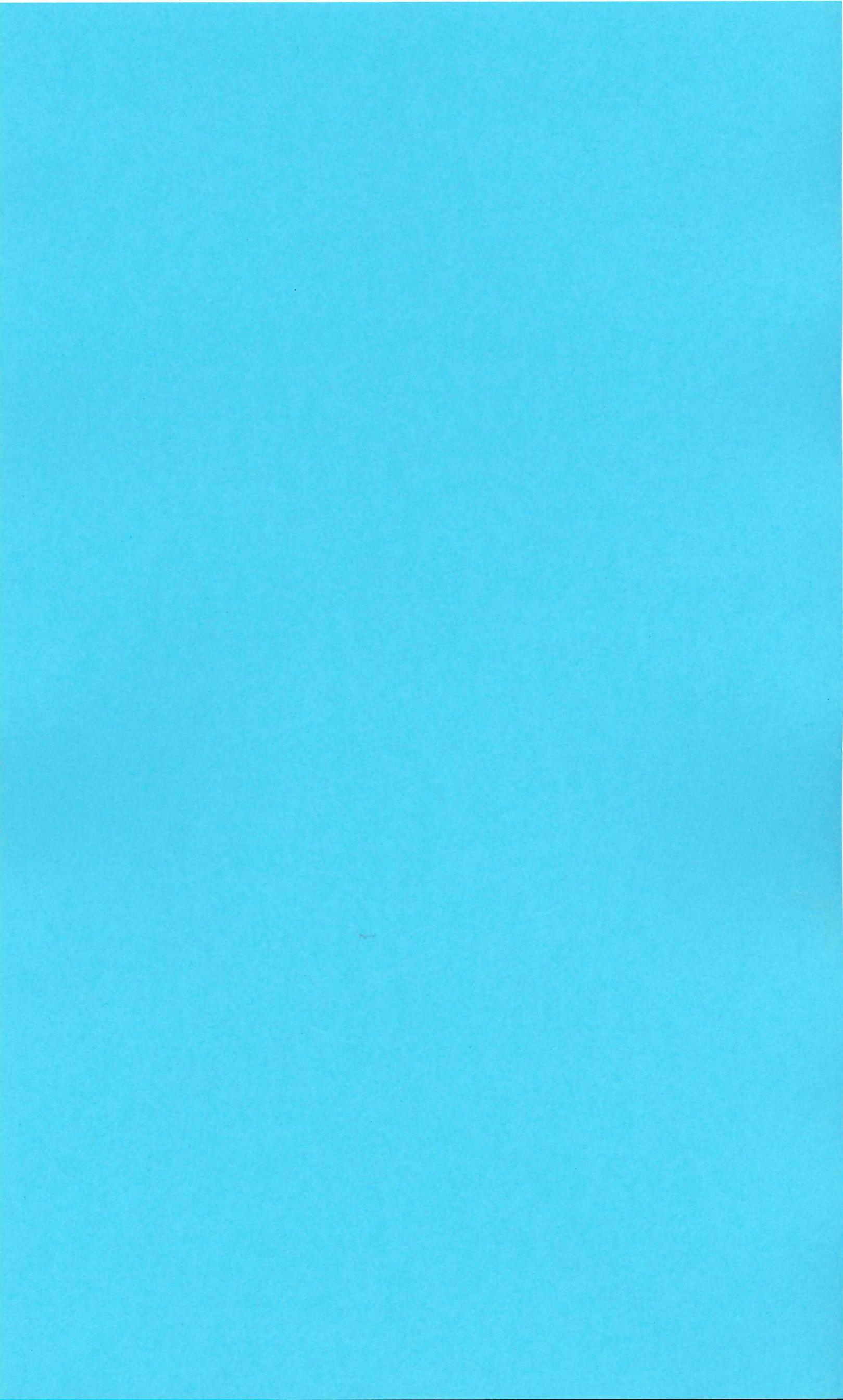
Joinder in Dual Capacity. Execution as herein provided by any Person, as either Working Interest Owner or a Royalty Owner, shall commit all interests owned or controlled by such Person as of the date of such execution and any additional interest thereafter acquired.

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
HORIZONTAL MODIFICATIONS**

OPERATING AGREEMENT

DATED

_____, _____, _____
Year

OPERATOR PDC Energy, Inc.

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

COUNTY OR PARISH OF Guernsey, STATE OF Ohio

UNIT NAME: Neff

TABLE OF CONTENTS

<u>Article</u>	<u>Title</u>	<u>Page</u>
I.	<u>DEFINITIONS</u>	1
II.	<u>EXHIBITS</u>	2
III.	<u>INTERESTS OF PARTIES</u>	2
	A. OIL AND GAS INTERESTS	2
	B. INTERESTS OF PARTIES IN COSTS AND PRODUCTION	2
	C. SUBSEQUENTLY CREATED INTERESTS	2
IV.	<u>TITLES</u>	3
	A. TITLE EXAMINATION	3
	B. LOSS OR FAILURE OF TITLE	3
	1. Failure of Title	3
	2. Loss by Non-Payment or Erroneous Payment of Amount Due	3
	3. Other Losses	4
	4. Curing Title	4
V.	<u>OPERATOR</u>	4
	A. DESIGNATION AND RESPONSIBILITIES OF OPERATOR	4
	B. RESIGNATION OR REMOVAL OF OPERATOR AND SELECTION OF SUCCESSOR	4
	1. Resignation or Removal of Operator	4
	2. Selection of Successor Operator	4
	3. Effect of Bankruptcy	4
	C. EMPLOYEES AND CONTRACTORS	4
	D. RIGHTS AND DUTIES OF OPERATOR	5
	1. Competitive Rates and Use of Affiliates	5
	2. Discharge of Joint Account Obligations	5
	3. Protection from Liens	5
	4. Custody of Funds	5
	5. Access to Contract Area and Records	5
	6. Filing and Furnishing Governmental Reports	5
	7. Drilling and Testing Operations	5
	8. Cost Estimates	5
	9. Insurance	5
VI.	<u>DRILLING AND DEVELOPMENT</u>	5
	A. INITIAL WELL	5
	B. SUBSEQUENT OPERATIONS	6
	1. Proposed Operations	6
	2. Operations by Less Than All Parties	6
	3. Stand-By Costs	7
	4. Deepening	8
	5. Sidetracking	8
	6. Order of Preference of Operations	8
	7. Conformity to Spacing Pattern	9
	8. Paying Wells	9
	9. Spudder Rigs	9
	10. Multi-Well Pads	9
	C. COMPLETION OF WELLS; REWORKING AND PLUGGING BACK	9
	1. Completion	9
	2. Rework, Recomplete or Plug Back	9
	D. OTHER OPERATIONS	10
	E. ABANDONMENT OF WELLS	10
	1. Abandonment of Dry Holes	10
	2. Abandonment of Wells That Have Produced	10
	3. Abandonment of Non-Consent Operations	10
	F. TERMINATION OF OPERATIONS	11
	G. TAKING PRODUCTION IN KIND	11
	(OPTION 1) Gas Balancing Agreement	11
	(OPTION 2) No Gas Balancing Agreement	11
VII.	<u>EXPENDITURES AND LIABILITY OF PARTIES</u>	12
	A. LIABILITY OF PARTIES	12
	B. LIENS AND SECURITY INTERESTS	12
	C. ADVANCES	12
	D. DEFAULTS AND REMEDIES	13
	1. Suspension of Rights	13
	2. Suit for Damages	13
	3. Deemed Non-Consent	13
	4. Advance Payment	13
	5. Costs and Attorneys' Fees	13
	E. RENTALS, SHUT-IN WELL PAYMENTS AND MINIMUM ROYALTIES	13
	F. TAXES	13
VIII.	<u>ACQUISITION, MAINTENANCE OR TRANSFER OF INTEREST</u>	14
	A. SURRENDER OF LEASES	14
	B. RENEWAL OR EXTENSION OF LEASES	14
	C. ACREAGE OR CASH CONTRIBUTIONS	14
	D. ASSIGNMENT; MAINTENANCE OF UNIFORM INTEREST	15

TABLE OF CONTENTS

<u>Article</u>	<u>Title</u>	<u>Page</u>
	E. WAIVER OF RIGHTS TO PARTITION	15
	F. PREFERENTIAL RIGHT TO PURCHASE	15
IX.	<u>INTERNAL REVENUE CODE ELECTION</u>	15
X.	<u>CLAIMS AND LAWSUITS</u>	15
XI.	<u>FORCE MAJEURE</u>	16
XII.	<u>NOTICES</u>	16
XIII.	<u>TERM OF AGREEMENT</u>	16
XIV.	<u>COMPLIANCE WITH LAWS AND REGULATIONS</u>	16
	A. LAWS, REGULATIONS AND ORDERS	16
	B. GOVERNING LAW	16
	C. REGULATORY AGENCIES	16
XV.	<u>MISCELLANEOUS</u>	17
	A. EXECUTION	17
	B. SUCCESSORS AND ASSIGNS	17
	C. COUNTERPARTS	17
	D. SEVERABILITY	17
XVI.	<u>OTHER PROVISIONS</u>	18
	A. CONFLICT OF TERMS	18
	B. OPERATOR'S DUTY	18
	C. PRIORITY OF OPERATIONS – HORIZONTAL WELLS	18

OPERATING AGREEMENT

THIS AGREEMENT, entered into by and between PDC Energy, Inc., a Nevada corporation, 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. An AFE is not a contractual commitment. Rather it is only an estimate, made in good faith. An AFE for a Horizontal Well shall clearly stipulate that the well being proposed is a Horizontal well and shall include all Completion operations for the proposed Horizontal well.

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

C. The term "Contract Area" shall mean all of the lands, Oil and Gas Leases and/or Oil and Gas Interests intended to be developed and operated for Oil and Gas purposes under this agreement. Such lands, Oil and Gas Leases and Oil and Gas Interests are described in Exhibit "A."

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, whichever is the lesser. When used in connection with a Horizontal Well, the term "Deepen" shall mean an operation whereby a Lateral is drilled to a Displacement greater than (i) the Displacement contained in the proposal for such operation approved by the Consenting Parties, or (ii) to the Displacement to which the Lateral was drilled pursuant to a previous proposal.

E. The term "Displacement" shall have the same meaning as the term defined by the state regulatory agency having jurisdiction over the Contract Area, in the absence of which the term shall otherwise mean the length of a Lateral.

F. 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.

G. 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.

H. The term "Drillsite" shall mean the Oil and Gas Lease or Oil and Gas Interest on which a proposed well is to be located. When used in connection with a Horizontal Well, the term "Drillsite" shall mean (i) the surface hole location, and (ii) the Oil and Gas Leases or Oil and Gas Interests within the Drilling Unit on or under which the wellbore, including the Lateral, is located.

I. The term "Horizontal Rig Move-On Period" shall mean the number of days after the date of rig release of a Spudder Rig until the date a rig capable of drilling a Horizontal Well to its Total Measured Depth has moved on to location.

J. The term "Horizontal Well" shall have the same meaning as the term defined by the state regulatory agency having jurisdiction over the Contract Area, in the absence of which the term shall mean a well containing one or more Laterals which are drilled, Completed or Recompleted in a manner in which the horizontal component of the Completion interval (1) extends at least one hundred feet (100') in the objective formation(s) and (2) exceeds the vertical component of the Completion interval in the objective formation(s).

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

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

M. 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.

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

O. 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.

P. 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.

Q. 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.

R. 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. When used in connection with a Horizontal Well, the term "Plug Back" shall mean an operation to test or Complete the well at a stratigraphically shallower Zone in which the operation has been or is being Completed and which is not in an existing Lateral.

S. 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.

T. 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.

U. The term "Sidetrack" shall mean the directional control and intentional deviation of a well from vertical 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. When used in connection with a Horizontal Well, the term "Sidetrack" shall mean the directional control and deviation of a well outside the existing Lateral(s) so as to change the Zone or the direction of a Lateral from the approved proposal unless done to straighten the hole or drill around junk in the hole or to overcome other mechanical difficulties.

V. The term "Spudder Rig" shall mean a drilling rig utilized only for drilling all or part of the vertical component of a Horizontal Well; a rig used only for setting conductor pipe shall not be considered a Spudder Rig.

W. The term "Terminus" shall have the same meaning as the term defined by the state regulatory agency having jurisdiction

1 over the Contract Area, in the absence of which the term shall mean the furthest point drilled in the Lateral.

2 X. The term "Total Measured Depth," when used in connection with a Horizontal Well, shall mean the distance from the surface of
3 the ground to the Terminus, as measured along and including the vertical component of the well and Lateral(s). When the proposed
4 operation(s) is the drilling of, or operation on, a Horizontal Well, the terms "depth" or "total depth" wherever used in this agreement shall be
5 deemed to read "Total Measured Depth" insofar as it applies to such well.

6 Y. The term "Vertical Well" shall mean a well drilled, Completed or Recompleted other than a Horizontal Well.

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

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

11 **ARTICLE II.**

12 **EXHIBITS**

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

14 | X A. Exhibit "A," shall also mean all sub-exhibits as appropriate, including Exhibits "A-1", "A-2", and "A-3", and shall include
15 the following information:

- 16 (1) Description of lands subject to this agreement,
17 (2) Restrictions, if any, as to depths, formations, or substances,
18 (3) Parties to agreement with addresses and telephone numbers for notice purposes,
19 (4) Percentages or fractional interests of parties to this agreement,
20 (5) Oil and Gas Leases and/or Oil and Gas Interests subject to this agreement. (also included on Exhibit "A-2")
21 (Exhibit A-1) Plat of Contract Area
22 (Exhibit A-2) List of Contract Area Interests
23 (Exhibit A-3 List of Unlease Mineral Owners
24 (6) Burdens on production.
25 (7) Addresses of parties for notice purposes (also included on Exhibit "A-3")

26 | X B. Exhibit "B," Form of Lease.

27 | X C. Exhibit "C," Accounting Procedure.

28 | X D. Exhibit "D," Insurance.

29 | XX E. Exhibit "E," Gas Balancing Agreement.

30 | X F. Exhibit "F," Non-Discrimination and Certification of Non-Segregated Facilities.

31 | ~~G. Exhibit "G," Tax Partnership.~~

32 | X H. Other: Recording Supplement

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

35 **ARTICLE III.**

36 **INTERESTS OF PARTIES**

37 **A. Oil and Gas Interests:**

38 or hereafter acquires
39 If any party owns / an Oil and Gas Interest in the Contract Area, that Interest shall be treated for all purposes of this agreement
40 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
41 thereof shall be deemed to own both royalty interest in such lease and the interest of the lessee thereunder.

42 **B. Interests of Parties in Costs and Production:**

43 Unless changed by other provisions, all costs and liabilities incurred in operations under this agreement shall be borne and paid,
44 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
45 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
46 payment of royalties and other burdens subject to burdens of record.
47 on production as / described hereafter.

48 Regardless of which party has contributed any Oil and Gas Lease or Oil and Gas Interest on which royalty or other burdens may
49 be payable and except as otherwise expressly provided in this agreement, each party shall pay or deliver, or cause to be paid or delivered,
50 all burdens of record as of the date of this agreement
51 on its share of the production from the Contract Area up to, but not in excess of, _____ and
52 shall indemnify, defend and hold the other parties free from any liability therefor. Except as otherwise expressly provided in this agreement,
53 if any party has contributed hereto any Lease or Interest which is burdened with any royalty, overriding royalty, production payment or
54 other burden on production in excess of the amounts stipulated above, such party so burdened shall assume and alone bear all such excess
55 obligations and shall indemnify, defend and hold the other parties hereto harmless from any and all claims attributable to such excess burden.
56 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
57 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
58 has contributed to this agreement, and shall indemnify, defend and hold the other parties free from any liability therefor.

59 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
60 royalty owner, and if such other party's lessor or royalty owner should demand and receive settlement on a higher price basis, the party
61 contributing the affected Lease shall bear the additional royalty burden attributable to such higher price.

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

65 **C. Subsequently Created Interests:**

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

73 The party whose interest is burdened with the Subsequently Created Interest (the "Burdened Party") shall assume and alone
74 bear, pay and discharge the Subsequently Created Interest and shall indemnify, defend and hold harmless the other parties from and against
75 any liability therefor. Further, if the Burdened Party fails to pay, when due, its share of expenses chargeable hereunder, all provisions of
76 Article VII.B. shall be enforceable against the Subsequently Created Interest in the same manner as they are enforceable against the working

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989 (Horz.)

1 interest of the Burdened Party. If the Burdened Party is required under this agreement to assign or relinquish to any other party, or parties,
2 all or a portion of its working interest and/or the production attributable thereto, said other party, or parties, shall receive said assignment
3 and/or production free and clear of said Subsequently Created Interest, and the Burdened Party shall indemnify, defend and hold harmless
4 said other party, or parties, from any and all claims and demands for payment asserted by owners of the Subsequently Created Interest.
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ARTICLE IV.

TITLES

A. Title Examination:

And Drilling Unit
 Title examination shall be made on the Drillsite of any proposed well prior to commencement of drilling operations and, ~~if a majority in interest of the Drilling Parties so request or Operator so elects, title examination shall be made on the entire Drilling Unit or maximum anticipated Drilling Unit, of the well.~~ The opinion will include the ownership of the working interest, minerals, royalty, overriding royalty and production payments under the applicable Leases. Each party ~~contributing Leases and/or Oil and Gas Interests to be included in the Drillsite or Drilling Unit, if appropriate, shall furnish to Operator all abstracts (including federal lease status reports), title opinions, title papers and curative material in its possession free of charge. All such information not in the possession of or made available to Operator by the parties, but necessary for the examination of the title, shall be obtained by Operator. Operator shall cause title to be examined by attorneys on its staff or by outside attorneys. Copies of all title opinions shall be furnished to each Drilling Party. Costs incurred by Operator in procuring abstracts, fees paid outside attorneys and other land consultants 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 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, except as provided herein.

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

B. Loss or Failure of Title:

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

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

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

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

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

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

(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~~

1 ~~acreage basis, up to the amount of unrecovered costs;~~

2 ~~_____ (b) Proceeds of Oil and Gas, less operating expenses and lease burdens chargeable hereunder to the person who failed~~
3 ~~to make payment, up to the amount of unrecovered costs attributable to that portion of Oil and Gas thereafter produced and marketed~~
4 ~~(excluding production from any wells thereafter drilled) which, in the absence of such Lease or Interest termination, would be attributable to~~
5 ~~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~~
6 ~~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~~
7 ~~"A"; and,~~

8 ~~_____ (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~~
9 ~~Lease or Interest lost, for the privilege of participating in the Contract Area or becoming a party to this agreement.~~

10 3. Other Losses: All losses of Leases or Interests committed to this agreement, other than those set forth in Articles
11 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
12 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
13 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
14 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
15 account of any joint loss.

16 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
17 Interest acquired by any party hereto (other than the party whose interest has failed or was lost) during the ninety (90) day period
18 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
19 cost to the party whose interest has failed or was lost, and the provisions of Article VIII.B. shall not apply to such acquisition.

20 **ARTICLE V.**
21 **OPERATOR**

22 **A. Designation and Responsibilities of Operator:**

23 PDC Energy, Inc. shall be the Operator of the Contract Area, and shall conduct and direct
24 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
25 performance of services hereunder for the Non-Operators, Operator shall be an independent contractor not subject to the control or direction
26 of the Non-Operators except as to the type of operation to be undertaken in accordance with the election procedures contained in this
27 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
28 liability assumed or incurred by Operator as to any third party. Operator shall conduct its activities under this agreement as a reasonably
29 prudent operator, in a good and workmanlike manner, with due diligence and dispatch, in accordance with good oilfield practice, and in
30 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
31 liabilities incurred except such as may result from gross negligence or willful misconduct.

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

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

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

49 2. Selection of Successor Operator: Upon the resignation or removal of Operator under any provision of this agreement, a
50 successor Operator shall be selected by the parties. The successor Operator shall be selected from the parties owning an interest in the
51 Contract Area at the time such successor Operator is selected. The successor Operator shall be selected by the affirmative vote of two (2) or
52 more parties owning a majority interest based on ownership as shown on Exhibit "A"; provided, however, if an Operator which has been
53 removed or is deemed to have resigned but continues to own an interest in the Contract Area fails to vote or votes only to succeed itself, the successor Operator shall be selected by the affirmative
54 vote of the party or parties owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting
55 interest of the Operator that was removed or resigned and provided that the requirement for two or more parties will not apply in the event that two or less parties are entitled to vote
56 data relating to the operations conducted by the former Operator to the extent such records and data are not already in the possession of the
57 successor operator. Any cost of obtaining or copying the former Operator's records and data shall be charged to the joint account. It is
58 expressly understood and agreed that, in the event Operator conveys all of its interest in the Contract Area, the party that acquires
such interest shall be entitled to vote with that interest for any party, including itself, as Successor Operator.

59 3. Effect of Bankruptcy: If Operator becomes insolvent, bankrupt or is placed in receivership, it shall be deemed to have
60 resigned without any action by Non-Operators, except the selection of a successor. If a petition for relief under the federal bankruptcy laws is
61 filed by or against Operator, and the removal of Operator is prevented by the federal bankruptcy court, all Non-Operators and Operator shall
62 comprise an interim operating committee to serve until Operator has elected to reject or assume this agreement pursuant to the Bankruptcy
63 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
64 resignation as Operator without any action by Non-Operators, except the selection of a successor. During the period of time the operating
65 committee controls operations, all actions shall require the approval of two (2) or more parties owning a majority interest based on ownership
66 as shown on Exhibit "A." In the event there are only two (2) parties to this agreement, during the period of time the operating committee
67 controls operations, a third party acceptable to Operator, Non-Operator and the federal bankruptcy court shall be selected as a member of the
68 operating committee, and all actions shall require the approval of two (2) members of the operating committee without regard for their interest
69 in the Contract Area based on Exhibit "A."

70 **C. Employees and Contractors:**

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

D. Rights and Duties of Operator:

1 | ~~1. Competitive Rates and Use of Affiliates:~~ All ~~wells drilled~~ ^{Operations conducted} / on the Contract Area shall be ~~drilled~~ ^{conducted} / on a competitive contract basis
2 | 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
3 | 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
4 | before drilling operations are commenced, and such work shall be performed by Operator under the same terms and conditions as are
5 | customary and usual in the area in contracts of independent contractors who are doing work of a similar nature. All work performed or
6 | materials supplied by affiliates or related parties of Operator shall be performed or supplied at competitive rates, pursuant to written
7 | agreement, and in accordance with customs and standards prevailing in the industry.

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

12 | 3. ~~Protection from Liens:~~ Operator shall pay, or cause to be paid, as and when they become due and payable, all accounts of
13 | contractors and suppliers and wages and salaries for services rendered or performed, and for materials supplied on, to or in respect of the
14 | Contract Area or any operations for the joint account thereof, and shall keep the Contract Area free from liens and encumbrances resulting
15 | therefrom except for those resulting from a bona fide dispute as to services rendered or materials supplied.

16 | 4. ~~Custody of Funds:~~ Operator shall hold for the account of the Non-Operators any funds of the Non-Operators advanced
17 | 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
18 | funds shall remain the funds of the Non-Operators on whose account they are advanced or paid until used for their intended purpose or
19 | otherwise delivered to the Non-Operators or applied toward the payment of debts as provided in Article VII.B. Nothing in this paragraph shall
20 | be construed to establish a fiduciary relationship between Operator and Non-Operators for any purpose other than to account for Non-
21 | Operator funds as herein specifically provided. Nothing in this paragraph shall require the maintenance by Operator of separate accounts for
22 | the funds of Non-Operators unless the parties otherwise specifically agree.

23 | 5. ~~Access to Contract Area and Records:~~ Operator shall, except as otherwise provided herein, permit each ^{Consenting Party} / ~~Non-Operator~~
24 | ^{Consenting Party} or its duly authorized representative, at the ~~Non-Operator~~ / 's sole risk and cost, full and free access at all reasonable times to all operations of
25 | every kind and character being conducted for the joint account on the Contract Area and to the records of operations conducted thereon or
26 | production therefrom, including Operator's books and records relating thereto ^{provided that Operator receives a minimum of 24 hours' notice.} / . Such access rights shall not be exercised in a manner
27 | interfering with Operator's conduct of an operation hereunder and shall not obligate Operator to furnish any geologic or geophysical data of an
28 | interpretive nature unless the cost of preparation of such interpretive data was charged to the joint account. Operator will furnish to each ~~Non-~~
29 | ^{Consenting Party} ~~Operator~~ / upon request copies of any and all reports and information obtained by Operator in connection with production and related items,
30 | including, without limitation, meter and chart reports, production purchaser statements, run tickets and monthly gauge reports, but excluding
31 | purchase contracts and pricing information to the extent not applicable to the production of the ~~Non-Operator~~ ^{Consenting Party} / seeking the information. Any
32 | audit of Operator's records relating to amounts expended and the appropriateness of such expenditures shall be conducted in accordance with
33 | the audit protocol specified in Exhibit "C."

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

38 | 7. ~~Drilling and Testing Operations:~~ The following provisions shall apply to each well drilled hereunder, including but not
39 | limited to the Initial Well: See Article XVII.I.

40 | (a) Operator will promptly advise ~~Non-Operators~~ ^{Consenting Parties} / of the date on which the well is spudded, or the date on which
41 | drilling operations are commenced.

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

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

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

49 | 9. ~~Insurance:~~ At all times while operations are conducted hereunder, Operator shall comply with the workers compensation law
50 | of the state where the operations are being conducted; provided, however, that Operator may be a self- insurer for liability under said
51 | compensation laws in which event the only charge that shall be made to the joint account shall be as provided in Exhibit "C." Operator
52 | 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
53 | part hereof. Operator shall require all contractors engaged in work on or for the Contract Area to comply with the workers compensation
54 | law of the state where the operations are being conducted and to maintain such other insurance as Operator may require.

55 | In the event automobile liability insurance is specified in said Exhibit "D," or subsequently receives the approval of the
56 | 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:

60 | On or before the _____ day of _____, _____, Operator shall commence the drilling of the Initial Well
61 | at the following location (if a Horizontal Well, surface and Terminus/Termini of the Lateral(s)):
62 | Operator anticipates commencing the drilling of the initial well within (1) year of the effective date of a final / ^{non- unitization} / ~~appealable~~ / order.
63 |

64 | and shall thereafter continue the drilling of the well (horizontally if a Horizontal Well) with due diligence to
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1 | _____
2 | The drilling of the Initial Well and the participation therein by all parties other than an Unleased Mineral Owner
3 | Completion operations and Article VI.F. as to termination of operations and Article XI as to occurrence of force majeure.

4 | **B. Subsequent Operations:**

5 | 1. Proposed Operations: If any party except an Unleased Mineral Owner
6 | hereto should desire to drill any well on the Contract Area other than the Initial Well, or if
7 | 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
8 | paying quantities in which such party has not otherwise relinquished its interest in the proposed objective Zone under this agreement, the
9 | party desiring to drill, Rework, Sidetrack, Deepen, Recomplete or Plug Back such a well shall give written notice of the proposed operation to
10 | the parties who have not otherwise relinquished their interest in such objective Zone under this agreement (and to all other parties in the
11 | case of a proposal for Sidetracking or Deepening as to a Vertical Well), specifying the work to be performed, the location, proposed depth,
12 | objective Zone and the estimated cost of the operation as outlined in an AFE. A proposal for the drilling of or other operations for a
13 | Horizontal Well shall: (1) state that the proposed operation is a Horizontal Well operation; (2) include drilling and Completion plans
14 | specifying the proposed: (i) Total Measured Depth(s), (ii) surface hole location(s), (iii) Terminus/Termini, (iv) Displacement(s),
15 | (v) utilization and scheduling of rig(s) (Spudder Rig, drilling and Completion), and (vi) stimulation operations, staging and sizing; and (3)
16 | include estimated drilling and Completion costs as set forth in an AFE. The parties to whom such a notice is delivered shall have thirty (30)
17 | 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
18 | proposed operation. If a drilling rig is on location, notice of a proposal to Rework, Sidetrack, Recomplete, Plug Back or Deepen may be
19 | given by telephone, email, or facsimile and the response period shall be limited to forty-eight (48) hours, inclusive of Saturday, Sunday and legal holidays.
20 | 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
21 | participate in the cost of the proposed operation. Any proposal by a party to conduct an operation conflicting with the operation initially
22 | proposed shall be delivered to all parties within the time and in the manner provided in Article VI.B.6. No Party may elect to participate in
23 | any well proposed pursuant to the Agreement with less than its full and undivided working interest in the Contract Area.

24 | If all parties to whom such notice is delivered elect to participate in such a proposed operation, the parties shall be contractually
25 | committed to participate therein provided such operations are commenced within the time period hereafter set forth, and Operator shall, no
26 | later than ~~ninety (90)~~ 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
27 | forty-eight (48) hour period when a drilling rig is on location, as the case may be), actually commence the proposed operation and thereafter
28 | complete it with due diligence at the risk and expense of the parties participating therein; provided, however, said commencement date may
29 | be extended upon written notice of same by Operator to the other parties, for a period of up to thirty (30) additional days if, in the sole
30 | opinion of Operator, such additional time is reasonably necessary to obtain permits from governmental authorities, surface rights (including
31 | rights-of-way) or appropriate drilling equipment, or to complete title examination or curative matter required for title approval or
32 | acceptance. If the actual operation has not been commenced within the time provided (including any extension thereof as specifically
33 | permitted herein or in the force majeure provisions of Article XI) and if any party hereto still desires to conduct said operation, written
34 | notice proposing same must be resubmitted to the other parties in accordance herewith as if no prior proposal had been made. Those parties
35 | 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
36 | participate in the proposed Deepening or Sidetracking operation, reimburse the Drilling Parties in accordance with Article VI.B.4. in the
37 | event of a Deepening operation and in accordance with Article VI.B.5. in the event of a Sidetracking operation.

38 | 2. Operations by Less Than All Parties. See Article XVI.T

39 | (a) Determination of Participation. If any party to whom such notice is delivered as provided in Article VI.B.1. or VI.C.1.
40 | (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
41 | parties giving the notice and such other parties as shall elect to participate in the operation shall, no later than one hundred eighty (180)
42 | 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
43 | a drilling rig is on location, as the case may be) actually commence the proposed operation and complete it with due diligence. Operator
44 | shall perform all work for the account of the Consenting Parties; provided, however, if no drilling rig or other equipment is on location, and
45 | if Operator is a Non-Consenting Party, the Consenting Parties shall either: (i) request Operator to perform the work required by such
46 | proposed operation for the account of the Consenting Parties, or (ii) designate one of the Consenting Parties as Operator to perform such
47 | work. The rights and duties granted to and imposed upon the Operator under this agreement are granted to and imposed upon the party
48 | designated as Operator for an operation in which the original Operator is a Non-Consenting Party. Consenting Parties, when conducting
49 | operations on the Contract Area pursuant to this Article VI.B.2., shall comply with all terms and conditions of this agreement.

50 | If less than all parties approve any proposed operation, the proposing party, immediately after the expiration of the applicable
51 | notice period, shall advise all Parties of the total interest of the parties approving such operation and its recommendation as to whether the
52 | Consenting Parties should proceed with the operation as proposed. Each Consenting Party, within forty-eight (48) hours (exclusive of
53 | Saturday, Sunday, and legal holidays) after delivery of such notice, shall advise the proposing party of its desire to (i) limit participation to
54 | 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
55 | Contract Area by the interests of all Consenting Parties in the Contract Area) of Non-Consenting Parties' interests, or (iii) carry its
56 | proportionate part (determined as provided in (ii)) of Non-Consenting Parties' interests together with all or a portion of its proportionate
57 | part of any Non-Consenting Parties' interests that any Consenting Party did not elect to take. Any interest of Non-Consenting Parties that is
58 | 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
59 | 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
60 | on location, notice may be given by telephone, email or facsimile, and the time permitted for such a response shall not exceed a total of forty-eight (48) hours
61 | (exclusive of Saturday, Sunday and legal holidays). The proposing party, at its election, may withdraw such proposal if there is less than
62 | 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
63 | location, following expiration of the applicable response period. If 100% subscription to the proposed operation is obtained, the proposing
64 | party shall promptly notify the Consenting Parties of their proportionate interests in the operation and the party serving as Operator shall
65 | commence such operation within the period provided in Article VI.B.1., subject to the same extension right as provided therein.

66 | (b) Relinquishment of Interest for Non-Participation. The entire cost and risk of conducting such operations shall be borne by
67 | the Consenting Parties in the proportions they have elected to bear same under the terms of the preceding paragraph. Consenting Parties
68 | shall keep the leasehold estates involved in such operations free and clear of all liens and encumbrances of every kind created by or arising
69 | 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
70 | Consenting Parties shall plug and abandon the well and restore the surface location at their sole cost, risk and expense; provided, however,
71 | that those Non Consenting Parties that participated in the drilling, Deepening or Sidetracking of the well shall remain liable for, and shall
72 | pay, their proportionate shares of the cost of plugging and abandoning the well and restoring the surface location insofar only as those costs
73 | were not increased by the subsequent operations of the Consenting Parties. If any well drilled, Reworked, Sidetracked, Deepened,
74 | 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, ~~or market value thereof if such share is not sold~~ (after deducting applicable ad valorem, production, severance, and excise taxes, royalty, overriding royalty and other interests not excepted by Article III.C. payable out of or measured by the production from such well accruing with respect to such interest until it reverts), shall equal the total of the following:

(i) 100 3200 % 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 100% of each such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this Article, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning of the operations; and

(ii) 400 2200 % 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.

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

(c) Reworking, ReCompleting or Plugging Back. An election not to participate in the drilling, Sidetracking or Deepening of a well shall be deemed an election not to participate in any Reworking or Plugging Back operation proposed in such a well, or portion thereof, to which the initial non-consent election applied that is conducted at any time prior to full recovery by the Consenting Parties of the Non-Consenting Party's recoupment amount. Similarly, an election not to participate in the Completing or ReCompleting of a well shall be deemed an election not to participate in any Reworking operation proposed in such a well, or portion thereof, to which the initial non-consent election applied that is conducted at any time prior to full recovery by the Consenting Parties of the Non-Consenting Party's recoupment amount. Any such Reworking, ReCompleting or Plugging Back operation conducted during the recoupment period shall be deemed part of the cost of operation of said well and there shall be added to the sums to be recouped by the Consenting Parties 2300 % of that portion of the costs of the Reworking, ReCompleting or Plugging Back operation which would have been chargeable to such Non-Consenting Party had it participated therein. If such a Reworking, ReCompleting or Plugging Back operation is proposed during such recoupment period, the provisions of this Article VI.B. shall be applicable as between said Consenting Parties in said well.

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

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

Within ~~ninety (90)~~ 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 quarter statement of monthly billings. Each ~~month~~ quarter thereafter, during the time the Consenting Parties are being reimbursed as provided above, the party conducting the operations for the Consenting Parties shall furnish the Non-Consenting Parties with an itemized statement of all costs and liabilities incurred in the operation of the well, together with a statement of the quantity of Oil and Gas produced from it and the amount of proceeds realized from the sale of the well's working interest production during the preceding quarter ~~month~~. In determining the quantity of Oil and Gas produced during any ~~month~~ quarter, 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

1 Article VI.F., stand-by costs incurred pending response to a party's notice proposing a Reworking, Sidetracking, Deepening, Recompleting,
2 Plugging Back or Completing operation in such a well (including the period required under Article VI.B.6. to resolve competing proposals)
3 shall be charged and borne as part of the drilling or Deepening operation just completed. Stand-by costs subsequent to all parties
4 responding, or expiration of the response time permitted, whichever first occurs, and prior to agreement as to the participating interests of
5 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
6 part of the proposed operation, but if the proposal is subsequently withdrawn because of insufficient participation, such stand-by costs shall
7 be allocated between the Consenting Parties in the proportion each Consenting Party's interest as shown on Exhibit "A" bears to the total
8 interest as shown on Exhibit "A" of all Consenting Parties.

9 In the event that notice for a Sidetracking operation is given while the drilling rig to be utilized is on location, any party
10 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.
11 within which to respond by paying for all stand-by costs and other costs incurred during such extended response period; Operator may require
12 such party to pay the estimated stand-by time in advance as a condition to extending the response period. If more than one party elects to take
13 such additional time to respond to the notice, standby costs shall be allocated between the parties taking additional time to respond on a day
14 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
15 the electing parties.

16 4. Deepening: If less than all parties elect to participate in a drilling, Sidetracking, or Deepening operation proposed
17 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
18 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
19 under Article VI.B.1. ("Initial Objective"). Such well shall not be Deepened beyond the Initial Objective without first complying with this
20 Article to afford the Non-Consenting Parties the opportunity to participate in the Deepening operation.

21 In the event any Consenting Party desires to drill or Deepen a Non-Consent Well to a depth below the Initial Objective,
22 such party shall give notice thereof, complying with the requirements of Article VI.B.1., to all parties (including Non-Consenting Parties).
23 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
24 Deepening of such well pursuant to said Articles VI.B.1. and 2. If a Deepening operation is approved pursuant to such provisions, and if any
25 Non-Consenting Party elects to participate in the Deepening operation, such Non-Consenting party shall pay or make reimbursement (as the
26 case may be) of the following costs and expenses.

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

34 (b) If the proposal is made for a Non-Consent Well that has been previously Completed as a well capable of producing
35 in paying quantities, but is no longer capable of producing in paying quantities, such Non-Consenting Party shall pay (or reimburse
36 Consenting Parties for, as the case may be) its proportionate share of all costs of drilling, Completing, and equipping said well from the
37 surface to the Initial Objective, calculated in the manner provided in paragraph (a) above, less those costs recouped by the Consenting Parties
38 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.
39 The Non-Consenting Parties' proportionate part (based on the percentage of such well Non-Consenting Party would have owned had it
40 previously participated in such Non-Consent Well) of the costs of salvable materials and equipment remaining in the hole and salvable surface
41 equipment used in connection with such well shall be determined in accordance with Exhibit "C." If the Consenting Parties have recouped the
42 cost of drilling, Completing, and equipping the well at the time such Deepening operation is conducted, then a Non-Consenting Party may
43 participate in the Deepening of the well with no payment for costs incurred prior to re-entering the well for Deepening

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

46 This Article VI.B.4 shall not apply to Deepening operations within an existing Lateral of a Horizontal Well.

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

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

52 (b) If the proposal is for Sidetracking a well which has previously produced, reimbursement shall be on the basis of
53 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
54 Sidetracking operation is conducted, calculated in the manner described in Article VI.B.4(b) above. Such party's proportionate share of the
55 cost of the well's salvable materials and equipment down to the depth at which the Sidetracking operation is initiated shall be determined in
56 accordance with the provisions of Exhibit "C."

57 This Article VI.B.5, "Sidetracking," shall not apply to operations in an existing Lateral of a Horizontal Well.

58 Unleased Mineral Owner, other than an

59 6. Order of Preference of Operations. Except as otherwise specifically provided in this agreement, if any party / desires to propose
60 the conduct of an operation that conflicts with a proposal that has been made by a party under this Article VI, such party shall have fifteen
61 (15) days from delivery of the initial proposal, in the case of a proposal to drill a well or to perform an operation on a well where no drilling
62 rig is on location, or twenty-four (24) hours, exclusive of Saturday, Sunday and legal holidays, from delivery of the initial proposal, if a
63 drilling rig is on location for the well on which such operation is to be conducted, to deliver to all parties entitled to participate in the proposed
64 operation such party's alternative proposal, such alternate proposal to contain the same information required to be included in the initial
65 proposal. Each party receiving such proposals shall elect by delivery of notice to Operator within five (5) days after expiration of the proposal
66 period, or within twenty-four (24) hours (exclusive of Saturday, Sunday and legal holidays) if a drilling rig is on location for the well that is
67 the subject of the proposals, to participate in one of the competing proposals. Any party not electing within the time required shall be deemed
68 not to have voted. The proposal receiving the vote of parties owning the largest aggregate percentage interest of the parties voting shall have
69 priority over all other competing proposals; in the case of a tie vote, the initial proposal shall prevail. Operator shall deliver notice of such
70 result to all parties entitled to participate in the operation within five (5) days after expiration of the election period (or within twenty-four (24)
71 hours, exclusive of Saturday, Sunday and legal holidays, if a drilling rig is on location). Each party shall then have two (2) days (or twenty
72 four (24) hours if a rig is on location) from receipt of such notice to elect by delivery of notice to Operator to participate in such operation or
to relinquish interest in the affected well pursuant to the provisions of Article VI.B.2.; failure by a party to deliver notice within such period

1 | shall be deemed an election not to participate in the prevailing proposal.

2 | 7. Conformity to Spacing Pattern. Notwithstanding the provisions of this Article VI.B.2., it is agreed that no wells shall be
 3 | proposed to be drilled to or Completed in or produced from a Zone from which a well located elsewhere on the Contract Area is producing,
 4 | 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
 5 | then existing spacing pattern for such Zone by the appropriate regulatory agency.

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

9 | 9. Spudder Rigs.

10 | (a) Within Approved Horizontal Well proposals (i.e. proposals which include an approved AFE). If an approved Horizontal
 11 | Well proposal provides that a Spudder Rig shall be utilized, and Operator desires to extend the proposed Horizontal Rig Move-On Period,
 12 | Operator may obtain one or more extensions, each for a period of time not to exceed 90 days only upon notice and the affirmative vote
 13 | of not less than 51 % in interest of the Consenting Parties to the drilling of the proposed well.

14 | (b) Not Within Approved Horizontal Well proposals. If an approved Horizontal Well proposal does not provide that a Spudder
 15 | Rig may be utilized, and Operator subsequently desires to utilize a Spudder Rig, Operator may utilize a Spudder Rig upon notice to the
 16 | Drilling Parties (which notice shall include a Horizontal Rig Move-On Period) and the affirmative vote of not less than 51 % in
 17 | interest of the Consenting Parties. Extension(s) of the Horizontal Rig Move-On Period may be requested by Operator in the same manner as
 18 | provided in Article VI.B.9.(a) immediately above.

19 | (c) Failure to meet Horizontal Rig Move-On Period. If a rig capable of drilling a Horizontal Well to its Total Measured Depth
 20 | has not commenced operations within the Horizontal Rig Move-On Period, or any approved extension(s) thereof, unless 51 % in
 21 | interest of the Consenting Parties agree to abandon the operation, Operator shall re-propose the well in the manner provided in Article VI.B
 22 | of this agreement. Any party who was a Non-Consenting Party to the original drilling proposal shall be entitled to a new election. Costs of
 23 | the operation, incurred both before and after such re-proposal, shall be borne as follows:

24 | (1) Operator shall promptly reimburse all unused funds previously advanced for the drilling of the well to each party who
 25 | advanced such unused funds;

26 | (2) If the well's drilling operations are subsequently resumed, all costs, whether incurred before or after the re-proposal,
 27 | shall be borne by the Consenting Parties to the re-proposed well; and, the Consenting Parties shall proportionately reimburse each party
 28 | who consented to the original proposal but did not consent to the re-proposal such party's share of costs incurred prior to the re-proposal.

29 | (3) If the well's drilling operations are not subsequently resumed pursuant to a re-proposal as herein provided, all costs
 30 | incurred prior to the re-proposal, and all costs of abandonment, shall be borne and paid by the original Consenting Parties.

31 | (d) Commencement of Operations. For purposes of Article VI.B., ^{only} and subject to the provisions of this sub-section 9, the date a
 32 | Spudder Rig commences actual drilling operations shall be considered the commencement of drilling operations of the proposed well.

33 | 10. Multi-well Pads. If multiple Horizontal Wells are drilled or proposed to be drilled from a single pad or location, the costs of
 34 | such pad or location shall be allocated, and/or reallocated as necessary, to the Consenting Parties of each of the wells thereon.

35 | **C. Completion of Wells; Reworking and Plugging Back:**

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

39 | Option No. 1: All necessary expenditures for the drilling, Deepening or Sidetracking, testing, Completion and equipping
 40 | of the Well, including tankage and/or surface facilities.

41 | Option No. 2: ~~All necessary expenditures for the drilling, Deepening or Sidetracking and testing of a Vertical Well. When such well has reached its authorized depth, and all logs, cores and other tests have been completed, and the results thereof furnished to the parties, Operator shall give immediate notice to the Non-Operators having the right to participate in a Completion attempt whether or not Operator recommends attempting to Complete the well, together with Operator's AFE for Completion costs if not previously provided. The parties receiving such notice shall have forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) in which to elect by delivery of notice to Operator to participate in a recommended Completion attempt or to make a Completion proposal with an accompanying AFE. Operator shall deliver any such Completion proposal, or any Completion proposal conflicting with Operator's proposal, to the other parties entitled to participate in such Completion in accordance with the procedures specified in Article VI.B.6. Election to participate in a Completion attempt shall include consent to all necessary expenditures for the Completing and equipping of such well, including necessary tankage and/or surface facilities but excluding any stimulation operation not contained on the Completion AFE. Failure of any party receiving such notice to reply within the period above fixed shall constitute an election by that party not to participate in the cost of the Completion attempt; provided, that Article VI.B.6. shall control in the case of conflicting Completion proposals. If one or more, but less than all of the parties, elect to attempt a Completion, the provisions 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 Recompletions 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.~~

67 | Notwithstanding anything to the contrary, including the selection of Option 2 above, or anything else in this agreement, Option
 68 | 1 shall apply to all Horizontal Wells.

69 | 2. Rework, Recomplete or Plug Back: No well shall be Reworked, Recompleted or Plugged Back except a well Reworked,
 70 | Recompleted, or Plugged Back pursuant to the provisions of Article VI.B.2. of this agreement. Consent to the Reworking, Recompleting or
 71 | Plugging Back of a well shall include all necessary expenditures in conducting such operations and Completing and equipping of said well,
 72 | 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 Seventy-Five-Fifty Thousand Dollars (\$ 750,000.00) except in connection with the drilling, Sidetracking, Reworking, Deepening, Completing, Re-completing 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 Seventy-Five-Fifty Thousand Dollars (\$ 5075,000.00). 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 by 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 8051 % 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. See Article XVI.U

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 who participated in the cost of drilling the well. Should Operator, after diligent effort, be unable to contact any party, or should any party fail to reply within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after delivery of notice of the proposal to plug and abandon such well, such party shall be deemed to have consented to the proposed abandonment. All such wells shall be plugged and abandoned in accordance with applicable regulations and at the cost, risk and expense of the parties who participated in the cost of drilling or Deepening such well. ~~Any party who objects to plugging and abandoning such well by notice delivered to Operator within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after delivery of notice of the proposed plugging shall take over the well as of the end of such forty-eight (48) hour notice period and conduct further operations in search of Oil and/or Gas subject to the provisions of Article VI.B.; failure of such party to provide proof reasonably satisfactory to Operator of its financial capability to conduct such operations or to take over the well within such period or thereafter to conduct operations on such well or plug and abandon such well shall entitle Operator to retain or take possession of the well and plug and abandon the well. The party taking over the well shall indemnify Operator (if Operator is an abandoning party) and the other abandoning parties against liability for any further operations conducted on such well except for the costs of plugging and abandoning the well and restoring the surface, for which the abandoning parties shall remain proportionately liable.~~

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

~~Parties taking over a well as provided herein shall tender to each of the other parties its proportionate share of the value of the well's salvable material and equipment, determined in accordance with the provisions of Exhibit "C," less the estimated cost of salvaging and the estimated cost of plugging and abandoning and restoring the surface; provided, however, that in the event the estimated plugging and abandoning and surface restoration costs and the estimated cost of salvaging are higher than the value of the well's salvable material and equipment, each of the abandoning parties shall tender to the parties continuing operations their proportionate shares of the estimated excess cost. Each abandoning party shall assign to the non-abandoning parties, without warranty, express or implied, as to title or as to quantity, or fitness for use of the equipment and material, all of its interest in the wellbore of the well and related equipment, together with its interest in the Leasehold insofar and only insofar as such Leasehold covers the right to obtain production from that wellbore in the Zone then open to production. If the interest of the abandoning party is or includes an 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 have the option to 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 80.51 % 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: See Article XVI.M

Option No. 1: Gas Balancing Agreement Attached

~~Each party shall~~ other than an Unleased Mineral Owner 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 development and producing operations and in preparing and treating Oil and Gas for marketing purposes and production unavoidably lost. Any extra expenditure incurred in the taking in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party. Any party taking its share of production in kind shall be required to pay for only its proportionate share of such part of Operator's surface facilities which it uses.

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

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

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

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

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

Option No. 2: No Gas Balancing Agreement:

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

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

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

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

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

ARTICLE VII.
EXPENDITURES AND LIABILITY OF PARTIES

A. Liability of Parties:

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

B. Liens and Security Interests: See Article XVI.W.

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

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

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

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

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

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

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

C. Advances:

Operator, at its election, shall have the right from time to time to demand and receive from one or more of the other parties other than Unleased Mineral Owners. payment in advance of their respective shares of the estimated amount of the expense to be incurred in operations hereunder during the next succeeding month, which right may be exercised only by submission to each such party of an itemized statement of such estimated expense, together with an invoice for its share thereof. Each such statement and invoice for the payment in advance of estimated expense shall be submitted on or before the 20th day of the next preceding month. Each party shall pay to Operator its proportionate share of such estimate

1 within fifteen (15) days after such estimate and invoice is received. If any party fails to pay its share of said estimate within said time, the
2 amount due shall bear interest as provided in Exhibit "C" until paid. Proper adjustment shall be made monthly between advances and actual
3 expense to the end that each party shall bear and pay its proportionate share of actual expenses incurred, and no more.

4 **D. Defaults and Remedies:**

5 If any party fails to discharge any financial obligation under this agreement, including without limitation the failure to make any
6 advance under the preceding Article VII.C. or any other provision of this agreement, within the period required for such payment
7 hereunder, then in addition to the remedies provided in Article VII.B. or elsewhere in this agreement, the remedies specified below shall be
8 applicable. For purposes of this Article VII.D., all notices and elections shall be delivered only by Operator, except that Operator shall
9 deliver any such notice and election requested by a non-defaulting Non-Operator, and when Operator is the party in default, the applicable
10 notices and elections can be delivered by any Non-Operator. Election of any one or more of the following remedies shall not preclude the
11 subsequent use of any other remedy specified below or otherwise available to a non-defaulting party.

12 Upon request by any party Operator will
13 1. Suspension of Rights: ~~Any party may~~ deliver to the party in default a Notice of Default, which shall specify the default,
14 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
15 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
16 of the defaulting party granted by this agreement may upon notice be suspended until the default is cured, without prejudice to the right of
17 the non-defaulting party or parties to continue to enforce the obligations of the defaulting party previously accrued or thereafter accruing
18 under this agreement. If Operator is the party in default, the Non-Operators shall have in addition the right, by vote of Non-Operators
19 owning a majority in interest in the Contract Area after excluding the voting interest of Operator, to appoint a new Operator effective
20 immediately. The rights of a defaulting party that may be suspended hereunder at the election of the non-defaulting parties shall include,
21 without limitation, the right to receive information as to any operation conducted hereunder during the period of such default, the right to
22 elect to participate in an operation proposed under Article VI.B. of this agreement, the right to participate in an operation being conducted
23 under this agreement even if the party has previously elected to participate in such operation, and the right to receive proceeds of
24 production from any well subject to this agreement.

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

29 3. Deemed Non-Consent: The non-defaulting party may deliver a written Notice of Non-Consent Election to the defaulting
30 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
31 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
32 dry hole, or for the Completion or Recompletion of any well, the defaulting party will be conclusively deemed to have elected not to
33 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
34 extent of the costs unpaid by such party, notwithstanding any election to participate theretofore made. If election is made to proceed under
35 this provision, then the non-defaulting parties may not elect to sue for the unpaid amount pursuant to Article VII.D.2.

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

42 4. Advance Payment: If a default is not cured within thirty (30) days of the delivery of a Notice of Default, Operator, or Non-
43 Operators if Operator is the defaulting party, may thereafter require advance payment from the defaulting party of such defaulting party's
44 anticipated share of any item of expense for which Operator, or Non-Operators, as the case may be, would be entitled to reimbursement
45 under any provision of this agreement, whether or not such expense was the subject of the previous default. Such right includes, but is not
46 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
47 participate in drilling or Completion has been made. If the defaulting party fails to pay the required advance payment, the non-defaulting
48 parties may pursue any of the remedies provided in this Article VII.D. or any other default remedy provided elsewhere in this agreement.
49 Any excess of funds advanced remaining when the operation is completed and all costs have been paid shall be promptly returned to the
50 advancing party.

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

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

55 Rentals, shut-in well payments and minimum royalties which may be required under the terms of any lease shall be paid by the
56 party or parties who contributed, or who is deemed to have contributed
57 subjected / such lease to this agreement at its or their expense. In the event two or more parties own and have
58 contributed interests in the same lease to this agreement, such parties may designate one of such parties to make said payments for and on
59 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
60 failure to make proper payment of any rental, shut-in well payment or minimum royalty through mistake or oversight where such payment
61 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
62 Article IV.B.2.

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

68 **F. Taxes:**

69 Beginning with the first calendar year after the effective date hereof, Operator shall render for ad valorem taxation all property
70 subject to this agreement which by law should be rendered for such taxes, and assessments
71 and it shall pay all such taxes / assessed thereon before they
72 become delinquent. Prior to the rendition date, each Non-Operator shall furnish Operator information as to burdens (to include, but not be
73 limited to, royalties, overriding royalties and production payments) on Leases and Oil and Gas Interests contributed by such Non-Operator.
74 If the assessed valuation of any Lease is reduced by reason of its being subject to outstanding excess royalties, overriding royalties or
75 production payments, the reduction in ad valorem taxes resulting therefrom shall inure to the benefit of the owner or owners of such Lease,

1 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
 2 in whole or in part upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges
 3 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.

4 Operator shall bill the other parties for their proportionate shares of all tax payments in the manner provided in Exhibit "C." Provided,
 5 however, if at any time any party takes its share of production in kind, or separately disposes of it, such party shall pay or cause to be
 6 paid any and all taxes as to such production except for any and all ad valorem taxes which shall be paid in accordance with this
 7 Article VII.F.

8 If Operator considers any tax assessment improper, Operator may, at its discretion, protest within the time and manner
 9 prescribed by law, and prosecute the protest to a final determination, unless all parties agree to abandon the protest prior to final
 10 determination. During the pendency of administrative or judicial proceedings, Operator may elect to pay, under protest, all such taxes and
 11 any interest and penalty. When any such protested assessment shall have been finally determined, Operator shall pay the tax for the joint
 12 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
 13 provided in Exhibit "C."

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

16 **ARTICLE VIII.**

17 **ACQUISITION, MAINTENANCE OR TRANSFER OF INTEREST**

18 **A. Surrender of Leases:**

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

22 except an Unleased Mineral Owner.
 23 However, should any party desire to surrender its interest in any Lease or in any portion thereof, such party shall give written
 24 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
 25 the notice within which to notify the party proposing the surrender whether they elect to consent thereto. Failure of a party to whom such
 26 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
 27 parties do not agree or consent thereto, the party desiring to surrender shall assign, without express or implied warranty of title, all of its
 28 interest in such Lease, or portion thereof, and any well, material and equipment which may be located thereon and any rights in production
 29 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,
 30 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
 31 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
 32 be on the form attached hereto as Exhibit "B." Upon such assignment or lease, the assigning party shall be relieved from all obligations
 33 thereafter accruing, but not theretofore accrued, with respect to the interest assigned or leased and the operation of any well attributable
 34 thereto, and the assigning party shall have no further interest in the assigned or leased premises and its equipment and production other than
 35 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
 36 the reasonable salvage value of the latter's interest in any well's salvable materials and equipment attributable to the assigned or leased
 37 acreage. The value of all salvable materials and equipment shall be determined in accordance with the provisions of Exhibit "C," less the
 38 estimated cost of salvaging and the estimated cost of plugging and abandoning and restoring the surface. If such value is less than such
 39 costs, then the party assignor or lessor shall pay to the party assignee or lessee the amount of such deficit. If the assignment or lease is in
 40 favor of more than one party, the interest shall be shared by such parties in the proportions that the interest of each bears to the total interest
 41 of all such parties. If the interest of the parties to whom the assignment is to be made varies according to depth, then the interest assigned
 42 shall similarly reflect such variances.

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

47 **B. Renewal or Extension of Leases: See Article XVI.V**
 48 except an Unleased Mineral Owner.

49 If any party secures a renewal or replacement of an Oil and Gas Lease or Interest subject to this agreement, then all other parties
 50 shall be notified promptly upon such acquisition or, in the case of a replacement Lease taken before expiration of an existing Lease,
 51 promptly upon expiration of the existing Lease. The parties notified shall have the right for a period of thirty (30) days following delivery
 52 of such notice in which to elect to participate in the ownership of the renewal or replacement Lease, insofar as such Lease affects lands
 53 within the Contract Area, by paying to the party who acquired it their proportionate shares of the acquisition cost allocated to that part of
 54 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
 55 party who participates in the purchase of a renewal or replacement Lease shall be given an assignment of its proportionate interest therein
 56 by the acquiring party without warranty of title, except as to acts by, through or under the acquiring party

57 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
 58 by the parties who elect to participate therein, in a ratio based upon the relationship of their respective percentage of participation in the
 59 Contract Area to the aggregate of the percentages of participation in the Contract Area of all parties participating in the purchase of such
 60 renewal or replacement Lease. The acquisition of a renewal or replacement Lease by any or all of the parties hereto shall not cause a
 61 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
 62 participate shall not be subject to this agreement but shall be deemed subject to a separate Operating Agreement in the form of this
 63 agreement.

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

66 The provisions of this Article shall apply to renewal or replacement Leases whether they are for the entire interest covered by
 67 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
 68 its predecessor Lease, or taken or contracted for or becoming effective within six (6) months after the expiration of the existing Lease, shall
 69 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
 70 Lease becomes effective; but any Lease taken or contracted for more than six (6) months after the expiration of an existing Lease shall not
 71 be deemed a renewal or replacement Lease and shall not be subject to the provisions of this agreement.

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

C. Acreage or Cash Contributions:

While this agreement is in force, if any party contracts for a contribution of cash towards the drilling of a well or any other
 operation on the Contract Area, such contribution shall be paid to the party who conducted the drilling or other operation and shall be
 applied by it against the cost of such drilling or other operation. If the contribution be in the form of acreage, the party to whom the

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~~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 the Contract Area.~~

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

D. Assignment; Maintenance of Uniform Interest: See Article XVI.E

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

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

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

~~Any~~ affecting any of that party's interest in the Contract Area.

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

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

Also see Article XVI.D

E. Waiver of Rights to Partition:

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

F. Preferential Right to Purchase:

(Optional: Check if applicable)

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

ARTICLE IX.

INTERNAL REVENUE CODE ELECTION

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

ARTICLE X.

CLAIMS AND LAWSUITS

Operator may settle any single uninsured third party damage claim or suit arising from operations hereunder if the expenditure does not exceed Seventy-Five Fifty Thousand Dollars (\$ 750,000.00) 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~~

~~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.~~
~~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, including the unavailability of drilling rigs and fracing services, and water for use in drilling or completion operations, 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, email, facsimile or oral notices permitted by this agreement shall be confirmed immediately thereafter by written notice. The originating notice given under any provision hereof shall be deemed delivered only when received by the party to whom such notice is directed, and the time for such party to deliver any notice in response thereto shall run from the date the originating notice is received. "Receipt" for purposes of this agreement with respect to written notice delivered hereunder shall be actual delivery of the notice to the address of the party to be notified specified in accordance with this agreement, or to the email 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 email 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, email 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, or email 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. An automatic response via email shall not be deemed as a response to a notice delivered via email.

ARTICLE XIII.

TERM OF AGREEMENT

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

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

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

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

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

ARTICLE XIV.

COMPLIANCE WITH LAWS AND REGULATIONS

A. Laws, Regulations and Orders:

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

B. Governing Law:

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

C. Regulatory Agencies:

~~Nothing herein contained shall grant, or be construed to grant, Operator the right or authority to waive or release any rights, privileges, or obligations which Non-Operators may have under federal or state laws or under rules, regulations or orders promulgated under such laws in reference to oil, gas and mineral operations, including the location, operation, or production of wells, on tracts offsetting~~

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1 ~~privileges, or obligations which Non-Operators may have under federal or state laws or under rules, regulations or orders promulgated~~
2 ~~under such laws in reference to oil, gas and mineral operations, including the location, operation, or production of wells, on tracts offsetting~~
3 ~~or adjacent to the Contract Area.~~

4
5 With respect to the operations hereunder, Non-Operators agree to release Operator from any and all losses, damages, injuries,
6 claims and causes of action arising out of, incident to or resulting directly or indirectly from Operator's interpretation or application of rules,
7 rulings, regulations or orders of the Department of Energy or Federal Energy Regulatory Commission or predecessor or successor agencies
8 to the extent such interpretation or application was made in good faith and does not constitute gross negligence. Each Non-Operator further
9 agrees to reimburse Operator for such Non-Operator's share of production or any refund, fine, levy or other governmental sanction that
10 Operator may be required to pay as a result of such an incorrect interpretation or application, together with interest and penalties thereon
11 owing by Operator as a result of such incorrect interpretation or application.

12 **ARTICLE XV.**
13 **MISCELLANEOUS**

14 **A. Execution:**

15 This agreement shall be binding upon each Non-Operator when this agreement or a counterpart thereof has been executed by
16 such Non-Operator and Operator notwithstanding that this agreement is not then or thereafter executed by all of the parties to which it is
17 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
18 Area. Operator may, however, by written notice to all Non-Operators who have become bound by this agreement as aforesaid, given at any
19 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
20 commencement of the Initial Well, terminate this agreement if Operator in its sole discretion determines that there is insufficient
21 participation to justify commencement of drilling operations. In the event of such a termination by Operator, all further obligations of the
22 parties hereunder shall cease as of such termination. In the event any Non-Operator has advanced or prepaid any share of drilling or other
23 costs hereunder, all sums so advanced shall be returned to such Non-Operator without interest. Except as otherwise provided in Article
24 IV.B, in the event operations on a well shall be commenced without execution of this agreement by all persons listed on Exhibit "A" as
25 having a current interest in such well, or in the event that subsequent to the commencement of operations on the well previously unknown
26 or undisclosed persons owning working interests in a well are discovered, or both, the parties executing this agreement agree to one of the
27 following:

- 28 **Option No. 1:** Operator shall indemnify executing Non-Operators with respect to all costs incurred for the well which would
29 have been charged to each such person under this agreement as if such person had executed the same and Operator shall receive
30 all revenues which would have been received by each such person under this agreement as if such person had executed the same.
- 31 ~~Option No. 2: The Operator shall advise all parties of the total interest of the parties that have executed this agreement. Each~~
32 ~~party executing this agreement, within forty-eight (48) hours (exclusive of Saturday, Sunday, and legal holidays) after delivery~~
33 ~~of such notice, shall advise the Operator of its desire to (i) limit participation to such party's interest as shown on Exhibit "A" or~~
34 ~~(ii) carry only its proportionate part (determined by dividing such party's interest in the Contract Area by the interest of all~~
35 ~~parties executing this agreement) of non-executing persons' interests, or (iii) carry its proportionate part (determined as provided~~
36 ~~in (ii)) of non-executing persons' interests together with all or a portion of its proportionate part of any non-executing persons~~
37 ~~interests that any executing party did not elect to take. Any interest of non-executing persons that is not carried by an executing~~
38 ~~party shall be deemed to be carried by the Operator. Failure to advise the Operator within the time required shall be deemed an~~
39 ~~election under (i).~~

40 **B. Successors and Assigns:**

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

44 **C. Counterparts:**

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

46 **D. Severability:**

47 For the purposes of assuming or rejecting this agreement as an executory contract pursuant to federal bankruptcy laws, this
48 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
49 comply with all of its financial obligations provided herein shall be a material default.

ARTICLE XVI.
OTHER PROVISIONS

A. Conflict of Terms:

Notwithstanding anything in this agreement to the contrary, in the event of any conflict between the provisions of Article I through XV of this agreement and the provisions of this Article XVI, the provisions of this Article XVI shall govern. This agreement is subject to all the terms and provisions of that certain Unit Agreement for the Development of the Neff Unit dated ...Month, Day Year ..., to which a copy of this agreement is attached (hereinafter the "Unit Agreement"). In the event of a conflict between the provisions of this agreement, including this Article XVI, and the Unit Agreement, the provisions of this agreement, including this Article XVI, shall prevail and control.

B. Operator's Duty: [This has been intentionally left blank]

Unless drilling operations are terminated pursuant to Article VI.F, Operator shall drill a Horizontal Well to the objective Zone(s) and drill the Lateral in the Zone(s) at least to a Displacement to which a reasonably prudent operator would deem further drilling is neither justified nor required.

C. Priority of Operations – Horizontal Wells:

Notwithstanding Article VI.B.6 or anything else in this agreement to the contrary, it is agreed that where a Horizontal Well subject to this agreement has been drilled to the objective Displacement and the Consenting Parties cannot agree upon the sequence and timing of further operations regarding such Horizontal Well, the following elections shall control the order of priority enumerated hereafter:

- First: Testing, coring or logging;
- Second: Complete drilling operations of all proposed Laterals;
- Third: Extend or Deepen a Lateral;
- Fourth: Kick out and drill an additional Lateral in the same Zone;
- Fifth: Plug Back the well to a Zone above the Zone in which a Lateral was drilled; if there is more than one proposal to Plug Back, the proposal to Plug Back to the next deepest prospective Zone shall have priority over a proposal to Plug Back to a shallower prospective Zone;
- Sixth: Sidetrack; and
- Seventh: Plug and abandon as provided for in Article VI.E

Provided, however, that if, at the time the Consenting Parties are considering any of the above, the hole is in such a condition that a reasonably prudent operator would not conduct the particular contemplated operation involved for fear of placing the hole in jeopardy or losing the hole prior to Completing the Horizontal Well in the objective Zone, such operation shall be eliminated from the priorities set forth above.

D. Subrogation:

In addition to the other rights and remedies, the parties may be subrogated to the rights of any party under any lien or encumbrance and be entitled to an assignment of the subrogor's interest in the Contract Area.

E. Maintenance of Uniform Interest:

In the event any party hereto creates a necessity for separate measurement facilities by virtue of any encumbrance or conveyance, the assignee shall alone bear the costs of acquisition, operation, maintenance and repair of such facility.

F. Pooling Authority: [This has been intentionally left blank]

The Drilling and Spacing Unit for the Well shall consist of the lands set forth on Exhibit "A" to this Agreement. Each Party hereto agrees that the Lease(s) it has contributed to the Unit authorizes pooling/unitization into the Unit described on Exhibit "A", or such party will obtain an amendment to the Lease(s) which will permit such pooling/unitization.

G. Rights Suspended:

If a lien conferred in Article VII.B. has been enforced, for so long as the affected Party remains in default it shall have no other access to the Contract Area or information obtained in connection with the operations hereunder and shall not be entitled to vote on any matter hereunder. As to any proposed operation in which it otherwise would have the right to participate, such Party shall have the right to be a Consenting Party therein only if it pays the amount it is in default before the operation is commenced; otherwise, it automatically shall be deemed a Non-Consenting Party to this operation.

H. Prior Operating Agreements: [This has been intentionally left blank]

The parties hereto agree that this Joint Operating Agreement shall replace, supersede and be in lieu of any existing Operating Agreement between the Parties covering the lands, depths and drilling and spacing units covered by this Agreement. This Agreement shall not alter or amend any existing Operating Agreement for any other well located or to be located on the lands covered by this Agreement.

I. Information:

Notwithstanding anything to the contrary contained elsewhere in this Agreement, a Non-Consenting Party shall not be entitled to receive proprietary, non-public geological or technical information or information concerning well-tests with respect to the non-consent operation until the recovery of all sums to be recovered pursuant to Article VI.B.2(b). Nothing in this paragraph shall limit any party's right to receive information as to the cost and expense of conducting operations or as to the actual quantity or price of oil, gas or other hydrocarbons produced or sold from any well on the Contract Area during any regular reporting period.

J. Subsequent Operations:

For the purposes of Article VI.B., Operator may commence activities preliminary to actual drilling operations, including without limitation building location, roads and pits, delivering materials and equipment to the well site, setting conductor pipe, drilling of surface hole by a small drilling rig and cementing of surface casing, rigging up a drilling rig, and/or actual drilling operations at any time before giving the notice of proposed operations required by said Article. Notwithstanding the foregoing, the parties receiving notice of proposed operations pursuant to Article VI.B.1. and VI.B.2. shall have the full time allowed in which to make their elections(s) and shall be subject to the non-consent provisions thereof to the same extent and in the same manner as provided in said Article VI.B. without reference to the time that such activities were commenced relative to giving notice. Nothing in this provision shall serve to extend the time within which Operator is required to commence operations pursuant to Articles VI.B.1. and VI.B.2.

K. Liability of Operator:

Operator shall conduct all such operations in a good and workmanlike manner, but, notwithstanding anything to the contrary herein contained, Operator shall have no liability, in contract, tort, or otherwise, to the other parties for losses or liabilities, whether or not such losses or liabilities are caused by the negligence, sole or concurrent, of Operator incurred, arising out of or in connection with the performance or administration of this Agreement, including, without limitation, any payment of royalty, accounting, marketing, purchasing or governmental filings, or operations performed hereunder or on the Contract Area, except such as may result from gross negligence or willful misconduct of Operator.

K. Designation and Responsibilities of Operator:

Operator of the Contract Area 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. It shall conduct all such operations in a good and workmanlike manner, but, notwithstanding anything to the contrary herein contained, Operator shall have no liability, in contract, tort, or otherwise, to the other parties for losses or liabilities, whether or not such losses or liabilities are caused by the negligence, sole or concurrent, of Operator incurred, arising out of or in connection with the performance or administration of this Agreement, including, without limitation, any payment of royalty, accounting, marketing, purchasing or governmental filings, or operations performed hereunder or on the Contract Area, except such as may result from gross negligence or willful misconduct of Operator.

L. Liability of Parties:

1 In their relations with each other under and in performance of this Agreement, and any unitization agreement or other agreement
2 relating to this Agreement or the Contract Area including the marketing of gas, the parties shall not be considered fiduciaries or to have a
3 fiduciary or confidential relationship (subject to the confidentiality provisions of this Operating Agreement) or duty of good faith or similar
4 duty but rather shall be free to act on an arm's-length basis in accordance with their own respective self-interests. No party shall be liable to
5 another Party for consequential, incidental, punitive, exemplary, special or indirect damages arising from or in connection with performance
6 of this Agreement. The Parties intend that the limitations imposed on remedies and the measure of damages hereunder be without regard to
7 the cause or causes related thereto, including, without limitation, the negligence or strict liability of any Party, whether such negligence be
8 sole, joint or concurrent, or active or passive.
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M. Marketing:

If Operator sells any gas of a non-operator pursuant to Article VI.G., Operator shall conclusively be deemed to have satisfied all its obligations with respect to any gas sold by Operator for a non-operator, if (1) the net price received by the non-operator for the sale of such gas is not less than the price received by Operator for gas produced from the same well, and (2) any charges, costs or fees paid by Operator to an affiliate for services in connection with the sale of such gas and deducted from the price received by the non-operator are not greater than those charged by such affiliate to others in arm's-length transactions. The failure of Operator to obtain such net price or the incurring of affiliate charges greater than those specified above shall not be deemed to prove any breach of Operator's obligations to sell the product in a commercially reasonable manner.

N. Confidentiality:

Any information furnished to or obtained by a Non-Operator pursuant to Articles V.D.5., V.D.6, and V.D.7. shall be maintained as confidential by the Non-Operator and shall not be disclosed by the Non-Operator without prior written consent of Operator. Notwithstanding anything in this Agreement to the contrary, the rights of a Non-Operator as set forth in Articles V.D.5., V.D.6., and V.D.7. shall only apply in favor of those Non-Operator parties who are Consenting Parties with respect to a proposed operation, until such time as the Consenting Parties are no longer entitled to the Non-Consenting Party's share of production, or the proceeds therefrom, attributable to the proposed operation in which the Non-Consenting Parties did not participate.

O. Media/News Release: other than Operator

No party hereto shall, / at any time, issue to the press or other media any news release, or distribute any information or photographs, concerning the Contract Area, without prior approval of all o the other parties hereto. When all of the parties have reviewed such material and all parties have approved the issuance of the material, the party desiring such release shall have the principal responsibility for its issuance. The only other exception to the foregoing shall be that in the event of any emergency involving extensive property damage, operations failure, loss of human life or other clear emergency, the party designated as Operator hereunder is authorized to furnish such minimum, strictly factual information as shall be necessary to satisfy the legitimate public interest on the part of the press and duly constituted authorities, if time does not permit obtaining prior approval by the other parties. Said Operator shall thereupon promptly advise parties of the information so furnished.

P. Damage to Reservoir/Loss of Reserves:

Notwithstanding any contrary provision of this agreement no party shall be liable to any other party for damage to a reservoir or loss of hydrocarbons that may result from any operation(s) conducted under this Agreement, except if that damage or loss arises from a party's gross negligence or willful misconduct.

Q. Operator Indemnity:

The drilling of multiple horizontal wellbores adjacent to an existing horizontal wellbore and fracing such wellbores to achieve possible communication between such wellbores is contemplated as a means to achieve maximum production and recovery of reserves. Such operations shall not constitute negligence or gross negligence under the terms of this Agreement, and all Non-Operators acknowledge that such operations associated with an adjacent horizontal wellbore by Operator will impact the operation of existing horizontal well(s), including flow rates and recoverable reserves, and that such impact may have a negative economic effect on any one or more of the existing horizontal wells in which Non-Operators may own an interest. Each Non-Operator acknowledges and agrees that Operator and its shareholders, officers, directors, subsidiaries, affiliates, agents, employees, and contractors (the "Operator Parties") shall not be liable, responsible, or accountable in damages to Non-Operators, its shareholders, officers, directors, subsidiaries, affiliates, agents, employees, and contractors (the "Non-Operator Parties") for any loss, liability, damage or costs, that the Non-Operator Parties may incur or suffer as a result of Non-Operator's non-consent or failure to participate pursuant to this operating agreement in any horizontal wellbore drilled to the same objective producing zone as an existing horizontal wellbore and Non-Operators hereby release, waive, discharge and covenant not to sue for, any claim they might have as a result of any loss, liability, damage or costs suffered by any Non-Operator with respect to any Non-Operator's interest in any existing wells in the Contract Area or otherwise, arising out of, or related to, the lawful drilling or completion, or any other lawful operational activity associated with a horizontal wellbore in which Non-Operator is a Consenting or a Non-Consenting participant and Non-Operator also hereby indemnifies and holds Operator Parties harmless from any such loss, liability, damage or cost suffered by Non-Operator.

R. Regulatory Filings:

Operator shall act as representative of all parties in all hearings and proceedings before administrative bodies concerning the Contract Area and all costs and expenses incurred by Operator directly or by retention of outside personnel for such hearings or proceedings shall be proper charges against the joint account. Nothing contained herein, however, shall prevent any of the parties from participating in any such hearings or proceedings on its own behalf and at its own cost and expense. Operator shall use its commercially reasonable judgment in making any filings, and preparing any of the notices, reports and applications referred to in Article V.D.6. of this Agreement. However, in no event shall Operator have any liability to any Non-Operator in making and prosecuting any such filing or in rendering any notice, report or application, absent bad faith, gross negligence or willful misconduct on the part of any senior executive of Operator. Any penalties incurred as a result of any incorrect filing, notice, report or application shall, in absence of bad faith, gross negligence or willful misconduct, be charged to the parties owning the production to which the penalty pertains.

S. Overhead – Environmental Response:

Non-Operators /other than Unleased Mineral Owners, agree to compensate Operator, in proportion to each Non-Operator's interest, for overhead costs incurred in responding to any Environmental Claim or any Environmental Condition with regard to or arising from the Cotrtract Area. The term "Environmental Claim" means any action, suit, investigation, proceeding, demand, claim or written notice by any person alleging or inquiring as to potential liability arising out of any Environmental Law with respect to the Contract Area; and the term "Environmental Condition" means any existing or threatened condition with respect to the soil, subsurface, surface waters, ground waters, atmosphere or other environmental media, whether or not the Environmental Condition is yet discovered, which could result in any damage, loss, cost, expense, claim, demand, order, lien or liability to or against the Contract Area or against the parties with respect to the Contract Area under any Environmental Law. The term "Environmental Law" means all state, local, and federal treaties, laws, rules, regulations and permits in effect during the term of this Agreement relating to pollution or protection of the environment, including, without limitations, the Comprehensive Environmental Response Compensation and Liability Act of 1980 as amended ("CERCLA"), the Resource Conversation and Recovery Act of 1976 as amended ("RCRA"), the Toxic Substances Control Act ("TSCA"). The overhead rates for amounts in excess of \$25,000.00 is as follows:

1. 5% of total costs through \$100,0000.00; plus
2. 3% of total costs in excess of \$100,000.00, but less than \$1,000,000.00; plus
3. 2% of total costs in excess of \$1,000,000.00

T. Operations by Less Than All Parties

Election by a previous Non-Consenting Party to participate in a subsequent Completion or Recompletion attempt on the same wellbore 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 elects to participate in a subsequent Completion attempt.

U. Additional Facilities

Any party /except an Unleased Mineral Owner, may propose the installation of additional facilities reasonably intended to benefit the joint property, beyond those included in a proposed operation, by giving to all other parties written notice of the proposal together with an estimate of anticipated expenses and all other reasonably necessary details. The parties shall have thirty (30) days from receipt of such notice to elect in writing whether or not to participate in the proposed installation, which time may be extended an additional thirty (30) days by agreement of a majority in interest in order to obtain additional information. At the expiration of the response time, those parties electing to participate may proceed to install the proposed facilities at their own risk and expense and shall own said facilities in the proportion that they bear the expense of construction. To the extent that the additional facilities are to be used for the benefit the joint property, all of the parties shall have access to and use of said facilities ratably, provided that the participating parties shall be entitled to a reasonable fee for such use by the non-participating parties, which fee shall include a reasonable return on investment. Unless otherwise

1 agreed by all participating parties and Operator. Operator shall be responsible for constructing and operating said facilities and shall be
2 entitled to collect a reasonable charge for overhead during construction pursuant to the provisions of Exhibit "C".
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1 V. Renewal or Extension of Leases:

2 Notwithstanding anything herein to the contrary, each party committing a lease or leases to this Agreement shall have the option
3 upon the expiration of each lease to renew or extend such lease and to bear the renewal or extension costs and expenses and thereby retain its
4 original interest and title in said lease. By exercising such option, the parties' working interest shall remain unchanged. If such party
5 committing a lease or leases to this Agreement does not exercise its option within sixty (60) days after the expiration date of the original lease,
6 the renewal or extension lease will then be subject to the terms of Article VIII.B. above. If any working interest owner other than the party
7 committing a lease or leases to this Agreement renews or extends the lease, the renewing or extending party shall furnish such other party an
8 itemized statement of the complete renewal or extension costs and expenses of such lease. Such other party shall then have sixty (60) days
9 after the receipt of such itemized statement to reimburse the renewing or extending party in full. Failure of such other party to do so shall
10 result in the forfeiture of its option hereunder. The provision hereof shall only apply to leases or portions of leases located in the Contract
11 Area.

12 W. Notice of Lien and Security Interest:

13 Each party to this agreement ratifies and agrees to execute a "Recording Supplement to Operating Agreement and Financing
14 Statement" in the form attached hereto as Exhibit "H" simultaneously with their execution of this agreement. Each party further authorizes
15 the Operator to file such instrument in the appropriate records of the county or counties where the Contract Lands are located and in the
16 Uniform Commercial Code records of the appropriate Secretary of State's office and/or such other records as may be required under
17 applicable state law to fully perfect the security interests created herein.

18 X. Non-Consenting of Initial Well

19 In the event a Party elects not to participate (a Non-Consenting Party) in the Initial Well proposed in the Contract Area
20 pursuant to Article VI.A., upon the timely commencement of actual drilling operations on such Well, such Non-Consenting Party shall be
21 deemed to have relinquished to the Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their
22 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
23 such interests, calculated at the well (after deducting production taxes, assessments, excise taxes, royalty, overriding royalty and other
24 interests not otherwise excepted in this agreement, payable out of or measured by the production from such well accruing with respect to such
25 interest until it reverts) shall equal the total of the following: a) 300% of such Non-Consenting Party's share of the cost of any newly acquired
26 surface equipment beyond the wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and
27 piping), plus 300% of such Non-Consenting Party's share of the cost of the operation of the well commencing with first production and
28 continuing until such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this Article, it being agreed that
29 such Non-Consenting Party's share of such costs and equipment will be that interest that would have been chargeable to such Non-Consenting
30 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,
31 testing and completing, after deducting any cash contributions received under Article III.C., and 300% of that portion of the cost of newly
32 acquired equipment in the well (to and including wellhead connections) which would have been chargeable to such Non-Consenting Party if it
33 had participated therein.

34 Y. Additional Definitions:

35 In addition to those set out in this agreement, the definitions set forth in the Unit Plan for the Miley Unit are hereby adopted and incorporated
36 as if fully rewritten herein.

37 Z. Netting and Setoff:

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

44 AA. Working Interest Adjustment:

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

51 BB. Contract Area/Drilling Unit Adjustment:

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

61 To the extent the Contract Area is modified pursuant to this Agreement, this Agreement shall be amended with revised

62 Exhibits "A," "A-1," and "A-2."

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

64 CC. Term

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

|

A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1989 (Horz.)

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

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

ATTEST OR WITNESS:

OPERATOR

PDC Energy, Inc., a Nevada corporation

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. _____

Exhibit A

Exhibit "A"

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

(1) DESCRIPTION OF LANDS SUBJECT TO THIS AGREEMENT

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

(2) RESTRICTIONS AS TO DEPTHS, FORMATIONS, OR SUBSTANCES

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

(3) PARTIES TO THIS AGREEMENT

PDC Energy, Inc.
1775 Sherman Street, Suite 3000
Denver, Colorado 80203
Attention: Vice President Land
Telephone: (303) 860-5800
Fax: (303) 860-5838

American Energy – Utica, LLC
301 NW 63, Suite 600
Oklahoma City, Oklahoma 73116
Atten: Lindsey Fixley

Antero Resources Corporation
1615 Wynkoop St.
Denver, Colorado 80202
Attn: Kenneth Vaughn

Guernsey Holdings, LLC
221 ½ South 6th Street
Byesville, Ohio 43723
Attn: David R. Hill

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

(4) PERCENTAGES OR FRACTIONAL INTERESTS OF PARTIES TO THIS AGREEMENT

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

(5) OIL AND GAS LEASES AND/OR OIL AND GAS INTERESTS SUBJECT TO THIS AGREEMENT

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

(6) BURDENS ON PRODUCTION

(7) ADDRESSES OF PARTIES FOR NOTICE PURPOSES

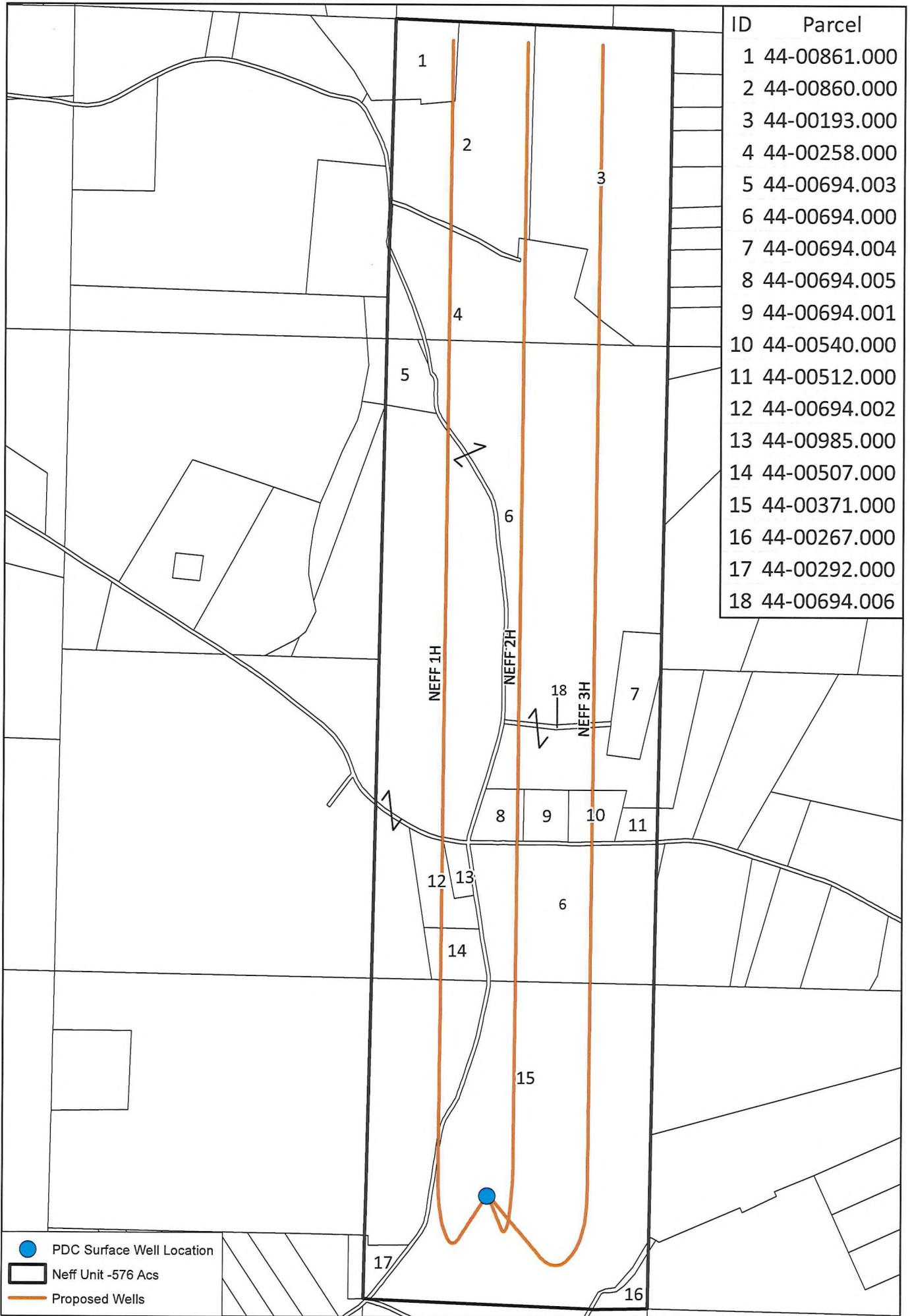
The addresses are set forth in Exhibit "A-3" attached hereto.

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

End of Exhibit "A"

Exhibit A-1

Exhibit A-1



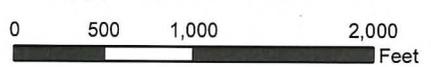
ID	Parcel
1	44-00861.000
2	44-00860.000
3	44-00193.000
4	44-00258.000
5	44-00694.003
6	44-00694.000
7	44-00694.004
8	44-00694.005
9	44-00694.001
10	44-00540.000
11	44-00512.000
12	44-00694.002
13	44-00985.000
14	44-00507.000
15	44-00371.000
16	44-00267.000
17	44-00292.000
18	44-00694.006

 PDC Surface Well Location
 Neff Unit -576 Acs
 Proposed Wells



Unit Plat

Neff Unit
Wills Township
Guernsey Co., OH



Coordinate System: NAD 1983 State Plane Ohio South

1 inch = 1,000 feet

Prepared Date: 11/5/2014

Exhibit A-2

EXHIBIT "A-2"

Leases Within the Contract Area

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

Tract #	Tax Map Number	Mineral Owner	Leased (Y/N)	Parcel Surface Acres in Unit	Mineral Owner Interest	Mineral Owner Surface Acres	Tract Participation	Unit Working Interest	PDC Working Interest	PDC Unit Participation	Guernsey Working Interest	Guernsey Unit Participation	Antero Working Interest	Antero Unit Participation	AEU Working Interest	AEU Unit Participation	Address	City	State	Zip Code
1	44-00861.000	Jeffrey A. Duvall and Teresa E. Duvall	Yes	6.842	1.0000	6.842	0.01187115	1.187115%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	100.0000000%	1.187115%	64446 Erie Rd.	Salesville	OH	43778
3	44-00193.000	Thomas A. Sarchet	Yes	60.000	1.0000	60.000	0.10410245	10.410245%	100.0000000%	10.410245%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	9278 Cadiz Rd.	Cambridge	OH	43725
4	44-00258.000	Carolyn Mae Sarchet	Yes	36.553	1.0000	36.553	0.06342095	6.342095%	100.0000000%	6.342095%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	9278 Cadiz Rd.	Cambridge	OH	43725
5	44-00694.003	Douglas M. Baird & Melissa A. Baird	Yes	4.078	1.0000	4.078	0.00707550	0.707550%	100.0000000%	0.707550%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	63927 Erie Rd.	Salesville	OH	43778
7	44-00694.004	Amy Jo Stonecipher (f/k/a Amy Jo Starcher)	Yes	8.425	1.0000	8.425	0.01461772	1.461772%	100.0000000%	1.461772%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	26650 Basket Rd.	Quaker City	OH	43773
8	44-00694.005	Eric A. Baird, Sr.	Yes	3.433	1.0000	3.433	0.00595640	0.595640%	100.0000000%	0.595640%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	18601 Putney Ridge Rd.	Salesville	OH	43778
9	44-00694.001	Charles M. Baird & Elizabeth J. Baird	Yes	3.807	1.0000	3.807	0.00660530	0.660530%	100.0000000%	0.660530%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	18877 Putney Ridge Rd.	Salesville	OH	43778
10	44-00540.000	Charles M. Baird & Elizabeth J. Baird	Yes	4.999	1.0000	4.999	0.00867347	0.867347%	100.0000000%	0.867347%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	18877 Putney Ridge Rd.	Salesville	OH	43778
12	44-00694.002	Mervin W. Baird & Barbara P. Baird	Yes	6.747	1.0000	6.747	0.01170632	1.170632%	75.0000000%	0.877974%	25.0000000%	0.292658%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	63229 Salem Rd.	Salesville	OH	43778
14	44-00507.000	Mervin W. Baird & Barbara P. Baird	Yes	5.000	1.0000	5.000	0.00867520	0.867520%	75.0000000%	0.650640%	25.0000000%	0.216880%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	63229 Salem Rd.	Salesville	OH	43778
16	44-00267.000	Dennis M. Solar	Yes	2.364	1.0000	2.364	0.00410164	0.410164%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	100.0000000%	0.410164%	0.0000000%	0.0000000%	6681 Commonwealth Blvd.	Cleveland	OH	44130
17	44-00292.000	Dannie B. Black & Crystal L. Black	Yes	1.988	1.0000	1.988	0.00344926	0.344926%	75.0000000%	0.258695%	25.0000000%	0.082322%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	62563 Salem Road	Salesville	OH	43778
11A	44-00512.000	Charles M. Baird	Yes	2.389	0.5000	1.195	0.00207251	0.207251%	100.0000000%	0.207251%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	18877 Putney Ridge Rd.	Salesville	OH	43778
11B	44-00512.000	Mervin W. Baird	Yes	2.389	0.5000	1.195	0.00207251	0.207251%	100.0000000%	0.207251%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	63229 Salem Rd.	Salesville	OH	43778
13A	44-00985.000	Charles M. Baird	Yes	2.088	0.5000	1.044	0.00181138	0.181138%	100.0000000%	0.181138%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	18877 Putney Ridge Rd.	Salesville	OH	43778
13B	44-00985.000	Mervin W. Baird	Yes	2.088	0.5000	1.044	0.00181138	0.181138%	100.0000000%	0.181138%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	63229 Salem Rd.	Salesville	OH	43778
15A	44-00371.000	PDC Energy, Inc.	Yes	40.000	1.0000	40.000	0.06940163	6.940163%	100.0000000%	6.940163%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	1775 Sherman St., Ste. 3000 (contact: Sarah M. Garrett)	Denver	CO	80203
15B	44-00371.000	PDC Energy, Inc.	No	99.000	1.0000	99.000	0.17176905	17.176905%	100.0000000%	17.176905%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	1775 Sherman St., Ste. 3000	Denver	CO	80203
18A	44-00694.006	Charles M. Baird	Yes	0.427	0.5000	0.214	0.00037043	0.037043%	100.0000000%	0.037043%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	Attn: Sarah M. Garrett	Denver	CO	80203
18B	44-00694.006	Mervin W. Baird	Yes	0.427	0.5000	0.214	0.00037043	0.037043%	100.0000000%	0.037043%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	18877 Putney Ridge Rd.	Salesville	OH	43778
2A	44-00860.000	Eugene C. Labut & Susanne E. Labut	Yes	38.333	0.5000	19.167	0.03325492	3.325492%	100.0000000%	3.325492%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	63229 Salem Rd.	Salesville	OH	43778
2B	44-00860.000	Bounty Minerals, LLC	No	38.333	0.5000	19.167	0.03325492	3.325492%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	1478 Steese Rd.	Uniontown	OH	44685
6A	44-00694.000	Charles M. Baird	Yes	249.882	0.5000	124.941	0.21677774	21.677774%	75.0000000%	16.258331%	25.0000000%	5.419444%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	777 Main St., Ste. 850 (contact: Jason Ragsdale)	Ft. Worth	TX	76102
6B	44-00694.000	Mervin W. Baird	Yes	249.882	0.5000	124.941	0.21677774	21.677774%	75.0000000%	16.258331%	25.0000000%	5.419444%	0.0000000%	0.0000000%	0.0000000%	0.0000000%	18877 Putney Ridge Rd.	Salesville	OH	43778
				TOTAL UNIT ACRES		576.355	100.0000000%	100.0000000%	83.642573%	83.642573%	11.434657%	11.434657%	0.0000000%	0.410164%	0.0000000%	1.187115%				43778
				TOTAL CONTROLLED ACRES		557.1887	96.674508%													

Exhibit A-3

EXHIBIT "A-3"
Unitized Parties

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

Tract #	Tax Map Number	Mineral Owner	Leased (Y/N)	Parcel Surface Acres in Unit	Mineral Owner Interest	Mineral Owner Surface Acres	Tract Participation	Unit Working Interest	Address	City	State	Zip Code
2B	44-00860.000	Bounty Minerals, LLC	No	38.333	0.5000	19.167	0.03325492	3.325492%	777 Main St., Ste. 850 (contact: Jason Ragsdale)	Ft. Worth	TX	76102
						TOTAL UNIT ACRES						
						576.355						
						TOTAL UNITIZED ACRES						
						19.1667						

Exhibit B

Exhibit "B"

Attached to and made a part of that certain Unit Operating Agreement dated Month, Day Year, for the Neff Unit.

PAID-UP OIL AND GAS LEASE

THIS LEASE AGREEMENT is made as of the ____ day of _____, 2014 between _____ as Lessor (whether one or more), and **PDC Energy, Inc.**, whose address is 1775 Sherman Street, Suite 3000, Denver, CO 80203, as Lessee. All printed portions of this lease were prepared by the party hereinabove named as Lessee, but all other provisions (including the completion of blank spaces) were prepared jointly by Lessor and Lessee.

1. **Grant of Leased Premises.** In consideration of a cash bonus in hand paid and the covenants herein contained, Lessor hereby grants, leases and lets exclusively to Lessee the following described land, hereinafter called leased premises:

State of: OHIO
County Name: _____
District/Township Name(s): _____
Section/Lot (s): _____
Tax Parcel Number(s): _____

PLEASE SEE EXHIBIT "A" ATTACHED HERETO FOR DESCRIPTIONS

PLEASE SEE EXHIBIT "B" ATTACHED HERETO FOR ADDITIONAL PROVISIONS

containing _____ gross acres, more or less (including any interests therein which Lessor may hereafter acquire by reversion, prescription or otherwise, together with all oil, gas, and their constituents underlying lakes, rivers, streams, roads, easements and rights of way which traverse or adjoin any of the land), for the purpose of exploring for, developing, producing and marketing oil and gas, along with all hydrocarbon and nonhydrocarbon substances produced in association therewith ("Oil and Gas Substances"). The term "gas" as used herein includes helium, carbon dioxide, gaseous sulfur compounds, methane and other commercial gases, as well as normal hydrocarbon gases. In addition to the above-described land, this lease and the term "leased premises" also covers accretions and any small strips or parcels of land now or hereafter owned by Lessor which are contiguous or adjacent to the above-described land, and, in consideration of the aforementioned cash bonus, Lessor agrees to execute at Lessee's request any additional or supplemental instruments for a more complete or accurate description of the land so covered. For the purpose of determining the amount of any payments based on acreage hereunder, the number of gross acres above specified shall be deemed correct, whether actually more or less.

2. **Ancillary Rights.** The rights granted to Lessee hereunder shall include the right of ingress and egress on the leased premises or lands pooled or unitized therewith, along with such rights as may be reasonably necessary to conduct operations for exploring, developing, producing and marketing Oil and Gas Substances, including but not limited to seismic and geophysical operations, the drilling of wells, and the construction and use of roads, pipelines, tanks, water wells, injection wells, pits, electric and telephone lines, power stations, and other facilities deemed necessary by Lessee to explore, discover, produce, store, treat and/or transport Oil and Gas Substances and water produced from the leased premises or other lands that share central facilities and are jointly operated with the leased premises for gathering, treating, compression and water disposal. Lessee may use in such operations, free of cost, any oil, gas, water and/or other substances produced on the leased premises, except water from Lessor's wells or ponds. In exploring, developing, producing or marketing from the leased premises or lands pooled or unitized therewith, the ancillary rights granted herein shall apply to the entire leased premises, notwithstanding any partial release or other partial termination of this lease. When requested by Lessor in writing, Lessee shall bury its pipelines below ordinary plow depth on cultivated lands. No well shall be located less than 200 feet from any house or barn now on the leased premises or other lands of Lessor used by Lessee hereunder, without Lessor's consent, and Lessee shall pay for damage caused by its operations to buildings and other improvements now on the leased premises or such other lands, and to commercial timber and growing crops thereon. Lessee shall have the right at any time to remove its fixtures, equipment and materials, including well casing, from the leased premises or such other lands during the term of this lease or within a reasonable time thereafter.

3. **Term of Lease.** This lease shall be in force for a primary term of **Five (5)** years from the date hereof, and for as long thereafter as oil or gas or other substances covered hereby are produced in paying quantities from the leased premises or from lands pooled or unitized therewith or this lease is otherwise maintained in effect pursuant to the provisions hereof.

4. **Paid-Up Lease.** This is a PAID-UP LEASE. In consideration of the cash payment, Lessor agrees that Lessee shall not be obligated, except as otherwise provided herein, to commence or continue any operations on the leased premises during the primary term.

5. **Operations.** If Lessee drills a well which is incapable of producing in paying quantities (hereinafter called "dry hole") on the leased premises or lands pooled or unitized therewith, or if all production (whether or not in paying quantities) permanently ceases from any cause, including a revision of unit boundaries pursuant to the provisions of this lease or the action of any governmental authority, then in the event this lease is not otherwise being maintained in force it shall nevertheless remain in force if Lessee commences further operations for reworking an existing well or for drilling an additional well or for otherwise obtaining or restoring production on the leased premises or lands pooled or unitized therewith within 90 days after completion of operations on such dry hole or within 90 days after such cessation of all production. If after the primary term this lease is not otherwise being maintained in force, but Lessee is then engaged in Operations, as defined below, this lease shall remain in force so long as any one or more of such Operations are prosecuted with no interruption of more than 90 consecutive days, and if any such Operations result in the production of Oil and Gas Substances, as long thereafter as there is production in paying quantities from the leased premises or lands pooled or unitized therewith. After completion of a well capable of producing in paying quantities hereunder, Lessee shall drill such additional wells on the leased premises or lands pooled or unitized therewith as a reasonably prudent operator would drill under the same or similar circumstances to (a) develop the leased premises as to reservoirs then capable of producing in paying quantities on the leased premises or lands pooled or unitized therewith, or (b) protect the leased premises from uncompensated drainage by any well or wells located on other lands not pooled or unitized therewith. There shall be no covenant to drill exploratory wells or any additional wells except as expressly provided herein. As used herein, the term Operations shall mean any activity conducted on or off the leased premises that is reasonably calculated to obtain or restore production, including without limitation, (i) drilling or any act preparatory to drilling (such as obtaining permits, surveying a drill site, staking a drill site, building roads, clearing a drill site, or hauling equipment or supplies); (ii) reworking, plugging back, deepening, treating, stimulating, refitting, installing any artificial lift or production-enhancement equipment or technique; (iii) constructing facilities related to the production, treatment, transportation and marketing of substances produced from the lease premises; (iv) contracting for marketing services and sale of Oil and Gas Substances; and (v) construction of water disposal facilities and the physical movement of water produced from the leased premises.

6. **Shut-in Royalty.** If after the primary term one or more wells on the leased premises or lands pooled or unitized therewith are capable of producing Oil and Gas Substances in paying quantities, but such well or wells are either shut in or production therefrom is not being sold by Lessee, such well or wells shall nevertheless be deemed to be producing in paying quantities for the purpose of maintaining this lease. If for a period of 90 consecutive days such well or wells are shut in or production therefrom is not sold by Lessee, then Lessee shall pay an aggregate shut-in royalty of one dollar per acre then covered by this lease. The payment shall be made to Lessor on or before the first anniversary date of the lease following the end of the 90-day period and thereafter on or before each anniversary while the well or wells are shut in or production therefrom is not being sold by Lessee; provided that if this lease is otherwise being maintained by operations under this lease, or if production is being sold by Lessee from another well or wells on the leased premises or lands pooled or unitized therewith, no shut-in royalty shall be due until the first anniversary date of the lease following the end of the 90-day period after the end of the period next following the cessation of such operations or production, as the case may be. Lessee's failure to properly pay shut-in royalty shall render Lessee liable for the amount due, but shall not operate to terminate this lease.

7. **Royalty Payment.** For all Oil and Gas Substances that are physically produced from the leased premises, or lands pooled, unitized or communitized therewith, and sold, Lessor shall receive as its royalty **one-eighth (12.5%)** of the sales net proceeds actually received by Lessee or, if applicable, its affiliate, as a result of the first sale of the affected production to an affiliated third party, less this same percentage share of all production, severance and ad valorem taxes and all post production costs. For royalty calculation purposes, lessee shall never be required to adjust the sales proceeds to account for the purchaser's costs or charges downstream of the point of sale.

If Lessee uses the Oil and Gas Substances (other than as fuel in connection with the production and sale thereof) in lieu of receiving sale proceeds, the price to be used under this provision shall be based upon arm's-length sale(s) to unaffiliated parties for the applicable month that are obtainable, comparable in terms of quality and quantity, and in closest proximity to the leased premises.

Lessor may lay a line to one gas well located on the leased premises and connect at the location designated by Lessee on said leased premises and may take annually 200,000 cubic feet of gas produced from said well for domestic use in a single principal residential dwelling located on the leased premises. Lessor understands and recognizes that the gas delivered by the Lessee is production gas that is high pressure, explosive, flammable and odorless and does not meet pipeline quality standards. Lessor agrees that any gas taken or used by Lessor will be at Lessor's sole risk, cost, expense and responsibility. Lessor hereby indemnifies and holds harmless Lessee, its successors and assigns, from any liability, loss, risk, expense, cost, damage to property or injury or death to any person or persons incurred or arising out of the taking or using of this gas even if caused by or attributable to the sole, joint

or concurrent negligence of Lessee. Lessor acknowledges that the production of gas can be unexpectedly interrupted from time to time in routine well operations. In lieu of free use of gas, Lessee shall have the option to compensate Lessor with an annual payment representing 200,000 cubic feet of gas, the cash value of such gas shall be based upon net proceeds received by Lessee at the average wellhead price received by Lessee for gas produced from such well(s), subject to the proportionate interest of the Lessor in any pooled unit.

8. **Pooling.** Lessee shall have the right but not the obligation to pool all or any part of the leased premises or interest therein with any other lands or interests, as to any or all depths or zones, and as to any or all substances covered by this lease, either before or after the commencement of drilling or production, whenever Lessee deems it necessary or proper to do so in order to prudently develop or operate the leased premises, whether or not similar pooling authority exists with respect to such other lands or interests. The creation of a unit by such pooling shall be based on the following criteria (hereinafter called "pooling criteria"): A unit for an oil well (other than a horizontal completion) shall not exceed 40 acres plus a maximum acreage tolerance of 10%, and for a gas well or a horizontal completion shall not exceed 640 acres plus a maximum acreage tolerance of 10%; provided that a larger unit may be formed for an oil well or gas well or horizontal completion to conform to any well spacing or density pattern that may be prescribed or permitted by any governmental authority having jurisdiction to do so. For the purpose of the foregoing, the terms "oil well" and "gas well" shall have the meanings prescribed by applicable law or the appropriate governmental authority, or, if no definition is so prescribed, "oil well" means a well with an initial gas-oil ratio of less than 100,000 cubic feet per barrel and "gas well" means a well with an initial gas-oil ratio of 100,000 cubic feet or more per barrel, based on a 24-hour production test conducted under normal producing conditions using standard lease separator facilities or equivalent testing equipment; and the term "horizontal completion" means a well in which the horizontal component of the completion interval in the reservoir exceeds the vertical component in such interval. In exercising its pooling rights hereunder, Lessee shall file of record a written declaration describing the unit and stating the effective date of pooling. Production, drilling or reworking operations anywhere on a unit which includes all or any part of the leased premises shall be treated as if it were production, drilling or reworking operations on the leased premises, except that the production on which Lessor's royalty is calculated shall be that proportion of the total unit production which the net acreage covered by this lease and included in the unit bears to the total acreage in the unit, but only to the extent such proportion of unit production is sold by Lessee. In the event a unit is formed hereunder before the unit well is drilled and completed, so that the applicable pooling criteria are not yet known, the unit shall be based on the pooling criteria Lessee expects in good faith to apply upon completion of the well; provided that within a reasonable time after completion of the well, the unit shall be revised if necessary to conform to the pooling criteria that actually exist. Pooling in one or more instances shall not exhaust Lessee's pooling rights hereunder, and Lessee shall have the recurring right but not the obligation to revise any unit formed hereunder by expansion or contraction or both, either before or after commencement of production, in order to conform to the well spacing or density pattern prescribed or permitted by the governmental authority having jurisdiction, or to conform to any productive acreage determination made by such governmental authority. To revise a unit hereunder, Lessee shall file of record a written declaration describing the revised unit and stating the effective date of revision. To the extent any portion of the leased premises is included in or excluded from the unit by virtue of such revision, the proportion of unit production on which royalties are payable hereunder shall thereafter be adjusted accordingly.

9. **Unitization.** Lessee shall have the right but not the obligation to commit all or any part of the leased premises or interest therein to one or more unit plans or agreements for the cooperative development or operation of one or more oil and/or gas reservoirs or portions thereof, if in lessee's judgment such plan or agreement will prevent waste and protect correlative rights, and if such plan or agreement is approved by the federal, state or local governmental authority having jurisdiction. When such a commitment is made, this lease shall be subject to the terms and conditions of the unit plan or agreement, including any formula prescribed therein for the allocation of production from a unit. Upon permanent cessation thereof, Lessee may terminate the unit by filing of record a written declaration describing the unit and stating the date of termination. Pooling hereunder shall not constitute a cross-conveyance of interests.

10. **Payment Reductions.** If Lessor owns less than the full mineral estate in all or any part of the leased premises, payment of rentals, royalties and shut-in royalties hereunder shall be reduced as follows: royalties and shut-in royalties for any well on any part of the leased premises or lands pooled therewith shall be reduced to the proportion that Lessor's interest in such part of the leased premises bears to the full mineral estate in such part of the leased premises. To the extent any rental, royalty or other payment attributable to the mineral estate covered by this lease is payable to someone other than Lessor, such rental, royalty or other payment shall be deducted from the corresponding amount otherwise payable to Lessor hereunder.

11. **Ownership Changes.** The interest of either Lessor or Lessee hereunder may be assigned, devised or otherwise transferred in whole or in part, by area and/or by depth or zone, and the rights and obligations of the parties hereunder shall extend to their respective heirs, devisees, executors, administrators, successors and assigns. No change in Lessor's ownership shall have the effect of reducing the rights or enlarging the obligations of Lessee hereunder, and no change in ownership shall be binding on Lessee until 60 days after Lessee has been furnished the original or duly authenticated copies of the documents establishing such change of ownership to the satisfaction of Lessee or until

Lessor has satisfied the notification requirements contained in Lessee's usual form of division order. In the event of the death of any person entitled to rentals or shut-in royalties hereunder, Lessee may pay or tender such rentals or shut-in royalties to the credit of decedent or decedent's estate. If at any time two or more persons are entitled to rentals or shut-in royalties hereunder, Lessee may pay or tender such rentals or shut-in royalties to such persons either jointly or separately in proportion to the interest which each owns. If Lessee transfers its interest hereunder in whole or in part Lessee shall be relieved of all obligations thereafter arising with respect to the transferred interest, and failure of the transferee to satisfy such obligations with respect to the transferred interest shall not affect the rights of Lessee with respect to any interest not so transferred. If Lessee transfers a full or undivided interest in all or any portion of the area covered by this lease, the obligation to pay or tender rentals or shut-in royalties hereunder shall be divided between Lessee and the transferee in proportion to the net acreage interest in this lease then held by each.

12. **Release of Lease.** Lessee may, at any time and from time to time, deliver to Lessor or file of record a written release of this lease as to a full or undivided interest in all or any portion of the area covered by this lease or any depths or zones thereunder, and shall thereupon be relieved of all obligations thereafter arising with respect to the interest so released. If Lessee releases less than all of the interest or area covered hereby, Lessee's obligation to pay or tender rentals or shut-in royalties shall be proportionately reduced in accordance with the net acreage interest retained hereunder.

13. **Regulation and Delay.** Lessee's obligations under this lease, whether express or implied, shall be subject to all applicable laws, rules, regulations and orders of any governmental authority having jurisdiction, including restrictions on the drilling and production of wells, and regulation of the price or transportation of oil, gas and other substances covered hereby. When drilling, reworking, production or other operations are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this lease shall not terminate because of such prevention or delay, and, at Lessee's option, the period of such prevention or delay shall be added to the term hereof. Lessee shall not be liable for breach of any provisions or implied covenants of this lease when drilling, production or other operations are so prevented or delayed.

14. **Breach or Default.** No litigation shall be initiated by Lessor for damages, forfeiture or cancellation with respect to any breach or default by Lessee hereunder, for a period of at least 90 days after Lessor has given Lessee written notice fully describing the breach or default, and then only if Lessee fails to remedy the breach or default within such period. In the event the matter is litigated and there is a final judicial determination that a breach or default has occurred, this lease shall not be forfeited or cancelled in whole or in part unless Lessee is given a reasonable time after said judicial determination to remedy the breach or default and Lessee fails to do so.

15. **Warranty of Title.** Lessor hereby warrants and agrees to defend title conveyed to Lessee hereunder, and agrees that Lessee at Lessee's option may pay and discharge any taxes, mortgages or liens existing, levied or assessed on or against the leased premises. If Lessee exercises such option, Lessee shall be subrogated to the rights of the party to whom payment is made, and, in addition to its other rights, may reimburse itself out of any royalties or shut-in royalties otherwise payable to Lessor hereunder. In the event Lessee is made aware of any claim inconsistent with Lessor's title, Lessee may suspend the payment of royalties and shut-in royalties hereunder, without interest, until Lessee has been furnished satisfactory evidence that such claim has been resolved.

16. **Indemnity.** Lessee will indemnify and hold Lessor, its officers, directors, employees, agents, successors and assigns (hereafter collectively referred to as "Indemnified Parties") harmless from any and all claims, demands, suits, losses, damages, and costs (including, without limitation, any attorney fees) incurred by the Indemnified Parties which may be asserted against the Indemnified Parties by reason of or which may arise out of or which may be related to Lessee's activities on the leased premises (including, without limitation, any claims by any owners or lessees of minerals that Lessee's operations hereunder are either illegal, unauthorized, or constitute an improper interference with their rights).

17. **Extension Term.** Notwithstanding anything to the contrary contained herein, Lessee has the option, but not the obligation, to extend the primary term of this Lease for an additional **Five (5)** years with the payment of an amount of _____ & 00/100 (\$_____) per net mineral acre, such amount being paid to Lessor on or before the expiration of the primary term set forth above in paragraph 3. Such payment may be considered tendered by Lessee and received by Lessor when deposited, postage-paid, in the United States mail, or with a nationally recognized carrier service.

18. **Preferential Right.** For the consideration herein recited, if during the primary term of this lease Lessor receives a bona fide offer from any party to purchase a new lease covering all or any part of the leased premises, and if Lessor is willing to accept such offer, then Lessor shall promptly notify Lessee in writing of the name and address of the offeror, and of all pertinent terms and conditions of the offer, including any lease bonus offered. Lessee shall have a period of thirty (30) days after receipt of such notice to exercise a preferential right to purchase a new lease from Lessor in accordance with the terms

and conditions of the offer, by giving Lessor written notice of such exercise. Promptly thereafter, Lessee shall furnish to Lessor the new lease for execution, along with a time draft for the lease bonus conditioned upon execution and delivery of the lease by Lessor and approval of title by Lessee, all in accordance with the terms of said draft. Whether or not Lessee exercises its preferential right hereunder, then as long as this lease remains in effect any new lease from the Lessor shall be subordinate to this lease and shall not be construed as replacing or adding to Lessee's obligations hereunder.

19. **Curative Documents.** In the event any of the lands identified on this lease are determined to be inaccurately described or in the event it is determined Lessor's ownership of said lands is owned in another capacity, other than described on this lease, Lessor hereby covenants and agrees with Lessee to execute and deliver such other documents necessary to amend and ratify this lease or take such further actions as Lessee may reasonably request, to carry out the intent of, and give effect to this Oil & Gas Lease.

20. **Other Provisions.** Any additional terms of this lease are set forth on Exhibit B attached hereto and incorporated herein by reference.

IN WITNESS WHEREOF, this lease is executed to be effective as of the date first written above, but upon execution shall be binding on the signatory and the signatory's heirs, devisees, executors, administrators, successors and assigns, whether or not this lease has been executed by all parties hereinabove named as Lessor.

LESSOR (WHETHER ONE OR MORE)

ACKNOWLEDGMENTS

STATE OF _____)
) ss. **Individual**
COUNTY OF _____)

Before me, a notary public in and for said county, personally appeared the above named _____, who acknowledged that (he/she/they) did sign the foregoing instrument, and that the same is his/her/their free act and deed.

In testimony whereof, I have hereunto subscribed my name at _____, this _____ day of _____, 2014.

Notary Public in and for the State of _____
Printed Name: _____
Commission Expires: _____

EXHIBIT "A"

This Exhibit "A" is attached to and made a part of that certain Oil and Gas Lease dated _____, 20____ by and between _____ of _____ as Lessor (whether one or more) and PDC Energy, Inc., 1775 Sherman Street, Suite 3000, Denver, CO 80203, as Lessee.

Tract # _____
Said land is situated in Section/Lot No. _____ of _____ Township, _____ County, Ohio, bounded substantially by lands now and/or formerly owned as follows:

On the North by the lands of: _____

On the East by the lands of: _____

On the South by the lands of: _____

On the West by the lands of: _____

Tax Parcel Number(s): _____

Being all the property owned by Lessor or to which the Lessor may have any rights in said Section/Lot/District or adjoining Sections/Lots/Districts, containing _____ acres, more or less.

Tract # _____
Said land is situated in Section/Lot No. _____ of _____ Township, _____ County, Ohio, bounded substantially by lands now and/or formerly owned as follows:

On the North by the lands of: _____

On the East by the lands of: _____

On the South by the lands of: _____

On the West by the lands of: _____

Tax Parcel Number(s): _____

Being all the property owned by Lessor or to which the Lessor may have any rights in said Section/Lot/District or adjoining Sections/Lots/Districts, containing _____ acres, more or less.

Tract # _____
Said land is situated in Section/Lot No. _____ of _____ Township, _____ County, Ohio, bounded substantially by lands now and/or formerly owned as follows:

On the North by the lands of: _____

On the East by the lands of: _____

On the South by the lands of: _____

On the West by the lands of: _____

Tax Parcel Number(s): _____

Being all the property owned by Lessor or to which the Lessor may have any rights in said Section/Lot/District or adjoining Sections/Lots/Districts, containing _____ acres, more or less.

MEMORANDUM OF OIL AND GAS LEASE

State: Ohio
County: _____

Lessor Name: _____
Address: _____

Lessee: **PDC Energy, Inc.**
1775 Sherman Street, #3000
Denver, CO 80203

Effective Date: _____ (Date of the Lease)

In consideration of a cash bonus in hand, as of the Effective Date stated above, Lessor, named above, executed and delivered to Lessee, named above, an Oil and Gas Lease (the "Lease") in which Lessor granted, leased, and let to Lessee all of Lessor's mineral interest in the lands (the "Lands") located in the county and state named above, which Lands are described as follows:

Section/Lot Number(s) _____

SEE ATTACHED EXHIBIT "A" FOR DESCRIPTIONS

Containing _____ acres of land, more or less being located in the District/Township of _____ County of _____, State of Ohio. Said lands were conveyed to Lessor from _____, by virtue of deed date _____, and recorded in Deed Book _____, at Page _____ at the Recorder's Office in _____ County, Ohio.

The Lease grants Lessee the exclusive rights to explore for, drill for, produce and market oil, gas, and other hydrocarbons from the Lands during the term of the Lease; construct and maintain such facilities as are provided for in the Lease; and, the right of ingress and egress through, on, over and across the Lands.

This Lease is for a primary term of five (5) years from the Effective Date stated above, and is effective as long thereafter as oil, gas, or other substances are produced in paying quantities from the Lands, or other lands pooled with the Lands, according to and by the terms and provisions of the Lease between Lessor and Lessee. Lessee has the option to extend this term of this lease an additional five (5) years from the expiration of the original primary term, upon additional consideration paid to Lessor pursuant to the terms of the Lease.

This Memorandum of Oil and Gas Lease is executed by Lessor and Lessee and placed of record in the county in which the Lands are located for the purpose of placing all persons on notice of the existence of the Lease, which is not, at the request of both parties, being filed of record. The execution delivery and recordation of this Memorandum of Oil and Gas Lease shall have no effect upon, and is not intended as an amendment of the terms and conditions of the

Lease. It is the intent of the Lessor to lease Lessor's interest in and to the properties described herein, whether or not the tracts recited herein are properly described.

This Memorandum is signed by Lessor and Lessee as of the date of the acknowledgment of their signatures below, but is effective for all purposes as of the Effective Date stated above.

LESSOR

LESSEE

PDC Energy, Inc.

BY:
ITS:

ACKNOWLEDGMENTS

STATE OF OHIO)
) §: **Individual Acknowledgement**
COUNTY OF _____)

Before me, a notary public in and for said county, personally appeared the above named _____, who acknowledged that (he/she/they) did sign the foregoing instrument, and that the same is (his/her/their) free act and deed.

In testimony whereof, I have hereunto subscribed my name at _____, this _____ day of _____, 2014

Printed Name: _____
Notary Public in and for the State of _____
My Commission Expires: _____

STATE OF COLORADO)
) §: **Corporate Acknowledgement**
COUNTY OF DENVER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by _____, _____ for PDC Energy, Inc., on behalf of the corporation.

Printed Name: _____
Notary Public in and for the State of Colorado
My Commission Expires: _____

This instrument prepared by: PDC Energy, Inc.

Exhibit C

EXHIBIT "C"

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

ACCOUNTING PROCEDURE
JOINT OPERATIONS

I. GENERAL PROVISIONS

1. Definitions

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

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

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

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

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

"Parties" shall mean Operator and Non-Operators.

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

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

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

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

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

2. Statement and Billings

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

3. Advances and Payments by Non-Operators

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

B. Each Non-Operator shall pay its proportion of all bills within / ~~fifteen (15)~~ ^{thirty (30)} days after receipt. If payment is not made within such time, the unpaid balance shall bear interest monthly at the prime rate in effect at Bank of Oklahoma, N.A. +2% 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.

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

4. Adjustments

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

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5. **Audits**

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

11
12 B. The Operator shall reply in writing to an audit report within 180 days after receipt of such report.

13
14 6. **Approval By Non-Operators**

15
16 Where an approval or other agreement of the Parties or Non-Operators is expressly required under other sections of this
17 Accounting Procedure and if the agreement to which this Accounting Procedure is attached contains no
18 contrary provisions in regard thereto, Operator shall notify all Non-Operators of the Operator's proposal, and the
19 agreement or approval of a majority in interest of the Non-Operators shall be controlling on all Non-Operators.

20
21
22 **II. DIRECT CHARGES**

23
24 Operator shall charge the Joint Account with the following items:

25
26 1. **Ecological and Environmental**

27
28 Costs incurred for the benefit of the Joint Property as a result of governmental or regulatory requirements to satisfy
29 environmental considerations applicable to the Joint Operations. Such costs may include surveys of an ecological or
30 archaeological nature and pollution control procedures as required by applicable laws and regulations.

31
32 2. **Rentals and Royalties**

33
34 Lease rentals and royalties paid by Operator for the Joint Operations.

35
36 3. **Labor**

37
38 A. (1) Salaries and wages of Operator's field employees ^{and/or consultants} directly employed on the Joint Property in the conduct of
39 Joint Operations.

40
41 (2) Salaries of First level Supervisors in the field.

42 ^{and/or consultants}

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

45 ^{and/or consultants}

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

48
49 B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to
50 employees whose salaries and wages are chargeable to the Joint Account under Paragraph 3A of this Section II.
51 Such costs under this Paragraph 3B may be charged on a "when and as paid basis" or by "percentage assessment"
52 on the amount of salaries and wages chargeable to the Joint Account under Paragraph 3A of this Section II. If
53 percentage assessment is used, the rate shall be based on the Operator's cost experience.

54
55 C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are
56 applicable to Operator's costs chargeable to the Joint Account under Paragraphs 3A and 3B of this Section II.

57
58 D. Personal Expenses of those employees whose salaries and wages are chargeable to the Joint Account under
59 Paragraphs 3A and 3B of this Section II.

60
61 4. **Employee Benefits**

62
63 Operator's current costs or established plans for employees' group life insurance, hospitalization, pension, retirement,
64 stock purchase, thrift, bonus, and other benefit plans of a like nature, applicable to Operator's labor cost chargeable to the
65 Joint Account under Paragraphs 3A and 3B of this Section II shall be Operator's actual cost not to exceed the percent
66 most recently recommended by the Council of Petroleum Accountants Societies.

5. **Material**

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

6. **Transportation**

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

- A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store where like material is normally available or railway receiving point nearest the Joint Property unless agreed to by the Parties.
- B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store where like material is normally available, or railway receiving point nearest the Joint Property unless agreed to by the Parties. No charge shall be made to the Joint Account for moving Material to other properties belonging to Operator, unless agreed to by the Parties.
- C. In the application of subparagraphs A and B above, the option to equalize or charge actual trucking cost is available when the actual charge is \$400 or less excluding accessorial charges. The \$400 will be adjusted to the amount most recently recommended by the Council of Petroleum Accountants Societies.

7. **Services**

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

8. **Equipment and Facilities Furnished By Operator**

- A. Operator shall charge the Joint Account for use of Operator owned equipment and facilities at rates commensurate with costs of ownership and operation. Such rates shall include costs of maintenance, repairs, other operating expense, insurance, taxes, depreciation, and interest on gross investment less accumulated depreciation not to exceed ten percent (10%) per annum. Such rates shall not exceed average commercial rates currently prevailing in the immediate area of the Joint Property.
- B. In lieu of charges in Paragraph 8A above, Operator may elect to use average commercial rates prevailing in the immediate area of the Joint Property ~~less—20%~~. For automotive equipment, Operator may elect to use rates published by the Petroleum Motor Transport Association.

9. **Damages and Losses to Joint Property**

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

10. **Legal Expense**

Expense of handling, investigating and settling litigation or claims, 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 and Article IV.A of the agreement to which this Accounting Procedure is attached.

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**

1 Net premiums paid for insurance required to be carried for the Joint Operations for the protection of the Parties. In the
2 event Joint Operations are conducted in a state in which Operator may act as self-insurer for Worker's Compensation
3 and/or Employers Liability under the respective state's laws, Operator may, at its election, include the risk under its self-
4 insurance program and in that event, Operator shall include a charge at Operator's cost not to exceed manual rates.
5

6 **13. Abandonment and Reclamation**

7
8 Costs incurred for abandonment of the Joint Property, including costs required by governmental or other regulatory
9 authority.
10

11 **14. Communications**

12
13 Cost of acquiring, leasing, installing, operating, repairing and maintaining communication systems, including radio and
14 microwave facilities directly serving the Joint Property. In the event communication facilities/systems serving the Joint
15 Property are Operator owned, charges to the Joint Account shall be made as provided in Paragraph 8 of this Section II.
16

17 **15. Other Expenditures**

18 **The cost of Operator's Field Offices not covered in Section III, or any**

19 Any other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III and which
20 is of direct benefit to the Joint Property and is incurred by the Operator in the necessary and proper conduct of the Joint
21 Operations.
22

23
24 **III. OVERHEAD**

25
26 **1. Overhead - Drilling and Producing Operations**

27
28 i. As compensation for administrative, supervision, office services and warehousing costs, Operator shall charge
29 drilling and producing operations on either:
30

- 31 (X) Fixed Rate Basis, Paragraph IA, or
32 () Percentage Basis, Paragraph IB
33

34 Unless otherwise agreed to by the Parties, such charge shall be in lieu of costs and expenses of all offices and
35 salaries or wages plus applicable burdens and expenses of all personnel, except those directly chargeable under
36 Paragraph 3A, Section II. The cost and expense of services from outside sources in connection with matters of
37 taxation, traffic, or accounting shall be considered as included in
38 the overhead rates provided for in the above selected Paragraph of this Section III unless such cost and expense are
39 agreed to by the Parties as a direct charge to the Joint Account. However matters before or involving governmental agencies will not be covered
40 by the overhead rates.
41

42 ii. The salaries, wages and Personal Expenses of Technical Employees and/or the cost of professional consultant
43 services and contract services of technical personnel directly employed on the Joint Property:
44

- 45 () shall be covered by the overhead rates, or
46 (X) shall not be covered by the overhead rates.
47

48 iii. The salaries, wages and Personal Expenses of Technical Employees and/or costs of professional consultant services
49 and contract services of technical personnel either temporarily or permanently assigned to and directly employed in
50 the operation of the Joint Property:
51

- 52 (X) shall be covered by the overhead rates except that the salaries, wages and Personal Expenses of those positions set forth on Exhibit C-1
53 employed in the operation of the Joint Property shall not be covered by the overhead rates., or
54 () shall not be covered by the overhead rates.
55

56 **A. Overhead - Fixed Rate Basis**

57 (1) Operator shall charge the Joint Account at the following rates per well per month:
58

59 Drilling Well Rate \$ 13,349.61
60 (Prorated for less than a full month)
61

62 Producing Well Rate \$ 1,334.96
63

64 (2) Application of Overhead - Fixed Rate Basis shall be as follows:
65

66 (a) Drilling Well Rate
67

- 68 (1) Charges for drilling wells shall begin on the date the well is spudded and terminate on the date
69 the drilling rig, completion rig, or other units used in completion of the well is released, whichever
70

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 ~~to which this Operating Agreement is attached~~, 2011) by the percent increase or decrease published by COPAS (i.e. [Month of execution of Settlement Agreement to which this Operating Agreement is attached]). The adjustment shall be computed by multiplying the rate currently in use by the percentage increase or decrease in the average weekly earnings of Crude Petroleum and Gas Production Workers for the last calendar year compared to the calendar year preceding as shown by ~~the index of average weekly earnings of Crude Petroleum and Gas Production Workers as approved and recorded by COPAS.~~ an published by the United States Department of Labor, Bureau of Labor Statistics, or the equivalent Canadian index as published by Statistics Canada, as applicable. The adjusted rates shall be the rates currently in use, plus or minus the computed adjustment.

B. ~~Overhead - Percentage Basis~~

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

(a) ~~Development~~

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

(b) ~~Operating~~

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

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

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

2. **Overhead - Major Construction**

To compensate Operator for overhead costs incurred in the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly discernible as a fixed asset required for the development and operation of the Joint Property, Operator shall either negotiate a rate prior to the beginning of construction, or shall charge the Joint Account for overhead based on the following rates for any Major Construction project in excess of \$ 50,000.00 :

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

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

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

3
4 Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single
5 project shall not be treated separately and the cost of drilling and workover wells and artificial lift equipment shall be
6 excluded.

7
8 **3. Catastrophe Overhead**

9
10 To compensate Operator for overhead costs incurred in the event of expenditures resulting from a single occurrence due
11 to oil spill, blowout, explosion, fire, storm, hurricane, or other catastrophes as agreed to by the Parties, which are
12 necessary to restore the Joint Property to the equivalent condition that existed prior to the event causing the
13 expenditures, Operator shall either negotiate a rate prior to charging the Joint Account or shall charge the Joint Account
14 for overhead based on the following rates:

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

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

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

18
19 Expenditures subject to the overheads above will not be reduced by insurance recoveries, and no other overhead
20 provisions of this Section III shall apply.

21
22
23
24 **4. Amendment of Rates**

25
26 The overhead rates provided for in this Section III may be amended from time to time only by mutual agreement
27 between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

28
29
30
31 **IV. PRICING OF JOINT ACCOUNT MATERIAL PURCHASES, TRANSFERS AND DISPOSITIONS**

32
33 Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for all Material
34 movements affecting the Joint Property. Operator shall provide all Material for use on the Joint Property; however, at
35 Operator's option, such Material may be supplied by the Non-Operator. Operator shall make timely disposition of idle and/or
36 surplus Material, such disposal being made either through sale to Operator or Non-Operator, division in kind, or sale to
37 outsiders. Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus condition
38 A or B Material. The disposal of surplus Controllable Material not purchased by the Operator shall be agreed to by the Parties.

39
40 **1. Purchases**

41
42 Material purchased shall be charged at the price paid by Operator after deduction of all discounts received. In case of
43 Material found to be defective or returned to vendor for any other reasons, credit shall be passed to the Joint Account
44 when adjustment has been received by the Operator.

45
46 **2. Transfers and Dispositions**

47
48 Material furnished to the Joint Property and Material transferred from the Joint Property or disposed of by the Operator,
49 unless otherwise agreed to by the Parties, shall be priced on the following basis exclusive of cash discounts:

50
51 A. New Material (Condition A)

52
53 (1) Tubular Goods Other than Line Pipe

54
55 (a) Tubular goods, sized 2 3/8 inches OD and larger, except line pipe, shall be priced at Eastern mill
56 published carload base prices effective as of date of movement plus transportation cost using the 80,000
57 pound carload weight basis to the railway receiving point nearest the Joint Property for which
58 published rail rates for tubular goods exist. If the 80,000 pound rail rate is not offered, the 70,000 pound
59 or 90,000 pound rail rate may be used. Freight charges for tubing will be calculated from Lorain, Ohio
60 and casing from Youngstown, Ohio.

61
62 (b) For grades which are special to one mill only, prices shall be computed at the mill base of that mill plus
63 transportation cost from that mill to the railway receiving point nearest the Joint Property as provided
64 above in Paragraph 2.A.(1)(a). For transportation cost from points other than Eastern mills, the 30,000
65

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

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

4
5 (d) Macaroni tubing (size less than 2 3/8 inch OD) shall be priced at the lowest published out-of-stock prices
6 f.o.b. the supplier plus transportation costs, using the Oil Field Haulers Association interstate truck rate
7 per weight of tubing transferred, to the railway receiving point nearest the Joint Property.

8
9 (2) Line Pipe

10
11 (a) Line pipe movements (except size 24 inch OD and larger with walls 3/4 inch and over) 30,000 pounds or
12 more shall be priced under provisions of tubular goods pricing in Paragraph A.(1)(a) as provided above.
13 Freight charges shall be calculated from Lorain, Ohio.

14
15 (b) Line Pipe movements (except size 24 inch OD) and larger with walls 3/4 inch and over) less than 30,000
16 pounds shall be priced at Eastern mill published carload base prices effective as of date of shipment,
17 / plus 20 percent, plus transportation costs based on freight rates as set forth under provisions of tubular
18 goods pricing in Paragraph A.(1)(a) as provided above. Freight charges shall be calculated from Lorain,
19 Ohio.

20
21 (c) Line pipe 24 inch OD and over and 3/4 inch wall and larger shall be priced f.o.b. the point of
22 manufacture at current new published prices plus transportation cost to the railway receiving point
23 nearest the Joint Property.

24
25 (d) Line pipe, including fabricated line pipe, drive pipe and conduit not listed on published price lists shall
26 be priced at quoted prices plus freight to the railway receiving point nearest the Joint Property or at
27 prices agreed to by the Parties.

28
29 (3) Other Material shall be priced at the current new price, in effect at date of movement, as listed by a reliable
30 supply store nearest the Joint Property, or point of manufacture, plus transportation costs, if applicable, to the
31 railway receiving point nearest the Joint Property.

32
33 (4) Unused new Material, except tubular goods, moved from the Joint Property shall be priced at the current
34 new price, in effect on date of movement, as listed by a reliable supply store nearest the Joint Property, or
35 point of manufacture, plus transportation costs, if applicable, to the railway receiving point nearest the Joint
36 Property. Unused new tubulars will be priced as provided above in Paragraph 2.A.(1) and (2).

37
38 B. Good Used Material (Condition B)

39
40 Material in sound and serviceable condition and suitable for reuse without reconditioning:

41
42 (1) Material moved to the Joint Property

43
44 At seventy-five percent (75%) of current new price, as determined by Paragraph A.

45
46 (2) Material used on and moved from the Joint Property

47
48 (a) At seventy-five percent (75%) of current new price, as determined by Paragraph A, if Material was
49 originally charged to the Joint Account as new Material or

50
51 (b) At sixty-five percent (65%) of current new price, as determined by Paragraph A, if Material was
52 originally charged to the Joint Account as used Material

53
54 (3) Material not used on and moved from the Joint Property

55
56 At seventy-five percent (75%) of current new price as determined by Paragraph A.

57
58 The cost of reconditioning, if any, shall be absorbed by the transferring property.

59
60 C. Other Used Material

61
62 (1) Condition C

63
64 Material which is not in sound and serviceable condition and not suitable for its original function until
65 after reconditioning shall be priced at fifty percent (50%) of current new price as determined by
66 Paragraph A. The cost of reconditioning shall be charged to the receiving property, provided Condition
67 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.

1 **3. Special Inventories**

2
3 Special inventories may be taken whenever there is any sale, change of interest, or change of Operator in the Joint
4 Property. It shall be the duty of the party selling to notify all other Parties as quickly as possible after the transfer of
5 interest takes place. In such cases, both the seller and the purchaser shall be governed by such inventory. In cases
6 involving a change of Operator, all Parties shall be governed by such inventory.
7

8 **4. Expense of Conducting Inventories**

9
10 A. The expense of conducting periodic inventories shall not be charged to the Joint Account unless agreed to by the
11 Parties.
12

13 B. The expense of conducting special inventories shall be charged to the Parties requesting such inventories, except
14 inventories required due to change of Operator shall be charged to the Joint Account.
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EXHIBIT C-1

TECHNICAL EMPLOYEES EXCLUDED FROM OVERHEAD RATES

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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 Neff Unit.

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

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

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

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

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

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

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

End of Exhibit "D"

Exhibit E

EXHIBIT "E"

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

Gas Balancing Agreement

I. DEFINITIONS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

II. APPLICATION OF THIS AGREEMENT

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

III. OVERPRODUCTION

A. Right to Take All Gas Produced

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

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

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

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

C. Credit For Gas in Storage

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

IV. RIGHT OF UNDERPRODUCED PARTY TO MAKE UP PRODUCTION

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

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

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

V. MONTHLY DATA AND STATEMENTS TO BE PROVIDED

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

VI. PAYMENT OF ROYALTIES AND PRODUCTION TAXES

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

VII. CASH SETTLEMENTS

A. Events Occasioning Cash Settlements

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

B. Notification of Proposed Transfer By Overproduced Party

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

C. Quantity of Gas

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

D. Pricing

1. For Overproduction Sold

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

- (a) production and/or severance taxes attributable to said Gas production paid by the Overproduced party;
- (b) royalties, if any, paid by the Overproduced party to an Underproduced party's royalty owner(s) to the extent said payments amounted to a discharge of said Underproduced party's royalty obligation;
- (c) any other payments made by the Overproduced party to obligees of the Underproduced party to the extent said payments by the Overproduced party were required by law and/or amounted to discharge of the obligations of the Underproduced party; and
- (d) all reasonable costs and expenses incurred to third parties in connection with the sale of said Gas; e.g., gathering, transportation, compression, storage, marketing and similar fees.

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

2. For Overproduction Taken or Utilized and Not Sold

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

3. Proceeds for Liquefiable Hydrocarbons Not Included

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

E. Calculation, Collection and Distribution of Payments

1. For Cash Settlements at Termination

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

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

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

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

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

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

3. Procedures Applicable to All Cash Settlements

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

4. Amount Subject to Refund May Be Withheld.

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

latter.

F. Operator's Liability

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

VIII. OPERATING EXPENSES

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

IX. DELIVERABILITY TESTS

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

X. NOMINATIONS

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

XI. TERM

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

XII. SUCCESSORS AND ASSIGNS

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

XIII. AUDITS

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

XIV. MISCELLANEOUS

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

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

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

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

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

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

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

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

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

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

End of Exhibit "E"

2

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

In re the Matter of the Application of :
PDC Energy, Inc. for Unit Operation :
 : Application Date: November 10, 2014
Neff Unit :

**PREPARED TESTIMONY OF JOSEPH P. SMITH II
ON BEHALF OF PDC ENERGY, INC.**

W. Jonathan Airey (0017437)
Gregory D. Russell (0059718)
J. Taylor Airey (0081092)
VORYS, SATER, SEYMOUR AND PEASE LLP
52 East Gay Street
P. O. Box 1008
Columbus, Ohio 43216-1008

Attorneys for Applicant,
PDC Energy, Inc.

Date: November 10, 2014

Attachment 2

PREPARED DIRECT TESTIMONY OF JOSEPH P. SMITH, II

1 **INTRODUCTION**

2 **Q1. Please introduce yourself to the Division.**

3 A1. My name is Joseph P. Smith II, and my business address is 120 Genesis Blvd,
4 Bridgeport, West Virginia 26330. I am a Senior Geologist with PDC Energy, Inc.,
5 currently working in the Utica asset.

6 **Q2. What is your educational background?**

7 A2. I have a Bachelors and Masters degree in Geological Science from Ohio
8 University.

9 **Q3. Would you briefly describe your professional experience?**

10 A3. I have almost 14 years of petroleum industry experience, working both
11 conventional and unconventional plays. I have worked for large and small
12 companies on projects in California, the Gulf of Mexico, Wyoming, Oklahoma,
13 Ohio, and Texas. The current focus of my work is the Appalachian Basin where I
14 am responsible for the development of PDC's Utica Shale assets.

15 **Q4. What do you do as a Senior Geologist for PDC?**

16 A4. My responsibilities include: developing and reviewing plans for new horizontal
17 Utica shale wells, monitoring active PDC drilling rig data to ensure that our Utica
18 shale wells stay in their target formation, and mapping all Ohio subsurface horizons
19 to identify hydrocarbon accumulations that may be exploitable via horizontal
20 drilling.

21 **Q5. Are you a member of any professional associations?**

22 A5. I am an active member of the American Association of Petroleum Geologists, the
23 Ohio Oil and Gas Association, the Southeastern Ohio Oil and Gas Association, and
24 the Appalachian Geological Society.

25 **Q6. What is the purpose of your testimony today?**

26 A6. I am testifying in support of the *Application of PDC Energy, Inc. for Unit*
27 *Operation* filed with respect to the Neff Unit, consisting of eighteen (18) separate
28 tracts of land totaling approximately 576 acres in Guernsey County, Ohio. My
29 testimony will show that the Unitized Formation described in the Application is
30 part of a pool and thus an appropriate subject of unitization. Additionally, my

1 testimony will support the Unit Plan's allocation of unit production and expenses to
2 separately owned tracts on a surface-acreage basis, based on the unit area's nearly
3 uniform thickness and substantially identical geological characteristics throughout.

4 **UNITIZED FORMATION IS PART OF A POOL.**

5 **Q7. To begin, would you tell me what a "pool" is?**

6 A7. A pool is generally understood to be a common source of supply in pores of a rock
7 that yields hydrocarbons on drilling. This is consistent with the Ohio statutory
8 definition defining a pool as "an underground reservoir containing a common
9 accumulation of oil or gas, or both, but does not include a gas storage reservoir."

10 **Q8. How is the Unitized Formation defined for the Neff Unit?**

11 A8. Unitized Formation is the subsurface portion of the Neff Unit at a depth located
12 from 50 feet above the top of the Utica Shale to 50 feet below the base of the Point
13 Pleasant formation, an interval believed to be approximately 6,596 feet true vertical
14 depth (TVD) to 7,240 feet TVD.

15 **Q9. Do you have an opinion on whether or not the Unitized Formation**
16 **contemplated by the Neff Unit constitutes a pool or part of a pool?**

17 A9. Yes. It is my opinion, based on my education and professional experience, that the
18 Unitized Formation is part of a pool.

19 **Q10. Why?**

20 A10. As part of a larger hydrocarbon pool, an equal accumulation of hydrocarbons are
21 expected to be in place throughout the Neff Unit. Furthermore, the hydrocarbon
22 pool would extend beyond the currently defined unit in each direction, North,
23 South, East and West. Interpretation of data indicates that the Unitized Formation
24 has consistent characteristics across the Neff Unit. Geological mapping suggests
25 that the Unitized Formation constitutes a common source of supply, meaning any
26 portion of the Neff Unit would be geologically equivalent to another portion of the
27 Neff Unit. Stated another way, the formation shows very similar traits from one
28 well location to the next, which suggest the production is likely to be similar from
29 all wells drilled in the unit. Therefore, the Unitized Formation qualifies as part of a
30 pool.

31 **Q11. Is your opinion based on your education and professional experience?**

1 A11. Yes.

2 **Q12. What data sources did you use in determining the geologic features of the Neff**
3 **Unit?**

4 A12. Wireline well log data and Gamma Ray data, which we used to compile attached
5 Exhibits JS-1 and JS-2.

6 **Q13. And is this a commonly accepted method of analysis in your profession for**
7 **determining whether a pool or part of a pool exists?**

8 A13. Yes.

9 **ALLOCATION METHODOLOGY**

10 **Q14. Production and expenses are allocated to the separate tracts in the Neff Unit**
11 **under the Unit Plan on a surface-acreage basis. Do you have an opinion on**
12 **whether that allocation method is appropriate, given your education and**
13 **professional experience?**

14 A14. I do. In my opinion, surface allocation is the appropriate method. The reason
15 being is that the Utica-Point Pleasant is an unconventional reservoir.
16 Unconventional reservoirs are characterized as “blanket type” deposits and as such
17 the geology is essentially uniform over large areal extents. Thus, the characteristics
18 of the rock and the type of fluid it contains should not vary under any part of the
19 proposed unit. This is marked contrast to conventional reservoirs (sandstone and
20 limestone) where over very small distances the nature and even the type of rock can
21 change dramatically.

22 **Q15. In your experience, is this a common method for allocating production and**
23 **expenses?**

24 A15. Yes.

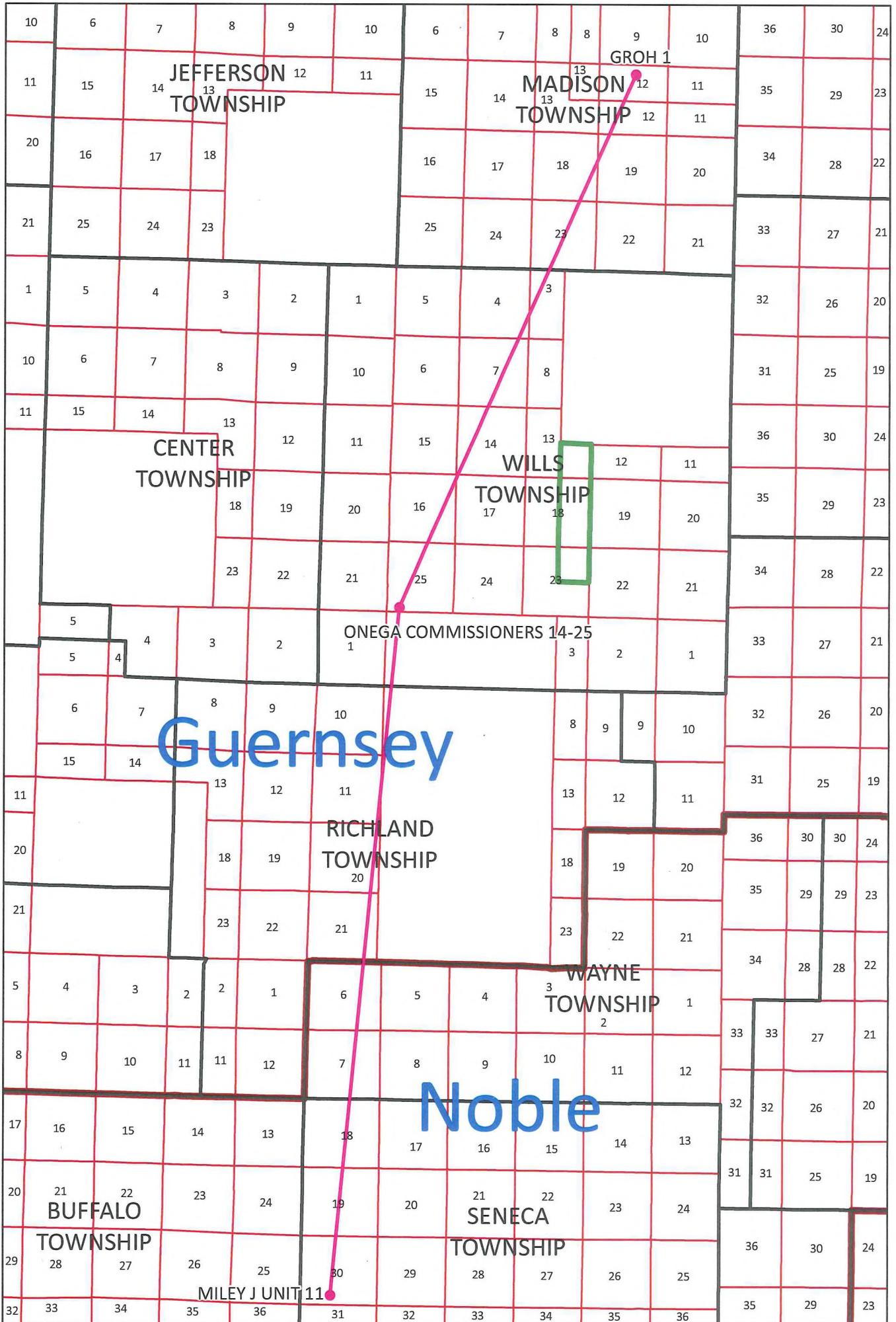
25 **Q16. Have you seen this allocation method used in other shale basins?**

26 A16. I have seen this method applied in the Monterey Shale of California, the Wolfcamp
27 shale of the Permian Basin in Texas, as well as Barnett Shale of the Fort Worth
28 Basin (Texas).

29 **Q17. Does this conclude your testimony?**

30 A17. Yes.

Exhibit JS-1



Cross-Section Map

Neff Unit
Wills Township
Guernsey Co., OH



0 5,000 10,000 20,000 Feet

Coordinate System: NAD 1983 State Plane Ohio South

1 inch = 9,000 feet

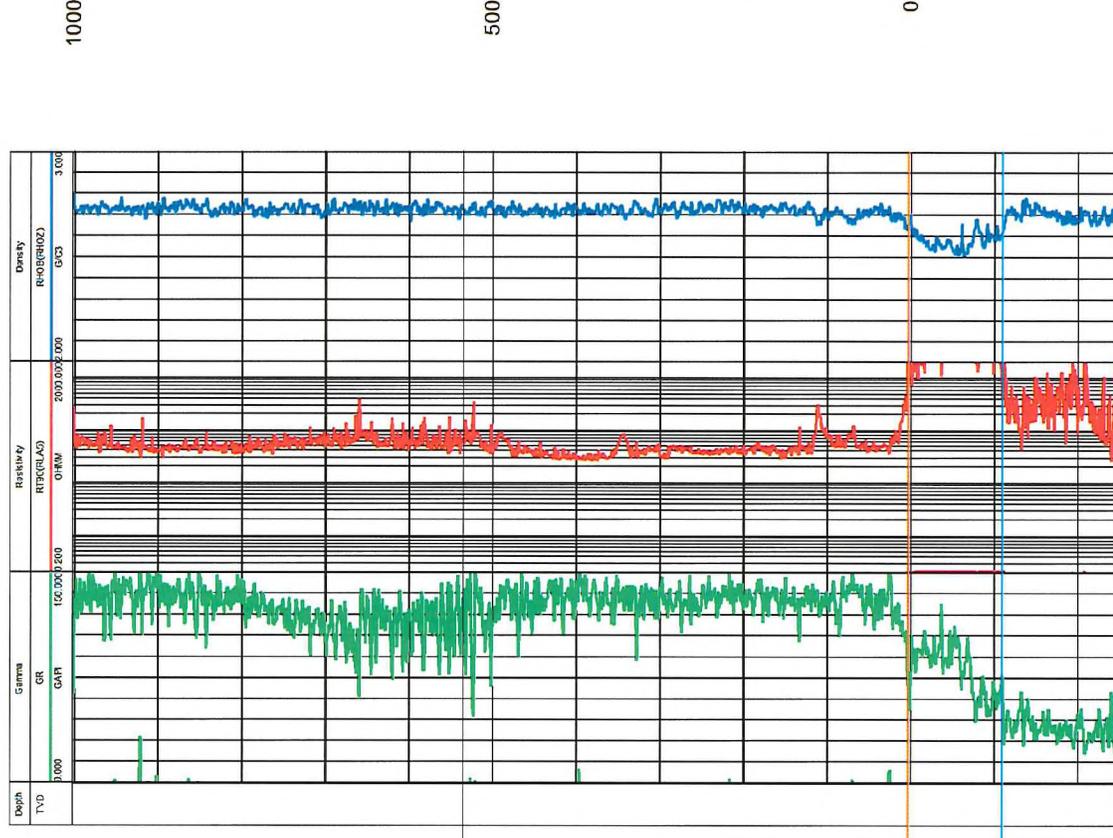
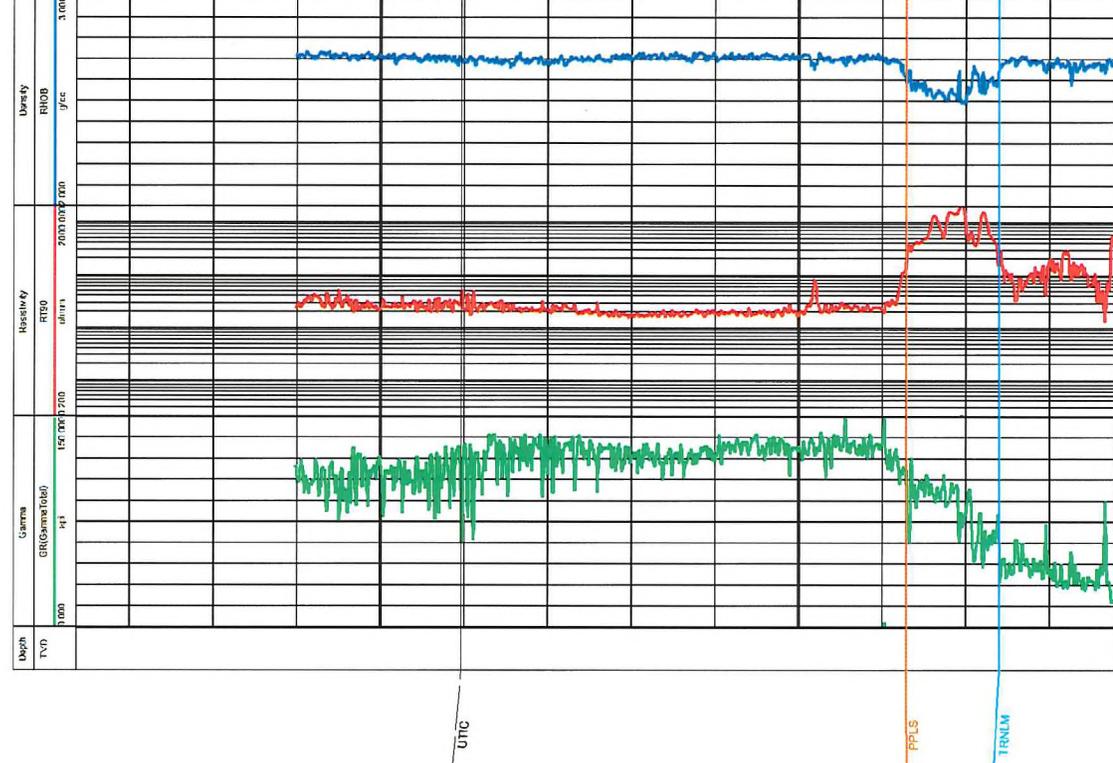
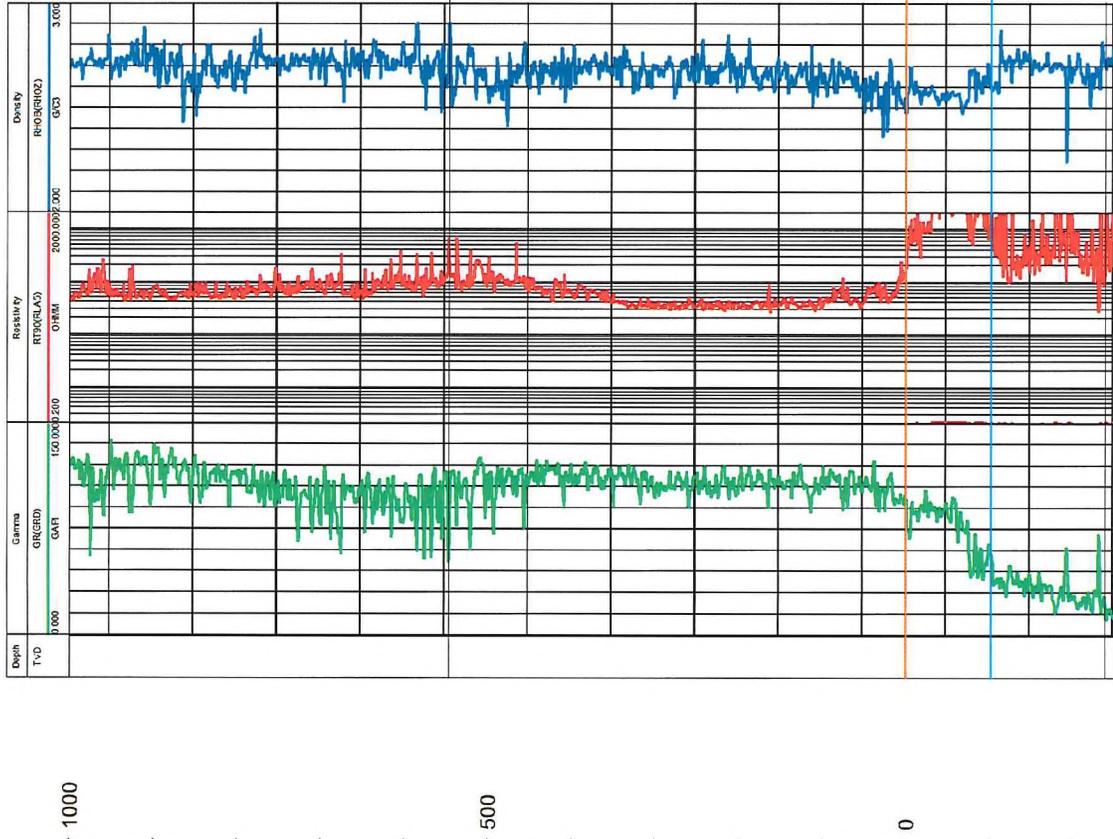
Prepared Date: 1/15/2015

Exhibit JS-2

34121240720000
MILEY J UNIT 1 1

34059242110000
ONEGA COMMISSIONERS 14-25

34059242060000
GROH 1



3

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

In re the Matter of the Application of :
PDC Energy, Inc. for Unit Operation :
 : Application Date: November 10, 2014
Neff Unit :

**PREPARED TESTIMONY OF ANTONIO VIZURRAGA
ON BEHALF OF PDC ENERGY, INC.**

W. Jonathan Airey (0017437)
Gregory D. Russell (0059718)
J. Taylor Airey (0081092)
VORYS, SATER, SEYMOUR AND PEASE LLP
52 East Gay Street
P. O. Box 1008
Columbus, Ohio 43216-1008

Attorneys for Applicant,
PDC Energy, Inc.

Date: January 19, 2015

Attachment 3

PREPARED DIRECT TESTIMONY OF ANTONIO VIZURRAGA

1 INTRODUCTION.

2 **Q1. Please introduce yourself to the Division.**

3 A1. My name is Antonio Vizurraga. I am a petroleum engineer with PDC Energy, Inc.
4 My business address is 1775 Sherman Street, Suite 3000, Denver, Colorado 80203.

5 **Q2. What is your educational background?**

6 A2. I hold a Bachelor and a Masters of Science in Mechanical Engineering from the
7 Georgia Institute of Technology.

8 **Q3. Would you briefly describe your professional experience?**

9 A3. I have approximately 25 years of experience as a reservoir and production engineer
10 in the oil and gas industry. After my Bachelor's degree, I worked for a year in a
11 project management role for an energy conservation consultant firm. Upon finish-
12 ing my graduate degree, I worked for Amoco E&P for seven years, eventually
13 moving to Colorado. I went through their rigorous training program for the first
14 two years where I trained in reservoir and production engineering. I also had vari-
15 ous job assignments in reservoir, production and completion engineering roles
16 throughout basins in the Unites States, including offshore Gulf of Mexico. After
17 leaving Amoco, I worked for the consulting group within Schlumberger specializ-
18 ing in reservoir studies. I worked on reservoir simulation projects and field devel-
19 opment studies for conventional, tight gas sands and unconventional reservoirs in
20 the USA, as well as conventional and unconventional projects in Mexico, Argenti-
21 na, Nigeria and China. These projects required that I use reservoir and production
22 engineering skills in nodal analysis, pressure transient analysis, fluid characteriza-
23 tion, material balance and reservoir volumetric analysis. I was employed by
24 Schlumberger for twelve years. Then, I worked for El Paso E&P for three years
25 where I was a reservoir engineer on their New Mexico and Utah assets. This was
26 mostly unconventional reservoirs: coalbed methane projects and tight oil sands. For
27 more than three years since leaving El Paso, I have worked for PDC Energy as a
28 Senior Lead Engineer for their Permian and Utica assets.

29 **Q4. What do you do as a Senior Lead Engineer for PDC?**

30 A4. As a Senior Lead Engineer at PDC, I am responsible for reservoir, production and

1 completion engineering in our Ohio operations. These responsibilities include
2 calculating reserves and forecasting production for our company. The team that I
3 supervise also designs the completion for wells, which includes the perforation and
4 hydraulic fracture treatments.

5 **Q5. Are you a member of any professional associations?**

6 A5. I have been an active member of Society of Petroleum Engineers for over 10 years.

7 **Q6. What is the purpose of your testimony today?**

8 A6. I am testifying in support of the *Application of PDC Energy, Inc. for Unit*
9 *Operation* filed with respect to the Neff Unit, consisting of eighteen (18) separate
10 tracts of land totaling approximately 576 acres in Guernsey County, Ohio. My
11 testimony addresses the following: (i) that unit operations for the Neff Unit are
12 reasonably necessary to increase substantially the recovery of oil and gas; and (ii)
13 that the value of the estimated additional recovery due to unit operations exceeds its
14 estimated additional costs.

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

17 **Q7. I'd like to begin by addressing whether unit operations in the Neff Unit are**
18 **reasonably necessary to increase substantially the recovery of oil and gas from**
19 **those properties. Would you describe briefly how PDC anticipates developing**
20 **the Neff Unit?**

21 A7. In the Unitized plan for the Neff leases, PDC Energy would develop the acreage
22 with three horizontal wells each of approximately 9,100 feet each. The exact final
23 lateral length of each well will depend upon final permit requirements. The well
24 pad will be located in the southern part of the unit and go north according to the
25 directional program as indicate on attached Exhibit AV-1.

26 **Q8. Do you have an opinion on whether unit operations in the Neff Unit are**
27 **reasonably necessary to increase substantially the recovery of oil and gas from**
28 **those properties, and if so, what is your opinion?**

29 A8. Yes. It is my opinion that unit operations are reasonably necessary to substantially
30 increase the recovery of oil and gas from the unit properties. It is highly likely that
31 the leases not in included in the Non-Unitized plan would never be developed.

1 Therefore those reserves would be stranded.

2 **Q9 What volumes would be lost if those properties are stranded?**

3 A9. PDC has nine wells to the south of the Neff Unit, located in Guernsey County,
4 these wells were used to estimate the production characteristics of and volumes to
5 be produced from of the wells within the Neff Unit. The volumes of oil and gas
6 obtained from analyzing the internal model are the basis for the estimated ultimate
7 recovery for the Neff Unit. The estimated ultimate recovery from the Neff Unit
8 with an order authorizing unit operations is 2,889 MBOE, which drops to 2,532
9 MBOE without an order authorizing unit operations. Thus, we estimate a loss of
10 approximately 357 MBOE absent unit operations. These estimates are broken down
11 on a per well basis on attached Exhibit TV-1.

12 **Q10. Are the estimates that you made based on good engineering practices and**
13 **accepted methods in the industry?**

14 A10. Yes.

15 **Q11. Can you calculate the production from these wells ahead of time with**
16 **mathematical certainty?**

17 A11. Utica development is relatively new. As such there is uncertainty on the exact
18 production for any given well, however, the range of production possible from
19 these wells can be determined with reasonable confidence.

20 **Q12. Is horizontal drilling technology, including hydraulic fracturing the formation,**
21 **required to economically develop unconventional resources?**

22 A12. Yes. Due to the low permeability of the Utica/Point Pleasant formation,
23 economically recoverable reserves would not be possible without it.

24 **Q13. Is it fair to say that horizontal wells are commonly used to develop shale**
25 **formations like the Unitized Formation today?**

26 A13. Yes.

1 VALUE OF ESTIMATED ADDITIONAL RECOVERY EXCEEDS ITS
2 ESTIMATED ADDITIONAL COSTS

3 **Q14. Let's turn to the financial side of the project. Generally, in your professional**
4 **experience, how would the economics of a development project such as the**
5 **development of the Neff Unit be evaluated?**

6 A14. First, the hydrocarbon volumes produced over time are developed. The commodity
7 pricing for oil, condensate, natural gas and natural gas liquids, based on NYMEX
8 sources, are used to generate the revenue stream. The royalties, any burdens such as
9 federal and state taxes, capital costs and operating taxes are then subtracted from
10 the revenue stream to evaluate the income and cash flow from each well. These
11 dollars are then discounted at various rates to calculate various economic factors
12 such as present values and rate of return.

13 **Q15. Did you do that here?**

14 A15. Yes.

15 **Q16. Would you walk us through your economic evaluation?**

16 A16. First, the hydrocarbon volumes produced over time are estimated, using a
17 production profile developed for each Neff Unit well. The initial production rate of
18 oil and natural gas was declined to obtain monthly and annual hydrocarbon
19 volumes. Then, the commodity pricing for oil, condensate, natural gas and natural
20 gas liquids, based on NYMEX sources, are used to generate the annual revenue
21 stream. The royalties, any burdens such as federal and state taxes, capital costs and
22 operating taxes are then subtracted from the revenue stream to evaluate the income
23 and cash flow from each well. The capital cost for each of the three Neff Unit wells
24 with an order authorizing unit operations at 9,100 feet in lateral length was
25 estimated at \$12,800,000. The Neff Unit wells without an order authorizing unit
26 operations would have an estimated capital cost of \$10,600,000, \$10,200,000 and
27 \$12,800,000 for Neff 1H, 2H and 3H respectively. These dollars are then
28 discounted at various rates to calculate various economic factors such as present
29 values and rate of return. The cost to operate each well is accounted for in these
30 numbers with the average cost per well per month in the Neff Unit being \$6,500,
31 which covers possible artificial lift costs.

1 **Q17. Based on this information and your professional judgment, does the value of**
2 **the estimated additional recovery from the unit operations proposed for the**
3 **Neff Unit exceed its estimated additional costs?**

4 A17. Yes. With an order authorizing unit operations, the Neff Unit would recover 2,889
5 MBOE and the total capital investment would be \$38,400,000. The economic
6 analysis shows a net present value discounted at 10% (PV10) to be \$9,927,000.
7 Whereas, for development without an order authorizing unit operations, the
8 recovery of hydrocarbons would be 2,532 MBOE and the total capital investment
9 would be \$33,600,000. The Non-Unitized economic analysis shows a net present
10 value discounted at 10% (PV10) to be \$7,906,000. This shows that developing the
11 stranded leases through a unit order increases the production from the Neff Unit by
12 357 MBOE having a net PV10 value of \$2,021,000.

13 **Q18. And your opinions are based on your education and professional experience?**

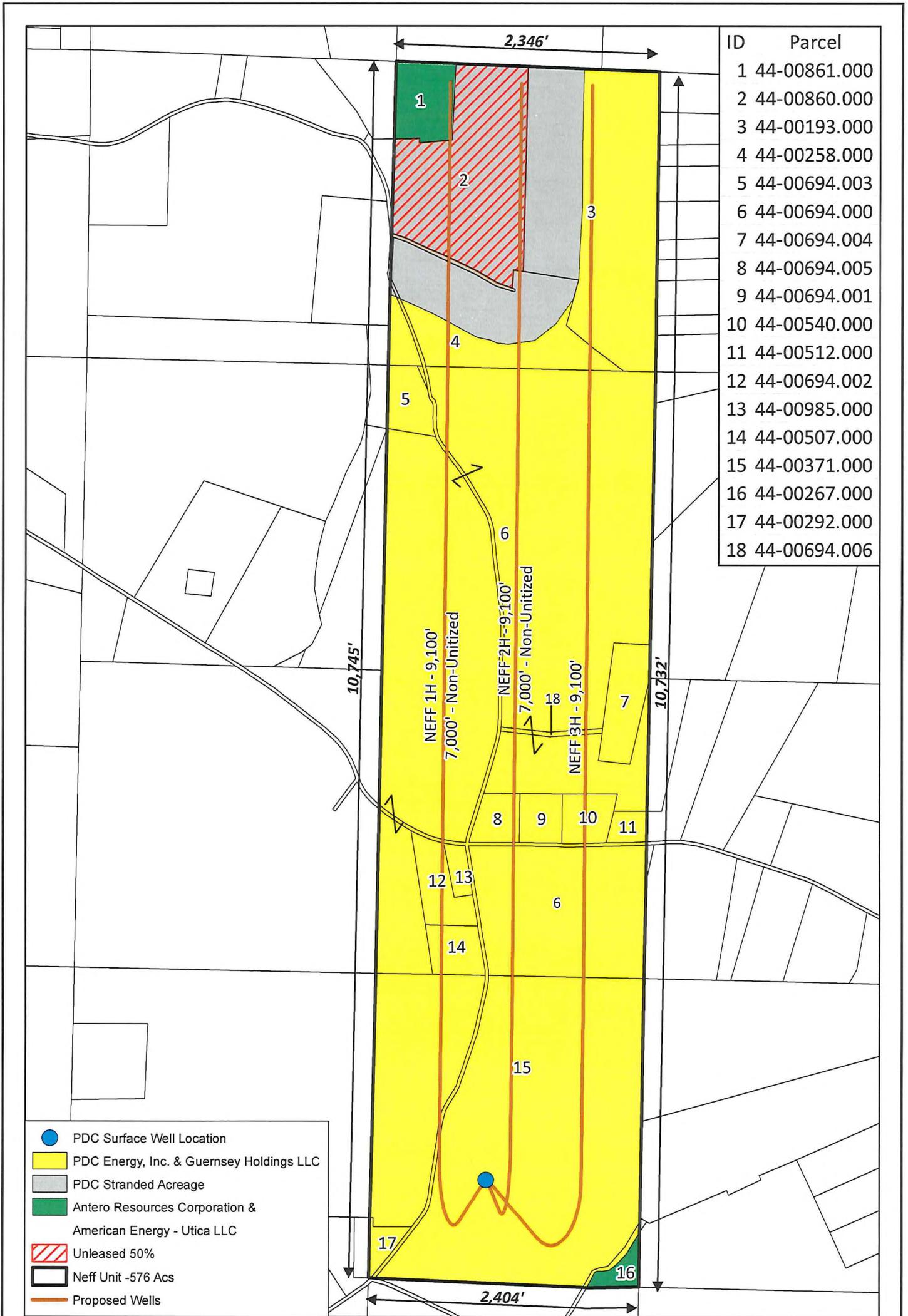
14 A18. Yes.

15 **Q19. Does this conclude your testimony?**

16 A19. Yes.

17

Exhibit AV-1



Coordinate System: NAD 1983 State Plane Ohio South

Unit Plat

Neff Unit
Wills Township
Guernsey Co., OH

1 inch = 1,000 feet



Prepared Date: 11/6/2014

Exhibit AV-2

NEFF UNIT EXHIBIT AV-2

Well Information				
Well Name	Unit Lateral Length (ft)	Unit Development Cost (\$M)	Non-Unit Lateral Length (ft)	Non-Unitized Development Cost (\$M)
Neff 1H	9100	12,800	7000	10,600
Neff 2H	9100	12,800	6800	10,200
Neff 3H	9100	12,800	9100	12,800
Totals	27,300	38,400	22,900	33,600

Commodity Pricing			
Year	Oil	Gas	NGL
2015	75.03	2.921	44.74
2016	73.03	3.208	43.74
2017	71.8	3.594	43.11
2018	71.42	3.696	42.91

Well Name	Unitized		Non-Unitized	
	EUR (MBOE)	PV10 (\$M)	EUR (MBOE)	PV10 (\$M)
Neff 1H	963	3,309	809	2,457
Neff 2H	963	3,309	760	2,140
Neff 3H	963	3,309	963	3,309

4

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

In re the Matter of the Application of :
PDC Energy, Inc. for Unit Operation :
: Application Date: November 10, 2014
Neff Unit :

**PREPARED TESTIMONY OF SARAH GARRETT
ON BEHALF OF PDC ENERGY, INC.**

W. Jonathan Airey (0017437)
Gregory D. Russell (0059718)
J. Taylor Airey (0081092)
VORYS, SATER, SEYMOUR AND PEASE LLP
52 East Gay Street
P. O. Box 1008
Columbus, Ohio 43216-1008

Attorneys for Applicant,
PDC Energy, Inc.

Date: November 10, 2014

Attachment 4

PREPARED DIRECT TESTIMONY OF SARAH GARRETT

1 **INTRODUCTION.**

2 **Q1. Please introduce yourself to the Division.**

3 A1. My name is Sarah Garrett, and I am a Senior Regional Landman with PDC Energy,
4 Inc., ("PDC"), an independent oil and natural gas company.

5 **Q2. What is your educational background?**

6 A2. I graduated from the College of Charleston in South Carolina with a Bachelor's
7 degree in Psychology. I later attended Regis University in Denver, Colorado, and
8 graduated with a Master's in Business Administration in June of 2011.

9 **Q3. Would you briefly describe your professional experience?**

10 A3. I have been employed by PDC since 2007, during which time I have been a
11 landman for assets in Texas, North Dakota, Michigan, Colorado, and now Ohio.
12 Prior to that, I worked for WhitMar Exploration, where I was a landman covering
13 Texas, Oklahoma, New York, and Pennsylvania.

14 **Q4. What do you do as a Senior Regional Landman for PDC?**

15 A4. I am responsible for all aspects of land within Guernsey and northern Noble
16 Counties, including ordering, examining, curing, and clearing title in advance of the
17 drilling schedule; managing field landmen in leasing efforts; ensuring that surface
18 issues are being addressed in a timely manner; serving as the contact point for
19 attorneys, landowners, and other working interest owners; preparing and
20 negotiating trade agreements and proposals, and compiling working interest units. I
21 also assist PDC's Utica team in any and all other land related issues.

22 **Q5. Are you a member of any professional associations?**

23 A5. I belong to the American Association of Professional Landman and the Denver
24 Association of Petroleum Landmen.

25 **Q6. What is the purpose of your testimony today?**

26 A6. I am testifying in support of the *Application of PDC Energy, Inc. for Unit*
27 *Operation* filed with respect to the Neff Unit, consisting of eighteen (18) separate
28 tracts of land totaling approximately 576 acres in Wills Township in Guernsey
29 County, Ohio. In particular, I will describe the efforts made by PDC to put the
30 Neff Unit together and the Unit Plan that PDC is proposing.

1 **EFFORTS MADE BY PDC TO LEASE UNIT TRACTS.**

2 **Q7. The Application submitted by PDC indicates that it owns the oil and gas rights**
3 **to more than 548 acres of the proposed 576-acre unit. Would you describe**
4 **how PDC acquired those rights?**

5 A7. PDC and its Working Interest partner Guernsey Holdings, LLC (“Guernsey”) own
6 the oil and gas rights to 548 acres of the proposed 576 acre unit. PDC acquired 75%
7 working interest in two HBP leases from Guernsey in 2011, comprising 255 acres
8 of the unit, with Guernsey retaining 25% working interest. PDC acquired new
9 leases on an additional 152 acres, in which Guernsey has a 25% working interest.
10 PDC also purchased the mineral interest in 139 acres, and acquired a 2 acre lease
11 from American Energy – Utica, LLC (“AEU”).

12 **Q8. And that represents 95% of the unit acreage?**

13 A8. Yes. PDC now holds leases or mineral rights for 548 acres, or 95.08% of the unit.
14 That’s reflected on Exhibit A-2 to the Unit Operating Agreement.

15 **Q9. Are there other operators in the unit, and if so, have they approved of the**
16 **filing of this Application?**

17 A9. Yes. All other operators in the unit have approved the filing of this application.

18 **Q10. What percentage of the total acreage of the Neff Unit is represented by the oil**
19 **and gas rights held by these other operators?**

20 A10. Antero Resources Corporation has a 0.41% working interest, and American Energy
21 - Utica, LLC has a 1.187% working interest. Both have given approval. Guernsey
22 Holdings, LLC is PDC’s partner in the Utica, and currently has record title to
23 11.435% of the unit.

24 **Q11. Is it accurate to say then that the owners of over Ninety Six percent (96%) of**
25 **the unit have approved the filing of this Application?**

26 A11. Yes. Working Interest Owner Approvals are included in Exhibit SG-1.

27 **Q12. How many unleased mineral owners are there in the Neff Unit?**

28 A12. There is one unleased mineral owner in the Neff Unit, who owns 50% of the
29 minerals under Tract 2, for a total of 19.167 unleased acres in the Neff Unit, which
30 is 3.325% of the unit.

31 **Q13. Have you prepared an affidavit detailing PDC’s efforts to obtain leases from**

1 **the unleased mineral owners?**

2 A13. Yes, it is attached as Exhibit SG-2 to this testimony.

3 **Q14. Do you have an exhibit to your testimony that illustrates the leased and**
4 **unleased tracts within the Neff Unit?**

5 A14. Yes. Exhibit SG-3 is a plat showing each of the tracts in the Neff Unit with Tract 2
6 shown in red cross hatching to indicate the unleased portion.

7 **Q15. Do you have an aerial plat of the Neff Unit?**

8 A15. Yes, I've attached one as Exhibit SG-4 to my testimony.

9 **UNIT PLAN PROVISIONS.**

10 **Q16. Would you describe generally the development plan for the Neff Unit?**

11 A16. PDC plans to develop the Neff Unit from a single well pad located at the southern
12 end of the Unit, from which we intend to drill three horizontal wells. The three
13 laterals are each projected to be approximately 9,100' in length. Exhibit SG-3
14 illustrates the planned configuration.

15 **Q17. Does PDC have a specific timeline for drilling the wells in the Neff Unit?**

16 A17. PDC plans to drill three wells in the Neff Unit from the same pad. A number of the
17 leases within the unit have a drilling commitment, by which PDC must commence
18 drilling operations by March 2016. Currently the unit is on PDC's schedule for a
19 September 2015 spud date.

20 **Q18. Does PDC have any other development activity in the immediate area?**

21 A18. Yes. Adjacent to the southern boundary of the Neff unit is PDC's Detweiler unit,
22 which consists of three producing wells. PDC operates several other units, as
23 shown on Exhibit SG-5, which are in various stages of drilling, completion, or
24 production.

25 **Q19. Are you familiar with the Unit Plan proposed by PDC for the Neff Unit?**

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

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

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

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

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

7 **Q22. How would production from the Neff Unit be allocated?**

8 A22. On a surface-acreage basis. Under Article 4 of the Unit Plan, every tract is
9 assigned a tract participation percentage based on surface acreage and shown on
10 Exhibit A-2 to the Unit Operating Agreement. Article 5 of the Unit Plan allocates
11 production based on that tract participation.

12 **Q23. Would you go through an example from Exhibit A-2 to the Unit Operating
13 Agreement to illustrate what you mean?**

14 A23. Yes. If you look at Exhibit A-2 to the Unit Operating Agreement, the column
15 entitled "Parcel Surface Acres in Unit" shows the number of surface acres in each
16 tract of land within the Neff Unit. As several of the parcels are owned jointly by
17 more than one mineral owner, the parcel surface acres are multiplied by the mineral
18 owner's interest in the tract to get "Mineral Owner Surface Acres". "Mineral
19 Owner Surface Acres" are then divided by the total number of surface acres in the
20 unit, resulting in the tract participation percentage for each mineral owner under the
21 tract. For example, Tract 6 is owned in equal shares by Charles M. Baird and
22 Mervin W. Baird. The entire tract consists of 249.882 acres, which is multiplied by
23 0.5 to give Charles and Mervin 124.941 surface acres each. This number is then
24 divided by the total number of surface acres (576.355) to give them each a tract
25 participation percentage of approximately 21.677% ($249.882 * 0.05 / 576.355$).

26 **Q24. Does it work the same way for an unleased mineral interest, that is, for the
27 tract of a person who did not lease the property in the unit?**

28 A24. Yes.

29 **Q25. In your experience, is this an unusual way to allocate production in a unit?**

30 A25. No. In my experience, surface-acreage allocation is both fair and customary for
31 horizontal shale development.

1 **Q26. How are unit expenses allocated?**

2 A26. Like production in the unit, generally on a surface-acreage basis. Article 3 of the
3 Unit Plan provides that expenses, unless otherwise allocated in the Unit Operating
4 Agreement, will be allocated to each tract of land within the unit in the proportion
5 that the surface acres of each tract bears to the surface acres of the entire unit.

6 **Q27. Who pays the unit expenses?**

7 A27. According to the terms of the proposed Unit Plan, the working interest owners.

8 **Q28. Do the royalty owners pay any part of the unit expenses?**

9 A28. No. Per our leases, royalty interest owners are only responsible for their
10 proportionate share of taxes and third-party post-production costs.

11 **Q29. Let's turn to the Unit Operating Agreement. It appears to be based upon
12 A.A.P.L. Form 610 – Model Form Operating Agreement, is that correct?**

13 A29. Yes. We typically use the AAPL Form 610 – 1989, modified by the AAPL for
14 horizontal development. The Form 610, together with its exhibits, is a commonly
15 used form in the industry and is frequently modified to fit the needs of the parties
16 and circumstances.

17 **Q30. Would it be fair to say, then, that you are familiar with the custom and usage
18 of the Form 610 and other similar agreements in the industry?**

19 A30. Yes.

20 **Q31. Turning to the Unit Operating Agreement in particular, does it address how
21 unit expenses are determined and paid?**

22 A31. Yes. Article III of the Unit Operating Agreement provides that all costs and
23 liabilities incurred in operations shall be borne and paid proportionately by the
24 working interest owners, according to their Unit Participation percentages. Those
25 percentages can be found in Exhibit A-2 to the Unit Operating Agreement.
26 Moreover, the Unit Operating Agreement has attached to it an accounting
27 procedure identified as Exhibit C that offers greater details regarding how unit
28 expenses are determined and paid.

29 **Q32. That's commonly referred to as the COPAS?**

30 A32. Yes, it stands for the Council of Petroleum Accountants Societies and is a
31 commonly used form in the industry.

1 **Q33. Based upon your education and professional experience, do you view the terms**
2 **of Exhibit C as reasonable?**

3 A33. Yes. Drafted by an organization that includes members from many different
4 companies in diverse sections of the industry, it was designed to be generally fair to
5 the parties. PDC, in fact, is frequently subject to the COPAS in its operations with
6 other producers.

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

9 A34. No. We do not anticipate any.

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

12 A35. Yes, such a situation is not uncommon in the industry. The Operating Agreement
13 includes the flexibility for one or more working interest owners to decline to
14 participate in an operation that they believe may not be profitable, or one that they
15 cannot afford. The remaining parties can then proceed at their own risk and
16 expense.

17 **Q36. Generally, what happens if a working interest owner chooses not to participate**
18 **in an operation?**

19 A36. That working owner would be considered a non-consenting party. If the remaining
20 working interest owners decide to proceed with the operation, they would bear the
21 full cost and expense. The non-consenting party would be deemed to have
22 relinquished its interest in that operation until the well pays out the costs that would
23 have been payable by that party, plus a risk penalty (non-consent penalty).

24 **Q37. Can a working interest owner choose to go non-consent in the initial well in**
25 **the Neff Unit?**

26 A37. Yes. If a working interest owner chooses not to participate in the unit's initial well,
27 Article VI.A. of the Unit Operating Agreement provides that the working interest
28 owner shall be deemed to have relinquished its working interest to the other parties
29 in the unit, with a back-in provision and risk factor of 300%.

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

3 A38. Yes. Subsequent operations have a smaller risk factor of 200%. Participation in the
4 initial well is a riskier endeavor than subsequent operations due to a lack of
5 information as to whether the well will be economic. Information gained from the
6 initial well reduces the risk factor going forward; therefore, it is common for joint
7 operating agreements to distinguish risk factors between initial and subsequent
8 operations.

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

11 A39. Yes. That royalty interest would still be paid.

12 **Q40. Are the percentage risk penalties included in the Unit Operating Agreement**
13 **unusual?**

14 A40. Yes and no. They are not unusual given the determinations made previously in
15 similar applications. On the other hand, they are a little conservative given my
16 experience elsewhere. Because of the significant costs associated with drilling
17 horizontally in the Utica Shale (often in excess of \$10,000,000 to plan, drill, and
18 complete) and because the Utica Shale is an unconventional play, it is common for
19 companies to incorporate into their joint operating agreements a risk factor
20 proportionate to the substantial financial commitment. These are often higher than
21 those proposed here (e.g. 500/400).

22 **Q41. How are decisions made regarding unit operations?**

23 A41. Article V of the Unit Operating Agreement designates PDC as the Unit Operator,
24 with full operational authority for the supervision and conduct of operations in the
25 unit.

26 **Q42. I believe you've already described generally the documents in Exhibits A and**
27 **C to the Unit Operating Agreement. Let's turn therefore to Exhibit B of the**
28 **Unit Operating Agreement. What is it?**

29 A42. Exhibit B is a standard oil and gas lease form that is attached to the joint operating
30 agreement to govern any unleased interests owned by the parties. Article III.A of
31 the Unit Operating Agreement provides that if any party owns or acquires an oil

1 and gas interest in the Contract Area, then that interest shall be treated for all
2 purposes of the Unit Operating Agreement as if it were covered by the form of
3 lease attached as Exhibit "B."

4 **Q43. Does this oil and gas lease contain standard provisions that PDC uses in**
5 **connection with its operations in Ohio?**

6 A43. Yes.

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

9 A44. Yes, Exhibit D is the insurance exhibit to the joint operating agreement. It sets
10 forth coverage amounts and limitations, and the insurance terms for operations
11 conducted under the Unit Operating Agreement. For example, it requires general
12 liability insurance of not less than five million dollars (\$5,000,000.00).

13 **Q45. Would you next describe to the Division Exhibit E of the Unit Operating**
14 **Agreement?**

15 A45. Yes. Exhibit E is the Gas Balancing Agreement, which further details the rights
16 and obligations of the parties with respect to marketing and selling any production
17 from the Contract Area.

18 **Q46. In your professional opinion, given your education and experience, are the**
19 **terms of the Unit Plan, including the terms of the exhibits just discussed, just**
20 **and reasonable?**

21 A46. Yes.

22 **Q47. Does this conclude your testimony?**

23 A47. Yes.

Exhibit SG-1

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

In re the Matter of the Application of :
PDC Energy, Inc. for Unit Operation : Application Date: November 10, 2014
: :
Neff Unit : :
: :

AFFIDAVIT OF OWNERSHIP

I, Sarah Garrett, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Sarah Garrett and I am a Senior Regional Landman with PDC Energy, Inc. ("Applicant"). My day-to-day responsibilities include all aspects of land within Guernsey and northern Noble Counties, including ordering, examining, curing, and clearing title in advance of the drilling schedule; managing field landmen in leasing efforts; ensuring that surface issues are being addressed in a timely manner; serving as the contact point for attorneys, landowners, and other working interest owners; preparing and negotiating trade agreements and proposals, and compiling working interest units; 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 Neff Unit, according to the Unit Plan attached thereto (the "Application") (as those terms are used and defined therein). The Neff Unit is located in Guernsey County, Ohio, and consists of eighteen (18) separate tracts of land covering approximately 576 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.



Sworn to and subscribed before me this 7 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 :
PDC Energy, Inc. for Unit Operation : Application Date: November 10, 2014
:
Neff Unit :
:

LEASE AFFIDAVIT

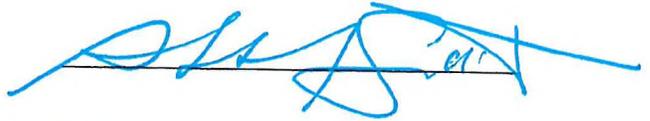
I, Sarah Garrett, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Sarah Garrett and I am a Senior Regional Landman with PDC Energy, Inc. ("Applicant"). My day-to-day responsibilities include overseeing and directing lease acquisition for Applicant in Noble and Guernsey Counties in the State of Ohio., 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 Neff Unit, according to the Unit Plan attached thereto (the "Application") (as those terms are used and defined therein). The Neff Unit is located in Guernsey County, Ohio, and consists of eighteen (18) separate tracts of land covering approximately 576 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 of the Unit Operating Agreement attached to the Application.

Further sayeth Affiant naught.



Sworn to and subscribed before me this 7 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 :
PDC Energy, Inc. for Unit Operation : Application Date: November 10, 2014
: :
Neff Unit :

WORKING INTEREST OWNER APPROVAL

PDC Energy, Inc. ("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 Neff Unit, located in Guernsey County, Ohio, and consisting of eighteen (18) separate tracts of land covering approximately 576 acres, according to the Unit Plan attached thereto (the "Application").

Antero Resources Corporation, formerly known as Antero Resources Appalachian Corporation is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of one (1) tract(s) of land covering approximately 2.364 acres contained in the Neff Unit, or 0.410 % of the lands in the unit, all as more specifically described on attached Exhibit 1.

Antero Resources Corporation 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.

Antero Resources Corporation

By: 

Name: Brian A. Kuhn

Title: Vice President - Land

Date: 11/10/14

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
3	Dennis M. Solar	2.364	44-00267.000

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

In re the Matter of the Application of :
PDC Energy, Inc. for Unit Operation : Application Date: November 10, 2014
: :
Neff Unit :

WORKING INTEREST OWNER APPROVAL

PDC Energy, Inc. ("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 Neff Unit, located in Guernsey County, Ohio, and consisting of eighteen (18) separate tracts of land covering approximately 576 acres, according to the Unit Plan attached thereto (the "Application").

American Energy – Utica, LLC is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of one (1) tract(s) of land covering approximately 6.842 acres contained in the Neff Unit, or 1.19% of the lands in the unit, all as more specifically described on attached Exhibit 1.

American Energy – 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.

American Energy – Utica, LLC

By: 
Name: Lauren B. Matlock
Title: Land Manager, Utica East

Date: 11/6/14

Exhibit 1

TRACT NUMBER	LESSOR	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
15	Jeffrey A. Duvall and Teresa E. Duvall, husband and wife, with Rights of Survivorship	6.842	44-00861.000

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

In re the Matter of the Application of :
PDC Energy, Inc. for Unit Operation : Application Date: November 10, 2014
: :
Neff Unit :

WORKING INTEREST OWNER APPROVAL

PDC Energy, Inc. ("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 Neff Unit, located in Guernsey County, Ohio, and consisting of eighteen (18) separate tracts of land covering approximately 576 acres, according to the Unit Plan attached thereto (the "Application").

Guernsey Holdings, LLC is a 25% interest owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of five(5) tract(s) of land covering approximately 263.6 acres contained in the Neff Unit, giving Guernsey Holdings, LLC an approximate 11.44% of the lands in the unit, all as more specifically described on attached Exhibit 1.

Guernsey Holdings, 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.

Guernsey Holdings, LLC

By: 
Name: David R. Hill
Title: President
Date: 11-10-2014

Exhibit 1

TRACT NUMBER	MINERAL OWNER	SURFACE ACRES IN UNIT	PARCEL ID NUMBER
6A	Charles M. Baird	124.941	44-00694.000
6B	Mervin W. Baird	124.941	44-00694.000
12	Mervin W. Baird & Barbara P. Baird	6.747	44-00694.002
14	Mervin W. Baird & Barbara P. Baird	5.000	44-00507.000
17	Dannie B. Black & Crystal L. Black	1.988	44-00292.000

Exhibit SG-2

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

In re the Matter of the Application of :
PDC Energy, Inc. for Unit Operation :
: Application Date: November 10, 2014
Neff Unit :
:

AFFIDAVIT OF SARAH GARRETT

(CONTACTS – UNLEASED MINERAL OWNER)

I, Sarah Garrett, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Sarah Garrett and I am a Senior Regional Landman with PDC Energy, Inc. (“Applicant”). My day-to-day responsibilities include overseeing and directing lease acquisition for Applicant in Noble and Guernsey Counties in the State of Ohio. 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 Neff 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 Neff Unit. Those efforts are detailed below.

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

Parcel No. 44-00860.000 (Tract 2B)

Owner’s Name: Bounty Minerals, LLC (“Current Owner”)

<u>Date</u>	<u>Party Contacted</u>	<u>By Whom</u>	<u>Method</u>	<u>Notes</u>	<u>Response</u>
11/11/2013	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Sent counter offer lease in response to lease form presented by Bounty
11/18/2013	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Bounty Wants “true” cost free royalty. Re-viewing other offers as well.
11/21/2013	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	PDC suspended lease efforts at this time, due to differences in terms
08/20/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Reached out to resume lease effort dialog. Jason suggested they had already leased.

<u>Date</u>	<u>Party Contacted</u>	<u>By Whom</u>	<u>Method</u>	<u>Notes</u>	<u>Response</u>
					Jason said he would verify status and get back to me.
08/21/14 through 09/17/14	Jason Ragsdell	Dan Stevenson	Phone	777 Main Street, Fort Worth, Texas 76102	Call Not returned.
09/17/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	E-mailed Jason to check on status of subject tract.
09/17/2014 through 10/15/2014	Jason Ragsdell	Dan Stevenson	Phone	777 Main Street, Fort Worth, Texas 76102	Mr. Ragsdell suggested that he was still waiting on Current Owner response to him on the lease status of the minerals.
10/15/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Reached out again to re-open lease dialog and check tract status.
10/21/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Jason requested updated lease offer, again requesting "true" gross royalty.
10/21/2014	Dan Stevenson	Jason Ragsdell	Email	777 Main Street, Fort Worth, Texas 76102	Jason asked if we had an inclusive unit defined.
10/22/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Sent revised lease and explanation of defined unit and timelines as well as drill commitment. Expressed that Bounty wasn't really interested in leasing at this time.
10/28/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Followed up for response status.
10/30/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	Sent PDF's of requested unit plats and Drill commitment language.
11/04/2014	Jason Ragsdell	Dan Stevenson	Email	777 Main Street, Fort Worth, Texas 76102	E-mailed Jason to check status.

11/06/2014 Jason Ragsdell Dan Stevenson Phone 777 Main Street, Spoke to Jason,
Fort Worth, TX Said he would
76102 check and get
back to me.
*no response

Further sayeth Affiant naught.


Sarah Garrett

Sworn to and subscribed before me this 10th day of November, 2014.



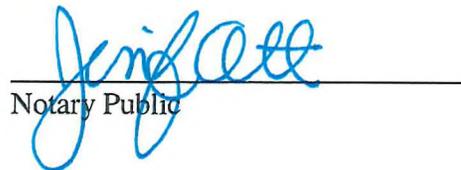
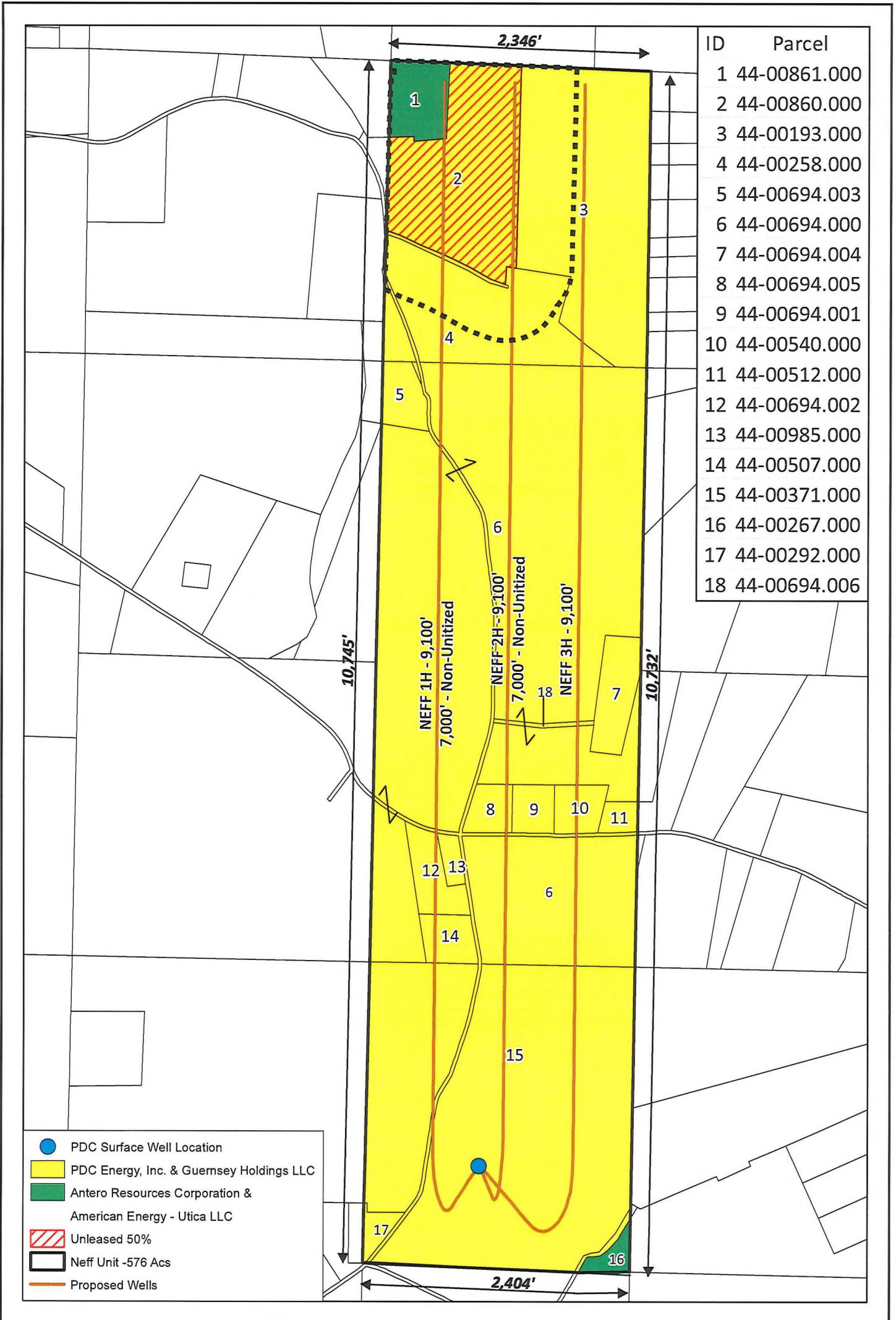

Notary Public

Exhibit SG-3



ID	Parcel
1	44-00861.000
2	44-00860.000
3	44-00193.000
4	44-00258.000
5	44-00694.003
6	44-00694.000
7	44-00694.004
8	44-00694.005
9	44-00694.001
10	44-00540.000
11	44-00512.000
12	44-00694.002
13	44-00985.000
14	44-00507.000
15	44-00371.000
16	44-00267.000
17	44-00292.000
18	44-00694.006

- PDC Surface Well Location
- PDC Energy, Inc. & Guernsey Holdings LLC
- Antero Resources Corporation & American Energy - Utica LLC
- Unleased 50%
- Neff Unit -576 Acs
- Proposed Wells



Unit Plat

Neff Unit
Wills Township
Guernsey Co., OH

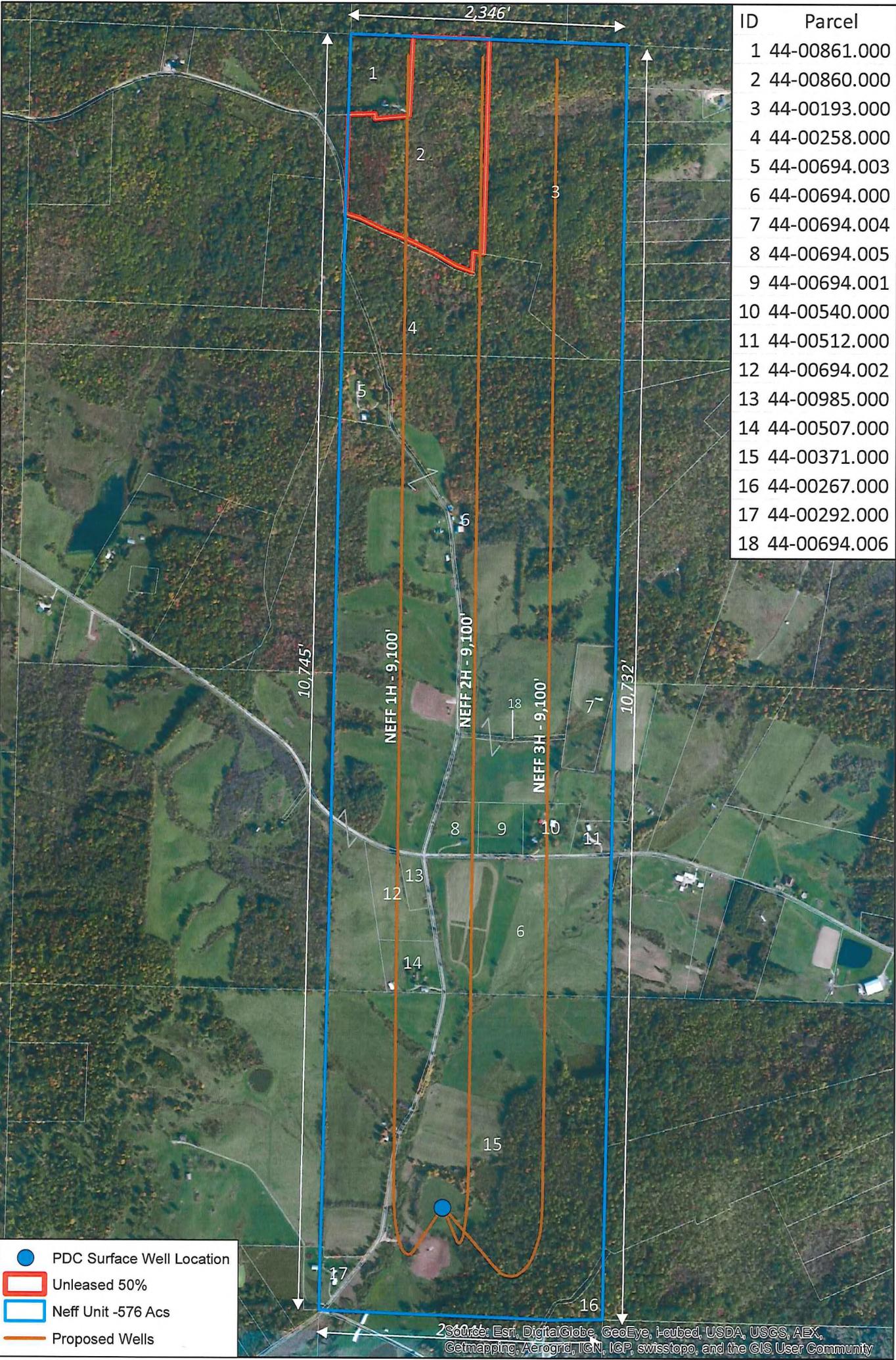


Coordinate System: NAD 1983 State Plane Ohio South

1 inch = 1,000 feet

Prepared Date: 11/6/2014

Exhibit SG-4



- PDC Surface Well Location
- Unleased 50%
- Neff Unit -576 Acs
- Proposed Wells



Coordinate System: NAD 1983 State Plane Ohio South

Unit Plat

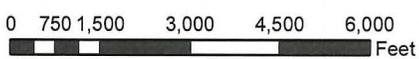
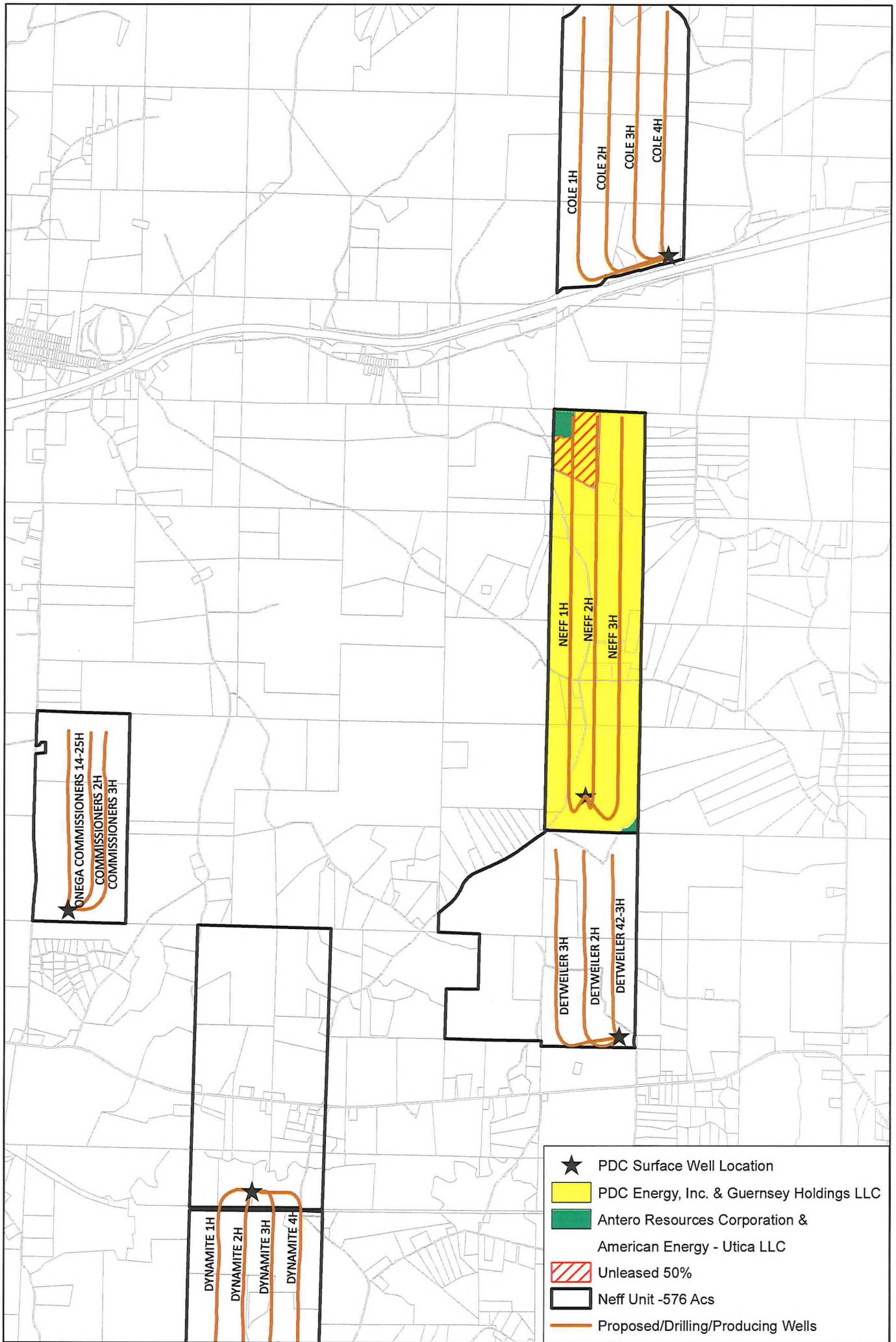
Neff Unit
Wills Township
Guernsey Co., OH

1 inch = 1,000 feet



Prepared Date: 11/6/2014

Exhibit SG-5



Coordinate System: NAD 1983 State Plane Ohio South

Unit Plat

Neff Unit
Wills Township
Guernsey Co., OH

1 inch = 3,000 feet



Prepared Date: 11/6/2014