

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

In re the Matter of the Application of	:	
American Energy – Utica, LLP for	:	
Unit Operation	:	Application Date: August 8, 2014
	:	Revision Date: October 23, 2014
<u>Emersyn E RCH BL Unit</u>	:	2 nd Revision Date: March 16, 2015
<u>(fka Emersyn N RCH BL Unit, originally</u>	:	
<u>filed as R&F Coal N RCH BL Unit)¹</u>	:	

APPLICATION

Pursuant to Ohio Revised Code Section 1509.28, AMERICAN ENERGY - UTICA, LLP (“AEU”), hereby respectfully requests the Chief of the Ohio Department of Natural Resources’ Division of Oil and Gas Resources Management (“Division”) to issue an order authorizing AEU to operate the Unitized Formation and applicable land area in Belmont County, Ohio (hereinafter, the “Emersyn E RCH BL Unit”) as a unit according to the Unit Plan attached hereto and as more fully described herein.

AEU is a Corporation organized under the laws of the State of Oklahoma and registered to do business in the State of Ohio. AEU has its principal office at 3501 NW 63rd Street, Oklahoma City, Oklahoma, 73116. AEU is an exploration and production AEU engaged in the exploitation, development, and acquisition of natural gas, natural gas liquids and oil properties located in the Appalachian Basin and is registered in good standing as an “owner” with the Division.

AEU 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:

¹ This application is a revision to the application titled the Emersyn N RCH BL Unit, which was originally filed on August 8, 2014, and revised on October 23, 2014 and for which a hearing was held before the ODNR staff on December 11, 2014. The Emersyn N RCH BL Unit originally was proposed to be a two-well unit, containing 43 tracts, totaling 546.705 acres, of which 8 tracts, totaling 31.536 acres, or 5.77% of the unit, were unleased. Since the hearing date, AEU has been able to lease 4 of the unleased parcels in the proposed Emersyn N RCH BL Unit which, in turn, has allowed AEU to voluntarily form a smaller, single well unit, the Emersyn W RCH BL Unit, without needing to resort to the statutory unitization process. AEU is filing this amendment to the Emersyn N application to remove from this proposed unit those tracts or portions of tracts included in the new voluntary Emersyn W RCH BL Unit. To avoid confusion, AEU proposes that this smaller, single well unit remaining to be unitized be known as the Emersyn E RCH BL Unit.

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
Ryan S. Bundy (0090027)
Steptoe & Johnson PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215
Tel. (614) 221-5100
E-mail: neal.pierce@steptoe-johnson.com
kathy.milenkovski@steptoe-johnson.com
ryan.bundy@steptoe-johnson.com

John F. Gwynn
Senior Landman
American Energy – Utica, LLP
3501 NW 63rd
Oklahoma City, OK 73116
Tel. (405) 608-5487
E-mail: John.Gwynn@aep-lp.com

Rodney Black
Regional Land Manager
XTO Energy, Inc.
810 Houston Street
Fort Worth, TX 76102
Tel. (817) 885-2419
E-mail: Rodney_Black@xtoenergy.com

Aileen Rice
Rice Drilling D, LLC
171 Hillpoint Drive, Suite 301
Canonsburg, PA 15317
Tel. (724) 338-2819
E-mail: Aileen.Rice@riceenergy.com

I. LEGAL REQUIREMENTS

A. Legal Standard

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

As is shown below and in the various attachments hereto, AEU makes this request for the purpose of substantially increasing the ultimate recovery of oil and natural gas, including related liquids, from the Unitized Formation, and to protect the correlative rights of unit owners, consistent with the public policy of Ohio to conserve and develop the state’s natural resources and prevent waste.

B. Application Contents

Pursuant to the Ohio Department of Natural Resources, Division of Oil and Gas Resources Management's May 9, 2014 Unitization Application Guidelines, the following information must be contained within an application for unitization.

1. A cover letter requesting unitization.

This document fulfills this purpose.

2. An affidavit attesting that the applicant is the owner (as defined in R.C. 1509.01(K)) of at least 65% of the land overlying the pool that is the subject of the unitization request.

See Exhibit 6.

3. A summary of the request for unitization that includes all of the following information:

- A statement describing the reasons why unitization is necessary;
- A description of the plan for development of the unit;
- An identification of the geologic formation(s) to be developed;
- An estimate of the value of the recovery of oil and gas for each well proposed to be drilled in the unit area;
- An estimate of the cost to drill and operate each well in the proposed unit;
- A designated contact person for the applicant for communication purposes with the Division, including legal counsel for the applicant (if applicable).

See Section II of this Application, infra. In addition, AEU contacts are listed above. See also prefiled testimony of Michael Hale, David Bailey and John Gwynn, attached as Exhibits 3, 4 and 5, respectively.

4. A list identifying all unleased mineral owners that includes the name, valid address, parcel number, and respective acreage of each unleased owner. If an unleased mineral owner is a corporation or other business entity, the name of a contact person within that corporation or business.

See Exhibit 2-A.3 to Unit Operating Agreement, attached to this Application as Exhibit 2.

5. A list identifying all mineral owners in the unit, leased or unleased, that includes the name, valid address, parcel number, and respective acreage of each owner. If a mineral owner is a corporation or other business entity, the name of a contact person within that corporation or business.

See Exhibit 2-A.1 to Unit Operating Agreement, attached to this Application as Exhibit 2.

6. A list identifying all uncommitted working interest owners in the unit, leased or unleased, that includes the name, valid address, parcel number, and respective acreage of each owner. If a mineral owner is a corporation or other business entity, the name of a contact person within that corporation or business.

See Exhibit 2-A.4 to Unit Operating Agreement, attached to this Application as Exhibit 2.

7. A map on a scale of 1"=1000' that shows all of the following:
- The boundary of the proposed unit area;
 - The proposed location of the well pad and wells to be drilled;
 - The tracts of land within the unit area that are leased to the applicant, shown in yellow;
 - The tracts of land within the unit area that are unleased, shown in red;
 - The tracts of land within the unit area that are leased to other operators (i.e. uncommitted working interest owners), including an identification of the operators, shown in green;
 - A five hundred foot boundary around each property in the unit that is not leased by the applicant or that is not subject to an agreement with the applicant;
 - Identification of each tract within the unit area by parcel number.

See Exhibits 5-A and 5-D, attached to this Application as part of Exhibit 5.

8. An aerial photograph on a scale of 1"=1000' that shows all of the following:
- The boundary of the proposed unit area;
 - The proposed location of the well pad and wells to be drilled;
 - The tracts of land within the proposed unit area that are unleased;
 - Identification of each tract within the unit area by parcel number.

See Exhibit 5-B, attached to this Application as part of Exhibit 5.

9. A gamma ray-density geophysical type log identifying the proposed geological formations to be produced.

See Exhibit 3-B, attached to this Application as part of Exhibit 3.

10. A cross-section showing the applicable formations that the applicant is proposing to drill into and produce from in the unit area.

See Exhibit 3-A, attached to this Application as part of Exhibit 3.

11. A map showing all existing units adjacent to the unit proposed in the application with an identification of any permitted, drilled, and/or producing wells in the existing units.

See Exhibit 5-C, attached to this Application as part of Exhibit 5.

12. If reserve calculations are based upon other existing wells in the vicinity of the proposed unit, an exhibit showing the locations of the well(s) to the proposed unit area and an identification of the wells by name and permit number.

See Exhibit 3-A, attached to this Application as part of Exhibit 3.

13. A statement in the form of an affidavit that gives a detailed account of the attempts to lease the unleased properties. The statement must include:

- The dates of all attempts;
- The person who was contacted, how contact was made, and by whom;
- Any joint venture or farmout proposal to another operator, if applicable.

See Exhibit 5-E, attached to this Application as part of Exhibit 5.

14. A copy of a joint operating agreement for working interest partners, if applicable.

See Exhibit 2 for proposed joint operating agreement applicable to unitized parties who elect to be non-consenting working interest partners.

15. An affidavit attesting to the fact that the applicant holds a valid lease agreement for all of the acreage that the applicant claims to have under lease.

See Exhibit 6.

16. A copy of the executed working interest agreement for each committed working interest partner in the proposed unit.

See Exhibit 7.

17. Any additional information that the applicant determines is beneficial for the Chief to consider in support of their request.

n/a

II. SUMMARY OF REQUEST FOR UNITIZATION

A. Project Description

The Emersyn E RCH BL Unit is located in Belmont County, Ohio, and consists of twenty-eight (28) separate tracts of land. See Exhibits 2-A.1 and 2-A.2 of the Unit Operating Agreement (showing the plat and tract participations, respectively). The total land area in the Emersyn E RCH BL Unit is approximately 286.110 acres and, at the time of this Application, AEU and the other working interest owners in the unit, Rice, Gulfport and XTO², have the right to drill on and produce from approximately 281.433 acres of the proposed unit – i.e., more than ninety-eight percent (98%) of the unit area, well above the sixty-five percent (65%) threshold required by Ohio Revised Code § 1509.28. Gulfport, who owns the oil and gas rights to 1.211 acres of the unit, has indicated that they do not wish to participate in the well. However, AEU on its own has leased and has the right to drill on and produce from approximately 277.20025 acres

² XTO and AEU have entered into a Participation Agreement, dated January 29, 2014 pursuant to which XTO will assign 95% of their acreage within a defined area (Contract Area B), in which the Emersyn E RCH BL Unit is located, at spud of the first well in Unit. Upon assignment AEU will have a 95% interest in the tract and XTO will have 5% in the tract. The tracts subject to this agreement are identified on Exhibit 2-A.1.

of the proposed unit – i.e., more than ninety-six percent (96%), which is also above the statutorily required sixty-five percent (65%).

As more specifically described herein, AEU seeks authority to drill and complete one (1) horizontal well in the Utica/Point Pleasant Formation (“the Unitized Formation”) from a well pad located near the southern border of the unit to efficiently test, develop, and operate the Unitized Formation for oil, natural gas, and related liquids production. The “Unitized Formation” consists of the subsurface portion of the Unit Area (i.e., the lands shown on Exhibit 2-A.2 and identified in Exhibit 2-A.1 to the Unit Operating Agreement) at a depth located from fifty feet above the top of the Utica Shale to fifty feet below the base of the Point Pleasant formation, and frequently referred to as the Utica/Point Pleasant formation. The evidence presented in this Application establishes that the Unitized Formation is part of a pool and thus an appropriate subject of unit operation under Ohio Rev. Code § 1509.28.³ Additionally, that evidence establishes that the Unitized Formation is likely to be reasonably uniformly distributed throughout the Unit Area – and thus that it is reasonable for the Unit Agreement to allocate unit production and expenses to separately owned tracts on a surface acreage basis.⁴

B. Justification for Unitization

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 Emersyn E RCH BL Unit. It also demonstrates that unitized operation protects the correlative rights of all of the owners within the proposed Unit, and serves to further Ohio’s public policy to conserve and develop the State’s natural resources and prevent waste of the same.

The Unit Agreement contemplates the drilling of one (1) horizontal well from a well pad, with a lateral length of approximately 9,670 feet. AEU estimates that the ultimate recovery from this unit development could be as much as 14.8 Bcfe from the Unitized Formation. Absent unit development contemplated in the unitized project, the recovery would be substantially less. First, the prefiled testimony shows that it is unlikely that vertical development of the unit would ever take place because it is likely to be uneconomic – resulting in potentially no resource

³ 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 Geology testimony, Exhibit 3.

⁴ See Exhibit 3.

recovery from portions of the Unitized Formation. Second, avoiding unleased tracts by relying on shorter horizontal laterals to develop the Unitized Formation underlying the Emersyn E RCH BL Unit would result in a substantially lower ultimate recovery of oil and gas, as it would strand approximately 6.2 Bcfe of the total estimated reserves, unlikely to ever be developed.⁵ AEU estimates that the ultimate recovery of reserves will increase by approximately 72% from 8.6 Bcfe to 14.8 Bcfe if the unit is developed utilizing the proposed unit development.⁶

The capital expense associated with developing the unitized project is \$11.9 million, as compared to \$8.8 million for the non-unitized project. The value of hydrocarbons expected to be recovered from the proposed unit is \$2.41 million as compared to \$418 thousand that could be recovered without unit operations. In other words, for an additional \$3.14 million in capital expenditure, AEU could recover hydrocarbons valued at more than \$1.99 million.⁷ Thus, the economic benefits of unitization far outweigh the additional costs necessary for unit development.

C. Unitized Operations

The proposed unit operations would be governed by the Unit Agreement, attached to this Application as Exhibit 1. The Unit Agreement allocates unit production and expenses based upon each tract's surface acreage participation in the unit. The Unit Agreement also offers those parties who have not voluntarily entered into a lease agreement by the date of the hearing on this application two options:

- (1) Lease their minerals to AEU for a 14% net royalty and a bonus of \$6000 per acre. This would be a non-surface use lease; or
- (2) Elect to be treated as a non-consenting working interest owner, entitled to a 1/8 net royalty interest and 7/8 working interest, subject to non-consent penalties of 500% for the well. The revenue attributable to the 7/8 working interest will accrue until the risk penalty has been recovered, whereas the royalty payments will be made monthly, without regard to any non-consent penalties.

The options provided above represent fair compensation to the unleased land owners, taking into consideration the current market value of leasing in this area, and past unitization

⁵ See Reservoir Engineer Testimony, Exhibit 4.

⁶ *Id.*

⁷ *Id.* See, in particular, Exhibit 4-A.

orders of the Chief.⁸ These options would allow AEU to develop this unit as planned and in the most efficient way possible, thus avoiding waste of natural resources that would otherwise be stranded. Allowing AEU to fully develop this Unit as planned would afford those parties who have leased their mineral interests and who want to participate in the unit the benefit of their bargain, and would also provide the unleased mineral owners with fair compensation for the inclusion and development of their minerals. Therefore, both options are “just and reasonable” as required by the statute.

The interest relinquished under either of the above options would be limited in depth and time as to the unitized formations and the term of the Unitization Order. Moreover, there would be no surface operations authorized unless specifically agreed to by AEU and the unleased owner. If an unleased party does not make a selection between the two options provided above within the 30 day timeframe, the Unit Agreement would compensate the unleased parties as if they were governed by the terms of the form lease, attached hereto as Exhibit 2-B. Finally, where the Unit Agreement conflicts with any Unitization Order issued by the Chief, the Unitization Order shall control and govern the operations within the Unit.

For all of the foregoing reasons, as further supported by the various attached exhibits, affidavits and prepared testimony, AEU maintains that operation as a Unit is reasonably necessary to increase substantially the ultimate recovery of oil and gas and that the value of that additional recovery exceeds its additional cost, thereby meeting the statutory requirement for unitization under ORC 1509.28. Operating the Emersyn E RCH BL Unit as proposed would be just and reasonable and would protect the correlative rights of all of the parties involved, as well as serve the state’s public policy interests with respect to oil and gas development and conservation. Thus, AEU respectfully requests that the Chief authorize the Emersyn E RCH BL Unit as proposed.

Respectfully submitted,

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
Ryan S. Bundy (0090027)
STEPTOE & JOHNSON PLLC

⁸ See Landman Testimony, Exhibit 5.

Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215

Attorneys for Applicant,
American Energy- Utica, LLC

UNIT AGREEMENT

EMERSYN E RCH BL UNIT RICHLAND & UNION TOWNSHIPS BELMONT COUNTY, OHIO

THIS AGREEMENT, entered into as of this March 16, 2015, by the parties subscribing, ratifying, approving, consenting to, or bound to the original of this instrument, a counterpart thereof, or other instrument agreeing to become a party hereto; and by those parties participating as a result of an order issued by the Division of Oil and Gas Resources Management ("Division") pursuant to Ohio Revised Code Section 1509.28.

WITNESSETH:

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

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

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

ARTICLE 1: DEFINITIONS

As used in this Agreement:

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

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

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

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

Royalty Owner is a Person who owns a Royalty Interest in the Unit.

Tract means the land identified by a tract number in Exhibit 2-A-1 to the Unit Operating Agreement.

Tract Participation means the fractional interest shown on Exhibit 2-A-1 to the Unit Operating Agreement for allocating Unitized Substances to a Tract.

Unit means the Emersyn E RCH BL Unit, located in Richland & Union Townships, Belmont County, Ohio.

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

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

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

Unitized Formation means the subsurface portion of the Unit Area located from fifty feet above the top of the Utica Shale (at an approximate depth of 7,650 feet) to fifty feet below the base of the Point Pleasant formation (at an approximate depth of 8,010 feet).

Unit Operating Agreement means the modified A.A.P.L. Form 610-1989 Model Form Operating Agreement dated March 16, 2015, for the Emersyn E RCH BL Unit, which is attached hereto. Such Unit Operating Agreement contains provisions for credits and charges among Working Interest Owners for their respective investments in, and expenses for, Unit Operations, including a provision, if necessary, for carrying any Person unable or electing not to participate in Unit Operations. In addition, the Unit Operating Agreement also contains provisions relating to the supervision and conduct of Unit Operations and the manner in which Working Interest Owners may vote. The Unit Operating Agreement is hereby confirmed and by reference made a part of this Agreement. In the event of a conflict between such agreements, the terms of the Unit Operating Agreement shall govern.

Unit Operations are all operations conducted pursuant to this Agreement.

Unit Operator means AMERICAN ENERGY – UTICA, LLC

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

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

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

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

ARTICLE 2: CREATION AND EFFECT OF UNIT

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

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 individual Unit Operating Agreements executed by the Working Interest Owners.

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

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

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

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

ARTICLE 3: UNIT OPERATIONS

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

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

ARTICLE 4: TRACT PARTICIPATIONS

Tract Participations. The Tract Participation of each Tract is identified in Exhibit 2-A-1 and shall be determined solely upon an acreage basis as the proportion that the Tract surface acreage bears to the total surface acreage of the Unit Area. The Tract Participation of each Tract has been calculated as follows: SURFACE ACRES IN EACH TRACT DIVIDED BY THE TOTAL SURFACE ACRES WITHIN THE UNIT AREA. The Tract Participations as shown in Exhibit 2-A-1 are accepted and approved as being fair and equitable.

ARTICLE 5: ALLOCATION OF UNITIZED SUBSTANCES

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

Distribution Within Tracts. The Unitized Substances allocated to each Tract or portion thereof shall be distributed among, or accounted for to, the Persons entitled to share in the

production from such Tract or portion thereof in the same manner, in the same proportions, and upon the same conditions as they would have participated and shared in the production from such Tract, or in the proceeds thereof, had this Agreement not been entered into, and with the same legal effect. If any Oil and Gas Rights in a Tract hereafter become divided and owned in severalty as to different parts of the Tract, the owners of the divided interests, in the absence of an agreement providing for a different division, shall share in the Unitized Substances allocated to the Tract, or in the proceeds thereof, in proportion to the surface acreage of their respective parts of the Tract. Any royalty or other payment which depends upon per well production or pipeline runs from a well or wells on a Tract shall, after the Effective Date, be determined by dividing the Unitized Substances allocated to the Tract by the number of wells on the Tract capable of producing Unitized Substances on the Effective Date; 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.

ARTICLE 7: TITLES

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

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

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

ARTICLE 8: EASEMENTS, GRANTS, OR USE OF SURFACE

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

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

Surface Damages. Subject to the terms and conditions of the various leases, Working Interest Owners shall reimburse the owner for the market value prevailing in the area of growing

crops, livestock, timber, fences, improvements, and structures on the Unit Area that are destroyed or damaged as a result of Unit Operations.

Unitized Property. Notwithstanding anything in this Article 8 to the contrary, and except where otherwise authorized by separate agreement or by the Division, there shall be no Unit Operations conducted on the surface of any property located within the Emersyn E RCH BL 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 Emersyn E RCH BL Unit, owned by an interest owner identified in Exhibit 2-A-3.

ARTICLE 9: CHANGE OF TITLE

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

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

ARTICLE 10: RELATIONSHIPS OF PERSONS

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

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

ARTICLE 11: EFFECTIVE DATE

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

ARTICLE 12: TERM

Term. This Agreement, unless sooner terminated in the manner hereinafter provided, shall remain in effect for one (1) year 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 eighty (180) consecutive days, or so long as other Unit Operations are conducted without a cessation of more than one hundred 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 Agreement, the further development and operation of the Unitized Formation as a unit shall cease. Each oil and gas lease and other agreement covering lands within the Unit Area shall remain in force for 180 days after the date on which this Agreement terminates, and for such further period as is provided by the lease or other agreement. The relationships among owners of Oil and Gas Rights shall thereafter be governed by the terms and provisions of the leases and other instruments, not including this Agreement, affecting the separate Tracts.

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

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

ARTICLE 13: APPROVAL

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

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

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

ARTICLE 14: MISCELLANEOUS

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

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

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

Submitted by:

AMERICAN ENERGY – UTICA, LLC

By: 

Serena Evans
Director of Land
American Energy – Utica, LLC
PO Box 13678
Oklahoma City, OK 73113
Phone: 405-418-8021
E-mail: Serena.Evans@aep-lp.com

ZFB
MWR
Dr

This instrument prepared by:

R. Neal Pierce (0028379)
Katerina E. Milenkovski (0063314)
Ryan S. Bundy (0090027)
STEPTOE & JOHNSON PLLC
Huntington Center
41 South High Street, Suite 2200
Columbus, Ohio 43215
Tel. (614) 221-5100
E-mail:neal.pierce@steptoe-johnson.com

TABLE OF CONTENTS

Article	Title	Page
I.	<u>DEFINITIONS</u>	1
II.	<u>EXHIBITS</u>	2
III.	<u>INTERESTS OF PARTIES</u>	3
	A. OIL AND GAS INTERESTS:	3
	B. INTERESTS OF PARTIES IN COSTS AND PRODUCTION:	3
	C. SUBSEQUENTLY CREATED INTERESTS:	3
IV.	<u>TITLES</u>	3
	A. TITLE EXAMINATION:	3
	B. LOSS OR FAILURE OF TITLE:	5
	1. Failure of Title	5
	2. Loss by Non-Payment or Erroneous Payment of Amount Due	5
	3. Other Losses	5
	4. Curing Title	5
V.	<u>OPERATOR</u>	6
	A. DESIGNATION AND RESPONSIBILITIES OF OPERATOR:	6
	B. RESIGNATION OR REMOVAL OF OPERATOR AND SELECTION OF SUCCESSOR:	6
	1. Resignation or Removal of Operator	6
	2. Selection of Successor Operator	6
	3. Effect of Bankruptcy	6
	C. EMPLOYEES AND CONTRACTORS:	6
	D. RIGHTS AND DUTIES OF OPERATOR:	6
	1. Competitive Rates and Use of Affiliates	6
	2. Discharge of Joint Account Obligations	6
	3. Protection from Liens	6
	4. Custody of Funds	7
	5. Access to Contract Area and Records	7
	6. Filing and Furnishing Governmental Reports	7
	7. Drilling and Testing Operations	7
	8. Cost Estimates	7
	9. Insurance	7
VI.	<u>DRILLING AND DEVELOPMENT</u>	7
	A. INITIAL WELL:	7
	B. SUBSEQUENT OPERATIONS:	7
	1. Proposed Operations	7
	2. Operations by Less Than All Parties	8
	3. Stand-By Costs	9
	4. Deepening	10
	5. Sidetracking	10
	6. Order of Preference of Operations	10
	7. Conformity to Spacing Pattern	11
	8. Paying Wells	11
	C. COMPLETION OF WELLS; REWORKING AND PLUGGING BACK:	11
	1. Completion	11
	2. Rework, Recomplete or Plug Back	11
	D. OTHER OPERATIONS:	11
	E. ABANDONMENT OF WELLS:	11
	1. Abandonment of Dry Holes	11
	2. Abandonment of Wells That Have Produced	12
	3. Abandonment of Non-Consent Operations	12
	F. TERMINATION OF OPERATIONS:	12
	G. TAKING PRODUCTION IN KIND:	12
	(Option 1) Gas Balancing Agreement	12
	(Option 2) No Gas Balancing Agreement	11
VII.	<u>EXPENDITURES AND LIABILITY OF PARTIES</u>	13
	A. LIABILITY OF PARTIES:	13
	B. LIENS AND SECURITY INTERESTS:	14
	C. ADVANCES:	14
	D. DEFAULTS AND REMEDIES:	14
	1. Suspension of Rights	15
	2. Suit for Damages	15
	3. Deemed Non-Consent	15
	4. Advance Payment	15
	5. Costs and Attorneys' Fees	15
	E. RENTALS, SHUT-IN WELL PAYMENTS AND MINIMUM ROYALTIES:	15
	F. TAXES:	15
VIII.	<u>ACQUISITION, MAINTENANCE OR TRANSFER OF INTEREST</u>	16
	A. SURRENDER OF LEASES:	16
	B. RENEWAL OR EXTENSION OF LEASES:	16
	C. ACREAGE OR CASH CONTRIBUTIONS:	16

TABLE OF CONTENTS

D. ASSIGNMENT; MAINTENANCE OF UNIFORM INTEREST:	17
E. WAIVER OF RIGHTS TO PARTITION:	17
F. PREFERENTIAL RIGHT TO PURCHASE:	15
IX. <u>INTERNAL REVENUE CODE ELECTION</u>	17
X. <u>CLAIMS AND LAWSUITS</u>	17
XI. <u>FORCE MAJEURE</u>	18
XII. <u>NOTICES</u>	18
XIII. <u>TERM OF AGREEMENT</u>	18
XIV. <u>COMPLIANCE WITH LAWS AND REGULATIONS</u>	18
A. LAWS, REGULATIONS AND ORDERS:	18
B. GOVERNING LAW:	18
C. REGULATORY AGENCIES:	18
XV. <u>MISCELLANEOUS</u>	19
A. EXECUTION:	19
B. SUCCESSORS AND ASSIGNS:	19
C. COUNTERPARTS:	19
D. SEVERABILITY:	19
XVI. <u>OTHER PROVISIONS</u>	19

OPERATING AGREEMENT

THIS AGREEMENT, entered into by and between American Energy – Utica, LLC, hereinafter designated and referred to as "Operator," and the signatory party or parties other than Operator, sometimes hereinafter referred to individually as "Non-Operator," and collectively as "Non-Operators."

WITNESSETH:

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

NOW, THEREFORE, it is agreed as follows:

ARTICLE I.

DEFINITIONS

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

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

B. The term "Completion" or "Complete" shall mean a single operation intended to complete a well as a 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." See also Article XVI.K.

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.

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

F. The term "Drilling Unit" shall mean the area fixed for the drilling of one well / or more wells by order or rule of any state or federal body having authority. If a Drilling Unit is not fixed by any such rule or order, a Drilling Unit shall be the drilling unit as established by the / pattern of drilling in the Contract Area unless fixed by express agreement of the Drilling Parties. See also Article XVI.K.

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

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

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

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

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

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

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

N. The term "Plug Back" shall mean / a single operation whereby a deeper Zone is abandoned in order to attempt a Completion in a shallower Zone.

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

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

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

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

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

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

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

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

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

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

Y. For the purposes of this Agreement, as to a Multi-lateral or Horizontal Well, the term "Plug Back" shall mean an operation to test or complete the well at a stratigraphically shallower geological horizon in which the operation has been or is being

1 completed and which is not within an existing Lateral.
 2 Z. The term "affiliate" shall mean any Person that, directly or indirectly, through one or more intermediaries,
 3 Controls or is Controlled by, or is under common Control with, another Person.
 4 AA. The term "Control" and its derivatives with respect to any Person shall mean the possession, directly or
 5 indirectly, of the power, directly or indirectly, to direct or cause the direction of the management or policies of the controlled
 6 Person, whether through the ownership of equity interests in or voting rights attributable to the equity interests in such Person, by
 7 contract or agency, by the general partner of a Person that is a partnership, or otherwise.
 8 BB. The term "Person" shall mean any individual, corporation, partnership, limited partnership, limited
 9 liability company, trust, estate, governmental authority or any other entity.
 10 Unless the context otherwise clearly indicates, words used in the singular include the plural, the word "person" includes
 11 natural and artificial persons, the plural includes the singular, and any gender includes the masculine, feminine, and neuter.

12
 13 **ARTICLE II.**
 14 **EXHIBITS**

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

- 16 A. Exhibit "A," shall include the following information:
 - 17 (1) Description of lands subject to this agreement,
 - 18 (2) Restrictions, if any, as to depths, formations, or substances,
 - 19 (3) Parties to agreement with addresses and telephone numbers for notice purposes,
 - 20 (4) Percentages or fractional interests of parties to this agreement,
 - 21 (5) Oil and Gas Leases and/or Oil and Gas Interests subject to this agreement.
 - 22 (6) Burdens on production.
 - 23 (7) Exhibit "A-1" - List of Contract Area
 - 24 (8) Exhibit "A-2" - Plat of Contract Area
 - 25 (9) Exhibit "A-3" - Unleased Tracts
 - 26 (10) Exhibit "A-4" - Non-Consenting Working Interest Owners
- 27 B. Exhibit "B," Form of Lease.
- 28 C. Exhibit "C," Accounting Procedure.
- 29 D. Exhibit "D," Insurance.
- 30 E. Exhibit "E," Gas Balancing Agreement.
- 31 ~~F. Exhibit "F," Non-Discrimination and Certification of Non-Segregated Facilities.~~
- 32 G. ~~Exhibit "G," Tax Partnership.~~
- 33 F. Other: **Model Form Recording Supplement to Operating Agreement and Financing Agreement.**

34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74

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

3 **ARTICLE III.**
4 **INTERESTS OF PARTIES**

5 **A. Oil and Gas Interests:**
6 **or hereafter acquires**

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

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

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

15 Regardless of which party has contributed any Oil and Gas Lease or Oil and Gas Interest on which royalty or other
16 burdens may be payable and except as otherwise expressly provided in this agreement, each party shall pay or deliver, or
17 cause to be paid or delivered, all burdens on its share of the production from the Contract Area up to, but not in excess of the lowest sum of
18 royalty plus overriding royalty of any Oil and Gas Lease in the Contract Area and shall indemnify, defend and hold the other parties free
19 from any liability therefor.

20 Except as otherwise expressly provided in this agreement, if any party has contributed hereto any Lease or Interest which is
21 burdened with any royalty, overriding royalty, production payment or other burden on production in excess of the amounts
22 stipulated above, such party so burdened shall assume and alone bear all such excess obligations and shall indemnify, defend
23 and hold the other parties hereto harmless from any and all claims attributable to such excess burden. However, so long as
24 the Drilling Unit for the productive Zone(s) is identical with the Contract Area, each party shall pay or deliver, or cause to
25 be paid or delivered, all burdens on production from the Contract Area due under the terms of the Oil and Gas Lease(s)
26 which such party has contributed to this agreement, and shall indemnify, defend and hold the other parties free from any
27 liability therefor.

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

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

34 **C. Subsequently Created Interests:**

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

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

53 **ARTICLE IV.**
54 **TITLES**

55 **A. Title Examination:**

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

74 Each party shall be responsible for securing curative matter and pooling amendments or agreements required in
75 connection with Leases or Oil and Gas Interests contributed by such party. Operator shall be responsible for the preparation
76 and recording of pooling designations or declarations and communitization agreements as well as the conduct of hearings

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

6
7 **[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]**
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74

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

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

6 **B. Loss or Failure of Title:**

7 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
8 reduction of interest from that shown on Exhibit "A," the party credited with contributing the affected Lease or Interest
9 (including, if applicable, a successor in interest to such party) shall have ninety (90) days from final determination of title
10 failure to acquire a new lease or other instrument curing the entirety of the title failure, which acquisition will not be subject
11 to Article VIII.B., and failing to do so, this agreement, nevertheless, shall continue in force as to all remaining Oil and Gas
12 Leases and Interests; and,

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

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

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

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

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

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

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

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

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

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

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

64 3. Other Losses: All losses of Leases or Interests committed to this agreement, other than those set forth in Articles
65 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
66 Exhibit "A." This shall include but not be limited to the loss of any Lease or Interest through failure to develop or because
67 express or implied covenants have not been performed (other than performance which requires only the payment of money),
68 and the loss of any Lease by expiration at the end of its primary term if it is not renewed or extended. There shall be no
69 readjustment of interests in the remaining portion of the Contract Area on account of any joint loss.

70 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
71 Lease or Interest acquired by any party hereto (other than the party whose interest has failed or was lost) during the ninety
72 (90) day period provided by Article IV.B.1. and Article IV.B.2. above covering all or a portion of the interest that has failed
73 or was lost shall be offered at cost to the party whose interest has failed or was lost, and the provisions of Article VIII.B.
74 shall not apply to such acquisition.

ARTICLE V.
OPERATOR

A. Designation and Responsibilities of Operator:

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

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

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

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

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

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

C. Employees and Contractors:

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

D. Rights and Duties of Operator:

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

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

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

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

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

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

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

28 7. Drilling and Testing Operations: The following provisions shall apply to each well drilled / ~~hereunder, including but not~~
 29 ~~limited to the Initial Well:~~ ~~each Consenting Party~~

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

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

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

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

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

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

50 **ARTICLE VI.**
 51 **DRILLING AND DEVELOPMENT**

52 **A. Initial Well:**

53 **Operator anticipates commencing the drilling of the Initial Well within one (1) years of the effective**
 54 **date of the Unitization Order issued by the Division,**

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

57 **In the event a Party elects not to participate (a Non-Consenting Party) in the Initial Well proposed in the Contract Area**
 58 **pursuant to Article VI.A., upon the timely commencement of actual drilling operations on such Well, such Non-Consenting Party**
 59 **shall be deemed to have relinquished to the Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in**
 60 **proportion to their respective interests, all of such Non-Consenting Party's interest in the well and share of production therefrom**
 61 **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**
 62 **production taxes, excise taxes, royalty, overriding royalty and other interests not excepted by Article III.D. payable out of or**
 63 **measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the**
 64 **following: (a) 500% of such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the**
 65 **wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 500%**
 66 **of such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until**
 67 **such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this Article, it being agreed that**
 68 **such**
 69 **Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to such Non-**
 70 **Consenting Party had it participated in the well from the beginning of the operations; and (b) 500% of that portion of the costs**
 71 **and**
 72 **expenses of drilling, testing and completing, after deducting any cash contributions received under Article III.C., and 500% of**
 73 **that**
 74 **portion of the cost of newly acquired equipment in the well (to and including wellhead connections), which would have been**
 75 **chargeable to such Non-Consenting Party if it had participated therein.**

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

3
 4 **B. Subsequent Operations:**

5 1. Proposed Operations: If any party hereto should desire to drill any well on the Contract Area other than the Initial Well, or
 6 if any party should desire to Rework, Sidetrack, Deepen, Recomplete or Plug Back a dry hole or a well no longer capable of
 7 producing in paying quantities in which such party has not otherwise relinquished its interest in the proposed objective Zone under
 8 this agreement, the party desiring to drill, Rework, Sidetrack, Deepen, Recomplete or Plug Back such a well shall give written
 9 notice of the proposed operation to the parties who have not otherwise relinquished their interest in such objective Zone under this
 10 agreement and to all other parties in the case of a proposal for Sidetracking or Deepening, specifying the work to be
 11 performed, the location, proposed depth, objective Zone and the estimated cost of the operation. The parties to whom such a
 12 notice is delivered shall have thirty (30) days after receipt of the notice within which to notify the party proposing to do the work
 13 whether they elect to participate in the cost of the proposed operation. If a drilling rig is on location, notice of a proposal to
 14 Rework, Sidetrack, ~~Recomplete~~, Plug Back or Deepen may be given by telephone and the response period shall be limited to forty-
 15 eight (48) hours, ^{inclusive} ~~exclusive~~ of Saturday, Sunday and legal holidays. Failure of a party to whom such notice is delivered to reply
 16 within the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation.
 17 Any proposal by a party to conduct an operation conflicting with the operation initially proposed shall be delivered to all parties
 18 within the time and in the manner provided in Article VI.B.6. **No Party may elect to participate in any well proposed pursuant to this**
 19 **Agreement with less than its full and undivided working interest in the Contract Area.**

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

36 2. Operations by Less Than All Parties:

37 (a) Determination of Participation. If any party to whom such notice is delivered as provided in Article VI.B.1. or
 38 VI.C.1. (Option No. 2) elects not to participate in the proposed operation, then, in order to be entitled to the benefits of this
 39 Article, the Operator or parties giving the notice and such other parties as shall elect to participate in the operation shall, no
 40 later than ninety (90) days after the expiration of the notice period of thirty (30) days (or as promptly as practicable after the
 41 expiration of the forty-eight (48) hour period when a drilling rig is on location, as the case may be) actually commence the
 42 proposed operation * and complete it with due diligence. Operator shall perform all work for the account of the Consenting
 43 Parties; provided, however, if no drilling rig or other equipment is on location, and if Operator is a Non-Consenting Party,
 44 the Consenting Parties shall either: (i) request Operator to perform the work required by such proposed operation for the
 45 account of the Consenting Parties, or (ii) designate one of the Consenting Parties as Operator to perform such work. The
 46 rights and duties granted to and imposed upon the Operator under this agreement are granted to and imposed upon the party
 47 designated as Operator for an operation in which the original Operator is a Non-Consenting Party. Consenting Parties, when
 48 conducting operations on the Contract Area pursuant to this Article VI.B.2., shall comply with all terms and conditions of this
 49 agreement. ***Nothing contained herein shall prohibit Operator from actually commencing the proposed operation before the**
 50 **expiration of the notice period, nor shall such commencement affect in any way the validity of a party's election or deemed election.**

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

69 (b) Relinquishment of Interest for Non-Participation. The entire cost and risk of conducting such operations shall be
 70 borne by the Consenting Parties in the proportions they have elected to bear same under the terms of the preceding
 71 paragraph. Consenting Parties shall keep the leasehold estates involved in such operations free and clear of all liens and
 72 encumbrances of every kind created by or arising from the operations of the Consenting Parties. If such an operation results
 73 in a dry hole, then subject to Articles VI.B.6. and VI.E.3., the Consenting Parties shall plug and abandon the well and restore
 74 the surface location at their sole cost, risk and expense; provided, however, that those Non-Consenting Parties that
 participated in the drilling, Deepening or Sidetracking of the well shall remain liable for, and shall pay, their proportionate

1 shares of the cost of plugging and abandoning the well and restoring the surface location insofar only as those costs were not
 2 increased by the subsequent operations of the Consenting Parties. If any well drilled, Reworked, Sidetracked, Deepened,
 3 Recompleted or Plugged Back under the provisions of this Article results in a well capable of producing Oil and/or Gas in
 4 paying quantities, the Consenting Parties shall Complete and equip the well to produce at their sole cost and risk, and the
 5 well shall then be turned over to Operator (if the Operator did not conduct the operation) and shall be operated by it at the
 6 expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, Reworking,
 7 Sidetracking, ReCompleting, Deepening or Plugging Back of any such well by Consenting Parties in accordance with the
 8 provisions of this Article, each Non-Consenting Party shall be deemed to have relinquished to Consenting Parties, and the
 9 Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-
 10 Consenting Party's interest in the well and share of production therefrom or, in the case of a Reworking, Sidetracking, Deepening,
 11 ReCompleting or Plugging Back, or a Completion pursuant to Article VI.C.1. Option No. 2, all of such Non-
 12 Consenting Party's interest in the production obtained from the operation in which the Non-Consenting Party did not elect
 13 to participate. Such relinquishment shall be effective until the proceeds of the sale of such share, calculated at the well, or
 14 market value thereof if such share is not sold (after deducting applicable ad valorem, production, severance, and excise taxes,
 15 royalty, overriding royalty and other interests not excepted by Article III.C. payable out of or measured by the production
 16 from such well accruing with respect to such interest until it reverts), shall equal the total of the following:

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

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

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

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

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

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

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

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

9 3. Stand-By Costs: When a well which has been drilled or Deepened has reached its authorized depth and all tests have
 10 been completed and the results thereof furnished to the parties, or when operations on the well have been otherwise
 11 terminated pursuant to Article VI.F., stand-by costs incurred pending response to a party's notice proposing a Reworking,
 12 Sidetracking, Deepening, Recompleting, Plugging Back or Completing operation in such a well (including the period required
 13 under Article VI.B.6. to resolve competing proposals) shall be charged and borne as part of the drilling or Deepening
 14 operation just completed. Stand-by costs subsequent to all parties responding, or expiration of the response time permitted,
 15 whichever first occurs, and prior to agreement as to the participating interests of all Consenting Parties pursuant to the terms
 16 of the second grammatical paragraph of Article VI.B.2. (a), shall be charged to and borne as part of the proposed operation,
 17 but if the proposal is subsequently withdrawn because of insufficient participation, such stand-by costs shall be allocated
 18 between the Consenting Parties in the proportion each Consenting Party's interest as shown on Exhibit "A" bears to the total
 19 interest as shown on Exhibit "A" of all Consenting Parties.

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

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

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

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

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

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

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

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

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

73 6. Order of Preference of Operations, Except as otherwise specifically provided in this agreement, if any party desires to
 74

1 propose the conduct of an operation that conflicts with a proposal that has been made by a party under this Article VI, such
 2 party shall have fifteen (15) days from delivery of the initial proposal, in the case of a proposal to drill a well or to perform
 3 an operation on a well where no drilling rig is on location, or twenty-four (24) hours, exclusive of Saturday, Sunday and legal
 4 holidays, from delivery of the initial proposal, if a drilling rig is on location for the well on which such operation is to be
 5 conducted, to deliver to all parties entitled to participate in the proposed operation such party's alternative proposal, such
 6 alternate proposal to contain the same information required to be included in the initial proposal. Each party receiving such
 7 proposals shall elect by delivery of notice to Operator within five (5) days after expiration of the proposal period, or within
 8 twenty-four (24) hours (exclusive of Saturday, Sunday and legal holidays) if a drilling rig is on location for the well that is the
 9 subject of the proposals, to participate in one of the competing proposals. Any party not electing within the time required
 10 shall be deemed not to have voted. The proposal receiving the vote of parties owning the largest aggregate percentage
 11 interest of the parties voting shall have priority over all other competing proposals; in the case of a tie vote, the initial proposal shall prevail.
 12 Operator shall deliver notice of such result to all parties entitled to participate in the operation
 13 within five (5) days after expiration of the election period (or within twenty-four (24) hours, exclusive of Saturday, Sunday
 14 and legal holidays, if a drilling rig is on location). Each party shall then have two (2) days (or twenty-four (24) hours if a rig
 15 is on location) from receipt of such notice to elect by delivery of notice to Operator to participate in such operation or to
 16 relinquish interest in the affected well pursuant to the provisions of Article VLB.2.; failure by a party to deliver notice within
 17 such period shall be deemed an election not to participate in the prevailing proposal.

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

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

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

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

- 28 Option No. 1: All / necessary expenditures for the drilling, Deepening, equipping of the well, including tankage and/or surface
 29 facilities. See also Article XVI.E.
 30 For Horizontal Wells and Multi-Lateral Wells, all
- 31 Option No. 2: All / necessary expenditures for the drilling, Deepening or Sidetracking and testing of the well. When
 32 such well has reached its authorized depth, and all logs, cores and other tests have been completed, and the results
 33 thereof furnished to the parties, Operator shall give immediate notice to the Non-Operators having the right to
 34 participate in a Completion attempt whether or not Operator recommends attempting to Complete the well,
 35 together with Operator's AFE for Completion costs if not previously provided. The parties receiving such notice
 36 shall have forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) in which to elect by delivery of
 37 notice to Operator to participate in a recommended Completion attempt or to make a Completion proposal with an
 38 accompanying AFE. Operator shall deliver any such Completion proposal, or any Completion proposal conflicting
 39 with Operator's proposal, to the other parties entitled to participate in such Completion in accordance with the
 40 procedures specified in Article VLB.6. Election to participate in a Completion attempt shall include consent to all
 41 necessary expenditures for the Completing and equipping of such well, including necessary tankage and/or surface
 42 facilities but excluding any stimulation operation not contained on the Completion AFE. Failure of any party
 43 receiving such notice to reply within the period above fixed shall constitute an election by that party not
 44 to participate in the cost of the Completion attempt; provided, that Article VLB.6. shall control in the case of
 45 conflicting Completion proposals. If one or more, but less than all of the parties, elect to attempt a Completion, the
 46 provision of Article VLB.2. hereof (the phrase "Reworking, Sidetracking, Deepening, Recompleting or Plugging
 47 Back" as contained in Article VLB.2. shall be deemed to include "Completing") shall apply to the operations
 48 thereafter conducted by less than all parties; provided, however, that Article VLB.2. shall apply separately to each
 49 separate Completion or Recompletion attempt undertaken hereunder, and an election to become a Non-Consenting
 50 Party as to one Completion or Recompletion attempt shall not prevent a party from becoming a Consenting Party
 51 in subsequent Completion or Recompletion attempts regardless whether the Consenting Parties as to earlier
 52 Completions or Recompletion have recouped their costs pursuant to Article VLB.2.; provided further, that any
 53 recoupment of costs by a Consenting Party shall be made solely from the production attributable to the Zone in
 54 which the Completion attempt is made. Election by a previous Non-Consenting party to participate in a subsequent
 55 Completion or Recompletion attempt shall require such party to pay its proportionate share of the cost of salvable
 56 materials and equipment installed in the well pursuant to the previous Completion or Recompletion attempt,
 57 insofar and only insofar as such materials and equipment benefit the Zone in which such party participates in a
 58 Completion attempt. See also Article XVI.E.

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

63 **D. Other Operations:**

64 Operator shall not undertake any single project reasonably estimated to require an expenditure in excess of Fifty Thousand
 65 _____ Dollars (\$ 50,000.00) except in connection with the
 66 drilling, Sidetracking, Reworking, Deepening, Completing, Recompleting or Plugging Back of a well that has been previously
 67 authorized by or pursuant to this agreement; provided, however, that, in case of explosion, fire, flood or other sudden
 68 emergency, whether of the same or different nature, Operator may take such steps and incur such expenses as in its opinion
 69 are required to deal with the emergency to safeguard life and property but Operator, as promptly as possible, shall report the
 70 emergency to the other parties. If Operator prepares an AFE for its own use, Operator shall furnish any Non-Operator so
 71 requesting an information copy thereof for any single project costing in excess of Fifty Thousand Dollars
 72 (\$50,000.00). Any party who has not relinquished its interest in a well shall have the right to propose that
 73 Operator perform repair work or undertake the installation of artificial lift equipment or ancillary production facilities such as
 74 salt water disposal wells or to conduct additional work with respect to a well drilled hereunder or other similar project (but

1 not including the installation of gathering lines or other transportation or marketing facilities, the installation of which shall
 2 be governed by separate agreement between the parties) reasonably estimated to require an expenditure in excess of the
 3 amount first set forth above in this Article VLD. (except in connection with an operation required to be proposed under
 4 Articles VLB.1. or VLC.1. Option No. 2, which shall be governed exclusively by those Articles). Operator shall deliver such
 5 proposal to all parties entitled to participate therein. If within thirty (30) days thereof Operator secures the written consent
 6 of any party or parties owning at least 80 % of the interests of the parties entitled to participate in such operation,
 7 each party having the right to participate in such project shall be bound by the terms of such proposal and shall be obligated
 8 to pay its proportionate share of the costs of the proposed project as if it had consented to such project pursuant to the terms
 9 of the proposal.

10

11 **E. Abandonment of Wells:**

12 1. Abandonment of Dry Holes: Except for any well drilled or Deepened pursuant to Article VLB.2., any well which has
 13 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
 14 abandoned without the consent of all parties. Should Operator, after diligent effort, be unable to contact any
 15 party, or should any party fail to reply within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after
 16 delivery of notice of the proposal to plug and abandon such well, such party shall be deemed to have consented to the
 17 proposed abandonment. All such wells shall be plugged and abandoned in accordance with applicable regulations and at the
 18 cost, risk and expense of the parties who participated in the cost of drilling or Deepening such well. Any party who objects to
 19 plugging and abandoning such well by notice delivered to Operator within forty-eight (48) hours (exclusive of Saturday,
 20 Sunday and legal holidays) after delivery of notice of the proposed plugging shall take over the well as of the end of such
 21 forty-eight (48) hour notice period and conduct further operations in search of Oil and/or Gas subject to the provisions of
 22 Article VLB.; failure of such party to provide proof reasonably satisfactory to Operator of its financial capability to conduct
 23 such operations or to take over the well within such period or thereafter to conduct operations on such well or plug and
 24 abandon such well shall entitle Operator to retain or take possession of the well and plug and abandon the well. The party
 25 taking over the well shall indemnify Operator (if Operator is an abandoning party) and the other abandoning parties against
 26 liability for any further operations conducted on such well except for the costs of plugging and abandoning the well and
 27 restoring the surface, for which the abandoning parties shall remain proportionately liable.

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

41 Parties taking over a well as provided herein shall tender to each of the other parties its proportionate share of the value of
 42 the well's salvable material and equipment, determined in accordance with the provisions of Exhibit "C," less the estimated cost
 43 of salvaging and the estimated cost of plugging and abandoning and restoring the surface; provided, however, that in the event
 44 the estimated plugging and abandoning and surface restoration costs and the estimated cost of salvaging are higher than the
 45 value of the well's salvable material and equipment, each of the abandoning parties shall tender to the parties continuing
 46 operations their proportionate shares of the estimated excess cost. Each abandoning party shall assign to the non-abandoning
 47 parties, without warranty, express or implied, as to title or as to quantity, or fitness for use of the equipment and material, all
 48 of its interest in the wellbore of the well and related equipment, together with its interest in the Leasehold insofar and only
 49 insofar as such Leasehold covers the right to obtain production from that wellbore in the Zone then open to production. If the
 50 interest of the abandoning party is or includes an Oil and Gas Interest, such party shall execute and deliver to the non-
 51 abandoning party or parties an oil and gas lease, limited to the wellbore and the Zone then open to production, for a term of
 52 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
 53 attached as Exhibit "B." The assignments or leases so limited shall encompass the Drilling Unit upon which the well is located.
 54 The payments by, and the assignments or leases to, the assignees shall be in a ratio based upon the relationship of their
 55 respective percentage of participation in the Contract Area to the aggregate of the percentages of participation in the Contract
 56 Area of all assignees. There shall be no readjustment of interests in the remaining portions of the Contract Area.

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

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

71 **F. Termination of Operations:**

72 Upon the commencement of an operation for the drilling, Reworking, Sidetracking, Plugging Back, Deepening, testing,
 73 Completion or plugging of a well, including but not limited to the Initial Well, such operation shall not be terminated without

74

1 consent of parties bearing 80 % of the costs of such operation; provided, however, that in the event granite or other
 2 practically impenetrable substance or condition in the hole is encountered which renders further operations impractical,
 3 Operator may discontinue operations and give notice of such condition in the manner provided in Article VI.B.1, and the
 4 provisions of Article VI.B. or V.I.E. shall thereafter apply to such operation, as appropriate.

5 **G. Taking Production in Kind:**

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

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

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

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

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

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

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

41 **Option No. 2: No Gas Balancing Agreement:**

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

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

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

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

72 ~~All parties shall give timely written notice to Operator of their Gas marketing arrangements for the following~~
 73 ~~month, excluding price, and shall notify Operator immediately in the event of a change in such arrangements.~~

Operator shall maintain records of all marketing arrangements, and of volumes actually sold or transported, which records shall be made available to Non-Operators upon reasonable request.

ARTICLE VII.

EXPENDITURES AND LIABILITY OF PARTIES

A. Liability of Parties:

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

B. Liens and Security Interests:

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

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

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

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

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

If any party does not perform all of its obligations hereunder, and the failure to perform subjects such party to foreclosure or execution proceedings pursuant to the provisions of this agreement, to the extent allowed by governing law, the defaulting party waives any available right of redemption from and after the date of judgment, any required valuation or appraisal of the mortgaged or secured property prior to sale, any available right / 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

1 payment to Operator of any sum due hereunder for services performed or materials supplied by Operator.

2 **C. Advances:**

3 Operator, at its election, shall have the right from time to time to demand and receive from one or more of the other
 4 parties payment in advance of their respective shares of the estimated amount of the expense to be incurred in operations
 5 hereunder during the next succeeding month, which right may be exercised only by submission to each such party of an
 6 itemized statement of such estimated expense, together with an invoice for its share thereof. Each such statement and invoice
 7 for the payment in advance of estimated expense shall be submitted on or before the 20th day of the next preceding month.
 8 Each party shall pay to Operator its proportionate share of such estimate within ~~fifteen (15)~~ ^{thirty (30)} after such estimate and
 9 invoice is received. If any party fails to pay its share of said estimate within said time, the amount due shall bear interest as
 10 provided in Exhibit "C" until paid. Proper adjustment shall be made monthly between advances and actual expense to the end
 11 that each party shall bear and pay its proportionate share of actual expenses incurred, and no more.

12 **D. Defaults and Remedies:**

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

21 1. Suspension of Rights: Any party may deliver to the party in default a Notice of Default, which shall specify the default,
 22 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
 23 or more of the remedies provided in this Article. If the default is not cured within thirty (30) days of the delivery of such
 24 Notice of Default, all of the rights of the defaulting party granted by this agreement may upon notice be suspended until the
 25 default is cured, without prejudice to the right of the non-defaulting party or parties to continue to enforce the obligations of
 26 the defaulting party previously accrued or thereafter accruing under this agreement. If Operator is the party in default, the
 27 Non-Operators shall have in addition the right, by vote of Non-Operators owning a majority in interest in the Contract Area
 28 after excluding the voting interest of Operator, to appoint a new Operator effective immediately. The rights of a defaulting
 29 party that may be suspended hereunder at the election of the non-defaulting parties shall include, without limitation, the right
 30 to receive information as to any operation conducted hereunder during the period of such default, the right to elect to
 31 participate in an operation proposed under Article VI.B. of this agreement, the right to participate in an operation being
 32 conducted under this agreement even if the party has previously elected to participate in such operation, and the right to
 33 receive proceeds of production from any well subject to this agreement.

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

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

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

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

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

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

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

72 Operator shall notify Non-Operators of the anticipated completion of a shut-in well, or the shutting in or return to
 73 production of a producing well, at least five (5) days (excluding Saturday, Sunday, and legal holidays) prior to taking such

1 action, or at the earliest opportunity permitted by circumstances, but assumes no liability for failure to do so. In the event of
2 failure by Operator to so notify Non-Operators, the loss of any lease contributed hereto by Non-Operators for failure to make
3 timely payments of any shut-in well payment shall be borne jointly by the parties hereto under the provisions of Article
4 IV.B.3.

5 **F. Taxes:**

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

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

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

26 **ARTICLE VIII.**

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

28 **A. Surrender of Leases:**

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

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

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

56 **B. Renewal or Extension of Leases:**

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

65 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
66 by the parties who elect to participate therein, in a ratio based upon the relationship of their respective percentage of participation in
67 the Contract Area to the aggregate of the percentages of participation in the Contract Area of all parties participating in the
68 purchase of such renewal or replacement Lease. The acquisition of a renewal or replacement Lease by any or all of the parties hereto
69 shall ~~not~~ ^{pursuant to Article XVI.L} cause a readjustment of the interests of the parties stated in Exhibit "A" / ~~but~~ and any renewal or replacement Lease in which
70 shall ~~not~~ ^{pursuant to Article XVI.L} be subject to this agreement ~~but shall be deemed subject to a separate Operating~~
71 ~~Agreement in the form of this agreement.~~

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

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

8 The provisions in this Article shall ^{not} ~~also~~ be applicable to extensions of Oil and Gas Leases.

9
 10
 11 **C. Acreage or Cash Contributions:**

12 While this agreement is in force, if any party contracts for a contribution of cash towards the drilling of a well or any other
 13 operation on the Contract Area, such contribution shall be paid to the party who conducted the drilling or other operation and shall
 14 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
 15 the contribution is made shall promptly tender an assignment of the acreage, without warranty of title, to the Drilling Parties in the
 16 proportions said Drilling Parties shared the cost of drilling the well. Such acreage shall become a separate Contract Area and, to the
 17 extent possible, be governed by provisions identical to this agreement. Each party shall promptly notify all other parties of any
 18 acreage or cash contributions it may obtain in support of any well or any other operation on the Contract Area. The above
 19 provisions shall also be applicable to optional rights to earn acreage outside the Contract Area which are in support of well drilled
 20 inside Contract Area.

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

23 **D. Assignment; Maintenance of Uniform Interest:**

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

- 28 ~~1. the entire interest of the party in all Oil and Gas Leases, Oil and Gas Interests, wells, equipment and production; or~~
 29 ~~2. an equal undivided percent of the party's present interest in all Oil and Gas Leases, Oil and Gas Interests, wells,~~
 30 ~~equipment and production in the Contract Area.~~

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

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

48 **E. Waiver of Rights to Partition:**

49 If permitted by the laws of the state or states in which the property covered hereby is located, each party hereto owning an
 50 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
 51 undivided interest therein.

52 **F. Preferential Right to Purchase**

53 (Optional: Check if applicable)

54 ~~Should any party desire to sell all or any part of its interests under this agreement, or its rights and interests in the Contract~~
 55 ~~Area, it shall promptly give written notice to the other parties, with full information concerning its proposed disposition, which~~
 56 ~~shall include the name and address of the prospective transferee (who must be ready, willing and able to purchase), the purchase~~
 57 ~~price, a legal description sufficient to identify the property, and all other terms of the offer. The other parties shall then have an~~
 58 ~~optional prior right, for a period of ten (10) days after notice is delivered, to purchase for the stated consideration on the~~
 59 ~~same terms and conditions the interest which the other party proposes to sell; and, if this optional right is exercised, the~~
 60 ~~purchasing parties shall share the purchased interest in the proportions that the interest of each bears to the total interest of all~~
 61 ~~purchasing parties. However, there shall be no preferential right to purchase in those cases where any party wishes to mortgage~~
 62 ~~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,~~
 63 ~~or to dispose of its interests by merger, reorganization, consolidation, or by sale of all or substantially all of its Oil and Gas assets~~
 64 ~~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~~
 65 ~~company in which such party owns a majority of the stock.~~

66 **ARTICLE IX.**

67 **INTERNAL REVENUE CODE ELECTION**

68 If, for federal income tax purposes, this agreement and the operations hereunder are regarded as a partnership, and if the
 69 parties have not otherwise agreed to form a tax partnership pursuant to Exhibit "G" or other agreement between them, each
 70 party thereby affected elects to be excluded from the application of all of the provisions of Subchapter "K," Chapter 1, Subtitle
 71 "A," of the Internal Revenue Code of 1986, as amended ("Code"), as permitted and authorized by Section 761 of the Code and
 72 the regulations promulgated thereunder. Operator is authorized and directed to execute on behalf of each party hereby affected
 73 such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal

1 Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by
2 Treasury Regulation §1.761. Should there be any requirement that each party hereby affected give further evidence of this
3 election, each such party shall execute such documents and furnish such other evidence as may be required by the Federal Internal
4 Revenue Service or as may be necessary to evidence this election. No such party shall give any notices or take any other action
5 inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Contract
6 Area is located or any future income tax laws of the United States contain provisions similar to those in Subchapter "K," Chapter
7 1, Subtitle "A," of the Code, under which an election similar to that provided by Section 761 of the Code is permitted, each party
8 hereby affected shall make such election as may be permitted or required by such laws. In making the foregoing election, each
9 such party states that the income derived by such party from operations hereunder can be adequately determined without the
10 computation of partnership taxable income.

11
12

13 **ARTICLE X.**
14 **CLAIMS AND LAWSUITS**

15 Operator may settle any single uninsured third party damage claim or suit arising from operations hereunder if the expenditure
16 does not exceed Fifty Thousand Dollars (**\$50,000.00**) and if the payment is in complete settlement
17 of such claim or suit. If the amount required for settlement exceeds the above amount, the parties hereto shall assume and take over
18 the further handling of the claim or suit, unless such authority is delegated to Operator. All costs and expenses of handling settling,
19 or otherwise discharging such claim or suit shall be a the joint expense of the parties participating in the operation from which the
20 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
21 hereunder over which such individual has no control because of the rights given Operator by this agreement, such party shall
22 immediately notify all other parties, and the claim or suit shall be treated as any other claim or suit involving operations hereunder.
23

24
25

26 **ARTICLE XI.**
27 **FORCE MAJEURE**

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

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

41
42

43 **ARTICLE XII.**
44 **NOTICES**

45 All notices authorized or required between the parties by any of the provisions of this agreement, unless otherwise
46 specifically provided, shall be in writing and delivered in person or by United States mail, courier ~~service,~~ ^{electronic mail,} telegram, telex,
47 telecopier or any other form of facsimile, postage or charges prepaid, and addressed to such parties at the addresses listed on
48 Exhibit "A." All telephone or oral notices permitted by this agreement shall be confirmed immediately thereafter by written
49 notice. The originating notice given under any provision hereof shall be deemed delivered only when received by the party to
50 whom such notice is directed, and the time for such party to deliver any notice in response thereto shall run from the date
51 the originating notice is received. "Receipt" for purposes of this agreement with respect to written notice delivered hereunder
52 shall be actual delivery of the notice to the address of the party to be notified specified in accordance with this agreement, or
53 to the telecopy, facsimile ^{electronic mail} / or telex machine of such party. The second or any responsive notice shall be deemed delivered when
54 deposited in the United States mail or at the office of the courier or telegraph service, or upon transmittal by telex, / telecopy
55 or facsimile, or when personally delivered to the party to be notified, provided, that when response is required within 24 or
56 48 hours, such response shall be given orally or by telephone, telex, / telecopy or other facsimile within such period. Each party
57 shall have the right to change its address at any time, and from time to time, by giving written notice thereof to all other
58 parties. If a party is not available to receive notice orally or by telephone when a party attempts to deliver a notice required
59 to be delivered within 24 or 48 hours, the notice may be delivered in writing by any other method specified herein and shall
60 be deemed delivered in the same manner provided above for any responsive notice.

61
62

63 **ARTICLE XIII.**
64 **TERM OF AGREEMENT**

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

- 68 ~~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~~
69 ~~of the Contract Area, whether by production, extension, renewal or otherwise~~
70 **Option No. 2:** In the event the well described in Article VI.A., or any subsequent well drilled under any provision
71 of this agreement, results in the Completion of a well as a well capable of production of Oil and/or Gas in paying
72 quantities, this agreement shall continue in force so long as any such well is capable of production, and for an
73 additional period of ninetv (90) days thereafter; provided, however, if, prior to the expiration of such
74 additional period, one or more of the parties hereto are engaged in drilling, Reworking, Deepening, Sidetracking,
75 Plugging Back, testing or attempting to Complete or Re-complete a well or wells hereunder, this agreement shall
76 continue in force until such operations have been completed and if production results therefrom, this agreement
77 shall continue in force as provided herein. In the event the well described in Article VI.A., or any subsequent well
78 drilled hereunder, results in a dry hole, and no other well is capable of producing Oil and/or Gas from the

79

1 Contract Area, this agreement shall terminate unless drilling, Deepening, Sidetracking, Completing, Re-
2 completing, Plugging Back or Reworking operations are commenced within ninety (90) days from the
3 date of abandonment of said well. "Abandonment" for such purposes shall mean either (i) a decision by all parties
4 not to conduct any further operations on the well or (ii) the elapse of 180 days from the conduct of any
5 operations on the well, whichever first occurs.

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

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

12
13 **ARTICLE XIV.**
14 **COMPLIANCE WITH LAWS AND REGULATIONS**

15 **A. Laws, Regulations and Orders:**

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

19 **B. Governing Law:**

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

24 **C. Regulatory Agencies:**

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

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

37
38 **ARTICLE XV.**
39 **MISCELLANEOUS**

40 **A. Execution:**

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

56 **B. Successors and Assigns:**

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

60 **C. Counterparts:**

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

63 **D. Severability:**

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

67
68 **ARTICLE XVI.**

69 **OTHER PROVISIONS**

70
71
72 **A. Conflicts:**

1 Notwithstanding anything herein contained to the contrary, it is understood and agreed that if there is any conflict between any
2 part of or all of the terms and provisions of Article XVI and any other terms and provisions of this agreement, the terms and
3 provisions of this Article XVI shall prevail and control.
4

5 **B. Priority of Operations:**

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

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

15
16 **C. Netting and Setoff:**

17 Except for any payments related to charges on any joint interest billing that a Non-Operator has disputed in good faith, in the
18 event that Non-Operator does not remit payment for any operating costs or charges assessable to Non-Operators and permitted
19 under this Operating Agreement within forty five (45) days after the date payment is due, Operator is authorized to deduct such
20 costs or charges, and to remit to such Non-Operators their respective net share of any proceeds attributable to the interest of such
21 Non-Operators being received directly from any purchasers of production from the Contract Area. The foregoing provisions shall
22 not diminish Operator's lien rights contained within this agreement.
23

24 **D. Multiple Billing:**

25 In no event shall Operator be required to make more than four billings for the entire interest credited to each Non-Operator on
26 Exhibit "A". If any Non-Operator to this agreement disposes of any part or all of the interest credited to it on Exhibit "A", hereinafter
27 referred to as "Selling Party," such Selling Party shall be solely responsible for billing its assignee or assignees and shall remain primarily
28 liable to the other Parties for the interest or interests assigned until such time as Selling Party has (1) designated and qualified the
29 assignees to receive the billing for its interest, (2) designated assignees have been approved and accepted by Operator, and (3) has
30 furnished to Operator written notice of the conveyance and photocopy of the recorded assignments by which the transfer is made. The
31 sale or other disposition of any interest in the leases covered by this agreement shall be made specifically subject to the provisions of this
32 Article. Operator's approval shall not be unreasonably withheld.
33

34 **E. Horizontal Wells:**

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

44 2. Operator shall have the right to cease drilling a Horizontal Well or Multi-lateral Well at any time, for any reason, and such
45 Horizontal Well or Multi-lateral Well shall be deemed to have reached its objective depth so long as Operator has drilled such
46 Horizontal Well or Multi-lateral Well to the objective formation and has drilled laterally in the objective formation for a distance
47 which is at least equal to fifty percent (50%) of the length of the total horizontal drainhole displacement (displacement from true
48 vertical) proposed for the operation. In like manner, Operator may continue drilling to extend a proposed lateral in a Horizontal
49 Well or Multi-lateral Well up to 10% longer than the length proposed in the proposal approved by the Parties if in Operator's sole
50 judgment, it would be reasonably prudent to do so.
51

52 **F. Sidetracking:**

53 Notwithstanding the provisions of Article VI.B(5), "Sidetracking", such paragraph shall not be applicable to operations in the
54 lateral portion of a Horizontal Well or Multi-lateral Well. Drilling operations which are intended to recover penetration of the
55 target interval which are conducted in a Horizontal Well or Multi-lateral Well shall be considered as included in the original
56 proposed drilling operations.
57

58 **G. Further Assurances:**

59 In connection with this agreement, the parties agree to execute and deliver such additional documents and instruments and to
60 perform such additional acts as may be necessary or appropriate to effectuate, carry out, and perform all the terms, provisions and
61 conditions of this agreement. Without limiting the generality of the foregoing, the parties agree to execute and deliver to Operator one or
62 more Recording Supplement to Operating Agreement and Financing Statement in the form of Exhibit "H" in recordable form, giving
63 notice of the existence of this Operating Agreement, which Operator shall cause to be recorded in the county or counties in which any
64 portion of the Contract Area is located.
65

66 **H. Covenants Running with the Land:**

67 The terms, provisions, covenants and conditions of this agreement shall be deemed to be covenants running with the lands, the
68 lease or leases and leasehold estate covered hereby, and all of the terms, provisions, covenants and conditions of this agreement shall
69 be binding upon and inure to the benefit of the parties hereto, their respective successors and assigns.
70

71 **I. Headings:**

72 All headings in this agreement are for reference purposes only and have no binding effect on the terms, conditions or
73 provisions of this agreement.
74

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74

J. Indemnity for Access to Contract Area:

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

K. Contract Area and Drilling Unit:

“Contract Area” shall mean a contiguous area in size and configuration as determined by the Operator in order to accommodate anticipated wells, wellbore paths and wellbore lengths located or to be located within the anticipated Drilling Unit. The Contract Area shall be, to the extent practicable, the same as the Drilling Unit, and shall include all Oil and Gas Leases and Oil and Gas Interests within the boundary of the Contract Area, and may include oil and gas leases or oil and gas interests not controlled or owned by the Parties to this Agreement or other interests which cannot be included in the Drilling Unit at the time the Drilling Unit is formed or created but are reasonably anticipated to be controlled or acquired by the Parties in the future. The Parties shall make good faith efforts to include otherwise stranded acreage in a Contract Area where reasonably practical.

L. Working Interest Adjustment:

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

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

M. Contract Area / Drilling Unit Adjustment:

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

To the extent the Contract Area is modified pursuant to this Agreement, this Agreement shall be amended with revised Exhibits “A,” “A-1,” and “A-2” and a new Recording Supplement to Operating Agreement and Financing Agreement shall be prepared and filed of record.

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

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74

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

_____.

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

OPERATOR

ATTEST OR WITNESS

American Energy – Utica, LLC
an Oklahoma limited liability company

_____ By: Robert W. Kelly II

Title: Attorney-in-Fact
Address: 301 NW 63rd, Suite 600, Oklahoma City, Oklahoma 73116

NON-OPERATORS

ATTEST OR WITNESS

_____ By: _____

Title: _____
Address: _____

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) §
COUNTY OF OKLAHOMA)

On this, the ____ day of _____, 20____, before me _____, the undersigned officer, personally appeared Robert W. Kelly II, who acknowledged himself to be the Attorney-in-Fact of American Energy – Utica, LLC, an Oklahoma limited liability company, and that he as such Attorney-in-Fact, being authorized to do so, executed the foregoing instrument for the purpose therein contained by signing the name of the limited liability company by himself as Attorney-in-Fact.

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

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

STATE OF _____)
) §
COUNTY OF _____)

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

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

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

EXHIBIT "A"

Attached to and made a part of that certain Operating Agreement dated _____, _____, by and between American Energy – Utica, LLC as Operator, and _____, _____, as Non-Operator.

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

The Contract Area is shown on Exhibit "A-2" attached hereto.

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

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

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

The owners and interests of the owners are set forth in Exhibit "A-1" attached hereto.

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

See Exhibits "A-1", "A-3", and "A-4" for a list of the oil and gas leases and interests subject to this agreement.

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

American Energy – Utica, LLC
P. O. Box 13678
Oklahoma City, Oklahoma 73113
Attention: Serena Evans, Land Director, Utica

The names and addresses of the remaining parties are set forth in Exhibit "A-3" and "A-4" attached hereto.

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

End of Exhibit "A"

Exhibit "A-1"

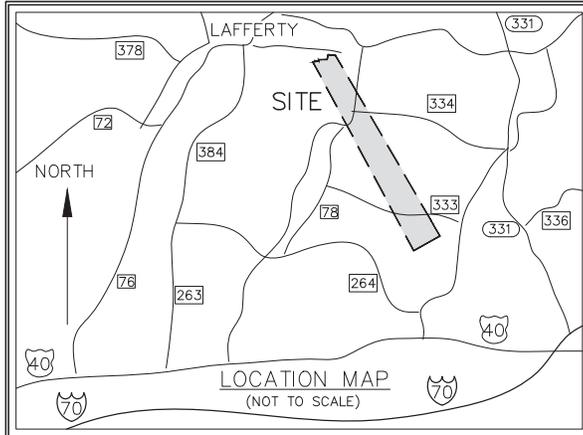
Tract Number	Mineral Owner	Address	Parcel Number	Deed Acreage	Unit Acreage	Unit Working Interest ("WI")	AEU Unit WI	AEU Unit Participation	XTO WI	XTO Unit Participation	Gulfpport WI	Gulfpport Unit Participation	Rice WI	Rice Unit Participation
1	Ida M. Boone	C/O Ida M. Brock 44591 Saffell Rd. Belmont, Ohio 43718	32-00491.000	5.00	1.486	0.52%	95.00%	0.49%	5.00%	0.03%	0.00%	0.00%	0.00%	0.00%
4	Bedway Land and Minerals Company	C/O Jonathan Bedway 67877 Pano Coast Rd. Belmont, Ohio 43718	32-01242.000	142.59	46.487	16.25%	95.00%	15.44%	5.00%	0.81%	0.00%	0.00%	0.00%	0.00%
6	Robert R. & Bonnie K. Rossini	PO Box 21 St. Clairsville, Ohio 43950	32-01296.001	36.45	1.211	0.42%	0.00%	0.00%	0.00%	0.00%	100.00%	0.42%	0.00%	0.00%
8	David L. Grum & Sarah E. Grum	68895 Loydsville Bannock Rd. Belmont, Ohio 43718	32-01336.000	44.42	6.933	2.42%	95.00%	2.30%	5.00%	0.12%	0.00%	0.00%	0.00%	0.00%
9	David L. Grum & Sarah E. Grum	68895 Loydsville Bannock Rd. Belmont, Ohio 43718	32-01402.000	91.91	3.113	1.09%	95.00%	1.03%	5.00%	0.05%	0.00%	0.00%	0.00%	0.00%
10	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	32-01481.000	76.88	0.334	0.12%	100.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
11	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01682.000	60.55	5.594	1.96%	100.00%	1.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
13	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01684.000	40.24	36.880	12.89%	100.00%	12.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
14	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01686.000	40.00	18.962	6.63%	100.00%	6.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
15	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01687.000	56.77	38.313	13.39%	100.00%	13.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
19	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00524.000	4.97	1.950	0.68%	100.00%	0.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
20	Bedway Land and Minerals Company	C/O Jonathan Bedway 67877 Pano Coast Rd. Belmont, Ohio 43718	39-00303.000	6.53	0.316	0.11%	95.00%	0.10%	5.00%	0.01%	0.00%	0.00%	0.00%	0.00%
26	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00521.000	70.87	39.222	13.71%	100.00%	13.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
27	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00522.000	167.76	31.265	10.93%	100.00%	10.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
28	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00522.001	0.10	0.127	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
29	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00523.000	0.22	0.185	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
30	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00534.000	6.82	5.134	1.79%	100.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
31	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00534.001	2.76	1.976	0.69%	100.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
35	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01240.000	73.25	25.060	8.76%	100.00%	8.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
36	Crystal Coyne	45282 Lucas Lash Road Belmont, Ohio 43718	39-01240.001	1.01	0.105	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.04%
36	Kayla Mamula	65795 N26 Road Bethesda, Ohio 43719	39-01240.001	1.01	0.105	0.04%	100.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
37	Cobra Petroleum Company, LP	PO Box 136355 FL Worth, Texas 76136	39-01240.002	7.26	2.1235125	0.74%	100.00%	0.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
37	Coastal Management Trust	PO Box 1569 Porter, Texas 77365	39-01240.002	7.26	0.7078375	0.25%	100.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
37	Domestic Resources, LLC	4450 Oak Park Ln. #101386 FL Worth, Texas 76185	39-01240.002	7.26	0.49965	0.17%	100.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Tract Number	Mineral Owner	Address	Parcel Number	Deed Acreage	Unit Acreage	Unit Working Interest ("WI")	AEU Unit WI	AEU Unit Participation	XTO WI	XTO Unit Participation	Gulfport WI	Gulfport Unit Participation	Rice WI	Rice Unit Participation
38	Ohio American Energy, Inc.	C/O Dena Milhoan 46226 National Rd. St. Clairsville, Ohio 43950	39-01240.003	4.99	4.365	1.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01240.005	0.46	0.493	0.17%	100.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
40	Robert Copeland & Bonnie Copeland	69583 Oco Rd. St. Clairsville, Ohio 43950	39-01240.007	7.27	7.273	2.54%	100.00%	2.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
41	Keystone Buckeye Energy, LLC	C/O Adam Angelici, Managing Member 445 Washington Ave., Suite 102 Bridgewater, Pennsylvania 15017	39-01241.000	1.00	0.975	0.34%	100.00%	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
42	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01415.000	10.40	2.927	1.02%	100.00%	1.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
43	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01417.000	3.71	0.495	0.17%	100.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
44	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01417.001	2.35	1.493	0.52%	100.00%	0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total					286.110	100.00%	AEU	96.89%	XTO	1.02%	Gulfport	0.42%	Rice	0.04%

End of Exhibit "A-1"

Exhibit "A-2"

Unit Area of Emersyn E RCH BL



UNIT PARCEL ACREAGE

TRACT NO.	PARCEL NUMBER	AREA IN UNIT (ACRES)
1	32-00491.000	1.486
4	32-01242.000	46.487
6	32-01296.001	1.211
8	32-01336.000	6.933
9	32-01402.000	3.113
10	32-01481.000	0.334
11	32-01682.000	5.594
13	32-01684.000	36.880
14	32-01686.000	18.962
15	32-01687.000	38.313
19	39-00524.000	1.950
20	39-00303.000	0.316
26	39-00521.000	39.222
27	39-00522.000	31.265
28	39-00522.001	0.127
29	39-00523.000	0.185
30	39-00534.000	5.134
31	39-00534.001	1.976
35	39-01240.000	25.060
36	39-01240.001	0.210
37	39-01240.002	3.331
38	39-01240.003	4.365
39	39-01240.005	0.493
40	39-01240.007	7.273
41	39-01241.000	0.975
42	39-01415.000	2.927
43	39-01417.000	0.495
44	39-01417.001	1.493
TOTAL:		286.110

NOTES:

1. PARCEL BOUNDARIES AND MAP FEATURES SHOWN OUTSIDE OF THE UNIT WERE OBTAINED FROM THE COUNTY AUDITOR TAX MAPS AND/OR GIS DATA. CESO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA.
2. PARCEL LINES, RIGHTS-OF-WAY AND GEOGRAPHIC SUBDIVISION BOUNDARIES ARE BASED ON COUNTY GIS, DEED INFORMATION, AND FOUND MONUMENTATION.
3. THIS PLAT IS NOT A BOUNDARY SURVEY PURSUANT TO THE OHIO ADMINISTRATIVE CODE (OAC) 4733-37.
4. EXISTING DRILLING AND/OR PRODUCING WELLS AND ANY PLUGGED OIL OR GAS WELLS SHOWN WERE PLOTTED USING THE ODNR OIL AND GAS INTERACTIVE WELL LOCATOR AND REPRESENT THE ACCURACY THEREOF, UNLESS OTHERWISE FIELD LOCATED.

UNIT CORNER COORDINATES:

UNIT CORNER	SPC NAD 83 (OHIO SOUTH) NORTHING	SPC NAD 83 (OHIO SOUTH) EASTING	GEO NAD 83 LATITUDE	GEO NAD 83 LONGITUDE	SPC NAD 27 (OHIO SOUTH) NORTHING	SPC NAD 27 (OHIO SOUTH) EASTING	GEO NAD 27 LATITUDE	GEO NAD 27 LONGITUDE
UC-1	771920.20	2385129.88	40.109887	81.010468	771879.06	2416590.86	40.109817	81.010648
UC-2	771941.77	2385130.08	40.109946	81.010466	771900.63	2416591.07	40.109876	81.010646
UC-3	771945.23	2385234.13	40.109976	81.010093	771913.09	2416695.12	40.109906	81.010274
UC-4	771978.89	2385231.88	40.110043	81.010100	771937.75	2416692.87	40.109974	81.010280
UC-5	771952.90	2385398.71	40.109964	81.009505	771911.76	2416859.69	40.109895	81.009685
UC-6	772034.85	2385398.96	40.110189	81.009499	771993.70	2416859.94	40.110120	81.009680
UC-7	772041.49	2385803.17	40.110189	81.008054	772000.34	2417264.14	40.110120	81.008234
UC-8	772277.50	2385857.63	40.110835	81.007845	772236.35	2417318.60	40.110765	81.008026
UC-9	772267.21	2385892.04	40.110805	81.007723	772226.06	2417353.01	40.110735	81.007903
UC-10	772239.01	2386204.76	40.110713	81.006607	772197.86	2417665.73	40.110644	81.006787
UC-11	763622.75	2391174.67	40.086838	80.989357	763581.58	2422635.51	40.086768	80.989538
UC-12	762956.47	2389967.03	40.085064	80.993712	762915.32	2421427.90	40.084994	80.993893

DPU PLAT

EMERSYN E RCH BL

OPERATOR: AMERICAN ENERGY – UTICA, LLC
 ADDRESS: 3501 NW 63rd
 OKLAHOMA CITY, OK 73116

SECTION: 34 TOWNSHIP: T7N RANGE: R4W

COUNTY: BELMONT

MUNICIPALITY: RICHLAND TWP

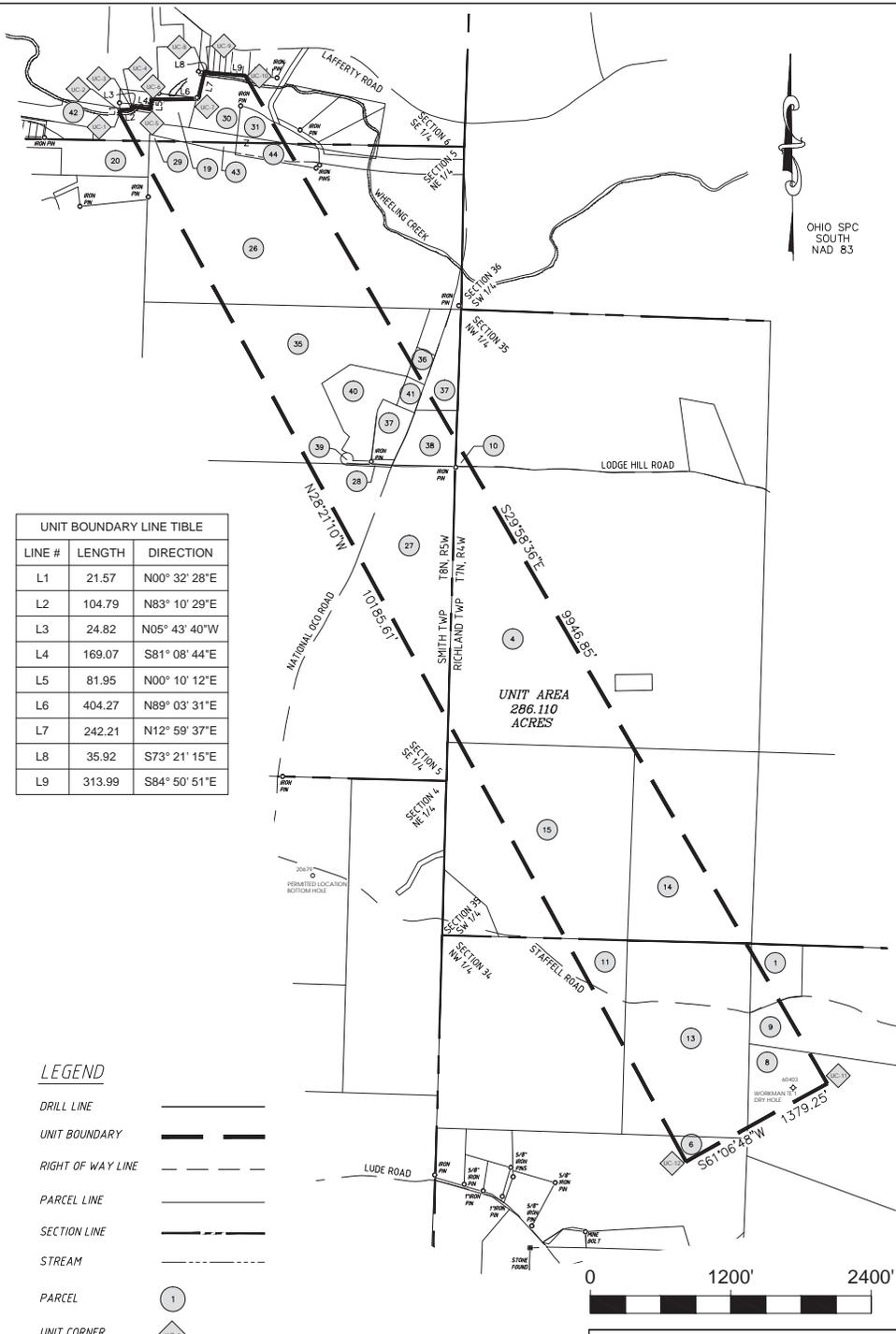
U.S.G.S. QUAD: SAINT CLAIRSVILLE

DATE: 3/3/14

PAGE NO: 1 OF 2

JOB NO.: 750430





OHIO SPC
SOUTH
NAD 83

UNIT BOUNDARY LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	21.57	N00° 32' 28"E
L2	104.79	N83° 10' 29"E
L3	24.82	N05° 43' 40"W
L4	169.07	S81° 08' 44"E
L5	81.95	N00° 10' 12"E
L6	404.27	N89° 03' 31"E
L7	242.21	N12° 59' 37"E
L8	35.92	S73° 21' 15"E
L9	313.99	S84° 50' 51"E

- LEGEND**
- DRILL LINE
 - UNIT BOUNDARY
 - RIGHT OF WAY LINE
 - PARCEL LINE
 - SECTION LINE
 - STREAM
 - PARCEL
 - UNIT CORNER



DPU PLAT	
EMERSYN E RCH BL	
OPERATOR: AMERICAN ENERGY – UTICA, LLC	
ADDRESS: 3501 NW 63rd OKLAHOMA CITY, OK 73116	
SECTION: 34	TOWNSHIP: T7N RANGE: R4W
COUNTY: BELMONT	
MUNICIPALITY: RICHLAND TWP	
U.S.G.S. QUAD: SAINT CLAIRSVILLE	
DATE: 3/3/14	PAGE NO.: 2 OF 2
JOB NO.: 750430	

Exhibit "A-3"
Unleased Tracts in Emersyn E RCH BL Unit

Tract Number	Owner	Owner Address	Parcel Number	Unit Acreage	Unit Participation
28	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00522.001	0.127	0.04%
29	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00523.000	0.185	0.06%
38	Ohio American Energy, Inc.	C/O Dena Milhoan 46226 National Rd. St. Clairsville, Ohio 43950	39-01240.003	4.365	1.53%
Total				4.677	1.63%

End of Exhibit "A-3"

Exhibit "A-4"
Non-Consenting Working Interest Owners in Emersyn E RCH BL Unit

Working Interest Owner	Working Interest Owner Address	Tract Number	Mineral Owner	Parcel Number	Unit Acreage	Unit Participation
Gulfport Energy Corporation	C/O Bill Eischeid, Land Manager 14313 N. May Avenue, Suite 100 Oklahoma City, Oklahoma 73134	6	Robert R. & Bonnie K. Rossini	32-01296.001	1.211	0.42%
Total					1.211	0.42%

End of Exhibit "A-4"

Exhibit "B"

PAID-UP
OIL & GAS LEASE

Lease No. _____

This Lease made this _____ day of _____ 201_, by and between:

_____ whose address is _____ hereinafter collectively called "Lessor," and **American Energy – Utica, LLC** an **Oklahoma Limited Liability Company**, whose address is **P.O. Box 18756, Oklahoma City, OK 73154**, hereinafter called "Lessee."

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

LEASING CLAUSE. Lessor hereby leases exclusively to Lessee all the oil and gas (including, but not limited to coal seam gas, coalbed methane gas, coalbed gas, methane gas, gob gas, occluded methane/natural gas and all associated natural gas and other hydrocarbons and non-hydrocarbons contained in, associated with, emitting from, or produced/originating within any formation, gob area, mined-out area, coal seam, and all communicating zones), and their liquid or gaseous constituents, whether hydrocarbon or non-hydrocarbon, underlying the land herein leased, together with such exclusive rights as may be necessary or convenient for Lessee, at its election, to explore for, develop, produce, measure, and market production from the Leasehold, or from other lands, using methods and techniques which are not restricted to current technology, including, without limitation, the right to conduct geophysical and other exploratory tests; to drill, maintain, operate, cease to operate, plug, abandon, and remove wells; to use or install roads over and across the Leasehold for use in development of the Leasehold or other lands, electric power and telephone facilities, water impoundments, and to construct pipelines with appurtenant facilities, including data acquisition, compression and collection facilities for use in the production and transportation of products from the Leasehold or from other lands across the Leasehold, to use oil, gas, and non-domestic water sources, free of cost, to store gas of any kind underground, regardless of the source thereof, including the injecting of gas therein and removing the same therefrom; to protect stored gas; to operate, maintain, repair, and remove material and equipment; to use and occupy the subsurface of the Leasehold for the drilling of a wellbore(s) for use in development of the Leasehold or other lands.

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

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

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

LEASE TERM. This Lease shall remain in force for a primary term of **Five (5)** years from 12:00 A.M. _____ (effective date) to 11:59 P.M. _____ (last day of primary term) and shall continue beyond the primary term as to the entirety of the Leasehold if any of the following is satisfied: (i) operations are conducted on the Leasehold or lands pooled/unitized therewith in search of oil, gas, or their constituents, or (ii) a well deemed by Lessee to be capable of production is located on the Leasehold or lands pooled/unitized therewith, or (iii) oil or gas, or their constituents, are produced from the Leasehold or lands pooled/unitized therewith, or (iv) if the Leasehold or lands pooled/unitized therewith is used for the underground storage of gas, or for the protection of stored gas, or (v) if prescribed payments are made, or (vi) if Lessee's operations are delayed, postponed or interrupted as a result of any coal, stone or other mining or mining related operation under any existing and effective lease, permit or authorization covering such operations on the leased premises or on other lands affecting the leased premises, such delay will automatically extend the primary or secondary term of this oil and gas lease without additional compensation or performance by Lessee for a period of time equal to any such delay, postponement or interruption.

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

EXTENSION OF PRIMARY TERM. Lessee has the option to extend the primary term of this Lease for one additional term of **Five (5)** years from the expiration of the primary term of this Lease; said extension to be under the same terms and conditions as contained in this Lease. Lessee may exercise this option to extend this Lease

if on or before the expiration date of the primary term of this Lease, Lessee pays or tenders to the Lessor or to the Lessor's credit an amount equal to the initial consideration given for the execution hereof. Exercise of this option is at Lessee's sole discretion and may be invoked by Lessee where no other alternative of the Lease Term clause extends this Lease beyond the primary term.

NO AUTOMATIC TERMINATION OR FORFEITURE.

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

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

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

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

(B) ROYALTY: For all oil and gas substances that are produced and sold from the lease premises, Lessor shall receive as its royalty _____ (____%) percent of the sales proceeds actually received by Lessee from the sale of such production, less this same percentage share of all post production costs, as defined below, and less this same percentage share of all production, severance and ad valorem taxes. As used in this provision, post production costs shall mean (i) all losses of produced volumes (whether by use as fuel, line loss, flaring, venting or otherwise) and (ii) all costs actually incurred by Lessee from and after the wellhead to the point of sale, including, without limitation, all gathering, dehydration, compression, treatment, processing, marketing and transportation costs incurred in connection with the sale of such production. For royalty calculation purposes, Lessee shall never be required to adjust the sales proceeds to account for the purchaser's costs or charges downstream from the point of sale. Lessee may withhold Royalty payment until such time as the total withheld exceeds fifty dollars (\$50.00).

(C) DELAY IN MARKETING: In the event that Lessee drills a well on the Leasehold or lands pooled/unitized therewith that is awaiting completion (including, without limitation, hydraulic fracture stimulation), or that Lessee deems to be capable of production, but does not market producible gas, oil, or their constituents therefrom and there is no other basis for extending this Lease, Lessee shall pay after the primary term and until such time as marketing is established (or Lessee surrenders the Lease) a Delay in Marketing payment equal in amount and frequency to the annual Delay Rental payment, and this Lease shall remain in full force and effect to the same extent as payment of Royalty.

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

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

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

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

(H) TITLE: If Lessee receives evidence that Lessor does not have title to all or any part of the rights herein leased, Lessee may immediately withhold payments that would be otherwise due and payable hereunder to Lessor until the adverse claim is fully resolved. Lessor represents and warrants that there is no existing oil and gas lease which is presently in effect covering the Leasehold.

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

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

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

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

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

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

DISPOSAL AND INJECTION WELLS. Lessor hereby grants to Lessee the right to drill wells and/or re-enter existing wells, including necessary location, roadway and pipeline easements and rights of way, on any part of the Leasehold or lands pooled or unitized therewith for the disposal and/or injection into any subsurface strata, other than a potable water strata, of air, gas, brine, completion and production fluids, waste water and any hydrocarbon related substances from any source, including, but not limited to wells on the Leasehold or lands pooled or unitized therewith or from properties and lands outside the Leasehold or lands pooled or unitized therewith, and to conduct all operations as may be required, for so long as necessary and required by Lessee for purposes as herein provided. If, at the expiration of the primary term, Lessee is disposing and/or injecting into any subsurface strata underlying the Leasehold or lands pooled or unitized therewith or conducting operations for such disposal and/or injection and this lease is not being maintained by any other provision contained herein and no other payments are being made to Lessor as prescribed hereunder, Lessee shall pay to Lessor the sum of one thousand dollars (\$1,000.00) per year, proportionately reduced to Lessor's ownership in the Leasehold and surface as it bears to the full and undivided

estate, beginning on the next anniversary date of this Lease and said payment and term of this Lease, insofar as to terms and provisions contained herein applicable to disposal and injection wells, shall continue annually thereafter for so long as necessary and required by Lessee for purposes as herein provided and until all disposal and/or injection wells located on the Leasehold or on lands pooled or unitized therewith are plugged and abandoned. Lessor agrees that if required by Lessee, regulatory agency or governmental authority having jurisdiction, Lessor shall enter a separate Disposal and Injection Agreement with Lessee for the purposes as herein provided.

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

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

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

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

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

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

TITLE CURATIVE. Lessor agrees to execute consents, affidavits, ratifications, amendments, permits and other instruments as Lessee may request to carry out the purpose of this lease, including without limitation, applications necessary to obtain driveway entrance permits, and approvals of drilling or production units which Lessee may seek to form pursuant to governmental authorization.

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

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

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

SEVERABILITY. This Lease is intended to comply with all applicable laws, rules, regulations, ordinances and governmental orders. If any provision of this Lease is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall survive and continue in full force and effect to the maximum extent allowed by law. If a court of competent jurisdiction holds any provision of this Lease invalid, void, or unenforceable under applicable law, the court shall give the provision the greatest effect possible under the law and

Exhibit " C "

ACCOUNTING PROCEDURE JOINT OPERATIONS

1 Attached to and made part of that certain Joint Operating Agreement dated _____, _____, by and between American Energy – Utica,
2 LLC as Operator, and _____, as Non-Operators

I. GENERAL PROVISIONS

3
4
5
6
7
8 **IF THE PARTIES FAIL TO SELECT EITHER ONE OF COMPETING "ALTERNATIVE" PROVISIONS, OR SELECT ALL THE**
9 **COMPETING "ALTERNATIVE" PROVISIONS, ALTERNATIVE 1 IN EACH SUCH INSTANCE SHALL BE DEEMED TO HAVE**
10 **BEEN ADOPTED BY THE PARTIES AS A RESULT OF ANY SUCH OMISSION OR DUPLICATE NOTATION.**

11
12 **IN THE EVENT THAT ANY "OPTIONAL" PROVISION OF THIS ACCOUNTING PROCEDURE IS NOT ADOPTED BY THE**
13 **PARTIES TO THE AGREEMENT BY A TYPED, PRINTED OR HANDWRITTEN INDICATION, SUCH PROVISION SHALL NOT**
14 **FORM A PART OF THIS ACCOUNTING PROCEDURE, AND NO INFERENCE SHALL BE MADE CONCERNING THE INTENT**
15 **OF THE PARTIES IN SUCH EVENT.**

16 17 1. DEFINITIONS

18
19 All terms used in this Accounting Procedure shall have the following meaning, unless otherwise expressly defined in the Agreement:

20
21 **"Affiliate"** means for a person, another person that controls, is controlled by, or is under common control with that person. In this
22 definition, (a) control means the ownership by one person, directly or indirectly, of more than fifty percent (50%) of the voting securities
23 of a corporation or, for other persons, the equivalent ownership interest (such as partnership interests), and (b) "person" means an
24 individual, corporation, partnership, trust, estate, unincorporated organization, association, or other legal entity.

25
26 **"Agreement"** means the operating agreement, farmout agreement, or other contract between the Parties to which this Accounting
27 Procedure is attached.

28
29 **"Controllable Material"** means Material that, at the time of acquisition or disposition by the Joint Account, as applicable, is so classified
30 in the Material Classification Manual most recently recommended by the Council of Petroleum Accountants Societies (COPAS).

31
32 **"Equalized Freight"** means the procedure of charging transportation cost to the Joint Account based upon the distance from the nearest
33 Railway Receiving Point to the property.

34
35 **"Excluded Amount"** means a specified excluded trucking amount most recently recommended by COPAS.

36
37 **"Field Office"** means a structure, or portion of a structure, whether a temporary or permanent installation, the primary function of which is
38 to directly serve daily operation and maintenance activities of the Joint Property and which serves as a staging area for directly chargeable
39 field personnel.

40
41 **"First Level Supervision"** means those employees whose primary function in Joint Operations is the direct oversight of the Operator's
42 field employees and/or contract labor directly employed On-site in a field operating capacity. First Level Supervision functions may
43 include, but are not limited to:

- 44
45
- 46 • Responsibility for field employees and contract labor engaged in activities that can include field operations, maintenance,
47 construction, well remedial work, equipment movement and drilling
 - 48 • Responsibility for day-to-day direct oversight of rig operations
 - 49 • Responsibility for day-to-day direct oversight of construction operations
 - 50 • Coordination of job priorities and approval of work procedures
 - 51 • Responsibility for optimal resource utilization (equipment, Materials, personnel)
 - 52 • Responsibility for meeting production and field operating expense targets
 - 53 • Representation of the Parties in local matters involving community, vendors, regulatory agents and landowners, as an incidental
54 part of the supervisor's operating responsibilities
 - 55 • Responsibility for all emergency responses with field staff
 - 56 • Responsibility for implementing safety and environmental practices
 - 57 • Responsibility for field adherence to company policy
 - 58 • Responsibility for employment decisions and performance appraisals for field personnel
 - 59 • Oversight of sub-groups for field functions such as electrical, safety, environmental, telecommunications, which may have group
60 or team leaders.

61
62 **"Joint Account"** means the account showing the charges paid and credits received in the conduct of the Joint Operations that are to be
63 shared by the Parties, but does not include proceeds attributable to hydrocarbons and by-products produced under the Agreement.

64
65 **"Joint Operations"** means all operations necessary or proper for the exploration, appraisal, development, production, protection,
66 maintenance, repair, abandonment, and restoration of the Joint Property.

1 **“Joint Property”** means the real and personal property subject to the Agreement.

2

3 **“Laws”** means any laws, rules, regulations, decrees, and orders of the United States of America or any state thereof and all other
4 governmental bodies, agencies, and other authorities having jurisdiction over or affecting the provisions contained in or the transactions
5 contemplated by the Agreement or the Parties and their operations, whether such laws now exist or are hereafter amended, enacted,
6 promulgated or issued.

7

8 **“Material”** means personal property, equipment, supplies, or consumables acquired or held for use by the Joint Property.

9

10 **“Non-Operators”** means the Parties to the Agreement other than the Operator.

11

12 **“Offshore Facilities”** means platforms, surface and subsea development and production systems, and other support systems such as oil and
13 gas handling facilities, living quarters, offices, shops, cranes, electrical supply equipment and systems, fuel and water storage and piping,
14 heliport, marine docking installations, communication facilities, navigation aids, and other similar facilities necessary in the conduct of
15 offshore operations, all of which are located offshore.

16

17 **“Off-site”** means any location that is not considered On-site as defined in this Accounting Procedure.

18

19 **“On-site”** means on the Joint Property when in direct conduct of Joint Operations. The term “On-site” shall also include that portion of
20 Offshore Facilities, Shore Base Facilities, fabrication yards, and staging areas from which Joint Operations are conducted, or other
21 facilities that directly control equipment on the Joint Property, regardless of whether such facilities are owned by the Joint Account.

22

23 **“Operator”** means the Party designated pursuant to the Agreement to conduct the Joint Operations.

24

25 **“Parties”** means legal entities signatory to the Agreement or their successors and assigns. Parties shall be referred to individually as
26 “Party.”

27

28 **“Participating Interest”** means the percentage of the costs and risks of conducting an operation under the Agreement that a Party agrees,
29 or is otherwise obligated, to pay and bear.

30

31 **“Participating Party”** means a Party that approves a proposed operation or otherwise agrees, or becomes liable, to pay and bear a share of
32 the costs and risks of conducting an operation under the Agreement.

33

34 **“Personal Expenses”** means reimbursed costs for travel and temporary living expenses.

35

36 **“Railway Receiving Point”** means the railhead nearest the Joint Property for which freight rates are published, even though an actual
37 railhead may not exist.

38

39 **“Shore Base Facilities”** means onshore support facilities that during Joint Operations provide such services to the Joint Property as a
40 receiving and transshipment point for Materials; debarkation point for drilling and production personnel and services; communication,
41 scheduling and dispatching center; and other associated functions serving the Joint Property.

42

43 **“Supply Store”** means a recognized source or common stock point for a given Material item.

44

45 **“Technical Services”** means services providing specific engineering, geoscience, or other professional skills, such as those performed by
46 engineers, geologists, geophysicists, and technicians, required to handle specific operating conditions and problems for the benefit of Joint
47 Operations; provided, however, Technical Services shall not include those functions specifically identified as overhead under the second
48 paragraph of the introduction of Section III (*Overhead*). Technical Services may be provided by the Operator, Operator’s Affiliate, Non-
49 Operator, Non-Operator Affiliates, and/or third parties.

50

51 2. STATEMENTS AND BILLINGS

52

53 The Operator shall bill Non-Operators on or before the last day of the month for their proportionate share of the Joint Account for the
54 preceding month. Such bills shall be accompanied by statements that identify the AFE (authority for expenditure), lease or facility, and all
55 charges and credits summarized by appropriate categories of investment and expense. Controllable Material shall be separately identified
56 and fully described in detail, or at the Operator’s option, Controllable Material may be summarized by major Material classifications.
57 Intangible drilling costs, audit adjustments, and unusual charges and credits shall be separately and clearly identified.

58

59 The Operator may make available to Non-Operators any statements and bills required under Section I.2 and/or Section I.3.A (*Advances
60 and Payments by the Parties*) via email, electronic data interchange, internet websites or other equivalent electronic media in lieu of paper
61 copies. The Operator shall provide the Non-Operators instructions and any necessary information to access and receive the statements and
62 bills within the timeframes specified herein. A statement or billing shall be deemed as delivered twenty-four (24) hours (exclusive of
63 weekends and holidays) after the Operator notifies the Non-Operator that the statement or billing is available on the website and/or sent via
64 email or electronic data interchange transmission. Each Non-Operator individually shall elect to receive statements and billings
65 electronically, if available from the Operator, or request paper copies. Such election may be changed upon thirty (30) days prior written
66 notice to the Operator.

1 **3. ADVANCES AND PAYMENTS BY THE PARTIES**

- 2
- 3 A. Unless otherwise provided for in the Agreement, the Operator may require the Non-Operators to advance their share of the estimated
- 4 cash outlay for the succeeding month's operations within fifteen (15) days after receipt of the advance request or by the first day of
- 5 the month for which the advance is required, whichever is later. The Operator shall adjust each monthly billing to reflect advances
- 6 received from the Non-Operators for such month. If a refund is due, the Operator shall apply the amount to be refunded to the
- 7 subsequent month's billing or advance, unless the Non-Operator sends the Operator a written request for a cash refund. The Operator
- 8 shall remit the refund to the Non-Operator within fifteen (15) days of receipt of such written request.
- 9
- 10 B. Except as provided below, each Party shall pay its proportionate share of all bills in full within fifteen (15) days of receipt date. If
- 11 payment is not made within such time, the unpaid balance shall bear interest compounded monthly at the prime rate published by the
- 12 *Wall Street Journal* on the first day of each month the payment is delinquent, plus three percent (3%), per annum, or the maximum
- 13 contract rate permitted by the applicable usury Laws governing the Joint Property, whichever is the lesser, plus attorney's fees, court
- 14 costs, and other costs in connection with the collection of unpaid amounts. If the *Wall Street Journal* ceases to be published or
- 15 discontinues publishing a prime rate, the unpaid balance shall bear interest compounded monthly at the prime rate published by the
- 16 Federal Reserve plus three percent (3%), per annum. Interest shall begin accruing on the first day of the month in which the payment
- 17 was due. Payment shall not be reduced or delayed as a result of inquiries or anticipated credits unless the Operator has agreed.
- 18 Notwithstanding the foregoing, the Non-Operator may reduce payment, provided it furnishes documentation and explanation to the
- 19 Operator at the time payment is made, to the extent such reduction is caused by:
- 20
- 21 (1) being billed at an incorrect working interest or Participating Interest that is higher than such Non-Operator's actual working
- 22 interest or Participating Interest, as applicable; or
- 23 (2) being billed for a project or AFE requiring approval of the Parties under the Agreement that the Non-Operator has not approved
- 24 or is not otherwise obligated to pay under the Agreement; or
- 25 (3) being billed for a property in which the Non-Operator no longer owns a working interest, provided the Non-Operator has
- 26 furnished the Operator a copy of the recorded assignment or letter in-lieu. Notwithstanding the foregoing, the Non-Operator
- 27 shall remain responsible for paying bills attributable to the interest it sold or transferred for any bills rendered during the thirty
- 28 (30) day period following the Operator's receipt of such written notice; or
- 29 (4) charges outside the adjustment period, as provided in Section I.4 (*Adjustments*).

30 **4. ADJUSTMENTS**

- 31
- 32 A. Payment of any such bills shall not prejudice the right of any Party to protest or question the correctness thereof; however, all bills
- 33 and statements, including payout statements, rendered during any calendar year shall conclusively be presumed to be true and correct,
- 34 with respect only to expenditures, after twenty-four (24) months following the end of any such calendar year, unless within said
- 35 period a Party takes specific detailed written exception thereto making a claim for adjustment. The Operator shall provide a response
- 36 to all written exceptions, whether or not contained in an audit report, within the time periods prescribed in Section I.5 (*Expenditure*
- 37 *Audits*).
- 38
- 39 B. All adjustments initiated by the Operator, except those described in items (1) through (4) of this Section I.4.B, are limited to the
- 40 twenty-four (24) month period following the end of the calendar year in which the original charge appeared or should have appeared
- 41 on the Operator's Joint Account statement or payout statement. Adjustments that may be made beyond the twenty-four (24) month
- 42 period are limited to adjustments resulting from the following:
- 43
- 44 (1) a physical inventory of Controllable Material as provided for in Section V (*Inventories of Controllable Material*), or
- 45 (2) an offsetting entry (whether in whole or in part) that is the direct result of a specific joint interest audit exception granted by the
- 46 Operator relating to another property, or
- 47 (3) a government/regulatory audit, or
- 48 (4) a working interest ownership or Participating Interest adjustment.
- 49

50 **5. EXPENDITURE AUDITS**

- 51
- 52 A. A Non-Operator, upon written notice to the Operator and all other Non-Operators, shall have the right to audit the Operator's
- 53 accounts and records relating to the Joint Account within the twenty-four (24) month period following the end of such calendar year in
- 54 which such bill was rendered; however, conducting an audit shall not extend the time for the taking of written exception to and the
- 55 adjustment of accounts as provided for in Section I.4 (*Adjustments*). Any Party that is subject to payout accounting under the
- 56 Agreement shall have the right to audit the accounts and records of the Party responsible for preparing the payout statements, or of
- 57 the Party furnishing information to the Party responsible for preparing payout statements. Audits of payout accounts may include the
- 58 volumes of hydrocarbons produced and saved and proceeds received for such hydrocarbons as they pertain to payout accounting
- 59 required under the Agreement. Unless otherwise provided in the Agreement, audits of a payout account shall be conducted within the
- 60 twenty-four (24) month period following the end of the calendar year in which the payout statement was rendered.
- 61

62 Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct a joint audit in a

63 manner that will result in a minimum of inconvenience to the Operator. The Operator shall bear no portion of the Non-Operators'

64 audit cost incurred under this paragraph unless agreed to by the Operator. The audits shall not be conducted more than once each year

65 without prior approval of the Operator, except upon the resignation or removal of the Operator, and shall be made at the expense of

66

1 those Non-Operators approving such audit.

2 The Non-Operator leading the audit (hereinafter "lead audit company") shall issue the audit report within ninety (90) days after
3 completion of the audit testing and analysis; however, the ninety (90) day time period shall not extend the twenty-four (24) month
4 requirement for taking specific detailed written exception as required in Section I.4.A (*Adjustments*) above. All claims shall be
5 supported with sufficient documentation.

6
7 A timely filed written exception or audit report containing written exceptions (hereinafter "written exceptions") shall, with respect to
8 the claims made therein, preclude the Operator from asserting a statute of limitations defense against such claims, and the Operator
9 hereby waives its right to assert any statute of limitations defense against such claims for so long as any Non-Operator continues to
10 comply with the deadlines for resolving exceptions provided in this Accounting Procedure. If the Non-Operators fail to comply with
11 the additional deadlines in Section I.5.B or I.5.C, the Operator's waiver of its rights to assert a statute of limitations defense against
12 the claims brought by the Non-Operators shall lapse, and such claims shall then be subject to the applicable statute of limitations,
13 provided that such waiver shall not lapse in the event that the Operator has failed to comply with the deadlines in Section I.5.B or
14 I.5.C.

15
16 B. The Operator shall provide a written response to all exceptions in an audit report within one hundred eighty (180) days after Operator
17 receives such report. Denied exceptions should be accompanied by a substantive response. If the Operator fails to provide substantive
18 response to an exception within this one hundred eighty (180) day period, the Operator will owe interest on that exception or portion
19 thereof, if ultimately granted, from the date it received the audit report. Interest shall be calculated using the rate set forth in Section
20 I.3.B (*Advances and Payments by the Parties*).

21
22 C. The lead audit company shall reply to the Operator's response to an audit report within ninety (90) days of receipt, and the Operator
23 shall reply to the lead audit company's follow-up response within ninety (90) days of receipt; provided, however, each Non-Operator
24 shall have the right to represent itself if it disagrees with the lead audit company's position or believes the lead audit company is not
25 adequately fulfilling its duties. Unless otherwise provided for in Section I.5.E, if the Operator fails to provide substantive response
26 to an exception within this ninety (90) day period, the Operator will owe interest on that exception or portion thereof, if ultimately
27 granted, from the date it received the audit report. Interest shall be calculated using the rate set forth in Section I.3.B (*Advances and
28 Payments by the Parties*).

29
30 D. If any Party fails to meet the deadlines in Sections I.5.B or I.5.C or if any audit issues are outstanding fifteen (15) months after
31 Operator receives the audit report, the Operator or any Non-Operator participating in the audit has the right to call a resolution
32 meeting, as set forth in this Section I.5.D or it may invoke the dispute resolution procedures included in the Agreement, if applicable.
33 The meeting will require one month's written notice to the Operator and all Non-Operators participating in the audit. The meeting
34 shall be held at the Operator's office or mutually agreed location, and shall be attended by representatives of the Parties with
35 authority to resolve such outstanding issues. Any Party who fails to attend the resolution meeting shall be bound by any resolution
36 reached at the meeting. The lead audit company will make good faith efforts to coordinate the response and positions of the
37 Non-Operator participants throughout the resolution process; however, each Non-Operator shall have the right to represent itself.
38 Attendees will make good faith efforts to resolve outstanding issues, and each Party will be required to present substantive information
39 supporting its position. A resolution meeting may be held as often as agreed to by the Parties. Issues unresolved at one meeting may
40 be discussed at subsequent meetings until each such issue is resolved.

41
42 If the Agreement contains no dispute resolution procedures and the audit issues cannot be resolved by negotiation, the dispute shall
43 be submitted to mediation. In such event, promptly following one Party's written request for mediation, the Parties to the dispute
44 shall choose a mutually acceptable mediator and share the costs of mediation services equally. The Parties shall each have present
45 at the mediation at least one individual who has the authority to settle the dispute. The Parties shall make reasonable efforts to
46 ensure that the mediation commences within sixty (60) days of the date of the mediation request. Notwithstanding the above, any
47 Party may file a lawsuit or complaint (1) if the Parties are unable after reasonable efforts, to commence mediation within sixty (60)
48 days of the date of the mediation request, (2) for statute of limitations reasons, or (3) to seek a preliminary injunction or other
49 provisional judicial relief, if in its sole judgment an injunction or other provisional relief is necessary to avoid irreparable damage or
50 to preserve the status quo. Despite such action, the Parties shall continue to try to resolve the dispute by mediation.

51
52 E. (*Optional Provision – Forfeiture Penalties*)

53 *If the Non-Operators fail to meet the deadline in Section I.5.C, any unresolved exceptions that were not addressed by the Non-
54 Operators within one (1) year following receipt of the last substantive response of the Operator shall be deemed to have been
55 withdrawn by the Non-Operators. If the Operator fails to meet the deadlines in Section I.5.B or I.5.C, any unresolved exceptions that
56 were not addressed by the Operator within one (1) year following receipt of the audit report or receipt of the last substantive response
57 of the Non-Operators, whichever is later, shall be deemed to have been granted by the Operator and adjustments shall be made,
58 without interest, to the Joint Account.*

60 6. APPROVAL BY PARTIES

61 A. GENERAL MATTERS

62 Where an approval or other agreement of the Parties or Non-Operators is expressly required under other Sections of this Accounting
63 Procedure and if the Agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, the
64
65
66

1 Operator shall notify all Non-Operators of the Operator's proposal and the agreement or approval of a majority in interest of the
2 Non-Operators shall be controlling on all Non-Operators.

3
4 This Section I.6.A applies to specific situations of limited duration where a Party proposes to change the accounting for charges from
5 that prescribed in this Accounting Procedure. This provision does not apply to amendments to this Accounting Procedure, which are
6 covered by Section I.6.B.

7 **B. AMENDMENTS**

8
9 If the Agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, this Accounting
10 Procedure can be amended by an affirmative vote of two (2) or more Parties, one of which is the Operator,
11 having a combined working interest of at least Fifty - One percent (51 %), which approval shall be binding on all Parties,
12 provided, however, approval of at least one (1) Non-Operator shall be required.

13
14 **C. AFFILIATES**

15
16 For the purpose of administering the voting procedures of Sections I.6.A and I.6.B, if Parties to this Agreement are Affiliates of each
17 other, then such Affiliates shall be combined and treated as a single Party having the combined working interest or Participating
18 Interest of such Affiliates.

19
20 For the purposes of administering the voting procedures in Section I.6.A, if a Non-Operator is an Affiliate of the Operator, votes
21 under Section I.6.A shall require the majority in interest of the Non-Operator(s) after excluding the interest of the Operator's
22 Affiliate.

23
24 **II. DIRECT CHARGES**

25
26 The Operator shall charge the Joint Account with the following items:

27
28 **1. RENTALS AND ROYALTIES**

29
30 Lease rentals and royalties paid by the Operator, on behalf of all Parties, for the Joint Operations.

31
32 **2. LABOR**

33
34 **A. Salaries and wages, including incentive compensation programs as set forth in COPAS MFI-37 ("Chargeability of Incentive
35 Compensation Programs"), for:**

- 36
37 (1) Operator's field employees directly employed On-site in the conduct of Joint Operations,
38
39 (2) Operator's employees directly employed on Shore Base Facilities, Offshore Facilities, or other facilities serving the Joint
40 Property if such costs are not charged under Section II.6 (*Equipment and Facilities Furnished by Operator*) or are not a
41 function covered under Section III (*Overhead*),
42
43 (3) Operator's employees providing First Level Supervision,
44
45 (4) Operator's employees providing On-site Technical Services for the Joint Property if such charges are excluded from the
46 overhead rates in Section III (*Overhead*),
47
48 (5) Operator's employees providing Off-site Technical Services for the Joint Property if such charges are excluded from the
49 overhead rates in Section III (*Overhead*).
50

51
52 Charges for the Operator's employees identified in Section II.2.A may be made based on the employee's actual salaries and wages,
53 or in lieu thereof, a day rate representing the Operator's average salaries and wages of the employee's specific job category.

54
55 Charges for personnel chargeable under this Section II.2.A who are foreign nationals shall not exceed comparable compensation paid
56 to an equivalent U.S. employee pursuant to this Section II.2, unless otherwise approved by the Parties pursuant to Section
57 I.6.A (*General Matters*).

58
59 **B. Operator's cost of holiday, vacation, sickness, and disability benefits, and other customary allowances paid to employees whose
60 salaries and wages are chargeable to the Joint Account under Section II.2.A, excluding severance payments or other termination
61 allowances. Such costs under this Section II.2.B may be charged on a "when and as-paid basis" or by "percentage assessment" on the
62 amount of salaries and wages chargeable to the Joint Account under Section II.2.A. If percentage assessment is used, the rate shall
63 be based on the Operator's cost experience.**

64
65 **C. Expenditures or contributions made pursuant to assessments imposed by governmental authority that are applicable to costs
66 chargeable to the Joint Account under Sections II.2.A and B.**

- 1 D. Personal Expenses of personnel whose salaries and wages are chargeable to the Joint Account under Section II.2.A when the
2 expenses are incurred in connection with directly chargeable activities.
- 3
- 4 E. Reasonable relocation costs incurred in transferring to the Joint Property personnel whose salaries and wages are chargeable to the
5 Joint Account under Section II.2.A. Notwithstanding the foregoing, relocation costs that result from reorganization or merger of a
6 Party, or that are for the primary benefit of the Operator, shall not be chargeable to the Joint Account. Extraordinary relocation
7 costs, such as those incurred as a result of transfers from remote locations, such as Alaska or overseas, shall not be charged to the
8 Joint Account unless approved by the Parties pursuant to Section I.6.A (*General Matters*).
- 9
- 10 F. Training costs as specified in COPAS MFI-35 ("Charging of Training Costs to the Joint Account") for personnel whose salaries and
11 wages are chargeable under Section II.2.A. This training charge shall include the wages, salaries, training course cost, and Personal
12 Expenses incurred during the training session. The training cost shall be charged or allocated to the property or properties directly
13 benefiting from the training. The cost of the training course shall not exceed prevailing commercial rates, where such rates are
14 available.
- 15
- 16 G. Operator's current cost of established plans for employee benefits, as described in COPAS MFI-27 ("Employee Benefits Chargeable
17 to Joint Operations and Subject to Percentage Limitation"), applicable to the Operator's labor costs chargeable to the Joint Account
18 under Sections II.2.A and B based on the Operator's actual cost not to exceed the employee benefits limitation percentage most
19 recently recommended by COPAS.
- 20
- 21 H. Award payments to employees, in accordance with COPAS MFI-49 ("Awards to Employees and Contractors") for personnel whose
22 salaries and wages are chargeable under Section II.2.A.

23 3. MATERIAL

24

25 Material purchased or furnished by the Operator for use on the Joint Property in the conduct of Joint Operations as provided under Section
26 IV (*Material Purchases, Transfers, and Dispositions*). Only such Material shall be purchased for or transferred to the Joint Property as
27 may be required for immediate use or is reasonably practical and consistent with efficient and economical operations. The accumulation
28 of surplus stocks shall be avoided.

29 4. TRANSPORTATION

30

31 A. Transportation of the Operator's, Operator's Affiliate's, or contractor's personnel necessary for Joint Operations.

32

33 B. Transportation of Material between the Joint Property and another property, or from the Operator's warehouse or other storage point
34 to the Joint Property, shall be charged to the receiving property using one of the methods listed below. Transportation of Material
35 from the Joint Property to the Operator's warehouse or other storage point shall be paid for by the Joint Property using one of the
36 methods listed below:

- 37
- 38 (1) If the actual trucking charge is less than or equal to the Excluded Amount the Operator may charge actual trucking cost or a
39 theoretical charge from the Railway Receiving Point to the Joint Property. The basis for the theoretical charge is the per
40 hundred weight charge plus fuel surcharges from the Railway Receiving Point to the Joint Property. The Operator shall
41 consistently apply the selected alternative.
- 42
- 43 (2) If the actual trucking charge is greater than the Excluded Amount, the Operator shall charge Equalized Freight. Accessorial
44 charges such as loading and unloading costs, split pick-up costs, detention, call out charges, and permit fees shall be charged
45 directly to the Joint Property and shall not be included when calculating the Equalized Freight.
- 46
- 47

48 5. SERVICES

49

50 The cost of contract services, equipment, and utilities used in the conduct of Joint Operations, except for contract services, equipment, and
51 utilities covered by Section III (*Overhead*), or Section II.7 (*Affiliates*), or excluded under Section II.9 (*Legal Expense*). Awards paid to
52 contractors shall be chargeable pursuant to COPAS MFI-49 ("Awards to Employees and Contractors").

53

54 The costs of third party Technical Services are chargeable to the extent excluded from the overhead rates under Section III (*Overhead*).

55 6. EQUIPMENT AND FACILITIES FURNISHED BY OPERATOR

56

57 In the absence of a separately negotiated agreement, equipment and facilities furnished by the Operator will be charged as follows:

- 58
- 59 A. The Operator shall charge the Joint Account for use of Operator-owned equipment and facilities, including but not limited to
60 production facilities, Shore Base Facilities, Offshore Facilities, and Field Offices, at rates commensurate with the costs of ownership
61 and operation. The cost of Field Offices shall be chargeable to the extent the Field Offices provide direct service to personnel who
62 are chargeable pursuant to Section II.2.A (*Labor*). Such rates may include labor, maintenance, repairs, other operating expense,
63 insurance, taxes, depreciation using straight line depreciation method, and interest on gross investment less accumulated depreciation
64 not to exceed _____ten_____ percent (____10____%) per annum; provided, however, depreciation shall not be charged when the
65
- 66

1 equipment and facilities investment have been fully depreciated. The rate may include an element of the estimated cost for
2 abandonment, reclamation, and dismantlement. Such rates shall not exceed the average commercial rates currently prevailing in the
3 immediate area of the Joint Property.

- 4
5 B. In lieu of charges in Section II.6.A above, the Operator may elect to use average commercial rates prevailing in the immediate area
6 of the Joint Property, less twenty percent (20%). If equipment and facilities are charged under this Section II.6.B, the Operator shall
7 adequately document and support commercial rates and shall periodically review and update the rate and the supporting
8 documentation. For automotive equipment, the Operator may elect to use rates published by the Petroleum Motor Transport
9 Association (PMTA) or such other organization recognized by COPAS as the official source of rates.

10 **7. AFFILIATES**

- 11
12 A. Charges for an Affiliate's goods and/or services used in operations requiring an AFE or other authorization from the Non-Operators
13 may be made without the approval of the Parties provided (i) the Affiliate is identified and the Affiliate goods and services are
14 specifically detailed in the approved AFE or other authorization, and (ii) the total costs for such Affiliate's goods and services billed
15 to such individual project do not exceed \$ 50,000.00. If the total costs for an Affiliate's goods and services charged to such
16 individual project are not specifically detailed in the approved AFE or authorization or exceed such amount, charges for such
17 Affiliate shall require approval of the Parties, pursuant to Section I.6.A (*General Matters*).

- 18
19 B. For an Affiliate's goods and/or services used in operations not requiring an AFE or other authorization from the Non-Operators,
20 charges for such Affiliate's goods and services shall require approval of the Parties, pursuant to Section I.6.A (*General Matters*), if the
21 charges exceed \$ 100,000.00 in a given calendar year.

- 22
23 C. The cost of the Affiliate's goods or services shall not exceed average commercial rates prevailing in the area of the Joint Property,
24 unless the Operator obtains the Non-Operators' approval of such rates. The Operator shall adequately document and support
25 commercial rates and shall periodically review and update the rate and the supporting documentation; provided, however,
26 documentation of commercial rates shall not be required if the Operator obtains Non-Operator approval of its Affiliate's rates or
27 charges prior to billing Non-Operators for such Affiliate's goods and services. Notwithstanding the foregoing, direct charges for
28 Affiliate-owned communication facilities or systems shall be made pursuant to Section II.12 (*Communications*).

29
30 If the Parties fail to designate an amount in Sections II.7.A or II.7.B, in each instance the amount deemed adopted by the Parties as a
31 result of such omission shall be the amount established as the Operator's expenditure limitation in the Agreement. If the Agreement
32 does not contain an Operator's expenditure limitation, the amount deemed adopted by the Parties as a result of such omission shall be
33 zero dollars (\$ 0.00).

34
35 **8. DAMAGES AND LOSSES TO JOINT PROPERTY**

36
37 All costs or expenses necessary for the repair or replacement of Joint Property resulting from damages or losses incurred, except to the
38 extent such damages or losses result from a Party's or Parties' gross negligence or willful misconduct, in which case such Party or Parties
39 shall be solely liable.

40
41 The Operator shall furnish the Non-Operator written notice of damages or losses incurred as soon as practicable after a report has been
42 received by the Operator.

43
44 **9. LEGAL EXPENSE**

45
46 Recording fees and costs of handling, settling, or otherwise discharging litigation, claims, and liens incurred in or resulting from
47 operations under the Agreement, or necessary to protect or recover the Joint Property, to the extent permitted under the Agreement. Costs
48 of the Operator's or Affiliate's legal staff or outside attorneys, including fees and expenses, are not chargeable unless approved by the
49 Parties pursuant to Section I.6.A (*General Matters*) or otherwise provided for in the Agreement.

50
51 Notwithstanding the foregoing paragraph, costs for procuring abstracts, fees paid to outside attorneys for title examinations (including
52 preliminary, supplemental, shut-in royalty opinions, division order title opinions), and curative work shall be chargeable to the extent
53 permitted as a direct charge in the Agreement.

54
55
56 **10. TAXES AND PERMITS**

57
58 All taxes and permitting fees of every kind and nature, assessed or levied upon or in connection with the Joint Property, or the production
59 therefrom, and which have been paid by the Operator for the benefit of the Parties, including penalties and interest, except to the extent the
60 penalties and interest result from the Operator's gross negligence or willful misconduct.

61
62 If ad valorem taxes paid by the Operator are based in whole or in part upon separate valuations of each Party's working interest, then
63 notwithstanding any contrary provisions, the charges to the Parties will be made in accordance with the tax value generated by each Party's
64 working interest.

1 Costs of tax consultants or advisors, the Operator's employees, or Operator's Affiliate employees in matters regarding ad valorem or other
2 tax matters, are not permitted as direct charges unless approved by the Parties pursuant to Section I.6.A (*General Matters*).

3
4 Charges to the Joint Account resulting from sales/use tax audits, including extrapolated amounts and penalties and interest, are permitted,
5 provided the Non-Operator shall be allowed to review the invoices and other underlying source documents which served as the basis for
6 tax charges and to determine that the correct amount of taxes were charged to the Joint Account. If the Non-Operator is not permitted to
7 review such documentation, the sales/use tax amount shall not be directly charged unless the Operator can conclusively document the
8 amount owed by the Joint Account.

9 **11. INSURANCE**

10
11 Net premiums paid for insurance required to be carried for Joint Operations for the protection of the Parties. If Joint Operations are
12 conducted at locations where the Operator acts as self-insurer in regard to its worker's compensation and employer's liability insurance
13 obligation, the Operator shall charge the Joint Account manual rates for the risk assumed in its self-insurance program as regulated by the
14 jurisdiction governing the Joint Property. In the case of offshore operations in federal waters, the manual rates of the adjacent state shall be
15 used for personnel performing work On-site, and such rates shall be adjusted for offshore operations by the U.S. Longshoreman and
16 Harbor Workers (USL&H) or Jones Act surcharge, as appropriate.

17 **12. COMMUNICATIONS**

18
19
20 Costs of acquiring, leasing, installing, operating, repairing, and maintaining communication facilities or systems, including satellite, radio
21 and microwave facilities, between the Joint Property and the Operator's office(s) directly responsible for field operations in accordance
22 with the provisions of COPAS MFI-44 ("Field Computer and Communication Systems"). If the communications facilities or systems
23 serving the Joint Property are Operator-owned, charges to the Joint Account shall be made as provided in Section II.6 (*Equipment and*
24 *Facilities Furnished by Operator*). If the communication facilities or systems serving the Joint Property are owned by the Operator's
25 Affiliate, charges to the Joint Account shall not exceed average commercial rates prevailing in the area of the Joint Property. The Operator
26 shall adequately document and support commercial rates and shall periodically review and update the rate and the supporting
27 documentation.

28 **13. ECOLOGICAL, ENVIRONMENTAL, AND SAFETY**

29
30
31 Costs incurred for Technical Services and drafting to comply with ecological, environmental and safety Laws or standards recommended by
32 Occupational Safety and Health Administration (OSHA) or other regulatory authorities. All other labor and functions incurred for
33 ecological, environmental and safety matters, including management, administration, and permitting, shall be covered by Sections II.2
34 (*Labor*), II.5 (*Services*), or Section III (*Overhead*), as applicable.

35
36
37 Costs to provide or have available pollution containment and removal equipment plus actual costs of control and cleanup and resulting
38 responsibilities of oil and other spills as well as discharges from permitted outfalls as required by applicable Laws, or other pollution
39 containment and removal equipment deemed appropriate by the Operator for prudent operations, are directly chargeable.

40 **14. ABANDONMENT AND RECLAMATION**

41
42 Costs incurred for abandonment and reclamation of the Joint Property, including costs required by lease agreements or by Laws.

43 **15. OTHER EXPENDITURES**

44
45
46 Any other expenditure not covered or dealt with in the foregoing provisions of this Section II (*Direct Charges*), or in Section III
47 (*Overhead*) and which is of direct benefit to the Joint Property and is incurred by the Operator in the necessary and proper conduct of the
48 Joint Operations. Charges made under this Section II.15 shall require approval of the Parties, pursuant to Section I.6.A (*General Matters*).

51 **III. OVERHEAD**

52
53 As compensation for costs not specifically identified as chargeable to the Joint Account pursuant to Section II (*Direct Charges*), the Operator
54 shall charge the Joint Account in accordance with this Section III.

55
56 Functions included in the overhead rates regardless of whether performed by the Operator, Operator's Affiliates or third parties and regardless
57 of location, shall include, but not be limited to, costs and expenses of:

- 58
59
- 60 • warehousing, other than for warehouses that are jointly owned under this Agreement
 - 61 • design and drafting (except when allowed as a direct charge under Sections II.13, III.1.A(ii), and III.2, Option B)
 - 62 • inventory costs not chargeable under Section V (*Inventories of Controllable Material*)
 - 63 • procurement
 - 64 • administration
 - 65 • accounting and auditing
 - 66 • gas dispatching and gas chart integration

- 1 • human resources
- 2 • management
- 3 • supervision not directly charged under Section II.2 (*Labor*)
- 4 • legal services not directly chargeable under Section II.9 (*Legal Expense*)
- 5 • taxation, other than those costs identified as directly chargeable under Section II.10 (*Taxes and Permits*)
- 6 • preparation and monitoring of permits and certifications; preparing regulatory reports; appearances before or meetings with
- 7 governmental agencies or other authorities having jurisdiction over the Joint Property, other than On-site inspections; reviewing,
- 8 interpreting, or submitting comments on or lobbying with respect to Laws or proposed Laws.

9
10 Overhead charges shall include the salaries or wages plus applicable payroll burdens, benefits, and Personal Expenses of personnel performing
11 overhead functions, as well as office and other related expenses of overhead functions.

12 **1. OVERHEAD—DRILLING AND PRODUCING OPERATIONS**

13
14 As compensation for costs incurred but not chargeable under Section II (*Direct Charges*) and not covered by other provisions of this
15 Section III, the Operator shall charge on either:

- 16 (Alternative 1) Fixed Rate Basis, Section III.1.B.
- 17 (Alternative 2) Percentage Basis, Section III.1.C.

18
19
20 **A. TECHNICAL SERVICES**

21
22 (i) Except as otherwise provided in Section II.13 (*Ecological, Environmental, and Safety*) and Section III.2 (*Overhead – Major*
23 *Construction and Catastrophe*), or by approval of the Parties pursuant to Section I.6.A (*General Matters*), the salaries, wages,
24 related payroll burdens and benefits, and Personal Expenses for **On-site** Technical Services, including third party Technical
25 Services:

26
27 (Alternative 1 – Direct) shall be charged **direct** to the Joint Account.

28
29 (Alternative 2 – Overhead) shall be covered by the **overhead** rates.

30
31 (ii) Except as otherwise provided in Section II.13 (*Ecological, Environmental, and Safety*) and Section III.2 (*Overhead – Major*
32 *Construction and Catastrophe*), or by approval of the Parties pursuant to Section I.6.A (*General Matters*), the salaries, wages,
33 related payroll burdens and benefits, and Personal Expenses for **Off-site** Technical Services, including third party Technical
34 Services:

35
36 (Alternative 1 – All Overhead) shall be covered by the **overhead** rates.

37
38 (Alternative 2 – All Direct) shall be charged **direct** to the Joint Account.

39
40 (Alternative 3 – Drilling Direct) shall be charged **direct** to the Joint Account, **only** to the extent such Technical Services
41 are directly attributable to drilling, redrilling, deepening, or sidetracking operations, through completion, temporary
42 abandonment, or abandonment if a dry hole. Off-site Technical Services for all other operations, including workover,
43 recompletion, abandonment of producing wells, and the construction or expansion of fixed assets not covered by Section
44 III.2 (*Overhead - Major Construction and Catastrophe*) shall be covered by the overhead rates.

45
46 Notwithstanding anything to the contrary in this Section III, Technical Services provided by Operator's Affiliates are subject to limitations
47 set forth in Section II.7 (*Affiliates*). Charges for Technical personnel performing non-technical work shall not be governed by this Section
48 III.1.A, but instead governed by other provisions of this Accounting Procedure relating to the type of work being performed.

49
50 **B. OVERHEAD—FIXED RATE BASIS**

51
52 (1) The Operator shall charge the Joint Account at the following rates per well per month:

53
54 Drilling Well Rate per month \$ 13,500 (prorated for less than a full month)

55
56 Producing Well Rate per month \$ 1,350

57
58 (2) Application of Overhead—Drilling Well Rate shall be as follows:

59
60 (a) Charges for onshore drilling wells shall begin on the spud date and terminate on the date the drilling and/or completion
61 equipment used on the well is released, whichever occurs later. Charges for offshore and inland waters drilling wells shall
62 begin on the date the drilling or completion equipment arrives on location and terminate on the date the drilling or completion
63 equipment moves off location, or is released, whichever occurs first. No charge shall be made during suspension of drilling
64 and/or completion operations for fifteen (15) or more consecutive calendar days.

- 1 (b) Charges for any well undergoing any type of workover, recompletion, and/or abandonment for a period of five (5) or more
2 consecutive work-days shall be made at the Drilling Well Rate. Such charges shall be applied for the period from date
3 operations, with rig or other units used in operations, commence through date of rig or other unit release, except that no charges
4 shall be made during suspension of operations for fifteen (15) or more consecutive calendar days.
- 5 (3) Application of Overhead—Producing Well Rate shall be as follows:
6
- 7 (a) An active well that is produced, injected into for recovery or disposal, or used to obtain water supply to support operations for
8 any portion of the month shall be considered as a one-well charge for the entire month.
9
- 10 (b) Each active completion in a multi-completed well shall be considered as a one-well charge provided each completion is
11 considered a separate well by the governing regulatory authority.
12
- 13 (c) A one-well charge shall be made for the month in which plugging and abandonment operations are completed on any well,
14 unless the Drilling Well Rate applies, as provided in Sections III.1.B.(2)(a) or (b). This one-well charge shall be made whether
15 or not the well has produced.
16
- 17 (d) An active gas well shut in because of overproduction or failure of a purchaser, processor, or transporter to take production shall
18 be considered as a one-well charge provided the gas well is directly connected to a permanent sales outlet.
19
- 20 (e) Any well not meeting the criteria set forth in Sections III.1.B.(3) (a), (b), (c), or (d) shall not qualify for a producing overhead
21 charge.
22
- 23 (4) The well rates shall be adjusted on the first day of April each year following the effective date of the Agreement; provided,
24 however, if this Accounting Procedure is attached to or otherwise governing the payout accounting under a farmout agreement, the
25 rates shall be adjusted on the first day of April each year following the effective date of such farmout agreement. The adjustment
26 shall be computed by applying the adjustment factor most recently published by COPAS. The adjusted rates shall be the initial or
27 amended rates agreed to by the Parties increased or decreased by the adjustment factor described herein, for each year from the
28 effective date of such rates, in accordance with COPAS MFI-47 (“Adjustment of Overhead Rates”).
29
30
31

32 2. OVERHEAD—MAJOR CONSTRUCTION AND CATASTROPHE 33

34 To compensate the Operator for overhead costs incurred in connection with a Major Construction project or Catastrophe, the Operator
35 shall either negotiate a rate prior to the beginning of the project, or shall charge the Joint Account for overhead based on the following
36 rates for any Major Construction project in excess of the Operator’s expenditure limit under the Agreement, or for any Catastrophe
37 regardless of the amount. If the Agreement to which this Accounting Procedure is attached does not contain an expenditure limit, Major
38 Construction Overhead shall be assessed for any single Major Construction project costing in excess of \$100,000 gross.
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66

1 Major Construction shall mean the construction and installation of fixed assets, the expansion of fixed assets, and any other project clearly
2 discernible as a fixed asset required for the development and operation of the Joint Property, or in the dismantlement, abandonment,
3 removal, and restoration of platforms, production equipment, and other operating facilities.

4
5 Catastrophe is defined as a sudden calamitous event bringing damage, loss, or destruction to property or the environment, such as an oil
6 spill, blowout, explosion, fire, storm, hurricane, or other disaster. The overhead rate shall be applied to those costs necessary to restore the
7 Joint Property to the equivalent condition that existed prior to the event.

8
9 A. If the Operator absorbs the engineering, design and drafting costs related to the project:

- 10 (1) 5 % of total costs if such costs are less than \$100,000; plus
11
12 (2) 3 % of total costs in excess of \$100,000 but less than \$1,000,000; plus
13
14 (3) 2 % of total costs in excess of \$1,000,000.
15

16
17 B. If the Operator charges engineering, design and drafting costs related to the project directly to the Joint Account:

- 18 (1) 5 % of total costs if such costs are less than \$100,000; plus
19
20 (2) 3 % of total costs in excess of \$100,000 but less than \$1,000,000; plus
21
22 (3) 2 % of total costs in excess of \$1,000,000.
23

24
25 Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single Major
26 Construction project shall not be treated separately, and the cost of drilling and workover wells and purchasing and installing pumping
27 units and downhole artificial lift equipment shall be excluded. For Catastrophes, the rates shall be applied to all costs associated with each
28 single occurrence or event.

29
30 On each project, the Operator shall advise the Non-Operator(s) in advance which of the above options shall apply.

31
32 For the purposes of calculating Catastrophe Overhead, the cost of drilling relief wells, substitute wells, or conducting other well operations
33 directly resulting from the catastrophic event shall be included. Expenditures to which these rates apply shall not be reduced by salvage or
34 insurance recoveries. Expenditures that qualify for Major Construction or Catastrophe Overhead shall not qualify for overhead under any
35 other overhead provisions.

36
37 In the event of any conflict between the provisions of this Section III.2 and the provisions of Sections II.2 (*Labor*), II.5 (*Services*), or II.7
38 (*Affiliates*), the provisions of this Section III.2 shall govern.

39
40 **3. AMENDMENT OF OVERHEAD RATES**

41
42 The overhead rates provided for in this Section III may be amended from time to time if, in practice, the rates are found to be insufficient
43 or excessive, in accordance with the provisions of Section I.6.B (*Amendments*).

44
45
46 **IV. MATERIAL PURCHASES, TRANSFERS, AND DISPOSITIONS**

47
48 The Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for direct purchases, transfers, and
49 dispositions. The Operator shall provide all Material for use in the conduct of Joint Operations; however, Material may be supplied by the Non-
50 Operators, at the Operator's option. Material furnished by any Party shall be furnished without any express or implied warranties as to quality,
51 fitness for use, or any other matter.

52
53 **1. DIRECT PURCHASES**

54
55 Direct purchases shall be charged to the Joint Account at the price paid by the Operator after deduction of all discounts received. The
56 Operator shall make good faith efforts to take discounts offered by suppliers, but shall not be liable for failure to take discounts except to
57 the extent such failure was the result of the Operator's gross negligence or willful misconduct. A direct purchase shall be deemed to occur
58 when an agreement is made between an Operator and a third party for the acquisition of Material for a specific well site or location.
59 Material provided by the Operator under "vendor stocking programs," where the initial use is for a Joint Property and title of the Material
60 does not pass from the manufacturer, distributor, or agent until usage, is considered a direct purchase. If Material is found to be defective
61 or is returned to the manufacturer, distributor, or agent for any other reason, credit shall be passed to the Joint Account within sixty (60)
62 days after the Operator has received adjustment from the manufacturer, distributor, or agent.
63
64
65
66

1 **2. TRANSFERS**

2 A transfer is determined to occur when the Operator (i) furnishes Material from a storage facility or from another operated property, (ii) has
3 assumed liability for the storage costs and changes in value, and (iii) has previously secured and held title to the transferred Material.
4 Similarly, the removal of Material from the Joint Property to a storage facility or to another operated property is also considered a transfer;
5 provided, however, Material that is moved from the Joint Property to a storage location for safe-keeping pending disposition may remain
6 charged to the Joint Account and is not considered a transfer. Material shall be disposed of in accordance with Section IV.3 (*Disposition of*
7 *Surplus*) and the Agreement to which this Accounting Procedure is attached.

8
9 **A. PRICING**

10
11 The value of Material transferred to/from the Joint Property should generally reflect the market value on the date of physical transfer.
12 Regardless of the pricing method used, the Operator shall make available to the Non-Operators sufficient documentation to verify the
13 Material valuation. When higher than specification grade or size tubulars are used in the conduct of Joint Operations, the Operator
14 shall charge the Joint Account at the equivalent price for well design specification tubulars, unless such higher specification grade or
15 sized tubulars are approved by the Parties pursuant to Section I.6.A (*General Matters*). Transfers of new Material will be priced
16 using one of the following pricing methods; provided, however, the Operator shall use consistent pricing methods, and not alternate
17 between methods for the purpose of choosing the method most favorable to the Operator for a specific transfer:

- 18
19 (1) Using published prices in effect on date of movement as adjusted by the appropriate COPAS Historical Price Multiplier (HPM)
20 or prices provided by the COPAS Computerized Equipment Pricing System (CEPS).
21
22 (a) For oil country tubulars and line pipe, the published price shall be based upon eastern mill carload base prices (Houston,
23 Texas, for special end) adjusted as of date of movement, plus transportation cost as defined in Section IV.2.B (*Freight*).
24
25 (b) For other Material, the published price shall be the published list price in effect at date of movement, as listed by a Supply
26 Store nearest the Joint Property where like Material is normally available, or point of manufacture plus transportation
27 costs as defined in Section IV.2.B (*Freight*).
28
29 (2) Based on a price quotation from a vendor that reflects a current realistic acquisition cost.
30
31 (3) Based on the amount paid by the Operator for like Material in the vicinity of the Joint Property within the previous twelve (12)
32 months from the date of physical transfer.
33
34 (4) As agreed to by the Participating Parties for Material being transferred to the Joint Property, and by the Parties owning the
35 Material for Material being transferred from the Joint Property.

36
37 **B. FREIGHT**

38
39 Transportation costs shall be added to the Material transfer price using the method prescribed by the COPAS Computerized
40 Equipment Pricing System (CEPS). If not using CEPS, transportation costs shall be calculated as follows:

- 41
42 (1) Transportation costs for oil country tubulars and line pipe shall be calculated using the distance from eastern mill to the
43 Railway Receiving Point based on the carload weight basis as recommended by the COPAS MFI-38 ("Material Pricing
44 Manual") and other COPAS MFIs in effect at the time of the transfer.
45
46 (2) Transportation costs for special mill items shall be calculated from that mill's shipping point to the Railway Receiving Point.
47 For transportation costs from other than eastern mills, the 30,000-pound interstate truck rate shall be used. Transportation costs
48 for macaroni tubing shall be calculated based on the interstate truck rate per weight of tubing transferred to the Railway
49 Receiving Point.
50
51 (3) Transportation costs for special end tubular goods shall be calculated using the interstate truck rate from Houston, Texas, to the
52 Railway Receiving Point.
53
54 (4) Transportation costs for Material other than that described in Sections IV.2.B.(1) through (3), shall be calculated from the
55 Supply Store or point of manufacture, whichever is appropriate, to the Railway Receiving Point

56
57 Regardless of whether using CEPS or manually calculating transportation costs, transportation costs from the Railway Receiving Point
58 to the Joint Property are in addition to the foregoing, and may be charged to the Joint Account based on actual costs incurred. All
59 transportation costs are subject to Equalized Freight as provided in Section II.4 (*Transportation*) of this Accounting Procedure.

60
61 **C. TAXES**

62
63 Sales and use taxes shall be added to the Material transfer price using either the method contained in the COPAS Computerized
64 Equipment Pricing System (CEPS) or the applicable tax rate in effect for the Joint Property at the time and place of transfer. In either
65 case, the Joint Account shall be charged or credited at the rate that would have governed had the Material been a direct purchase.
66

D. CONDITION

(1) Condition "A" – New and unused Material in sound and serviceable condition shall be charged at one hundred percent (100%) of the price as determined in Sections IV.2.A (*Pricing*), IV.2.B (*Freight*), and IV.2.C (*Taxes*). Material transferred from the Joint Property that was not placed in service shall be credited as charged without gain or loss; provided, however, any unused Material that was charged to the Joint Account through a direct purchase will be credited to the Joint Account at the original cost paid less restocking fees charged by the vendor. New and unused Material transferred from the Joint Property may be credited at a price other than the price originally charged to the Joint Account provided such price is approved by the Parties owning such Material, pursuant to Section I.6.A (*General Matters*). All refurbishing costs required or necessary to return the Material to original condition or to correct handling, transportation, or other damages will be borne by the divesting property. The Joint Account is responsible for Material preparation, handling, and transportation costs for new and unused Material charged to the Joint Property either through a direct purchase or transfer. Any preparation costs incurred, including any internal or external coating and wrapping, will be credited on new Material provided these services were not repeated for such Material for the receiving property.

(2) Condition "B" – Used Material in sound and serviceable condition and suitable for reuse without reconditioning shall be priced by multiplying the price determined in Sections IV.2.A (*Pricing*), IV.2.B (*Freight*), and IV.2.C (*Taxes*) by seventy-five percent (75%).

Except as provided in Section IV.2.D(3), all reconditioning costs required to return the Material to Condition "B" or to correct handling, transportation or other damages will be borne by the divesting property.

If the Material was originally charged to the Joint Account as used Material and placed in service for the Joint Property, the Material will be credited at the price determined in Sections IV.2.A (*Pricing*), IV.2.B (*Freight*), and IV.2.C (*Taxes*) multiplied by sixty-five percent (65%).

Unless otherwise agreed to by the Parties that paid for such Material, used Material transferred from the Joint Property that was not placed in service on the property shall be credited as charged without gain or loss.

(3) Condition "C" – Material that is not in sound and serviceable condition and not suitable for its original function until after reconditioning shall be priced by multiplying the price determined in Sections IV.2.A (*Pricing*), IV.2.B (*Freight*), and IV.2.C (*Taxes*) by fifty percent (50%).

The cost of reconditioning may be charged to the receiving property to the extent Condition "C" value, plus cost of reconditioning, does not exceed Condition "B" value.

(4) Condition "D" – Material that (i) is no longer suitable for its original purpose but useable for some other purpose, (ii) is obsolete, or (iii) does not meet original specifications but still has value and can be used in other applications as a substitute for items with different specifications, is considered Condition "D" Material. 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. 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. For other items, the price used should result in the Joint Account being charged or credited with the value of the service rendered or use of the Material, or as agreed to by the Parties pursuant to Section I.6.A (*General Matters*).

(5) Condition "E" – Junk shall be priced at prevailing scrap value prices.

E. OTHER PRICING PROVISIONS

(1) Preparation Costs

Subject to Section II (*Direct Charges*) and Section III (*Overhead*) of this Accounting Procedure, costs incurred by the Operator in making Material serviceable including inspection, third party surveillance services, and other similar services will be charged to the Joint Account at prices which reflect the Operator's actual costs of the services. Documentation must be provided to the Non-Operators upon request to support the cost of service. New coating and/or wrapping shall be considered a component of the Materials and priced in accordance with Sections IV.1 (*Direct Purchases*) or IV.2.A (*Pricing*), as applicable. No charges or credits shall be made for used coating or wrapping. Charges and credits for inspections shall be made in accordance with COPAS MFI-38 ("Material Pricing Manual").

(2) Loading and Unloading Costs

Loading and unloading costs related to the movement of the Material to the Joint Property shall be charged in accordance with the methods specified in COPAS MFI-38 ("Material Pricing Manual").

3. DISPOSITION OF SURPLUS

Surplus Material is that Material, whether new or used, that is no longer required for Joint Operations. The Operator may purchase, but shall be under no obligation to purchase, the interest of the Non-Operators in surplus Material.

Dispositions for the purpose of this procedure are considered to be the relinquishment of title of the Material from the Joint Property to either a third party, a Non-Operator, or to the Operator. To avoid the accumulation of surplus Material, the Operator should make good faith efforts to dispose of surplus within twelve (12) months through buy/sale agreements, trade, sale to a third party, division in kind, or other dispositions as agreed to by the Parties.

Disposal of surplus Materials shall be made in accordance with the terms of the Agreement to which this Accounting Procedure is attached. If the Agreement contains no provisions governing disposal of surplus Material, the following terms shall apply:

- The Operator may, through a sale to an unrelated third party or entity, dispose of surplus Material having a gross sale value that is less than or equal to the Operator's expenditure limit as set forth in the Agreement to which this Accounting Procedure is attached without the prior approval of the Parties owning such Material.
- If the gross sale value exceeds the Agreement expenditure limit, the disposal must be agreed to by the Parties owning such Material.
- Operator may purchase surplus Condition "A" or "B" Material without approval of the Parties owning such Material, based on the pricing methods set forth in Section IV.2 (*Transfers*).
- Operator may purchase Condition "C" Material without prior approval of the Parties owning such Material if the value of the Materials, based on the pricing methods set forth in Section IV.2 (*Transfers*), is less than or equal to the Operator's expenditure limitation set forth in the Agreement. The Operator shall provide documentation supporting the classification of the Material as Condition C.
- Operator may dispose of Condition "D" or "E" Material under procedures normally utilized by Operator without prior approval of the Parties owning such Material.

4. SPECIAL PRICING PROVISIONS

A. PREMIUM PRICING

Whenever Material is available only at inflated prices due to national emergencies, strikes, government imposed foreign trade restrictions, or other unusual causes over which the Operator has no control, for direct purchase the Operator may charge the Joint Account for the required Material at the Operator's actual cost incurred in providing such Material, making it suitable for use, and moving it to the Joint Property. Material transferred or disposed of during premium pricing situations shall be valued in accordance with Section IV.2 (*Transfers*) or Section IV.3 (*Disposition of Surplus*), as applicable.

B. SHOP-MADE ITEMS

Items fabricated by the Operator's employees, or by contract laborers under the direction of the Operator, shall be priced using the value of the Material used to construct the item plus the cost of labor to fabricate the item. If the Material is from the Operator's scrap or junk account, the Material shall be priced at either twenty-five percent (25%) of the current price as determined in Section IV.2.A (*Pricing*) or scrap value, whichever is higher. In no event shall the amount charged exceed the value of the item commensurate with its use.

C. MILL REJECTS

Mill rejects purchased as "limited service" casing or tubing shall be priced at eighty percent (80%) of K-55/J-55 price as determined in Section IV.2 (*Transfers*). Line pipe converted to casing or tubing with casing or tubing couplings attached shall be priced as K-55/J-55 casing or tubing at the nearest size and weight.

V. INVENTORIES OF CONTROLLABLE MATERIAL

The Operator shall maintain records of Controllable Material charged to the Joint Account, with sufficient detail to perform physical inventories.

Adjustments to the Joint Account by the Operator resulting from a physical inventory of Controllable Material shall be made within twelve (12) months following the taking of the inventory or receipt of Non-Operator inventory report. Charges and credits for overages or shortages will be valued for the Joint Account in accordance with Section IV.2 (*Transfers*) and shall be based on the Condition "B" prices in effect on the date of physical inventory unless the inventorying Parties can provide sufficient evidence another Material condition applies.

1 **1. DIRECTED INVENTORIES**

2
3 Physical inventories shall be performed by the Operator upon written request of a majority in working interests of the Non-Operators
4 (hereinafter, "directed inventory"); provided, however, the Operator shall not be required to perform directed inventories more frequently
5 than once every five (5) years. Directed inventories shall be commenced within one hundred eighty (180) days after the Operator receives
6 written notice that a majority in interest of the Non-Operators has requested the inventory. All Parties shall be governed by the results of
7 any directed inventory.

8
9 Expenses of directed inventories will be borne by the Joint Account; provided, however, costs associated with any post-report follow-up
10 work in settling the inventory will be absorbed by the Party incurring such costs. The Operator is expected to exercise judgment in keeping
11 expenses within reasonable limits. Any anticipated disproportionate or extraordinary costs should be discussed and agreed upon prior to
12 commencement of the inventory. Expenses of directed inventories may include the following:

- 13
14 A. A per diem rate for each inventory person, representative of actual salaries, wages, and payroll burdens and benefits of the personnel
15 performing the inventory or a rate agreed to by the Parties pursuant to Section I.6.A (*General Matters*). The per diem rate shall also
16 be applied to a reasonable number of days for pre-inventory work and report preparation.
- 17
18 B. Actual transportation costs and Personal Expenses for the inventory team.
- 19
20 C. Reasonable charges for report preparation and distribution to the Non-Operators.

21 **2. NON-DIRECTED INVENTORIES**

22
23 A. **OPERATOR INVENTORIES**

24
25 Physical inventories that are not requested by the Non-Operators may be performed by the Operator, at the Operator's discretion. The
26 expenses of conducting such Operator-initiated inventories shall not be charged to the Joint Account.

27
28 B. **NON-OPERATOR INVENTORIES**

29
30 Subject to the terms of the Agreement to which this Accounting Procedure is attached, the Non-Operators may conduct a physical
31 inventory at reasonable times at their sole cost and risk after giving the Operator at least ninety (90) days prior written notice. The
32 Non-Operator inventory report shall be furnished to the Operator in writing within ninety (90) days of completing the inventory
33 fieldwork.

34
35 C. **SPECIAL INVENTORIES**

36
37 The expense of conducting inventories other than those described in Sections V.1 (*Directed Inventories*), V.2.A (*Operator*
38 *Inventories*), or V.2.B (*Non-Operator Inventories*), shall be charged to the Party requesting such inventory; provided, however,
39 inventories required due to a change of Operator shall be charged to the Joint Account in the same manner as described in Section
40 V.1 (*Directed Inventories*).

41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66

EXHIBIT "D"

Attached to and made a part of that certain Operating Agreement dated _____, _____, by and between American Energy – Utica, LLC as Operator, and _____, _____, as Non-Operator.

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

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

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

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

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

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

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

END OF EXHIBIT "D"

EXHIBIT "E"

Attached to and made a part of that certain Operating Agreement dated _____, _____, by and between American Energy – Utica, LLC as Operator, and _____, _____, as Non-Operator.

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 unrecovered 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"

EXHIBIT "F"

Attached to and made a part of that certain Operating Agreement dated _____, _____, by and between American Energy – Utica, LLC as Operator, and _____, _____, as Non-Operator.

MODEL FORM RECORDING SUPPLEMENT TO OPERATING AGREEMENT AND FINANCING STATEMENT

THIS AGREEMENT, entered into by and between American Energy – Utica, LLC, hereinafter referred to as "Operator," and the signatory party or parties other than Operator, hereinafter referred to individually as "Non-Operator," and collectively as "Non-Operators."

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" (said land, Leases and Interests being hereinafter called the "Contract Area"), and in any instance in which the Leases or Interests of a party are not of record, the record owner and the party hereto that owns the interest or rights therein are reflected on Exhibit "A";

WHEREAS, the parties hereto have executed an Operating Agreement dated _____, 20____ (herein the "Operating Agreement"), covering the Contract Area for the purpose of exploring and developing such lands, Leases and Interests for Oil and Gas; and

WHEREAS, the parties hereto have executed this agreement for the purpose of imparting notice to all persons of the rights and obligations of the parties under the Operating Agreement and for the further purpose of perfecting those rights capable of perfection.

NOW, THEREFORE, in consideration of the mutual rights and obligations of the parties hereto, it is agreed as follows:

1. This agreement supplements the Operating Agreement, which Agreement in its entirety is incorporated herein by reference, and all terms used herein shall have the meaning ascribed to them in the Operating Agreement.
2. The parties do hereby agree that:
 - A. The Oil and Gas Leases and/or Oil and Gas Interests of the parties comprising the Contract Area shall be subject to and burdened with the terms and provisions of this agreement and the Operating Agreement, and the parties do hereby commit such Leases and Interests to the performance thereof.
 - B. The exploration and development of the Contract Area for Oil and Gas shall be governed by the terms and provisions of the Operating Agreement, as supplemented by this agreement.
 - C. All costs and liabilities incurred in operations under this agreement and the Operating Agreement shall be borne and paid, and all equipment and materials acquired in operations on the Contract Area shall be owned, by the parties hereto, as provided in the Operating Agreement.
 - D. Regardless of the record title ownership to the Oil and Gas Leases and/or Oil and Gas Interests identified on Exhibit "A," all production of Oil and Gas from the Contract Area shall be owned by the parties as provided in the Operating Agreement; provided nothing contained in this agreement shall be deemed an assignment or cross-assignment of interests covered hereby.
 - E. Each party shall pay or deliver, or cause to be paid or delivered, all burdens on its share of the production from the Contract Area as provided in the Operating Agreement.
 - F. An overriding royalty, production payment, net profits interest or other burden payable out of production hereafter created, assignments of production given as security for the payment of money and those overriding royalties, production payments and other burdens payable out of production heretofore created and defined as Subsequently Created Interests in the Operating Agreement shall be (i) borne solely by the party whose interest is burdened therewith, (ii) subject to suspension if a party is required to assign or relinquish to another party an interest which is subject to such burden, and (iii) subject to the lien and security interest hereinafter provided if the party subject to such burden fails to pay its share of expenses chargeable hereunder and under the Operating Agreement, all upon the terms and provisions and in the times and manner provided by the Operating Agreement.
 - G. The Oil and Gas Leases and/or Oil and Gas Interests which are subject hereto may not be assigned or transferred except in accordance with those terms, provisions and restrictions in the Operating Agreement regulating such transfers.

This agreement and the Operating Agreement shall be binding upon and shall inure to the benefit of the parties hereto, and their respective heirs, devisees, legal representatives, and assigns, and the terms hereof shall be deemed to run with the leases or interests included within the lease Contract Area.
 - H. The parties shall have the right to acquire an interest in renewal, extension and replacement leases, leases proposed to be surrendered, wells proposed to be abandoned, and interests to be relinquished as a result of non-participation in subsequent operations, all in accordance with the terms and provisions of the Operating Agreement.
 - I. The rights and obligations of the parties and the adjustment of interests among them in the event of a failure or loss of title, each party's right to propose operations, obligations with respect to participation in operations on the Contract Area and the consequences of a failure to participate in operations, the rights and obligations of the parties regarding the marketing of production, and the rights and remedies of the parties for failure to comply with financial obligations shall be as provided in the Operating Agreement.
 - J. Each party's interest under this agreement and under the Operating Agreement shall be subject to relinquishment for its failure to participate in subsequent operations and each party's share of production and costs shall be reallocated on the basis of such relinquishment, all upon the terms and provisions provided in the Operating Agreement.
 - K. All other matters with respect to exploration and development of the Contract Area and the ownership and transfer of the Oil and Gas Leases and/or Oil and Gas Interest therein shall be governed by the terms and provisions of the Operating Agreement.
3. The parties hereby grant reciprocal liens and security interests as follows:

- A. 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 and the Operating Agreement including but not limited to payment of expense, interest and fees, the proper disbursement of all monies paid under this agreement and the Operating Agreement, the assignment or relinquishment of interest in Oil and Gas Leases as required under this agreement and the Operating Agreement, and the proper performance of operations under this agreement and the Operating Agreement. 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 and the Operating 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 the sale of production at the wellhead), contract rights, inventory and general intangibles relating thereto or arising therefrom, and all proceeds and products of the foregoing.
- B. 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 and the Operating 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 and the Operating Agreement, whether by assignment, merger, mortgage, operation of law, or otherwise, shall be deemed to have taken subject to the lien and security interest granted by the Operating Agreement and this instrument as to all obligations attributable to such interest under this agreement and the Operating Agreement whether or not such obligations arise before or after such interest is acquired.
- C. To the extent that the 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, interest 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, 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.
- D. If any party fails to pay its share of expenses 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 this paragraph 3 and in the Operating Agreement, and each paying party may independently pursue any remedy available under the Operating Agreement or otherwise.
- E. If any party does not perform all of its obligations under this agreement or the Operating Agreement, and the failure to perform subjects such party to foreclosure or execution proceedings pursuant to the provisions of this agreement or the Operating 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 to stay execution or to require a marshaling of assets 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 or under the Operating Agreement, such power to be exercised in the manner provided by applicable law or otherwise in a commercially reasonable manner and upon reasonable notice.
- F. The lien and security interest granted in this paragraph 3 supplements identical rights granted under the Operating Agreement.
- G. 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 under this agreement and the Operating Agreement for services performed or materials supplied by Operator.
- H. The above described security will be financed at the wellhead of the well or wells located on the Contract Area and this Recording Supplement may be filed in the land records in the County or Parish in which the Contract Area is located, and as a financing statement in all recording offices required under the Uniform Commercial Code or other applicable state statutes to perfect the above-described security interest, and any party hereto may file a continuation statement as necessary under the Uniform Commercial Code, or other state laws.
4. This agreement shall be effective as of the date of the Operating Agreement as above recited. Upon termination of this agreement and the Operating Agreement and the satisfaction of all obligations thereunder, 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 the request of Operator, if Operator has complied with all of its financial obligations.
5. This agreement and the Operating Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, devisees, legal representatives, successors and assigns. No sale, encumbrance, transfer or other disposition shall be made by any party of any interest in the Leases or Interests subject hereto except as expressly permitted under the Operating Agreement and, if permitted, shall be made expressly subject to this agreement and the Operating Agreement and without prejudice to the rights of the other parties. If the transfer is permitted, the assignee of an ownership interest in any Oil and Gas Lease shall be deemed a party to this agreement and the Operating Agreement as to the interest assigned 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 under this agreement or the Operating Agreement with respect to the interest transferred, including without limitation the obligation of a party to pay all costs attributable to an operation conducted under this agreement and the Operating Agreement in which such party has agreed to participate prior to making such assignment, and the lien and security interest granted by Article VII.B. of the Operating Agreement and hereby shall continue to burden the interest transferred to secure payment of any such obligations.
6. In the event of a conflict between the terms and provisions of this agreement and the terms and provisions of the Operating Agreement, then, as between the parties, the terms and provisions of the Operating Agreement shall control.

7. This agreement shall be binding upon each Non-Operator when this agreement or a counterpart thereof has been executed by such Non-Operator and Operator notwithstanding that this agreement is not then or thereafter executed by all of the parties to which it is tendered or which are listed on Exhibit "A" as owning an interest in the Contract Area or which own, in fact, an interest in the Contract Area. In the event that any provision herein is illegal or unenforceable, the remaining provisions shall not be affected, and shall be enforced as if the illegal or unenforceable provision did not appear herein.

IN WITNESS WHEREOF, this agreement shall be effective as of the _____ day of _____, 20 ____.

ATTEST OR WITNESS

OPERATOR

American Energy – Utica, LLC
an Oklahoma limited liability company

By: Robert W. Kelly II

Title: Attorney-in-Fact
Address: 301 NW 63rd, Suite 600, Oklahoma City, Oklahoma 73116

ATTEST OR WITNESS

NON-OPERATORS

By: _____

Title: _____
Address: _____

ATTEST OR WITNESS

By: _____

Title: _____
Address: _____

ATTEST OR WITNESS

By: _____

Title: _____
Address: _____

ACKNOWLEDGMENT

STATE OF OKLAHOMA)
) §
COUNTY OF OKLAHOMA)

On this, the ___ day of _____, 20___, before me _____, the undersigned officer, personally appeared Robert W. Kelly II, who acknowledged himself to be the Attorney-in-Fact of American Energy – Ohio, LLC, an Oklahoma limited liability company, and that he as such Attorney-in-Fact, being authorized to do so, executed the foregoing instrument for the purpose therein contained by signing the name of the limited liability company by himself as Attorney-in-Fact.

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

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

STATE OF _____)
) §
COUNTY OF _____)

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

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

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

This document prepared by:
American Energy – Utica, LLC
301 NW 63rd, Suite 600
Oklahoma City, OK 73116

END OF EXHIBIT “F”

PREPARED DIRECT TESTIMONY

Michael E. Hale - GEOLOGIST

1 **Q1. Please state your name and identify where you are employed.**

2 A1. My name is Michael Hale. I am a Senior Geologist for American Energy – Utica, LLC
3 (“AEU”). Our offices are located at PO Box 18756, Oklahoma City, OK 73154.

4 **Q2. Describe your professional responsibilities at AEU.**

5 A2. My job is to help AEU best understand the geology of a given play, in order to best
6 develop the resources. I perform large scale subsurface mapping, I do log correlations, I
7 use various tools to try to understand basin mechanics, basin geometry, and the pre- and
8 post- depositional processes that shaped a reservoir. I help plan for well development by
9 looking at logs and determining what I believe is the best “landing zone” for our drill
10 bit, in order to stay within the target horizon. I also work with our landmen to
11 implement proper spacing between wells, to ensure that we are efficiently draining the
12 resources. I sometimes perform geosteering when the well is being drilled, and my
13 involvement in the well planning process helps make that geosteering easier. When I
14 am not geosteering, I help oversee the geosteering process.

15 **Q3. Describe your educational background.**

16 A3. I have a Bachelor’s of Science degree in Geology from East Carolina University. I also
17 have a Master’s of Science in Geology from East Carolina University.

18 **Q4. Describe your professional experience.**

19 A4. I have over 7 years of experience in the oil and gas industry. I began my career as a
20 geologic consultant for Fronterra Geosciences, where I held the position of geologist.
21 My duties included micro-resistivity formation image analysis and large-scale reservoir
22 and basin mapping (i.e., structure, fracture trends, lithology, etc). While at Fronterra
23 Geosciences, I gained significant experience in shale reservoirs, including the
24 Appalachian Basin Devonian shales. Immediately prior to joining AEU, I spent 3.5
25 years at SandRidge Energy, where I held the position of Geologist. My primary focus
26 at SandRidge was on operations and development of the Permian Basin and the
27 Mississippian Lime plays. I have spent the past two years at AEU, where I work on

1 Marcellus Shale and Utica/Point Pleasant Formation operations and development.

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

3 A5. I am a member of American Association of Petroleum Geologists (AAPG), West Texas
4 Geological Society (WTGS), and Young Professionals in Energy (YPE).

5 **Q6. Are you familiar with AEU's Application for Unit Operations with respect to the
6 Emersyn E RCH BL Unit?**

7 A6. Yes.

8 **Q7. Describe the Emersyn E RCH BL Unit, in terms of its general location, surface
9 acreage, and subsurface depth?**

10 A7. The Emersyn E RCH BL Unit consists of 28 separate tracts of land totaling
11 approximately 286.110 acres in Belmont County, Ohio. Exhibit 1-A.2 to the Unit
12 Agreement shows the geologic location of the proposed unit in Belmont County. The
13 Unitized Formation described in the Application is the subsurface portion of the Emersyn
14 E RCH BL Unit at a depth from 50' above the top of the Utica Shale, to 50' below the
15 base of the Point Pleasant Formation.

16 **Q8. Ohio Revised Code § 1509.01(E) defines the term "pool" to mean "an underground
17 reservoir containing a common accumulation of oil or gas, or both, but does not
18 include a gas storage reservoir. Each zone of a geological structure that is
19 completely separated from any other zone in the same structure may contain a
20 separate pool." Please explain if this definition of "pool" applies to the Emersyn E
21 RCH BL and why?**

22 A8. Yes. It is my professional opinion that the reservoir to be developed by the proposed
23 Emersyn E RCH BL Unit is a pool. The main reason is that if you use the offsetting logs to
24 compare different points within the reservoir, there is very little variation. Throughout
25 the play, and more specifically, within a 10 – 15 mile radius of the proposed Unit, the
26 logs simply don't change much. The logs show that there is a common reservoir, of
27 similar thickness, similar porosity, similar permeability, similar resistivity. That's really
28 what we are looking for. Therefore I believe it is a pool.

29 **Q9. Generally speaking, what sources of data would you review and analyze to assess
30 the geologic characteristics of a potential shale play?**

1 A9. We predominantly use wire log data to try to understand the processes that shaped the
2 basin. In situations where we are first coming into a play and don't have such data from
3 our own wells, we use whatever information is available – typically, published studies
4 from universities, data submitted to the agencies by other companies, anything we can do
5 to avoid having to reinvent the wheel. We will look at preexisting studies and study core
6 samples to understand the lithology, the texture of the rock (e.g., is it grainstone?
7 fossiliferous?), - anything that helps us understand and estimate the permeability,
8 porosity, and other relevant characteristics that we would anticipate to be encountered
9 within those rocks.

10 **Q11. How is this data obtained, and what is it meant to show about a formation?**

11 A11. We obtain wireline log data from pilot wells that have been drilled into the Utica/Point
12 Pleasant Formation. Those logs measure various characteristics about the rock and report
13 those measurements on a graphical “log” that can be interpreted to help us understand the
14 upper and lower boundaries of the formation, as well as expected characteristics of the
15 formation. Cores, which are actual samples of the rock, are also studied and can be
16 correlated with wireline logs to further refine the information. We joined an entity called
17 the Core Labs Utica Consortium, which gave us access to somewhere around 28 core
18 samples before we had drilled any of our own. We also relied heavily on data available
19 through the Ohio Department of Natural Resources, especially when we first started to
20 develop this play.

21 **Q12. What data sources did you use in determining the geologic features of the**
22 **Emersyn E RCH BL Unit?**

23 A12. In evaluating this Unit, I used wireline log data exclusively. I looked at three wells –
24 PDC's Hickenbottom Pilot, Gulfport's Wagner Unit Pilot, and Red Hill's Zechman
25 Thomas Unit Pilot. Wireline log data is the only data we have in the immediate vicinity of
26 the proposed Unit. I chose to use the Hickenbottom well because it is the closest. As for
27 the other two wells, I could have chosen from any number of other wells. I chose the ones
28 I did because I wanted to show that the rock characteristics remained fairly consistent,
29 even as you move farther away from the well location.

30 **Q13. Which formations are included in the proposed Emersyn E RCH BL Unit?**

31 A13. The Utica Shale and Point Pleasant Formations.

1 **Q14. How and why were these formations chosen?**

2 A14. The Point Pleasant formation is the source material that we actually target for
3 development. Where we land, however, is only about 50' from the top of that formation.
4 The Utica formation directly overlies it. When we stimulate the horizontal wellbore,
5 some of the fractures will grow into the Utica. We know that from microseismic data.
6 Because the Utica is also a reservoir quality rock, and because our fractures will
7 propagate into the Utica, we believe we will also drain small areas of the Utica, even
8 though Point Pleasant is our primary target.

9 **Q15. What is the approximate depth of the Utica/Point Pleasant Formation under the**
10 **Emersyn E RCH BL Unit?**

11 A15. It is approximately 9200' TVD to the top of the Utica/Point Pleasant Formation.

12 **Q16. Please describe your Exhibits and summarize what they tell us about the Emersyn E**
13 **RCH BL Unit.**

14 A16. Exhibit 3-A is a map of the Trenton structure showing the area where the Emersyn E
15 RCH BL Unit is being proposed, highlighted in Red, as well as several key producing
16 Utica/Point Pleasant horizontal wells. Exhibit 3-B is Cross Section A-A' of three keys
17 wells surrounding the Red Hill Zechman Thomas Unit #1, Gulfport Wagner Unit #1, and
18 the PDC Hickenbottom #1 (see Exhibit 3-A for location of the cross section wells). The
19 log data displayed are gamma ray in track 1 and resistivity in track 2. As seen on this
20 exhibit the log data show that the Utica/Point Pleasant Formation does not change within
21 or across the proposed Emersyn E RCH BL Unit; the stratigraphy is regionally very
22 consistent. Geologic properties, like thickness and resistivity, are constant throughout the
23 Point Pleasant Formation.

24 **Q17. Based on the data you analyzed, should the area be considered a pool? Explain why.**

25 A17. Yes. The log data demonstrate that formation thickness remains relatively constant across
26 the unit. Porosity and resistivity will be relatively uniform, and the thermal maturity of
27 the rock, which applies to BTU and liquids content, is the same across the unit. All of
28 this data suggests, in my professional opinion, that the area within the proposed Emersyn
29 E RCH BL Coal Unit boundary is all one geologic unit, and therefore part of the same
30 pool.

1 **Q18. Given the reservoir characteristics of the Utica/Point Pleasant Formation, what**
2 **would be an appropriate method of allocating production and unit expenses among**
3 **the parcels contained in the Emersyn E RCH BL Unit?**

4 A18. Allocating production and expenses on a surface acreage basis would be appropriate in
5 this instance. The relative thickness and quality of the Utica/Point Pleasant Formation is
6 not expected to change across the Emersyn E RCH BL Unit, and so surface acre
7 allocation is the easiest and most fair.

8 **Q19. Is this the method proposed by AEU for the Emersyn E RCH BL Unit?**

9 A19. Yes.

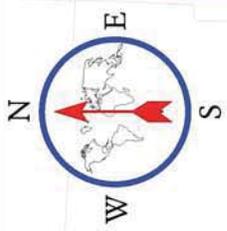
10 **Q20. Is this method used elsewhere?**

11 A20. Yes. It's the only way I've ever seen it done. There just isn't enough variation in the
12 data to show that any one area of the proposed unit will contribute more than another to
13 justify apportioning any other way.

14

15 **Q21. Does this conclude your testimony?**

16 A21. Yes.



ZECHMAN THOMAS UNIT 1
APPROX. 11.5 MILES FROM
EMERSYN E RCH BL UNIT

ZECHMAN THOMAS UNIT 1
34067207370000

MOOREFIELD

WAGNER UNIT 1
34067210620000

WAGNER UNIT 1
APPROX. 5.5 MILES FROM
EMERSYN E RCH BL UNIT

ATHENS

FLUSHING

8000

8600

8800

9000

9200

9400

WHEELING

EMERSYN E RCH BL UNIT

HICKENBOTTOM 1
34013206500000

HICKENBOTTOM 1
APPROX. 1.5 MILES FROM
EMERSYN E RCH BL UNIT

UNION

PLYWOOD

EXHIBIT 3-A



AMERICAN ENERGY
APPALACHIA

Utica/Point Pleasant
EMERSYN E RCH BL

Trenton Structure TVD MD (C.I. 200')

Geologist: Aubrey Trimmis

Date: 17 March, 2015

1 inch = 8 miles

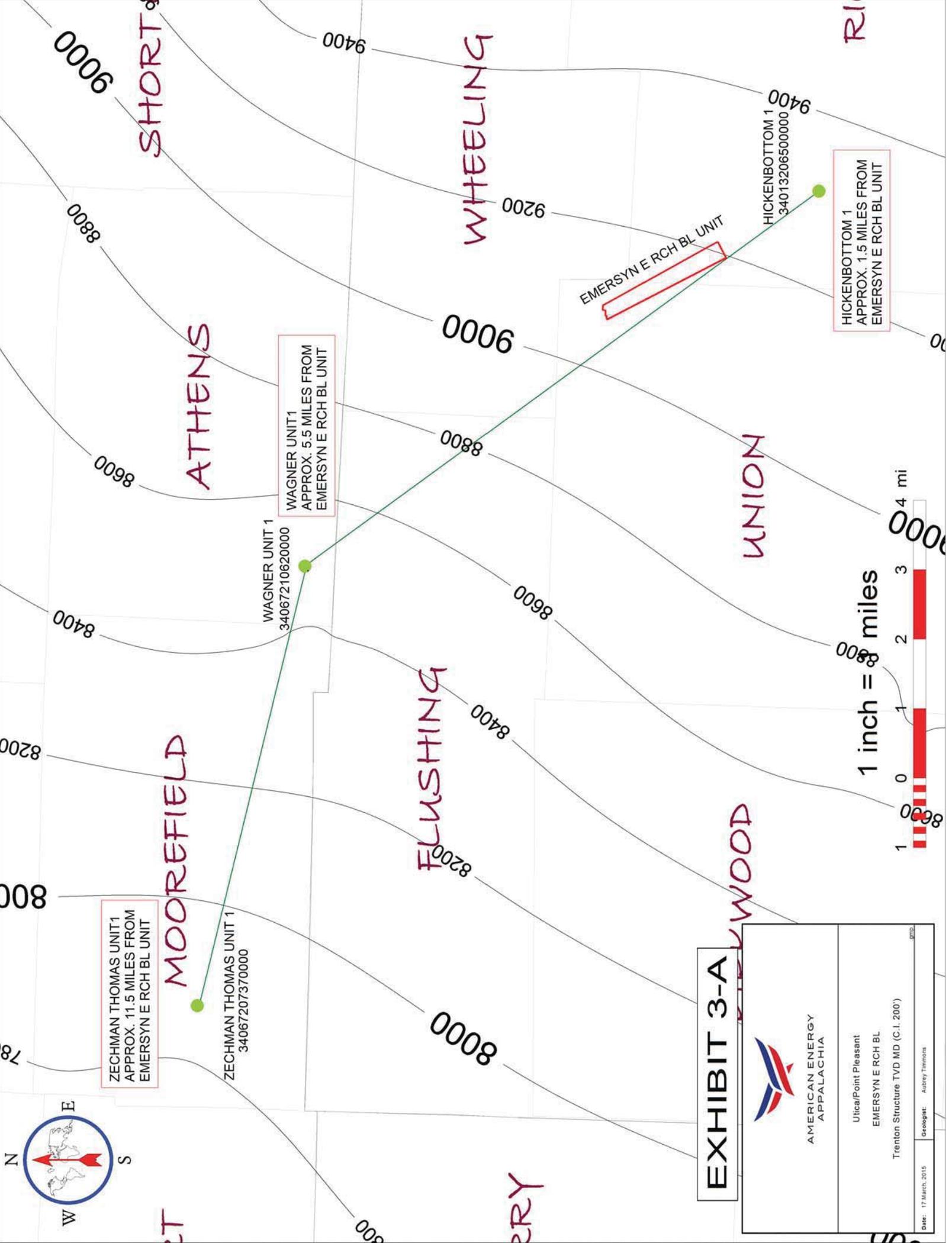
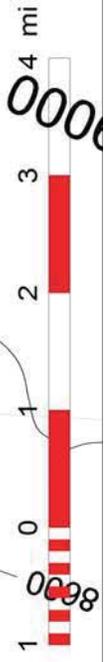


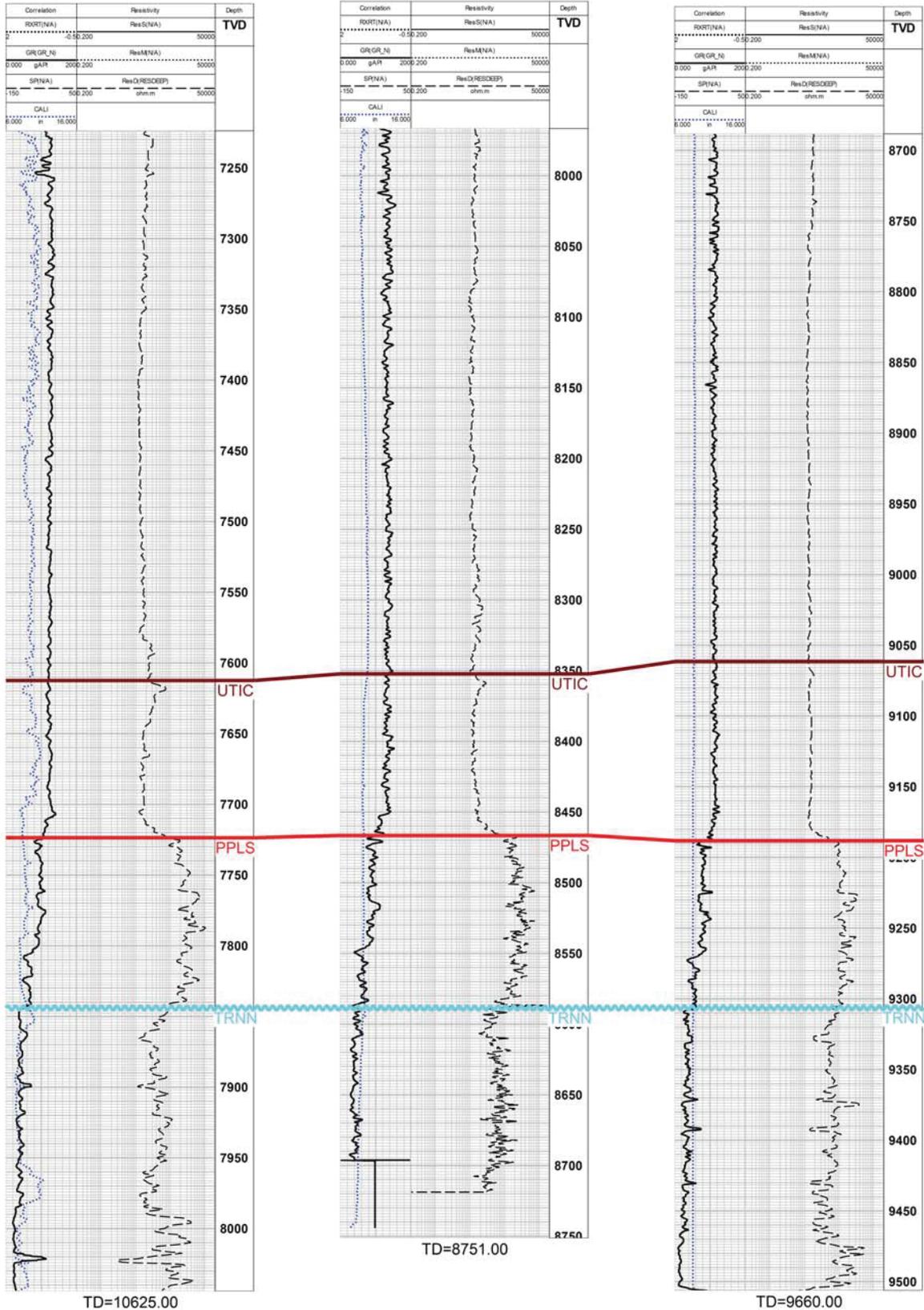
Exhibit 3-B
 Emersyn E RCH BL Unit
 West-East Stratigraphic Cross Section A-A'
 *Hung Stratigraphically on the Trenton Formation

34067207370000 34400 ft 34067210620000 48373 ft 34013206500000

RED HILL DEVELOPMENT GULFPORT ENERGY CORP PETROLEUM DEVELOPMENT CORPORATION
 ZECHMAN THOMAS UNIT 1 WAGNER UNIT 1 HICKENBOTTOM 1
 250 FSL/200 FWL 2230 FSL/1003 FEL 670 FNL/2260 FWL
 Longitude: - Latitude: Longitude: - Latitude: Longitude: - Latitude:

A

A'



500

500

0

0

PREPARED DIRECT TESTIMONY

DAVID BAILEY – RESERVOIR ENGINEER

1 **Q1. What is your name and business address?**

2 A1. My name is David Bailey. I am a Reservoir Engineer with American Energy – Utica,
3 LLC (“AEU”). My business address is PO Box 18756, Oklahoma City, OK 73154.

4 **Q2. Can you please describe your educational background?**

5 A2. I hold a Bachelors of Science degree in Petroleum Engineering from The University of
6 Oklahoma.

7 **Q3. Describe your professional experience.**

8 A3. I have approximately 4 years of experience working in oil and gas development and
9 exploration. I have been with AEU for 1.5 years as a Reservoir Engineer working the
10 Appalachian Basin. Prior to working for AEU, I was with another smaller production
11 company, GMX resources, for about a year. Prior to that, I worked for Enogex, a
12 midstream company, for about a year and half. For all of these employers, I have worked
13 in a reservoir engineering capacity, in multiple unconventional shale reservoirs, including
14 the Haynesville Shale, Bakken Shale, and various unconventional reservoirs in the
15 Appalachian and Anadarko Basins.

16 **Q4. Are you a member of any professional associations?**

17 A4. I have been a member of the Society of Petroleum Engineers.

18 **Q5. What does being a Reservoir Engineer entail?**

19 A5. I perform various jobs, ranging from quantifying the economic value of drilling in one
20 area versus another, doing reserve booking/forecasting, evaluating the development
21 potential of both current and future locations, developing type curves, and doing general
22 resource development and overall optimization of the company’s field development
23 operations.

24 **Q6. With regard to the Emersyn E RCH BL Unit, have you made an estimate of the
25 production you anticipate from the proposed unit’s operations?**

26 A6. I have. I used type curves that reflect this area of the reservoir to predict performance.

1 The type curves were developed for AEU by a third party consulting engineering firm –
2 WD Von Gonten and Company Petroleum Engineering. By looking at the size and
3 shape of the proposed unit, I was able to use the type curve data to predict the ultimate
4 recoveries that we anticipate based on developing 1 lateral, which is what we believe is
5 the maximum number of laterals that can be reasonably developed given the necessary
6 spacing requirements within the unit. I predicted that unitized operation will result in the
7 recovery of 14.8 Bcfe. My calculations are summarized in Exhibit 4-A.

8 **Q7. How did you make the estimates?**

9 A7. Type curves are commonly used by reservoir engineers to predict the performance of a
10 well in a given area. Our consultant has developed numerous type curves for us based on
11 historical production data and information about the anticipated impact of reservoir
12 stimulation. The type curve takes into consideration various factors, including the
13 maturity, depth and pressure of a given formation. The type curve I used assumed a
14 horizontal well with a 7,500' lateral. Because production is directly related to lateral
15 length, I was able to do some simple calculations, adjusting the lateral length to estimate
16 the production anticipated from the proposed lateral in the Emersyn E RCH BL Unit.

17 **Q8. If the Emersyn E RCH BL Unit as proposed were not granted, have you estimated**
18 **the production that could be recovered?**

19 A8. Yes, if we were not able to unitize the Emersyn E RCH BL unit, we would have to
20 shorten the lateral, leaving us with a total of 5,316' in lateral length, as opposed to having
21 a full-length lateral of 9,670' total. Because production is directly related to lateral
22 length, shortening the lateral would significantly lower our ultimate recovery. Without
23 unitization, 6.2 Bcfe, or roughly 42% of the otherwise recoverable reserves, would be
24 stranded.

25 **Q9. In your professional opinion, would it be economic to develop the Emersyn E RCH**
26 **BL Unit using traditional vertical drilling?**

27 A9. No, not at all. Within a shale reservoir, permeability is far too low to produce
28 hydrocarbons at an economic level. That's why we drill horizontally and add fracture
29 stages to add exposure to the reservoir. It's the only way to get hydrocarbons to flow at
30 an economic rate.

1 **Q10. Summarize what your calculations show and the differences between unitized vs**
2 **non-unitized development.**

3 A10. The results of my calculations are summarized in Exhibit 4-A. In the Unitized
4 development plan, we would drill 1 well totaling 9,670' in length. Without unitization,
5 we would have to shorten the lateral and would only be able to develop 5,316' total.
6 Losing 4,354' in lateral length would mean stranding roughly 42% of otherwise
7 recoverable hydrocarbons in this unit.

8 **Q11. Is the increase in production associated with unitization solely due to drilling the**
9 **currently unleased parcels?**

10 A11. No. It includes production from leased tracts around those unleased parcels as well.
11 Because the law requires that we maintain a 500' setback from any unleased tract, several
12 leased parties adjacent to the unleased tracts would have some portion of their interests
13 stranded and not able to be developed as well. By unitizing the unleased parcels, we
14 ensure that we effectively drain all of the acreage in the unit, leased and unleased, and do
15 not waste any minerals. We also ensure that those mineral owners who leased and who
16 want to see their minerals developed get the full benefit of participation within the unit.
17 If their acreage cannot be produced, the profits to be shared by all within the unit are
18 decreased by 83%. See Exhibit 5-D for a visual representation of the stranded acreage.

19 **Q12. Do you believe that the proposed unit operations are reasonably necessary to**
20 **increase substantially the ultimate recovery of oil and gas from the unit area?**

21 A12. Yes. The additional reserves that would be recovered, and the additional proceeds that
22 AEU and the other Working Interest and Royalty owners in the unit would stand to gain
23 as a result certainly justify the additional expenditures associated with unitization.

24 **Q13. Would you walk us through your economic evaluation, beginning with your estimate**
25 **of the anticipated revenue stream from the Emersyn E RCH BL Unit development?**

26 A13. As I noted above, I use type curves to predict production. I then use our economics
27 software to estimate capital costs for drilling and completing the wells. One of the inputs
28 that I must provide to the software is the overall lateral length because, as noted above,
29 the lateral length dictates the production. The software then provides me with a capital
30 cost for constructing a well of that length. In my experience, our model is on the

1 conservative side and we do a good job of building and completing wells at or under
2 budget. I discounted the anticipated revenue to present value and compared present
3 value with capital expenditures to calculate the return on the project.

4 As previously noted, type curves representative of this particular area were used to
5 determine future reserves and net present value. An estimation of capital costs provided
6 by our Operations department was used in the analysis. These two components, along
7 with estimated working and net revenue interests, are what are used in determining the
8 quantity of reserves and net v

9 **Q14. What price scenario did you use?**

10 A14. I used NYMEX futures pricing as of March 19, 2015. I chose this pricing as it is the best
11 representation of both current and future pricing given the current market conditions. I
12 also included NGLs attributable to gas processing in my economic analysis. It is
13 estimated that gas in this area is approximately 1,081 BTU. SEC pricing was not used in
14 this evaluation as it is currently a poor representation of current market conditions.

15 **Q15. What about anticipated operating expenses?**

16 A15. Operating expenses were incorporated in my analysis. I used data gathered from our own
17 operated wells, as well as non-operated wells within close proximity of the Emersyn E
18 RCH BL unit.

19 **Q16. Based on this information and your professional judgment, does the value of the
20 estimated additional recovery of hydrocarbons from the unitized project exceed its
21 estimated costs?**

22 A16. Yes. The capital expense is \$11.9 million for the unitized project, as compared to \$8.8
23 million for the project without unitization. The value of hydrocarbons from the proposed
24 unit is \$2.4 million as compared to \$418 thousand without approval of this application for
25 unit operations. For an additional \$3,142,000 in capital, AEU could recover
26 hydrocarbons valued with a net present value of more than \$1.99 million. Thus, the
27 economic benefits of unitization far outweigh the additional costs necessary for unit
28 development.

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

30 A17. Yes.

Unitized Emersyn E RCH BL 3H Unit						
Well Name	Lateral Length (ft.)	Gross Capital (\$M)	Net PV10 (\$M)	Gross Residue Gas (MMcf)	Gross Processed NGLs (bbls)	Gross Reserves (MMcfe)
Emersyn E RCH BL 3H	9,670	\$ 11,947	\$ 2,412	12,678	354	14,805
Total Emersyn E RCH BL Unit	9,670	\$ 11,947	\$ 2,412	12,678	354	14,805

Un-unitized Emersyn E RCH BL 3H Unit						
Well Name	Lateral Length (ft.)	Gross Capital (\$M)	Net PV10 (\$M)	Gross Residue Gas (MMcf)	Gross Processed NGLs (bbls)	Gross Reserves (MMcfe)
Emersyn E RCH BL 3H	5,316	\$ 8,805	\$ 418	7,367	206	8,603
Total Emersyn E RCH BL Unit	5,316	\$ 8,805	\$ 418	7,367	206	8,603

Difference						
Well Name	Lateral Length (ft.)	Gross Capital (\$M)	Net PV10 (\$M)	Gross Residue Gas (MMcf)	Gross Processed NGLs (bbls)	Gross Reserves (MMcfe)
Emersyn E RCH BL 3H	4,354	\$ 3,142	\$ 1,994	5,311	149	6,203
%Δ		45%	26%	83%	42%	42%

*Economics run @ 3/19/15 NYMEX Strip Pricing

Fixed Operating Costs (\$/Month)	\$ 4,000
---	----------

Variable Operating Costs	
Gas (\$/Mcf)	\$ 0.21

PREPARED DIRECT TESTIMONY

John F. Gwynn – SENIOR LANDMAN

1 **Q1. Please state your name and identify your employer.**

2 A1. My name is John F. Gwynn and I am a Senior Landman with American Energy- Utica,
3 LLC. American Energy-Utica, LLC (“AEU”) is an exploration and production company
4 engaged in the development of oil and gas properties in the Appalachian Basin. Our
5 offices are located at 3501 NW 63rd Street, Oklahoma City, Oklahoma, 73116.

6 **Q2. As a landman, what are your professional responsibilities?**

7 A2. My responsibilities vary, but are all related to development of drilling units in the Utica
8 shale. I am directly involved in leasing efforts, and I also oversee land brokers who work
9 for us in efforts to lease properties. Once we identify a potential drilling site, I am
10 involved in reviewing title for the tracts within the planned unit, reviewing leases to
11 identify potential issues, like Dormant Mineral Act concerns or other requirements within
12 existing leases that may pose problems to our planned development. I work with our
13 geologists and our reservoir engineers to plan how a unit will be laid out, with an eye
14 towards spacing and set back requirements. In general, development of the play is
15 planned so that rigs and resources can be used efficiently, making sure that we have the
16 resources we need available when we need them, but also making sure that we don’t have
17 a lot of downtime, where rigs and crews are sitting idle. Right now, my focus is on our
18 drilling schedule and doing what I can to try to keep everything on schedule.

19 **Q3. Please summarize your educational background.**

20 A3. I graduated from The University of Central Oklahoma with a Bachelor’s degree in
21 General Studies.

22 **Q4. What is your employment history?**

23 A4. Following graduation, I went to work for Chesapeake Energy in a non-energy related
24 capacity. I was soon recruited into Chesapeake’s land group, where I spent 18 months
25 training before being assigned to the Barnett Shale play. I subsequently joined the Utica
26 shale group, and was later promoted to supervisor in the Marcellus group. After almost 7
27 years working as a landman at Chesapeake, I joined American Energy-Utica, LLC in
28 February of 2014.

1 **Q5. Do you belong to any professional organizations or associations?**

2 A5. I am a member of American Association of Petroleum Landmen (AAPL) and the
3 Oklahoma City Association of Professional Landmen (OCAPL).

4 **Q6. Do you have any prior experience with unitization applications?**

5 A6. I do. While this is my first unitization application with AEU, I assisted in the preparation
6 of unitization applications at my former employer, Chesapeake Energy.

7 **Q7. Can you briefly describe the proposed Emersyn E RCH BL Unit?**

8 A7. The Emersyn E RCH BL Unit consists of 28 separate tracts of land, totaling 286.110
9 acres more or less in Belmont County, Ohio.

10 **Q8. What are AEU's plans for developing the Emersyn E RCH BL Unit?**

11 A8. Within the Emersyn E RCH BL Unit we plan to drill and complete one horizontal well
12 from the surface location at the south end of the Unit. Exhibit 5-A depicts the surface
13 location as well as the planned wellbore path for the Emersyn E RCH BL Unit well. We
14 would like to drill the well, the Emersyn E RCH BL 3H, by May of 2015 if not sooner.

15 **Q9. What is AEU's Interest in the Emersyn E RCH BL Unit?**

16 A9. American Energy – Utica, LLC and the other Working Interest owners in the unit,
17 Gulfport Energy Corporation, XTO Energy, Inc., and Rice Drilling D, LLC, own the oil
18 and gas rights to approximately 98.37% of the Unit.¹ All told, 281.433 acres of the
19 proposed 286.110 acre unit are leased for development. However, Gulfport Energy
20 Corporation, who owns the oil and gas rights to 1.211 acres of the Unit, has indicated that
21 they do not wish to participate in the well. AEU's individual interest is approximately
22 277.20025 acres, or roughly 96.89% of the Unit.

23 **Q10. Can you summarize the terms upon which AEU has offered to lease tracts within
24 this Unit?**

25 A10. AEU has been pursuing oil and gas leases in this general area for almost two years. Our
26 offers have been fair and, at times, probably exceed the market rate for leases in this area.
27 The average lease bonus for this unit is \$6,800 per acre, with the highest bonus that was
28 paid being \$7,000 per acre. In my opinion, the average lease bonus in this unit is skewed

¹ XTO Energy, Inc. ("XTO") and AEU have entered into a Participation Agreement, dated January 29, 2014 pursuant to which XTO will assign 95% of their acreage within a defined area (Contract Area B), in which the Emersyn E RCH BL Unit is located, at spud of the first well in Unit. Upon assignment, AEU will have a 95% interest in the tract and XTO will have a 5% interest in those tracts shown on Exhibit 2.A-1.

1 high because we paid a premium to acquire a block of leases through a deal with another
2 operator and a number of those leases are in this unit.

3 **Q11. Would you say your leasing efforts were successful?**

4 A11. Overall, yes, our leasing efforts were successful. We were able to lease 25 of the 28
5 tracts in this unit. Despite our best efforts, however, 3 tracts totaling 4.677 acres remain
6 unleased. In addition, 1 tract in the Unit is currently leased by Gulfport Energy
7 Corporation, who has indicated that they do not wish to participate in the well.

8 **Q12. Can you provide any additional information about these unleased tracts?**

9 A12. The attached plat [Exhibit 5-A] shows the tracts to be unitized in red. Additional
10 information about the owners of these tracts and the exact acreage is found in Exhibit 2-
11 A.3 to the Unit Agreement. The attached lease logs [Exhibit 5-E] detail our attempts to
12 lease the 3 unleased parcels. As the logs show, we have contacted the landowners by
13 telephone and by mail, including certified mail, but for whatever reason, we have not
14 been able to lease these parcels. The owners of Tax Parcel Number 39-01240.003 appear
15 to be opposed to leasing in principle. However, we remain optimistic about being able to
16 reach a lease agreement with the owner of two other unleased tracts², but as of the filing
17 of this application, they remain unleased.

18 **Q13. Can you briefly summarize the terms of the Unit Agreement?**

19 A13. The Unit Agreement [Exhibit 1] effectively combines the oil and gas rights of the various
20 parcels within the unit for that area that is fifty feet above the top of the Utica Shale to
21 fifty feet below the base of the Point Pleasant formation. As a result, we can uniformly
22 operate the Emersyn E RCH BL Unit as though it were a single lease. The Unit
23 Agreement explains that production proceeds from the Unit will be allocated among
24 royalty interest owners and working interest owners based on a surface-acreage basis.
25 This is consistent with what our geologist has indicated is appropriate, given the uniform
26 thickness and reservoir quality of the Utica formation in this area. Using a surface
27 acreage allocation approach, each tract will be given its proportionate percentage of the
28 proceeds by dividing the tract acreage by the total unit acreage, both of which have been
29 calculated by certified survey.

² We acquired a number of leases with the owner in question –Ohio River Collieries Company— through a prior assignment. The two parcels that they own in this unit, which combined total 0.312 acres, were overlooked in that prior assignment, and we are optimistic that we can reach a lease agreement with them before the hearing on this application.

1 **Q14. How are unit expenses paid?**

2 A14. Unit expenses will be allocated and paid by the working interest owners using the same
3 surface acreage allocation approach. Royalty interest owners do not pay unit expenses.
4 They are only responsible for their proportionate share of taxes and post-production
5 costs, which are paid from their share of proceeds.

6 **Q15. Who makes decisions about how the Unit is operated?**

7 A15. AEU will be the Unit Operator and will operate the unit according to agreements it has in
8 place with various working interest partners.

9 **Q16. How does AEU propose treating unleased parties within this Unit?**

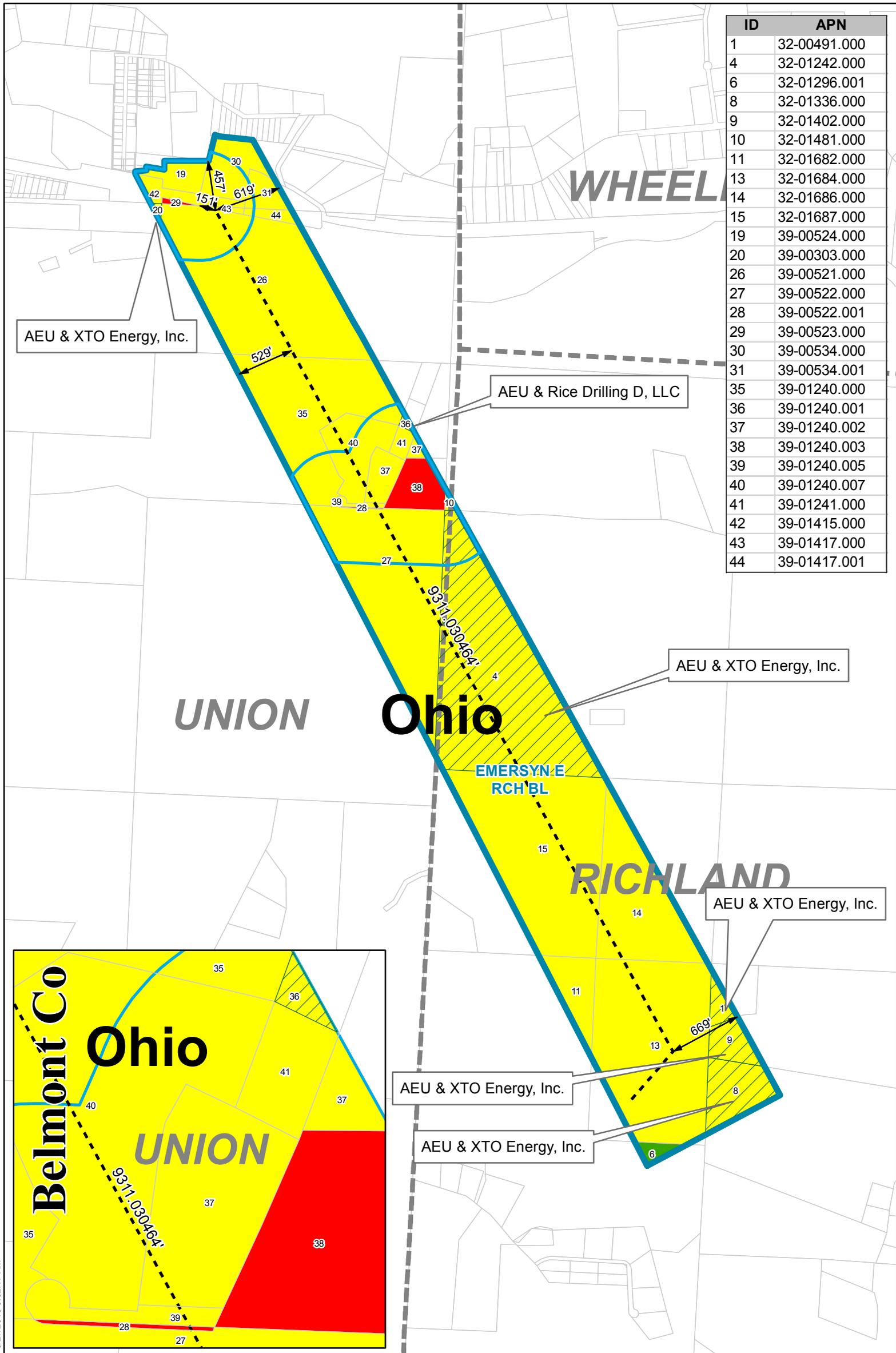
10 A16. We propose that unleased parties be given two options. The first is to lease their
11 minerals to AEU for a 14% net royalty and a bonus of \$6,000 per acre. This would be a
12 non-surface use lease. Alternatively, the unleased party could elect to be treated as a
13 non-consenting working interest owner, entitled to a 1/8 net royalty interest and 7/8
14 working interest, subject to non-consent penalties of 500% for the well. The revenue
15 attributable to the 7/8 working interest will accrue until the risk penalty has been
16 recovered, whereas the royalty payments will be made monthly, without regard to any
17 non-consent penalties. If an unleased party does not make an affirmative election within
18 30 days, we propose that the Chief's Order include language that compensates the
19 unleased parties as if they were governed by the terms of the form lease, attached hereto
20 as Exhibit 2-B.

21 **Q17. Are these fair offers in your opinion?**

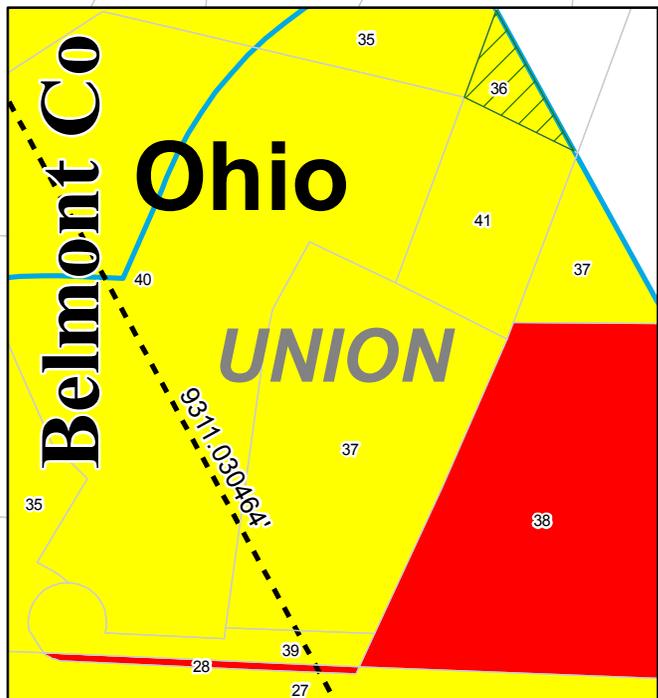
22 A17. Yes. The royalty and the bonus contemplated by the proposed lease are consistent with
23 the general market for such leases in this area. Similarly, the non-consent penalties
24 included in the proposed working interest option are consistent with those that apply to
25 AEU working interest partners in other units

26 **Q18. Does this conclude your testimony?**

27 A18. Yes.

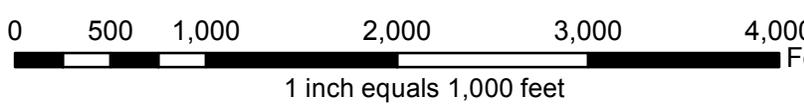


ID	APN
1	32-00491.000
4	32-01242.000
6	32-01296.001
8	32-01336.000
9	32-01402.000
10	32-01481.000
11	32-01682.000
13	32-01684.000
14	32-01686.000
15	32-01687.000
19	39-00524.000
20	39-00303.000
26	39-00521.000
27	39-00522.000
28	39-00522.001
29	39-00523.000
30	39-00534.000
31	39-00534.001
35	39-01240.000
36	39-01240.001
37	39-01240.002
38	39-01240.003
39	39-01240.005
40	39-01240.007
41	39-01241.000
42	39-01415.000
43	39-01417.000
44	39-01417.001

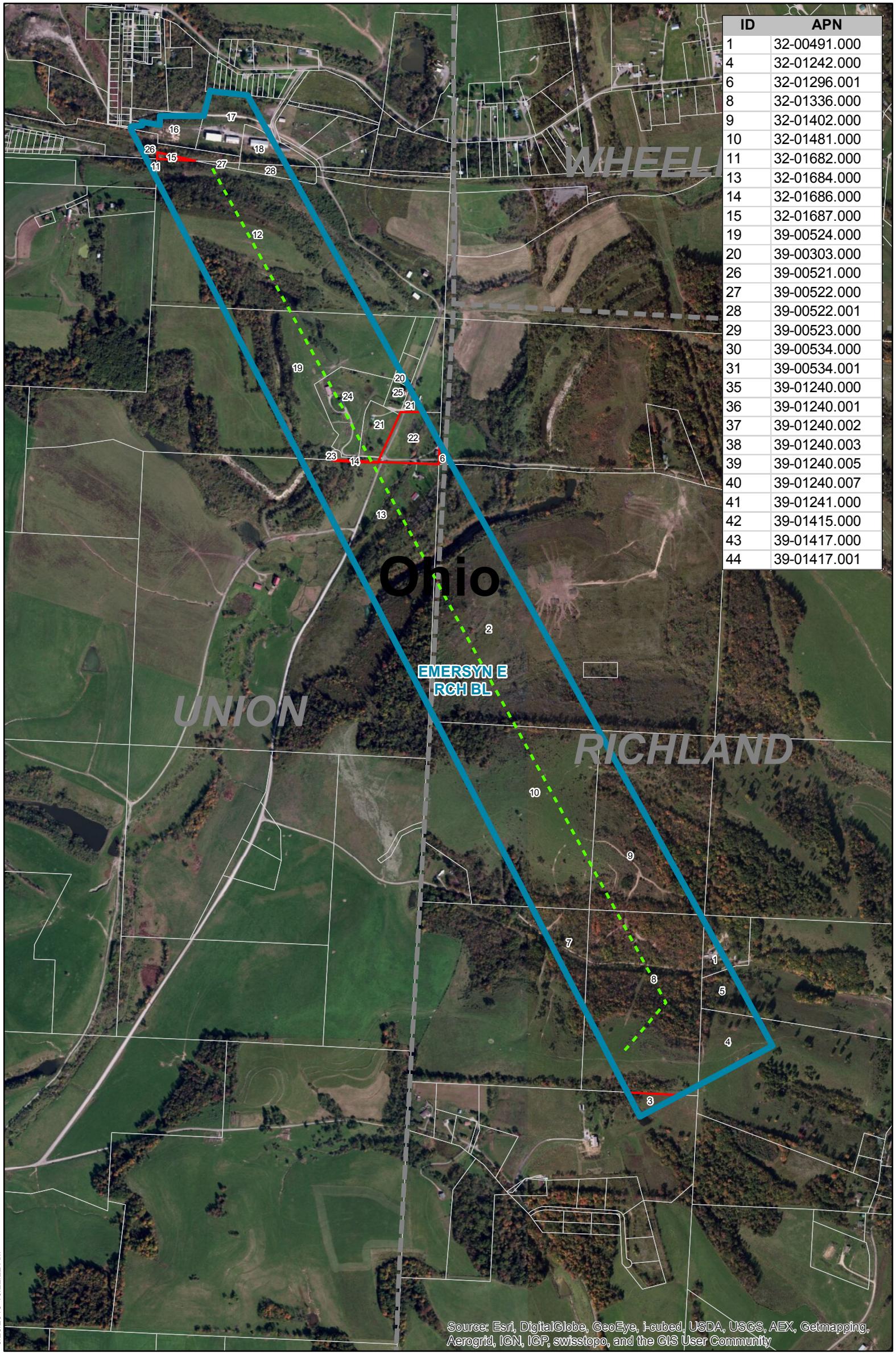


Emersyn E RCH BL
Exhibit 5A

- Legend**
- AEU
 - Gulfport Energy Corporation
 - UNLEASED
 - MULTIPLE WI OWNERS



3/27/2015 9:52:17 AM

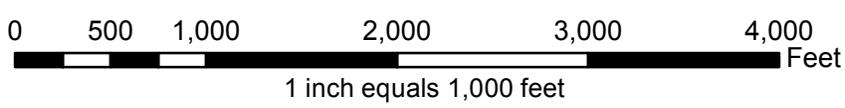


ID	APN
1	32-00491.000
4	32-01242.000
6	32-01296.001
8	32-01336.000
9	32-01402.000
10	32-01481.000
11	32-01682.000
13	32-01684.000
14	32-01686.000
15	32-01687.000
19	39-00524.000
20	39-00303.000
26	39-00521.000
27	39-00522.000
28	39-00522.001
29	39-00523.000
30	39-00534.000
31	39-00534.001
35	39-01240.000
36	39-01240.001
37	39-01240.002
38	39-01240.003
39	39-01240.005
40	39-01240.007
41	39-01241.000
42	39-01415.000
43	39-01417.000
44	39-01417.001

Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

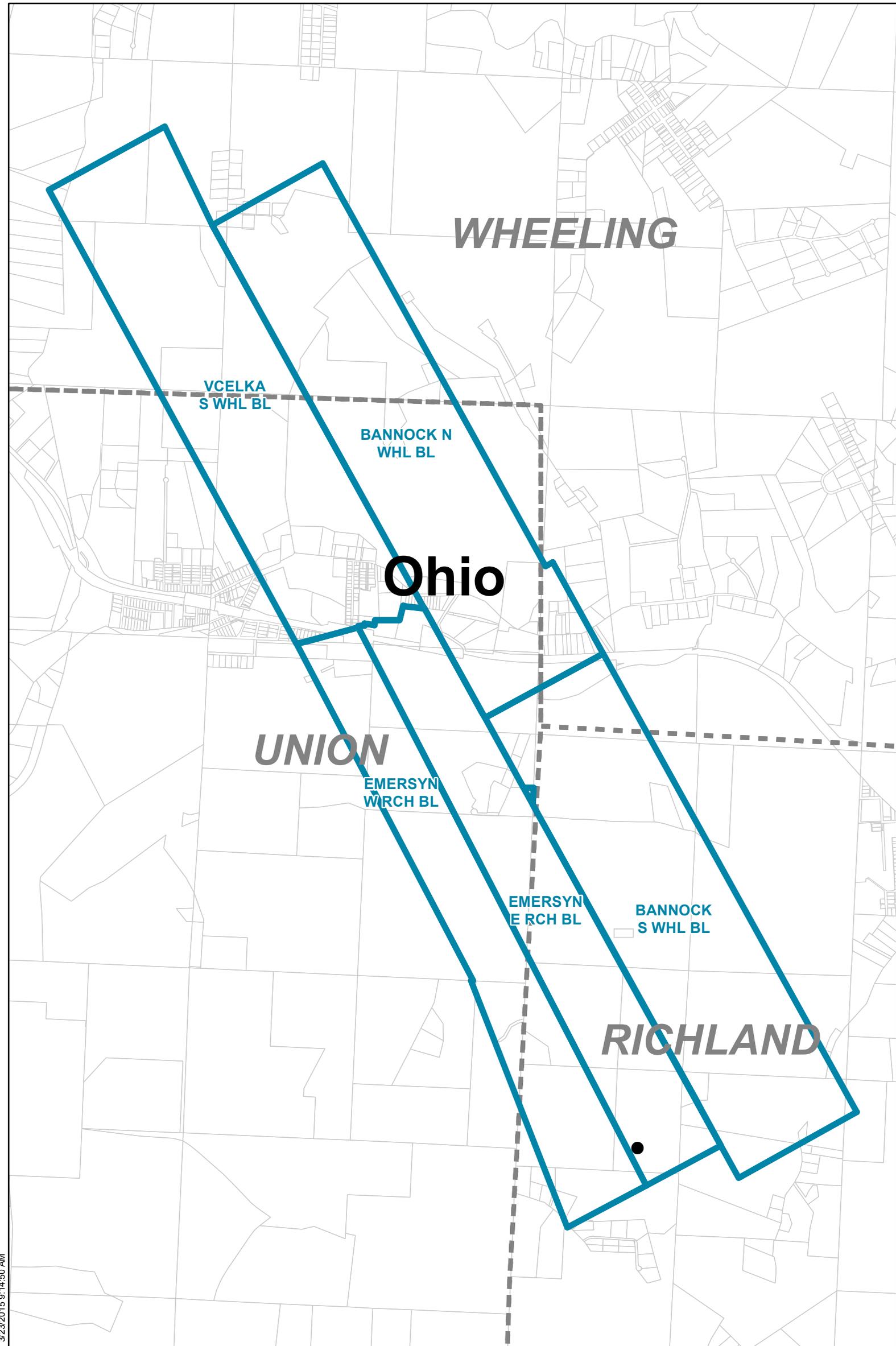
Emersyn E RCH BL Exhibit 5B

AMERICAN ENERGY
UTICA
NAD 1927 UTM Zone 17N



Legend
 UNITIZING

3/26/2015 10:22:22 AM

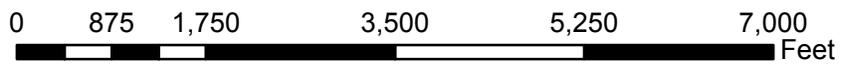


3/23/2015 9:14:50 AM

Emersyn E RCH BL Exhibit 5C

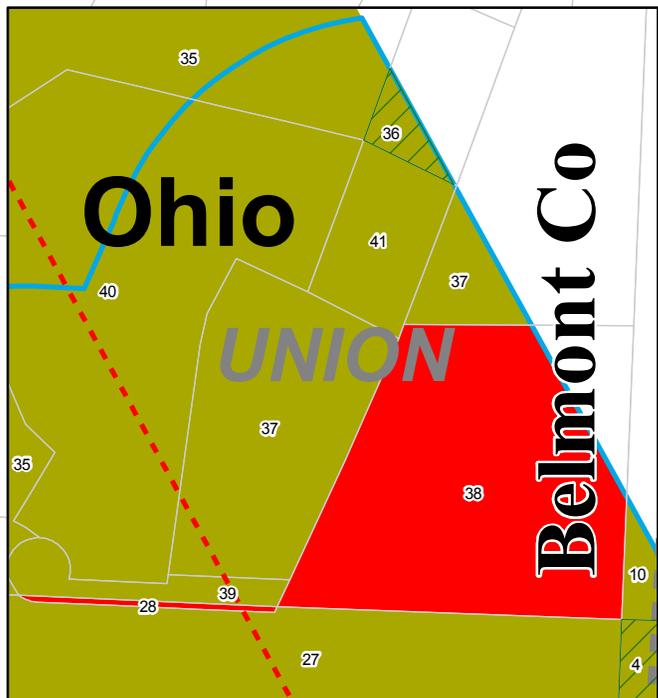
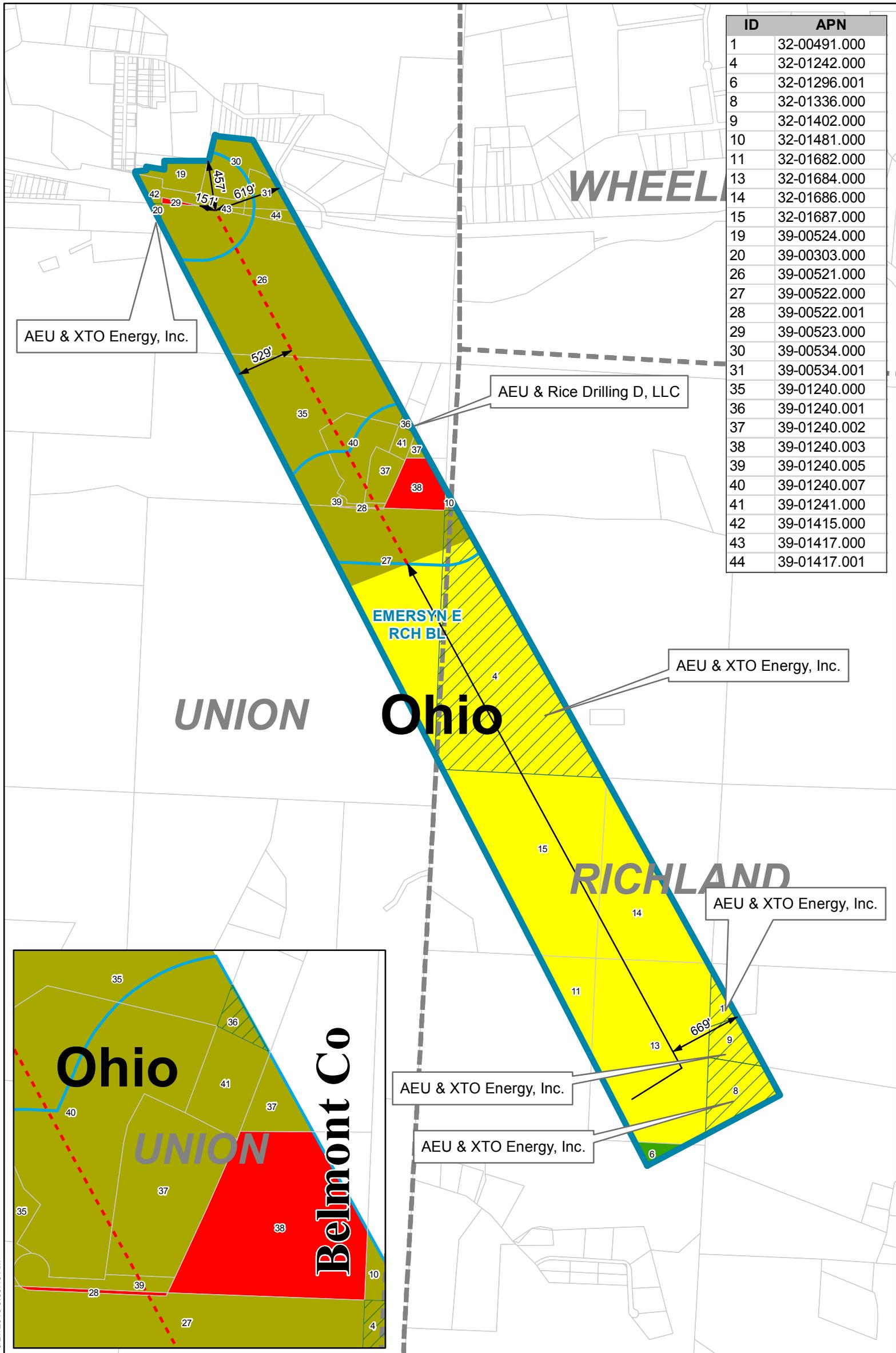


AMERICAN ENERGY
UTICA
NAD 1927 UTM Zone 17N



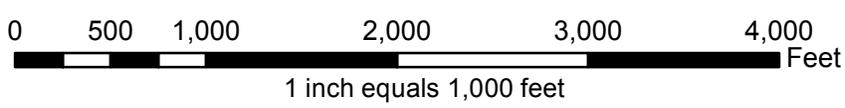
1 inch equals 1,769 feet

Legend



Emersyn E RCH BL
Exhibit 5D

- Legend**
- STRANDED ACREAGE
 - AEU
 - Gulfport Energy Corporation
 - UNLEASED
 - MULTIPLE WI OWNERS



3/27/2015 9:56:45 AM

AFFIDAVIT OF LEASE EFFORTS

STATE OF OHIO)
) SS
COUNTY OF STARK)

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Matthew Bertram, is employed by Purple Land Management (“PLM”) as a Project Manager. Affiant’s job responsibilities include negotiating lease acquisitions for American Energy – Utica, LLC’s operations in the Utica Shale. Further, PLM is an authorized contractor acting on behalf of American Energy – Utica, LLC.
2. As a result of his job responsibilities, Affiant has personal knowledge of the matters set forth in this affidavit, including the attachment hereto, and the following information is true to the best of Affiant’s knowledge and belief.
3. PLM has made diligent efforts to voluntarily lease all of the oil and gas interests within the proposed Emersyn E RCH BL Unit and, as of the date of this affidavit, had leased 96.89 % of those interests.
4. Despite PLM’s efforts, three tracts remain unleased.
5. The attached chart documents, in summary form, PLM’s efforts to lease each such unleased tract, which efforts include mailing lease offers by certified mail, placing telephone calls, making in-person visits, leaving notes at the property, corresponding by e-mail, or some combination of the above.
6. PLM continues to negotiate with these unleased landowners in an ongoing effort to obtain additional leases before the hearing on the Unit Application for the Emersyn E RCH BL Unit.

Further Affiant sayeth naught.

Dated this 17th day of March, 2015.



Matthew Bertram, Affiant
Project Manager
Purple Land Management

EXHIBIT 5-E

ACKNOWLEDGEMENT

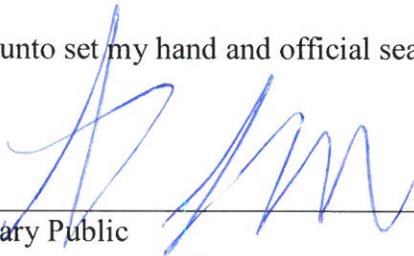
STATE OF OHIO)
) SS
COUNTY OF STARK)

The foregoing instrument was sworn to before me, a Notary Public in and for the State of Ohio, and subscribed in my presence this **17th** day of **March, 2015**, known to me or satisfactorily proven to be the Affiant in the foregoing instrument, who acknowledged the above statements to be true as Affiant verily believes.

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

My Commission Expires:

11/19/2019



Notary Public
Stacy Ineman

Printed Name of Notary

(SEAL)



Stacy Ineman
Resident Summit County
Notary Public, State of Ohio
My Commission Expires: 11/19/2019

Parcel Number	Mineral Owner	Surface Owner	Contact Information
39-01240.003	Ohio American Energy, Inc.	Ohio American Energy, Inc.	Greg Benini 153 Highway 7 South Powhatan Point, Ohio 43942 (740)338-3100
Date	Contacting Agent Name	Communication Attempts	
4/10/2014	Peter Raptis	Research indicates this is a coal company. I will send an email to see if I should pursue.	
4/22/2014	Peter Raptis	I got the clearance to pursue yesterday. I called today and talked to Dena in the Land Department. She asked for the parcel number, twp., and county. She told me she would have the person that handles these matters call me back. She was unsure of who would be calling me.	
4/23/2014	Peter Raptis	Called again today and left a message in a general Voicemail box.	
4/25/2014	Peter Raptis	Called and talked to Dena again...she said I should get a return call beginning of next week, if not to call her back.	
4/29/2014	Peter Raptis	Called and left another message in general Voicemail box	
5/2/2014	Peter Raptis	I spoke to Dena again, she said she will follow up with her supervisor again.	
5/12/2014	Peter Raptis	I sent request to have a lease prepped so we could send a certified copy to Ohio American Energy's office.	
5/15/2014	Peter Raptis	Mailed certified lease packet yesterday, and also sent copies to John Gwynn.	
5/27/2014	Peter Raptis	I talked to Dena again, she said she did not received anything. She said to send mail to 46226 National Road, St. Clairsville, OH 43950. ATTN: Dena Milhoan	
6/5/2014	Peter Raptis	Certified lease packet re-sent today to correct address as listed below. Will follow up with phone call.	
7/11/2014	Peter Raptis	Left a detailed message on Dena's Voicemail.	
7/17/2014	Peter Raptis	Spoke with Dena, with instructed me to contact Greg Benini at 740-338-3100. I called Greg and left a voicemail message asking him to return my call.	
9/18/2014	Kristina Gonzales-Banaag	I called (740) 338-3100 and spoke to Greg Benini around 9:20 a.m. I explained that I was calling with PLM & AEU in regards to an Oil & Gas Lease offer for P # 39-01240.003 in Belmont County. I confirmed that he is the correct person to contact in regards to leasing; however, he stated that they are NOT interested in leasing at all. I asked if there was more information that I could provide him to change that opinion, or if there was another contact that I could speak with, and he stated no - they are just not interested in leasing period. I thanked him for his time. I asked him if they were working with another company to lease, and he replied "we are all taken care of and will not be interested in leasing, thank you." I thanked him again and ended the call.	
9/30/2014	Kristina Gonzales-Banaag	Given my last phone conversation with Ohio American Energy regarding leasing parcel 39-01240.003, I inquired as to the best course of action to proceed with moving forward. Per instructions, I will be preparing a follow-up letter to send to Mr. Benini, thanking him for his time, and again expressing our interest in acquiring an oil and gas lease on this parcel.	
10/7/2014	Kristina Gonzales-Banaag	I have prepared a letter to send today to Greg Benini at Ohio American Energy in order to follow up with our leasing contact with the Landowner. I called Ohio American Energy at (740) 338-3100 to confirm the address to send the letter: Attention: Greg Benini. I was instructed to send the letter to 46226 National Rd. St. Clairsville, Ohio 43950. I will be preparing and sending the letter out today.	

12/1/2014	Stacy Ineman	Given Ohio American Energy's complete lack of interest in communicating and entertaining a lease offer with American Energy - Utica, LLC, it has been decided to not continue pursuit of this parcel at this time. Any additional attempts to contact for the time being may be construed as harrassment and thus it would be better for all parties to cease contact for the time being. We will revisit this matter again sometime in the New Year. Last offer from PLM was \$5750/acre with 18% net royalty.
-----------	--------------	---

Parcel Number	Mineral Owner	Surface Owner	Contact Information
39-00522.001 *Notes: Please note that all reference to communication with Ohio River Collieries "ORC" includes parcel 39-00522.001, even if not specifically mentioned.	Ohio River Collieries	Ohio River Collieries	Anita Rice 70245 Bannock Uniontown Rd Bannock, OH 43972 (740)968-3582 Attorney: Sean Jacobs sjacobs@emenswolperlaw.com Sean Jacobs Emens & Wolper Law Firm One Easton Oval, Suite 550 Columbus, OH 43219 (614) 414-0888 office (614) 414-0898 fax
Date	Contacting Agent Name	Communication Attempts	
5/12/2014	Scott Terranova	I called and was told to leave a message for Anita, which I did. This is in regard to unleased property that Ohio River Collieries claims title to. I will follow up if I do not hear from her.	
5/13/2014	Scott Terranova	I talked to Anita this afternoon. They are definitely potentially interested in an oil and gas lease. She had to run to a meeting and asked me to give her a call tomorrow afternoon with more information. The initial offer I made was \$5,800.00/Acre at an 18% Royalty	
5/28/2014	Chad Ditcher	I spoke with Anita this afternoon about the parcels that we are interested in leasing. We talked today specifically about parcel number 32-01231.000 1.0 ac Sec 35 T7 R4 Richland Twp. Belmont County auditors site lists this parcel as Bannock Land Company, which is believed to be merged out of existence through Bannock Coal now Ohio River Collieries. I spoke with Anita and she did not believe they owned the parcel. I called once again to discuss the parcel in which I left a message and request for a phone call in the morning. I will visit the office in Bannock on Thursday if I do not receive a phone call in the morning.	
5/29/2014	Chad Ditcher	Anita called me on 5/29 and believed parcel 32-01231.000 was leased to Hess at some point. Anita said she would check their leases to confirm the parcel was already leased with Hess and potentially assigned to AEU	
6/9/2014	Chad Ditcher	Spoke with Anita once again today concerning Parcel 32-01231.000. She once again told me she believed that property to be leased with Hess, but would call me back to confirm.	
6/25/2014	Chad Ditcher	Called & left message for Anita	
6/26/2014	Chad Ditcher	Anita emailed me back and said they do not have record of parcel 32-01231.000 being leased. She requested a copy of the lease to ensure its the same AEU lease they have signed for other parcels.	
7/7/2014	Chad Ditcher	Sent follow up email to Anita	
7/9/2014	Chad Ditcher	I sent Anita a follow up email concerning the parcels below. I will follow up with a phone call today or stop by ORC office. 32-01230.000 (Bannock Coal) 32-01231.000 (Ohio River Collieries) 51-00194.000 (Lafferty Coal) 32-00520.000 (Lafferty Coal) 50-00564.000 (Ohio River Collieries) 32-00058.000 (Bannock Coal) 32-00523.000 (Lafferty Coal)	
7/9/2014	Chad Ditcher	I called Anita today to follow up on the parcels I emailed her. I discussed a copy of the AEU lease for 90 acres ORC has already signed. Anita said they have since signed an updated lease. Anita said she would look into these parcels and call me back today.	
7/18/2014	Chad Ditcher	Will email copy of lease to Anita Rice today when lease is completed	
7/22/2014	Chad Ditcher	Attempted to get in contact with Anita on Monday. She was out of the office. I have emailed a copy of the lease to her. Notified by the title team that it was discovered another parcel held by "ORC" is open for leasing, being parcel 39-00522.001. We will be adding this additional parcel to the lease, therefore the lease will need to be redrafted. Working to contact Anita today and hopefully setting up a time to execute the lease the week.	

7/22/2014	Chad Ditcher	I called & left a message with Anita at Ohio River Collieries. I stated that I wanted to make sure she had received and viewed the copy of the lease I sent and also wanted to make her aware we found another parcel that will need to be added the lease.
7/23/2014	Chad Ditcher	Called ORC, no answer in Anita's office
7/25/2014	Chad Ditcher	Emailed the revised copy of the lease to Anita, containing the additional parcel (39-00522.001). While in the area Thursday, I stopped in at ORC and Anita was not at the office. I will visit on Friday if possible.
7/27/2014	Chad Ditcher	Will stop by ORC on Monday morning
7/29/2014	Chad Ditcher	I called Anita again to discuss the revised copy of the lease I had sent to her. No answer, however, sent follow up email to Anita Rice.
7/31/2014	Chad Ditcher	Anita contacted me on Thursday & apologized for not getting back with me as July is their busiest month of the year. I received another email from Anita stating that "ORCs" attorneys had reviewed the lease would be drafting their own lease to send to me by end of the business day on Friday. Anita also stated that the 90+ acres (which was the original lease template we used to draft the 60+ acres lease (THAT INCLUDES PARCEL 39-00522.001) we are pursuing on the log) has not be leased. We need to confirm with AEU that the 90+ acre lease was never signed and we should seek both leases.
8/4/2014	Chad Ditcher	Email from ORC's attorney below: Chad, Our client, Ohio River Collieries Company ("ORCC"), asked us to get in touch with you regarding some acreage in Belmont County that it has been approached about leasing to American Energy – Utica, LLC ("AEU"). This includes 90.875 acres in Warren & Kirkwood Townships and 66.067 acres in Wheeling & Union Townships that I know you have been discussing with ORCC. I have attached a Lease and Memorandum of Lease covering this acreage that we have worked out with our client and which our client would be willing to sign. If this lease is acceptable to AEU then we can move forward in the leasing process. If you would like to discuss anything please don't hesitate to contact me. Best Regards, Sean Sean Jacobs sjacobs@emenswolperlaw.com Sean Jacobs Emens & Wolper Law Firm One Easton Oval, Suite 550 Columbus, OH 43219 (614) 414-0888 office (614) 414-0898 fax
8/19/2014	AEU	American Energy - Utica, LLC is negotiating directly with Sean Jacobs in order to secure the OGL on multiple tracts, including parcel 39-00522.001. Final offer from PLM before this handoff was \$5800/acre with 18% net royalty.

3/17/2015 AEU

AEU sent 3 representatives to meet in-person with Mr. Jacobs and negotiate a lease. The final offer from AEU was \$8000/acre with 16% gross royalty.

Parcel Number	Mineral Owner	Surface Owner	Contact Information
39-00523.000 *Notes: Please note that all reference to communication with Ohio River Collieries "ORC" includes parcel 39-00523.000, even if not specifically mentioned.	Ohio River Collieries	Ohio River Collieries	Anita Rice 70245 Bannock Uniontown Rd Bannock, OH 43972 (740)968-3582 Attorney: Sean Jacobs sjacobs@emenswolperlaw.com Sean Jacobs Emens & Wolper Law Firm One Easton Oval, Suite 550 Columbus, OH 43219 (614) 414-0888 office (614) 414-0898 fax
Date	Contacting Agent Name	Communication Attempts	
5/12/2014	Scott Terranova	I called and was told to leave a message for Anita, which I did. This is in regards to multiple parcels, including parcel 39-00523.000, containing 0.22 acres. Will follow up on May 12, 2014 if I do not hear from her.	
5/13/2014	Scott Terranova	I talked to Anita this afternoon. They are definitely potentially interested in an oil and gas lease. She had to run to a meeting and asked me to give her a call tomorrow afternoon with more information. The initial offer I made was \$5,800.00/Acre at an 18% Royalty	
5/28/2014	Chad Ditcher	I spoke with Anita this afternoon about the parcels that we are interested in leasing, including parcel 39-00523.000. However, Anita has some concerns about whether ORC in fact owns parcel number 32-01231.000 1.0 ac Sec 35 T7 R4 Richland Twp. Belmont County auditors site lists this parcel as Bannock Land Company, which is believed to be merged out of existence through Bannock Coal now Ohio River Collieries. I called and left a message and request for a phone call in the morning. I will visit the office in Bannock on Thursday if I do not receive a phone call in the morning.	
5/29/2014	Chad Ditcher	Anita called me on 5/29 and believed parcel 32-01231.000 was leased to Hess at some point. Anita said she would check their leases to confirm the parcel was already leased with Hess and potentially assigned to AEU	
6/9/2014	Chad Ditcher	Spoke with Anita once again today concerning Parcel 32-01231.000. She once again told me she believed that property to be leased with Hess, but would call me back to confirm.	
6/25/2014	Chad Ditcher	Called & left message for Anita	
6/26/2014	Chad Ditcher	Anita emailed me back and said they do not have record of parcel 32-01231.000 being leased. She requested a copy of the lease to ensure its the same AEU lease they have signed for other parcels.	
7/7/2014	Chad Ditcher	Sent follow up email to Anita	
7/9/2014	Chad Ditcher	I sent Anita a follow up email concerning the parcels below. I will follow up with a phone call today or stop by ORC office. 32-01230.000 32-01231.000 51-00194.000 32-00520.000 50-00564.000 32-00058.000 39-00523.000	
7/9/2014	Chad Ditcher	I called Anita today to follow up on the parcels I emailed her. I discussed a copy of the AEU lease for 90 acres ORC has already signed. Anita said they have since signed an updated lease. Anita said she would look into these parcels and call me back today.	
7/18/2014	Chad Ditcher	Will email copy of lease to Anita Rice today when lease is completed	
7/22/2014	Chad Ditcher	Attempted to get in contact with Anita on Monday. She was out of the office. I have emailed a copy of the lease to her. We will be adding another parcel to the lease therefore the lease will need to be redrafted. Working to contact Anita today and hopefully setting up a time to execute the lease the week.	
7/22/2014	Chad Ditcher	I called & left a message with Anita at Ohio River Collieries. I stated that I wanted to make sure she had received and viewed the copy of the lease I sent and also wanted to make her aware we found another parcel that will need to be added the lease.	
7/23/2014	Chad Ditcher	Called ORC, no answer in Anita's office	

7/25/2014	Chad Ditcher	Notified by the title team that it was discovered another parcel held by "ORC" is open for leasing, being parcel 39-00522.001. Emailed the revised copy of the lease to Anita, containing the additional parcel (39-00522.001). While in the area Thursday, I stopped in at ORC and Anita was not at the office. I will visit on Friday if possible.
7/27/2014	Chad Ditcher	Will stop by ORC on Monday morning
7/29/2014	Chad Ditcher	I called Anita again to discuss the revised copy of the lease I had sent to her. No answer, however, sent follow up email to Anita Rice.
7/31/2014	Chad Ditcher	Anita contacted me on Thursday & apologized for not getting back with me as July is their busiest month of the year. I received another email from Anita stating that "ORCs" attorneys had reviewed the lease would be drafting their own lease to send to me by end of the business day on Friday. Anita also stated that the 90+ acres (which was the original lease template we used to draft the 60+ acres lease (THAT INCLUDES PARCEL 39-00523.000) we are pursuing on the log) has not be leased. We need to confirm with AEU that the 90+ acre lease was never signed and we should seek both leases.
8/4/2014	Chad Ditcher	Email from ORC's attorney below: Chad, Our client, Ohio River Collieries Company ("ORCC"), asked us to get in touch with you regarding some acreage in Belmont County that it has been approached about leasing to American Energy – Utica, LLC ("AEU"). This includes 90.875 acres in Warren & Kirkwood Townships and 66.067 acres in Wheeling & Union Townships that I know you have been discussing with ORCC. I have attached a Lease and Memorandum of Lease covering this acreage that we have worked out with our client and which our client would be willing to sign. If this lease is acceptable to AEU then we can move forward in the leasing process. If you would like to discuss anything please don't hesitate to contact me. Best Regards, Sean Sean Jacobs sjacobs@emenswolperlaw.com Sean Jacobs Emens & Wolper Law Firm One Easton Oval, Suite 550 Columbus, OH 43219 (614) 414-0888 office (614) 414-0898 fax
8/19/2014	AEU	American Energy - Utica, LLC is negotiating directly with Sean Jacobs in order to secure the OGL on multiple tracts, including parcel 39-00523.000. Final offer from PLM before this handoff was \$5800/acre with 18% net royalty.

3/17/2015 AEU

AEU sent 3 representatives to meet in-person with Mr. Jacobs and negotiate a lease. The final offer from AEU was \$8000/acre with 16% gross royalty.

AFFIDAVIT OF VALIDITY OF LEASES

STATE OF OKLAHOMA)
) SS
COUNTY OF OKLAHOMA)

The undersigned, being first duly sworn according to the law, makes this Affidavit and deposes and says that:

1. Affiant, Serena Evans, is employed by American Energy – Utica, LLC (“AEU”) as Land Director.
2. As a result of her job responsibilities, Affiant has personal knowledge of the matters set forth in this affidavit, including the attachments hereto, and the following information is true to the best of Affiant’s knowledge and belief.
3. As of the date of filing this application for unitization, AEU holds a valid lease agreement for all of the acreage that the applicant claims to have under lease, as depicted on the attached spreadsheet.
4. Specifically, AEU has under lease 277.20025 acres of the proposed 286.110 acre unit, which is 96.89 percent of the unit acreage.

Further Affiant sayeth naught.

Dated this 16th day of March, 2015.



Serena Evans, Affiant
Land Director
American Energy – Utica, LLC

276
mwr

Exhibit "A-1"

Tract Number	Mineral Owner	Address	Parcel Number	Deed Acreage	Unit Acreage	Unit Working Interest ("WI")	AEU Unit WI	AEU Unit Participation	XTO WI	XTO Unit Participation	Gulfport WI	Gulfport Unit Participation	Rice WI	Rice Unit Participation
1	Ida M. Boone	C/O Ida M. Brock 44591 Saffell Rd. Belmont, Ohio 43718	32-00451 000	5.00	1.486	0.52%	95.00%	0.49%	5.00%	0.03%	0.00%	0.00%	0.00%	0.00%
4	Bedway Land and Minerals Company	C/O Jonathan Bedway 67877 Pancoast Rd. Belmont, Ohio 43718	32-01242 000	142.59	46.487	16.25%	95.00%	15.44%	5.00%	0.81%	0.00%	0.00%	0.00%	0.00%
6	Robert R. & Bonnie K. Rossini	PO Box 21 St. Clairsville, Ohio 43950	32-01295 001	36.45	1.211	0.42%	0.00%	0.00%	0.00%	0.00%	100.00%	0.42%	0.00%	0.00%
8	David L. Grum & Sarah E. Grum	68895 Loydsville Bannock Rd. Belmont, Ohio 43718	32-01336 000	44.42	6.933	2.42%	95.00%	2.30%	5.00%	0.12%	0.00%	0.00%	0.00%	0.00%
9	David L. Grum & Sarah E. Grum	68895 Loydsville Bannock Rd. Belmont, Ohio 43718	32-01402 000	91.91	3.113	1.09%	95.00%	1.03%	5.00%	0.05%	0.00%	0.00%	0.00%	0.00%
10	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	32-01461 000	76.88	0.334	0.12%	100.00%	0.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
11	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01682 000	80.55	5.594	1.96%	100.00%	1.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
13	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01684 000	40.24	36.880	12.89%	100.00%	12.89%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
14	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01686 000	40.00	18.962	6.63%	100.00%	6.63%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
15	Capstone Holding Company	C/O John Dutton, Statutory Agent PO Box 115 Bannock, Ohio 43972	32-01687 000	56.77	38.313	13.39%	100.00%	13.39%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
19	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00524 000	4.97	1.950	0.68%	100.00%	0.68%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
20	Bedway Land and Minerals Company	C/O Jonathan Bedway 67877 Pancoast Rd. Belmont, Ohio 43718	39-00303 000	6.53	0.316	0.11%	95.00%	0.10%	5.00%	0.01%	0.00%	0.00%	0.00%	0.00%
26	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00521 000	70.87	39.222	13.71%	100.00%	13.71%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
27	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00522 000	167.76	31.265	10.93%	100.00%	10.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
28	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00522 001	0.10	0.127	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
29	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00523 000	0.22	0.185	0.06%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
30	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00534 000	6.82	5.134	1.79%	100.00%	1.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
31	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-00534 001	2.76	1.976	0.69%	100.00%	0.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
35	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01240 000	73.25	25.060	8.76%	100.00%	8.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Tract Number	Mineral Owner	Address	Parcel Number	Deed Acreage	Unit Acreage	Unit Working Interest ("WI")	AEU Unit WI	AEU Unit Participation	XTO WI	XTO Unit Participation	Guilford WI	Guilford Unit Participation	Rice WI	Rice Unit Participation
36	Crystal Coyne	45282 Lucas Lash Road Belmont, Ohio 43718	39-01240.001	1.01	0.105	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.04%
36	Kayla Mamula	65795 N26 Road Bethesda, Ohio 43719	39-01240.001	1.01	0.105	0.04%	100.00%	0.04%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
37	Cobra Petroleum Company, LP	PO Box 136355 FL Worth, Texas 76136	39-01240.002	7.26	2.1235125	0.74%	100.00%	0.74%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
37	Coastal Management Trust	PO Box 1569 Porter, Texas 77365	39-01240.002	7.26	0.7078375	0.25%	100.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
37	Domestic Resources, LLC	4450 Oak Park Ln, #101386 FL Worth, Texas 76185	39-01240.002	7.26	0.49965	0.17%	100.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
38	Ohio American Energy, Inc.	C/O Dena Milhoan 46226 National Rd. St. Clairsville, Ohio 43950	39-01240.003	4.99	4.365	1.53%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
39	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01240.005	0.46	0.493	0.17%	100.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
40	Robert Coppeland & Bonnie Coppeland	69583 Oco Rd. St. Clairsville, Ohio 43950	39-01240.007	7.27	7.273	2.54%	100.00%	2.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
41	Keystone Buckeye Energy, LLC	C/O Adam Angelci, Managing Member 445 Washington Ave., Suite 102 Bridgeville, Pennsylvania 15017	39-01241.000	1.00	0.975	0.34%	100.00%	0.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
42	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01415.000	10.40	2.927	1.02%	100.00%	1.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
43	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01417.000	3.71	0.495	0.17%	100.00%	0.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
44	Ohio River Collieries Company	C/O Anita G. Rice, Corporate Secretary PO Box 128 Bannock, Ohio 43972	39-01417.001	2.35	1.493	0.52%	100.00%	0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total				286.110	100.00%	AEU	96.89%	XTO	1.02%	Guilford	0.42%	Rice	0.04%	

End of Exhibit "A-1"

WORKING INTEREST OWNER

APPROVAL OF

UNIT PLAN FOR THE

EMERSYN E RCH BL UNIT

Richland & Union Townships

Belmont County, Ohio

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, a Unit Plan has been prepared for the testing, development, and operation of certain Tracts identified therein, which Plan consists of an agreement entitled, "Unit Agreement, The Emersyn E RCH BL Unit, Richland & Union Townships, Belmont County, Ohio," dated March 16, 2015 (the "Unit Agreement"); and an agreement entitled, "A.A.P.L. Form 610-1989 Model Form Operating Agreement," also regarding the Emersyn E RCH BL Unit and of like date (the "Unit Operating Agreement"); and,

WHEREAS, the undersigned is the owner of a Working Interest in and to one or more of the Tracts identified in said Unit Plan, namely, the Tracts identified below (hereinafter, the "Owner").

NOW, THEREFORE, the Owner hereby approves the Unit Plan and acknowledges receipt of full and true copies of both the Unit Agreement and the Unit Operating Agreement.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the date set forth opposite the signature of its representative.

WORKING INTEREST OWNER

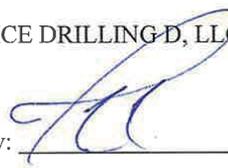
TRACT NO. 36

TRACT ACREAGE 0.105

RELATED WORKING INTEREST PERCENTAGE 0.04%

RICE DRILLING-D, LLC

Date March 24, 2015

By: 

Name: Toby Z. Rice

Title: President and Chief Operating Officer

Tract Number	Mineral Owner	Parcel Number	Unit Acreage
1	Ida M. Boone	32-00491.000	1.486
4	Bedway Land and Minerals Company	32-01242.000	46.487
6	Robert R. & Bonnie K. Rossini	32-01296.001	1.211
8	David L. Grum & Sarah E. Grum	32-01336.000	6.933
9	David L. Grum & Sarah E. Grum	32-01402.000	3.113
10	Ohio River Collieries Company	32-01481.000	0.334
11	Capstone Holding Company	32-01682.000	5.594
13	Capstone Holding Company	32-01684.000	36.880
14	Capstone Holding Company	32-01686.000	18.962
15	Capstone Holding Company	32-01687.000	38.313
19	Ohio River Collieries Company	39-00524.000	1.950
20	Bedway Land and Minerals Company	39-00303.000	0.316
26	Ohio River Collieries Company	39-00521.000	39.222
27	Ohio River Collieries Company	39-00522.000	31.265
28	Ohio River Collieries Company	39-00522.001	0.127
29	Ohio River Collieries Company	39-00523.000	0.185
30	Ohio River Collieries Company	39-00534.000	5.134
31	Ohio River Collieries Company	39-00534.001	1.976
35	Ohio River Collieries Company	39-01240.000	25.060
36	Crystal Coyne	39-01240.001	0.105
36	Kayla Mamula	39-01240.001	0.105
37	Cobra Petroleum Company, LP	39-01240.002	2.1235125
37	Coastal Management Trust	39-01240.002	0.7078375
37	Domestic Resources, LLC	39-01240.002	0.49965
38	Ohio American Energy, Inc.	39-01240.003	4.365
39	Ohio River Collieries Company	39-01240.005	0.493
40	Robert Copeland & Bonnie Copeland	39-01240.007	7.273
41	Keystone Buckeye Energy, LLC	39-01241.000	0.975
42	Ohio River Collieries Company	39-01415.000	2.927
43	Ohio River Collieries Company	39-01417.000	0.495
44	Ohio River Collieries Company	39-01417.001	1.493
			286.110

WORKING INTEREST OWNER

APPROVAL OF

UNIT PLAN FOR THE

EMERSYN E RCH BL UNIT

Richland & Union Townships

Belmont County, Ohio

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, a Unit Plan has been prepared for the testing, development, and operation of certain Tracts identified therein, which Plan consists of an agreement entitled, "Unit Agreement, The Emersyn E RCH BL Unit, Richland & Union Townships, Belmont County, Ohio," dated March 16, 2015 (the "Unit Agreement"); and an agreement entitled, "A.A.P.L. Form 610-1989 Model Form Operating Agreement," also regarding the Emersyn E RCH BL Unit and of like date (the "Unit Operating Agreement"); and,

WHEREAS, the undersigned is the owner of a Working Interest in and to one or more of the Tracts identified in said Unit Plan, namely, the Tracts identified below (hereinafter, the "Owner").

NOW, THEREFORE, the Owner hereby approves the Unit Plan and acknowledges receipt of full and true copies of both the Unit Agreement and the Unit Operating Agreement.

IN WITNESS WHEREOF, the undersigned has executed this instrument on the date set forth opposite the signature of its representative.

WORKING INTEREST OWNER

TRACT NO. 1, 4, 8, 9, & 20

TRACT ACREAGE 2.91675

RELATED WORKING INTEREST PERCENTAGE 1.02%

XTO ENERGY, INC.

Date

8/26/15

By:

Name:

Title:

[Signature]
Maureen L. B. Jack
Regional Land Manager - Ohio