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June 30, 2015

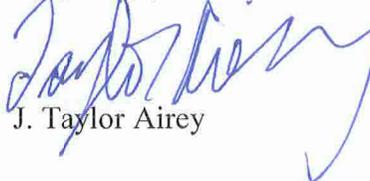
Ohio Department of Natural Resources
Division of Oil & Gas Resources Management
2045 Morse Road, Building F-2
Columbus, Ohio 43229

Re: The Matter of the Application of Hess Ohio Developments, LLC for Unit
Operation - Cadiz E Unit A
Application Date: April 20, 2015
Supplement Date: June 30, 2015

Enclosed is the supplement to the application of Hess Ohio Developments, LLC ("Hess") seeking an Order Authorizing Unit Operation pursuant to Ohio Revised Code Section 1509.28 concerning the Cadiz E Unit A as described in the Hess's Application for Unit Operation (the "Application"). Attached to this letter are four copies of the supplement to the Application. If the Division has any questions concerning the attached supplement to the Application, please contact me or one of my colleagues: Greg Russell (614) 464-5468, Jon Airey (614) 464-6346, and Scott M. Guttman (614) 464-6272.

Thank you for your attention to this matter.

Very truly yours,



J. Taylor Airey

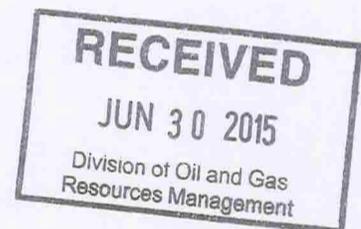
JTA/vorys

Enclosure

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

In re the Matter of the Application of Hess :
Ohio Developments, LLC for Unit Operation :
 : Application Date: April 20, 2015
 : Supplement Date: June 30, 2015
Cadiz E Unit A :

APPLICATION OF HESS OHIO DEVELOPMENTS, LLC ("HESS")
FOR UNIT OPERATION



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Gregory D. Russell (0059718)
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ATTACHMENTS

Attachment 1 Unit Plan

Attachment 2 Prepared Direct Testimony of Stuart Hirsch (“Geologist”)

Attachment 3 Prepared Direct Testimony of Jacob Rosenzweig (“Reservoir Engineer”)

Attachment 4 Prepared Direct Testimony of Julia Johnson (“Landman”)

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

In re the Matter of the Application of Hess	:	
Ohio Developments, LLC for	:	Application Date: April 20, 2015
Unit Operation	:	Supplement Date: June 30, 2015
	:	
<u>Cadiz E Unit A</u>	:	

APPLICATION

Pursuant to Ohio Revised Code Section 1509.28, Hess Ohio Developments, LLC (“Hess”), hereby respectfully requests the Chief of the Division of Oil and Gas Resources Management (“Division”) for an order authorizing Hess to operate the Unitized Formation and applicable land area in Harrison County, Ohio, (hereinafter, the “Cadiz E Unit A”) as a unit according to the Unit Plan attached hereto and as more fully described herein. Hess makes this request for, and unitization is necessary for, the purpose of substantially increasing the ultimate recovery of oil and natural gas, including related liquids, from the Unitized Formation, and to protect the correlative rights of unit owners, consistent with the public policy of Ohio to conserve and develop the state’s natural resources and prevent waste.

I.
APPLICANT INFORMATION

Hess is a corporation organized under the laws of the State of Delaware, with its principal office located at 1501 McKinney Street, Houston, Texas 77010. Hess is registered in good standing as an “owner” with the Division.

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

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II. PROJECT DESCRIPTION

The Cadiz E Unit A is located in Harrison County, Ohio, and consists of sixty-six (66) separate tracts of land. See Exhibits A-1 and A-2 to the Unit Operating Agreement (showing the plat and tract participations, respectively). The total land area in the Cadiz E Unit A is approximately seven hundred and sixty-six (766) acres and, at the time of this Application, Hess and other working interest owners participating in this Application have the right to drill on and produce from approximately seven hundred and fifty-three (753) acres of the proposed unit – *i.e.*, approximately ninety-eight percent (98%) of the unit area, well above the sixty-five percent (65%) threshold required by Ohio Revised Code § 1509.28. As more specifically described herein, Hess seeks authority to drill and complete one or more horizontal wells in the Unitized Formation, from fifty feet (50') above the top of the Utica Formation to fifty feet (50') below the base of the Point Pleasant Formation, from one well pad located on the southern portion of the Cadiz E Unit A, to efficiently test, develop, operate and produce the Unitized Formation for oil, natural gas, and related liquids production.

Hess's plan for unit operations (the "Unit Plan") is attached to this Application as Attachment 1. Among other things, the Unit Plan allocates unit production and expenses based upon each tract's surface acreage participation in the unit; includes a carry provision for those unit participants unable to meet their financial obligations, and which determines reimbursement, in part, based upon the costs of and risks related to the project; and conforms to industry standards for the drilling and operating of horizontal wells.

III. TESTIMONY

The following pre-filed testimony has been attached to the Application supporting the creation of the Cadiz E Unit A: (i) testimony from a Geologist establishing that the Unitized Formation is part of a pool and supporting the Unit Plan's recommended allocation of unit production and expenses on a surface acreage basis;¹ (ii) testimony from a Reservoir Engineer establishing that unitization is reasonably necessary to increase substantially the recovery of oil and gas, and that the value of the estimated additional resource recovery from unit operations ex-

¹ See Attachment 2.

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

IV.
THE CHIEF SHOULD GRANT THIS APPLICATION

A. Legal Standard

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

The Chief's order must be on terms and conditions that are just and reasonable and prescribe a plan for unit operations that includes the following:

- (1) a description of the unit area;
- (2) a statement of the nature of the contemplated operations;
- (3) an allocation of production from the unit area not used in unit operations, or otherwise lost, to the separately owned tracts;
- (4) a provision addressing credits and charges to be made for the investment in wells, tanks, pumps, and other equipment contributed to unit operations by owners in the unit;
- (5) a provision addressing how unit operation expenses shall be determined and charged to the separately owned tracts in the unit, and how they will be paid;
- (6) a provision, if necessary, for carrying someone unable to meet their financial obligations in connection with the unit;
- (7) a provision for the supervision and conduct of unit operations in which each person has a vote with a value corresponding to the percentage of unit operations expenses chargeable against that person's interest;
- (8) the time when operations shall commence and the manner in which, and circumstances under which, unit operations will terminate; and
- (9) such other provisions appropriate for engaging in unit operations and for the protection or adjustment of correlative rights.

Hess further proposes the following additional provisions in the event that the Division issues an order authorizing unitization of the Cadiz E Unit A:

² See Attachment 3.

³ See Attachment 4.

Hess shall present unitized parties with the option to:

- (a) elect to enter into an oil and gas lease identical in terms to the lease attached as Exhibit B to the Unit Operating Agreement, or a correlative rights waiver on substantially similar terms, for a lease bonus payment of five thousand dollars (\$5,000) per net mineral acre and a royalty rate on production of eighteen percent (18%); or
- (b) be deemed to be a non-consenting working interest owner receiving, in part, a royalty on production of twelve and one-half percent (12.5%), which upon payout of the interest penalty contained in the Unit Operating Agreement⁴ shall convert to a working interest subject to the terms and conditions of the Unit Plan and the Unit Operating Agreement.

Upon the issuance of an order authorizing unit operations, Hess shall present these options by certified mail. Should a unitized party fail to make an affirmative election prior to the effective date of a final non-appealable order, the unitized party shall be deemed to have selected option (b).

See Ohio Rev. Code § 1509.28(A). The Chief's order becomes effective once approved in writing by those owners who will be responsible for paying at least sixty-five percent of the costs of the unit's operations and by royalty and unleased fee-owners of sixty-five percent of the unit's acreage. Once effective, production that is "allocated to a separately owned tract shall be deemed, for all purposes, to have been actually produced from such tract, and all operations conducted upon any portion of the unit area shall be deemed for all purposes the conduct of such operations and production from any lease or contract for lands any portion of which is included in the unit area." Ohio Rev. Code § 1509.28.

B. Hess' Application Meets this Standard

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

The "Unitized Formation" consists of the subsurface portion of the Unit Area (i.e., the lands shown on Exhibit A-1 and identified in Exhibit A-2 to the Unit Operating Agreement) at an approximate depth of from fifty feet (50') above the top of the Utica Formation to fifty feet (50') below the base of the Point Pleasant Formation within the Cadiz E Unit A. The evidence presented with this Application establishes that the Unitized Formation is part of a pool and, thus, an appropriate subject of unit operation under Ohio Rev. Code § 1509.28.⁵ Additionally, that evidence establishes that the Unitized Formation is likely to be reasonably uniformly distributed

⁴ The Unit Operating Agreement proposes that non-consenting unleased mineral owners are subject to an interest penalty of 200 percent for all operations.

⁵ A "pool" is defined under Ohio law as "an underground reservoir containing a common accumulation of oil or gas, or both, but does not include a gas storage reservoir." Ohio Rev. Code § 1509.01(E). See also Attachment 2.

throughout the Unit Area and thus, it is reasonable for the Unit Plan to allocate unit production and expenses to separately owned tracts on a surface acreage basis.⁶

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

The evidence presented in this Application establishes that unit operations are reasonably necessary to increase substantially the ultimate recovery of oil and gas from the lands making up the Cadiz E Unit A. The Unit Plan contemplates the potential drilling of as many as five (5) horizontal wells, with laterals in approximate length of between 6,400 feet and 7,800 feet.⁷ Hess estimates that the ultimate recovery from this unit development, if all unit wells are drilled, could be as much as 9,417 MBOE from the Unitized Formation.⁸ Hess estimates that recovery from the Cadiz E Unit A would be 8,448 MBOE absent unit operations.⁹

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

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

The evidence shows that the estimated recovery from unit operations has a present value in excess of approximately \$36,300,000.¹⁰ Absent unit operations, the estimated recovery has a present value of approximately \$31,000,000. Thus, unit operations increase the net present value of the Cadiz E Unit A by approximately seventeen percent (17%). See Attachment 3 – Exhibit JR-3 and JR-4, showing for each proposed well the estimated value of the well’s production and the estimated drilling and operating costs (incorporated here as if fully rewritten herein). The evidence accordingly establishes that the value of the estimated additional recovery exceeds the estimated additional costs incident to conducting unit operations.

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

The Unit Plan proposed by Hess meets the requirements set forth in Ohio Revised Code § 1509.28. The unit area is described in the Unit Plan at Article 1, as well as on Exhibits A-1 and A-2 to the Unit Operating Agreement. The nature of the contemplated unit operations can be found generally in the Unit Plan at Article 3, with greater specificity throughout, including the

⁶ *Id.*

⁷ See Attachment 3.

⁸ See Attachment 3. We emphasize that these are only estimates, and like the rest of the estimates set forth in this Application, they should be treated as simply estimates based upon the best information available at the time.

⁹ *Id.*

¹⁰ See Attachment 3. We emphasize that these are only estimates, and like the rest of the estimates set forth in this Application, they should be treated as simply estimates based upon the best information available at the time.

Unit Operating Agreement. Unit production and unit expenses are allocated on a surface acreage basis as set forth in the Unit Plan at Articles 3 through 5 (generally), except where otherwise allocated by the Unit Operating Agreement. Payment of unit expenses is addressed generally in Article 3 of the Unit Plan. The Unit Plan provides for payment of costs by other working interest owners in the event a participant is unable to meet its financial obligations related to the unit - see, e.g., Article VI of the Unit Operating Agreement. Voting provisions related to the supervision and conduct of unit operations are set forth in Article 14 of the Unit Plan, with each person having a vote that has a value corresponding to the percentage of unit expenses chargeable against that person's interest. And the commencement and termination of operations are addressed in Articles 11 and 12 of the Unit Plan.¹¹

V. HEARING

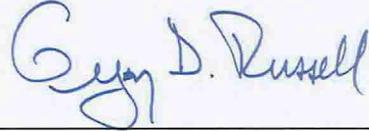
Ohio Revised Code § 1509.28 requires the Chief to hold a hearing to consider this Application when requested by sixty-five percent (65%) of the owners of the land area underlying the proposed unit. Ohio Rev. Code § 1509.28(A). That threshold level is met here. See Attachment 4 – Exhibit JJ-1. Accordingly, Hess respectfully requests that the Division schedule a hearing at an available hearing room located at the Division's Columbus complex on August 19, 2015 to consider the Application filed herein.

VI. CONCLUSION

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

¹¹ See Attachment 4 generally.

Respectfully submitted,



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Attorneys for Applicant,
Hess Ohio Developments, LLC

PLAN FOR UNIT OPERATIONS
THE CADIZ E UNIT A
CADIZ TOWNSHIP
HARRISON COUNTY, OHIO

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

ARTICLE 1: DEFINITIONS

As used in this Plan for Unit Operations:

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

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

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

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

Plan means this Plan for Unit Operations for the Cadiz E Unit A, Cadiz Township, Harrison County, Ohio, including, unless otherwise expressly mentioned, any and all attachments and exhibits hereto.

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

Royalty Owner is a Person who owns a Royalty Interest.

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

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

Uncommitted Working Interest Owner is a Working Interest Owner, other than an Unleased Mineral Owner, who has not agreed to, ratified or otherwise approved this Plan.

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

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

Unit Expense means all cost, expense, investment and indebtedness incurred by Working Interest Owners or Unit Operator pursuant to this Plan for or on account of Unit Operations.

Unitized Formation means the subsurface portion of the Unit Area located from fifty feet (50') above the top of the Utica Formation to fifty feet (50') below the base of the Point Pleasant Formation, believed to be between approximately 8,250 and 8,450 feet subsurface to between 8,570 to 8,810 feet subsurface TVD ("Total Vertical Depth").

Unit Operating Agreement means the modified A.A.P.L. Form 610-1989 Model Form Operating Agreement that is attached hereto as Exhibit 1 and incorporated herein by reference as

if fully re-written herein and to which all Working Interest Owners are deemed to be parties; provided, however, that in the event two or more Working Interest Owners have agreed to a separate joint operating agreement relating to the supervision and conduct of unit operations contemplated herein, such operating agreement shall control. The Unit Operating Agreement contains provisions for credits and charges among Working Interest Owners for their respective investments in, and expenses for, Unit Operations, including a provision, if necessary, for carrying any Person unable or electing not to participate in Unit Operations. In addition, the Unit Operating Agreement also contains provisions relating to the supervision and conduct of Unit Operations and the manner in which Working Interest Owners may vote. In the event of a conflict between the terms of the Unit Operating Agreement and the other terms of this Plan, excluding the Unit Operating Agreement, such other terms of this Plan shall govern.

Unit Operations are all operations conducted pursuant to this Plan.

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

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

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

Unleased Mineral Owner is a Person who owns Oil and Gas Rights free of a lease or other instrument conveying all or any portion of the Working Interest in such rights to another and who has not agreed to, ratified or otherwise approved this Plan.

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. A Royalty Interest created out of a Working Interest subsequent to the participation of, subscription to, ratification of, approval by, or consent to this Plan by the owner of such Working Interest shall continue to be subject to such Working Interest burdens and obligations that are stated in this Plan.

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

ARTICLE 2: CREATION AND EFFECT OF UNIT

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

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

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

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

Pre-existing Conditions in Unit Area. Working Interest Owners shall not be liable for or assume any obligation with respect to (i) the restoration or remediation of any condition associated with the Unit Area that existed prior to the Effective Date of this Plan, or (ii) the removal and/or plugging and abandonment of any wellbore, equipment, fixtures, facilities or other property located in, on or under the Unit Area prior to the Effective Date of this Plan.

ARTICLE 3: UNIT OPERATIONS

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

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

ARTICLE 4: TRACT PARTICIPATIONS

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

ARTICLE 5: ALLOCATION OF UNITIZED SUBSTANCES

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

Distribution Within Tracts. The Unitized Substances allocated to each Tract or portion thereof shall be distributed among, or accounted for to, the Persons entitled to share in the production from such Tract or portion thereof in the same manner, in the same proportions, and upon the same conditions as they would have participated and shared in the production from such Tract, or in the proceeds thereof, had this Plan not been entered into, and with the same legal effect. If any Oil and Gas Rights in a Tract hereafter become divided and owned in severalty as to different parts of the Tract, the owners of the divided interests, in the absence of an agreement providing for a different division, shall share in the Unitized Substances allocated to the Tract, or in the proceeds thereof, in proportion to the surface acreage of their respective parts of the Tract. Any royalty or other payment which depends upon per well production or pipeline runs from a well or wells on a Tract shall, after the Effective Date, be determined by dividing the Unitized Substances allocated to the Tract by the number of wells on the Tract capable of producing Unitized Substances on the Effective Date; however, if any Tract has no well thereon capable of producing Unitized Substances on the Effective Date, the Tract shall, for the purpose of this determination, be deemed to have one (1) such well thereon.

ARTICLE 6: USE OR LOSS OF UNITIZED SUBSTANCES

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

Royalty Payments. No royalty, overriding royalty, production, or other payments shall be payable on account of Unitized Substances used, lost, or consumed in Unit Operations, including without limitation the testing of the productivity of any wells drilled in the Unit Area. Royalty payments shall be made to Unleased Mineral Owners beginning with the initial distribution date for production of Unitized Substances from any well within the Cadiz E Unit A.

ARTICLE 7: TITLES

Warranty and Indemnity. Each Person who, by acceptance of produced Unitized Substances or the proceeds from a sale thereof, may claim to own a Working Interest or Royalty Interest in and to any Tract or in the Unitized Substances allocated thereto, shall be deemed to have warranted its title to such interest, and, upon receipt of the Unitized Substances or the proceeds from a sale thereof to the credit of such interest, shall indemnify and hold harmless all other Persons in interest from any loss due to failure, in whole or in part, of its title to any such interest; provided, however, that nothing in this provision shall apply to Unleased Mineral Owners.

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

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

ARTICLE 8: EASEMENTS, GRANTS, OR USE OF SURFACE

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

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

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

Unleased Property. Notwithstanding anything in this Article 8 to the contrary, and except where otherwise authorized by the Division, there shall be no Unit Operations conducted on the surface of any property located within the Cadiz E Unit A, 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 Cadiz E Unit A, owned by a non-consenting Unleased Mineral Owner.

ARTICLE 9: CHANGE OF TITLE

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

Waiver of Rights of Partition. No Person affected hereby shall resort to any action to, and shall not, partition Oil and Gas Rights, the Unit Area, the Unitized Formation, the Unitized Substances or the Unit Equipment.

ARTICLE 10: RELATIONSHIPS OF PERSONS

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

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

ARTICLE 11: EFFECTIVE DATE

Effective Date. This Plan shall become effective as of, and operations may commence hereunder as of, 7:00 A.M. on the date of an effective order approving this unit by the Division in accordance with the provisions of Ohio Revised Code Section 1509.28; provided, however, that Working Interest Owners may terminate this Plan in the event of a material modification by the Division of all or any part of this Plan in such order by filing a notice of termination with the Division within thirty (30) days of such order becoming final and no longer subject to further appeal. In the event a dispute arises or exists with respect to this Plan, or the order approving this unit issued by the Division, Unit Operator may, in its sole discretion, hold the revenues from the sale of Unitized Substances until such time as such dispute is resolved or, in the Unit Operator's opinion, it is appropriate to distribute such revenues.

ARTICLE 12: TERM

Term. This Plan, unless sooner terminated in the manner hereinafter provided, shall remain in effect for five (5) years from the Effective Date and as long thereafter as Unitized Substances are produced, or are capable of being produced, in paying quantities from the Unit Area without a cessation of more than one hundred and eighty (180) consecutive days, or so long as other Unit Operations are conducted without a cessation of more than one hundred and eighty (180) consecutive days, unless sooner terminated by Working Interest Owners owning a combined Unit Participation of fifty-one percent (51%) or more whenever such Working Interest Owners determine that Unit Operations are no longer warranted. The date of any termination hereunder shall be known as the "Termination Date."

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

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

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

ARTICLE 13: APPROVAL

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

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

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

ARTICLE 14: MISCELLANEOUS

Determinations by Working Interest Owners. Each Working Interest Owner shall have a voting interest equal to its Unit Participation. All decisions, determinations, or approvals by Working Interest Owners hereunder shall be made by the affirmative vote of one or more parties having a combined voting interest of at least fifty one percent (51%). No vote, however, is required for such determinations if the Unit Operator owns or controls fifty one percent (51%) or more of the Working Interest in the Unit Area.

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

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

MODEL FORM OPERATING AGREEMENT

OPERATING AGREEMENT

DATED

September 1 , 2015 ,
year

OPERATOR Hess Ohio Developments, LLC

CONTRACT AREA Cadiz E Unit A

COUNTY OR PARISH OF Harrison , STATE OF Ohio

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

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OPERATING AGREEMENT

THIS AGREEMENT, entered into by and between Hess Ohio Developments, 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."

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 by order or rule of any state or federal body having authority. If a Drilling Unit is not fixed by any such rule or order, a Drilling Unit shall be the drilling unit as established by the pattern of drilling in the Contract Area unless fixed by express agreement of the Drilling Parties.

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

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

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

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

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

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

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

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

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

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

Q. The term "Sidetrack" shall mean the directional control and intentional deviation of a well from vertical so as to change the bottom hole location unless done to straighten the hole or drill around junk in the hole to overcome other mechanical difficulties.

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.

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

ARTICLE II. EXHIBITS

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

- X A. Exhibit "A," shall include the following information: (1) Description of lands subject to this agreement, (2) Restrictions, if any, as to depths, formations, or substances, (3) Parties to agreement with addresses and telephone numbers for notice purposes, (4) Percentages or fractional interests of parties to this agreement, (5) Oil and Gas Leases and/or Oil and Gas Interests subject to this agreement, (6) Burdens on production.
X B. Exhibit "B," Form of Lease.
X C. Exhibit "C," Accounting Procedure.
X D. Exhibit "D," Insurance.
X E. Exhibit "E," Gas Balancing Agreement.
X F. Exhibit "F," Memorandum of Operating Agreement.
G.
H. Other:

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

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

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

14 Regardless of which party has contributed any Oil and Gas Lease or Oil and Gas Interest on which royalty or other
15 burdens may be payable and except as otherwise expressly provided in this agreement, each party shall pay or deliver, or
16 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,
17 1/8th and shall indemnify, defend and hold the other parties free from any liability therefor.
18 Except as otherwise expressly provided in this agreement, if any party has contributed hereto any Lease or Interest which is
19 burdened with any royalty, overriding royalty, production payment or other burden on production in excess of the amounts
20 stipulated above, such party so burdened shall assume and alone bear all such excess obligations and shall indemnify, defend
21 and hold the other parties hereto harmless from any and all claims attributable to such excess burden. However, so long as
22 the Drilling Unit for the productive Zone(s) is identical with the Contract Area, each party shall pay or deliver, or cause to
23 be paid or delivered, all burdens on production from the Contract Area due under the terms of the Oil and Gas Lease(s)
24 which such party has contributed to this agreement, and shall indemnify, defend and hold the other parties free from any
25 liability therefor.

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

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

32 **C. Subsequently Created Interests:**

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

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

50 **ARTICLE IV.**

51 **TITLES**

52 **A. Title Examination:**

53 ^{And, if applicable, all the parcels and tracts through which a horizontal well may traverse}
54 ^{opinion} Title examination shall be made on the Drillsite / of any proposed well prior to commencement of drilling operations. The
55 ^{will} ^{include} ^{the} ^{ownership} ^{of} ^{the} ^{working}
56 ^{interest, minerals, royalty, overriding royalty and production payments under the applicable Leases.} Each party / contributing
57 Leases and/or Oil and Gas Interests to be included in the Drillsite or Drilling Unit, if appropriate, shall furnish to Operator
58 all abstracts (including federal lease status reports), title opinions, title papers and curative material in its possession free of
59 charge. All such information not in the possession of or made available to Operator by the parties, but necessary for the
60 examination of the title, shall be obtained by Operator. Operator shall cause title to be examined by attorneys on its staff or
61 by outside attorneys. Copies of all title opinions shall be furnished to each Drilling Party. Costs incurred by Operator in
62 procuring abstracts, fees paid outside attorneys for title examination (including preliminary, supplemental, shut-in royalty
63 opinions and division order title opinions) and other direct charges as provided in Exhibit "C" shall be borne by the Drilling
64 Parties in the proportion that the interest of each Drilling Party bears to the total interest of all Drilling Parties as such
65 interests appear in Exhibit "A." Operator shall make no charge for services rendered by its staff attorneys or other personnel
66 in the performance of the above functions.

66 Each party shall be responsible for securing curative matter and pooling amendments or agreements required in
67 connection with Leases or Oil and Gas Interests contributed by such party. Operator shall be responsible for the preparation
68 and recording of pooling designations or declarations and communitization agreements as well as the conduct of hearings
69 before governmental agencies for the securing of spacing or pooling orders or any other orders necessary or appropriate to
70 the conduct of operations hereunder. This shall not prevent any party from appearing on its own behalf at such hearings.
71 Costs incurred by Operator, including fees paid to outside attorneys, which are associated with hearings before governmental
72 agencies, and which costs are necessary and proper for the activities contemplated under this agreement, shall be direct
73 charges to the joint account and shall not be covered by the administrative overhead charges as provided in Exhibit "C."

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

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

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 ^{other than an unleased mineral owner} 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.

41 3. Other Losses: All losses of Leases or Interests committed to this agreement, other than those set forth in Articles
42 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
43 Exhibit "A." This shall include but not be limited to the loss of any Lease or Interest through failure to develop or because
44 express or implied covenants have not been performed (other than performance which requires only the payment of money),
45 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
46 readjustment of interests in the remaining portion of the Contract Area on account of any joint loss.

47 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
48 Lease or Interest acquired by any party hereto (other than the party whose interest has failed or was lost) during the ninety
49 (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
50 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.
51 shall not apply to such acquisition.

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**ARTICLE V.
OPERATOR**

A. Designation and Responsibilities of Operator:

Hess Ohio Developments, 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. ^{Operator shall not be deemed the agent or fiduciary of non-operators.}

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. 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 by Operator, and all such employees or contractors shall be the employees or contractors of Operator.

D. Rights and Duties of Operator:

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

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

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

1 liens and 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, permit each Non-Operator
12 or its duly authorized representative, 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 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 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 7. Drilling and Testing Operations: The following provisions shall apply to each well drilled hereunder, including but not
28 limited to the Initial Well:

29 (a) Operator will promptly advise Non-Operators of the date on which the well is spudded, or the date on which
30 drilling operations are commenced.

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

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

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

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

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

49 **ARTICLE VI.**

50 **DRILLING AND DEVELOPMENT**

51 **A. Initial Well:**

52 _____, Operator shall Within one (1) year of a final, un-appealable, order of the Initial
53 Well at the following location: Cadiz E Unit A, Section 3, T10N-R5W, Cadiz Township, Harrison County, Ohio,
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60 and shall thereafter continue the drilling of the well with due diligence to a depth sufficient, in the Operator's reasonable opinion, to
61 adequately test, develop and produce the Utica/Point Pleasant formation in the Initial Well.
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68 The drilling of the Initial Well and the participation therein by all parties is obligatory, subject to Article VI.C.1. as to participation
69 in Completion operations and Article VI.F. as to termination of operations and Article XI as to occurrence of force majeure. /
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71 **B. Subsequent Operations:**

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

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1 under this agreement and to all other parties in the case of a proposal for Sidetracking or Deepening, specifying the work to be
2 performed, the location, proposed depth, objective Zone and the estimated cost of the operation. The parties to whom such a
3 notice is delivered shall have thirty (30) days after receipt of the notice within which to notify the party proposing to do the work
4 whether they elect to participate in the cost of the proposed operation. If a drilling rig is on location, notice of a proposal to
5 Rework, Sidetrack, Recomplete, Plug Back or Deepen may be given by telephone and the response period shall be limited to forty-
6 eight (48) hours, exclusive of Saturday, Sunday and legal holidays. Failure of a party to whom such notice is delivered to reply
7 within the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation.
8 Any proposal by a party to conduct an operation conflicting with the operation initially proposed shall be delivered to all parties
9 within the time and in the manner provided in Article VI.B.6.

10 If all parties to whom such notice is delivered elect to participate in such a proposed operation, the parties shall be
11 contractually committed to participate therein provided such operations are commenced within the time period hereafter set
12 forth, and Operator shall, no later than ^{one hundred eighty (180)} / days after expiration of the notice period of thirty (30) days (or as
13 promptly as practicable after the expiration of the forty-eight (48) hour period when a drilling rig is on location, as the case
14 may be), actually commence the proposed operation and thereafter complete it with due diligence at the risk and expense of
15 the parties participating therein; provided, however, said commencement date may be extended upon written notice of same
16 by Operator to the other parties, for a period of up to thirty (30) additional days if, in the sole opinion of Operator, such
17 additional time is reasonably necessary to obtain permits from governmental authorities, surface rights (including rights-of-
18 way) or appropriate drilling equipment, or to complete title examination or curative matter required for title approval or
19 acceptance. If the actual operation has not been commenced within the time provided (including any extension thereof as
20 specifically permitted herein or in the force majeure provisions of Article XI) and if any party hereto still desires to conduct
21 said operation, written notice proposing same must be resubmitted to the other parties in accordance herewith as if no prior
22 proposal had been made. Those parties that did not participate in the drilling of a well for which a proposal to Deepen or
23 Sidetrack is made hereunder shall, if such parties desire to participate in the proposed Deepening or Sidetracking operation,
24 reimburse the Drilling Parties in accordance with Article VI.B.4. in the event of a Deepening operation and in accordance
25 with Article VI.B.5. in the event of a Sidetracking operation.

26 2. Operations by Less Than All Parties:

27 (a) Determination of Participation. If any party to whom such notice is delivered as provided in Article VI.B.1. or
28 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
29 Article, the party or parties giving the notice and such other parties as shall elect to participate in the operation shall, no
30 later than / days ^{one hundred eighty (180)} after the expiration of the notice period of thirty (30) days (or as promptly as practicable after the
31 expiration of the forty-eight (48) hour period when a drilling rig is on location, as the case may be) actually commence the
32 proposed operation and complete it with due diligence. Operator shall perform all work for the account of the Consenting
33 Parties; provided, however, if no drilling rig or other equipment is on location, and if Operator is a Non-Consenting Party,
34 the Consenting Parties shall either: (i) request Operator to perform the work required by such proposed operation for the
35 account of the Consenting Parties, or (ii) designate one of the Consenting Parties as Operator to perform such work. The
36 rights and duties granted to and imposed upon the Operator under this agreement are granted to and imposed upon the party
37 designated as Operator for an operation in which the original Operator is a Non-Consenting Party. Consenting Parties, when
38 conducting operations on the Contract Area pursuant to this Article VI.B.2., shall comply with all terms and conditions of this
39 agreement.

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

58 (b) Relinquishment of Interest for Non-Participation. The entire cost and risk of conducting such operations shall be
59 borne by the Consenting Parties in the proportions they have elected to bear same under the terms of the preceding
60 paragraph. Consenting Parties shall keep the leasehold estates involved in such operations free and clear of all liens and
61 encumbrances of every kind created by or arising from the operations of the Consenting Parties. If such an operation results
62 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
63 the surface location at their sole cost, risk and expense; provided, however, that those Non-Consenting Parties that
64 participated in the drilling, Deepening or Sidetracking of the well shall remain liable for, and shall pay, their proportionate
65 shares of the cost of plugging and abandoning the well and restoring the surface location insofar only as those costs were not
66 increased by the subsequent operations of the Consenting Parties. If any well drilled, Reworked, Sidetracked, Deepened,
67 Recompleted or Plugged Back under the provisions of this Article results in a well capable of producing Oil and/or Gas in
68 paying quantities, the Consenting Parties shall Complete and equip the well to produce at their sole cost and risk, and the
69 well shall then be turned over to Operator (if the Operator did not conduct the operation) and shall be operated by it at the
70 expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, Reworking,
71 Sidetracking, Recompleting, Deepening or Plugging Back of any such well by Consenting Parties in accordance with the
72 provisions of this Article, each Non-Consenting Party shall be deemed to have relinquished to Consenting Parties, and the
73 Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-
74 Consenting Party's interest in the well and share of production therefrom or, in the case of a Reworking, Sidetracking,

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

7 (i) 500.00 % of each such Non-Consenting Party's share of the cost of any newly acquired surface equipment
8 beyond the wellhead connections (including but not limited to stock tanks, separators, treaters, pumping equipment and
9 piping), plus 500% of each such Non-Consenting Party's share of the cost of operation of the well commencing with first
10 production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other
11 provisions of this Article, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that
12 interest which would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning
13 of the operations; and

14 (ii) 500.00 % of (a) that portion of the costs and expenses of drilling, Reworking, Sidetracking, Deepening,
15 Plugging Back, testing, Completing, and Recompleting, after deducting any cash contributions received under Article VIII.C.,
16 and of (b) that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections),
17 which would have been chargeable to such Non-Consenting Party if it had participated therein.

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

27 See Article XVI.W for application of non-consent penalty for Non-Consenting Unleased Mineral Owner.

28 (c) Reworking, Recompleting or Plugging Back. An election not to participate in the drilling, Sidetracking or
29 Deepening of a well shall be deemed an election not to participate in any Reworking or Plugging Back operation proposed in
30 such a well, or portion thereof, to which the initial non-consent election applied that is conducted at any time prior to full
31 recovery by the Consenting Parties of the Non-Consenting Party's recoupment amount. Similarly, an election not to
32 participate in the Completing or Recompleting of a well shall be deemed an election not to participate in any Reworking
33 operation proposed in such a well, or portion thereof, to which the initial non-consent election applied that is conducted at
34 any time prior to full recovery by the Consenting Parties of the Non-Consenting Party's recoupment amount. Any such
35 Reworking, Recompleting or Plugging Back operation conducted during the recoupment period shall be deemed part of the
36 cost of operation of said well and there shall be added to the sums to be recouped by the Consenting Parties 200.00 % of
37 that portion of the costs of the Reworking, Recompleting or Plugging Back operation which would have been chargeable to
38 such Non-Consenting Party had it participated therein. If such a Reworking, Recompleting or Plugging Back operation is
39 proposed during such recoupment period, the provisions of this Article VI.B. shall be applicable as between said Consenting
40 Parties in said well.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

62 6. Order of Preference of Operations. Except as otherwise specifically provided in this agreement, if any party desires to
63 propose the conduct of an operation that conflicts with a proposal that has been made by a party under this Article VI, such
64 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
65 an operation on a well where no drilling rig is on location, or twenty-four (24) hours, exclusive of Saturday, Sunday and legal
66 holidays, from delivery of the initial proposal, if a drilling rig is on location for the well on which such operation is to be
67 conducted, to deliver to all parties entitled to participate in the proposed operation such party's alternative proposal, such
68 alternate proposal to contain the same information required to be included in the initial proposal. Each party receiving such
69 proposals shall elect by delivery of notice to Operator within five (5) days after expiration of the proposal period, or within
70 twenty-four (24) hours (exclusive of Saturday, Sunday and legal holidays) if a drilling rig is on location for the well that is the
71 subject of the proposals, to participate in one of the competing proposals. Any party not electing within the time required
72 shall be deemed not to have voted. The proposal receiving the vote of parties owning the largest aggregate percentage
73 interest of the parties voting shall have priority over all other competing proposals; in the case of a tie vote, the
74

1 initial proposal shall prevail. Operator shall deliver notice of such result to all parties entitled to participate in the operation
 2 within five (5) days after expiration of the election period (or within twenty-four (24) hours, exclusive of Saturday, Sunday
 3 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
 4 is on location) from receipt of such notice to elect by delivery of notice to Operator to participate in such operation or to
 5 relinquish interest in the affected well pursuant to the provisions of Article VI.B.2.; failure by a party to deliver notice within
 6 such period shall be deemed an election not to participate in the prevailing proposal.

7 7. Conformity to Spacing Pattern. Notwithstanding the provisions of this Article VI.B.2., it is agreed that no wells shall be
 8 proposed to be drilled to or Completed in or produced from a Zone from which a well located elsewhere on the Contract
 9 or each well has been approved as an exception to the then existing spacing pattern for each zone by the appropriate regulatory
 10 agency
 11 Area is producing, unless such well conforms to the then-existing well spacing pattern for such Zone / .

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

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

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

19 Option No. 1: All necessary expenditures for the drilling, Deepening or Sidetracking, testing, Completing and
 20 equipping of the well, including necessary tankage and/or surface facilities.

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

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

53 **D. Other Operations:**

54 Operator shall not undertake any single project reasonably estimated to require an expenditure in excess of _____
 55 Fifty Thousand Dollars (\$ 50,000.00) except in connection with the
 56 drilling, Sidetracking, Reworking, Deepening, Completing, Recompleting or Plugging Back of a well that has been previously
 57 authorized by or pursuant to this agreement; provided, however, that, in case of explosion, fire, flood or other sudden
 58 emergency, whether of the same or different nature, Operator may take such steps and incur such expenses as in its opinion
 59 are required to deal with the emergency to safeguard life and property but Operator, as promptly as possible, shall report the
 60 emergency to the other parties. If Operator prepares an AFE for its own use, Operator shall furnish any Non-Operator so
 61 requesting an information copy thereof for any single project costing in excess of Fifty Thousand Dollars
 62 (\$ 50,000.00). Any party who has not relinquished its interest in a well shall have the right to propose that
 63 Operator perform repair work or undertake the installation of artificial lift equipment or ancillary production facilities such as
 64 salt water disposal wells or to conduct additional work with respect to a well drilled hereunder or other similar project (but
 65 not including the installation of gathering lines or other transportation or marketing facilities, the installation of which shall
 66 be governed by separate agreement between the parties) reasonably estimated to require an expenditure in excess of the
 67 amount first set forth above in this Article VI.D. (except in connection with an operation required to be proposed under
 68 Articles VI.B.1. or VI.C.1. Option No. 2, which shall be governed exclusively by those Articles). Operator shall deliver such
 69 proposal to all parties entitled to participate therein. If within thirty (30) days thereof Operator secures the written consent
 70 of any party or parties owning at least 65.00 % of the interests of the parties entitled to participate in such operation,
 71 each party having the right to participate in such project shall be bound by the terms of such proposal and shall be obligated
 72 to pay its proportionate share of the costs of the proposed project as if it had consented to such project pursuant to the terms
 73 of the proposal. /
 74 An AFE is an estimate of costs only, and in no way shall the execution of an AFE limit the liability of any party.

75 **E. Abandonment of Wells:**

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

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

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

28 Parties taking over a well as provided herein shall tender to each of the other parties its proportionate share of the value of
29 the well's salvable material and equipment, determined in accordance with the provisions of Exhibit "C," less the estimated cost
30 of salvaging and the estimated cost of plugging and abandoning and restoring the surface; provided, however, that in the event
31 the estimated plugging and abandoning and surface restoration costs and the estimated cost of salvaging are higher than the
32 value of the well's salvable material and equipment, each of the abandoning parties shall tender to the parties continuing
33 operations their proportionate shares of the estimated excess cost. Each abandoning party shall assign to the non-abandoning
34 parties, without warranty, express or implied, as to title or as to quantity, or fitness for use of the equipment and material, all
35 of its interest in the wellbore of the well and related equipment, together with its interest in the Leasehold insofar and only
36 insofar as such Leasehold covers the right to obtain production from that wellbore in the Zone then open to production. If the
37 interest of the abandoning party is or includes and Oil and Gas Interest, such party shall execute and deliver to the non-
38 abandoning party or parties an oil and gas lease, limited to the wellbore and the Zone then open to production, for a term of
39 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
40 attached as Exhibit "B." The assignments or leases so limited shall encompass the Drilling Unit upon which the well is located.
41 The payments by, and the assignments or leases to, the assignees shall be in a ratio based upon the relationship of their
42 respective percentage of participation in the Contract Area to the aggregate of the percentages of participation in the Contract
43 Area of all assignees. There shall be no readjustment of interests in the remaining portions of the Contract Area.

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

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

58 **F. Termination of Operations:**

59 Upon the commencement of an operation for the drilling, Reworking, Sidetracking, Plugging Back, Deepening, testing,
60 Completion or plugging of a well, including but not limited to the Initial Well, such operation shall not be terminated without
61 consent of parties bearing 51.00 % of the costs of such operation; provided, however, that in the event granite or other
62 practically impenetrable substance or condition in the hole is encountered which renders further operations impractical,
63 Operator may discontinue operations and give notice of such condition in the manner provided in Article VI.B.1, and the
64 provisions of Article VI.B. or VI.E. shall thereafter apply to such operation, as appropriate.

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

66 **Option No. 1: Gas Balancing Agreement Attached**
67 ^{, other than an unleased mineral owner,}
68 Each party / shall take in kind or separately dispose of its proportionate share of all Oil and Gas produced from the
69 Contract Area, exclusive of production which may be used in development and producing operations and in preparing and
70 treating Oil and Gas for marketing purposes and production unavoidably lost. Any extra expenditure incurred in the taking
71 in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party. Any
72 party taking its share of production in kind shall be required to pay for only its proportionate share of such part of
73 Operator's surface facilities which it uses.

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

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

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

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

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

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

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

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

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

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

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

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

62 **ARTICLE VII.**

63 **EXPENDITURES AND LIABILITY OF PARTIES**

64 **A. Liability of Parties:**

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

B. Liens and Security Interests:

Each party ^{other than an unleased mineral owner,} 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 and any required bond in the event a receiver is appointed. In addition, to the extent permitted by applicable law, each party hereby grants to the other parties a power of sale as to any property that is subject to the lien and security rights granted hereunder, such power to be exercised in the manner provided by applicable law or otherwise in a commercially reasonable manner and upon reasonable notice.

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

C. Advances:

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

D. Defaults and Remedies:

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

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

5 1. Suspension of Rights: Any party may deliver to the party in default a Notice of Default, which shall specify the default,
 6 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
 7 or more of the remedies provided in this Article. If the default is not cured within thirty (30) days of the delivery of such
 8 Notice of Default, all of the rights of the defaulting party granted by this agreement may upon notice be suspended until the
 9 default is cured, without prejudice to the right of the non-defaulting party or parties to continue to enforce the obligations of
 10 the defaulting party previously accrued or thereafter accruing under this agreement. If Operator is the party in default, the
 11 Non-Operators shall have in addition the right, by vote of Non-Operators owning a majority in interest in the Contract Area
 12 after excluding the voting interest of Operator, to appoint a new Operator effective immediately. The rights of a defaulting
 13 party that may be suspended hereunder at the election of the non-defaulting parties shall include, without limitation, the right
 14 to receive information as to any operation conducted hereunder during the period of such default, the right to elect to
 15 participate in an operation proposed under Article VI.B. of this agreement, the right to participate in an operation being
 16 conducted under this agreement even if the party has previously elected to participate in such operation, and the right to
 17 receive proceeds of production from any well subject to this agreement.

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

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

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

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

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

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

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

60 **F. Taxes:**

61 Beginning with the first calendar year after the effective date hereof, Operator shall render for ad valorem taxation all
 62 property subject to this agreement which by law should be rendered for such taxes, and it shall pay all such taxes assessed
 63 thereon before they become delinquent. Prior to the rendition date, each Non-Operator shall furnish Operator information as
 64 to burdens (to include, but not be limited to, royalties, overriding royalties and production payments) on Leases and Oil and
 65 Gas Interests contributed by such Non-Operator. If the assessed valuation of any Lease is reduced by reason of its being
 66 subject to outstanding excess royalties, overriding royalties or production payments, the reduction in ad valorem taxes
 67 resulting therefrom shall inure to the benefit of the owner or owners of such Lease, and Operator shall adjust the charge to
 68 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
 69 upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges to
 70 the joint account shall be made and paid by the parties hereto in accordance with the tax value generated by each party's
 71 working interest. Operator shall bill the other parties for their proportionate shares of all tax payments in the manner
 72 provided in Exhibit "C."

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

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

9 ARTICLE VIII.

10 ACQUISITION, MAINTENANCE OR TRANSFER OF INTEREST

11 A. Surrender of Leases:

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

14 However, should any party desire to surrender its interest in any Lease or in any portion thereof, such party shall give written
 15 notice of the proposed surrender to all parties, and the parties to whom such notice is delivered shall have thirty (30) days after
 16 delivery of the notice within which to notify the party proposing the surrender whether they elect to consent thereto. Failure of a
 17 party to whom such notice is delivered to reply within said 30-day period shall constitute a consent to the surrender of the Leases
 18 described in the notice. If all parties do not agree or consent thereto, the party desiring to surrender shall assign, without express or
 19 implied warranty of title, all of its interest in such Lease, or portion thereof, and any well, material and equipment which may be
 20 located thereon and any rights in production thereafter secured, to the parties not consenting to such surrender. If the interest of the
 21 assigning party is or includes an Oil and Gas Interest, the assigning party shall execute and deliver to the party or parties not
 22 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
 23 thereafter as Oil and/or Gas is produced / in commercial quantities from the land covered thereby, such lease to be on the form attached hereto as Exhibit "B."
 24 Upon such assignment or lease, the assigning party shall be relieved from all obligations thereafter accruing, but not theretofore
 25 accrued, with respect to the interest assigned or leased and the operation of any well attributable thereto, and the assigning party
 26 shall have no further interest in the assigned or leased premises and its equipment and production other than the royalties retained
 27 in any lease made under the terms of this Article. The party assignee or lessee shall pay to the party assignor or lessor the
 28 reasonable salvage value of the latter's interest in any well's salvable materials and equipment attributable to the assigned or leased
 29 acreage. The value of all salvable materials and equipment shall be determined in accordance with the provisions of Exhibit "C," less
 30 the estimated cost of salvaging and the estimated cost of plugging and abandoning and restoring the surface. If such value is less
 31 than such costs, then the party assignor or lessor shall pay to the party assignee or lessee the amount of such deficit. If the
 32 assignment or lease is in favor of more than one party, the interest shall be shared by such parties in the proportions that the
 33 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
 34 varies according to depth, then the interest assigned shall similarly reflect such variances.

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

39 B. Renewal or Extension of Leases:

40 If any party / except an unleased mineral owner, secures a renewal or replacement of an Oil and Gas Lease or Interest subject to this agreement, then all other parties
 41 shall be notified promptly upon such acquisition or, in the case of a replacement Lease taken before expiration of an existing Lease,
 42 promptly upon expiration of the existing Lease. The parties notified shall have the right for a period of thirty (30) days following
 43 delivery of such notice in which to elect to participate in the ownership of the renewal or replacement Lease, insofar as such Lease
 44 affects lands within the Contract Area, by paying to the party who acquired it their proportionate shares of the acquisition cost
 45 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
 46 parties in the Contract Area. Each party who participates in the purchase of a renewal or replacement Lease shall be given an
 47 assignment of its proportionate interest therein by the acquiring party.

48 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
 49 by the parties who elect to participate therein, in a ratio based upon the relationship of their respective percentage of participation in
 50 the Contract Area to the aggregate of the percentages of participation in the Contract Area of all parties participating in the
 51 purchase of such renewal or replacement Lease. The acquisition of a renewal or replacement Lease by any or all of the parties hereto
 52 shall not cause a readjustment of the interests of the parties stated in Exhibit "A," but any renewal or replacement Lease in which
 53 less than all parties elect to participate shall not be subject to this agreement but shall be deemed subject to a separate Operating
 54 Agreement in the form of this agreement.

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

57 The provisions of this Article shall apply to renewal or replacement Leases whether they are for the entire interest covered by
 58 the expiring Lease or cover only a portion of its area or an interest therein. Any renewal or replacement Lease taken before the
 59 expiration of its predecessor Lease, or taken or contracted for or becoming effective within six (6) months after the expiration of the
 60 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
 61 the renewal or replacement Lease becomes effective; but any Lease taken or contracted for more than six (6) months after the
 62 expiration of an existing Lease shall not be deemed a renewal or replacement Lease and shall not be subject to the provisions of this
 63 agreement.

64 The provisions in this Article shall also be applicable to extensions of Oil and Gas Leases.

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

16 If permitted by the laws of the state or states in which the property covered hereby is located, each party hereto owning an
17 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
18 undivided interest therein.

19 **F.**

20 **ARTICLE IX.**
21 **INTERNAL REVENUE CODE ELECTION**

22 If, for federal income tax purposes, this agreement and the operations hereunder are regarded as a partnership, and if the
23 parties have not otherwise agreed to form a tax partnership pursuant to Exhibit "G" or other agreement between them, each
24 party thereby affected elects to be excluded from the application of all of the provisions of Subchapter "K," Chapter 1, Subtitle
25 "A," of the Internal Revenue Code of 1986, as amended ("Code"), as permitted and authorized by Section 761 of the Code and
26 the regulations promulgated thereunder. Operator is authorized and directed to execute on behalf of each party hereby affected
27 such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal
28 Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by
29 Treasury Regulation §1.761. Should there be any requirement that each party hereby affected give further evidence of this
30 election, each such party shall execute such documents and furnish such other evidence as may be required by the Federal Internal
31 Revenue Service or as may be necessary to evidence this election. No such party shall give any notices or take any other action
32 inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Contract
33 Area is located or any future income tax laws of the United States contain provisions similar to those in Subchapter "K," Chapter
34 1, Subtitle "A," of the Code, under which an election similar to that provided by Section 761 of the Code is permitted, each party
35 hereby affected shall make such election as may be permitted or required by such laws. In making the foregoing election, each
36 such party states that the income derived by such party from operations hereunder can be adequately determined without the
37 computation of partnership taxable income.

38 **ARTICLE X.**
39 **CLAIMS AND LAWSUITS**

40 Operator may settle any single uninsured third party damage claim or suit arising from operations hereunder if the expenditure
41 does not exceed Fifty Thousand Dollars (\$ 50,000.00) and if the payment is in complete settlement
42 of such claim or suit. If the amount required for settlement exceeds the above amount, the parties hereto shall assume and take over
43 the further handling of the claim or suit, unless such authority is delegated to Operator. All costs and expenses of handling settling,
44 or otherwise discharging such claim or suit shall be at the joint expense of the parties participating in the operation from which the
45 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
46 hereunder over which such individual has no control because of the rights given Operator by this agreement, such party shall
47 immediately notify all other parties, and the claim or suit shall be treated as any other claim or suit involving operations hereunder.
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**ARTICLE XI.
FORCE MAJEURE**

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

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

**ARTICLE XII.
NOTICES**

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

ARTICLE XIII.

TERM OF AGREEMENT

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

ARTICLE XIV.

COMPLIANCE WITH LAWS AND REGULATIONS

A. Laws, Regulations and Orders:

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

B. Governing Law:

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

C. Regulatory Agencies:

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

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

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

11 **ARTICLE XV.**
12 **MISCELLANEOUS**

13 **A. Execution:**

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

29 **B. Successors and Assigns:**

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

33 **C. Counterparts:**

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

36 **D. Severability:**

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

40 **ARTICLE XVI.**
41 **OTHER PROVISIONS**

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43 **A. Liability of Parties:**

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

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55 **B. Liens and Security Interests:**

56 Each party, other than an unleased mineral owner, grants to the other parties hereto a lien upon any interest it now
57 owns or hereafter acquires in Oil and Gas Leases and Oil and Gas Interests in the Contract Area, and a security interest
58 and/or purchase money security interest in any interest it now owns or hereafter acquires in the personal property and
59 fixtures on or used or obtained for use in connection therewith, to secure performance of all of its obligations under this
60 agreement including but not limited to payment interest in Oil and Gas Leases as required hereunder, and the proper
61 performance of operations hereunder. Such lien and security interest granted by each party hereto shall include such party's
62 leasehold interests, working interests, operating rights, and royalty and overriding royalty interests in the Contract Area now
63 owned or hereafter acquired and in lands pooled or unitized therewith or otherwise becoming subject to this agreement, the
64 Oil and Gas when extracted therefrom and equipment situated thereon or used or obtained for use in connection therewith
65 (including, without limitation, all wells, tools, and tubular goods), and accounts (including, without limitation, accounts arising
66 from gas imbalances or from the sale of Oil and/or Gas at the wellhead), contract rights, inventory and general
67 intangibles relating thereto or arising therefrom, and all proceeds and products of the foregoing. To perfect the lien and
68 security agreement provided herein, each party hereto shall execute and acknowledge the Memorandum of Operating Agreement
69 supplement and/or any financing statement prepared and submitted by any party hereto in conjunction herewith or at any time following
70 execution hereof, and Operator is authorized to file this agreement or the recording supplement executed herewith as a lien or mortgage in
71 the applicable real estate records and as a financing statement with the proper officer under the Uniform Commercial Code in the state in
72 which the Contract Area is situated and such other states as Operator shall deem appropriate to perfect the security interest granted
73 hereunder. Any party may file this agreement, the recording supplement executed herewith, or such other documents as deems necessary
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1 as a lien or mortgage in the applicable real estate records and/or a financing statement with the proper officer under the Uniform
2 Commercial Code.

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4 Each party represents and warrants to the other parties hereto that the lien and security interest granted by such
5 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
6 security interest against all persons acquiring an interest in Oil and Gas Leases and Interests covered by this agreement by,
7 through or under such party. All parties acquiring an interest in Oil and Gas Leases and Oil and Gas Interests covered
8 by this agreement, whether by assignment, merger, mortgage, operation of law, or otherwise, shall be deemed to
9 have taken subject to the lien and security interest granted by this Article VII.B. as to all obligations attributable to
10 such interest hereunder whether or not such obligations arise before or after such interest is acquired.

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

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

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

37
38 Each party agrees that the other parties shall be entitled to utilize the provisions of Oil and Gas lien law or
39 other lien law of any state in which the Contract Area is situated to enforce the obligations of each party hereunder.
40 Without limiting the generality of the foregoing, to the extent permitted by applicable law, Non-Operators agree that Operator
41 may invoke or utilize the mechanics' or materialmen's lien law of the state in which the Contract Area is situated in order
42 to secure the payment to Operator of any sum due hereunder for services performed or materials supplied by
43 Operator.

44 C. Defaults and Remedies:

45
46 If any party, other than an unleased mineral owner, fails to discharge any financial obligation under this agreement,
47 including without limitation the failure to make any advance under the preceding Article VII.C. or any other provision of this
48 agreement, within the period required for such payment hereunder, then in addition to the remedies provided in Article
49 VII.B. or elsewhere in this agreement, the remedies specified below shall be applicable. For purposes of this Article VII.D., all
50 notices and elections shall be delivered only by Operator, except that Operator shall deliver any such notice and election
51 requested by a non-defaulting Non-Operator, and when Operator is the party in default, the applicable notices and
52 elections can be delivered by any Non-Operator. Election of any one or more of the following remedies shall not preclude
53 the subsequent use of any other remedy specified below or otherwise available to a non-defaulting party.

54
55 1. Suspension of Rights: Any party may deliver to the party in default a Notice of Default, which shall specify the
56 default, specify the action to be taken to cure the default, and specify that failure to take such action will result in
57 the exercise of one or more of the remedies provided in this Article. If the default is not cured within thirty (30)
58 days of the delivery of such Notice of Default, all of the rights of the defaulting party granted by this agreement
59 may upon notice be suspended until the default is cured, without prejudice to the right of the non-defaulting party
60 or parties to continue to enforce the obligations of the defaulting party previously accrued or thereafter accruing
61 under this agreement. If Operator is the party in default, the Non-Operators shall have in addition the right, by
62 vote of Non-Operators owning a majority in interest in the Contract Area after excluding the voting interest of
63 Operator, to appoint a new Operator effective immediately. The rights of a defaulting party that may be suspended
64 hereunder at the election of the non-defaulting parties shall include, without limitation, the right to receive
65 information as to any operation conducted hereunder during the period of such default, the right to elect to
66 participate in an operation proposed under Article VI.B. of this agreement, the right to participate in an
67 operation being conducted under this agreement even if the party has previously elected to participate in such
68 operation, and the right to receive proceeds of production from any well subject to this agreement.

69
70 2. Suit for Damages: Non-defaulting parties or Operator for the benefit of non-defaulting parties may sue (at
71 joint account expense) to collect the amounts in default, plus interest accruing on the amounts recovered from the
72 date of default until the date of collection at the rate specified in Exhibit "C" attached hereto. Nothing herein shall
73 prevent any party from suing any defaulting party to collect consequential damages accruing to such party as a result of the
74 default.

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

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

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

D. Costs Associated with Use of Consultants:

LEFT INTENTIONALLY BLANK

E. Advances of Cost of Operations:

Notwithstanding the provisions of Article VII.C herein to the contrary, Operator may require from any other party, other than an unleased mineral owner, advance payment, within 30 days after billing, in the event of a proposed completion or in the event a drilling rig is on location, of such other party's anticipated share of any item of expense for which the Operator would be entitled to reimbursement under any provision of this agreement. Such right includes, but is not limited to, the right to require advance payment for the estimated costs of drilling a well or completion of a well as to which an election to participate in drilling or completion has been made. For horizontal wells, the requirement for advance payment shall apply to a party's share of both the drilling and the completion costs associated with the proposed well. Any amounts advanced by a Non-Operator hereunder in excess of that which is reasonably expected to be needed by Operator to complete the operations for which the funds were advanced shall be promptly refunded to such Non-Operator.

F. Operator Affiliates:

Notwithstanding the provisions of Article V. herein to the contrary, a party to this agreement that has been designated as the Operator under this Agreement ("Party") may employ a subsidiary or affiliate to serve as Operator so long as the Party owns an interest in the Contract Area and is otherwise in compliance with the provisions of this Agreement. However, at such time as the Party sells its interest or no longer owns an interest in the Contract Area, the Party's subsidiary or affiliate that is serving as Operator shall be deemed to have resigned just as if the Party had been serving as Operator. Furthermore, the Operator's failure to observe or comply with the provisions of this Agreement may be applied and enforced against the Party just as if the Party was serving as the Operator. Therefore, the provisions of this Agreement may be enforced interchangeably between the Operator and the Party just as if they are one entity.

G. Operations Necessary to Maintain a Lease(s) in Force:

Notwithstanding the provisions of this Agreement and particularly Article VI, if any proposed operations are necessary to maintain a lease covered by this Agreement in force, or an agreement to earn a lease(s) which would otherwise expire unless such operations are conducted, then in addition to being penalized under Article VI.B.2. (a) and (b), each Non-Consenting Party shall assign to Consenting Parties all of such Non-Consenting Party's right, title and interest in and to the lease(s) or portion thereof or such agreement which would be lost or not earned if such operations were not conducted/ Such assignment shall be promptly due upon commencement of said proposed operations by Consenting Parties and if the assignment is in favor of more than one party the assigned interest shall be shared by the Consenting Parties unless otherwise agree to in writing. Thereafter, such acreage covered by said assignment shall not be subject to the terms of this Agreement, but shall be deemed to be subject to an agreement identical this Agreement changed only in Exhibit "A" to indicate the Consenting Parties and their percentages. For purposes of defining necessary operations to maintain a lease or agreement to earn a lease(s) in force which would otherwise expire, such operations will be deemed necessary if proposed within six (6) months of the date the lease or agreement would otherwise expire.

H. Conflict of Terms:

In the event of a conflict between the typewritten/inserted portions and printed original form portions hereof in this Operating Agreement, the typewritten/inserted portions shall prevail.

I. Metering of Production:

In the event of transfer, sale, encumbrance or other disposition of interest within the Contract Area which creates the necessity separate measurement of production, the party creating the necessity for such separate measurement shall alone bear the cost of purchase, installation and operation of such facilities.

J. Arbitration:

1 LEFT INTENTIONALLY BLANK

2 K. Additional Definitions (Continued from Article I):

3
4 1. The term "lateral" shall mean that portion of a wellbore that deviates from approximate vertical orientation and all wellbore
5 beyond such deviation to total depth.

6 2. The term "horizontal well" shall mean a well containing a single lateral in which the wellbore deviates from
7 approximate vertical orientation to approximate horizontal orientation in order to drill within and test a specific geological
8 interval, utilizing deviation equipment, services, and technology. This shall include similar operations conducted in the re-
9 entry of an existing wellbore.

10 3. The term "multi-lateral well" shall mean a well which contains more than one lateral and in which the wellbores deviate
11 from approximate vertical orientation to approximate horizontal orientation in order to drill within and test a
12 specific geological interval, utilizing deviation equipment, services and technology. This shall include similar
13 operations conducted in the re-entry of an existing wellbore.

14 4. The term "total depth" shall apply to all multi-lateral or horizontal wells drilled pursuant to this Agreement and shall mean
15 the distance from the surface of the ground to the terminus of the wellbore. Each lateral together with the common vertical
16 wellbore shall be considered a single wellbore and shall have a corresponding total depth if the production from each
17 lateral is to be measured separately and not commingled in the vertical wellbore. If the production from each lateral
18 is to be commingled in the common vertical wellbore then the lateral(s) and vertical wellbore shall be considered
19 collectively as a single wellbore. When the proposed operation is the drilling of, or operations on, a well containing
20 a lateral component, the term "depth" whenever used in this Agreement shall be deemed to read "total measured depth"
21 insofar as it applies to such well.

22 5. The term "deepen" when used in conjunction with a horizontal or multi-lateral well shall mean an operation whereby a lateral
23 is drilled to a distance greater than the distance set out in Article VI.A within the relevant zone.

24 6. For the purposes of this Agreement, as to a horizontal or multi-lateral well, the term "plug back" shall mean an operation
25 to test or complete the well at a stratigraphically shallower geological horizon in which an operation has been or is being
26 completed and which is not within an existing lateral.

27 L. Substitute Well Provision:

28
29 In the event any well drilled hereunder is lost for any reason prior to being drilled to the proposed total depth for such, or
30 Operator has encountered during drilling mechanical conditions which would, in Operator's opinion, make further drilling in any test
31 well hereunder impracticable or inadvisable, Operator may abandon said test well and thereafter may commence operations for a substitute well
32 for any such well (which has been lost or abandoned) to the same proposed total depth, drilled in the same quarter section (unless a different
33 location is agreeable to both parties), and drilled subject to the same terms and conditions as the provided for the well so lost or abandoned.
34 Provided that the well is abandoned or lost during the vertical stage, then Operator may require participation by all Non-Operators in the
35 substitute well. In the event the wellbore is abandoned or lost at or following the kick-off point, then participation by the Non-
36 Operators in any substitute well, including a substitute well for the initial well (Cadiz E Unit A 1H well), is not automatic; but instead,
37 Non-Operators shall be given the option to participate in any such Substitute Well pursuant to the terms and conditions contained in Article
38 VI.B.1.

39 M. Non-Consent Election:

40
41 In the event a Party elects not to participate (a Non-Consenting Party) in the Initial Well proposed in the Contract Area pursuant to Article VI.A.,
42 upon the timely commencement of actual drilling operations on such Well, such Non-Consenting Party shall be deemed to have relinquished to the
43 Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests all of such Non-
44 Consenting Party's interest in the well and share of production therefrom until such proceeds of the sale of such interests, calculated at the well
45 (after deducting production taxes, excise taxes and assessments, royalty, overriding royalty and other interests not excepted by Article III.D.
46 payable out of or measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the
47 following: a) 125% of such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections
48 (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 125% of such Non-Consenting Party's share
49 of the cost of the operation of the well commencing with first production and continuing until such Non-Consenting Party's relinquished interest
50 shall revert to it under the provisions of this Article, it being agreed that such Non-Consenting Party's share of such costs and equipment will be
51 that interest that would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning of the operations;
52 and b) 300% of that portion of the costs and expenses of drilling, testing and completing, after deducting any cash contributions received under
53 Article III.C., and 300% of that portion of the cost of newly acquired equipment in the well (to and including wellhead connections) which would
54 have been chargeable to such Non-Consenting Party if it had participated therein. See Article XVI.W for application of non-consent penalty for
55 Non-Consenting Unleased Mineral Owner.

56 N. Payment of Royalties:

57 Notwithstanding the provisions of Article III.B herein to the contrary, so long as the Drilling Unit for the productive Zone(s) is
58 identical with the Contract Area, each party shall pay or deliver, or cause to be paid or delivered, all burdens on production from the
59 Contract Area due under the terms of the Oil and Gas Lease(s) which such party has contributed to this agreement, and shall indemnify,
60 defend and hold the other parties free from any liability therefore. If provided for in the lease, Royalty interests may be charged
61 hereunder their allocated share of post-production costs, including without limitation the costs of marketing, gathering,
62 treatment, compression, dehydration, processing and transportation.

63 O. Horizontal Wells:

64
65 1. Notwithstanding anything contained herein to contrary, (i) the provisions of Article VII.D.1 Option No. 1 shall apply to
66 any "horizontal well" (hereinafter defined) proposed hereunder, and (ii) the provisions of Article VII.D.1. Option No. 2 shall
67 apply to all other wells proposed hereunder that are not expressly proposed as "horizontal wells". To be effective as
68 "horizontal well proposal", such proposal must include an AFE, the corresponding Unit and Contract Area size and dimensions
69 within which the well will be drilled, and other accompanying documents that clearly stipulate that the well being proposed is
70 a horizontal well. As to any possible conflicts that may arise during the completion phase of a horizontal well, priority shall
71 be given first to a lateral drain hole of the authorized depth, and then to objective formations in ascending order above the
72 authorized depth, and then to objective formations in descending order below the authorized depth.

73 2. Such horizontal well shall be deemed to have reached its objective depth so long as Operator has drilled such horizontal well
74 to the objective formation and had drilled laterally in the objective formation for a distance which is at least equal to fifty

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1 percent (50%) of the length of the total horizontal drainhole displacement (displacement from true vertical) proposed for the
2 operation.

3 P. Further Assurances:
4

5 In connection with this agreement, the parties, other than an unleased mineral owner, agree to execute and deliver such
6 additional documents and instruments and to perform such additional acts as may be necessary or appropriate to effectuate, carry out,
7 and perform all the terms, provisions and conditions of this agreement.

8 Q. Confidentiality:
9

10 Any information forwarded to or obtained by any party concerning the wells and operations in the Contract Area shall be
11 maintained as confidential by all parties and shall not be disclosed by any party without the prior written consent of all
12 parties. Any party may disclose Confidential Information, without the consent of any other party, (a) to any governmental authority when
13 lawfully required by such governmental authority, (b) to lenders, investors and financial institutions in connection with a bona fide
14 financial transaction, (c) to bona fide consultants and accredited engineering firms for the purpose of evaluation on a confidential basis,
15 (d) to financially responsible third parties with whom a party is engaged in a bona fide effort to sell all or part of its interest in the Contract
16 Area in accordance with this Operating Agreement, (e) pursuant to Article XVI.U., (f) to third parties with whom a party is engaged in a
17 bona fide effort to (i) effect a merger or consolidation, (ii) sell all or a controlling part of its stock or other equity capital, or (iii) sell all or
18 substantially all of its assets, (g) or to any parent, subsidiary or joint venture partner with an interest in the Contract Area; provided
19 that any third party who is permitted access to Confidential Information pursuant to provisions (b), (c), (d), or (f), of this paragraph
20 (collectively, the "Permitted Third Parties"), shall agree in writing prior to that access not to communicate such information to anyone and
21 to make no use of such information adverse to the parties hereto; and provided further that the party disclosing the Confidential
22 Information shall indemnify and hold the other parties hereto harmless against losses resulting from its disclosure to non-governmental
23 third parties.

24 R. Netting and Setoff:
25

26 Except for any payments related to charges on any interest billing that a Non-Operator has disputed in good faith, Operator is
27 authorized to deduct operating costs and charges assessable to Non-Operators and permitted under this Operating Agreement and to remit to
28 such Non-Operations their respective net share of any proceeds attributable to the interest of such Non-Operators being received directly
29 from any purchasers of production from the Contract Area. With the exception of royalties owed lessors, Operator may also withhold any
30 money payable by it to a Non-Operator hereunder and apply the same to the payment of any obligation owed by Non-Operator to Operator
31 to other Non-Operator hereunder. The foregoing provisions shall not diminish Operator's lien rights contained within this agreement.
32

33 S. Priority of Operations:
34

35 Where a well, authorized under the terms of this Agreement by all parties (or by less than all parties under Article VI.B.2)
36 and the parties participating in the well cannot agree upon the sequence and timing of further operations regarding the well, the following
37 elections shall control in the order enumerated below:

38 1. Prior to reaching the objective depth or zone:

39 a. Drilling the well to its objective depth.

40
41 b. In the event that impenetrable conditions or mechanical difficulties prevent reaching the objective depth or
42 zone, a proposal to sidetrack in an effort to reach the objective depth or zone shall have priority over a proposal to
43 attempt a completion in a zone already reached.

44 2. After the objective depth or zone has been reached:

45 a. an election to conduct additional logging, coring or testing;

46
47 b. an election to attempt to complete the well at the objective depth or zone in the manner set forth in the
48 Operator's AFE for completion;

49
50 c. an election to complete the well at the objective depth or zone in a manner NOT set forth in the Operator's AFE for
51 completion;

52
53 d. an election to deepen the well;

54
55 e. an election to plug back and attempt to complete the well;

56
57 f. an election to sidetrack the well;

58
59 g. an election to plug and abandon the well;

60 It is provided however, that if at the time said participating parties are considering any of the above elections the hole is in such a
61 condition that a reasonably prudent operator would not conduct the operations contemplated by the particular election involved for fear of
62 placing the hole or objective formation in jeopardy, such election shall be eliminated from the sequence set forth above.

63 T. Take In Kind:
64

65 Notwithstanding the provisions of Article VI.G. and the provisions of Exhibit "E", in the event any party shall fail to make the
66 arrangements necessary to take in kind or separately dispose of its proportionate share of the Oil and Gas produced from the Contract Area,
67 Operator shall purchase such Oil and Gas or sell it to others for the account of the non-taking party, and Operator will market that Oil and
68 Gas on the same terms that Operator markets its own share of such production. In so doing, Operator shall not enter into any agreement to
69 sell any other party's share of Oil and Gas for a period in excess of one (1) year without the prior written consent of such other party.
70 Except to the extent that such Oil and Gas has been committed to a sales agreement with a term of longer than sixty (60) days, in
71 accordance with this Article XVI.M, any such purchase or sale by Operator of any other party's share of Oil and Gas shall be subject to the
72 right of the owner of the production to exercise at any time its right to take in kind or separately dispose of its share of all Oil and Gas not
73 previously delivered to a purchaser by the giving of written notice thereof to Operator at least sixty (60) days prior to its requested taking
74 (the "Taking Date"); such notice shall be deemed effective on the first day of the next month following the Taking Date.
Notwithstanding anything herein to the contrary, the Operator is expressly responsible for paying all distributions to the net revenue

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1 interest owners of record for all oil, gas, or liquids that Operator markets on behalf of itself or the Non-Operator within the unit or contract
2 area. Should Non-Operator choose to take production in kind, then Non-Operator is expressly responsible for paying all distributions to
3 the net revenue interest owners of record for all oil, gas, or liquids that Non-Operator markets.

4 U. Public Announcement:

5
6 No public announcement or statement regarding operations hereunder shall be made or released without the prior written approval of the
7 consenting parties, such approval not to be unreasonably withheld, unless required by law or an applicable Stock Exchange and, then, in such
8 instance, only to the extent required. Any party making a public announcement as required by law or applicable Stock Exchange shall
9 immediately furnish the other parties with a full transcript of such public announcement or statement.

10 V. Re-Allocation of Shared Facility Costs:

11
12 All wells drilled from a common drilling location or pad, whether in the same unit or contract area or not in the same unit or contract
13 area, will share proportionally all common expenditures for items including, but not limited to, pad construction, joint production facilities,
14 road construction and maintenance costs, pipeline construction and maintenance costs, and all other common or shared facility costs
15 whether. As subsequent wells are drilled, the Operator shall re-allocate the costs as described above to each well and to the account of the
16 working interest owners thereof.

17 W. Non-Consenting Unleased Mineral Owner Penalty:

18
19 In the event an unleased mineral owner elects not to participate in the Initial well proposed in the Contract Area pursuant to Article VI.A.,
20 upon timely commencement of actual drilling operations on such Well, such Non-Consenting Unleased Mineral Owner shall be deemed to
21 have relinquished to the Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective
22 interests, all of such Non-Consenting Unleased Mineral Owner's interest in the well and share of production therefrom. All of such Non-

23 Consenting Party's Unleased Mineral Owner's interest in the production obtained from the operation in which the Non-Consenting
Unleased Mineral Owner did not elect

24 to participate shall be owned by the Consenting parties who will be entitled to receive, in proportion to their respective interests, all of such
25 Non-Consenting Unleased Mineral Owner's interest. Such relinquishment shall be effective until the proceeds of the sale of such share,
calculated at the well, of

26 market value thereof if such share is not sold (after deducting applicable ad valorem, production, severance, and excise taxes,
27 royalty, overriding royalty and other interests not excepted by Article III.C payable out of or measured by the production
28 from such well accruing with respect to such interest until it reverts), shall equal the total of the following:

29
30 (i) 200 % of each such Non-Consenting Unleased Mineral Owner's share of the cost of any newly acquired surface equipment
31 beyond the wellhead connections (including but not limited to stock tanks, separators, treaters, pumping equipment and
32 piping), plus 200% of each such Non-Consenting Mineral Owner's share of the cost of operation of the well commencing with first
33 production and continuing until each such Non-Consenting Mineral Owner's relinquished interest shall revert to it under other
34 provisions of this Article, it being agreed that each Non-Consenting Mineral Owner's share of such costs and equipment will be that
35 interest which would have been chargeable to such Non-Consenting Mineral Owner had it participated in the well from the beginning
36 of the operations; and

37 (ii) 200 % of (a) that portion of the costs and expenses of drilling, Reworking, Sidetracking, Deepening,
38 Plugging Back, testing, Completing, and Recompleting, after deducting any cash contributions received under Article VIII.C.,
39 and of (b) that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections),
40 which would have been chargeable to such Non-Consenting Mineral Owner if it had participated therein.

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

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

6 ATTEST OR WITNESS:

OPERATOR

Hess Ohio Developments, LLC

By *Jay Phillips*
JAY PHILLIPS

Type or print name

Title ATTORNEY-IN-FACT

Date _____

Tax ID or S.S. No. _____

14 NON-OPERATORS

16 _____
17 By _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

24 _____
25 By _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

31 _____
32 By _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

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ACKNOWLEDGMENTS

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Note: The following forms of acknowledgment are the short forms approved by the Uniform Law on Notarial Acts.

The validity and effect of these forms in any state will depend upon the statutes of that state.

Individual acknowledgment:

State of TEXAS)

) ss.

County of HARRIS)

This instrument was acknowledged before me on

JUNE 25, 2015

by IVY PHILLIPS

(Seal, if any)



Christina M. Wallace

Title (and Rank) LAND TECH

My commission expires: 1-27-2016

Acknowledgment in representative capacity:

State of _____)

) ss.

County of _____)

This instrument was acknowledged before me on

_____ by _____ as

_____ of _____

(Seal, if any)

_____ Title (and Rank) _____

My commission expires: _____

EXHIBIT "A"

Attached to and made a part of that certain Unit Operating Agreement for the
Cadiz E Unit A.

1. **Description of lands subject to this Agreement:**

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

2. **Restrictions, if any, as to depths, formations or substances:**

This Agreement covers rights for the Unitized Formation, described as that portion of the Utica/Point Pleasant formation found in the subsurface portion of the Cadiz E Unit A at an approximate depth of fifty (50) feet above the top of the Utica Shale formation to fifty (50) feet below the base of the Point Pleasant formation, believed to be approximately 8,200 feet subsurface to 8,450 feet subsurface TVD ("True Vertical Depth").

3. **Parties to agreement with addresses and telephone numbers for notice purposes:**

Operator:

Hess Ohio Developments, L.L.C.
1501 McKinney Street
Houston, TX 77010
Attention: Ivy Phillips, Utica Land Team Lead
Phone: (713) 496-5404

Non-Operators:

CNX Gas Company, LLC
1000 Consol Drive
Canonsburg, PA 15317
Attention: Alex Reyes, Director of Land Services
Phone: (724) 485-4167

Chesapeake Exploration, L.L.C.
P. O. Box 18496
Oklahoma City, Oklahoma 73154-0496
Attention: James K. Ary, Vice President – Land
Phone: (405) 735-3518

CHK Utica, L.L.C.
P. O. Box 18496
Oklahoma City, Oklahoma 73154-0496
Attention: James K. Ary, Vice President – Land
Phone: (405) 735-3518

Total E&P USA, Inc.
1201 Louisiana Street, Suite 1800
Houston, TX 77002
Attention: Pierre Germain, Vice President, Business Development & Strategy
Phone: (713) 483-5000

4. **Percentages or fractional interests of parties to this agreement:**

OPERATOR	<u>Working Interest</u>
Hess Ohio Developments, L.L.C.	37.46775%*
NON OPERATOR	
CNX Gas Company LLC	37.46775%*
Chesapeake Exploration, L.L.C.	03.90912%*
CHK Utica, L.L.C.	13.35267%*
Total E&P USA, Inc.	06.15342%*
Unleased (Unitized Parties)	01.64929%

5. **Oil and Gas Leases and/or Oil and Gas Interests subject to this agreement:**

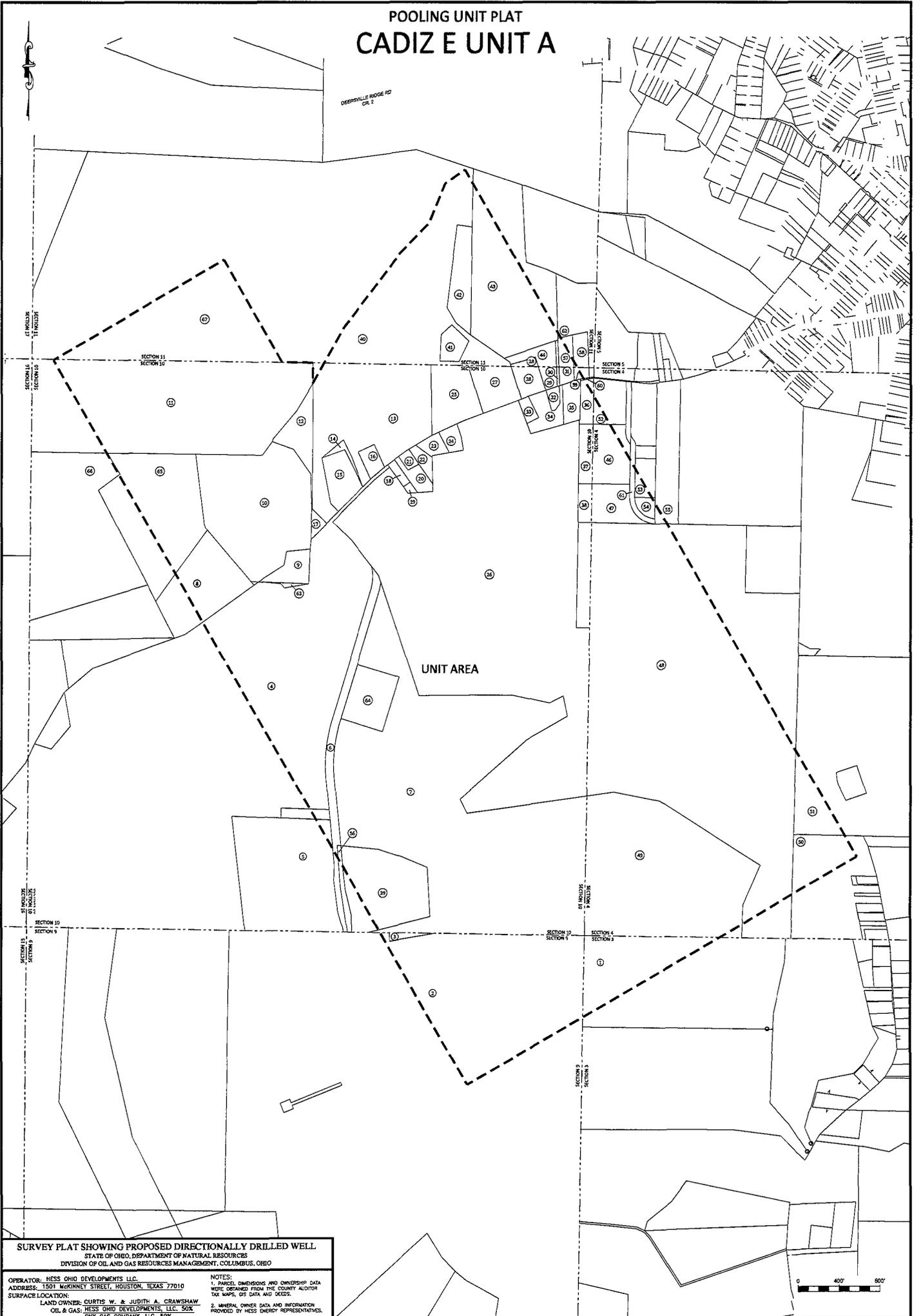
See Exhibit "A-2"

*It is understood by the Parties that the working interests listed above are estimates and are subject to change based upon the verification of title, additional leasehold acquired within the Contract Area, and/or the participation or non-participation of unleased mineral interests and/or third parties. 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

POOLING UNIT PLAT
CADIZ E UNIT A

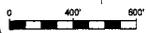


SURVEY PLAT SHOWING PROPOSED DIRECTIONALLY DRILLED WELL
STATE OF OHIO, DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT, COLUMBUS, OHIO

OPERATOR: HESS OHIO DEVELOPMENTS LLC
ADDRESS: 1501 MCKINNEY STREET, HOUSTON, TEXAS 77010
SURFACE LOCATION:
LAND OWNER: CURTIS W. & JUDITH A. CRAWSHAW
OIL & GAS: HESS OHIO DEVELOPMENTS, LLC, 50%
CNX GAS COMPANY, LLC, 50%

NOTES:
1. PARCEL DIMENSIONS AND OWNERSHIP DATA WERE OBTAINED FROM THE COUNTY AUDITOR TAX MAPS, GIS DATA AND DEEDS.
2. MINERAL OWNER DATA AND INFORMATION PROVIDED BY HESS ENERGY REPRESENTATIVES.

LEASE NAME: CADIZ E UNIT A
COUNTY: HARRISON
MUNICIPALITY: VILLAGE OF CADIZ
U.S.G.S. QUAD: JEWETT
SUBDIVISION CIVIL TOWNSHIP / PLSS
TOWNSHIP & RANGE: T10N, R3W
QUARTER TOWNSHIP: N/2
SECTION: 3
LOT: N/A
TRACT: N/A
ALLOTMENT: N/A
FRACTION: N/A
DATE: 04/16/15
REVISIONS: N/A



CANTER SURVEYING
Robert C. Canter, P.S.
6801 S.R. 56 Athens, Ohio 45701
Phone: (740) 592-5706
Email: canter@rcgps.com

I HEREBY CERTIFY THAT OIL DRILLING OR PRODUCING WITHIN 1000 FEET AND ALL BUILDINGS AND STREAMS WITHIN 200 FEET HAVE BEEN SHOWN. THERE ARE NO DRILLING UNIT CRIES NEARER THAN 200 FEET, AND THAT THIS PLAT IS TRUE AND CORRECT AND WAS PREPARED ACCORDING TO THE CURRENT STATE OF OHIO, DEPARTMENT OF NATURAL RESOURCES, DIVISION OF OIL AND GAS RESOURCES MANAGEMENT SPECIFICATIONS. THIS IS NOT A SURVEY SURVEY PER OAC 4733-37.

PROJECT NO.	SCALE	DRAWN BY:	CHECKED BY:	DATE
14653	1"=400'	DKC	R.C. CANTER	

SEAL

Exhibit A-2																					
Tract Number	Current Mineral Owner	Leased/Free Yes or No	Acres in Unit	Tract Participation ⁴	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	Hess Working Interest ¹	Hess Unit Participation	CNX Working Interest ²	CNX Unit Participation	Chesapeake Working Interest	Chesapeake Unit Participation	CHK Utica Working Interest	CHK Utica Unit Participation	Total Working Interest	Total Unit Participation	Unleased Working Interest	Unleased Unit Participation	Parcel ID Number	Township	Current Mineral Owner Address
1	Crawshaw, Curtis W. and Judith	Yes	12.000	1.567%	100.00000%	1.56653%	50.00000%	0.78326%	50.00000%	0.78326%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0002185.002	Cadiz	419 Charleston Street, Cadiz, OH 43907
2	Board of Commissioners of Harrison County Ohio	Yes	43.050	5.620%	100.00000%	5.62016%	50.00000%	2.81008%	50.00000%	2.81008%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0002039.000	Cadiz	Harrison County Court House, 128 Court Street, Cadiz, OH 43906
3	Board of Commissioners of Harrison County Ohio	Yes	0.362	0.047%	100.00000%	0.04728%	50.00000%	0.02364%	50.00000%	0.02364%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0000048.000	Cadiz	Harrison County Court House, 128 Court Street, Cadiz, OH 43907
4	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	51.424	6.713%	100.00000%	6.71332%	50.00000%	3.35666%	50.00000%	3.35666%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001835.002	Cadiz	See footnote Nos. 2 and 3, below
5	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	0.461	0.060%	100.00000%	0.06021%	50.00000%	0.03011%	50.00000%	0.03011%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001835.005	Cadiz	See footnote Nos. 2 and 3, below
6	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	5.046	0.659%	100.00000%	0.65877%	50.00000%	0.32938%	50.00000%	0.32938%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001835.006	Cadiz	See footnote Nos. 2 and 3, below
7	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	99.923	13.045%	100.00000%	13.04482%	50.00000%	6.52241%	50.00000%	6.52241%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001835.001	Cadiz	See footnote Nos. 2 and 3, below
8	Kelley, Kurt A	Yes	7.880	1.029%	100.00000%	1.02873%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.061726%	68.99976%	0.70982%	25.00000%	0.25718%	0.00000%	0.00000%	04-0000061.001	Cadiz	739 Grant Street, Cadiz, OH 43907
9	Blake, Jeffrey and Mary Jane	Yes	2.279	0.298%	100.00000%	0.29755%	0.00000%	0.00000%	0.00000%	0.00000%	10.71430%	0.03188%	0.00000%	0.00000%	89.28570%	0.26567%	0.00000%	0.00000%	05-0000699.000	Cadiz	754 Grant Street, Cadiz, OH 43907
10	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	25.339	3.308%	100.00000%	3.30796%	50.00000%	1.65398%	50.00000%	1.65398%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001862.000	Cadiz	See footnote Nos. 2 and 3, below
11	Twin Minerals Land, LTD. Triple Crown Energy, L.L.C.	Yes	39.097	5.104%	100.00000%	5.10402%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.31628%	66.12477%	3.37502%	27.67857%	1.41272%	0.00000%	0.00000%	04-0000061.000	Cadiz	2283 Ridge Road NE, New Philadelphia, Ohio 44663 P.O. Box 702103, Tulsa, Oklahoma 74170-2534
12	Twin Minerals Land, LTD. Triple Crown Energy, L.L.C.	Yes	7.790	1.017%	100.00000%	1.01696%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.06302%	66.12477%	0.67246%	27.67857%	0.28148%	0.00000%	0.00000%	04-0000061.002	Cadiz	2283 Ridge Road NE, New Philadelphia, Ohio 44663 P.O. Box 702103, Tulsa, Oklahoma 74170-2534
13	Luther, Teresa Mae Fledderus, Elizabeth Ann Luther, Dorothy Jean Luther, William Paul, Jr.	Yes	24.873	3.247%	100.00000%	3.24708%	0.00000%	0.00000%	0.00000%	0.00000%	75.00000%	2.43531%	0.00000%	0.00000%	25.00000%	0.81177%	0.00000%	0.00000%	05-0002148.000	Cadiz	648 Kerr Avenue, Cadiz, OH 43907 628 Stanton Avenue, Cadiz, OH 43907 648 Kerr Avenue, Cadiz, OH 43907 PO Box 94, Cadiz, OH 43907
14	Luther, Anna Mae	Yes	0.456	0.060%	100.00000%	0.05954%	50.00000%	0.02977%	50.00000%	0.02977%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0002148.002	Cadiz	PO Box 94, Cadiz, OH 43907
15	Luther, Anna Mae	Yes	3.263	0.426%	100.00000%	0.42600%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.02556%	68.99976%	0.29394%	25.00000%	0.10650%	0.00000%	0.00000%	05-0002149.000	Cadiz	PO Box 94, Cadiz, OH 43908
16	LFC Rentals, an Ohio general partnership Kelley, Kurt A	Yes	1.061	0.139%	100.00000%	0.13852%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.00858%	66.12477%	0.09159%	27.67857%	0.03834%	0.00000%	0.00000%	05-0000976.000	Cadiz	700 Lincoln Avenue, Cadiz, OH 43907
17	Kelley, Kurt A	Yes	0.516	0.067%	100.00000%	0.06741%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.00404%	68.99976%	0.04651%	25.00000%	0.01685%	0.00000%	0.00000%	05-0002148.001	Cadiz	739 Grant Street, Cadiz, OH 43907
18	Glover, Robert & Dorothy	Yes	0.489	0.064%	100.00000%	0.06389%	0.00000%	0.00000%	0.00000%	0.00000%	75.00000%	0.04792%	0.00000%	0.00000%	25.00000%	0.01597%	0.00000%	0.00000%	05-0000596.000	Cadiz	87240 Tipton Road, Jewett, OH 43986
19	Glover, Robert & Dorothy	Yes	0.186	0.024%	100.00000%	0.02433%	0.00000%	0.00000%	0.00000%	0.00000%	75.00000%	0.01825%	0.00000%	0.00000%	25.00000%	0.00608%	0.00000%	0.00000%	05-0000597.001	Cadiz	87240 Tipton Road, Jewett, OH 43987
20	Kalman, Kenneth & Lisa	Yes	1.230	0.161%	100.00000%	0.16061%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.00964%	68.99976%	0.11082%	25.00000%	0.04015%	0.00000%	0.00000%	05-0000597.002	Cadiz	700 Grant Street, Cadiz, OH 43907
21	Manbeck, Douglas & Anna	Yes	0.476	0.062%	100.00000%	0.06214%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.00385%	66.12477%	0.04109%	27.67857%	0.01720%	0.00000%	0.00000%	05-0000597.000	Cadiz	694 Grant Street, Cadiz, OH 43907
22	Ripley, Heidi J	Yes	0.842	0.110%	100.00000%	0.10989%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.00681%	66.12477%	0.07267%	27.67857%	0.03042%	0.00000%	0.00000%	05-0001061.000	Cadiz	690 Grant Street, Cadiz, OH 43907
23	Fledderus, Thomas M	Yes	0.959	0.125%	100.00000%	0.12514%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.00775%	66.12477%	0.08275%	27.67857%	0.03464%	0.00000%	0.00000%	05-0000258.000	Cadiz	RR 1 Box 156, Valley Grove, WV 26060
24	Soos, Mark J	Yes	0.963	0.126%	100.00000%	0.12573%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.12573%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001250.000	Cadiz	1483 Master St, North Tonawanda, NY 14120
25	LFC Rentals, an Ohio general partnership	Yes	5.789	0.756%	100.00000%	0.75570%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.04683%	66.12477%	0.49970%	27.67857%	0.20917%	0.00000%	0.00000%	05-0001868.000	Cadiz	648 Kerr Avenue, Cadiz, OH, 43907
26	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	128.268	16.745%	100.00000%	16.74523%	50.00000%	8.37262%	50.00000%	8.37262%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-000135.000	Cadiz	See footnote Nos. 2 and 3, below
27	Forest Land LTD	Yes	3.733	0.487%	100.00000%	0.48734%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.03020%	66.12477%	0.32225%	27.67857%	0.13489%	0.00000%	0.00000%	05-0001868.001	Cadiz	318 Lincoln Avenue, Cadiz, OH 43907
28	Russell, John S. & Joan S.	Yes	1.955	0.257%	100.00000%	0.25652%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.25652%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0000113.000	Cadiz	637 Grant St, Cadiz, OH 43907
29	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	0.704	0.092%	100.00000%	0.09192%	50.00000%	0.04596%	50.00000%	0.04596%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0000114.000	Cadiz	See footnote Nos. 2 and 3, below
30	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	0.253	0.033%	100.00000%	0.03303%	50.00000%	0.01652%	50.00000%	0.01652%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0000114.001	Cadiz	See footnote Nos. 2 and 3, below
31	Heaston, Rhonda K.	Yes	0.518	0.068%	100.00000%	0.06764%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.00419%	66.12477%	0.04473%	27.67857%	0.01872%	0.00000%	0.00000%	05-0001124.000	Cadiz	156 East South Street, Cadiz, OH 43907
32	Hauber, James S & Michele	Yes	0.509	0.066%	100.00000%	0.06647%	0.00000%	0.00000%	0.00000%	0.00000%	75.00000%	0.04985%	25.00000%	0.01662%	0.00000%	0.00000%	0.00000%	0.00000%	05-0002013.000	Cadiz	630 Grant Street, Cadiz, OH 43907
33	Pugh, William	Yes	0.629	0.082%	100.00000%	0.08214%	50.00000%	0.04107%	50.00000%	0.04107%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0002144.000	Cadiz	636 Grant Street, Cadiz, OH 43907
34	Mattern, J Arthur & Nan J	Yes	2.141	0.280%	100.00000%	0.27952%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.01732%	66.12477%	0.18483%	27.67857%	0.07737%	0.00000%	0.00000%	05-0002143.000	Cadiz	635 Grant Street, Cadiz, OH 43907
35	Davis, Roger W & H Jean	Yes	1.543	0.201%	100.00000%	0.20141%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.01209%	68.99976%	0.13897%	25.00000%	0.05035%	0.00000%	0.00000%	05-0002143.001	Cadiz	624 Grant Street, Cadiz, OH 43907

Exhibit A-2																					
Tract Number	Current Mineral Owner	Leased/Free Yes or No	Acres in Unit	Tract Participation ⁴	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	Hess Working Interest ¹	Hess Unit Participation	CNX Working Interest ²	CNX Unit Participation	Chesapeake Working Interest	Chesapeake Unit Participation	CHK Utica Working Interest	CHK Utica Unit Participation	Total Working Interest	Total Unit Participation	Unleased Working Interest	Unleased Unit Participation	Parcel ID Number	Township	Current Mineral Owner Address
36	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	1.104	0.144%	100.00000%	0.14416%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.14416%	05-0001286.002	Cadiz	229 Huber Village Blvd Westerville, OH 43081
37	Muddy Run Limited Partnership	No	1.751	0.229%	100.00000%	0.22862%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.22862%	05-0001286.001	Cadiz	229 Huber Village Blvd Westerville, OH 43081
38	Gables at Countryside Lane II, LLC	No	1.095	0.143%	100.00000%	0.14294%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.14294%	05-0001286.000	Cadiz	PO Box 961009, Fortworth TX, 76161
39	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	11.090	1.448%	100.00000%	1.44774%	50.00000%	0.72387%	50.00000%	0.72387%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001835.008	Cadiz	See footnote Nos. 2 and 3, below
40	Bounty Minerals LLC Liming, Donald W	Yes	29.551	3.858%	100.00000%	3.85790%	0.00000%	0.00000%	0.00000%	0.00000%	3.00000%	0.11574%	72.00000%	2.77769%	25.00000%	0.96447%	0.00000%	0.00000%	05-0001865.000	Cadiz	777 Main Street, Suite 850, Fort Worth, TX 76102 709 Peppard Avenue, Cadiz, OH 43907
41	Bounty Minerals LLC Liming, Donald W	Yes	1.593	0.208%	100.00000%	0.20799%	0.00000%	0.00000%	0.00000%	0.00000%	3.00000%	0.00624%	72.00000%	0.14975%	25.00000%	0.05200%	0.00000%	0.00000%	05-0001865.001	Cadiz	778 Main Street, Suite 850, Fort Worth, TX 76102 709 Peppard Avenue, Cadiz, OH 43907
42	Bounty Minerals LLC Liming, Donald W	Yes	4.262	0.556%	100.00000%	0.55640%	0.00000%	0.00000%	0.00000%	0.00000%	3.00000%	0.01669%	72.00000%	0.40061%	25.00000%	0.13910%	0.00000%	0.00000%	05-0001865.002	Cadiz	779 Main Street, Suite 850, Fort Worth, TX 76102 709 Peppard Avenue, Cadiz, OH 43907
43	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	16.889	2.205%	100.00000%	2.20481%	50.00000%	1.10240%	50.00000%	1.10240%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001845.000	Cadiz	See footnote Nos. 2 and 3, below
44	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	1.512	0.197%	100.00000%	0.19735%	50.00000%	0.09858%	50.00000%	0.09858%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0000115.000	Cadiz	See footnote Nos. 2 and 3, below
46	Muddy Run Limited Partnership	No	4.094	0.534%	100.00000%	0.53447%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.53447%	05-0001287.001	Cadiz	229 Huber Village Blvd, Westerville, OH 43081
47	Gables at Countryside Lane II, LLC	No	3.547	0.463%	100.00000%	0.46305%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.46305%	05-0001287.000	Cadiz	PO Box 25965 Shawnee, Mission, KS, 66225
48	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	111.003	14.491%	100.00000%	14.49130%	50.00000%	7.24565%	50.00000%	7.24565%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001825.000	Cadiz	See footnote Nos. 2 and 3, below
49	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	43.431	5.670%	100.00000%	5.66986%	50.00000%	2.83493%	50.00000%	2.83493%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001825.001	Cadiz	See footnote Nos. 2 and 3, below
50	Liggett Enterprises, LTD Robert Charles Baxter Cristofaro, Alice Ann and Michael	Yes	5.313	0.694%	100.00000%	0.69360%	0.00000%	0.00000%	0.00000%	0.00000%	6.30828%	0.04375%	68.69173%	0.47645%	25.00000%	0.17340%	0.00000%	0.00000%	05-0001873.000	Cadiz	242 Jade Circle, Canfield, OH 44406-8626 1204 Chateau Drive, Kettering, OH 45429 2405 Olson Drive, Kettering, OH 45429
51	Liggett Enterprises, LTD Robert Charles Baxter Cristofaro, Alice Ann and Michael	Yes	4.674	0.610%	100.00000%	0.61018%	0.00000%	0.00000%	0.00000%	0.00000%	6.30828%	0.03849%	68.69173%	0.41914%	25.00000%	0.15254%	0.00000%	0.00000%	05-0002295.000	Cadiz	243 Jade Circle, Canfield, OH 44406-8626 1204 Chateau Drive, Kettering, OH 45429 2405 Olson Drive, Kettering, OH 45429
52	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	0.510	0.067%	100.00000%	0.06663%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.06663%	05-0001287.009	Cadiz	229 Huber Village Blvd, Westerville, OH 43081
53	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	0.521	0.068%	100.00000%	0.06799%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.06799%	05-0001287.008	Cadiz	230 Huber Village Blvd, Westerville, OH 43081
54	Eastern Ohio Housing Development Corporation	Yes	0.702	0.092%	100.00000%	0.09159%	50.00000%	0.04579%	50.00000%	0.04579%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001287.004	Cadiz	PO Box 388, Lansing, Ohio, 43934
55	Harrison County Board of Commissioners	Yes	0.260	0.034%	100.00000%	0.03400%	50.00000%	0.01700%	50.00000%	0.01700%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001287.006	Cadiz	Harrison County Court House, 128 Court Street, Cadiz, OH 43906
56	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	0.146	0.019%	100.00000%	0.01900%	50.00000%	0.00950%	50.00000%	0.00950%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001835.004	Cadiz	See footnote Nos. 2 and 3, below
57	Heaston, Rhonda K.	Yes	0.655	0.085%	100.00000%	0.08546%	0.00000%	0.00000%	0.00000%	0.00000%	6.19666%	0.00530%	66.12477%	0.05651%	27.67857%	0.02365%	0.00000%	0.00000%	05-0001125.000	Cadiz	156 East South Street, Cadiz, OH 43907
58	McPeak, Richard A. and Sondra L.	Yes	0.024	0.003%	100.00000%	0.00316%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.00019%	68.99976%	0.00218%	25.00000%	0.00079%	0.00000%	0.00000%	05-0000031.000	Cadiz	617 Grant Street, Cadiz, OH 43907
59	McPeak, Richard A. and Sondra L.	Yes	0.170	0.022%	100.00000%	0.02225%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.00134%	68.99976%	0.01535%	25.00000%	0.00556%	0.00000%	0.00000%	05-0000032.000	Cadiz	618 Grant Street, Cadiz, OH 43907
60	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	0.011	0.001%	100.00000%	0.00143%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	100.00000%	0.00143%	05-0000000.000	Cadiz	229 Huber Village Blvd Westerville, OH 43081
61	Harrison County Board of Commissioners	Yes	0.771	0.101%	100.00000%	0.10070%	50.00000%	0.05035%	50.00000%	0.05035%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001287.005	Cadiz	Harrison County Court House, 128 Court Street, Cadiz, OH 43906
62	Brown, Audrey	Yes	0.017	0.002%	100.00000%	0.00217%	0.00000%	0.00000%	0.00000%	0.00000%	6.00024%	0.00013%	68.99976%	0.00150%	25.00000%	0.00054%	0.00000%	0.00000%	05-0001349.000	Cadiz	601 Grant Street, Cadiz, OH 43907
63	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	0.182	0.024%	100.00000%	0.02375%	50.00000%	0.01187%	50.00000%	0.01187%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0000699.001	Cadiz	See footnote Nos. 2 and 3, below

Exhibit A-2																					
Tract Number	Current Mineral Owner	Leased/Fee Yes or No	Acres In Unit	Tract Participation ⁴	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	Hess Working Interest ¹	Hess Unit Participation	CNX Working Interest ²	CNX Unit Participation	Chesapeake Working Interest	Chesapeake Unit Participation	CHK Utica Working Interest	CHK Utica Unit Participation	Total Working Interest	Total Unit Participation	Unleased Working Interest	Unleased Unit Participation	Parcel ID Number	Township	Current Mineral Owner Address
64	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	5.418	0.707%	100.00000%	0.70726%	50.00000%	0.35363%	50.00000%	0.35363%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001835.009	Cadiz	See footnote Nos. 2 and 3, below
65	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	14.638	1.911%	100.00000%	1.91101%	50.00000%	0.95551%	50.00000%	0.95551%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	05-0001833.000	Cadiz	See footnote Nos. 2 and 3, below
66	Hess Ohio Developments, LLC/CNX Gas Company, LLC ³	Yes	0.048	0.006%	100.00000%	0.00622%	50.00000%	0.00311%	50.00000%	0.00311%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	0.00000%	04-0000055.000	Cadiz	See footnote Nos. 2 and 3, below
67	Bounty Minerals LLC Liming, Donald W	Yes	24.998	3.263%	100.00000%	3.26348%	0.00000%	0.00000%	0.00000%	0.00000%	3.00000%	0.09790%	72.00000%	2.34971%	25.00000%	0.81587%	0.00000%	0.00000%	04-0000063.000	Cadiz	777 Main Street, Suite 850, Fort Worth, TX 76102 709 Peppard Avenue, Cadiz, OH 43907
			765.998	100.00000%		100.00000%		37.46775%		37.46775%		3.90912%		13.35267%		6.15342%		1.64928%			
¹ "Hess" refers to Hess Ohio Developments, LLC. Contact information is: Hess Ohio Developments, L.L.C. 1501 McKinney Street Houston, TX 77010 Attention: Ivy Phillips, Utica Land Team Lead Phone: (713) 496-5404																					
² "CNX" refers to CNX Gas Company, LLC. Contact information is: CNX Gas Company, LLC 1000 Consol Drive Canonsburg, PA 15317 Attention: Alex Reyes, Director of Land Services Phone: (724) 485-4167																					
³ Hess and CNX together own this tract in fee, with Hess being the operator.																					
⁴ "Tract Participation" was calculated by dividing "Surface Acres in Unit" by 765.998 (unit acreage).																					

Exhibit A-3

Unleased Tracts Within Cadiz E Unit A Contract Area

Tract Number	Current Mineral Owner	Leased Yes or No	Acres in Unit	Tract Participation ¹	Current Mineral Owner Working Interest	Current Mineral Owner Unit Participation	Parcel ID Number	Township	Current Mineral Owner Address
36	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	1.104	0.144%	100.00000%	0.14413%	05-0001286.002	Cadiz	The Woda Group, Inc. Contact: Jennifer Ricci, Vice President 229 Huber Village Blvd. Suite 100, Westerville, OH 43081
37	Muddy Run Limited Partnership	No	1.751	0.229%	100.00000%	0.22859%	05-0001286.001	Cadiz	2307 Broad Avenue NW, Canton, Ohio 44708 Contact: James Bentley
38	Gables at Countryside Lane II, LLC	No	1.095	0.143%	100.00000%	0.14295%	05-0001286.000	Cadiz	The Woda Group, Inc. Contact: Jennifer Ricci, Vice President 229 Huber Village Blvd. Suite 100, Westerville, OH 43081
46	Muddy Run Limited Partnership	No	4.094	0.534%	100.00000%	0.53448%	05-0001287.001	Cadiz	2307 Broad Avenue NW, Canton, Ohio 44708 Contact: James Bentley
47	Gables at Countryside Lane II, LLC	No	3.547	0.463%	100.00000%	0.46306%	05-0001287.000	Cadiz	The Woda Group, Inc. Contact: Jennifer Ricci, Vice President 229 Huber Village Blvd. Suite 100, Westerville, OH 43081
52	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	0.510	0.067%	100.00000%	0.06658%	05-0001287.009	Cadiz	The Woda Group, Inc. Contact: Jennifer Ricci, Vice President 229 Huber Village Blvd. Suite 100, Westerville, OH 43081
53	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	0.521	0.068%	100.00000%	0.06802%	05-0001287.008	Cadiz	The Woda Group, Inc. Contact: Jennifer Ricci, Vice President 229 Huber Village Blvd. Suite 100, Westerville, OH 43081
60	Cadiz Homes Limited Partnership, an Ohio Limited Partnership	No	0.011	0.001%	100.00000%	0.00144%	05-0000000.000	Cadiz	The Woda Group, Inc. Contact: Jennifer Ricci, Vice President 229 Huber Village Blvd. Suite 100, Westerville, OH 43081
	Total Leased Acres²		753.365						
	Total Unleased Acres		12.633						
	Total Acres		765.998						
¹ "Tract Participation" was calculated by dividing "Acres in Unit" by 765.998 (unit acreage)									
² Refers to Acres leased or owned in fee by Hess, CNX, Chesapeake, Chesapeake Utica, Total and CMB.									

Exhibit B

PAID-UP OIL AND GAS LEASE

THIS AGREEMENT made and entered into this ____ day of _____, _____, by and between _____ whose address is _____, hereinafter called Lessor (whether one or more), and **Hess Ohio Developments, LLC**, a Delaware limited liability company, whose address is 1501 McKinney Street, Houston Texas 77010, hereinafter called Lessee.

WITNESSETH:

1. **Lease Description.** In consideration of One Dollar (\$1.00) in hand paid by Lessee, and other good and valuable considerations, the receipt and sufficiency of which are hereby acknowledged, and for the covenants hereinafter contained, Lessor hereby grants, leases, and lets exclusively to Lessee the following described lands situated within the Township of _____, County of _____, State of **Ohio**, located in Section/Lot number(s) _____, Township number(s) _____, Range number(s) _____, and bounded substantially by lands now or formerly owned as follows:

On the North by: _____

On the East by: _____

On the South by: _____ *See Exhibit A

On the West by: _____

Known as Tax Parcel #*See Exhibit A and estimated to comprise _____ acres, whether said tract or tracts contain more or less, which acreage figure may be relied upon by Lessee in determining the amount of delay rentals or other payments hereunder. In addition to the above described land, this lease also covers accretions and any strips or parcels of land now or hereafter owned by Lessor which are contiguous or adjacent to the above described land, including any interest therein which Lessor may hereafter acquire by reversion, prescription, or otherwise.

2. **Term of Lease.** It is agreed that this lease shall remain in force for a term of five (5) years(s) from this date, and as long thereafter as oil or gas (including coalbed methane gas, gob gas, casing-head gas and casing-head gasoline), or either of them, is produced from said land by the Lessee, its successors and assigns. Lessee has the option to extend the primary term of this lease for an additional term of five (5) years(s) from the expiration of the primary term of this lease set forth above, and as long thereafter as oil or gas (including coalbed methane gas, gob gas, casing-head gas and casing-head gasoline), or either of them, is produced from said land by the Lessee, its successors and assigns, said extension to be under the same terms and conditions as contained in this lease. Lessee, its successors or assigns, may exercise this option to extend 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 per net mineral acre covered under that certain un-recorded "Order of Payment and Bonus and Rental Agreement" between Lessor and Lessee of even date hereof.

3. **Lease Rights Granted.** Lessee shall have and is hereby granted by Lessor, during the term of this lease, the exclusive right to enter upon the above described land to conduct geological and geophysical surveys and explorations, and to operate for, produce and save oil and gas (including coalbed methane gas, gob gas, casing-head gas and casing-head gasoline) produced in conjunction therewith, and to inject gas, air, water or other fluids into the subsurface strata of said land for the recovery and production of oil and gas; together with the right to drill wells, recondition producing wells and redrill and use abandoned wells on said land for all such purposes; together with rights-of-way and servitudes on, over, and through said lands for roads, pipelines, telephone and telegraph lines, electric power lines, structures, plants, drips, tanks, stations, houses for machinery, gates, meters, regulators, tools, appliances, materials and other equipment that may be used in exploring for and producing therefrom hydrocarbons of every kind and nature whatsoever, including but not limited to oil, gas, coalbed methane gas, gob gas, casing-head gas, and casing-head gasoline and the injection of gas, air, water or other fluids for the enhanced recovery and production of oil and gas produced in conjunction therewith; together with the right to use oil, gas, and water from said land free of cost to Lessee for all such purposes, except water from Lessor's wells or ponds; to remove, either during or after the term hereof, any and all property and improvements placed or located on said land by Lessee, including the right to draw and remove casing; together with the right of ingress, egress, and regress on, over, and through said land for any of the purposes aforesaid.

4. **Paid-Up Lease.** This lease is a paid-up lease. Notwithstanding anything to the contrary contained in the foregoing lease agreement, no production, operations, delay rental payments, or shut-in rental payments are necessary to maintain this lease in force during the primary term of this lease.

5. **Royalty Payments.** The royalties reserved by Lessor, and which shall be paid by Lessee, are: (a) On oil (including but not limited to distillate and condensate) _____% of that produced and saved from the leased premises, the same to be delivered at the wells or to the credit of Lessor in the pipeline to which the wells may be connected, provided; however, Lessee, at its option, may from time to time purchase such royalty oil, paying

therefore not less than the price prevailing in the pricing area for oil of like grade and gravity at the time of delivery; (b) On gas, including coalbed methane gas, gob gas, casinghead gas and all other gaseous or vaporous products, the market value at the wells of _____% of the gas so sold or used, such market value at the wells in no event to exceed the net proceeds received by Lessee calculated or allocated back to the wells from which produced, making allowance and deduction for a fair and reasonable charge for gathering, compressing, and making merchantable such gas, provided, that on gas sold at the wells, the royalty shall be _____% of the net proceeds received by Lessee from such sale, after such allowance and deduction, and provided further that, if any such sale of gas is regulated as to price by any governmental agency having jurisdiction, such market value or net proceeds shall in no event exceed the amount received by Lessee, not subject to refund, calculated, or allocated back to the wells from which produced, making allowance and deduction for a fair and reasonable charge for gathering, compressing, and making merchantable such gas, and which amount may be further adjusted up or down prospectively or retrospectively when the price or rate authorized by such governmental agency is finally determined. Lessor agrees to pay any and all taxes levied or assessed upon its interest in the production of oil and gas from the leased premises and Lessee is hereby authorized to pay such taxes and assessments on behalf of Lessor and to deduct the amount so paid from any monies payable to Lessor hereunder. In the event any extraneous substance (being any substance that is obtained from sources other than the leased premises or lands pooled or unitized therewith) is injected into subsurface strata in connection with secondary, tertiary, or other enhanced recovery operations hereunder, any like substance thereafter produced hereunder, or contained in oil or gas thereafter produced hereunder, from such strata shall be deemed to be part of the extraneous substance so injected until the total volume thereof equals the total volume of the extraneous substance so injected, and no royalty shall be payable hereunder on any such extraneous substance. During any period after expiration of the primary term hereof, where there is a gas well on the leased premises or on a unit that includes all or a part of the leased premises, however designated, capable of producing gas and gas is not being sold or used on or off the leased premises and the well or wells are shut-in and there is no current production of oil or operations on any part of said leased premises sufficient to keep this lease in force, Lessee shall be obligated to pay or tender as shut-in rental the amount of Ten Dollars (\$10.00) per net acre of this lease contained in the drilling unit (which shall be the same and shall be paid regardless of the number of shut-in wells and regardless of whether the shut-in well or wells be located upon said leased premises or upon such other acreage as is embraced in such unit) for each six (6) month period during the shut-in period and it will be considered that gas is produced, for all purposes of this lease, during any period that such well or wells are so shut-in; such amount for the first six (6) month period to be payable within ninety (90) days following shutting-in of the last well, and payment for each subsequent six (6) month period, if required, shall be payable on or before the beginning date of each such subsequent six (6) month period. The amount of each such rental payment or tender may be paid to Lessor by check or draft of Lessee and such payments may be commenced and continued either during or beyond the primary term. No such shut-in rental payments shall be required during the primary term of this lease. Lessee's failure to properly pay such rental payments shall render Lessee liable for the amount due but shall not operate to terminate this lease. Lessee shall use reasonable diligence to market gas capable of being produced from such shut-in well or wells, but shall be under no obligation to market such gas under terms, condition, or circumstances which, in Lessee's judgment exercised in good faith, are unsatisfactory.

6. **Operations.** If at the expiration of the primary term, oil or gas is not being produced on the leased premises or on acreage pooled therewith, but Lessee is engaged in drilling, deepening, plugging back or reworking operations thereon or shall have completed a dry hole thereon within ninety (90) days prior to the end of the primary term, this lease shall remain in force so long as operations on said well, or for the drilling, deepening, plugging back, or reworking of any additional well, are prosecuted with no cessation of more than ninety (90) consecutive days and, if they result in the production of oil or gas, so long thereafter as oil or gas is produced from the leased premises, or upon acreage pooled therewith. Furthermore, if on or after the expiration of the primary term Lessee should drill a dry hole or holes thereon or, if after discovery and production of oil or gas, the production thereof should cease from any cause, this lease shall not terminate if Lessee commences operations for drilling, deepening, plugging back, or reworking within ninety (90) days from date of completion of a dry hole or cessation of production.

7. **Pooling.** Lessee hereby is given the right at its option, at any time within the primary term hereof or at any time during which this lease may be extended by any provision hereof, and from time to time within such period, to pool, reform, enlarge and/or reduce such unit or pool, and repool all or any part or parts of leased premises, formation(s) or strata, and/or rights therewith with any other land in the vicinity thereof, or with any leasehold, operating, or other rights, formation(s) or strata, and/or interests in such other land so as to create units of such size and surface acreage as Lessee may desire but containing not more than eighty (80) acres for an oil well and not more than twelve hundred eighty (1280) acres for a gas well plus in each case a ten percent (10%) acreage tolerance. If at any time larger units are specified under any then applicable law, rule, regulation, or order of any governmental authority for the drilling, completion or operation of a well, or for obtaining maximum allowable, any such unit may be established or enlarged to conform to the size authorized. Each unit or reformation thereof may be created by governmental authority or by Lessee recording in the county recorder's office a Declaration containing a description of the pooled acreage. Any well which is commenced, or is drilled, or is producing on any part of any land theretofore or thereafter so pooled shall, except for the payment of royalties, be considered a well commenced, drilled, and producing on leased premises under this lease. There shall be allocated to the portion of leased premises included in any such pooling or repooling such proportion of the actual production from all lands so pooled or repooled as such portion of leased premises, computed on an acreage basis, bears to the entire acreage of the lands so pooled or repooled. The production so allocated shall be considered for the purpose of payment or delivery of royalty to be the entire production from the portion of leased premises included in such pooling or repooling in the same manner as though produced from such portion of leased premises under the terms of this lease. A unit established hereunder shall be valid and effective for all purposes of this lease even though there may be land, oil, and gas rights, royalty, and/or leasehold interests in land within the unit which are not pooled or unitized, or even though there may be a failure of the leasehold title (in whole or in part) to any tract or interest therein included in a pooled unit.

8. **Warranty and Proportionate Reduction.** Lessor hereby warrants and agrees to defend the title in and to the land herein described, covenants that Lessee will have quiet enjoyment under this agreement, covenants the Lessee shall have the benefit of the doctrine of after-acquired title, and covenants that Lessee, at its option, may discharge any tax, mortgage or other lien upon said land in event of default in payment thereof by Lessor and be subrogated to the rights of the holder thereof with the right to enforce same and apply royalties and payments accruing hereunder toward satisfying same. Without impairment of Lessee's rights under the warranty in event of failure of title, it is agreed that if Lessor owns an interest in the land herein described less than the entire oil and gas estate covered by this lease, when the rentals and royalties to be paid Lessor shall be reduced proportionately.

9. **Notices.** Failure to pay or error in paying any rental or other payment due hereunder shall not constitute a ground for forfeiture of this lease and shall not affect Lessee's obligation to make such payment, but Lessee shall not be considered in default on account thereof until Lessor has first given Lessee written notice of the non-payment and Lessee shall have failed for a period of thirty (30) days after receipt of such notice to make payment.

10. **Ownership Changes.** The rights of either party hereunder may be assigned in whole or in part; but no change or division in ownership of the leased premises, delay rentals, shut-in rentals, storage rentals, or royalties, or in the status of any party, however accomplished, shall operate to enlarge the obligations or diminish the rights of Lessee. No change in such ownership or status shall be binding on Lessee until thirty (30) days after Lessee shall have been furnished by U.S. mail, at Lessee's principal place of business, with a certified copy of recorded instrument or instruments satisfactory to the Lessee, evidencing same. In the event of the death of any person entitled to any sum hereunder, Lessee may pay or tender the same to the credit of the deceased or the estate of the deceased until such time Lessee is furnished with proper evidence of the appointment and qualification of an executor or administrator of the estate or, if there be none, evidence satisfactory as to the heirs or devisees of the deceased and that all debts of the estate have been paid. If at any time two or more parties are entitled to or adversely claim any sum payable hereunder, or any part thereof, Lessee may pay or tender the same either jointly to such parties or separately to each in accordance with his respective ownership thereof. If six or more parties become entitled to royalty hereunder, Lessee may withhold payment unless and until furnished with a recordable instrument executed by all parties designating an agent to receive payment for all. In the event of assignment of this lease as to a segregated portion of the leased premises, the delay rentals, shut-in rentals, and storage rentals payable hereunder shall be apportionable as between the several leasehold owners ratably according to the surface area of each, and the failure to pay delay rentals, shut-in rentals, or storage rentals on the one segregated portion of the leased premises shall not affect the rights of the party holding the other segregated portion hereunder. In the event of assignment hereof, in whole or in part, liability for breach of any obligation hereunder shall rest exclusively upon the owner of this lease or of a portion thereof who commits such breach.

11. **Release of Lease.** Lessee, at any time, and from time to time, may surrender this lease as to all or any part or parts of leased premises by tendering an appropriate instrument of surrender to the Lessor or filing for a record a release or releases of this lease as to any part or all of said land, and thereupon, this lease, and the rights and obligations of the parties hereunder, shall terminate as to the part or parts so surrendered. Upon each such surrender as to any part or parts of the leased premises the rental and all other payments specified herein shall be proportionately reduced on an acreage basis, and Lessee shall maintain such rights to the surrendered portion as may be appropriate to its enjoyment of the portion not surrendered. Lessee shall have the right at any time during or after the expiration of this lease to remove all machinery, fixtures, buildings, or other structures placed on said premises by Lessee, including the right to pull and remove all casing.

12. **Adverse Claims.** In case of notice of, or an adverse claim to the premises, affecting all or any part of the shut-in rentals, delay rentals, storage rentals or royalties, Lessee may withhold payment or delivery of the same until their ownership is determined by compromise, or by final decree of a court of competent jurisdiction, and to this end Lessee may file a petition for interpleader.

13. **Surface Use.** No well shall be drilled nearer than two hundred (200) feet of any house or barn now on said premises without written consent of Lessor. Lessee shall pay for damages caused by Lessee's operations to growing crops on said land. When requested by Lessor, prior to the laying of any such pipeline, Lessee shall bury Lessee's pipeline below plow depth.

14. **Storage.** Lessee shall have the exclusive right to use any stratum or strata underlying the premises for the storage of gas or liquids and may, for such purpose, reopen and restore to operation any and all abandoned wells on the premises and may drill new wells thereon for the purpose of injecting and storing gas or liquids in such stratum or strata and withdrawing such gas or liquids there from. If Lessee intends to use the premises for such purpose, or determines that it is so using the premises, Lessee may deliver to Lessor or have recorded in the county or counties in which this lease is recorded a declaration that the premises are being used, or from a specified date will be used, for gas or liquid storage, and thereafter Lessee shall have the exclusive right to use the premises for such gas or liquid storage until such time as Lessee may deliver to Lessor or have recorded in such county or counties a surrender of the right granted to Lessee by this paragraph or until Lessee shall intentionally abandon the right to use the premises for such storage. During the period or periods that Lessee shall utilize the premises for storage of gas or liquids, the royalties herein provided to be paid to Lessor shall accrue and become payable only as such gas and liquids shall have been taken from such premises by Lessee over and above the amount thereof which Lessee theretofore shall have been stored in such stratum or strata. For and during the period or periods that Lessee uses said premises for such storage, Lessee shall pay to Lessor a minimum rental of Two and 00/100 (\$2.00) Dollars per acre per year on the number of acres covered by this lease, such payment to be made not later than sixty (60) days from and after the end of each twelve (12) month period during which the premises are utilized for storage. Lessee is expressly granted the right to use so much of the surface of the premises as is reasonably necessary in the exercise of the rights granted to Lessee by this paragraph. The rights granted to Lessee by this paragraph shall

continue in force for the period of time hereinabove specified, but this lease, insofar as it grants to Lessee the right to prospect and explore for, and produce oil and gas from stratum or strata other than those employed in such storage, shall not be continued in force solely by the storage of gas or liquids as provided in this paragraph.

15. **Regulations and Delays.** Lessee's obligations under this lease, whether expressed or implied, shall be subject to all applicable laws, rules, regulations, and orders of any governmental authority having jurisdiction, including restrictions on the drilling and production of wells, and the price of oil, gas, and other substances hereby. When drilling, reworking, production or other operations are prevented or delayed by such laws, rules, regulations or orders, or by inability to obtain necessary permits, equipment, services, material, water, electricity, fuel, access or easements, or by fire, flood, adverse weather conditions, war, sabotage, rebellion, insurrection, riot, strike, or labor disputes, or by inability to obtain a satisfactory market for production or failure of purchasers or carriers to take or transport such production, or by any other cause not reasonably within Lessee's control, this lease shall not terminate because of such prevention or delay, and shall be maintained in force and effect for so long as prevention or delay continues, and for ninety (90) days thereafter, or so long as this lease is maintained in force by some other provisions thereof, whichever is the later date. Lessee shall not be liable for breach of any express or implied covenants of this lease when drilling, production, or other operations are so prevented, delayed, or interrupted.

Lessor grants Lessee the authority to request any waivers, special permits, special orders as to drilling unit requirements and/or other requirements, as well as the authority to compromise or settle any disputes with governmental agencies relating to this lease and/or production thereon and waives any notice to Lessor thereof.

16. **Entire Agreement; Further Assurances.** It is mutually agreed that this instrument contains and expresses all of the agreements and understandings of the parties in regard to the subject matter hereof, and supersedes all prior discussions and negotiations of the parties hereto. No implied covenant, agreement or obligation shall read into this agreement or imposed upon the parties or either of them. Lessor agrees to execute such additional documents as may be determined by Lessee to be necessary and/or convenient to perfect Lessee's title to the oil and gas or any interest which is the subject of this lease and such documents relating to the sale of production as may be required by Lessee and/or others, including, but not limited to, division orders, transfer orders, affidavits, notices, ratifications, instruments regarding dormant mineral interests, requests for subordination, and any and all other such instruments.

17. **Breach or Default.** In the event Lessor considers that Lessee has not complied with its express or implied obligations hereunder, Lessor shall notify Lessee in writing of the facts relied upon as constituting a breach of said obligation. Lessee shall then have sixty (60) days after receipt of said notice within which to meet or commence to meet all or any part of the breaches alleged by Lessor. The service of said notice shall be precedent to the bringing of any action by Lessor for any cause hereunder, and no such action shall be brought until the lapse of sixty (60) days after service of such notice on Lessee. Neither the service of said notice nor the doing of any acts by the Lessee aimed to meet all or any of the alleged breaches shall be deemed an admission or presumption that Lessee has failed to perform all of its obligations hereunder. It is provided, however, that after production of oil or gas has been obtained from the land covered hereby or land pooled therewith (or with any part thereof) this lease shall not be subject to forfeiture or loss, either in whole or part, for failure to comply with the express or implied obligations of this contract, except after final judicial ascertainment of such failure and after Lessee has been given a period of sixty (60) days after such final ascertainment to prevent such loss or forfeiture by complying with and discharging the obligations as to which Lessee has been judicially determined to be in default.

18. **Execution.** Should any one or more of the parties named herein as Lessor fail to execute this lease, it shall nevertheless be binding on the party or parties who execute the same, and additional parties may execute this lease as Lessor, and this lease shall be binding on each party executing the same notwithstanding that such party is not named herein as Lessor; and all of the provisions of this lease shall inure to the benefit of and be binding on the parties hereto and their respective heirs, legal representatives, successors, and assigns.

19. See addendum attached hereto and made a part hereof.

IN WITNESS WHEREOF, this instrument is executed as of the first date above written.

ACKNOWLEDGEMENT

State of _____

County of _____

On _____, before me, a Notary Public in and for said County, personally appeared the said _____, _____, who acknowledged that they did sign the foregoing instrument and that it is their free act and deed.

Signature / Notary Public _____

Printed Name of Notary Public _____

[SEAL]

My commission expires: _____

After recording, please return original instrument to: Hess Ohio Developments, LLC, 4525 Sunset Blvd., Steubenville OH 43952.

**MEMORANDUM OF OIL AND GAS LEASE
FOR RECORDING**
(_____)

“Harrison County, Ohio”

THIS MEMORANDUM OF LEASE FOR RECORDING (“Memorandum”) made and entered into by and between:

_____ hereinafter called “**Lessor**”
whose address is _____

and

Hess Ohio Developments, LLC, a Delaware limited liability company
hereafter called “**Lessee**”
whose address is 1501 McKinney Street, Houston Texas 77010

WITNESS That:

- 1) The parties hereto are parties to a Lease dated effective _____.
- 2) This Memorandum is entered into by the parties under favor of Ohio Revised Code Section 5301.251.
- 3) The names and addresses of the parties as set forth in the Lease are the same as those set forth in the first full paragraph of this Memorandum.
- 4) The premises so leased:

_____ **acres, more or less, situated in** _____ **Township,**
_____ **County, Ohio,** as more specifically identified on **Exhibit “A”**
attached hereto (hereinafter called the “**Leased Premises**”).

- 5) The term of the Lease is for a term of five (5) years from and after the Effective Date thereof (“**Primary Term**”) and so long thereafter as oil or gas is produced from acreage included within a production and/or a pooled unit located on or partially on the Leased Premises by the Lessee, its successors and assigns, or operations are being conducted thereon by the Lessee in search for oil and/or gas. Lessee shall have the option to extend the Primary Term of this Lease as to all or any part of the acreage not included within a production and/or pooled unit at the expiration of the original Primary Term for an additional term of five (5) years(s) from the expiration of the Primary Term. Lessee shall have the right to surrender this Lease or any portion thereof by written notice to the Lessor describing the portion which it elects to surrender, or by returning the Lease to the Lessor with the endorsement of surrender thereof, or by recording the surrender or partial surrender of this Lease, any of which shall be full and legal surrender of this Lease as to all of the Leased Premises indicated on said surrender. At the expiration of the Primary Term or any extension thereof and at all times thereafter when wells cease to produce in paying quantities and are plugged and abandoned and there is no continuous drilling, this Lease shall terminate as to any undeveloped portion of the Leased Premises.

EXECUTED by the parties hereto as of the dates hereinafter set forth.

Hess Ohio Developments, LLC

Printed name:
Attorney-In-Fact

State of _____
County of _____

On _____, _____, before me, a Notary Public in and for said County, personally appeared the said _____, who acknowledged that he/she/they did sign the foregoing instrument and that it is his/her/their free act and deed.

Signature / Notary Public _____ [SEAL]
My commission expires: _____

STATE OF Texas
COUNTY OF Harris

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by **Ivy Phillips**, as Attorney-In-Fact, of Hess Ohio Developments, LLC, a Delaware limited liability company, on behalf of the company.

Signature / Notary Public _____ [SEAL]
My commission expires: _____

ADDENDUM

This ADDENDUM is attached to and made a part of that certain Oil and Gas Lease dated _____ by and between _____, as Lessor, and **Hess Ohio Developments, LLC**, as Lessee. If any of the following provisions conflict with or are inconsistent with the printed provisions or terms of this Lease, the following provisions shall control.

Lessor hereby warrants that Lessor is not currently receiving any bonus, rental, or production royalty as the result of any prior oil and gas lease covering any or all of the subject premises, and that there are no commercially producing wells currently existing on the subject premises, or upon other lands within the boundaries of a drilling or production unit utilizing all or a part of the subject premises.

1. **Conflict of Terms:** Notwithstanding anything to the contrary considered in the Oil and Gas Lease to which this Addendum is attached and made a part of, the provisions of this Addendum shall prevail whenever in conflict with the provisions of the Oil and Gas Lease.
2. **Reclamation:** On completion of any operation, Lessee shall clean up the lease premises and remove all debris, equipment, and personal property which Lessee placed on the lease premises (except for equipment needed for the operation of producing wells, which shall be removed within six (6) months after a well permanently ceases to produce), which leave the lease premises in a neat and clean condition. While conducting operations, Lessee shall keep the premises in a neat and clean condition.
3. **Surface Restoration Clause:** It is agreed and understood that the Lessee shall repair and restore the surface of said premises as nearly as practicable, as a result of the Lessee's operations, to the condition in which said land existed at the time of the commencement of drilling operations upon above described land. This work shall be completed within a reasonable amount of time after all cessation of the drilling operations upon the said lands. This work shall be done at the sole expense of the Lessee.
4. **Timber Clause:** Prior to commencing any construction activities on the leased premises Lessee shall have an independent appraiser survey and assess the value of any marketable timber that would be impacted by Lessee's activities. Lessee agrees to pay Lessor the value of any marketable timber as damages at the prevailing stump price for the local area as determined by such independent timber appraiser; in which case said marketable timber shall then become the property of the Lessee and removed from the leased premises; OR (b) Lessor may request that Lessee stack the marketable timber on the leased premises at a mutually agreeable location in close proximity to the construction site, and said marketable timber shall remain the property of Lessor.
5. **Fresh Water Damage:** In the event any activity carried on by the Lessee pursuant to the terms of this lease damages, disturbs, or injures Lessor's fresh water well or source located on the leased premises, Lessee shall, at its sole cost and expense, use its best efforts to correct any such damage, disturbance, or injury.
6. **Pipeline – Plow Depth:** Lessee shall bury the pipeline a minimum depth of 32 inches below ground level.
7. **No Storage Rights:** Notwithstanding anything herein contained to the contrary, Lessee agrees the herein described leased premises shall not be used for the purpose of gas storage as defined by the Federal Energy Regulatory Commission. Any reference to gas storage contained in this lease is hereby deleted. If Lessor wishes to enter into an agreement regarding gas storage using the leased premises with a third party, Lessor shall first give Lessee written notice of the identity of the third party, the effective date and closing date of the transaction, the formation and interval proposed for such storage, and any other information respecting the transaction which Lessee believes would be material to the exercise of the offering. If in Lessee's sole discretion Lessee determines operations for gas storage will not adversely affect Lessee's operations, then Lessee shall provide its consent to such operation by providing written notice to Lessor within thirty (30) days from receipt of Lessor's request to allow gas storage including all or a portion of the leased premises. Failure by Lessee to provide its consent within such thirty (30) day period shall be deemed a rejection of Lessor's request.
8. **No Disposal and/or Injection Wells Clause:** Lessee agrees the herein described leased premises shall not be used for any disposal and/or injection wells. Any reference to disposal and/or injection wells contained in this lease is hereby deleted.

9. Fence Clause: Upon Lessor's written request, Lessee shall at its sole cost, expense, and design install fencing for the protection of livestock around any well site(s), tank battery (ies) or facility (ies) installed on the leased premises by Lessee provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations.

10. Gate Clause: Upon the written request of Lessor, Lessee shall install at its sole cost and expense a gate at the entrance of any road constructed by Lessee on the leased premises provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations.

11. Fence and Gates: Lessee shall promptly replace any barrier, including but not limited to, fences and stone walls, removed by Lessee during its operations on said land. Lessee shall construct gates on all access roads on said land upon written request by Lessor. The type of gates constructed shall be solely at Lessee's option. An access key will be provided or a double lock system installed by Lessor and Lessee. Gates are to be closed and locked when employees are not on the premises.

12. Fence Producing Well: Upon written request of Lessor, Lessee shall: (a) fence all producing wells, tank, batteries, pits, separator, drip stations, pump engines and other equipment placed on the leased premises, with a fence capable of turning sheep, goats and cattle; (b) keep the fences on the leased premises that are installed pursuant to Lessee's operations in good repair; and (c) keep all gates and fences closed when not in use. In lieu of gates, the Lessee may choose to install cattle guards.

13. Mutual Agreement: Before commencing any drilling operation on the herein Leased Premises, there shall be a meeting between the Lessor and Lessee. Provided that Lessor is the current surface owner of the Leased Premises at the time of Lessee's surface operations, Lessor and Lessee shall mutually agree on the location of all well pads, tank batteries, meters, separator sites, flow line locations, frac pits, routes of ingress and egress, and/or pipeline routes pertinent to Lessee's operations on the Leased Premises, or lands pooled therewith. Lessor shall not unreasonably withhold, delay, or condition consent to such locations. Lessee shall make every effort to use existing logging and township roads.

14. Double Ditch Method: If Lessee wishes to use farm or grazing lands to lay pipelines, Lessee agrees to use a double ditch method for laying pipelines, which is topsoil to one side and subsoil to the other; when filling the ditch, the subsoil is replaced first and topsoil is placed on the top.

15. No Construction Within 500 feet: No well shall be drilled nearer than five hundred (500) feet of any building, water well, spring, pond, or septic system on the Leased Premises without the written consent of Lessor. No pipeline shall be constructed nearer than two hundred fifty (250) feet of any building, water well, spring, pond, or septic system on the Leased Premises without the written consent of Lessor.

16. No Use of Ponds and Lakes: Lessee shall not use water from Lessor's wells, ponds, lakes, springs, creeks or reservoirs ("Water") located on the Leased Premises without first obtaining the prior written consent of Lessor. Lessor and Lessee contemplate negotiations and agreement for the cost for onsite water usage but neither party is bound to offer to pay, or accept said offer, for any reason. Lessee shall be fully responsible for any material damage caused to Lessor's Water by any operations conducted pursuant to this Lease.

17. Shut-In Limitation: Lessee agrees that the shut-in royalty payment provided for in the Lease will be increased to Twenty-Five Dollars (\$25.00) per acre. Said shut-in royalty shall be paid or tendered to the Lessor within thirty (30) days after the end of each continuous one hundred eighty (180) day period in addition to any royalty owed on the gas once it is marketed. Upon payment of the shut-in royalty as provided herein, the Lease will continue in full force and effect while production is shut-in. It is understood and agreed that, in the sole discretion of the Lessor, this Lease may not be maintained in force for any continuous period of time longer than three (3) consecutive years after the expiration of the primary term hereof solely by the provision of the shut-in royalty clause.

18. Ad Valorem Taxes: Lessor and Lessee will pay their proportional share of all ad valorem taxes or any similar tax or assessment of oil and gas production or reserves made by any local, state, or federal entity or governmental unit attributable to, or resulting from, the assessment of oil and gas production or reserves from the Leased Premises.

19. Paid-Up Lease: Notwithstanding any provisions contained herein to the contrary, all rentals due during the primary term of the Lease are paid in full and no further rental payments are due.

20. No Compressor: This Lease does not grant Lessee the right to construct compression facilities on the

Leased Premises other than those necessary and electronically powered for the production and transportation of products produced from the Leasehold or lands pooled or unitized therewith. Lessee agrees that the Leased Premises described herein will not be used as a central processing facility or storage area for equipment and materials.

21. Declaration of Production Unit: Lessee shall furnish to Lessor, a declaration of a production unit of which the Leased Premises or a portion of the Leased Premises shall be part, including a copy of all plats, maps, and exhibits of said unit.

22. Bonus Consideration: Lessee shall pay to the Lessor the sum of \$«Bonus» per net acre in accordance with that certain Paid-Up Order of Payment and Bonus Agreement executed in conjunction with the oil and gas lease to which this Addendum is attached. Lessee shall not conduct any operations pursuant to this lease until the Bonus Consideration is paid to Lessor.

23. Force Majeure: In the event Lessee claims that any duties or obligations of Lessee as contained in the Lease may not be fulfilled as a result of Force Majeure as defined in the Lease, Lessee shall provide notice to Lessor of the nature of the Force Majeure, indicate the expected length of delay, and work diligently to remove or resolve the force majeure event. The lease shall never be extended longer than a total of three (3) consecutive years due to the terms contained in the Force Majeure Clause of the Lease.

24. Conduct of Operations: Lessee shall cooperate with Lessor conducting its operations to minimize any interference with the agricultural or residential use of the premises. If Lessee in the course of its operations hereunder interferes with Lessor's personal ingress and egress routes, Lessee will provide reasonable alternate temporary access to help minimize the disruption. In addition:

a. Lessee shall not use Lessor's existing roadways without Lessor's written consent. All ditching and grading shall be to the standards as established by the township in which the Leased Premises are located for road construction and maintenance.

b. Lessee shall be responsible for any damages caused by Lessee's operations to above ground and underground utilities, sanitary sewers, storm drains, catch basins, and drainage ditches.

c. All pipelines shall be conspicuously marked by Lessee. If Lessee chooses to lay plastic lines, such lines shall be marked by a tracer wire for purposes for electronically locating such lines.

d. Lessee shall, during the operation of the drilling and afterward, clean the site and all appropriate areas, including areas of ingress and egress, spread the appropriate gravel, road fabric, plastic culverts, properly maintain all approaches and driveways, maintain all areas in a clean and orderly manner, maintain all tanks and equipment in a clean, painted condition, mow all grass and weeds (as needed) and grade all areas to the reasonable and prudent satisfaction of Lessor. All roads shall be appropriately crowned to foster drainage.

e. All motors used in the operation of any wells shall be electrical, where practical and economical.

f. All access roads used by Lessee pursuant to its drilling and production operations on the Leased Premises shall be kept in passable condition, free of significant ruts.

g. Lessee shall test, with a certified lab, Lessor's domestic water supply tested for quality prior to commencement of and, to the extent so requested by Lessor, following drilling operations on said land in order to ensure that said water supply is not adversely affected by said operations. Lessor shall be provided with copies of the lab documentation. In the event it is reasonably determined by Lessor and Lessee that said operations have adversely and materially affected said water supply, then Lessee, at its own expense, shall take steps necessary to return said water supply to pre-drilling conditions. Lessee, at Lessee's expense, agrees to provide Lessor with a reasonable supply of potable water until such time as Lessor's water supply has been returned to pre-drilling conditions. It is further understood and agreed that Lessee will not utilize Lessor's water supply while conducting its operations on the Leased Premises without Lessor's written consent. The water testing shall be conducted to Ohio EPA standards for potable non-transient use. In the event the Leased Premises are used for agricultural purposes where the quality of water is regulated and Lessee's operations negatively impact the water supply for such operations, Lessee shall immediately provide water meeting such requirements as to quality and within a time period necessary to fully comply with all regulations relating thereto.

h. Prior to use of Lessee's means of ingress or egress, lessee shall receive all proper permits and post all bonds required by any governmental authority relative to the use of said roadways.

i. Any electric lines installed by Lessee shall meet the electrical code of the Ohio Department of Commerce and all electrical installation shall remain in force after termination of this Lease or abandonment of any wells drilled by Lessee. All above ground electric lines shall be installed at least fourteen (14) feet high.

25. Coal: Lessee acknowledges that certain rights to mine or extract coal may be applicable to or affect the Leased Premises subject to this Lease. Lessor makes no representation or warranty and provides no assurance that Lessee's ability to extract oil and gas will be unaffected by such coal rights. Lessee shall rely solely on its evaluation of the exploration and extraction rights granted hereby and shall not rely on Lessor regarding such rights. In the event the right, so long as it does not interfere with Lessee's oil and gas operations, to extract coal and/or other mineral is granted or conveyed by Lessor subsequent to the date hereof, Lessee agrees to cooperate with such Lessee or grantee in the mining or extraction of such coal or mineral in order to permit Lessor to obtaining the economic benefit of all coal and minerals located on the Leased Premises. In any event, this provision shall always adhere and be under and subject to the Force Majeure provisions in this Lease.

26. Pooled Production Unit Limit: In the event Lessee desires to pool or unitize the Leased Premises with other lands and there is no spacing order previously established by a governmental or regulatory body, Lessee shall not have the right to form a production unit larger than 1,280 acres for a horizontal well, 160 acres for a vertical gas well, and 80 acres if a vertical oil well, plus in each case a 10% tolerance.

27. Surface Damage Payment: Provided that Lessor is the current surface owner of the affected lands at the time of Lessee's surface operations, Lessee agrees to pay to Lessor the sum of Twenty Thousand Dollars (\$20,000.00) as surface damage payment for each drill site pad and newly constructed access roads located on the surface of the leased premises. Multiple wells may be drilled from a single drill site pad. Lessee agrees that each drill site pad built on the Leased Premises shall not exceed twenty (20) acres of surface area unless granted written permission by Lessor. In the event Lessee physically and materially disturbs more than twenty (20) acres for any drill site pad, Lessor shall be compensated at the rate of Three Thousand Dollars (\$3,000.00) per acre so disturbed in excess of twenty (20) acres. If Lessee should locate more than one drill site pad on the Leased Premises, a separate surface damage payment shall be paid for each drill site pad. Lessee shall not be required to pay any separate surface damage payment for additional wells drilled in sequence after the completion of drilling the initial well or group of wells as the case may be; however, if Lessee fully reclaims any well pad, and then returns at a later date to a fully reclaimed drill site pad for the purpose of drilling an additional well or wells on that drill site pad, Lessee shall pay to Lessor an additional surface damage payment. To the extent only a portion of a drill site pad is located upon the surface of the Leased Premises, the payments described above shall be proportionately adjusted to reflect the percent of the drill site pad that is located upon the Leased Premises.

28. Hold Harmless Clause: Lessee shall indemnify and hold Lessor harmless from any and all liability, liens, demands, judgments, suits, and claims of any kind or character arising out of, in connection with, or relating to Lessee's operations under the terms of this Lease, including, but not limited to, environmental issues, claims for injury to or death of any persons, or damage, loss or destruction of any property, real or personal, under any theory of tort, contract, or strict liability. Lessee further covenants and agrees to defend any suits brought against Lessor on any claims, and to pay any judgment against Lessor resulting from any suit or suits, together with all costs and expenses relating to any claims, including attorney's fees, arising from Lessee's operations under the terms of this lease. Lessor, if it so elects, shall have the right to participate, at its sole expense, in its defense in any suit or suits in which it may be a party, without relieving Lessee of the obligation to defend Lessor. The terms hereof do survive the expiration or surrender of this lease and/or the completion of operations.

29. Audit Clause: Lessee further grants to the Lessor the right annually to examine, audit, or inspect books, records, and accounts of Lessee pertinent to the purpose of verifying the accuracy of the reports and statements furnished to Lessor, and for checking the amount of payments lawfully due the Lessor under the terms of this agreement. In exercising this right, Lessor shall give reasonable notice to Lessee of its intended audit and such audit shall be conducted during normal business hours at the office of Lessee. Such examination and audit shall be at the sole cost and expense of Lessor.

30. Compliance Clause: Lessee's operations on said land shall be in compliance with all applicable federal and state regulations.

31. Prudent Operator: Lessee agrees to be a prudent operator and will keep all surface disturbances to the minimum area necessary to conduct its operations.

32. No Other Minerals: This Lease shall cover only oil and gas and related hydrocarbons (but not coalbed methane) that may be produced from the well bore; and all other minerals including, but not limited to, lignite coal, uranium, sulfur, gravel, copper, and metallic ores are not included in this Lease.

33. Damage: Lessee agrees to pay Lessor at fair market value for all surface damages caused by Lessee's operations to growing crops.

34. Commencement of Operations: Commencement of operations shall be defined as Lessee having secured a drilling permit from the State and further entering upon the herein described premises with equipment necessary to build any access road(s) for drilling of a well subsequently followed by a drilling rig for the spudding of the well to be drilled, and the commencement and completion of the drilling of a well.

35. Arbitration: Any questions concerning this lease or performance there under shall be ascertained and determined by three disinterested arbitrators, one thereof to be appointed by Lessor, one by the Lessee and third by the two so appointed as aforesaid and the award of such collective group shall be final and conclusive. Arbitration proceedings hereunder shall be conducted at the county seat or the county where the Lease is filed or the action occurred which is cause for the arbitration, or such other place as the parties to such arbitration shall all mutually agree upon. Each party will pay its own arbitrator and share costs of the third arbitrator equally.

36. Leasehold Identification: Notwithstanding any other provision in the lease including that provision being what is commonly known in lease terminology as a "Mother Hubbard Clause", it is understood and agreed that the lease is valid only as to the specific parcels described and identified in the lease. This lease does not include parcels adjacent or contiguous to the land described in the lease that is also owned or claimed by Lessor which is not specifically described in the lease. Any acreage discrepancies in the parcels listed shall be covered by this lease.

37. Pipeline – No Foreign Gas: Any pipelines constructed pursuant to the terms of this lease shall be for transporting oil and/or gas from a well(s) drilled on the leased premises or lands pooled therewith unless Lessor and Lessee enter into a separate written agreement.

38. Pugh Clause: If the Leasehold covered by this Oil and Gas Lease covers more than sixty (60) net acres and more than sixty percent (60%) of the Leasehold covered by this Oil and Gas Lease is not included in the production unit established by Lessee, this Lease shall automatically terminate two (2) years ("Extended Term") after the expiration of the primary term or any extension provided herein, insofar and only insofar as to all Leasehold outside a production unit established by Lessee for a well, provided if the Lessee, its successors or assigns shall be engaged in operations for the drilling, completing or testing of a new well or wells or the drilling, completing, testing, or deepening of an existing well or wells on the leased premises or on lands with which said Leasehold or a portion hereof have been included in a production unit, then this Oil and Gas Lease shall continue in full force and effect until such drilling, completing, testing or deepening operations have been completed.

39. Clean and Green Clause: Lessee agrees that if and when any penalty, rollback or recapture of tax abatements created or imposed under any governmental program such as, but not limited to CREP, CRP and Clean and Green that is levied on Lessor solely as a result of Lessee's operations on leased premises, Lessee will reimburse Lessor upon written request and copy of the penalty notice, but only insofar as such assessments are imposed on that portion of the surface of the leased premises actually disturbed by such oil and gas operations and not reclaimed.

40. Release of Lease: Upon written request by Lessor and after termination, expiration, or surrender of this lease in whole or in part, Lessee shall provide Lessor with a copy of an appropriate release of lease and cause the same to be filed of record.

Lessor's Signature:



Exhibit " C " ACCOUNTING PROCEDURE JOINT OPERATIONS

1 | Attached to and made part of Operating Agreement for the Cadiz E Unit A dated September 1, 2015, by and between Hess _____
2 | Ohio Developments, LLC as Operator, _____
3 | _____
4 | _____

I. GENERAL PROVISIONS

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.

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.

1. DEFINITIONS

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

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.

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

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).

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.

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

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.

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:

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

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

64 | ~~Authorized under this agreement or the corresponding JOA~~
64 | "Joint Operations" means all operations ~~necessary or proper~~ for the exploration, appraisal, development, production, protection,
65 | 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 **“Off-site”** means any location that is not considered On-site as defined in this Accounting Procedure.
17

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

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

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

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

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

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

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

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

41 **“Supply Store”** means a recognized source or common stock point for a given Material item.
42

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

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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.



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3. ADVANCES AND PAYMENTS BY THE PARTIES

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

4. ADJUSTMENTS

- A. Payment of any such bills shall not prejudice the right of any Party to protest or question the correctness thereof; however, all bills and statements, including payout statements, rendered during any calendar year shall conclusively be presumed to be true and correct, with respect only to expenditures, after twenty-four (24) months following the end of any such calendar year, unless within said period a Party takes specific detailed written exception thereto making a claim for adjustment. The Operator shall provide a response to all written exceptions, whether or not contained in an audit report, within the time periods prescribed in Section I.5 (*Expenditure Audits*).
- 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 twenty-four (24) month period following the end of the calendar year in which the original charge appeared or should have appeared on the Operator's Joint Account statement or payout statement. Adjustments that may be made beyond the twenty-four (24) month period are limited to adjustments resulting from the following:
- (1) a physical inventory of Controllable Material as provided for in Section V (*Inventories of Controllable Material*), or
 - (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 Operator relating to another property, or
 - (3) a government/regulatory audit, or
 - (4) a working interest ownership or Participating Interest adjustment.

5. EXPENDITURE AUDITS

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

Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct a joint audit in a manner that will result in a minimum of inconvenience to the Operator. The Operator shall bear no portion of the Non-Operators' audit cost incurred under this paragraph unless agreed to by the Operator. The audits shall not be conducted more than once each year without prior approval of the Operator, except upon the resignation or removal of the Operator, and shall be made at the expense of



1 those Non-Operators approving such audit.

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

7
8 A timely filed written exception or audit report containing written exceptions (hereinafter "written exceptions") shall, with respect to
9 the claims made therein, preclude the Operator from asserting a statute of limitations defense against such claims, and the Operator
10 hereby waives its right to assert any statute of limitations defense against such claims for so long as any Non-Operator continues to
11 comply with the deadlines for resolving exceptions provided in this Accounting Procedure. If the Non-Operators fail to comply with
12 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
13 the claims brought by the Non-Operators shall lapse, and such claims shall then be subject to the applicable statute of limitations,
14 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
15 I.5.C.

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

22
23 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
24 shall reply to the lead audit company's follow-up response within ninety (90) days of receipt; provided, however, each Non-Operator
25 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
26 adequately fulfilling its duties. Unless otherwise provided for in Section I.5.E, if the Operator fails to provide substantive response
27 to an exception within this ninety (90) day period, the Operator will owe interest on that exception or portion thereof, if ultimately
28 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
29 Payments by the Parties*).

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

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

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

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

60 6. APPROVAL BY PARTIES

61 A. GENERAL MATTERS

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

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

B. AMENDMENTS

If the Agreement to which this Accounting Procedure is attached contains no contrary provisions in regard thereto, this Accounting Procedure can be amended by an affirmative vote of TWO (2) or more Parties, one of which is the Operator, having a combined working interest of at least Sixty-Five percent (65 %), which approval shall be binding on all Parties, provided, however, approval of at least one (1) Non-Operator shall be required.



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

3. MATERIAL

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

4. TRANSPORTATION

- A. Transportation of the Operator's, Operator's Affiliate's, or contractor's personnel necessary for Joint Operations.
- B. Transportation of Material between the Joint Property and another property, or from the Operator's warehouse or other storage point to the Joint Property, shall be charged to the receiving property using one of the methods listed below. Transportation of Material 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 methods listed below:
 - (1) If the actual trucking charge is less than or equal to the Excluded Amount the Operator may charge actual trucking cost or a theoretical charge from the Railway Receiving Point to the Joint Property. The basis for the theoretical charge is the per hundred weight charge plus fuel surcharges from the Railway Receiving Point to the Joint Property. The Operator shall consistently apply the selected alternative.
 - (2) If the actual trucking charge is greater than the Excluded Amount, the Operator shall charge Equalized Freight. Accessorial charges such as loading and unloading costs, split pick-up costs, detention, call out charges, and permit fees shall be charged directly to the Joint Property and shall not be included when calculating the Equalized Freight.

5. SERVICES

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

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

6. EQUIPMENT AND FACILITIES FURNISHED BY OPERATOR

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

- A. The Operator shall charge the Joint Account for use of Operator-owned equipment and facilities, including but not limited to production facilities, Shore Base Facilities, Offshore Facilities, and Field Offices, at rates commensurate with the costs of ownership and operation. The cost of Field Offices shall be chargeable to the extent the Field Offices provide direct service to personnel who are chargeable pursuant to Section II.2.A (*Labor*). Such rates may include labor, maintenance, repairs, other operating expense, insurance, taxes, depreciation using straight line depreciation method, and interest on gross investment less accumulated depreciation not to exceed $\frac{12}{10}$ percent ($\frac{10}{10}$ %) per annum; provided, however, depreciation shall not be charged when the



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.

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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**

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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 individual
16 project are not specifically detailed in the approved AFE or authorization or exceed such amount, charges for such Affiliate
17 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.
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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*).
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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).
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35 **8. DAMAGES AND LOSSES TO JOINT PROPERTY**

36 All costs or expenses necessary for the repair or replacement of Joint Property resulting from damages or losses incurred, except to the
37 extent such damages or losses result from a Party's or Parties' gross negligence or willful misconduct, in which case such Party or Parties
38 shall be solely liable.
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40 The Operator shall furnish the Non-Operator written notice of damages or losses incurred as soon as practicable after a report has been
41 received by the Operator.
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43 **9. LEGAL EXPENSE**

44 Recording fees and costs of handling, settling, or otherwise discharging litigation, claims, and liens incurred in or resulting from
45 operations under the Agreement, or necessary to protect or recover the Joint Property, to the extent permitted under the Agreement. Costs
46 of the Operator's or Affiliate's legal staff or outside attorneys, including fees and expenses, are not chargeable unless approved by the
47 Parties pursuant to Section I.6.A (*General Matters*) or otherwise provided for in the Agreement.
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49 Notwithstanding the foregoing paragraph, costs for procuring abstracts, fees paid to outside attorneys for title examinations (including
50 preliminary, supplemental, shut-in royalty opinions, division order title opinions), and curative work shall be chargeable to the extent
51 permitted as a direct charge in the Agreement.
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53 **10. TAXES AND PERMITS**

54 All taxes and permitting fees of every kind and nature, assessed or levied upon or in connection with the Joint Property, or the production
55 therefrom, and which have been paid by the Operator for the benefit of the Parties, including penalties and interest, except to the extent the
56 penalties and interest result from the Operator's gross negligence or willful misconduct.
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58 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
59 notwithstanding any contrary provisions, the charges to the Parties will be made in accordance with the tax value generated by each Party's
60 working interest.
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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*).

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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.

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10 **11. INSURANCE**

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
14 the jurisdiction governing the Joint Property. ~~In the case of offshore operations in federal waters, the manual rates of the adjacent state~~
15 ~~shall be used for personnel performing work On-site, and such rates shall be adjusted for offshore operations by the U.S.~~
16 ~~Longshoreman's (HSL&H) or Jones Act surcharge, as appropriate.~~

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19 **12. COMMUNICATIONS**

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.

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

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

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41 **14. ABANDONMENT AND RECLAMATION**

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

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45 **15. OTHER EXPENDITURES**

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*).

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52 **III. OVERHEAD**

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.

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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:

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



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

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

I. OVERHEAD—DRILLING AND PRODUCING OPERATIONS

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

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

A. TECHNICAL SERVICES

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

- (Alternative 1 – Direct) shall be charged direct to the Joint Account.
- (Alternative 2 – Overhead) shall be covered by the overhead rates.

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

- (Alternative 1 – All Overhead) shall be covered by the overhead rates.
- (Alternative 2 – All Direct) shall be charged direct to the Joint Account.
- (Alternative 3 – Drilling Direct) shall be charged direct to the Joint Account, only to the extent such Technical Services are directly attributable to drilling, redrilling, deepening, or sidetracking operations, through completion, temporary abandonment, or abandonment if a dry hole. Off-site Technical Services for all other operations, including workover, recompletion, abandonment of producing wells, and the construction or expansion of fixed assets not covered by Section III.2 (*Overhead - Major Construction and Catastrophe*) shall be covered by the overhead rates.

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

B. OVERHEAD—FIXED RATE BASIS

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

- Drilling Well Rate per month \$ 15,383.25 (prorated for less than a full month)
- Producing Well Rate per month \$ 911.60

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

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



(b) Charges for any well undergoing any type of workover, recompletion, and/or abandonment for a period of five (5) or more consecutive work-days shall be made at the Drilling Well Rate. Such charges shall be applied for the period from date operations, with rig or other units used in operations, commence through date of rig or other unit release, except that no charges shall be made during suspension of operations for ~~five (5)~~^{ten (10)} or more consecutive calendar days.

(3) Application of Overhead—Producing Well Rate shall be as follows:

- (a) An active well that is produced, injected into for recovery or disposal, or used to obtain water supply to support operations for any portion of the month shall be considered as a one-well charge for the entire month.
- (b) Each active completion in a multi-completed well shall be considered as a one-well charge provided each completion is considered a separate well by the governing regulatory authority.
- (c) A one-well charge shall be made for the month in which plugging and abandonment operations are completed on any well, 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 or not the well has produced.
- (d) An active gas well shut in because of overproduction or failure of a purchaser, processor, or transporter to take production shall be considered as a one-well charge provided the gas well is directly connected to a permanent sales outlet.
- (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 charge.

(4) The well rates shall be adjusted on the first day of April each year following the effective date of the Agreement; provided, however, if this Accounting Procedure is attached to or otherwise governing the payout accounting under a farmout agreement, the rates shall be adjusted on the first day of April each year following the effective date of such farmout agreement. The adjustment shall be computed by applying the adjustment factor most recently published by COPAS. The adjusted rates shall be the initial or amended rates agreed to by the Parties increased or decreased by the adjustment factor described herein, for each year from the effective date of such rates, in accordance with COPAS MFI-47 (“Adjustment of Overhead Rates”).

~~C. OVERHEAD—PERCENTAGE BASIS~~

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

- ~~(a) Development Rate _____ percent (_____ %) of the cost of development of the Joint Property, exclusive of costs provided under Section II.9 (Legal Expense) and all Material salvage credits.~~
- ~~(b) Operating Rate _____ percent (_____ %) of the cost of operating the Joint Property, exclusive of costs provided under Sections II.1 (Rentals and Royalties) and II.9 (Legal Expense); all Material salvage credits; the value of substances purchased for enhanced recovery; all property and ad valorem taxes, and any other taxes and assessments that are levied, assessed, and paid upon the mineral interest in and to the Joint Property.~~

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

~~(a) The Development Rate shall be applied to all costs in connection with:~~

- ~~[i] drilling, redrilling, sidetracking, or deepening of a well~~
- ~~[ii] a well undergoing plugback or workover operations for a period of five (5) or more consecutive work days~~
- ~~[iii] preliminary expenditures necessary in preparation for drilling~~
- ~~[iv] expenditures incurred in abandoning when the well is not completed as a producer~~
- ~~[v] construction or installation of fixed assets, the expansion of fixed assets and any other project clearly discernible as a fixed asset, other than Major Construction or Catastrophe as defined in Section III.2 (Overhead—Major Construction and Catastrophe).~~

~~(b) The Operating Rate shall be applied to all other costs in connection with Joint Operations, except those subject to Section III.2 (Overhead—Major Construction and Catastrophe).~~

2. OVERHEAD—MAJOR CONSTRUCTION AND CATASTROPHE

To compensate the Operator for overhead costs incurred in connection with a Major Construction project or Catastrophe, the Operator shall either negotiate a rate prior to the beginning of the project, or shall charge the Joint Account for overhead based on the following rates for any Major Construction project in excess of the Operator's expenditure limit under the Agreement, or for any Catastrophe regardless of the amount. If the Agreement to which this Accounting Procedure is attached does not contain an expenditure limit, Major Construction Overhead shall be assessed for any single Major Construction project costing in excess of \$100,000 gross.



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

7
8
9 A. If the Operator absorbs the engineering, design and drafting costs related to the project:

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

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

- 17
18 | (1) 3 % of total costs if such costs are less than \$100,000; plus
19 |
20 | (2) 2 % of total costs in excess of \$100,000 but less than \$1,000,000; plus
21 |
22 | (3) 1 % of total costs in excess of \$1,000,000.

23
24 Total cost shall mean the gross cost of any one project. For the purpose of this paragraph, the component parts of a single Major
25 Construction project shall not be treated separately, and the cost of drilling and workover wells and purchasing and installing pumping
26 units and downhole artificial lift equipment shall be excluded. For Catastrophes, the rates shall be applied to all costs associated with each
27 single occurrence or event.

28
29 On each project, the Operator shall advise the Non-Operator(s) in advance which of the above options shall apply.

30
31 For the purposes of calculating Catastrophe Overhead, the cost of drilling relief wells, substitute wells, or conducting other well operations
32 directly resulting from the catastrophic event shall be included. Expenditures to which these rates apply shall not be reduced by salvage or
33 insurance recoveries. Expenditures that qualify for Major Construction or Catastrophe Overhead shall not qualify for overhead under any
34 other overhead provisions.

35
36 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
37 (*Affiliates*), the provisions of this Section III.2 shall govern.

39 3. AMENDMENT OF OVERHEAD RATES

40
41 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
42 insufficient or excessive, in accordance with the provisions of Section I.6.B (*Amendments*).

45 IV. MATERIAL PURCHASES, TRANSFERS, AND DISPOSITIONS

46
47 The Operator is responsible for Joint Account Material and shall make proper and timely charges and credits for direct purchases, transfers, and
48 dispositions. The Operator shall provide all Material for use in the conduct of Joint Operations; however, Material may be supplied by the Non-
49 Operators, at the Operator's option. Material furnished by any Party shall be furnished without any express or implied warranties as to quality,
50 fitness for use, or any other matter.

52 1. DIRECT PURCHASES

53
54 Direct purchases shall be charged to the Joint Account at the price paid by the Operator after deduction of all discounts received. The
55 Operator shall make good faith efforts to take discounts offered by suppliers, but shall not be liable for failure to take discounts except to
56 the extent such failure was the result of the Operator's gross negligence or willful misconduct. A direct purchase shall be deemed to occur
57 when an agreement is made between an Operator and a third party for the acquisition of Material for a specific well site or location.
58 Material provided by the Operator under "vendor stocking programs," where the initial use is for a Joint Property and title of the Material
59 does not pass from the manufacturer, distributor, or agent until usage, is considered a direct purchase. If Material is found to be
60 defective or is returned to the manufacturer, distributor, or agent for any other reason, credit shall be passed to the Joint Account within
61 sixty (60) days after the Operator has received adjustment from the manufacturer, distributor, or agent.



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2. TRANSFERS

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

A. PRICING

The value of Material transferred to/from the Joint Property should generally reflect the market value on the date of physical transfer. Regardless of the pricing method used, the Operator shall make available to the Non-Operators sufficient documentation to verify the Material valuation. When higher than specification grade or size tubulars are used in the conduct of Joint Operations, the Operator shall charge the Joint Account at the equivalent price for well design specification tubulars, unless such higher specification grade or sized tubulars are approved by the Parties pursuant to Section 1.6.A (*General Matters*). Transfers of new Material will be priced using one of the following pricing methods; provided, however, the Operator shall use consistent pricing methods, and not alternate between methods for the purpose of choosing the method most favorable to the Operator for a specific transfer:

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

B. FREIGHT

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

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

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

C. TAXES

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



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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 1.6.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 1.6.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").



1 **3. DISPOSITION OF SURPLUS**

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

4
5 Dispositions for the purpose of this procedure are considered to be the relinquishment of title of the Material from the Joint Property to
6 either a third party, a Non-Operator, or to the Operator. To avoid the accumulation of surplus Material, the Operator should make good
7 faith efforts to dispose of surplus within twelve (12) months through buy/sale agreements, trade, sale to a third party, division in kind, or
8 other dispositions as agreed to by the Parties.

9
10 Disposal of surplus Materials shall be made in accordance with the terms of the Agreement to which this Accounting Procedure is
11 attached. If the Agreement contains no provisions governing disposal of surplus Material, the following terms shall apply:

- 12
13 • The Operator may, through a sale to an unrelated third party or entity, dispose of surplus Material having a gross sale value that
14 is less than or equal to the Operator's expenditure limit as set forth in the Agreement to which this Accounting Procedure is
15 attached without the prior approval of the Parties owning such Material.
- 16
17 • If the gross sale value exceeds the Agreement expenditure limit, the disposal must be agreed to by the Parties owning such
18 Material.
- 19
20 • Operator may purchase surplus Condition "A" or "B" Material without approval of the Parties owning such Material, based on
21 the pricing methods set forth in Section IV.2 (*Transfers*).
- 22
23 • Operator may purchase Condition "C" Material without prior approval of the Parties owning such Material if the value of the
24 Materials, based on the pricing methods set forth in Section IV.2 (*Transfers*), is less than or equal to the Operator's expenditure
25 limitation set forth in the Agreement. The Operator shall provide documentation supporting the classification of the Material as
26 Condition C.
- 27
28 • Operator may dispose of Condition "D" or "E" Material under procedures normally utilized by Operator without prior approval
29 of the Parties owning such Material.
- 30

31 **4. SPECIAL PRICING PROVISIONS**

32 **A. PREMIUM PRICING**

33
34 Whenever Material is available only at inflated prices due to national emergencies, strikes, government imposed foreign trade
35 restrictions, or other unusual causes over which the Operator has no control, for direct purchase the Operator may charge the Joint
36 Account for the required Material at the Operator's actual cost incurred in providing such Material, making it suitable for use, and
37 moving it to the Joint Property. Material transferred or disposed of during premium pricing situations shall be valued in accordance
38 with Section IV.2 (*Transfers*) or Section IV.3 (*Disposition of Surplus*), as applicable.

39
40 **B. SHOP-MADE ITEMS**

41
42 Items fabricated by the Operator's employees, or by contract laborers under the direction of the Operator, shall be priced using the
43 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
44 scrap or junk account, the Material shall be priced at either twenty-five percent (25%) of the current price as determined in Section
45 IV.2.A (*Pricing*) or scrap value, whichever is higher. In no event shall the amount charged exceed the value of the item
46 commensurate with its use.

47
48 **C. MILL REJECTS**

49
50 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
51 Section IV.2 (*Transfers*). Line pipe converted to casing or tubing with casing or tubing couplings attached shall be priced as K-55/J-
52 55 casing or tubing at the nearest size and weight.

53
54 **V. INVENTORIES OF CONTROLLABLE MATERIAL**

55
56 The Operator shall maintain records of Controllable Material charged to the Joint Account, with sufficient detail to perform physical inventories.

57
58 Adjustments to the Joint Account by the Operator resulting from a physical inventory of Controllable Material shall be made within twelve (12)
59 months following the taking of the inventory or receipt of Non-Operator inventory report. Charges and credits for overages or shortages will be
60 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
61 physical inventory unless the inventorying Parties can provide sufficient evidence another Material condition applies.



1 **1. DIRECTED INVENTORIES**

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

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

- 13 A. A per diem rate for each inventory person, representative of actual salaries, wages, and payroll burdens and benefits of the personnel
14 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
15 be applied to a reasonable number of days for pre-inventory work and report preparation.
16
- 17 B. Actual transportation costs and Personal Expenses for the inventory team.
18
- 19 C. Reasonable charges for report preparation and distribution to the Non-Operators.
20

21 **2. NON-DIRECTED INVENTORIES**

22 **A. OPERATOR INVENTORIES**

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

26 **B. NON-OPERATOR INVENTORIES**

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

32 **C. SPECIAL INVENTORIES**

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

Attached to and made a part of that certain Operating Agreement for the Cadiz E Unit A, dated September 1, 2015, by and between Hess Ohio Developments, LLC, Operator and _____.

Insurance

Operator shall at all times while conducting operations hereunder carry insurance to protect and save the parties hereto harmless as follows:

(a) Workman's Compensation Insurance in accordance with the laws of the state in which the operations are to be conducted, and Employer's Liability Insurance with limits not less than \$1,000,000.00 for any one person, and not less than \$1,000,000.00 for any one accident.

(b) General Liability Insurance with limits of not less than \$5,000,000.00 for any one person, and \$5,000,000.00 for any one accident; and Property Damage Liability Insurance with limits of not less than 5,000,000.00 per accident. \$5,000,000.00 combined single limit.

(c) Automobile Public Liability Insurance with limits of not less than \$1,000,000.00 for any one person, and not less than \$1,000,000.00 for any one accident; and Automobile Property Damage Insurance with limits of not less than \$1,000,000.00 to cover all automotive equipment. \$1,000,000.00 combined single limit.

(d) Excess Liability Umbrella Form (Bodily injuries and Property Damage) with limits of \$5,000,000.00 each occurrence.

(e) Well Control including Blowout and Cratering Hazard Property Damage, Pollution and Saline Coverage, Underground Resources and Equipment Hazard with limits of \$10,000,000.00 each occurrence.

Operator shall require all other contractors or subcontractors conducting operations hereunder to carry insurance of such types and in such amounts as Operator deems adequate to protect the parties hereto. No liability shall attach to Operator in the exercise of its good-faith judgment as to the types and amounts of insurance, if any, to be required of such other contractors.

Operator shall at all times comply with the laws of the state in which the operations are to be conducted covering Workman's Compensation Insurance. Any other insurance desired by a party hereto shall be carried by such party at its own cost and expense.

Non-Operators shall be named as additional insured on the liability policies above, but only with respect to the performance of work under the Joint Operating Agreement and then only as to such Non-Operators' working interest.

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 ownership as determined by this agreement.

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

1 NOTE: Instructions For Use of Gas Balancing
2 Agreement MUST be reviewed before
3 finalizing this document.
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6

7 **EXHIBIT "E"**
8 **GAS BALANCING AGREEMENT ("AGREEMENT")**
9 **ATTACHED TO AND MADE PART OF THAT CERTAIN**

10 **OPERATING AGREEMENT DATED** September 1, 2015
11 **BY AND BETWEEN** Hess Ohio Developments, LLC
12 **Operator AND** _____ **("OPERATING**
13 **RELATING TO THE** Cadiz E Unit A **AGREEMENT") AREA,**
14 **Harrison** **COUNTY/PARISH, STATE OF** _____
15 **Ohio**

16 **1. DEFINITIONS**

17 The following definitions shall apply to this Agreement:

18 1.01 "Arm's Length Agreement" shall mean any gas sales agreement with an unaffiliated purchaser or any gas
19 sales agreement with an affiliated purchaser where the sales price and delivery conditions under such agreement
20 are representative of prices and delivery conditions existing under other similar agreements in the area
21 between unaffiliated parties at the same time for natural gas of comparable quality and quantity.

22 1.02 "Balancing Area" shall mean (select one):

- 23 each well subject to the Operating Agreement that produces Gas or is allocated a share of Gas production. If
24 a single well is completed in two or more producing intervals, each producing interval from which the Gas
25 production is not commingled in the wellbore shall be considered a separate well.
26 all of the acreage and depths subject to the Operating Agreement.
27 _____
28 _____
29 _____
30 _____

31 1.03 "Full Share of Current Production" shall mean the Percentage Interest of each Party in the Gas actually produced
32 from the Balancing Area during each month.

33 1.04 "Gas" shall mean all hydrocarbons produced or producible from the Balancing Area, whether from a well
34 classified an oil well or gas well by the regulatory agency having jurisdiction in such matters, which are or may be
35 made available for sale or separate disposition by the Parties, excluding oil, condensate and other liquids
36 recovered by field equipment operated for the joint account. "Gas" does not include gas used in joint operations,
37 such as for fuel, recycling or reinjection, or which is vented or lost prior to its sale or delivery from the Balancing Area.

38 1.05 "Makeup Gas" shall mean any Gas taken by an Underproduced Party from the Balancing Area in excess of its Full
39 Share of Current Production, whether pursuant to Section 3.3 or Section 4.1 hereof.

40 1.06 "Mcf" shall mean one thousand cubic feet. A cubic foot of Gas shall mean the volume of gas contained in one
41 cubicfoot of space at a standard pressure base and at a standard temperature base.

42 1.07 "MMBtu" shall mean one million British Thermal Units. A British Thermal Unit shall mean the quantity of heat
43 required to raise one pound avoirdupois of pure water from 58.5 degrees Fahrenheit to 59.5 degrees Fahrenheit at a
44 constant pressure of 14.73 pounds per square inch absolute.

45 1.08 "Operator" shall mean the individual or entity designated under the terms of the Operating Agreement or, in
46 the event this Agreement is not employed in connection with an operating agreement, the individual or
47 entity designated as the operator of the well(s) located in the Balancing Area.

48 1.09 "Overproduced Party" shall mean any Party having taken a greater quantity of Gas from the Balancing Area than
49 the Percentage interest of such Party in the cumulative quantity of all Gas produced from the Balancing Area.

50 1.10 "Overproduction" shall mean the cumulative quantity of Gas taken by a Party in excess of its Percentage Interest
51 in the cumulative quantity of all Gas produced from the Balancing Area.

52 1.11 "Party" shall mean those individuals or entities subject to this Agreement, and their respective heirs,
53 successors, executors and assigns.

54 1.12 "Percentage Interest" shall mean the percentage or decimal interest of each Party in the Gas produced from
55 the Balancing Area pursuant to the Operating Agreement covering the Balancing Area.

56 1.13 "Royalty" shall mean payments on production of Gas from the Balancing Area to all owners of royalties,
57 overriding royalties, production payments or similar interests.

58 1.14 "Underproduced Party" shall mean any Party having taken a lesser quantity of Gas from the Balancing Area
59 than the Percentage Interest of such Party in the cumulative quantity of all Gas produced from the Balancing Area.

60 1.15 "Underproduction" shall mean the deficiency between the cumulative quantity of Gas taken by a Party and its
61 Percentage Interest in the cumulative quantity of all Gas produced from the Balancing Area. 1.16 (Optional) "Winter Period" shall mean the

62 month(s) of November and December in one _____
63 calendar year and the month(s) of January, February and March in the succeeding calendar year.

64 **2. BALANCING AREA**

65 2.1 If this Agreement covers more than one Balancing Area, it shall be applied as if each Balancing Area were covered
66 by separate but identical agreements. All balancing hereunder shall be on the basis of Gas taken from the Balancing Area
67 measured in (Alternative 1) Mcfs or (Alternative 2) MMBtus.

68 2.2 In the event that all or part of the Gas deliverable from a Balancing Area is or becomes subject to one or
69 more maximum lawful prices, any Gas not subject to price controls shall be considered as produced from a single
70 Balancing Area and Gas subject to each maximum lawful price category shall be considered produced from a separate Balancing Area.

71 **3. RIGHT OF PARTIES TO TAKE GAS**

72 3.1 Each Party desiring to take Gas will notify the Operator, or cause the Operator to be notified, of the
73 ~~nomination~~, the name of the transporting pipeline and the pipeline contract number (if available) and meter station
74 relating to such delivery, sufficiently in advance for the Operator, acting with reasonable diligence, to meet all nomination

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1 requirements. Operator is authorized to deliver the volumes so nominated and confirmed (if confirmation is required) to
2 the transporting pipeline in accordance with the terms of this Agreement.

3 3.2 Each Party shall make a reasonable, good faith effort to take its Full Share of Current Production each month, to
4 the extent that such production is required to maintain leases in effect, to protect the producing capacity of a well or reservoir,
5 to preserve correlative rights, or to maintain oil production.

6 3.3 When a Party fails for any reason to take its Full Share of Current Production (as such Share may be reduced by
7 the right of the other Parties to make up for Underproduction as provided herein), the other Parties shall be entitled to take
8 any Gas which such Party fails to take. To the extent practicable, such Gas shall be made available initially to each
9 Underproduced Party in the proportion that its Percentage Interest in the Balancing Area bears to the total Percentage
10 Interests of all Underproduced Parties desiring to take such Gas. If all such Gas is not taken by the Underproduced
11 Parties, the portion not taken shall then be made available to the other Parties in the proportion that their respective
12 Percentage Interests in the Balancing Area bear to the total Percentage Interests of such Parties.

13 3.4 All Gas taken by a Party in accordance with the provisions of this Agreement, regardless of whether such Party is
14 underproduced or overproduced, shall be regarded as Gas taken for its own account with title thereto being in such
15 taking Party.

16 3.5 Notwithstanding the provisions of Section 3.3 hereof, no Overproduced Party shall be entitled in any month to take
17 any Gas in excess of three hundred percent (300%) of its Percentage Interest of the Balancing Area's then-current
18 Maximum Monthly Availability; provided, however, that this limitation shall not apply to the extent that it would preclude
19 production that is required to maintain leases in effect, to protect the producing capacity of a well or reservoir, to preserve
20 correlative rights, or to maintain oil production. "Maximum Monthly Availability" shall mean the maximum average monthly
21 rate of production at which Gas can be delivered from the Balancing Area, as determined by the Operator, considering the
22 maximum efficient well rate for each well within the Balancing Area, the maximum allowable(s) set by the appropriate regulatory
23 agency, mode of operation, production facility capabilities and pipeline pressures.

24 3.6 In the event that a Party fails to make arrangements to take its Full Share of Current Production required to
25 be produced to maintain leases in effect, to protect the producing capacity of a well or reservoir, to preserve correlative
26 rights, or to maintain oil production, the Operator may sell any part of such Party's Full Share of Current Production that
27 such Party fails to take for the account of such Party and tender to such Party, on a current basis, the full proceeds of
28 the sale, less any reasonable marketing, compression, treating, gathering or transportation costs incurred directly in
29 connection with the sale of such Full Share of Current Production. In making the sale contemplated herein, the Operator
30 shall be obligated only to obtain such price and conditions for the sale as are reasonable under the circumstances and shall
31 not be obligated to share any of its markets. Any such sale by Operator under the terms hereof shall be only for such
32 reasonable periods of time as are consistent with the minimum needs of the industry under the particular circumstances, but
33 in no event for a period in excess of one year. Notwithstanding the provisions of Article 3.4 hereof, Gas sold by
34 Operator for a Party under the provisions hereof shall be deemed to be Gas taken for the account of such Party.

35 **4. IN-KIND BALANCING**

36 4.1 Effective the first day of any calendar month following at least Thirty (30) days' prior written notice to the Operator, any
37 Underproduced Party may begin taking, in addition to its Full Share of Current Production and any Makeup Gas
38 taken pursuant to Section 3.3 of this Agreement, a share of current production determined by multiplying Twenty-Five percent
39 (25 %) of the Full Shares of Current Production of all Overproduced Parties by a fraction, the numerator of which is the Percentage
40 Interest of such Underproduced Party and the denominator of which is the total of the Percentage Interests of all
41 Underproduced Parties desiring to take Makeup Gas. In no event will an Overproduced Party be required to provide more than
42 Twenty-Five percent (25 %) of its Full Share of Current Production for Makeup Gas. The Operator will promptly notify all Overproduced
43 Parties of the election of an Underproduced Party to begin taking Makeup Gas.

44
45 4.2 (Optional - Seasonal Limitation on Makeup - Option 1) Notwithstanding the provisions of Section 4.1, the average
46 monthly amount of Makeup Gas taken by an Underproduced Party during the Winter Period pursuant to Section 4.1 shall
47 not exceed the average monthly amount of Makeup Gas taken by such Underproduced Party during the
48 _____ (_____) months immediately preceding the Winter Period.

49 4.2 (Optional - Seasonal Limitation on Makeup - Option 2) Notwithstanding the provisions of Section 4.1, no
50 Overproduced Party will be required to provide more than fifteen percent (15 %) of its Full Share of Current Production for Makeup Gas during the
51 Winter Period.

52 4.3 (Optional) Notwithstanding any other provision of this Agreement, at such time and for so long as Operator, or
53 (insofar as concerns production by the Operator) any Underproduced Party, determines in good faith that an
54 Overproduced Party has produced all of its share of the ultimately recoverable reserves in the Balancing Area, such
55 Overproduced Party may be required to make available for Makeup Gas, upon the demand of the Operator or any
56 ~~Underproduced Party~~ up to _____ percent (100 %) of such Overproduced Party's Full Share of Current Production.

57 **5. STATEMENT OF GAS BALANCES**

58 5.1 The Operator will maintain appropriate accounting on a monthly and cumulative basis of the volumes of Gas that
59 each Party is entitled to receive and the volumes of Gas actually taken or sold for each Party's account. Within forty-five
60 (45) days after the month of production, the Operator will furnish a statement for such month showing (1) each Party's
61 Full Share of Current Production, (2) the total volume of Gas actually taken or sold for each Party's account, (3) the
62 difference between the volume taken by each Party and that Party's Full Share of Current Production, (4) the
63 Overproduction or Underproduction of each Party, and (5) other data as recommended by the provisions of the
64 Council of Petroleum Accountants Societies Bulletin No.24, as amended or supplemented hereafter. Each Party taking Gas
65 will promptly provide to the Operator any data required by the Operator for preparation of the statements required hereunder.

66 5.2 If any Party fails to provide the data required herein for four (4) consecutive production months, the Operator,
67 or where the Operator has failed to provide data, another Party, may audit the production and Gas sales and
68 transportation volumes of the non-reporting Party to provide the required data. Such audit shall be conducted only after
69 reasonable notice and during normal business hours in the office of the Party whose records are being audited. All costs
70 associated with such audit will be charged to the account of the Party failing to provide the required data.

71 **6. PAYMENTS ON PRODUCTION**

72 6.1 Each Party taking Gas shall pay or cause to be paid all production and severance taxes due on all volumes of
73 Gas actually taken by such Party.

74 6.2 (Alternative 1 - Entitlements) Each Party shall pay or cause to be paid all Royalty due with respect to Royalty

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owners to whom it is accountable as if such Party were taking its Full Share of Current Production, and only its Full Share of Current Production.

6.2.1 (Optional - For use only with Section 6.2 - Alternative I - Entitlement) Upon written request of a Party taking less than its Full Share of Current Production in a given month ("Current Underproducer"), any Party taking more than its Full Share of Current Production in such month ("Current Overproducer") will pay to such Current Underproducer an amount each month equal to the Royalty percentage of the proceeds received by the Current Overproducer for that portion of the Current Underproducer's Full Share of Current Production taken by the Current Overproducer; provided, however, that such payment will not exceed the Royalty percentage that is common to all Royalty burdens in the Balancing Area. Payments made pursuant to this Section 6.2.1 will be deemed payments to the Underproduced Party's Royalty owners for purposes of Section 7.5.

6.2 (Alternative 2 - Sales) Each Party shall pay or cause to be paid Royalty due with respect to Royalty owners to whom it is accountable based on the volume of Gas actually taken for its account.

6.3 In the event that any governmental authority requires that Royalty payments be made on any other basis than that provided for in this Section 6, each Party agrees to make such Royalty payments accordingly, commencing on the effective date required by such governmental authority, and the method provided for herein shall be thereby superseded.

7. CASH SETTLEMENTS

7.1 Upon the earlier of the plugging and abandonment of the last producing interval in the Balancing Area, the termination of the Operating Agreement or any pooling or unit agreement covering the Balancing Area, or at any time no Gas is taken from the Balancing Area for a period of twelve (12) consecutive months, any Party may give written notice calling for cash settlement of the Gas production imbalances among the Parties. Such notice shall be given to all Parties in the Balancing Area.

7.2 Within sixty (60) days after the notice calling for cash settlement under Section 7.1, the Operator will distribute to each Party a Final Gas Settlement Statement detailing the quantity of Overproduction owed by each Overproduced Party to each Underproduced Party and identifying the month to which such Overproduction is attributed, pursuant to the methodology set out in Section 7.4.

7.3 (Alternative 1 - Direct Party-to-Party Settlement) Within sixty (60) days after receipt of the Final Gas Settlement Statement, each Overproduced Party will pay to each Underproduced Party entitled to settlement the appropriate cash settlement, accompanied by appropriate accounting detail. At the time of payment, the Overproduced Party will notify the Operator of the Gas imbalance settled by the Overproduced Party's payment.

7.3 (Alternative 2 - Settlement Through Operator) Within sixty (60) days after receipt of the Final Gas Settlement Statement, each Overproduced Party will send its cash settlement, accompanied by appropriate accounting detail, to the Operator. The Operator will distribute the monies so received, along with any settlement owed by the Operator as an Overproduced Party, to each Underproduced Party to whom settlement is due within ninety (90) days after issuance of the Final Gas Settlement Statement. In the event that any Overproduced Party fails to pay any settlement due hereunder, the Operator may turn over responsibility for the collection of such settlement to the Party to whom it is owed, and the Operator will have no further responsibility with regard to such settlement.

7.3.1 (Optional - For use only with Section 7.3, Alternative 2 - Settlement Through Operator) Any Party shall have the right at any time upon thirty (30) days' prior written notice to all other Parties to demand that any settlements due such Party for Overproduction be paid directly to such Party by the Overproduced Party, rather than being paid through the Operator. In the event that an Overproduced Party pays the Operator any sums due to an Underproduced Party at any time after thirty (30) days following the receipt of the notice provided for herein, the Overproduced Party will continue to be liable to such Underproduced Party for any sums so paid, until payment is actually received by the Underproduced Party.

7.4 (Alternative 1 - Historical Sales Basis) The amount of the cash settlement will be based on the proceeds received by the Overproduced Party under an Arm's Length Agreement for the Gas taken from time to time by the Overproduced Party in excess of the Overproduced Party's Full Share of Current Production. Any Makeup Gas taken by the Underproduced Party prior to monetary settlement hereunder will be applied to offset Overproduction chronologically in the order of accrual.

7.4 (Alternative 2 - Most Recent Sales Basis) The amount of the cash settlement will be based on the proceeds received by the Overproduced Party under an Arm's Length Agreement for the volume of Gas that constituted Overproduction by the Overproduced Party from the Balancing Area. For the purpose of implementing the cash settlement provision of the Section 7, an Overproduced Party will not be considered to have produced any of an Underproduced Party's share of Gas until the Overproduced Party has produced cumulatively all of its Percentage Interest share of the Gas ultimately produced from the Balancing Area.

7.5 The values used for calculating the cash settlement under Section 7.4 will include all proceeds received for the sale of the Gas by the Overproduced Party calculated at the Balancing Area, after deducting any production or severance taxes paid and any Royalty actually 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, as well as any reasonable marketing, compression, treating, gathering or transportation costs incurred directly in connection with the sale of the Overproduction.

7.5.1 (Optional - For Valuation Under Percentage of Proceeds Contracts) For Overproduction sold under a gas purchase contract providing for payment based on a percentage of the proceeds obtained by the purchaser upon resale of residue gas and liquid hydrocarbons extracted at a gas processing plant, the values used for calculating cash settlement will include proceeds received by the Overproduced Party for both the liquid hydrocarbons and the residue gas attributable to the Overproduction.

7.5.2 (Optional - Valuation for Processed Gas - Option 1) For Overproduction processed for the account of the Overproduced Party at a gas processing plant for the extraction of liquid hydrocarbons, the full quantity of the Overproduction will be valued for purposes of cash settlement at the prices received by the Overproduced Party for the sale of the residue gas attributable to the Overproduction without regard to proceeds attributable to liquid hydrocarbons which may have been extracted from the Overproduction.

7.5.2 (Optional - Valuation for Processed Gas - Option 2) For Overproduction processed for the account of the Overproduced Party at a gas processing plant for the extraction of liquid hydrocarbons, the values used for calculating cash settlement will include the proceeds received by the Overproduced Party for the sale of the liquid hydrocarbons extracted from the Overproduction, less the actual reasonable costs incurred by the Overproduced Party to process the Overproduction and to transport, fractionate and handle the liquid hydrocarbons extracted therefrom prior to sale.

7.6 To the extent the Overproduced Party did not sell all Overproduction under an Arm's Length Agreement, the cash settlement will be based on the weighted average price received by the Overproduced Party for any gas sold from the

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1 Balancing Area under Arm's Length Agreements during the months to which such Overproduction is attributed. In the
2 event that no sales under Arm's Length Agreements were made during any such month, the cash settlement for such month
3 will be based on the spot sales prices published for the applicable geographic area during such month in a mutually
4 acceptable pricing bulletin.

5 ~~7.7 Interest compounded at the rate of Zero percent (0 %) per annum or the maximum lawful
6 rate of interest applicable to the Balancing Area, whichever is less, will accrue for all amounts due under Section 7.1 beginning
7 the first day following the date payment is due pursuant to Section 7.3. Such interest shall be borne by the Operator or any
8 Overproduced Party in the proportion that their respective delays beyond the deadlines set out in Sections 7.2 and 7.3
9 contributed to the accrual of the interest.~~

10 7.8 In lieu of the cash settlement required by Section 7.3, an Overproduced Party may deliver to the Underproduced
11 Party an offer to settle its Overproduction in-kind and at such rates, quantities, times and sources as may be agreed upon
12 by the Underproduced Party. If the Parties are unable to agree upon the manner in which such in-kind settlement gas
13 will be furnished within sixty (60) days after the Overproduced Party's offer to settle in kind, which period may be
14 extended by agreement of said Parties, the Overproduced Party shall make a cash settlement as provided in Section 7.3. The
15 making of an in-kind settlement offer under this Section 7.8 will not delay the accrual of interest on the cash settlement
16 should the Parties fail to reach agreement on an in-kind settlement.

17 7.9 (Optional - For Balancing Areas Subject to Federal Price Regulation) That portion of any monies collected by an
18 Overproduced Party for Overproduction which is subject to refund by orders of the Federal Energy Regulatory Commission
19 or other governmental authority may be withheld by the Overproduced Party until such prices are fully approved by
20 such governmental authority, unless the Underproduced Party furnishes a corporate undertaking, acceptable to the
21 Overproduced Party, agreeing to hold the Overproduced Party harmless from financial loss due to refund orders by
22 such governmental authority.

23 7.10 (Optional - Interim Cash Balancing) At any time during the term of this Agreement, any Overproduced Party may,
24 in its sole discretion, make cash settlement(s) with the Underproduced Parties covering all or part of its outstanding Gas
25 imbalance, provided that such settlements must be made with all Underproduced Parties proportionately based on the
26 relative imbalances of the Underproduced Parties, and provided further that such settlements may not be made more often
27 than once every twenty-four (24) months. Such settlements will be calculated in the same manner provided above for
28 final cash settlements. The Overproduced Party will provide Operator a detailed accounting of any such cash settlement
29 within thirty (30) days after the settlement is made.

30 **8. TESTING**

31 Notwithstanding any provision of this Agreement to the contrary, any Party shall have the right, from time to time, to
32 produce and take up to one hundred percent (100%) of a well's entire Gas stream to meet the reasonable deliverability
33 test(s) required by such Party's Gas purchaser, and the right to take any Makeup Gas shall be subordinate to the right of any
34 Party to conduct such tests; provided, however, that such tests shall be conducted in accordance with prudent operating
35 practices and shall be given (30) days' prior written notice to the Operator and shall last no longer than
36 Forty-eight (48) hours.

37 **9. OPERATING COSTS**

38 Nothing in this Agreement shall change or affect any Party's obligation to pay its proportionate share of all costs
39 liabilities incurred in operations on or in connection with the Balancing Area, as its share thereof is set forth in the
40 Operating Agreement, irrespective of whether any Party is at any time selling and using Gas or whether such sales or
41 use are in proportion to its Percentage Interest in the Balancing Area.

42 **10. LIQUIDS**

43 The Parties shall share proportionately in and own all liquid hydrocarbons recovered with Gas by field equipment
44 for the ~~joint~~ account in accordance with their Percentage Interests in the Balancing Area.

45 **11. AUDIT RIGHTS**

46 Notwithstanding any provision in this Agreement or any other agreement between the Parties hereto, and
47 notwithstanding any termination or cancellation of this Agreement, for a period of two (2) years from the end of the
48 calendar year in which any information to be furnished under Section 5 or 7 hereof is supplied, any Party shall have the
49 right to audit the records of any other Party regarding quantity, including but not limited to information
50 regarding Btu-content. Any Underproduced Party shall have the right for a period of two (2) years from the end of the
51 calendar year in which any cash settlement is received pursuant to Section 7 to audit the records of any Overproduced Party
52 as to all matters concerning values, including but not limited to information regarding prices and disposition of Gas from
53 the Balancing Area. Any such audit shall be conducted at the expense of the Party or Parties desiring such audit, and
54 shall be conducted, after reasonable notice, during normal business hours in the office of the Party whose records are being
55 audited. Each Party hereto agrees to maintain records as to the volumes and prices of Gas sold each month and the
56 volumes of Gas used in its own operations, along with the Royalty paid on any such Gas used by a Party in its own
57 operations. The audit rights provided for in this Section 11 shall be in addition to those provided for in Section 5.2 of this Agreement.

58 **12. MISCELLANEOUS**

59 12.1 As between the Parties, in the event of any conflict between the provisions of this Agreement and the provisions
60 of any ~~gas~~ sales contract, or in the event of any conflict between the provisions of this Agreement and the provisions of
61 the Operating Agreement, the provisions of this Agreement shall govern.

62 12.2 Each Party agrees to defend, indemnify and hold harmless all other Parties from and against any and all liability
63 for any claims, which may be asserted by any third party which now or hereafter stands in a contractual relationship with
64 such indemnifying Party and which arise out of the operation of this Agreement or any activities of such indemnifying Party
65 under the provisions of this Agreement, and does further agree to save the other Parties harmless from all judgments or
66 damages sustained and costs incurred in connection therewith.

67 12.3 Except as otherwise provided in this Agreement, Operator is authorized to administer the provisions of
68 this Agreement, but shall have no liability to the other Parties for losses sustained or liability incurred which arise out of or
69 in connection with the performance of Operator's duties hereunder, except such as may result from Operator's gross
70 negligence or willful misconduct. Operator shall not be liable to any Underproduced Party for the failure of any
71 Overproduced Party, (other than Operator) to pay any amounts owed pursuant to the terms hereof.

72 12.4 This Agreement shall remain in full force and effect for as long as the Operating Agreement shall remain in force
73 and effect as to the Balancing Area, and thereafter until the Gas accounts between the Parties are settled in full, and shall
74 inure to the benefit of and be binding upon the Parties hereto, and their respective heirs, successors, legal
representatives

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1 and assigns, if any. The Parties hereto agree to give notice of the existence of this Agreement to any successor in interest
2 of any such Party and to provide that any such successor shall be bound by this Agreement, and shall further make any
3 transfer of any interest subject to the Operating Agreement, or any part thereof, also subject to the terms of this Agreement.

4 12.5 Unless the context clearly indicates otherwise, words used in the singular include the plural, the plural includes
5 the singular, and the neuter gender includes the masculine and the feminine.

6 12.6 In the event that any "Optional" provision of this Agreement is not adopted by the Parties to this Agreement by
7 a typed, printed or handwritten indication, such provision shall not form a part of this Agreement, and no inference shall
8 be made concerning the intent of the Parties in such event. In the event that any "Alternative" provision of this Agreement
9 is not so adopted by the Parties, Alternative 1 in each such instance shall be deemed to have been adopted by the Parties as
10 a result of any such omission. In those cases where it is indicated that an Optional provision may be used only if a specific
11 Alternative is selected: (i) an election to include said Optional provision shall not be effective unless the Alternative in question is
12 selected; and (ii) the election to include said Optional provision must be expressly indicated hereon, it being understood
13 that the selection of an Alternative either expressly or by default as provided herein shall not, in and of itself, constitute an
14 election to include an associated Optional provision.

15 12.7 This Agreement shall bind the Parties in accordance with the provisions hereof, and nothing herein shall be
16 construed or interpreted as creating any rights in any person or entity not a signatory hereto, or as being a stipulation in
17 favor of any such person or entity.

18 12.8 If contemporaneously with this Agreement becoming effective, or thereafter, any Party requests that any other
19 Party execute an appropriate memorandum or notice of this Agreement in order to give third parties notice of record of
20 same and submits same for execution in recordable form, such memorandum or notice shall be duly executed by the Party to
21 which such request is made and delivered promptly thereafter to the Party making the request. Upon receipt, the Party making
22 the request shall cause the memorandum or notice to be duly recorded in the appropriate real property or other records
23 affecting the Balancing Area.

24 12.9 In the event Internal Revenue Service regulations require a uniform method of computing taxable income by
25 all Parties, each Party agrees to compute and report income to the Internal Revenue Service (select one) as if such Party
26 were taking its Full Share of Current Production during each relevant tax period in accordance with such regulations, insofar
27 as same relate to entitlement method tax computations; or based on the quantity of Gas taken for its account in
28 accordance with such regulations, insofar as same relate to sales method tax computations.

29 **13. ASSIGNMENT AND RIGHTS UPON ASSIGNMENT**

30 13.1 Subject to the provisions of Sections 13.2 (if elected) and 13.3 hereof, and notwithstanding anything in this
31 or in the Operating Agreement to the contrary, if any Party assigns (including any sale, exchange or other transfer) any of
32 its working interest in the Balancing Area when such Party is an Underproduced or Overproduced Party, the assignment or
33 other act of transfer shall, insofar as the Parties hereto are concerned, include all interest of the assigning or transferring Party
34 in the Gas, all rights to receive or obligations to provide or take Makeup Gas and all rights to receive or obligations to make
35 any monetary payment which may ultimately be due hereunder, as applicable. Operator and each of the other Parties hereto
36 shall thereafter treat the assignment accordingly, and the assigning or transferring Party shall look solely to its assignee or
37 other transferee for any interest in the Gas or monetary payment that such Party may have or to which it may be entitled,
38 and shall cause its assignee or other transferee to assume its obligations hereunder.

39 13.2 (Optional - Cash Settlement Upon Assignment) Notwithstanding anything in this Agreement (including but not limited
40 to the provisions of Section 13.1 hereof) or in the Operating Agreement to the contrary, and subject to the provisions of
41 Section 13.3 hereof, in the event an Overproduced Party intends to sell, assign, exchange or otherwise transfer any of its
42 interest in a Balancing Area, such Overproduced Party shall notify in writing the other working interest owners who are
43 Parties hereto in such Balancing Area of such fact at least Thirty (30) days prior to closing the
44 transaction. Thereafter, any Underproduced Party may demand from such Overproduced Party in writing, within
45 Thirty (30) days after receipt of the Overproduced Party's notice, a cash settlement of its
46 Underproduction from the Balancing Area. The Operator shall be notified of any such demand and of any cash
47 settlement pursuant to this Section 13, and the Overproduction and Underproduction of each Party shall be adjusted
48 accordingly. Any cash settlement pursuant to this Section 13 shall be paid by the Overproduced Party on or before the earlier to
49 occur (i) of sixty (60) days after receipt of the Underproduced Party's demand or (ii) at the closing of the transaction in
50 which the Overproduced Party sells, assigns, exchanges or otherwise transfers its interest in a Balancing Area on the same basis
51 as otherwise set forth in Sections 7.3 through 7.6 hereof, and shall bear interest at the rate set forth in Section 7.7 hereof,
52 beginning sixty (60) days after the Overproduced Party's sale, assignment, exchange or transfer of its interest in the Balancing
53 Area for any amounts not paid. Provided, however, if any Underproduced Party does not so demand such cash settlement of
54 its Underproduction from the Balancing Area, such Underproduced Party shall look exclusively to the assignee or other
55 successor in interest of the Overproduced Party giving notice hereunder for the satisfaction of such Underproduced
56 Party's Underproduction in accordance with the provisions of Section 13.1 hereof.

57 13.3 The provisions of this Section 13 shall not be applicable in the event any Party mortgages its interest or disposes of
58 its interest by merger, reorganization, consolidation or sale of substantially all of its assets to a subsidiary or parent company, or
59 to any company in which any parent or subsidiary of such Party owns a majority of the stock of such company.

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1 14. OTHER PROVISIONS
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A.A.P.L. FORM 610-E - GAS BALANCING AGREEMENT - 1992

1 **15. COUNTERPARTS**

2 This Agreement may be executed in counterparts, each of which when taken with all other counterparts shall constitute
3 a binding agreement between the Parties hereto; provided, however, that if a Party or Parties owning a Percentage Interest in
4 the Balancing Area equal to or greater than a _____ percent (_____%) therein fail(s) to execute this
5 Agreement on or before _____, this Agreement shall not be binding upon any Party and shall be of
6 no further force and effect.

7 IN WITNESS WHEREOF, this Agreement shall be effective as of the 22 day of July, 2014.

8
9
10 **ATTEST OR WITNESS:**

OPERATOR

11 _____
12 _____
13 _____
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42 _____

Hess Ohio Developments, LLC

BY: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

NON-OPERATORS

BY: _____

Type or print name

Title _____

Date _____

Tax ID or S.S. No. _____

A.A.P.L. FORM 610-E - GAS BALANCING AGREEMENT - 1992

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ACKNOWLEDGMENTS

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

Individual acknowledgment:

State of _____)

_____) ss.

County of _____)

This instrument was acknowledged before me on _____

_____ by _____

(Seal, if any)

Title (and Rank) _____

My commission expires: _____

Acknowledgment in representative capacity:

State of _____)

_____) ss.

County of _____)

This instrument was acknowledged before me on _____

_____ by _____ as

_____ of _____

(Seal, if any)

Title (and Rank) _____

My commission expires: _____

EXHIBIT "F"

Attached to and made a part of that certain Operating Agreement dated effective September 1, 2015, by and between Hess Ohio Developments, LLC as Operator, and _____.

**MODEL FORM RECORDING SUPPLEMENT TO
OPERATING AGREEMENT AND FINANCING STATEMENT**

THIS AGREEMENT, entered into by and between Hess Ohio Developments, LLC, hereinafter referred to as "Operator," and the signatory party or parties other than Operator, and _____ 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 _____, 2014 (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. 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 marshalling 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 _____, 2014.

ATTEST OR WITNESS

OPERATOR

Hess Ohio Developments, LLC
A Delaware Limited Liability Company

By: _____

Title: _____
Date: _____
Address: 1501 McKinney Street, Houston, TX 77010

NON-OPERATOR

ATTEST OR WITNESS

By: _____

Title: _____
Date: _____
Address: _____

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for :
Unit Operation : Application Date: April 20, 2015
 : Supplement Date: June 30, 2015
Cadiz E Unit A :

**PREPARED TESTIMONY OF STUART HIRSCH, PG, CPG
ON BEHALF OF HESS OHIO DEVELOPMENTS, LLC (“HESS”)**

W. Jonathan Airey (0017437)
Gregory D. Russell (0059718)
J. Taylor Airey (0081092)
Scott M. Guttman (0086639)
VORYS, SATER, SEYMOUR AND PEASE LLP
52 East Gay Street
P. O. Box 1008
Columbus, Ohio 43216-1008

Attorneys for Applicant,
Hess Ohio Developments, LLC

Date: June 30, 2015

Attachment 2

PREPARED DIRECT TESTIMONY OF STUART HIRSCH, PG, CPG

1 **INTRODUCTION**

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

3 A1. My name is Stuart Hirsch and I am a Geological Advisor at Hess Corporation. My
4 business address is 1501 McKinney Street, Houston, Texas 77010.

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

6 A2. I obtained a Bachelor of Science degree in Earth and Planetary Sciences from the
7 University of Pittsburgh in 1972 and a Master of Arts degree in Geology from
8 Indiana University in 1975. Additionally, I have completed numerous continuing
9 education and college level courses in the fields of business, geology and
10 environmental sciences.

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

12 A3. I have over forty one (41) years of professional experience as a geoscientist
13 working in the fields of oil and gas, engineering and environmental sciences.
14 During that time, I have primarily worked as a petroleum geoscientist focusing on
15 exploration and production in the Appalachian, Gulf Coast, Gulf of Mexico and US
16 Mid-Continent basins. Before my employment with Hess, I worked as a
17 geoscientist for Mobil Oil Corporation, Consolidated Gas Supply Corporation,
18 Marathon Oil Corporation, Standard Oil of Ohio, British Petroleum, L. Robert
19 Kimball and Associates, Cabot Oil and Gas Corporation and Chesapeake Energy
20 Corporation. Currently and for most of my career I have worked in the
21 Appalachian Basin, focusing on the exploration and development of
22 unconventional resources such as the Huron, Marcellus and Utica-Point Pleasant
23 "shale" formations. I have also worked the Eagle Ford, Cotton Valley and Bossier
24 "shales" of the Gulf Coast basins.

25 **Q4. What do you do as a Geological Advisor for Hess?**

26 A4. As a Geological Advisor for Hess, I identify, evaluate and develop oil and gas
27 opportunities and am part of an integrated team that plans and carries out the
28 appraisal and development of Hess's Ohio assets. In this respect, I provide high
29 level support for the identification of drilling locations, the planning of pre-drill
30 operations, the monitoring of drilling operations and the integration of drilling

1 results with our appraisal efforts and ongoing development planning. I am
2 currently involved in a project whereby I provide advanced geoscience support in
3 the appraisal of Hess's Utica-Point Pleasant assets. This advanced geoscience
4 support includes the collection of geological, geophysical and operational data
5 which I analyze, interpret and integrate with existing historical information to
6 produce a comprehensive assessment of Hess's Ohio assets.

7 **Q6. Are you a Registered Professional Geologist?**

8 A6. Yes, I am a registered professional geologist in the states of Pennsylvania,
9 Tennessee, Texas and Wyoming.

10 **Q7. Are you a member of any professional associations?**

11 A7. Yes, I am a member of the American Association of Petroleum Geologists
12 (AAPG), the Ohio Geological Society (OGS), the Houston Geological Society
13 (HGS) and the Appalachian Geological Society (AGS).

14 **Q8. What is the purpose of your testimony today?**

15 A8. I am testifying in support of the *Application of Hess Ohio Developments, LLC for*
16 *Unit Operation* filed with respect to the Cadiz E Unit A, consisting of sixty-six (66)
17 separate tracts of land totaling approximately seven hundred sixty-six (766) acres in
18 Harrison County, Ohio. My testimony will demonstrate that the Unitized
19 Formation described in the Application is part of a pool and thus an appropriate
20 subject of unitization. Additionally, my testimony will support the Unit Plan's
21 allocation of unit production and expenses to separately owned tracts on a surface-
22 acreage basis, based on the unit area's nearly uniform formation thickness and
23 substantially identical geological characteristics throughout.

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

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

26 A9. An oil and/or gas pool is generally defined to be a subsurface accumulation of
27 hydrocarbons locally confined by subsurface geological features. This is consistent
28 with the Ohio statutory definition as contained in Ohio Revised Code § 1509.01(E)
29 defining a pool as "an underground reservoir containing a common accumulation of
30 oil or gas, or both, but does not include a gas storage reservoir."

1 **Q10. How is the Unitized Formation defined for the Cadiz E Unit A?**

2 A10. In this area of Ohio, the Utica-Point Pleasant encompasses two (2) geological
3 formations (*i.e.*, the Utica Formation and the Point Pleasant Formation) which act
4 as a common reservoir and source and which comprise the interval between the top
5 of the Utica Formation and the top of the Trenton Limestone as demonstrated in
6 attached Exhibit SH-2 (an annotated electric log from a nearby well). Because the
7 tops and bases of geological formations can exhibit local stratigraphic variability
8 due to the nature of their original depositional environments and resulting lateral
9 facies relationships coupled with the uncertainties inherent in the pre-drill depth
10 prognoses, it is customary to include buffer intervals both above the top and below
11 the base of the subject formations that will account for this localized stratigraphic
12 and depth variability. In this case, the Unitized Formation includes two buffer
13 intervals, the interval fifty feet (50') above the top of the Utica Formation and the
14 interval fifty feet (50') below the base of the Point Pleasant Formation.

15 **Q11. What do you expect to be the True Vertical Depth (TVD) of the Unitized
16 Formation?**

17 A11. TVD (Total Vertical Depth) to the top of the unitized formation across the
18 proposed Cadiz E Unit A should range from 8,250' to 8,450'. TVD to the base of
19 the unitized formation across the proposed unit should range from 8,570' to 8,810'.

20 **Q12. Do you have an opinion on whether or not the Unitized Formation
21 contemplated by the Cadiz E Unit A constitutes a pool or part of a pool?**

22 A12. Yes. It is my opinion, based on my education and professional experience, that the
23 Unitized Formation is part of a pool.

24 **Q13. Why?**

25 A13. Based upon my interpretation of subsurface geological, geophysical and
26 petrophysical data consisting of 3-D seismic, wireline logs, a geological map, a
27 cross-section constructed from wireline logs and other available geological data,
28 the Utica-Point Pleasant formation underlies and extends beyond the area of the
29 Cadiz E Unit A. Exhibit SH-3, a structure map on top of the Trenton limestone
30 (*i.e.*, the base of the Point Pleasant formation), demonstrates that the subsurface
31 geological formations dip in an uninterrupted manner to the southeast in the

1 subsurface area beneath the Cadiz E Unit A. Exhibit SH-4, a geological cross-
2 section constructed from three (3) area wells, clearly demonstrates that the
3 Utica/Point Pleasant is continuous in the subsurface area below Cadiz E Unit A.
4 Additionally, the cross-section and electric logs demonstrate that the Utica-Point
5 Pleasant is consistent in thickness and geological characteristics throughout the
6 area of the proposed unit. As a result of this, the Unitized Formation meets the
7 definition of a “pool.”

8 **Q14. Why are the Utica and the Point Pleasant Formations both included as the**
9 **“Unitized Formation”?**

10 A14. The Utica Formation and the Point Pleasant Formation comprise the geological
11 units that immediately overlie the Trenton Limestone (*see* Exhibits SH-2 and SH-
12 4). Both formations act as source rocks and provide a common reservoir for the
13 generated hydrocarbons. Porosity in either of these units will contain hydrocarbons
14 produced in this geological interval. When wells penetrating both of these
15 formations are stimulated and completed, the hydrocarbons common to both units
16 are produced as there are no “barriers” between the two units. Completion
17 practices result in the concurrent stimulation of both units while the overlying and
18 underlying beds generally confine the stimulations to both units without the ability
19 to completely isolate either unit from the other. Therefore, both the Utica and Point
20 Pleasant together act as a single producing interval and therefore a single pool.

21 **Q15. Did you assess the geological characteristics of the Cadiz E Unit A?**

22 A15. Yes.

23 **Q16. What data sources did you utilize in determining the geologic characteristics**
24 **of the Cadiz E Unit A area?**

25 A16. I utilized electric log data from deep well penetrations in the area to construct
26 attached Exhibits SH-2 through SH-4. Specifically, I utilized five (5) wells in
27 proximity to the proposed Cadiz E Unit A area, those being (i) the Hess-CNX,
28 Wheeling Bel-A, Unit A, Capstone #2P-9 (API#34013206600000) well located
29 approximately 7.2 miles south of the proposed unit; (ii) the Hess-CNX, Athens A,
30 Unit A, #1P-24 (API# 34067210740000) well located approximately 4.8 miles
31 southwest of the unit; (iii) the Hess-CNX, Cadiz A, Unit A, #1P-23 (API

1 #34067210820000) well located approximately 3.5 miles northwest of the proposed
2 unit; (iv) the Hess-CNX, Short Creek A, Unit A, #1P-7 (API #34067210830000)
3 well located approximately 5.6 miles southeast of the proposed unit; and (v) the
4 Sanford McCormick, Roy Birney #1 (API #34067201030000) well located
5 approximately 2.3 miles northeast of the proposed unit. Data from additional wells
6 in the area were incorporated into the geological assessment. Hess geoscientists
7 have also constructed regional geological structure maps (refer to attached Exhibit
8 SH-3) to determine the structural continuity in the area of the proposed unit. Data
9 derived from area cores were utilized to investigate the petrophysical properties of
10 the Utica and Point Pleasant formations and to understand how they respond to
11 completion and production activities.

12 **Q17. What do the data and exhibits tell us about the Cadiz E Unit A area?**

13 A17. The information outlined above was utilized to create Exhibit SH-1 (*i.e.*, the
14 Location and Cross-Section Index Map), Exhibit SH-2 (*i.e.*, the Annotated E-Log),
15 Exhibit SH-3 (*i.e.*, the Structure Map on Top Trenton), and Exhibit SH-4 (*i.e.*, the
16 Stratigraphic Cross Section). The location map, Exhibit SH-1, shows the location
17 of the proposed Cadiz E Unit A unit with respect to the key well logs used for the
18 analysis. The Structure Map on Top Trenton, Exhibit SH-3, demonstrates the
19 consistent dip and uncomplicated geological structure that characterize the area of
20 the proposed unit. The Annotated E-Log, Exhibit SH-2, clearly shows the
21 stratigraphy of the proposed unit area. Lastly, the Stratigraphic Cross Section,
22 Exhibit SH-4, demonstrates the consistent nature of the formations across the area
23 where the proposed unit is located. Collectively, these exhibits demonstrate that
24 the Unitized Formation is of consistent thickness and has similar reservoir
25 properties across the unit area and should be deemed part of a pool.

26 **Q18. Is your opinion based on your education and professional experience?**

27 A18. Yes.

28 **Q19. And is this a commonly accepted method of analysis in your profession for
29 determining whether a pool or part of a pool exists?**

30 A19. Yes.

1 **ALLOCATION METHODOLOGY**

2 **Q20. Production and expenses are allocated to the separate tracts in the Cadiz E**
3 **Unit A under the Unit Plan on a surface-acreage basis. Do you have an**
4 **opinion on whether that allocation method is appropriate, given your**
5 **education and professional experience?**

6 A29. I do. In my opinion, surface allocation is the appropriate method.

7 **Q30. Why?**

8 A30. The continuous nature of the pool and the homogeneity of the reservoir are
9 conducive to this method of allocation.

10 **Q31. In your experience, is this a common method for allocating production and**
11 **expenses?**

12 A31. Yes.

13 **Q32. Have you seen this allocation method used in other shale basins?**

14 A32. Yes, I have seen this allocation method utilized in other areas within the
15 Appalachian Basin, as well as in Gulf Coast and Anadarko Basins. Further, this
16 allocation method has been utilized in Ohio and adjacent states for many years in
17 both conventional and unconventional reservoirs.

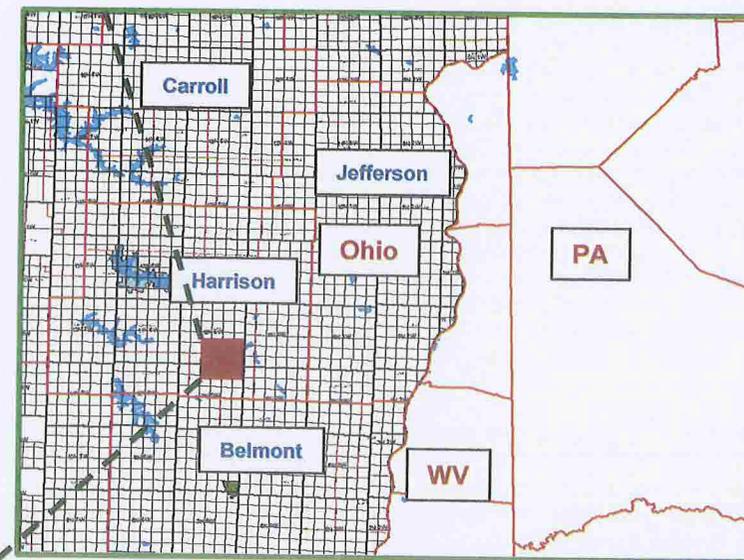
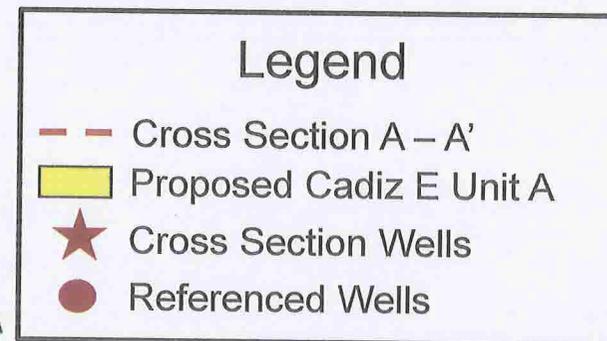
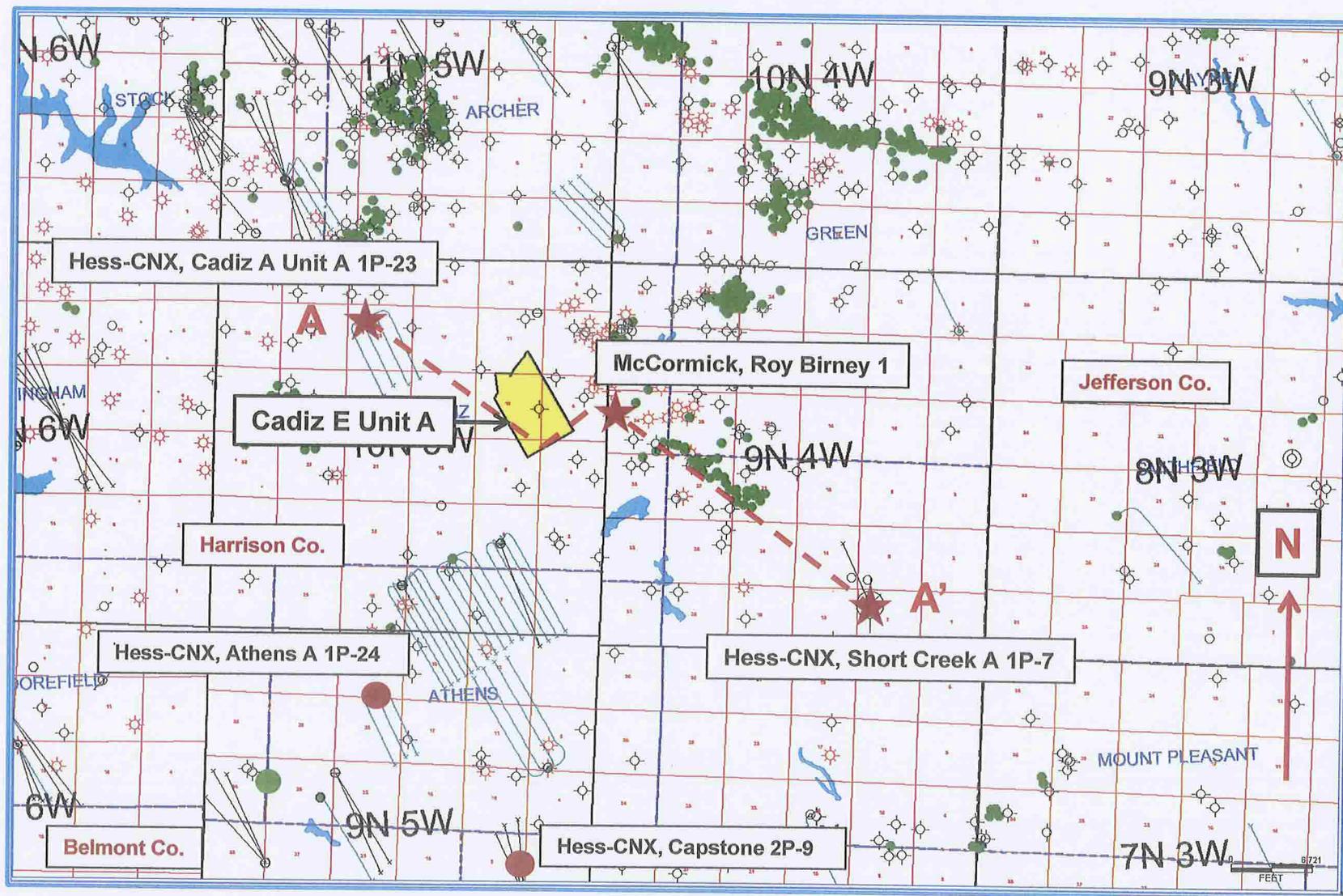
18 **Q33. Does this conclude your testimony?**

19 A34. Yes.

Cadiz E Unit A: Location and Cross Section Index Map



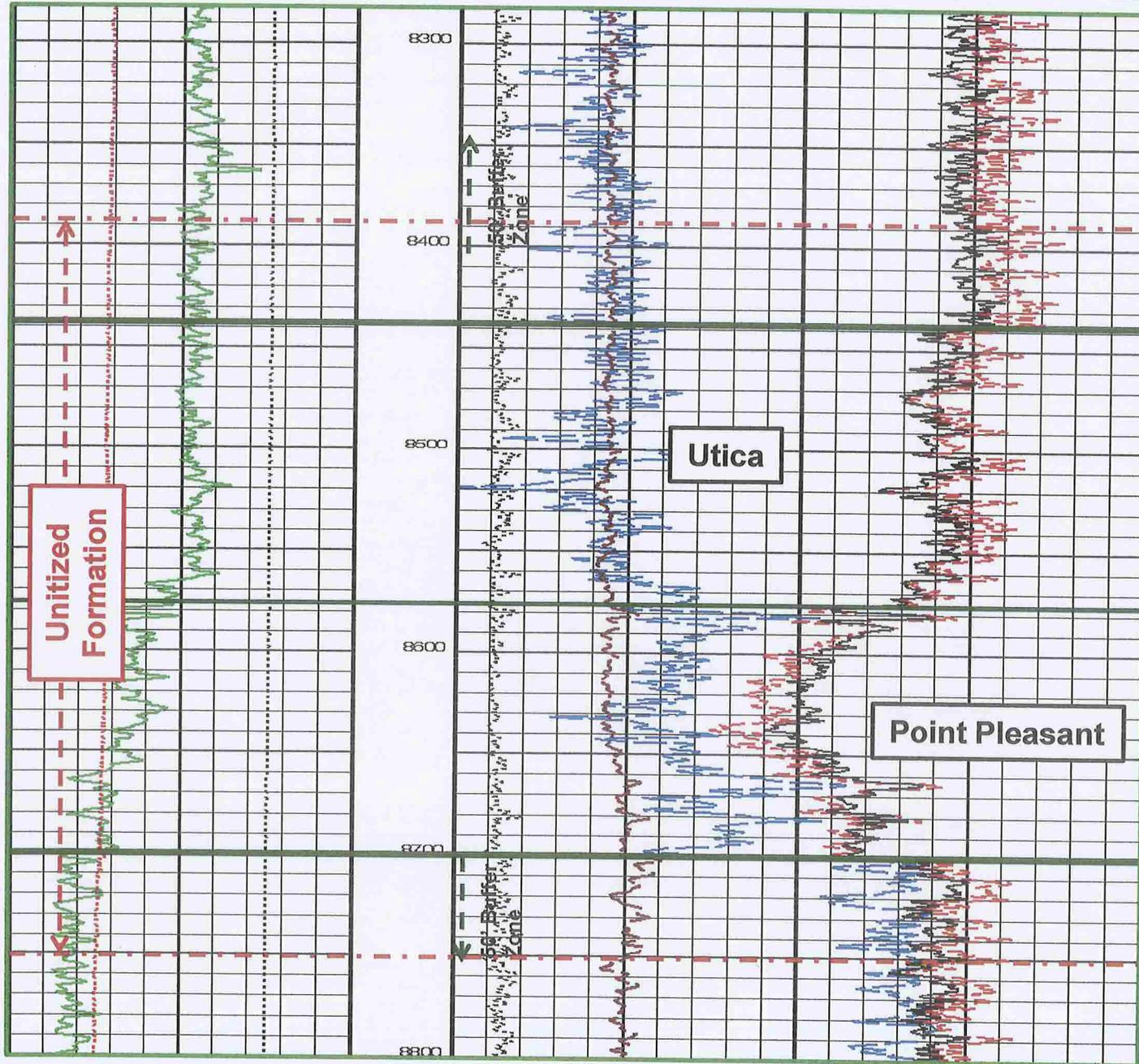
Attachment 2 Exhibit SH-1



Cadiz E Unit A: Annotated E-Log (Hess, Athens A Unit A 1P-24)



Attachment 2 Exhibit SH-2



Top Utica - Point Pleasant

Utica

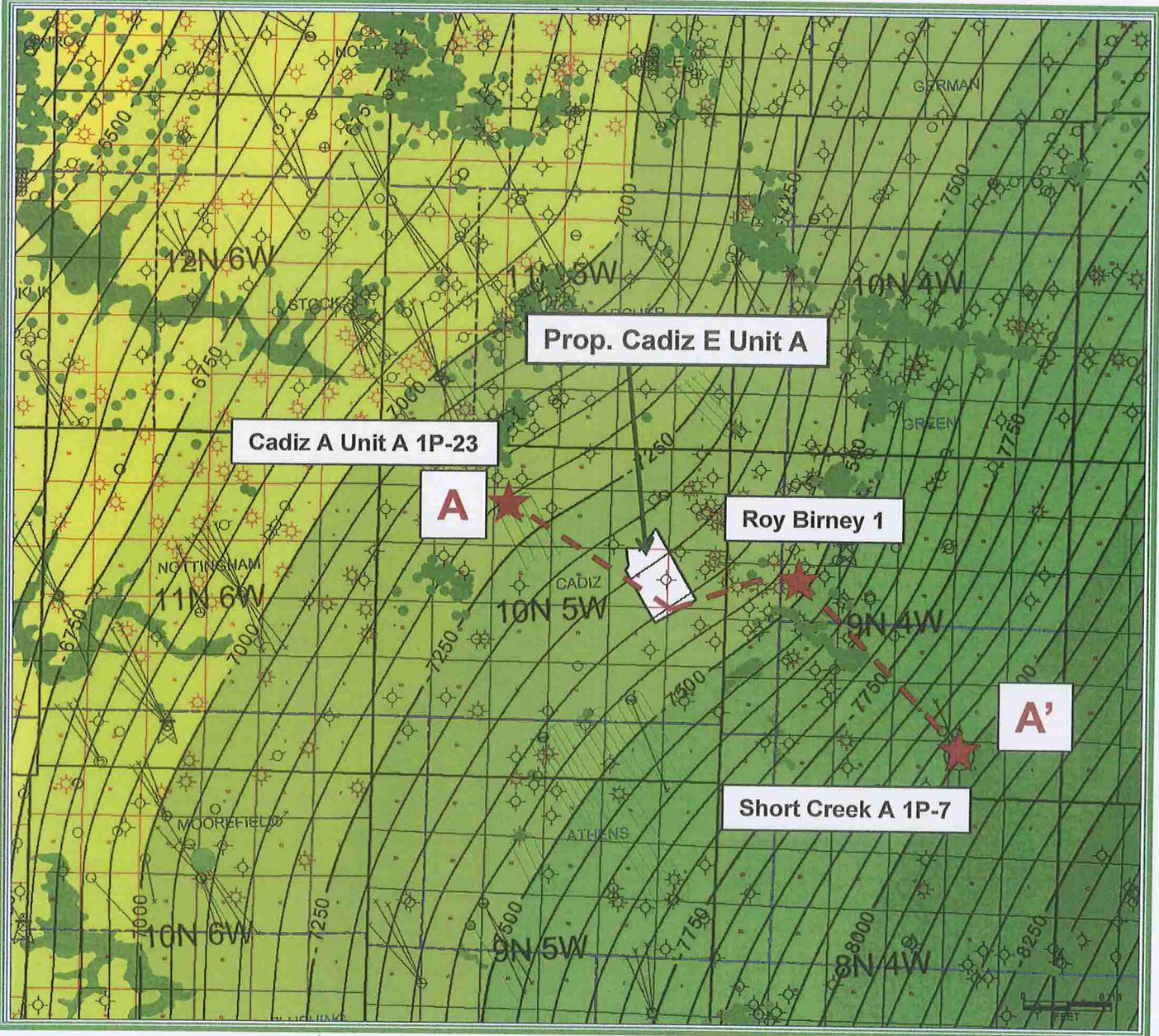
Point Pleasant

Top Trenton Limestone

Cadiz E Unit A: Structure Map on Top Trenton (C.I. = 50')



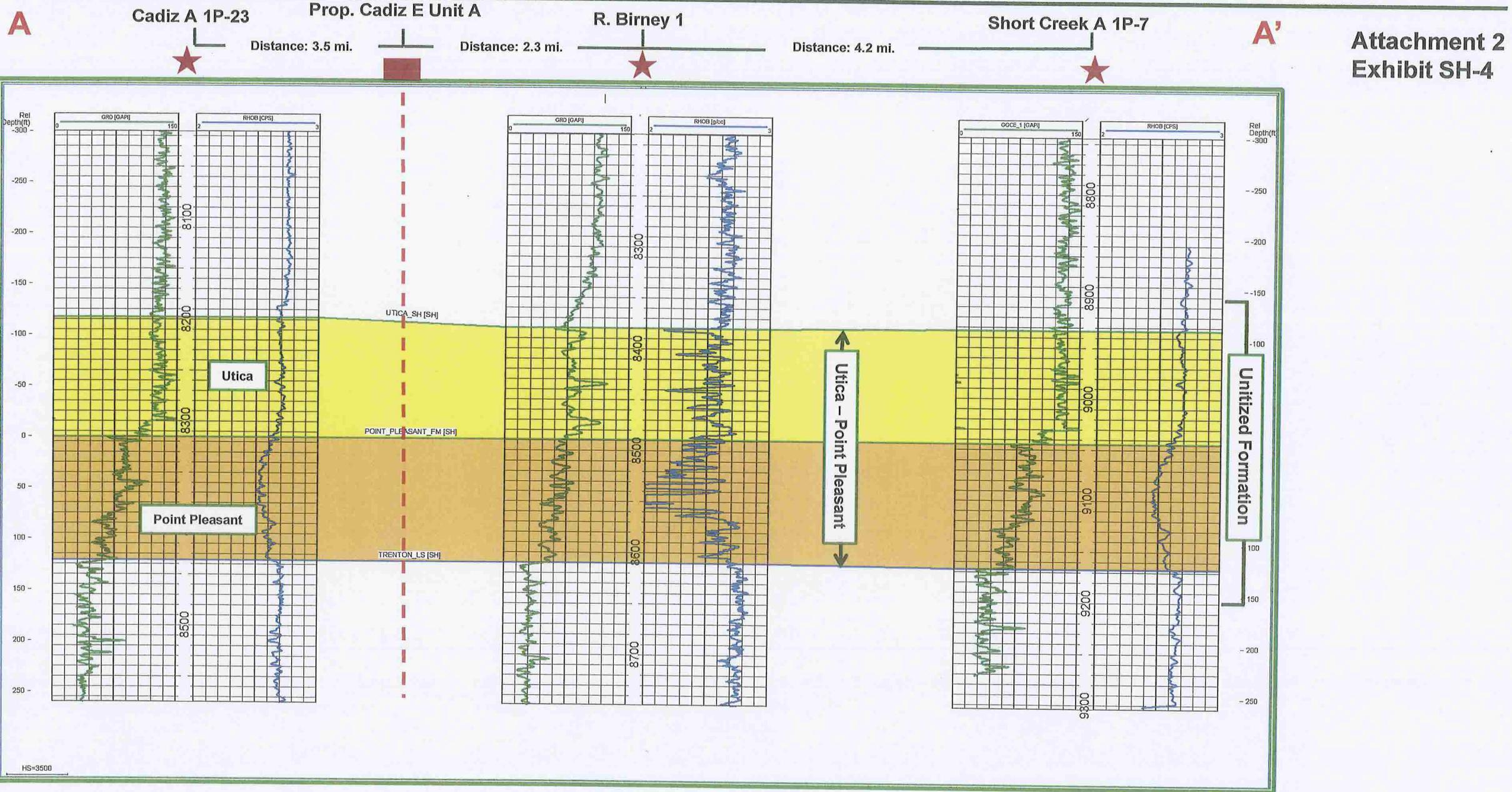
Attachment 2 Exhibit SH-3



Legend

- Cross Section A – A'
- Proposed Cadiz E Unit A
- ★ Cross Section Wells

Cadiz E Unit A: Stratigraphic Cross Section A – A'



Attachment 2
Exhibit SH-4

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for :
Unit Operation : Application Date: April 20, 2015
 : Supplement Date: June 30, 2015
Cadiz E Unit A :

**PREPARED TESTIMONY OF JACOB ROSENZWEIG
ON BEHALF OF HESS OHIO DEVELOPMENTS, LLC (“HESS”)**

W. Jonathan Airey (0017437)
Gregory D. Russell (0059718)
J. Taylor Airey (0081092)
Scott Guttman (0086639)
VORYS, SATER, SEYMOUR AND PEASE LLP
52 East Gay Street
P. O. Box 1008
Columbus, Ohio 43216-1008

Attorneys for Applicant,
Hess Ohio Developments, LLC

Date: June 30, 2015

PREPARED DIRECT TESTIMONY OF JACOB ROSENZWEIG

1 **INTRODUCTION.**

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

3 A1. My name is Jacob Rosenzweig and I am a Reservoir Engineer for Hess working on
4 the Utica asset team. My business address is 1501 McKinney, Houston, Texas
5 77010.

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

7 A2. I earned a Bachelor of Science in Mechanical Engineering from The Cooper Union
8 in 1975, as well as a Master of Science and Doctor of Philosophy in Mechanical
9 Engineering from MIT in 1976 and 1981, respectively.

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

11 A3. I have worked in the oil and gas industry for thirty-three (33) years, of which the
12 last 6 years have been with Hess. Prior to joining the Utica asset team, I was the
13 Hess Reservoir Engineering Team Lead for the Bakken. During my career I have
14 held a variety of reservoir engineering, commercial, and team lead positions in
15 onshore, offshore, and unconventional resource settings. My previous employers in
16 chronological order were, Gulf Oil, SOHIO/BP, UNOCAL/Chevron.

17 **Q4. What do you do as a Reservoir Engineer for Hess?**

18 A4. The things I do which have relevance to this hearing are: monitoring, forecasting,
19 and updating expected well and field production, as well as running economic
20 evaluations to assure project robustness and calculating Utica reserves.

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

22 A5. I am a member of the Society of Petroleum Engineers.

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

24 A6. I am testifying in support of the *Application of Hess Ohio Developments, LLC for*
25 *Unit Operation* filed with respect to the Cadiz E Unit A, consisting of sixty-six (66)
26 separate tracts of land totaling approximately seven hundred and sixty-six 766 acres
27 in Harrison County, Ohio. My testimony addresses the following: (i) that unit
28 operations for the Cadiz E Unit A are reasonably necessary to increase substantially
29 the recovery of oil and gas; and (ii) that the value of the estimated additional
30 recovery due to unit operations exceeds its estimated additional costs.

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

3 **Q7. I'd like to begin by addressing whether unit operations in the Cadiz E Unit A**
4 **are reasonably necessary to increase substantially the recovery of oil and gas**
5 **from those properties. Would you describe briefly how Hess anticipates**
6 **developing the Cadiz E Unit A?**

7 A7. Cadiz E Unit A is a five well development that will spud in 2Q 2016. Exhibit JR-1,
8 henceforth referred to as the "With Unit" case, depicts the planned well locations,
9 drill pad location, and planned lateral lengths assuming an order authorizing unit
10 operations is granted. Exhibit JR-2 depicts the unit development without a
11 unitization order, henceforth referred to as the "No Unit" case. Exhibit JR-3 depicts
12 the well by well lateral lengths for both the "With Unit" and "No Unit" case
13 developments.

14 **Q8. Do you have an opinion on whether unit operations in the Cadiz E Unit A are**
15 **reasonably necessary to increase substantially the recovery of oil and gas from**
16 **those properties, and if so, what is your opinion?**

17 A8. Yes, it is my opinion that unit operations are reasonably necessary to increase
18 substantially the recovery of oil and gas from the Cadiz E Unit A pad. The "With
19 Unit" and "No Unit" scenarios depicted in Exhibit JR-3 indicate that five Cadiz E
20 Unit A wells would be completed and stimulated over a combined lateral length of
21 34,754 feet in the "With Unit" case, whereas the stimulated lateral length would be
22 reduced to 31,470 feet in the "No Unit" case. Because recoverable volumes are
23 proportional to wellbore length, the recoverable volumes from the Cadiz E Unit A
24 would decrease significantly without an order authorizing unit operations. The
25 Cadiz E Unit A is located in an area where wet gas production is expected. To
26 forecast the expected ultimate recovery (EUR) we use an internal model that is
27 specific to the area. This model assumes that actual well performance has a 50%
28 probability of over or under performing the forecast. Our internal model is based
29 on analyses of Utica wet gas area well performance and reservoir simulation.
30 Estimated Gross EUR for the Cadiz E Unit A under the "With Unit" case is 9,417
31 MBOE, while the "No Unit" scenario yields 8,448 MBOE. These results are

1 summarized in detail in Exhibit JR-4, which includes a well by well breakdown.
2 The unitized development of the Cadiz E Unit A results in an EUR increase of
3 eleven percent (11%) over that which is possible without an order authorizing unit
4 operations. This clearly illustrates that unit operations would increase substantially
5 the recovery of oil and gas from the Cadiz E Unit A.

6 **Q9. Are the estimates that you made based on good engineering practices and**
7 **accepted methods in the industry?**

8 A9. Yes.

9 **Q10. Can you calculate the production from these wells ahead of time with**
10 **mathematical certainty?**

11 A10. No, it is especially difficult in shale reservoirs and in this early phase of reservoir
12 appraisal.

13 **Q11. Is horizontal drilling technology, including hydraulic fracturing the formation,**
14 **required to economically develop unconventional resources?**

15 A11. Yes, unconventional source rock such as the Utica Point Pleasant has extremely
16 low permeability and requires horizontal wells that are completed with multi-stage
17 hydraulic fractures along the horizontal lateral. This technology is required in
18 order to connect a large enough surface area of stimulated formation to the
19 wellbore to create economic levels of production.

20 **Q12. Is it fair to say that horizontal wells are commonly used to develop shale**
21 **formations like the Unitized Formation today?**

22 A12. Yes, especially when developing shale reservoirs like the Utica/Point Pleasant.

23 **Q13. In your professional opinion, would it be economic to develop the Cadiz E Unit**
24 **using vertical drilling?**

25 A13. No, unconventional reservoirs cannot be produced at economic flow rates without
26 the use of horizontal drilling and without the assistance of multi-stage hydraulic
27 fracture stimulation treatments.

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

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

6 A14. We would first calculate revenue from the sale of produced gas, condensate, and
7 processed natural gas liquids (NGL) and then subtract all associated costs, which
8 include: drilling, completions, facilities, abandonment, operating, NGL processing
9 costs, tariff's royalties, and taxes. The resulting difference, which we call income,
10 would then be discounted for time to arrive at a present value.

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

12 A15. Yes we did.

13 **Q16. Would you walk us through your economic evaluation, beginning with your**
14 **estimate of the anticipated revenue stream from the Cadiz E Unit A's**
15 **development?**

16 A16. Our economic evaluation assumes a five well development. Two cases were
17 considered: the "With Unit" case (i.e. the Cadiz E Unit A assuming development
18 with an order authorizing unit operations) and the "No Unit" case. Gross EUR's
19 and net present values (NPV, assuming 100% working interest) for both cases are
20 summarized in Exhibit JR-4. The EUR forecasting model took into account the
21 lateral length of each well. Revenue was calculated with the aid of the price deck
22 shown in Exhibit JR-5. Gross capital expenses for the "With Unit" and "No Unit"
23 cases were calculated as 47.6million and 45.7million, respectively (see Exhibit JR-
24 3). The above cost estimates are based on Hess's historical operating experience in
25 the Utica and include drilling, completions, and facilities costs. Discipline experts
26 from each cost category were involved in making these estimates. Based on
27 historical costs, the assumed operating expense was calculated as 94 (\$M) per year
28 per well, and 234(\$M) per year per pad, and \$10 per barrel of produced water.

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

4 A17. Yes, the value of the estimated recovery from the operations proposed for the Cadiz
5 E Unit A exceeds its estimated additional costs. The gross present value (PV) of
6 the “With Unit” case exceeds that of the “No Unit” case by 17%, which
7 demonstrates that the value of the additional recovery exceeds the additional costs
8 of obtaining that recovery. These numbers are summarized in detail in Exhibit JR-
9 4.

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

11 A18. Yes.

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

13 A19. Yes.

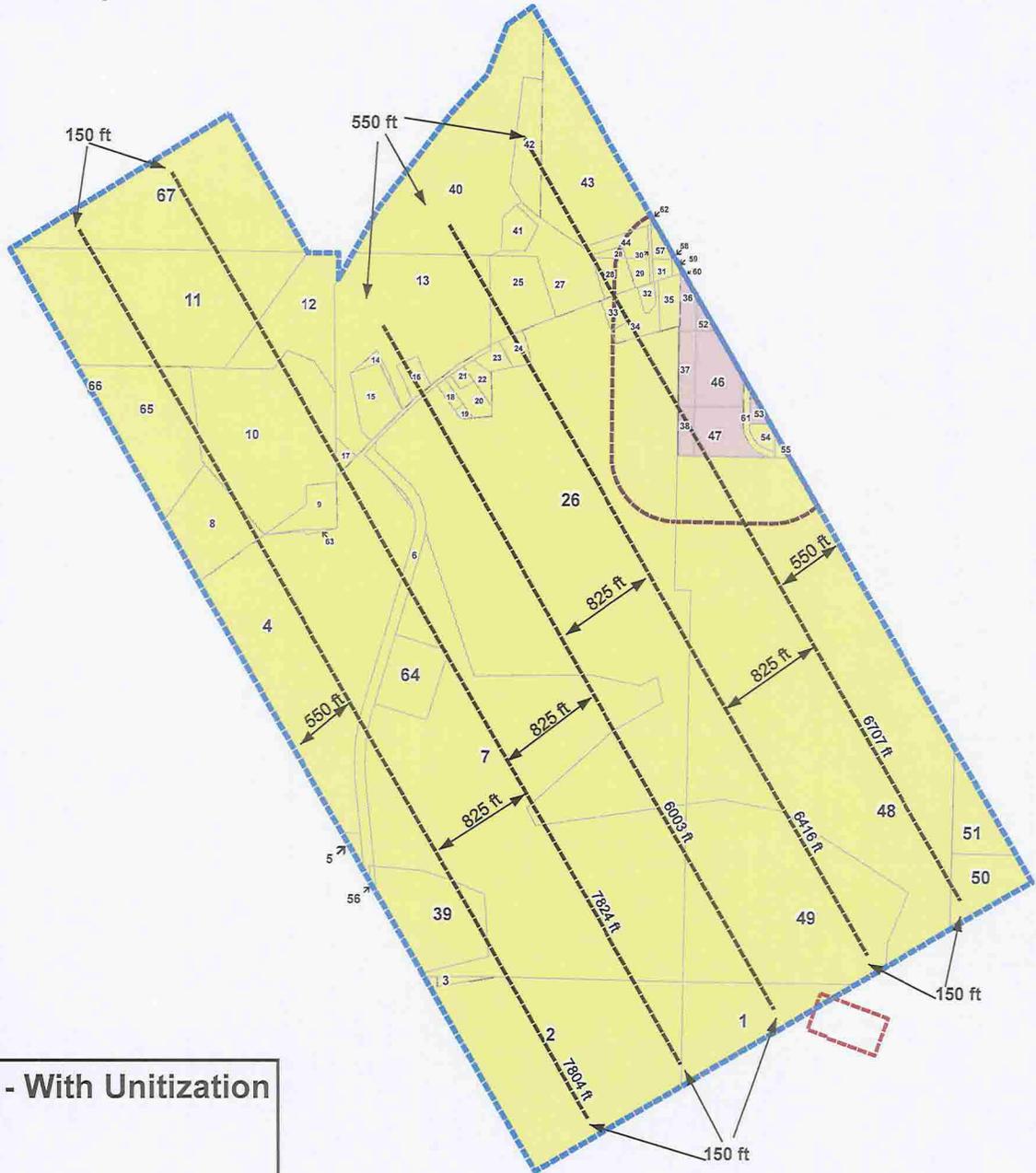
14

Cadiz E Unit A - With Unitization

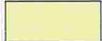
Cadiz Township
Harrison County, OH



1 inch = 1,000 feet



Cadiz E Unit A - With Unitization

-  WELL PATH
-  WELL PAD
-  LEASED/FEE - 754 Acres
-  UNLEASED - 12 Acres
-  UNIT BOUNDARY - 766 Acres



0 500 1,000 Feet



Date: 6/26/2015

Exhibit JR-3

Lateral Length and Capital				
Well Name	With Unit Lateral Length (ft)	No Unit Lateral Length (ft)	With Unit Dev Cost (M\$)	No Unit Dev Cost (M\$)
1H	7,804	7,804	11,661	11,661
2H	7,824	7,824	9,597	9,597
3H	6,003	6,003	8,568	8,568
4H	6,416	6,416	8,822	8,822
5H	6,707	3,423	8,955	7,035
Sum	34,754	31,470	47,603	45,683

Exhibit JR- 4

Reserves and Economic Summary			
	With Unit	No Unit	% Difference
1H EUR (MBOE, Gross)	2,126	2,126	0%
2H EUR (MBOE, Gross)	2,131	2,131	0%
3H EUR (MBOE, Gross)	1,609	1,609	0%
4H EUR (MBOE, Gross)	1,730	1,730	0%
5H EUR (MBOE, Gross)	1,821	852	114%
Total EUR (MBOE)	9,417	8,448	11%
1H 100% WI - NPV (\$M)	7,670	7,670	0%
2H 100% WI - NPV (\$M)	8,845	8,845	0%
3H 100% WI - NPV (\$M)	6,000	6,000	0%
4H 100% WI - NPV (\$M)	6,650	6,650	0%
5H 100% WI - NPV (\$M)	7,136	1,898	276%
Total Gross PV 10% (M\$)	36,301	31,063	17%

Exhibit JR-5

Price Assumptions			
	Gas	Condensate	NGL
Date	\$/MMBTU	\$/Bbl	\$/Bbl
2017	\$4.00	\$75.00	\$37.35
2018	\$4.00	\$75.00	\$37.35
2019	\$4.00	\$75.00	\$37.35
2020	\$4.00	\$75.00	\$37.35
2021	\$4.00	\$75.00	\$37.35
To Life	\$4.00	\$75.00	\$37.35

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for :
Unit Operation : Application Date: April 20, 2015
 : Supplement Date: June 30, 2015
Cadiz E Unit A :

**PREPARED TESTIMONY OF JULIA JOHNSON
ON BEHALF OF HESS OHIO DEVELOPMENTS, LLC (“HESS”)**

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Gregory D. Russell (0059718)
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Attorneys for Applicant,
Hess Ohio Developments, LLC

Date: June 30, 2015

Attachment 4

PREPARED DIRECT TESTIMONY OF JULIA JOHNSON

1 **INTRODUCTION.**

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

3 A1. My name is Julia Johnson. I am a Land Negotiator for Hess Ohio Developments,
4 LLC and am based in its Houston, Texas office.

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

6 A2. I received a Bachelor of Science in Business in Marketing from Florida State
7 University in 2007, a Master of Business Administration from the University of
8 Alabama in 2011, and a Juris Doctorate from the University of Alabama in 2011.

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

10 A3. I have worked as a land professional in the oil and gas industry since August 2011.
11 In that capacity, I have worked the Utica, Marcellus, and Eagleford. In each area, I
12 have worked on lease and title issues that have arisen in the course of pre-drill unit
13 preparation and title curative efforts. Within the Utica play, I have worked on
14 surface development issues including well site location and construction, road
15 access, pipeline and midstream facilities, water resources, as well as ongoing
16 operational issues associated with large scale field development.

17 **Q4. What do you do as a Land Negotiator for Hess?**

18 A4. In my role as Land Negotiator I supervise the research of land records in county
19 courthouses in eastern Ohio, preparation of title reports, request and review drilling
20 title opinions and division order title opinions. I also oversee title curative efforts
21 and supervise the acquisition of oil and gas leases, pipeline rights-of-way, surface
22 use agreements, and roadway easements associated with access to well sites. My
23 duties regularly require me to coordinate my efforts with the field personnel and
24 contractors associated with multi-well field development efforts.

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

26 A5. Yes, American Association of Professional Landmen, Houston Association of
27 Professional Landmen, Texas State Bar, and Alabama State Bar.

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

29 A6. I am testifying in support of the *Application of Hess Ohio Developments, LLC for*
30 *Unit Operation* filed with respect to the Cadiz E Unit A, consisting of sixty-six (66)

1 separate tracts of land totaling approximately seven hundred and sixty-six (766)
2 acres in Harrison County, Ohio. In particular, I will describe the efforts made by
3 Hess to put the Cadiz E Unit A together and the Unit Plan that Hess is proposing.

4 **EFFORTS MADE BY HESS TO LEASE UNIT TRACTS.**

5 **Q7. The Application submitted by Hess indicates that it owns the oil and gas rights**
6 **to more than approximately 574 acres of the proposed 766-acre unit. Would**
7 **you describe how Hess acquired those rights?**

8 A7. Hess acquired the majority of these rights through a Joint Venture Agreement with
9 CONSOL Energy and CNX Gas Company, LLC, wherein Hess purchased a one-
10 half (1/2) interest in and to certain oil and gas rights underlying the Utica/Point
11 Pleasant formations. CNX obtained the remaining one-half (1/2) interest which is
12 operated by Hess pursuant to the terms of the Joint Venture Agreement. There are
13 also leasehold interests within the Cadiz E Unit A, which Hess acquired from
14 parties who were identified during the title review process and who have since
15 executed oil and gas leases with Hess.

16 **Q8. And that represents approximately 74.94% of the unit acreage?**

17 A8. Yes, Hess now holds leases, owns in fee, or operates under the Hess/CNX Joint
18 Venture approximately 574 acres, or approximately 74.94% of the unit. That's
19 reflected on Exhibit A-2 to the Unit Operating Agreement.

20 **Q9. Are there other operators in the unit, and if so, have they agreed to participate**
21 **in its development?**

22 A9. Yes. There are three operators other than Hess and CNX in the Cadiz E Unit A:
23 Chesapeake Exploration, L.L.C. and CHK, Utica L.L.C. (collectively "CHK") own
24 interest in tracts covering surface acreage of approximately 179 acres, the net
25 interest of CHK in those tracts is equal to approximately 132 acres or around
26 17.26% interest in the Cadiz E Unit A. Total E&P USA, Inc. is the owner of
27 interest in several of the CHK tracts equal to a net of approximately 47 acres or
28 around 6.15% interest in the Cadiz E Unit A. The total CHK and Total in the Cadiz
29 E Unit A is approximately 23.41% of the unit.

30 **Q10. How many unleased mineral owners are there in the Cadiz E Unit A?**

31 A10. There are eight (8) unleased mineral owners who own all of Tract Nos. 36, 37, 38,

1 46, 47, 52, 53, and 60, which together total 12.633 acres, or 1.649% of the unit.

2 **Q11. Have you prepared an affidavit detailing Hess' efforts to obtain leases from**
3 **the unleased mineral owners?**

4 A11. Yes, it is attached as Exhibit JJ-2 to this testimony.

5 **Q12. Do you have an exhibit to your testimony that illustrates the leased/fee and**
6 **unleased tracts within the Cadiz E Unit A?**

7 A12. Yes, see attached Exhibit JJ-3. The unleased tracts are along the eastern edge of
8 the Cadiz E Unit A.

9 **Q13. Do you have an aerial plat of the Cadiz E Unit A?**

10 A13. Yes, I've attached one as Exhibit JJ-4 to my testimony.

11 **UNIT PLAN PROVISIONS.**

12 **Q14. Would you describe generally the development plan for the Cadiz E Unit A?**

13 A14. The Cadiz E Unit A will be drilled from the Cadiz E well site, which is located on
14 Tract 1 located in Cadiz Township, Harrison County, Ohio. This well pad is
15 designed to accommodate the drilling of the Cadiz E Unit A's five wells to the
16 northwest and the future Cadiz E Unit B's five wells to the southeast.

17 **Q15. Does Hess have a specific timeline for drilling the wells in the Cadiz E Unit A?**

18 A15. Yes, Hess intends to spud the 1H well of the Cadiz E Unit A in October of 2015,
19 followed immediately by the 2H, 3H, 4H and 5H wells. Hess estimates that each
20 well will require thirty (30) days to drill.

21 **Q16. Does Hess have any other development activity in the immediate area?**

22 A16. Yes, Hess has drilled and is producing multiple units in the region, the closest
23 being 5 wells in the Cadiz D Unit B, which is approximately 3 miles southwest of
24 the proposed Cadiz E Unit A, and 4 wells in the Cadiz A Units A and B, which are
25 approximately 3 miles northwest of the proposed Cadiz E Unit A. Moreover,
26 directly to the west of the Cadiz E Unit A is the Cadiz F Unit A and to the south is
27 the Cadiz E Unit B.

28 **Q17. Are you familiar with the Unit Plan proposed by Hess for the Cadiz E Unit A?**

29 A17. Yes, the Unit Plan proposed by Hess is attached to the Application and consists of
30 an initial document that establishes the non-operating relationship between the
31 parties in the unit, and an operating agreement and related exhibits that establish

1 how the unit is going to be explored, developed and produced.

2 **Q18. Turning first to the body of the Unit Plan, marked as Exhibit 1 to the**
3 **Application. Would you describe briefly what it does?**

4 A18. Yes, the general intent of the Unit Plan is to effectively combine the oil and gas
5 rights and interests in the Cadiz E Unit A in a uniform manner so that they can be
6 developed as though each of the tracts were covered by a single lease.

7 **Q19. Are all of the oil and gas rights in the proposed unit combined?**

8 A19. No, the Unit Plan only unitizes the oil and gas rights in and related to the Unitized
9 Formation.

10 **Q20. How would production from the Cadiz E Unit A be allocated?**

11 A20. On a surface-acreage basis, under Article 4 of the Unit Plan, every tract is assigned
12 a tract participation percentage based on surface acreage of the tract in the unit as
13 shown on Exhibit A-2 to the Unit Operating Agreement. Article 5 of the Unit Plan
14 allocates production based on that tract participation.

15 **Q21. Would you go through an example from Exhibit A-2 to the Unit Operating**
16 **Agreement to illustrate what you mean?**

17 A21. Yes, if you look at Tract 1, parcel number 05-0002185.002, on the attached Exhibit
18 A-2 you will see that it has 12 acres lying within the boundary limits of the Cadiz E
19 Unit A, which is a 765.998 acre production unit. Under the Unit Plan, Tract 1
20 would therefore be allocated 1.567% of the production from the Cadiz E Unit A.

21 **Q22. Does it work the same way for an unleased mineral interest, that is, for the**
22 **tract of a person who did not lease the property in the unit?**

23 A22. Yes.

24 **Q23. In your experience, is this an unusual way to allocate production in a unit?**

25 A23. No, this is the customary method for allocating production in a unit.

26 **Q24. How are unit expenses allocated?**

27 A24. Unless the terms of an individual lease dictate otherwise, as with production
28 allocation, expenses are generally allocated in a unit on a surface-acreage basis.
29 Article 3 of the Unit Plan provides that expenses, unless otherwise allocated in the
30 Unit Operating Agreement, will be allocated to each tract of land within the unit in
31 the proportion that the surface acres of each tract bears to the surface acres of the

1 entire unit. Should the terms of tract within the Cadiz E Unit A dictate otherwise
2 then expense will be allocated according to the terms of the individual lease.

3 **Q25. Who pays the unit expenses?**

4 A25. According to the terms of the proposed Unit Plan, the working interest owners pay
5 the unit expenses.

6 **Q26. Do the royalty owners pay any part of the unit expenses?**

7 A26. No, the royalty owners do not pay any part of the unit expenses.

8 **Q27. Let's turn to the Unit Operating Agreement. It appears to be based upon
9 A.A.P.L. Form 610 – Model Form Operating Agreement, is that correct?**

10 A27. Yes, we typically use a modified version of the 1989. The Form 610, together with
11 its exhibits, is a commonly used form in the industry and is frequently modified to
12 fit the needs of the parties and circumstances.

13 **Q28. Would it be fair to say, then, that you are familiar with the custom and usage
14 of the Form 610 and other similar agreements in the industry?**

15 A28. Yes.

16 **Q29. Turning to the Unit Operating Agreement in particular, does it address how
17 unit expenses are determined and paid?**

18 A29. Yes, Article III of the Unit Operating Agreement provides that all costs and
19 liabilities incurred in operations shall be borne and paid proportionately by the
20 working interest owners, according to their Unit Participation percentages. Those
21 percentages can be found in Exhibit A-2 to the Unit Operating Agreement.
22 Moreover, attached to the Unit Operating Agreement as Exhibit C is an accounting
23 procedure document that offers greater detail regarding how unit expenses are
24 determined and paid.

25 **Q30. That's commonly referred to as the COPAS?**

26 A30. Yes, it stands for the Council of Petroleum Accountants Societies and is a
27 commonly used form in the industry.

28 **Q31. Based upon your education and professional experience, do you view the terms
29 of Exhibit C as reasonable?**

30 A31. Yes. The terms as presented in Exhibit C are commonly accepted amongst
31 operators and clearly set forth definitions, processes, timelines, etc., so that all

1 parties can fully understand and agree to those costs and accounting procedures
2 associated with the activity of drilling and producing oil and natural gas wells and
3 units.

4 **Q32. Will there be in-kind contributions made by owners in the unit area for unit
5 operations, such as contributions of equipment?**

6 A32. No.

7 **Q33. Does the Unit Operating Agreement treat the initial well and subsequent
8 operations differently in terms of going non-consent, and if so, why?**

9 A33. Yes, unless a party is a non-consenting unleased mineral owner, the Agreement
10 requires participation in the initial well, but has provisions under Article VI for
11 subsequent wells and operations. These Article VI provisions require the
12 requesting party to give notice prior to proceeding with additional activity and
13 accruing additional costs against the joint account. There are provisions for the
14 requesting party to proceed with the proposed work without the consent of all
15 parties, but also provisions that allow the non-consenting party to avoid accruing
16 additional costs by relinquishing their interest in the well(s)/unit per the terms of
17 the Agreement.

18 **Q34. But if the working interest owner still has a royalty interest in the unit, that
19 royalty interest would remain in place and be paid?**

20 A34. Yes, that royalty interest would still be paid.

21 **Q35. Are the percentage risk penalties included in the Unit Operating Agreement
22 unusual?**

23 A35. No.

24 **Q36. How are decisions made regarding unit operations?**

25 A36. Article V of the Unit Operating Agreement designates Hess as the Unit Operator,
26 having full operational authority for the supervision and conduct of operations in
27 the unit.

28 **Q37. I believe you've already described generally the documents in Exhibits A and
29 C to the Unit Operating Agreement. Let's turn therefore to Exhibit B of the
30 Unit Operating Agreement. What is it?**

31 A37. Exhibit B is a standard oil and gas lease form that is attached to the joint operating

1 agreement to govern any unleased interests owned by the parties. Article III.A of
2 the Unit Operating Agreement provides that if any party owns or acquires an oil
3 and gas interest in the Contract Area, then that interest shall be treated for all
4 purposes of the Unit Operating Agreement as if it were covered by the form of
5 lease attached as Exhibit "B."

6 **Q38. Does this oil and gas lease contain standard provisions that Hess uses in**
7 **connection with its operations in Ohio?**

8 A38. Yes.

9 **Q39. Moving on to Exhibit D of the Unit Operating Agreement, would you describe**
10 **what it is?**

11 A39. Yes, Exhibit D is the insurance exhibit to the joint operating agreement. It sets
12 forth coverage amounts and limitations, and the insurance terms for operations
13 conducted under the Unit Operating Agreement.

14 **Q40. Would you next describe to the Division Exhibit E of the Unit Operating**
15 **Agreement?**

16 A40. Yes. Exhibit E is the Gas Balancing Agreement, which further details the rights
17 and obligations of the parties with respect to marketing and selling any production
18 from the Contract Area.

19 **Q41. In your professional opinion, given your education and experience, are the**
20 **terms of the Unit Plan, including the terms of the exhibits just discussed, just**
21 **and reasonable?**

22 A41. Yes.

23 **Q42. Does this conclude your testimony?**

24 A42. Yes.

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for : Application Date: April 21, 2015
Unit Operation :
 :
Cadiz E Unit A :

AFFIDAVIT OF OWNERSHIP

I, Julia Johnson, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Julia Johnson and I am a Land Negotiator with Hess Ohio Developments, LLC ("Applicant"). My day-to-day responsibilities include, in my role as Land Negotiator, supervise the research of land records in county courthouses in eastern Ohio, preparation of title reports, request and review drilling title opinions and division order title opinions. I also oversee title curative efforts and supervise the acquisition of oil and gas leases, pipeline rights-of-way, surface use agreements, and roadway easements associated with access to well sites. My duties regularly require me to coordinate my efforts with the field personnel and contractors associated with multi-well field development efforts, for the Applicant in the State of Ohio, and I have personal knowledge of the facts stated herein.

2. Pursuant to Ohio Revised Code § 1509.28, the Applicant has filed an application with the Chief of the Division of Oil and Gas Resources Management requesting an order authorizing Applicant to operate the Unitized Formation and applicable land area, identified as the Cadiz E Unit A, according to the Unit Plan attached thereto (the "Application") (as those terms are used and defined therein). The Cadiz E Unit A is located in Harrison County, Ohio, and consists of seventy-seven (67) separate tracts of land covering approximately 765.938 acres.

3. As of the Application Date set forth above, the Applicant and the Working Interest Owners supporting the Application are the owners, as that term is defined in Ohio Revised Code § 1509.01(K), of at least 65% of the land overlying the Unitized Formation, as outlined in Exhibit A attached hereto.

Further sayeth Affiant naught.

Julia H. Johnson

Sworn to and subscribed before me this 16th day of APRIL, 2015.



Christina M. Wallace
Notary Public

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for : Application Date: April 21, 2015
Unit Operation :
 :
Cadiz E Unit A :

LEASE AFFIDAVIT

I, Julia Johnson, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Julia Johnson and I am a Land Negotiator with Hess Ohio Developments, LLC ("Applicant"). My day-to-day responsibilities include, in my role as Land Negotiator, supervise the research of land records in county courthouses in eastern Ohio, preparation of title reports, request and review drilling title opinions and division order title opinions. I also oversee title curative efforts and supervise the acquisition of oil and gas leases, pipeline rights-of-way, surface use agreements, and roadway easements associated with access to well sites. My duties regularly require me to coordinate my efforts with the field personnel and contractors associated with multi-well field development efforts, for the Applicant in the State of Ohio, and I have personal knowledge of the facts stated herein.

2. Pursuant to Ohio Revised Code § 1509.28, the Applicant has filed an application with the Chief of the Division of Oil and Gas Resources Management requesting an order authorizing Applicant to operate the Unitized Formation and applicable land area, identified as the Cadiz E Unit A, according to the Unit Plan attached thereto (the "Application") (as those terms are used and defined therein). The Cadiz E Unit A is located in Harrison County, Ohio, and consists of sixty-seven (67) separate tracts of land covering approximately 765.938 acres.

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

Further sayeth Affiant naught.

Julia H. Johnson

Sworn to and subscribed before me this 16th day of APRIL, 2015.



Christina M. Wallace
Notary Public

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for : Application Date: April 20, 2015
Unit Operation : Supplement Date: June 30, 2015
: :
Cadiz E Unit A : :

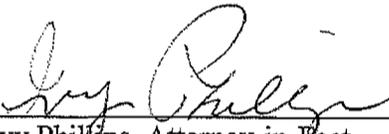
WORKING INTEREST OWNER APPROVAL

Hess Ohio Developments, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Cadiz E Unit A, located in Harrison County, Ohio, and consisting of sixty-six (66) separate tracts of land covering approximately 766 acres, according to the Unit Plan attached thereto (the "Application").

Hess Ohio Developments, LLC is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of twenty six (26) tracts of land covering approximately 574 acres contained in the Cadiz E Unit A, or 74.94% of the lands in the unit, all as more specifically described on attached Exhibit 1.

Hess Ohio Developments, LLC hereby approves, and supports the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledge receipt of full and true copies thereof.

Hess Ohio Developments, LLC

By: 
Ivy Phillips, Attorney-in-Fact

Date: 6/29/15

Exhibit 1

Tract Number	Current Mineral Owner	Acres in Unit	Parcel ID Number
1	Crawshaw, Curtis W. and Judith	12.000	05-0002185.002
2	Board of Commissioners of Harrison County Ohio	43.050	05-0002039.000
3	Board of Commissioners of Harrison County Ohio	0.362	05-0000048.000
4	Hess Ohio Developments, LLC/CNX Gas Company, LLC	51.424	05-0001835.002
5	Hess Ohio Developments, LLC/CNX Gas Company, LLC	0.461	05-0001835.005
6	Hess Ohio Developments, LLC/CNX Gas Company, LLC	5.046	05-0001835.006
7	Hess Ohio Developments, LLC/CNX Gas Company, LLC	99.923	05-0001835.001
10	Hess Ohio Developments, LLC/CNX Gas Company, LLC	25.339	05-0001862.000
14	Luther, Anna Mae	0.456	05-0002148.002
26	Hess Ohio Developments, LLC/CNX Gas Company, LLC	128.268	05-000135.000
29	Hess Ohio Developments, LLC/CNX Gas Company, LLC	0.704	05-0000114.000
30	Hess Ohio Developments, LLC/CNX Gas Company, LLC	0.253	05-0000114.001
33	Pugh, William	0.629	05-0002144.000
39	Hess Ohio Developments, LLC/CNX Gas Company, LLC	11.090	05-0001835.008
43	Hess Ohio Developments, LLC/CNX Gas Company, LLC	16.889	05-0001845.000
44	Hess Ohio Developments, LLC/CNX Gas Company, LLC	1.512	05-0000115.000
48	Hess Ohio Developments, LLC/CNX Gas Company, LLC	111.003	05-0001825.000
49	Hess Ohio Developments, LLC/CNX Gas Company, LLC	43.431	05-0001825.001
54	Eastern Ohio Housing Development Corporation	0.702	05-0001287.004
55	Harrison County Board of Commissioners	0.260	05-0001287.006
56	Hess Ohio Developments, LLC/CNX Gas Company, LLC	0.146	05-0001835.004
61	Harrison County Board of Commissioners	0.771	05-0001287.005
63	Hess Ohio Developments, LLC/CNX Gas Company, LLC	0.182	05-0000699.001
64	Hess Ohio Developments, LLC/CNX Gas Company, LLC	5.418	05-0001835.009
65	Hess Ohio Developments, LLC/CNX Gas Company, LLC	14.638	05-0001833.000
66	Hess Ohio Developments, LLC/CNX Gas Company, LLC	0.048	04-0000055.000

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for : Application Date: April 20, 2015
Unit Operation : Supplement Date: June 30, 2015
:
Cadiz E Unit A :

WORKING INTEREST OWNER APPROVAL

Hess Ohio Developments, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Cadiz E Unit A, located in Harrison County, Ohio, and consisting of sixty-six (66) separate tracts of land covering approximately 766 acres, according to the Unit Plan attached thereto (the "Application").

Chesapeake Exploration, L.L.C. and CHK, Utica L.L.C. are the owners (as that term is defined in Ohio Revised Code § 1509.01(K)) of 32 tracts of land covering approximately 132 acres contained in the Cadiz E Unit A, or 17.26% of the lands in the unit, all as more specifically described on attached Exhibit 1.

Chesapeake Exploration, L.L.C. and CHK Utica, L.L.C. hereby approve, and support the making of, the Application, including without limitation the Unit Plan attached thereto, and acknowledge receipt of full and true copies thereof.

Chesapeake Exploration, L.L.C.

By: [Signature]
Dan Weinmeister, Land Manager -
Appalachia South
Date: 6/30/2015 B/C

CHK Utica, L.L.C.

By: [Signature]
Dan Weinmeister, Land Manager -
Appalachia South
Date: 6/30/2015 B/C

Exhibit 1

Tract Number	Current Mineral Owner	Surface Acres in Unit	Parcel ID Number
8	Kelley, Kurt A	7.880	04-0000061.001
9	Blake, Jeffrey and Mary Jane	2.279	05-0000699.000
11	Twin Minerals Land, LTD. Triple Crown Energy, L.L.C.	39.097	04-0000061.000
12	Twin Minerals Land, LTD. Triple Crown Energy, L.L.C.	7.790	04-0000061.002
13	Luther, Teresa Mae Fledderus, Elizabeth Ann Luther, Dorothy Jean Luther, William Paul, jr.	24.873	05-0002148.000
15	Luther, Anna Mae	3.263	05-0002149.000
16	LFC Rentals, an Ohio general partnership	1.061	05-0000976.000
17	Kelley, Kurt A	0.516	05-0002148.001
18	Glover, Robert & Dorothy	0.489	05-0000596.000
19	Glover, Robert & Dorothy	0.186	05-0000597.001
20	Kalman, Kenneth & Lisa	1.230	05-0000597.002
21	Manbeck, Douglas & Anna	0.476	05-0000597.000
22	Ripley, Heidi J	0.842	05-0001061.000
23	Fledderus, Thomas M	0.959	05-0000258.000
24	Soos, Mark J	0.963	05-0001250.000
25	LFC Rentals, an Ohio general partnership	5.789	05-0001868.000
27	Forest Land LTD	3.733	05-0001868.001
28	Russell, John S. & Joan S.	1.965	05-0000113.000
31	Heaston, Rhonda K.	0.518	05-0001124.000
32	Hauber, James S & Michele	0.509	05-0002013.000
34	Mattern, J Arthur & Nan J	2.141	05-0002143.000
35	Davis, Roger W & H Jean	1.543	05-0002143.001
40	Bounty Minerals LLC Liming, Donald W	29.551	05-0001865.000
41	Bounty Minerals LLC Liming, Donald W	1.593	05-0001865.001
42	Bounty Minerals LLC Liming, Donald W	4.262	05-0001865.002
50	Liggett Enterprises, LTD Robert Charles Baxter Cristofaro, Alice Ann and Michael	5.313	05-0001873.000
51	Liggett Enterprises, LTD Robert Charles Baxter Cristofaro, Alice Ann and Michael	4.674	05-0002295.000
57	Heaston, Rhonda K.	0.655	05-0001125.000
58	McPeak, Richard A. and Sondra L.	0.024	05-0000031.000
59	McPeak, Richard A. and Sondra L.	0.170	05-0000032.000
62	Brown, Audrey	0.017	05-0001349.000
67	Bounty Minerals LLC Liming, Donald W	24.998	04-0000063.000

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for : Application Date: April 20, 2015
Unit Operation : Supplement Date: June 30, 2015
:
Cadiz E Unit A :

WORKING INTEREST OWNER APPROVAL

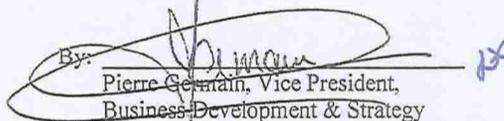
Hess Ohio Developments, LLC ("Applicant") has prepared and/or filed an application asking the Chief of the Division of Oil and Gas Resources Management to issue an order authorizing Applicant to operate the Cadiz E Unit A, located in Harrison County, Ohio, and consisting of sixty-six (66) separate tracts of land covering approximately 766 acres, according to the Unit Plan attached thereto (the "Application").

Total E&P USA, Inc. is the owner (as that term is defined in Ohio Revised Code § 1509.01(K)) of 29 tracts of land covering approximately 47 acres contained in the Cadiz E Unit A, or 6.15% of the lands in the unit, all as more specifically described on attached Exhibit 1.

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

Total E&P USA, Inc.

By:

 17
Pierre Germain, Vice President,
Business Development & Strategy

Date:

6.30.2015

Exhibit 1

Tract Number	Current Mineral Owner	Acres in Unit	Parcel ID Number
8	Kelley, Kurt A	7.880	04-0000061.001
9	Blake, Jeffrey and Mary Jane	2.279	05-0000699.000
11	Twin Minerals Land, LTD. Triple Crown Energy, L.L.C.	39.097	04-0000061.000
12	Twin Minerals Land, LTD. Triple Crown Energy, L.L.C.	7.790	04-0000061.002
13	Luther, Teresa Mae Fledderus, Elizabeth Ann Luther, Dorothy Jean Luther, William Paul, jr.	24.873	05-0002148.000
15	Luther, Anna Mae	3.263	05-0002149.000
16	LFC Rentals, an Ohio general partnership	1.061	05-0000976.000
17	Kelley, Kurt A	0.516	05-0002148.001
18	Glover, Robert & Dorothy	0.489	05-0000596.000
19	Glover, Robert & Dorothy	0.186	05-0000597.001
20	Kalman, Kenneth & Lisa	1.230	05-0000597.002
21	Manbeck, Douglas & Anna	0.476	05-0000597.000
22	Ripley, Heidi J	0.842	05-0001061.000
23	Fledderus, Thomas M	0.959	05-0000258.000
25	LFC Rentals, an Ohio general partnership	5.789	05-0001868.000
27	Forest Land LTD	3.733	05-0001868.001
31	Heaston, Rhonda K.	0.518	05-0001124.000
34	Mattern, J Arthur & Nan J	2.141	05-0002143.000
35	Davis, Roger W & H Jean	1.543	05-0002143.001
40	Bounty Minerals LLC Liming, Donald W	29.551	05-0001865.000
41	Bounty Minerals LLC Liming, Donald W	1.593	05-0001865.001
42	Bounty Minerals LLC Liming, Donald W	4.262	05-0001865.002
50	Liggett Enterprises, LTD Robert Charles Baxter Cristofaro, Alice Ann and Michael	5.313	05-0001873.000
51	Liggett Enterprises, LTD Robert Charles Baxter Cristofaro, Alice Ann and Michael	4.674	05-0002295.000
57	Heaston, Rhonda K.	0.655	05-0001125.000
58	McPeak, Richard A. and Sondra L.	0.024	05-0000031.000
59	McPeak, Richard A. and Sondra L.	0.170	05-0000032.000
62	Brown, Audrey	0.017	05-0001349.000
67	Bounty Minerals LLC Liming, Donald W	24.998	04-0000063.000

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

In re the Matter of the Application of :
Hess Ohio Developments, LLC for : Application Date: April 20, 2015
Unit Operation : Supplement Date: June 30, 2015
:
Cadiz E Unit A :

**AFFIDAVIT OF JULIA JOHNSON
(CONTACTS – UNLEASED MINERAL OWNERS)**

I, Julia Johnson, being first duly cautioned and sworn, do hereby depose and state as follows:

1. My name is Julia Johnson and I am a Land Negotiator with Hess Ohio Developments, LLC (“Applicant”). In that role, my day-to-day responsibilities include the supervision of the research of land records in eastern Ohio county courthouses and the preparation of title reports. I also request and review drilling title opinions and division order title opinions. Further, I oversee title curative efforts and supervise the acquisition of oil and gas leases, pipeline rights-of-way, surface use agreements, and roadway easements associated with access to well sites. My duties regularly require me to coordinate my efforts with the field personnel and contractors associated with multi-well field development efforts for the Applicant in the State of Ohio.

2. As part of those responsibilities, I work with and supervise contractors representing Applicant who contact landowners and obtain oil and gas leases on behalf of Applicant, including individuals from Percheron, LLC (“Land Company”).

3. I have received reports of contacts and attempts to contact that Land Company has made to lease unleased lands within the Cadiz E Unit A. Those contacts and attempts are detailed below.

4. The following contacts were made or attempted:

**Parcel Nos. 05-0001286.000 and 05-0001287.000 (Tracts 38 and 47)
Owner’s Name: Gables at Countryside Lane II, LLC (“Current Owners”)**

<u>Date</u>	<u>Party Contacted</u>	<u>By Whom</u>	<u>Method</u>	<u>Response</u>
5/13/2014	Jennifer Ricci	Land Company	Phone	None
5/27/2014	Jennifer Ricci	Land Company	Phone	Emailed a lease offer
5/30/2014	Jennifer Ricci	Land Company	Phone	Requested a map showing distance from well
5/30/2014	Land Company	Jennifer Ricci	Email	Indicated they review offered lease soon.
6/10/2014	Jennifer Ricci	Land Company	Email	Requested an update
6/10/2014	Land Company	Jennifer Ricci	Email	Waiting on approval
6/24/2014	Jennifer Ricci	Land Company	Email	Requested an update
7/8/2014	Jennifer Ricci	Land Company	Phone and email	Left a message requesting an update
7/10/2014	Land Company	Jennifer Ricci	Email	They will need approval of their partners

7/10/2014	Jennifer Ricci	Land Company	Email	Update to lease offer due to ownership details
7/11/2014	Jennifer Ricci	Land Company	Email	Requested information
7/11/2014	Land Company	Jennifer Ricci	Email	Obtaining requested information
7/29/2014	Jennifer Ricci	Land Company	Email	Requested update
8/4/2014	Woda Group	Land Company	Phone	Requested a contact to discuss leasing
8/4/2014	Land Company	Jennifer Ricci	Email	Informed that they need investor approval
8/4/2014	Jennifer Ricci	Land Company	Email	Requested an update on timing
8/4/2014	Land Company	Jennifer Ricci	Email	Informed that no timeframe should be expected
8/19/2014	Jennifer Ricci	Andrew Keck	Letter	Mailed a lease packet
8/28/2014	Jennifer Ricci	Land Company	Email	Requested update
9/9/2014	Jennifer Ricci	Land Company	Phone	Suggested potential signing
9/22/2014	Jennifer Ricci	Land Company	Phone	Concern regarding surface use
9/22/2014	Jennifer Ricci	Land Company	Email	Emailed non-surface lease terms
9/26/2014	Jennifer Ricci	Land Company	Email	Requested update
10/1/2014	Jennifer Ricci	Land Company	Phone	Left voice mail
10/7/2014	Jennifer Ricci	Land Company	Phone	Indicated signing soon
10/14/2014	Jennifer Ricci	Land Company	Phone and email	Requested update
10/20/2014	Jennifer Ricci	Land Company	Phone	Left voice mail requesting update
10/22/2014	Jennifer Ricci	Land Company	Phone	Left voice mail requesting update
10/27/2014	Jennifer Ricci	Land Company	Phone	Left voice mail concerning request to sign a letter to allow Hess to permit Cadiz E Unit A wells
10/27/2014	Land Company	Jennifer Ricci	Phone	Concerning permit support letter for review
11/03/2014	Jennifer Ricci	Land Company	Email	Sent permit support letter
11/18/2014	Jennifer Ricci	Land Company	Email	Requested an update
12/09/2014	Jennifer Ricci	Land Company	Email and Phone	Left a voice mail /e-mail requesting update
12/18/2014	Jennifer Ricci	Land Company	Phone	Left a voice mail /e-mail requesting update

01/05/2015	Jennifer Ricci	Land Company	Phone	Voice mail concerning whether or not leases will be, or not
02/11/2015	Jennifer Ricci	Land Company	Phone	No answer
03/10/2015	Jennifer Ricci	Land Company	Phone	Left message requesting an update
03/17/2015	Jennifer Ricci	Land Company	Phone	Requested time to consider lease terms
03/23/2015	Jennifer Ricci	Land Company	Phone	Requested time to consider lease terms
03/31/2015	Jennifer Ricci	Land Company	Email	Requested update
04/13/2015	Jennifer Ricci	Land Company	Email	Requested update
04/13/2015	Land Company	Jennifer Ricci	Email	Lease comments should be sent next day
04/13/2015	Land Company	Jennifer Ricci	Email	Comments to the lease received
5/1/2015	Land Company	Jennifer Ricci	Phone	Discussed potential lease terms but an agreement was not reached
5/12/2015	Jennifer Ricci	Land Company	Email	Requested update
5/27/2015	Jennifer Ricci	Land Company	Email	Requested update
6/2/2015	Jennifer Ricci	Land Company	Email	Requested update
6/2/2015	Land Company	Jennifer Ricci	Email	Indicated that agreement is close
6/5/2015	Jennifer Ricci	Land Company	Email	Requested update
6/5/2015	Land Company	Jennifer Ricci	Email	Requested lease forms
6/8/2015	Jennifer Ricci	Land Company	Email	Sent requested forms
6/17/2015	Jennifer Ricci	Land Company	Email	Requested update
6/18/2015	Land Company	Jennifer Ricci	Email	Proposal being considered

**Parcel Nos. 05-0001286.002, 05-0001287.009, 05-0001287.008, and 05-0000000.000
(Tracts 36, 52, 53 and 60, respectively)**

**Owner's Name: Cadiz Homes Limited Partnership
("Current Owners")**

05/13/2014	Jennifer Ricci	Land Company	Phone	Left voicemail to the Woda Group (owners of Cadiz Homes . . .)
05/27/2014	Jennifer Ricci	Land Company	Phone and Email	Emailed Leases for review
05/30/2014	Land Company	Jennifer Ricci	Phone	Requested information regarding distance from wells
05/30/2014	Jennifer Ricci	Land Company	Email	Requested a map showing distance from well
05/30/2014	Land Company	Jennifer Ricci	Email	Received map and lease to review
06/10/2014	Jennifer Ricci	Land Company	Email	Requested update

06/10/2014	Land Company	Jennifer Ricci	Email	Awaiting signed leases
06/24/2014	Jennifer Ricci	Land Company	Email	Requested update
07/08/2014	Jennifer Ricci	Land Company	Phone and Email	Requested update
07/10/2014	Land Company	Jennifer Ricci	Email	Partners do not own Muddy Run LP
0710/2014	Jennifer Ricci	Land Company	Email	Updated leases per ownership details
07/11/2014	Jennifer Ricci	Land Company	Email	Tax information sent to Muddy Run and requested Muddy Run contact
07/11/2014	Land Company	Jennifer Ricci		Company manages Muddy Run and will inquire as to contact
07/29/2014	Jennifer Ricci	Land Company	Email	Requested update
08/04/2014	Woda Group	Land Company	Phone	Requested contact
08/04/2014	Land Company	Jennifer Ricci		Informed that they need investor approval
08/04/2014	Jennifer Ricci	Land Company	Email	Requested update
08/04/2014	Land Company	Jennifer Ricci		Slow process due to housing developments
08/19/2014	Jennifer Ricci	Andrew Keck	Mail	Mailed a lease packet
08/28/2014	Jennifer Ricci	Land Company	Email	Requested update
09/09/2014	Jennifer Ricci	Land Company	Phone	Suggested potential signing
09/22/2014	Jennifer Ricci	Land Company	Phone	Concern regarding surface use. Proposed non-surface lease
09/22/2014	Jennifer Ricci	Land Company	Email	Sent non-surface usage leases
09/26/2014	Jennifer Ricci	Land Company	Email	Requested update
10/01/2014	Jennifer Ricci	Land Company	Phone	Left voice mail requesting update
10/07/2014	Jennifer Ricci	Land Company	Phone	Suggested potential signing
10/14/2014	Jennifer Ricci	Land Company	Phone and Email	Requested update
10/20/2014	Jennifer Ricci	Land Company	Phone	Left voice mail requesting update
10/22/2014	Jennifer Ricci	Land Company	Phone	Left voice mail requesting update
10/27/2014	Jennifer Ricci	Land Company	Phone	Left voice mail requesting update
10/27/2014	Land Company	Jennifer Ricci	Email	Request permit support letter
11/03/2014	Jennifer Ricci	Land Company	Email	Sent permit support letter
11/18/2014	Jennifer Ricci	Land Company	Email	Requested update

12/09/2014	Jennifer Ricci	Land Company	Email and Phone	Left message and sent an email requesting update
12/18/2014	Jennifer Ricci	Land Company		Left message
01/05/2015	Jennifer Ricci	Land Company	Phone	Requested update on signing
02/11/2015	Jennifer Ricci	Land Company	Phone	No answer
03/10/2015	Jennifer Ricci	Land Company	Phone	Requested an update
03/17/2015	Jennifer Ricci	Land Company	Phone	Has comments regarding the lease
03/23/2015	Jennifer Ricci	Land Company	Phone	Requested time to send her comments regarding the lease
03/31/2015	Jennifer Ricci	Land Company	Email	Requested update
04/13/2015	Jennifer Ricci	Land Company	Email	Requested update
04/13/2015	Land Company	Jennifer Ricci	Email	Comments will be sent soon
04/13/2015	Land Company	Jennifer Ricci	Email	Comments received to review for Gables and Cadiz Homes leases
5/1/2015	Land Company	Jennifer Ricci	Phone	Discussed potential lease terms agreement was not reached
5/12/2015	Jennifer Ricci	Land Company	Email	Requested update
5/27/2015	Jennifer Ricci	Land Company	Email	Requested update
6/2/2015	Jennifer Ricci	Land Company	Email	Requested update
6/2/2015	Land Company	Jennifer Ricci	Email	Indicated that agreement is close
6/5/2015	Jennifer Ricci	Land Company	Email	Requested update
6/5/2015	Land Company	Jennifer Ricci	Email	Requested lease forms
6/8/2015	Jennifer Ricci	Land Company	Email	Sent requested forms
6/17/2015	Jennifer Ricci	Land Company	Email	Requested update
6/18/2015	Land Company	Jennifer Ricci	Email	Proposal being considered

**Parcel Nos. 05-0001286.001 and 05-0001287.001 (Tracts 37 and 46)
Owner's Name: Muddy Run Limited Partnership
("Current Owners")**

07/10/2014	Land Company	Jennifer Ricci	Email	Woda Group does not own Muddy Run LP
07/11/2014	Jennifer Ricci	Land Company	Email	Tax information sent to Muddy Run and request Muddy Run contact
07/11/2014	Land Company	Jennifer Ricci	Email	Company manages Muddy Run LP will inquire as to a contact
07/22/2014	Cambridge, Cadiz offices	Land Company	Phone	Call Woda Group to obtain contact

07/29/2014	Jennifer Ricci	Land Company	Email	Requested update and contact
09/09/2014	Jennifer Ricci	Land Company	Phone	Request contact, was told Woda Group is trying to take property via court, nothing found in the courts
09/16/2014	James Bentley's ex wife	Land Company	Home visit	Not able to contact Mr. Bentley.
09/23/2014	James Bentley	Land Company	Home visit	Visited Canton address. Obtained Mr. Bentley's cell number.
09/23/2014	James Bentley	Land Company	Phone	Left voicemail
09/25/2014	James Bentley	Land Company	Phone	Requested update on execution of lease
09/26/2014	James Bentley	Land Company	Mail	Non-surface usage lease mailed
10/07/2014	James Bentley	Land Company	Phone	Left voicemail
10/14/2014	James Bentley	Land Company	Phone	May sign once Cadiz Homes and Gables signs leases
03/03/2015	James Bentley	Land Company	Phone	Received lease package. Awaiting Cables and Cadiz Homes signed lease.

Further sayeth Affiant naught.

Julia Gohmer

Sworn to and subscribed before me this 29th day of June, 2015.

Christina M. Wallace



Cadiz E Unit A - With Unitization

Cadiz Township
Harrison County, OH

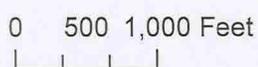


1 inch = 1,000 feet



Cadiz E Unit A - With Unitization

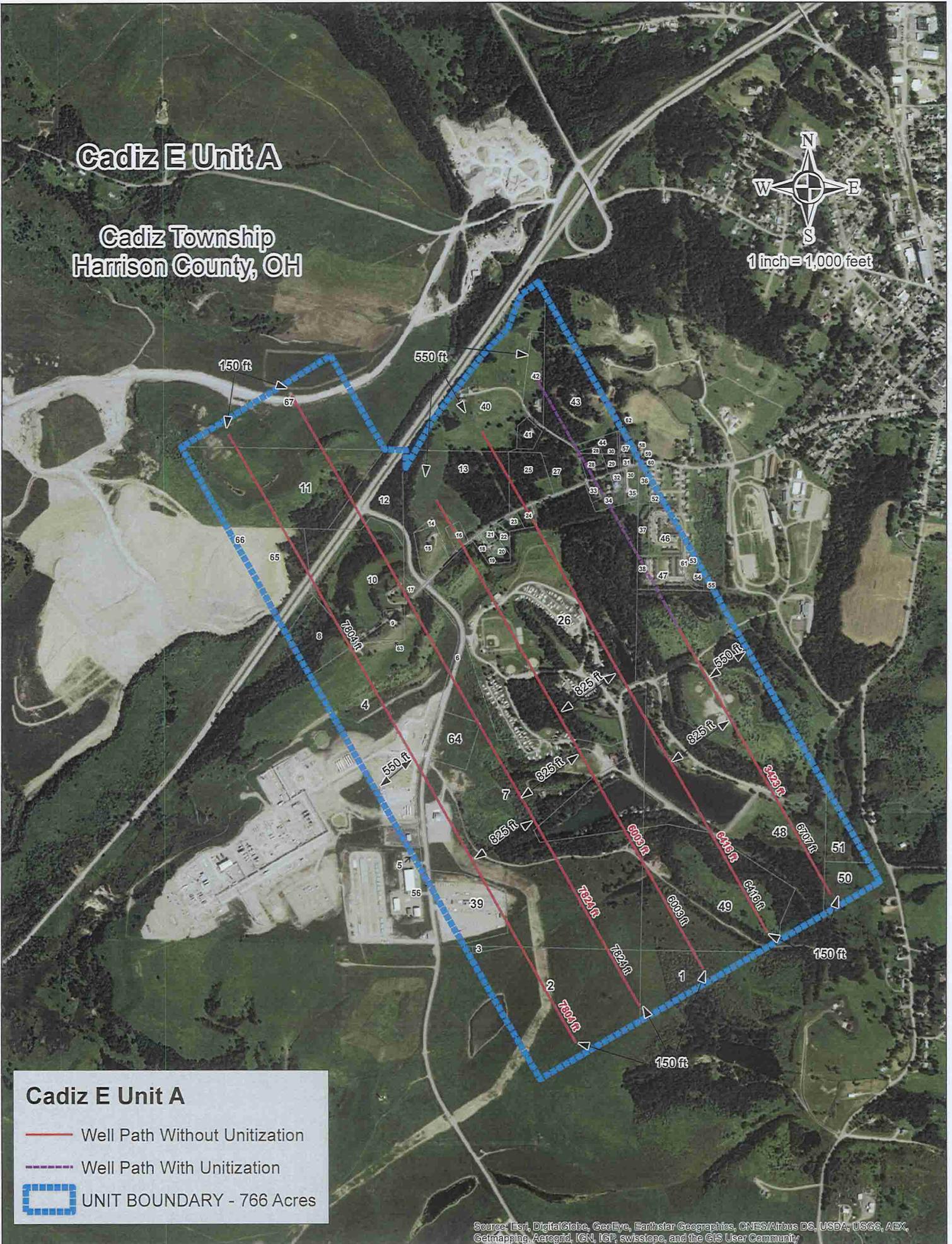
-  WELL PATH
-  WELL PAD
-  LEASED/FEE - 754 Acres
-  UNLEASED - 12 Acres
-  UNIT BOUNDARY - 766 Acres



Date: 6/26/2015

Cadiz E Unit A

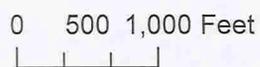
Cadiz Township
Harrison County, OH



Cadiz E Unit A

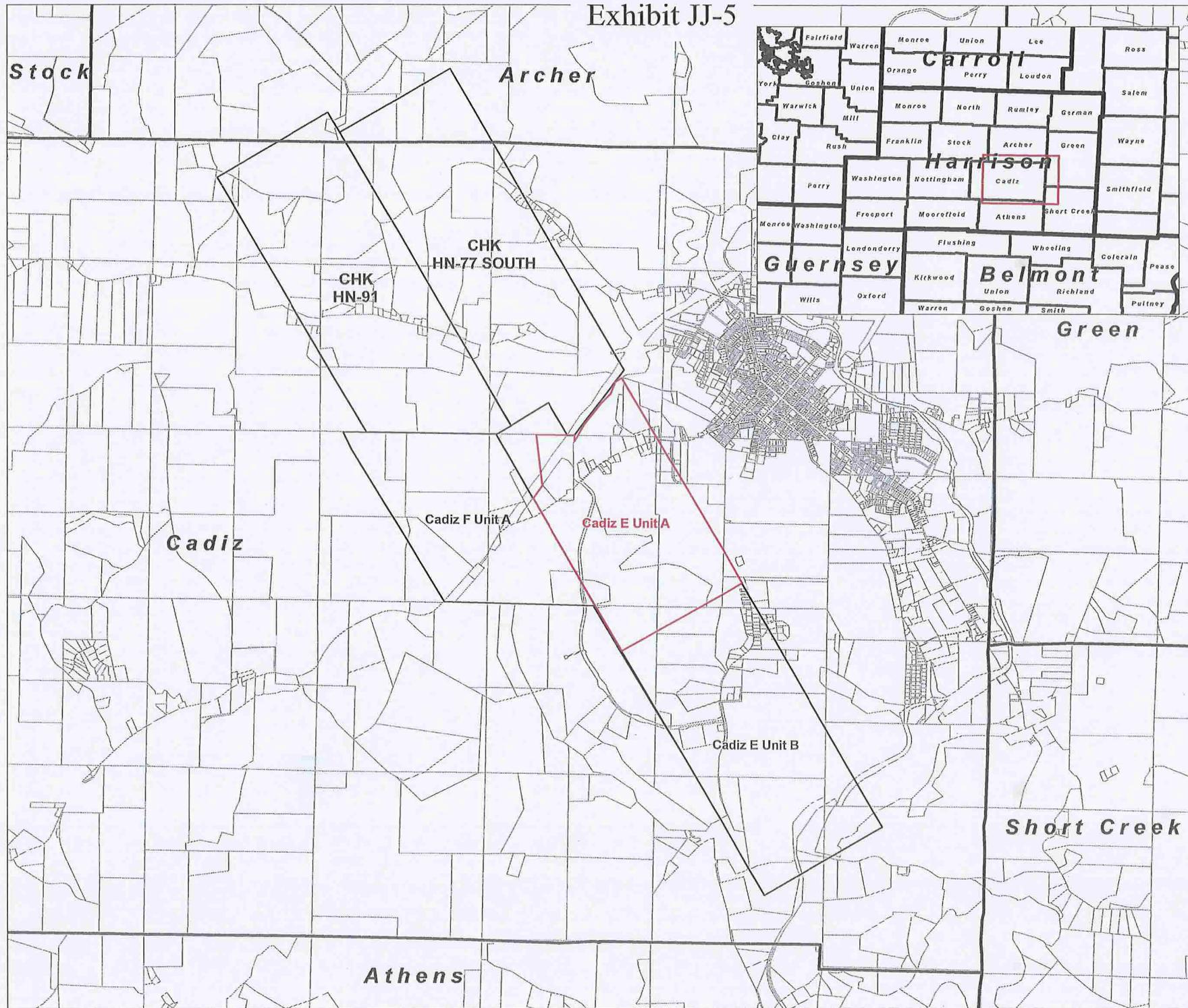
- Well Path Without Unitization
- Well Path With Unitization
- UNIT BOUNDARY - 766 Acres

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Date: 6/26/2015

Exhibit JJ-5



Land Exhibit

Cadiz E Unit A
 Cadiz & Archer
 Townships
 Harrison County, OH

 Cadiz E Unit A
 Adjacent Units

1 inch = 1,000 feet
 Utica Ohio
 Date: 4/15/2015
 Author: shestlow