

**STATE OF NEW MEXICO  
DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES  
OIL CONSERVATION DIVISION**

**APPLICATION OF PEDERNALES  
PRODUCTION, LP FOR APPROVAL  
OF A UNIT AGREEMENT,  
LEA COUNTY, NEW MEXICO.**

**CASE NO. 14405**

**AFFIDAVIT OF JOHN THOMA**

STATE OF TEXAS        )  
                                  ) ss.  
COUNTY OF COLLIN    )

I, John Thoma, being first duly sworn on oath, states as follows:

1. My name is John Thoma. I reside in Frisco, Texas. I am the petroleum geologist employed by Pedernales Production, LP ("Pedernales") who is responsible for the formation of the proposed UNO State Exploratory Unit ("the Unit") comprised of 1,600.00 acres, more or less, of State of New Mexico lands situated in Lea County, New Mexico. The horizontal limits of said Unit Area are described as follows:

**Township 14 South, Range 34 East, N.M.P.M.**

Section 23: N/2  
Section 24: All  
Section 25: All

2. Pedernales, the designated Unit Operator in the UNO State Exploratory Unit Agreement, proposes the formation of the Unit to test all formations from the surface to the base of the Wolfcamp formation.

3. The initial unit well will be drilled as a horizontal well in the Wolfcamp formation traversing then N/2 N/2 of Section 23. This well will be drilled at a standard surface location in the NE/4 NE/4 of Section 23 to a legal bottom hole location in the NW/4 NW/4 of the section. The target total vertical depth for the lateral portion of the proposed test well is approximately 9,655 feet.

The following geological exhibits/attachments document the discontinuous nature of porosity development, both in thickness and lateral distribution, within the targeted upper Wolfcamp dolomite sequence in the Uno Unit area and surrounds. The discontinuous nature of porosity development within the upper Wolfcamp sequence is precisely why Pedernales Production views the reservoir as an ideal candidate for the application of horizontal development and drilling techniques. The approach and justification for horizontal development is fairly simple. Under conditions of extreme

reservoir and porosity discontinuity, such as that demonstrated by the targeted upper Wolfcamp dolomite sequence, a single vertical wellbore, spaced on 40 or 80 acres, has a much lower probability than does an extended lateral targeting this reservoir, spaced on 160 acres, of contacting multiple highly porous and economically viable reservoirs within the sequence. It is believed, therefore, that horizontal development of the upper Wolfcamp sequence will ultimately yield an economic multiple of reserve recoveries observed through vertical development.

4. Attachment A to this Affidavit is a copy of the Unit Agreement for the proposed UNO State Exploratory Unit. This agreement is on the New Mexico State Land Office State/Fee Unit Agreement form.

5. Attachment B is the plat to the Unit Agreement that shows the boundaries of the UNO State Exploratory Unit.

6. Attachment C to this Affidavit is a copy of Schedule B to the Unit Agreement for the UNO State Exploratory Unit that identifies the working interest ownership in the Unit Area. 100% of the working interest in the Unit Area is owned by Pedernales and is committed to the Unit.

7. The schedule under Attachment C also identifies the royalty interest in the Unit Area. 100% of the royalty interest is owned by the State of New Mexico and under Attachment D to this Affidavit is a letter from the New Mexico Commissioner of Public Lands giving preliminary approval of the State Land Office to the proposed UNO State Exploratory Unit.

8. All of Pedernales' interest in the Unit Area has been committed to the Unit.

9. Attachments E and F include a General Area Production Map and an Upper Wolfcamp/Basal Abo Isoporosity Map, respectfully. These maps characterize both area production and the distribution of porosity within the objective upper Wolfcamp Dolomite section across and around the proposed Uno Unit area.

The upper Wolfcamp Dolomite reservoir objective both within and in the immediate vicinity of the Uno Unit has been penetrated by numerous wells over the years which targeted deeper objectives in the Permo-Penn (Bough) section. These penetrations provide the basis for, and largely define, the proposed upper Wolfcamp Dolomite play being made within the Uno Unit area. As evidenced by Attachments H and I (Cross-Sections) the objective Wolfcamp reservoir section in the Uno Unit area develops at depths between 9600 to 9800', whereas the Bough producing reservoirs occur at depths between 10,400 to 10,600'. As illustrated on each of the accompanying maps, there are currently six penetrations of the upper Wolfcamp section within the confines of the proposed Uno Unit area. The attached Wolfcamp Isoporosity Map (Attachment F) utilizes a 6% effective porosity cutoff as measured from Neutron logs. Attachment F documents Unit porosity thicknesses ranging from 13' in the SE/SW4 section 24, T14S, R34E, to 48' as measured in the abandoned penetration located in the

NE/4NW/4 Section 23, T14S, R34E. None of the six Unit penetrations have produced from the targeted upper Wolfcamp section. There is currently one active producer in the Unit, the Marbob Energy operated Triple Tres State #1 located in the SE/4SW/4 section 24, which produces marginal volumes of gas from Atoka/Morrow perforations at a depths of 12,463' – 14,090'.

Outside of the proposed Unit boundary, as evidenced by the accompanying production map (Attachment E), all but one producing completion in the vicinity of the proposed Uno Unit are from deeper Bough, Atoka and/or Morrow reservoirs. The lone completion from the objective upper Wolfcamp dolomite section resulted from the re-completion of a depleted Bough producer. The subject well, the Apache Corporation – High Plains Unit #1, located in the NE/4NE/4 section 22, T14S, R34E, appears at point A on Cross-Section A-A' (Attachment H) and immediately offsets both the proposed Unit area as well as the proposed BHL of the Uno Unit #1 well in the NW/4NW/4 section 23, T14S, R34E. The High Plains #1 was initially completed January 1, 1965 flowing 1262 BO and 1500 MCFGPD from upper Penn (Bough) perforations between 10,438' – 10,512'. The Bough perforations ultimately yielded 298,613 BO, 954,992 MCFG and 66,856 BW before zone abandonment and re-completion to the upper Wolfcamp dolomite section between 9,644' – 9,650' in October of 1985. Prior to well plugging and abandonment in April 2002, the objective Wolfcamp dolomite reservoir had produced 39,226 BO, 73,804 MCFG and 9,654 BW. The marginal volume of hydrocarbon recovered from the Wolfcamp in the High Plains #1 suggests the contacted reservoir to be somewhat limited in size. While an encouraging show, the volume of hydrocarbon produced from the upper Wolfcamp dolomite in the High Plains #1 well does not, by itself, provide economic justification for further conventional vertical development of this objective.

In general, subsurface correlation and Isoporosity mapping of the objective upper Wolfcamp dolomite sequence in the Uno Unit area, as well as throughout central northern Lea County, suggests the upper Wolfcamp sequence is characterized by a multitude of pervasively hydrocarbon bearing, aerially discontinuous benches or pods of porosity development which have, at best, been proven difficult to economically develop through conventional vertical drilling. In fact, attempts at conventional vertical development of this reservoir sequence has confirmed the discontinuous nature of the sequence in as much as production volumes from producing well to producing well are, in fact, widely variant and hence consistent with a laterally discontinuous reservoir sequence.

10. Attachment G is a Wolfcamp XX Marker Structure Map and shows Pedernales proposed well location in the N/2 N/2 of Section 23.

Production within the objective sequence is believed to be largely controlled by porosity development, therefore, structure plays only a limited role related to porosity enhancement through fracturing. The accompanying XX Structure map indicates the presence of a minor flexure which crosses the Unit area from northwest to southeast. This flexure could potentially cause natural fracturing which could in turn enhance reservoir porosity and permeability within the proposed Unit area. The proposed surface location in the NE/4NE/4 section 23 is expected to encounter the XX marker at a subsea elevation of approximately -5825', approximately

65' down dip of the abandoned Wolfcamp/Bough C producer located in the NE/4NE/4 section 22.

11. Attachment H and Attachment I include the Abo/Wolfcamp Stratigraphic Cross Sections A-A' and B-B'.

Justification for inclusion of each of the subject leases within the Uno Unit is based on evidence provided by the six Wolfcamp penetrations within the Unit area. The objective Wolfcamp section from each of these penetrations is highlighted on Cross-Sections A-A' and B-B' and each penetration documents the presence of varying thicknesses of porosity development within the objective Wolfcamp horizon across the proposed Unit Area.

The Wolfcamp Dolomite is designated as the Wolfcamp Dolomite Pay which is highlighted in lavender on the attached cross-sections. Porosity is shaded in red on the attached sections. Cross-Section A-A' traverses the Unit from West to East, beginning immediately outside of the Unit area at point A in the abandoned Abo/Wolfcamp producer located in the NE/4NE/4 Section 22, T14S, R34E and terminating just outside of the Unit area at point A' in the Yates Petroleum – Mandrell State Unit #1, located in the NW/4NW/4 section 19, T14S, R35E. The off scale log which appears on the right hand side of Cross-Section A-A', off the line of section, is the Warren American Oil Company & Ralph Lowe Estate – Texaco State #1. The Texaco State #1 is located within the proposed Unit boundary, in the NW/4NW/4 section 24, T14S, R34E. The scale log that appears on section A-A' was the only log available and was included for reference.

Cross-Section B-B' traverses the proposed Unit area from northwest to southeast, beginning at point B, just north of the Unit boundary, in the Cayman Corporation – High Plains #1, located in the NE/4SW/4 section 14, T14S, R34E and terminating within the Unit area at point B' in the Elk Oil Company – Union State #1, located in the SE/4SW/4 section 25, T14S, R34E.

As evidenced by these Cross-Sections, each penetration within the proposed Unit area exhibit potentially viable and productive porosity within the objective upper Wolfcamp dolomite section. It is this direct evidence along with Isoporosity mapping of the objective zone that justifies inclusion of each of the subject leases within the proposed Uno Unit.

12. The unit covers an area that can be reasonably developed under a unit plan.

13. Pedernales is attempting to develop an upper Wolfcamp section that develops at depths between 9600 feet to 9800 feet. Other wells in the area have targeted deeper objectives in the Permo Penn (Bough) section which occurs at depths between 10,400 feet to 10,600 feet or the Atoka-Morrow at depths of 12,463 feet to 14,090 feet.

14. If the initial unit well is successful, additional wells will be drilled in the Unit Area. Accordingly, approval of the unit agreement will result in the efficient recovery of hydrocarbons.

15. Approval of the UNO State Exploratory Unit and the development of the Unit Area pursuant to a unit plan is in the best interest of conservation, the prevention of waste and the protection of correlative rights.

FURTHER AFFIANT SAYETH NOT.

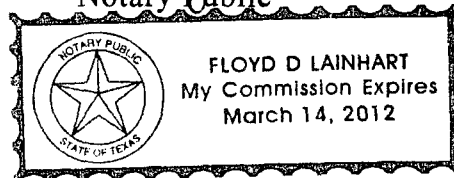
*[Signature]*

SUBSCRIBED AND SWORN before me on this 12 day of December, 2009.

*Floyd D. Lainhart*  
Notary Public

My Commission Expires:

03-14-2012



UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION OF THE  
UNO STATE EXPLORATORY UNIT AREA  
LEA COUNTY, NEW MEXICO  
NO. \_\_\_\_\_

THIS AGREEMENT, entered into as of the 1st day of January, 2010, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as the "parties hereto";

WITNESSETH:

WHEREAS, the parties hereto are the owners of working, royalty, or other oil or gas interests in the unit area subject to this agreement; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 3, Chap. 88, Laws 1943) as amended by Sec. 1 of Chapter 162, Laws of 1951, (Chap. 19, Art. 10, Sec. 45, N.M. Statutes 1978 Annotated), to consent to and approve the development or operation of State Lands under agreements made by lessees of State Land jointly or severally with other lessees where such agreements provide for the unit operation or development of part of or all of any oil or gas pool, field, or area; and

WHEREAS, the Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 1, Chap. 162), (Laws of 1951, Chap. 19, Art. 10, Sec. 47, N.M. Statutes 1978 Annotated) to amend with the approval of lessee, evidenced by the lessee's execution of such agreement or otherwise, any oil and gas lease embracing State Lands so that the length of the term of said lease may coincide with the term of such agreements for the unit operation and development of part or all of any oil or gas pool, field, or area; and

WHEREAS, the Oil Conservation Division of the Energy and Minerals Department of the State of New Mexico (hereinafter referred to as the "Division"), is authorized by an Act of the Legislature (Chap. 72, Laws 1935, as amended, being Section 70-2-1 et seq. N. M. Statutes Annotated, 1978 Compilation) to approve this agreement and the conservation provisions hereof; and

**ATTACHMENT A**

WHEREAS, the parties hereto hold sufficient interests in the Uno State Exploratory Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to conserve natural resources, prevent waste and secure other benefits obtainable through development and operation of the area subject to this agreement under the terms, conditions and limitations herein set forth;

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this agreement their respective interests in the below defined unit area, and agree severally among themselves as follows:

1. UNIT AREA: The following described land is hereby designated and recognized as constituting the unit area:

Township 14 South, Range 34 East, NMPM  
Section 23: N/2  
Section 24: All  
Section 25: All

Containing 1,600.00 total acres, more or less, in Lea County, New Mexico

Exhibit "A" attached hereto is a map showing the unit area and the boundaries and identity of tracts and leases in said area to the extent known to the unit operator. Exhibit "B" attached hereto is a schedule showing to the extent known to the unit operator the acreage, percentage and kind of ownership of oil and gas interests in all lands in the unit area. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown on said map or schedule as owned by such party. Exhibit "A" and "B" shall be revised by the unit operator whenever changes in ownership in the unit area render such revisions necessary or when requested by the Commissioner of Public Lands, hereinafter referred to as "Commissioner" or the Oil Conservation Division, hereinafter referred to as the "Division".

All land committed to this agreement shall constitute land referred to herein as "unitized land" or "land subject to this agreement".

2. UNITIZED SUBSTANCES: All oil, gas, natural gasoline, and associated fluid hydrocarbons in any and all formations from the surface to the base of the Wolfcamp formation of the unitized land are unitized under the terms of this agreement and herein are called "unitized substances", with the Wolfcamp formation described as the Wolfcamp formation found in the well log dated 8-4-66 in the Warren American

Oil Company & Ralph Lowe Estate Texaco Estate #1 well, located 660' FNL & 660' FWL of Section 24, T14S, R34E, NMPM, Lea County, New Mexico.

3. UNIT OPERATOR: Pedernales Production, LP, whose address is 6363 Woodway, Suite 560, Houston, Texas 77057 is hereby designated as unit operator and by signature hereto commits to this agreement all interest in unitized substances vested in it as set forth in Exhibit "B", and agrees and consents to accept the duties and obligations of unit operator for the discovery, development and production of unitized substances as herein provided. Whenever reference is made herein to the unit operator, such reference means the unit operator acting in that capacity and not as an owner of interests in unitized substances, and the term "working interest owner" when used herein shall include or refer to unit operator as the owner of a working interest when such an interest is owned by it.

4. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit operator shall have the right to resign at any time but such resignation shall not become effective until a successor unit operator has been selected and approved in the manner provided for in Section 5 of this agreement. The resignation of the unit operator shall not release the unit operator from any liability or any default by it hereunder occurring prior to the effective date of its resignation.

Unit operator may, upon default or failure in the performance of its duties or obligations hereunder, be subject to removal by the same percentage vote of the owners of working interests determined in like manner as herein provided for the selection of a new unit operator. Such removal shall be effective upon notice thereof to the Commissioner and the Division.

The resignation or removal of the unit operator under this agreement shall not terminate his right, title or interest as the owner of a working interest or other interest in unitized substances, but upon the resignation or removal of unit operator becoming effective, such unit operator shall deliver possession of all equipment, materials, and appurtenances used in conducting the unit operations and owned by the working interest owners to the new duly qualified successor unit operator, or to the owners thereof if no such new unit operator is elected, to be used for the purpose of conducting unit operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment and appurtenances needed for the preservation of wells.



5. SUCCESSOR UNIT OPERATOR: Whenever the unit operator shall resign as unit operator or shall be removed as hereinabove provided, the owners of the working interests according to their respective acreage interests in all unitized land shall by a majority vote select a successor unit operator; provided that, if a majority but less than seventy-five percent (75%) of the working interests qualified to vote is owned by one party to this agreement, a concurring vote of sufficient additional parties, so as to constitute in the aggregate not less than seventy-five percent (75%) of the total working interests, shall be required to select a new operator. Such selection shall not become effective until (a) a unit operator so selected shall accept in writing the duties and responsibilities of unit operator, and (b) the selection shall have been approved by the Commissioner. If no successor unit operator is selected and qualified as herein provided, the Commissioner at his election, with notice to the Division, may declare this unit agreement terminated.

6. ACCOUNTING PROVISIONS: The unit operator shall pay in the first instance all costs and expenses incurred in conducting unit operations hereunder, and such costs and expenses and the working interest benefits accruing hereunder shall be apportioned among the owners of the unitized working interests in accordance with an operating agreement entered into by and between the unit operator and the owners of such interests, whether one or more, separately or collectively. Any agreement or agreements entered into between the working interest owners and the unit operator as provided in this section, whether one or more, are herein referred to as the "Operating Agreement". No such agreement shall be deemed either to modify any of the terms and conditions of this unit agreement or to relieve the unit operator of any right or obligation established under this unit agreement and in case of any inconsistencies or conflict between this unit agreement and the operating agreement, this unit agreement shall prevail.

7. RIGHTS AND OBLIGATIONS OF UNIT OPERATOR: Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the unitized substances are hereby delegated to and shall be exercised by the unit operator as herein provided. Acceptable evidence of title to said rights shall be deposited with said unit operator and, together with this agreement, shall constitute and define the rights, privileges and obligations of unit operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this agreement the unit operator, in its capacity as unit operator, shall

exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

8. DRILLING TO DISCOVERY: The unit operator shall, within sixty (60) days after the effective date of this agreement, commence operations upon an adequate test well for oil and gas upon some part of the lands embraced within the unit area and shall drill said well with due diligence to 10,000' TVD (True Vertical Depth) and 14,000' MD (Measured Depth) sufficient to encounter the top of the Wolfcamp formation or to such a depth as unitized substances shall be discovered in paying quantities at a lesser depth or until it shall, in the opinion of unit operator, be determined that the further drilling of said well shall be unwarranted or impracticable; provided, however, that unit operator shall not, in any event, be required to drill said well to a depth in excess of 10,000 feet (TVD). Until a discovery of a deposit of unitized substances capable of being produced in paying quantities (to wit: quantities sufficient to repay the costs of drilling and producing operations with a reasonable profit) unit operator shall continue drilling diligently, one well at a time, allowing not more than six months between the completion of one well and the beginning of the next well, until a well capable of producing unitized substances in paying quantities is completed to the satisfaction of the Commissioner or until it is reasonably proven to the satisfaction of the unit operator that the unitized land is incapable of producing unitized substances in paying quantities in the formation drilled hereunder.

Any well commenced prior to the effective date of this agreement upon the unit area and drilled to the depth provided herein for the drilling of an initial test well shall be considered as complying with the drilling requirements hereof with respect to the initial well. The Commissioner may modify the drilling requirements of this section by granting reasonable extensions of time when in his opinion such action is warranted. Upon failure to comply with the drilling provisions of this article the Commissioner may, after reasonable notice to the unit operator and each working interest owner, lessee and lessor at their last known addresses, declare this unit agreement terminated, and all rights privileges and obligations granted and assumed by this unit agreement shall cease and terminate as of such date.

9. OBLIGATIONS OF UNIT OPERATOR AFTER DISCOVERY OF UNITIZED SUBSTANCES: Should unitized substances in paying quantities be discovered upon the unit area, the unit operator shall

on or before six months from the time of the completion of the initial discovery well and within thirty days after the expiration of each twelve months period thereafter, file a report with the Commissioner and Division of the status of the development of the unit area and the development contemplated for the following twelve months period.

It is understood that one of the main considerations for the approval of this agreement by the Commissioner of Public Lands is to secure the orderly development of the unitized lands in accordance with good conservation practices so as to obtain the greatest ultimate recovery of unitized substances.

After discovery of unitized substances in paying quantities, unit operator shall proceed with diligence to reasonably develop the unitized area as a reasonably prudent operator would develop such area under the same or similar circumstances.

If the unit operator should fail to comply with the above covenant for reasonable development this agreement may be terminated by the Commissioner as to all lands of the State of New Mexico embracing undeveloped regular well spacing or proration units, but in such event, the basis of participation by the working interest owners shall remain the same as if this agreement had not been terminated as to such lands; provided, however, the Commissioner shall give notice to the unit operator and the lessees or record in the manner prescribed by (Sec. 19-10-20 N.M. Statutes 1978 Annotated), of intention to cancel on account of any alleged breach of said covenant for reasonable development and any decision entered thereunder shall be subject to appeal in the manner prescribed by (Sec. 19-10-23 N.M. Statutes 1978 Annotated), and , provided further, in any event the unit operator shall be given a reasonable opportunity after a final determination within which to remedy any default, failing in which this agreement shall be terminated as to all lands of the State of New Mexico embracing undeveloped regular well spacing or proration units.

Notwithstanding any of the provisions of this Agreement to the contrary, all undeveloped regular well spacing or proration unit tracts within the unit boundaries shall be automatically eliminated from this Agreement and shall no longer be a part of the unit or be further subject to the terms of this agreement unless at the expiration of five (5) years after the first day of the month following the effective date of this agreement diligent drilling operations are in progress on said tracts.

10. PARTICIPATION AFTER DISCOVERY: Upon completion of a well capable of producing unitized substances in paying quantities the owners of working interests shall participate in the production therefrom and in all other producing wells which may be drilled pursuant hereto in the proportions that their respective leasehold interests covered hereby on an acreage basis bears to the total number of acres committed to this unit agreement, and such unitized substances shall be deemed to have been produced from the respective leasehold interests participating therein. For the purpose of determining any benefits accruing under this agreement and the distribution of the royalties payable to the State of New Mexico and other lessors, each separate lease shall have allocated to it such percentage of said production as the number of acres in each lease respectively committed to this agreement bears to the total number of acres committed hereto.

Notwithstanding any provisions contained herein to the contrary, each working interest owner shall have the right to take such owner's proportionate share of the unitized substances in kind or to personally sell or dispose of the same, and nothing herein contained shall be construed as giving or granting to the unit operator the right to sell or otherwise dispose of the proportionate share of any working interest owner without specific authorization from time to time so to do.

11. ALLOCATION OF PRODUCTION: All unitized substances produced from each tract in the unitized area established under this agreement, except any part thereof used for production or development purposes hereunder, or unavoidably lost, shall be deemed to be produced equally on an acreage basis from the several tracts of the unitized land, and for the purpose of determining any benefits that accrue on an acreage basis, each such tract shall have allocated to it such percentage of said production as its area bears to the entire unitized area. It is hereby agreed that production of unitized substances from the unitized area shall be allocated as provided herein, regardless of whether any wells are drilled on any particular tracts of said unitized area.

12. PAYMENT OF RENTALS, ROYALTIES AND OVERRIDING ROYALTIES: The respective lease owners in accordance with the terms of their leases shall pay all rentals due to the State of New Mexico.

All royalties due to the State of New Mexico under the terms of the leases committed to this agreement shall be computed and paid on the basis of all unitized substances allocated to the respective

leases committed hereto; provided, however, the State shall be entitled to take in kind its share of the unitized substances allocated to the respective leases, and in such case the unit operator shall make deliveries of such royalty share in accordance with the terms of the respective leases.

All rentals, if any, due under any leases embracing lands other than the State of New Mexico, shall be paid by the respective lease owners in accordance with the terms of their leases and all royalties due under the terms of any such leases shall be paid on the basis of all unitized substances allocated to the respective leases committed hereto.

If the unit operator introduces gas obtained from sources other than the unitized substances into any producing formation for the purpose of repressuring, stimulating or increasing the ultimate recovery of unitized substances therefrom, a like amount of gas, if available, with due allowance for loss or depletion from any cause may be withdrawn from the formation into which the gas was introduced royalty free as to dry gas but not as to the products extracted therefrom; provided, that such withdrawal shall be at such time as may be provided in a plan of operation consented to by the Commissioner and approved by the Division as conforming to good petroleum engineering practices; and provided further, that such right of withdrawal shall terminate on the termination of this unit agreement.

If any lease committed hereto is burdened with an overriding royalty, payment out of production or other charge in addition to the usual royalty, the owner of each such lease shall bear and assume the same out of the unitized substances allocated to the lands embraced in each such lease as provided herein.

13. LEASES AND CONTRACTS CONFORMED AND EXTENDED INSOFAR AS THEY APPLY TO LANDS WITHIN THE UNITIZED AREA: The terms, conditions and provisions of all leases, subleases, operating agreements and other contracts relating to the exploration, drilling development or operation for oil or gas of the lands committed to this agreement, shall as of the effective date hereof, be and the same are hereby expressly modified and amended insofar as they apply to lands within the unitized area to the extent necessary to make the same conform to the provisions hereof and so that the respective terms of said leases and agreements will be extended insofar as necessary to coincide with the terms of this agreement and the approval of this agreement by the Commissioner and the respective lessors and lessees shall be effective to conform the provisions and extend the terms of each such lease as to lands

within the unitized area to the provisions and terms of this agreement; but otherwise to remain in full force and effect. Each lease committed to this agreement, insofar as it applies to lands within the unitized area, shall continue in force beyond the term provided therein as long as this agreement remains in effect, provided, drilling operations upon the initial test well provided for herein shall have been commenced or said well is in the process of being drilled by the unit operator prior to the expiration of the shortest term lease committed to this agreement. Termination of this agreement shall not affect any lease which pursuant to the terms thereof or any applicable laws would continue in full force and effect thereafter. The commencement, completion, continued operation or production on each of the leasehold interests committed to this agreement and operations or production pursuant to this agreement shall be deemed to be operations upon and production from each leasehold interest committed hereto and there shall be no obligation on the part of the unit operator or any of the owners of the respective leasehold interests committed hereto to drill offset to wells as between the leasehold interests committed to this agreement, except as provided in Section 9 hereof.

Any lease embracing lands of the State of New Mexico of which only a portion is committed hereto shall be segregated as to the portion committed and as to the portion not committed and the terms of such leases shall apply separately as two separate leases as to such segregated portions, commencing as of the effective date hereof. Notwithstanding any of the provisions of this agreement to the contrary, any lease embracing lands of the State of New Mexico having only a portion of its lands committed hereto shall continue in full force and effect beyond the term provided therein as to all lands embraced within the unitized area and committed to this agreement, in accordance with the terms of this agreement. If oil and gas, or either of them, are discovered and are being produced in paying quantities from some part of the lands embraced in such lease which part is committed to this agreement at the expiration of the fixed term of such lease, such production shall not be considered as production from lands embraced in such lease which are not within the unitized area, and which are not committed thereto, and drilling or reworking operations upon some part of the lands embraced within the unitized area and committed to this agreement shall be considered as drilling and reworking operations only as to lands embraced within the unit agreement and not as to lands embraced within the lease and not committed to this unit agreement; provided, however, as to any lease embracing lands of the State of New Mexico having only a portion of its

lands committed hereto upon which oil and gas, or either of them, has been discovered is discovered upon that portion of such lands not committed to this agreement, and are being produced in paying quantities prior to the expiration of the fixed term of such lease, such production in paying quantities shall serve to continue such lease in full force and effect in accordance with its terms as to all of the lands embraced in said lease.

14. CONSERVATION: Operations hereunder and production of unitized substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to State laws or regulations.

15. DRAINAGE: In the event a well or wells producing oil or gas in paying quantities should be brought in on land adjacent to the unit area draining unitized substances from the lands embraced therein, unit operator shall drill such offset well or wells as a reasonably prudent operator would drill under the same or similar circumstances.

16. COVENANTS RUN WITH LAND: The covenants herein shall be construed to be covenants running with the land with respect to the interests of the parties hereto and their successors in interest until this agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder to the grantee, transferee or other successor in interest. No assignment or transfer or any working, royalty, or other interest subject hereto shall be binding upon unit operator until the first day of the calendar month after the unit operator is furnished with the original, photo static, or certified copy of the instrument of transfer.

17. EFFECTIVE DATE AND TERM: This agreement shall become effective upon approval by the Commissioner and the Division and shall terminate in 5 (five) years after such date unless (a) such date of expiration is extended by the Commissioner, or (b) a valuable discovery of unitized substances has been made on unitized land during said initial term or any extension thereof in which case this agreement shall remain in effect so long as unitized substances are being produced in paying quantities from the unitized land and, should production cease, so long thereafter as diligent operations are in progress for the restoration of production or discovery of new production and so long thereafter as the unitized substances

so discovered are being produced as aforesaid. This agreement may be terminated at any time by not less than seventy-five percent (75%) on an acreage basis of the owners of the working interests, signatory hereto, with the approval of the Commissioner and with notice to the Division. Likewise, the failure to comply with the drilling requirements of Section 8 hereof, may subject this agreement to termination as provided in said section.

18. RATE OF PRODUCTION: All production and the disposal thereof shall be in conformity with allocations, allotments, and quotas made or fixed by the Division, and in conformity with all applicable laws and lawful regulations.

19. APPEARANCES: Unit operator shall, after notice to other parties affected, have the right to appear for and on behalf of any and all interests affected hereby, before the Commissioner of Public Lands and the Division, and to appeal from orders issued under the regulations of the Commissioner or Division, or to apply for relief from any of said regulations or in any proceedings on its own behalf relative to operations pending before the Commissioner or Division; provided, however, that any other interest party shall also have the right at his own expense to appear and to participate in any such proceedings.

20. NOTICES: All notices, demands, or statements required hereunder to be given or rendered to the parties hereto, shall be deemed fully given, if given in writing and sent by postpaid registered mail, addressed to such party or parties at their respective addresses, set forth in connection with the signatures hereto or to the ratification or consent hereof, or to such other address as any such party may have furnished in writing to party sending the notice, demand, or statement.

21. LOSS OF TITLE: In the event title to any tract of unitized land or substantial interest therein shall fail, and the true owner cannot be induced to join the unit agreement so that such tract is not committed to this agreement, or the operation thereof hereunder becomes impracticable as a result thereof, such tract may be eliminated from the unitized area, and the interest of the parties readjusted as a result of such tract being eliminated from the unitized area. In the event of a dispute as to the title to any royalty, working, or other interest subject hereto, the unit operator may withhold payment or delivery of the allocated portion of the unitized substances involved on account thereof, without liability for interest until the dispute is finally settled, provided that no payments of funds due the State of New Mexico shall be withheld. Unit Operator, as such, is relieved from any responsibility for any defect or failure of any title hereunder.



22. SUBSEQUENT JOINDER: Any oil or gas interest in lands within the unit area not committed hereto, prior to the submission of the agreement for final approval by the Commissioner and the Division, may be committed hereto by the owner or owners of such rights, subscribing or consenting to this agreement, or executing a ratification thereof, and if such owner is also a working interest owner, by subscribing to the operating agreement providing for the allocation of costs of exploration, development, and operation. A subsequent joinder shall be effective as of the first day of the month following the approval by the Commissioner and the filing with the Division of duly executed counterparts of the instrument or instruments committing the interest of such owner to this agreement, but such joining party or parties, before participating in any benefits hereunder, shall be required to assume and pay to unit operator, their proportionate share of the unit expenses incurred prior to such party's or parties joinder in the unit agreement, and the unit operator shall make appropriate adjustments caused by such joinder, without any retroactive adjustment of revenue.

23. COUNTERPARTS: This agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties, or may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification, or consent hereto with the same force and effect as if all such parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above described unit area.

IN WITNESS WHEREOF, the undersigned parties hereto have caused this agreement to be executed as of the respective dates set forth opposite their signatures.

UNIT OPERATOR

PEDERNALES PRODUCTION, LP

Date \_\_\_\_\_

\_\_\_\_\_

WORKING INTEREST OWNERS

PEDERNALES PRODUCTION, LP

Date \_\_\_\_\_

\_\_\_\_\_

ACKNOWLEDGMENT

STATE OF TEXAS

§

§

COUNTY OF HARRIS

§

This instrument was acknowledged before me on \_\_\_\_ day of \_\_\_\_\_, 2010 by  
\_\_\_\_\_, as \_\_\_\_\_, of PEDERNALES  
PRODUCTION, LP, a \_\_\_\_\_ limited partnership, on behalf of said entity.

\_\_\_\_\_  
Notary Public in and for the State of Texas

Printed Name: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

**EXHIBIT "A"**

**MAP OF UNIT AREA**

**UNO STATE EXPLORATORY UNIT**

**LEA COUNTY, NEW MEXICO**

**TOWNSHIP 14 SOUTH, RANGE 34 EAST, NMPM**

<b>23</b>  Tract 1    VB-1706	<b>24</b>  Tract 2    VB-1707	
	Tract 3    VO-6926	
	<b>25</b>  Tract 4  VO-7333	Tract 5  VO-7334

EXHIBIT "B" SCHEDULE OF OWNERSHIP - Schedule showing all lands and leases within the  
Uno Exploratory Unit  
Lea County, New Mexico

Tract No.	Description of Lands	Acres	Serial Number	Expiration Date	Lessee of Record	Basic Royalty and Percentage	Overriding Royalty and Percentages	Working Interest and Percentages
Uno Exploratory Unit								
1	insofar and only insofar as said lease covers T14S, R34E - Sec. 23; N/2, Lea Co., NM	320.00	State of New Mexico VB-1706	08/01/14	J Bar Cane Inc.	State of New Mexico - 18.75%	C. Mark Wheeler - 1.453125% John L. Thoma - 1.453125% John Bergman - 0.385000%	Pedemales Production, LP - 100%
2	T14S, R34E - Sec. 24; N/2, Lea Co., NM	320.00	State of New Mexico VB-1707	08/01/14	J Bar Cane Inc.	State of New Mexico - 18.75%	C. Mark Wheeler - 1.453125% John L. Thoma - 1.453125% John Bergman - 0.385000%	Pedemales Production, LP - 100%
3	T14S, R34E - Sec. 24; S/2, Lea Co., NM  (limited from the Surface to the Base of the Wolfcamp Formation thereunder)	320.00	State of New Mexico VO-6926	11BP	Marbob Energy Corp.	State of New Mexico - 16.667%	Marbob Energy Corp. - 5.333333% C. Mark Wheeler - 1.162500% John L. Thoma - 1.162500% John Bergman - 0.175000%	Pedemales Production, LP - 100%
4	T14S, R34E - Sec. 25; W/2	320.00	State of New Mexico VO-7333	03/01/10	Marbob Energy Corp.	State of New Mexico - 16.667%	Marbob Energy Corp. - 5.333333% C. Mark Wheeler - 1.162500% John L. Thoma - 1.162500% John Bergman - 0.175000%	Pedemales Production, LP - 100%
5	T14S, R34E - Sec. 25; E/2	320.00	State of New Mexico VO-7334	03/01/10	Marbob Energy Corp.	State of New Mexico - 16.667%	Marbob Energy Corp. - 5.333333% C. Mark Wheeler - 1.162500% John L. Thoma - 1.162500% John Bergman - 0.175000%	Pedemales Production, LP - 100%
Totals:		1600.00						
Recapitulation:		Acres in Unit Boundary		% of Unit				
State of New Mexico Lands:		1600.00		100.000000%				
Totals:		1600.00		100.000000%				

PATRICK H. LYONS  
COMMISSIONER

*State of New Mexico*  
*Commissioner of Public Lands*

310 OLD SANTA FE TRAIL  
P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE

Phone (505) 827-5760  
Fax (505) 827-5766  
www.nmstatelands.org

November 18, 2009

CMW Interests, Inc.  
24 Smith Road, Suite 405  
Midland, Texas 79705

Attention: Mr. Mark Wheeler

Re: Preliminary Approval  
Uno State Exploratory Unit Agreement  
Lea County, New Mexico

Dear Mr. Wheeler:

This office has received the unexecuted copy of the unit agreement which you have submitted on behalf of Pedernales Production, LP for the proposed Uno State Exploratory Unit area, Lea County, New Mexico. This agreement meets the general requirements of the Commissioner of Public Lands, who has this date granted you preliminary approval as to form and content.

Preliminary approval shall not be construed to mean final approval of this agreement in any way and will not extend any short-term leases, until final approval and an effective date have been given.

When submitting your agreement for final approval, please submit the following:

1. Application for final approval by the Commissioner setting forth the tracts that have been committed and the tracts that have not been committed.
2. Pursuant to Rule 19.2.100.51, applications for approval shall contain a statement of facts showing:
  - a. That such agreement will tend to promote the conservation of oil and gas and the better utilization of reservoir energy.
  - b. That under the proposed unit operation, the State of New Mexico will receive its fair share of the recoverable oil and gas in place under its lands in the proposed unit area.
  - c. That each beneficiary institution of the State of New Mexico will receive its fair and equitable share of the recoverable oil and gas under its lands within the unit area.
  - d. That such unit agreement is in other respects for the best interest of the trust.
3. All ratifications from the Lessees of Record and Working Interest Owners. All signatures should be acknowledged by a notary and one set must contain original signatures.

*-State Land Office Beneficiaries -*

Carrie Tingley Hospital • Charitable Penal & Reform • Common Schools • Eastern NM University • Rio Grande Improvement • Miners' Hospital of NM • NM Boys School • NM Highlands University • NM Institute of Mining & Technology • New Mexico Military Institute • NM School for the Deaf • NM School for the Visually Handicapped • NM State Hospital • New Mexico State University • Northern NM Community College • Penitentiary of New Mexico • Public Buildings at Capital •

**ATTACHMENT D**

CMW Interests, Inc.  
November 18, 2009  
Page 2

4. Order of the New Mexico Oil Conservation Division. Our approval will be conditioned upon subsequent favorable approval by the New Mexico Oil Conservation Division.
5. Please submit two copies of the Unit Agreement.
6. A copy of the Unit Operating Agreement (if applicable).
7. Copies of all the well records for the initial unit well
8. It is our understanding that the operator will initially be drilling lay down spaced horizontal wells. Please be advised that in the event the operator drills a horizontal well that includes any uncommitted lands, the operator will then be required to submit the appropriate Communitization Agreement covering the committed and uncommitted lands to this office for approval.
9. Pedernales Production, LP does not have the required bond filed with this office. Pedernales Production, LP must submit a \$20,000 multi-lease blanket bond to this office prior to final approval.

The filing fee for a unit agreement is \$30.00 for every section or partial section thereof. Please submit a \$90.00 filing fee.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

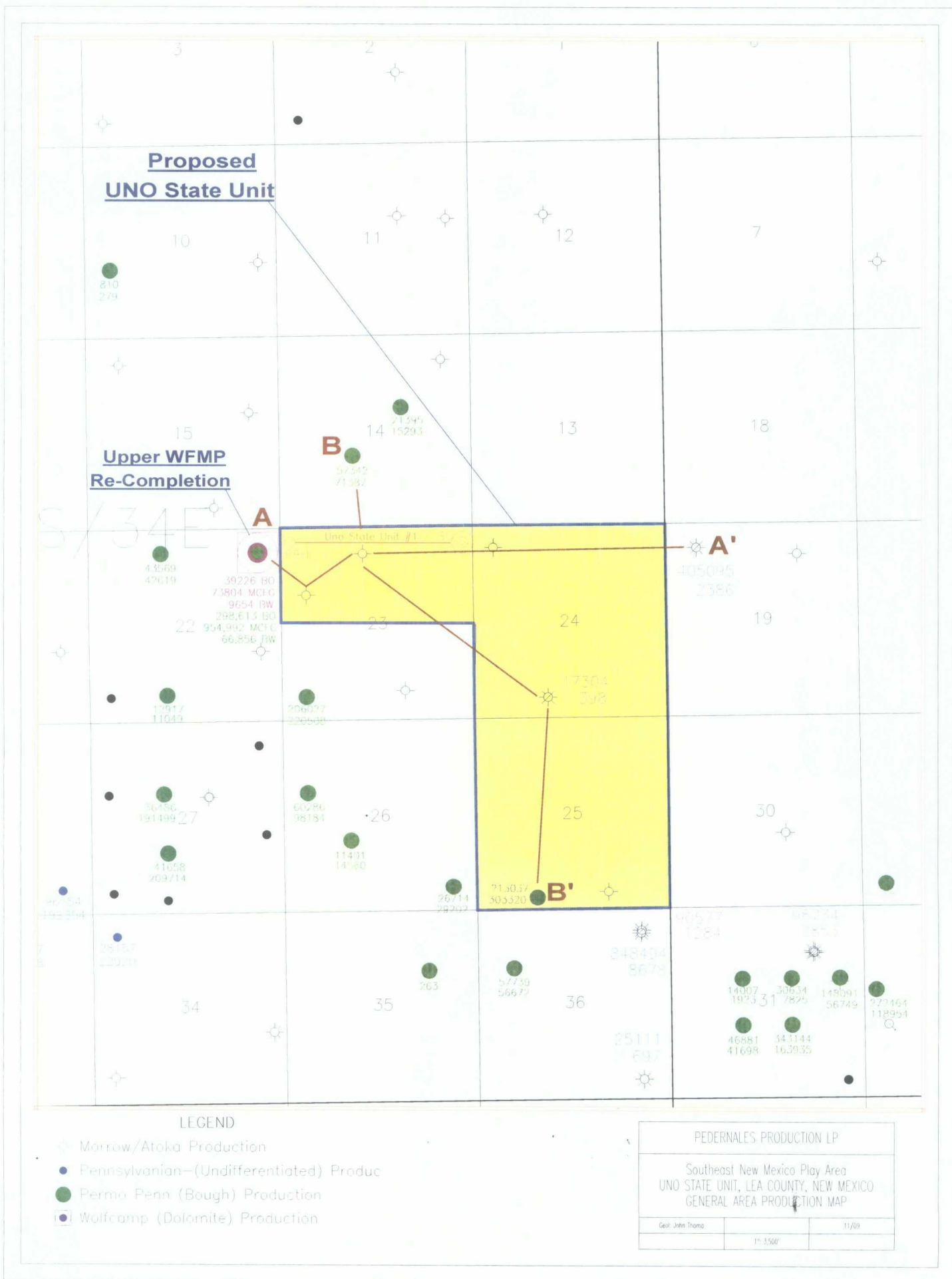
Very truly yours,

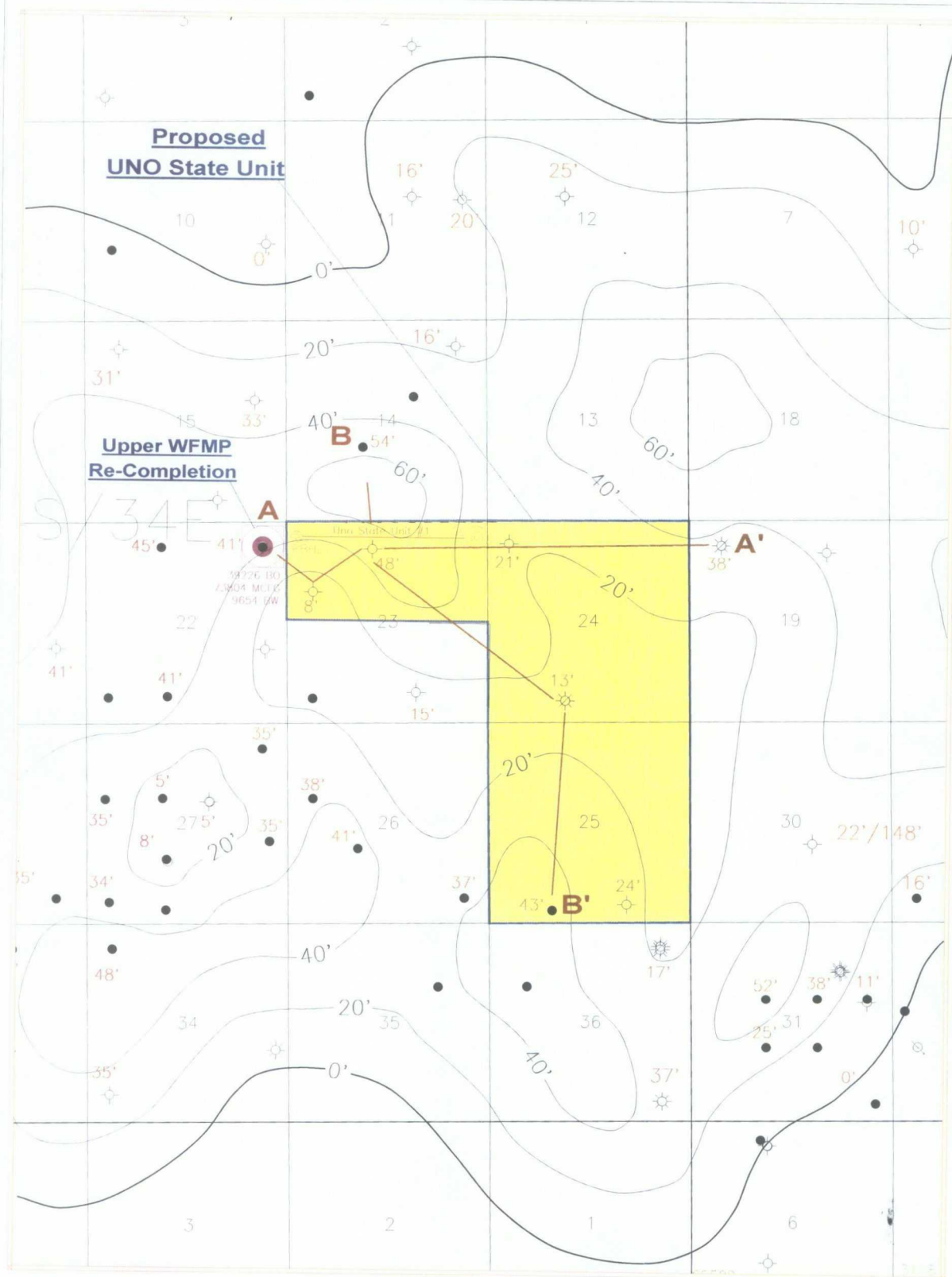
PATRICK H. LYONS  
COMMISSIONER OF PUBLIC LANDS

BY: 

JAMI BAILEY, Director  
Oil, Gas and Minerals Division  
RP/JB/prm

pc: Reader File,  
NMOCD - Attn: Mr. Ed Martin



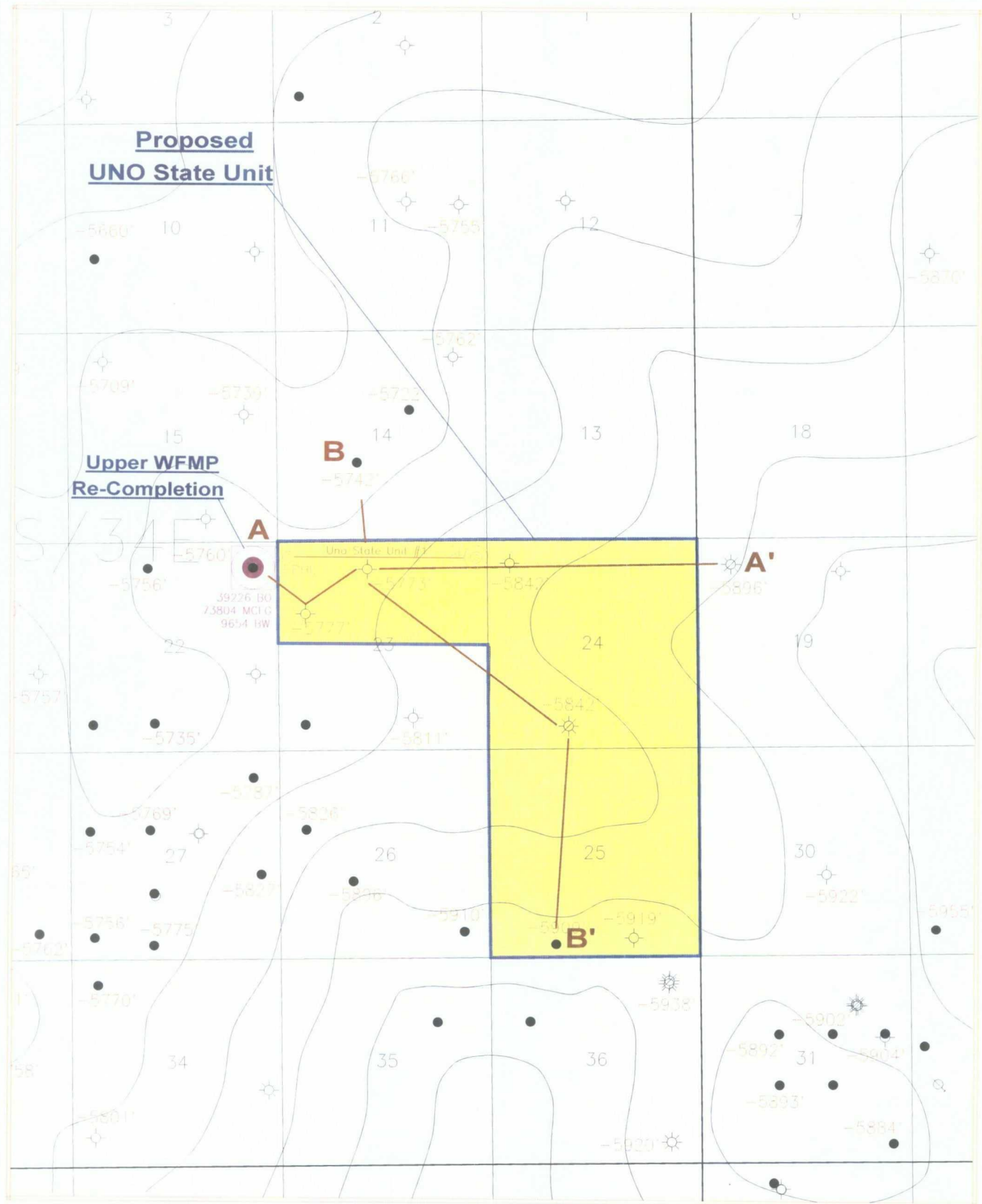


PEDERNALES ENERGY, LLC		
Southeast New Mexico Play Area UNO STATE UNIT, LEA COUNTY, NEW MEXICO UPPER WOLFCAMP/BASAL ABO ISOPOROSITY		
Geol. John Thomas	Dr. 10'	11/09
1" = 4,000'		



**Proposed**  
**UNO State Unit**

**Upper WFMP**  
**Re-Completion**



PEDERNALES ENERGY, LLC

Southeast New Mexico Play Area  
UNO STATE UNIT, LEA COUNTY, NEW MEXICO  
WOLFCAMP 'XX' MARKER STRUCTURE MAP

Geol: John Thoma

Dr: 5/07

11/09

1" = 4,000'



## ATTACHMENT I