

JUL 17 2013

STATE OIL AND GAS BOARD
LISA IVSHIN, SUPERVISOR

BEFORE THE STATE OIL AND GAS BOARD OF MISSISSIPPI

RE: PETITION OF VITRUVIAN EXPLORATION, LLC
TO AMEND THE SPECIAL FIELD RULES FOR
PICKENS FIELD, AND OBTAIN RELATED
RELIEF

DOCKET NO. 247-2013-D

ORDER NO. 379-2013

ORDER

THIS MATTER came on to be heard at the regular June 2013 meeting of the State Oil and Gas Board on the Petition of **VITRUVIAN EXPLORATION, LLC**, Petitioner, for authority to amend the Special Field Rules for Pickens Field (the "Field"), located in Madison and Yazoo Counties, Mississippi and grant related relief. Having considered the Petition, the evidence in support thereof, and being fully advised in the premises, the Board finds that the Petition is well-taken and should be granted. The Board also finds the following:

1.

The Board has jurisdiction over the parties and the subject matter of the Petition. Due and legal notice of the hearing on the Petition has been given in the time and manner required by law and the rules and regulations of the Board.

2.

Whitworth Farms Limited Partnership ("Whitworth Farms") did not file a notice of contest, but did file a request to continue this docket, appeared at the hearing and presented its arguments for the requested continuance. The requested continuance was opposed by Petitioner. The Board duly considered the request for continuance and the arguments thereon, found the request to be without merit, and denied the requested continuance.

3.

Petitioner is the operator of wells located in the Pickens Field, and is also the operator of the Wilburn Sand Fieldwide Unit which was approved by the Board by Order No. 253-2011 dated August 17, 2011, and by Supplemental Order No. 556-2011, dated October 12, 2011. In relevant part, the said orders establish the said Fieldwide Unit and authorize Petitioner to conduct "Unit Operations" for the production of "Unitized Substances" (such as oil and natural gas) from the "Unitized Formation." Among other things, Petitioner is authorized to inject and reinject "Outside Substances" into the Unitized Formation for, e.g., pressure maintenance, secondary and tertiary recovery operations. Outside Substances include, but are not limited to, carbon dioxide ("CO2") and produced fluids such as salt water.

4.

The Special Field Rules for Pickens Field were last amended by Order No. 254-2011, dated August 17, 2011. The said Special Field Rules contain various provisions that apply to the Wilburn Sand Fieldwide Unit. With regard to the said Fieldwide Unit, based on the evidence presented the Board finds that the Special Field Rules should be amended in certain respects, including to clarify the permitting procedure for each well to be used for the enhanced recovery of oil and natural gas (an "EOR well") and for producing wells, to authorize CO₂ "huff & puff" operations, and to provide for the dual permitting of wells that are used in huff & puff operations.

5.

The current the Special Field Rules should be and are amended as follows:

(1) Current Rule 3.A. is amended to read as follows:

- A. The operator of the Fieldwide Unit is authorized to conduct secondary or tertiary recovery and/or pressure maintenance operations in the Fieldwide Unit by the injection of gas, carbon dioxide, and/or other substances into the Wilburn Sand Oil Pool (the "Unitized Formation"). The operator may utilize, for injection and production purposes, existing wells located within the Fieldwide Unit, each of which may be converted to a well to be used for the enhanced recovery of oil and natural gas (an "EOR well"), or as a production well, or new wells may be drilled on the Fieldwide Unit for such purposes, whether as vertical, directional or horizontal wells. The permitting shall be as follows:
1. Each well within the Fieldwide Unit that is proposed to be drilled as or converted to an EOR well may be approved by the Board by administrative permit, without a hearing, upon the operator filing with the Board a duly executed OGB Form 2, well location plat, the required fee for the permit requested, all evidence and information required under Statewide Rule 63, and upon publication of public notice of the same for not less than twenty (20) days prior to the issuance of the administrative permit.
 2. Any EOR well and any other non-producing well located within

the Fieldwide Unit may be converted to a producing well for the Fieldwide Unit, without notice and hearing, upon the operator filing with the Board a duly executed OGB Form 2, well location plat, and the required fee for the permit requested.

(2) Current Rule 3.F.(2) is amended to add the word “vertical” as follows:

(2) The operator may drill wells utilizing vertical, directional or horizontal drilling techniques designed to increase the ultimate recovery of hydrocarbons contained in the pool [rest of the subparagraph remains the same].

(3) A new Rule 3.G. is added to read as follows:

G. Authorization For Carbon Dioxide (“CO2”) Huff & Puff Operations, and Permitting. The operator of the Fieldwide Unit may apply for authority to conduct CO2 “huff & puff” operations whereby a given well is used, on an alternating and/or recurring basis, to inject CO2 and/or produced fluids into the Unitized Formation and subsequently produce CO2, oil and natural gas according to the following permitting procedure. In accordance with the procedure that is provided for in Rule 3.A. above, for each well that will be utilized by the operator of the Fieldwide Unit for CO2 huff & puff operations, the operator may apply for and the Board is authorized to grant two simultaneous permits: one a permit to use the well as an EOR well to inject CO2 and/or produced fluids into the Unitized Formation, and the other to use the same well as a producing well to produce CO2, oil and natural gas from the Unitized Formation. After such permits issue, each time that the operator converts the said well from a producing well to an EOR well, or from an EOR well to a producing well, the operator shall provide the Board with a written notice of the change of use of the said well. At such time as the CO2 huff & puff operations on the said well are finally completed by the operator, the operator shall notify the Board and select the permit under which it desires to continue operating the well, and surrender or cancel the other permit.

6.

The proposed amendments to the Special Field Rules will allow for the orderly development of the Fieldwide Unit and the Field, will prevent waste, will protect the coequal and correlative rights of the owners in the Fieldwide Unit and the Field, will avoid the drilling of unnecessary well(s), and will allow the owners in the Field the opportunity to recover their fair and equitable share of production.

IT IS, THEREFORE, ORDERED AND ADJUDGED, that the Petition filed herein is granted; and the Special Field Rules for Pickens Field are amended as proposed and as more particularly set forth above and in Exhibit "1" to this Order, which is incorporated by **reference**.

IT IS, FURTHER ORDERED AND ADJUDGED, that this Order shall be in force and effect from and after June 19, 2013.

Permittee shall acquire all other permits, if any, required by other permitting authority.

SO ORDERED AND ADJUDGED, this the 19th day of June, 2013.

STATE OIL AND GAS BOARD OF MISSISSIPPI

By: 
CHAIRMAN

PREPARED BY:

Glenn Gates Taylor (MBN 7453)
C. Glen Bush (MBN 7589)
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ATTORNEYS FOR PETITIONER

**AMENDED SPECIAL FIELD RULES
PICKENS FIELD
YAZOO AND MADISON COUNTIES, MISSISSIPPI**

A. FIELD AREA

The Pickens Field, as used herein, consists of the following described land in Madison and Yazoo Counties, Mississippi is defined as follows:

In Township 12 North, Range 2 East, Yazoo County

Sections 14, 15, 16, 22, 23, 24, 25, and 36.

In Township 12 North, Range 3 East, Yazoo County

All of Sections 19, 29, 30, 31, and 32.

The following lands in Section 28: the North One-half; the Southwest One-quarter; and all of the Southeast One-quarter lying West of the Big Black River.

The following lands in Section 33: the Northwest One-quarter; all of the Northeast One-quarter lying West of the Big Black River; all of the Southeast One-quarter lying West of the Big Black River; and all of the Southeast One-quarter lying West of the Big Black River.

In Township 11 North, Range 3 East, Yazoo County

The following lands in Section 4: All of the Northwest One-quarter lying West of the Big Black River.

The following lands in Section 5: All of the section lying North and West of the Big Black River.

In Township 12 North, Range 3 East, Madison County

The following lands in Section 28: All of the Southeast One-quarter lying East of the Big Black River.

The following land in Section 33: All of the Northeast One-quarter lying East of the Big Black River; all of the Southeast One-quarter lying East of the Big Black River; and all of the Southwest One-quarter lying East of the Big Black River.

In Township 11 North, Range 3 East, Madison County

All Sections of 3, 9, 10 and 11.

The following lands in Section 4: All of the Northwest One-quarter lying East of the Big Black River; all of the Northeast One-quarter; and all of the South One-half.

The following lands in Section 5: All of the section lying South and East of the Big Black River.

B. POOL DEFINITIONS

1. The Wilburn Sand Oil Pool in Pickens Field shall be construed to mean those strata in the Eutaw Formation currently, formerly or in the future productive of oil or gas from the depths of 4802 feet to 4885 feet, as shown on the log for the Jones-Massey #2 Well, located 240 feet from the South line and 600 feet from the West line of the SW 1/4 of the SE 1/4 of Section 3, Township 11 North, Range 3 East, Madison County, Mississippi, and including those strata productive of Unitized Substances which can be correlated or are in communication therewith.

2. The Selma Chalk Oil Pool in Pickens Field shall be construed to mean those strata in the Selma Chalk Formation currently, formerly or in the future productive of oil or gas from the depths of 3,950 feet to 4,770 feet, as shown on the log for the Jones-Massey #2 Well, located 240 feet from the South line and 600 feet from the West line of the SW 1/4 of the SE 1/4 of Section 3, Township 11 North, Range 3 East, Madison County, Mississippi, and all intervals in communication therewith correlative of said strata.

3. The characteristics of the above described Wilburn Sand Oil Pool and Selma Chalk Oil Pool in said Field are such that wells located outside the fieldwide unit in conformance with Rule 1 will efficiently drain and produce the recoverable oil from each said pool with avoidable waste.

C. The Wilburn Sand Fieldwide Unit of Pickens Field ("Fieldwide Unit") is the Wilburn Sand Oil Pool located within the following Unit Area approved in Order No. 253-2011.

Township 12 North, Range 3 East

- Section 29: SW/4 SW/4
- Section 30: SW/4 NW/4;
SW/4;
S/2 SE/4; and
S/2 NW/4 SE/4
- Section 31: NE/4;
N/2 NE/4 NW/4; and
N/2 NE/4 SE/4
- Section 32: S/2 SE/4 NE/4;
SW/4 NE/4;
S/2 NE/4 NW/4;
NW/4 NW/4;
S/2 NW/4;
N/2 SW/4;
SE/4 SW/4; and
SE/4
- Section 33: W/2 SW/4; and
S/2 SE/4 SW/4

Township 11 North, Range 3 East

- Section 2: S/2 SW/4 SW/4
- Section 3: SW/4 NW/4;
SW/4;
S/2 NW/4 SE/4; and
S/2 SE/4
- Section 4: All of Section
- Section 5: N/2 NE/4 NW/4;
N2 NE/4; and
SE/4 NE/4
- Section 9: N/2 NE/4;
NE/4 NW/4;
N/2 NW/4 NW/4; and
N/2 S/2 NE/4
- Section 10: N2;
E 10 acres of NW/4 SW/4;
NE/4 SW/4;
N/2 SE/4;
N3/4 SE/4SE/4; and
N/2 N/2 SW/4 SE/4
- Section 11: W/2;
SW/4 NE/4; and
SE/4

RULE NO. 1 SPACING OF OIL WELLS IN DRILLING UNITS

A. Every well drilled as an oil well for production from drilling units out of the Wilburn Sand Oil Pool or Selma Chalk Oil Pool:

(1) Shall be drilled according to regular spacing patterns on a drilling unit consisting of forty (40) surface contiguous acres or one (1) governmental quarter-quarter section in the form of a square containing not less than 36 acres or more than 44 acres upon which no other drilling or producible well is located;

(2) Shall be located at least 330 feet from every exterior boundary of the drilling unit;

(3) Shall be located at least 660 feet from every other drilling or producible well to be produced from the same pool;

(4) This Rule shall not apply to wells completed in the Wilburn Sand Fieldwide Unit approved in Order 253-2011, Docket No. 110-2011-D.

RULE NO. 2 CLASS II INJECTION OR EOR WELLS

- A. Pursuant to Order No. 269-98, Docket No. 190-98, prior to the issuance of any permit to drill or convert a Class II Injection or EOR well, the operator seeking such permit shall publish a notice of its intent to do so in the same manner as

is currently provided for giving notice of hearings before the Board. Such notice shall be published at least (20) days prior to the issuance of such a permit, so as to allow for a comment period on the permit application of not less than twenty (20) days.

- B. If no objection is filed within the twenty (20) day notice period; and the State Oil and Gas Supervisor has determined that the applied-for well meets all necessary requirements under Statewide Rule 63, then the permit may be issued administratively by the Supervisor.

RULE NO. 3 SECONDARY AND TERTIARY RECOVERY PROGRAM FOR FIELDWIDE UNIT

A. The operator of the Fieldwide Unit is authorized to conduct secondary or tertiary recovery and/or pressure maintenance operations in the Fieldwide Unit by the injection of gas, carbon-dioxide, and/or other substances into the Wilburn Sand Oil Pool (the "Unitized Formation"). The operator may utilize, for injection and production purposes, existing wells located within the Fieldwide Unit, each of which may be converted to a well to be used for the enhanced recovery of oil and natural gas (an "EOR well"), or as a production well, or new wells may be drilled on the Fieldwide Unit for such purposes, whether as vertical, directional or horizontal wells. The permitting shall be as follows:

1. Each well within the Fieldwide Unit that is proposed to be drilled as or converted to an EOR well may be approved by the Board by administrative permit, without a hearing, upon the operator filing with the Board a duly executed OGB Form 2, well location plat, the required fee for the permit requested, all evidence and information required under Statewide Rule 63, and upon publication of public notice of the same for not less than twenty (20) days prior to the issuance of the administrative permit.

2. Any EOR well and any other non-producing well located within the Fieldwide Unit may be converted to a producing well for the Fieldwide Unit, without notice and hearing, upon the operator filing with the Board a duly executed OGB Form 2, well location plat, and the required fee for the permit requested.

B. The conversion of producing wells to injection wells will not affect the Fieldwide Unit allowable as determined by Rule 3.C.

C. The allowable for the Wilburn Sand Oil Pool shall be the sum of the number of wells in the Fieldwide Unit, including injection wells times the depth allowable allowed under Statewide Rule 35. Said allowable may be altered to an MER, if different, after notice

and hearing.

D. Allocation and apportionment of allowable production from the Wilburn Sand Oil Pool in Pickens Field, among and between any individual drilling units and the Fieldwide Unit shall be made on the basis of and in proportion to the surface acre content of each of the units.

E. The operator of the Fieldwide Unit may maintain such separators, stock tanks, metering devices, connections and storage facilities as it deems necessary to accurately measure the total production from the Fieldwide Unit. Separate measurement or storage for the wells and leases within the Fieldwide Unit shall not be necessary. Automatic custody transfer systems which automatically test, sample, measure and transfer the production from the operator to the purchaser are hereby authorized for Pickens Field. Such systems will be equipped with a sampling device which will take a representative sample of the total production passing through the system in order that the specific gravity and basic sediment and water content can be determined. Each custody transfer system will be equipped with a volume displacement type metering device which registers the volume of oil passed through it in barrels or multiples thereof.

F. Spacing of Wells

(1) Notwithstanding any other provisions contained in these Special Field Rules, the location of injection and production wells in the Fieldwide Unit shall be selected by the operator and shall be governed by the standards of geology and petroleum engineering designed to promote the greatest ultimate recovery of hydrocarbons contained in the pool. However, no well may be drilled, injected into or produced from said pool nearer than 100 feet from any exterior boundary of the fieldwide unit, except upon permit issued by the Mississippi State Oil and Gas Board, after notice and hearing.

(2) The operator may drill wells utilizing vertical, directional or horizontal drilling techniques designed to increase the ultimate recovery of hydrocarbons contained in the pool without notice and hearing; provided, that (a) no portion of the wellbore of any such well so drilled shall be nearer than 100 feet from any exterior boundary of the Fieldwide Unit, except upon permit issued by the Mississippi State Oil and Gas Board, after notice and hearing, and (b) the operator shall file a directional survey and other information required by rule or written policy of the Board after completion.

G. Authorization For Carbon Dioxide ("CO₂") Huff & Puff Operations, and

Permitting. The operator of the Fieldwide Unit may apply for authority to conduct CO2 “huff and puff” operations whereby a given well is used, on an alternating and/or recurring basis, to inject CO2 and/or produced fluids into the Unitized Formation and subsequently produce CO2, oil and natural gas according to the following permitting procedure. In accordance with the procedure that is provided for in Rule 3.A above, for each well that will be utilized by the operator of the Fieldwide Unit for CO2 huff & puff operations, the operator may apply for and the Board is authorized to grant two simultaneous permits: one a permit to use the well as an EOR well to inject CO2 and/or produced fluids into the Unitized Formation, and the other to use the same well as a producing well to produce CO2, oil and natural gas from the Unitized Formation. After such permits issue, each time that the operator converts the said well from a producing well to an EOR well, or from an EOR well to a producing well, the operator shall provide the Board with a written notice of the change of use of the said well. At such time as the CO2 huff & puff operations on the said well are finally completed by the operator, the operator shall notify the Board and select the permit under which it desires to continue operating the well, and surrender or cancel the other permit.

RULE NO. 4 APPLICABILITY OF STATEWIDE RULES

A. All rules and regulations contained in the current Statewide Rules, and any amendments thereto, not specifically covered in the foregoing Special Field Rules, are hereby adopted and shall apply to the Unit.

B. Any previous Special Field Rules for the Pickens Field shall be superseded after the effective date hereof.

C. The Board expressly reserves the right after notice and hearing to alter, amend or repeal, any and all of the foregoing Rules and Regulations.

-END OF SPECIAL FIELD RULES-