

MAY 04 2018

STATE OIL AND GAS BOARD
LISA IVSHIN, SUPERVISOR

IN THE STATE OIL AND GAS BOARD OF MISSISSIPPI

RE: PETITION OF ROVER OPERATING, LLC
TO AMEND THE SPECIAL FIELD RULES
FOR BENTONIA FIELD, YAZOO COUNTY
AND MADISON COUNTY, MISSISSIPPI

DOCKET NO.: 63 -2018-D

ORDER NO.: 154-2018

ORDER AMENDING SPECIAL FIELD RULES

This matter came on for hearing before the State Oil and Gas Board of Mississippi (hereinafter the "Board") on the 18th day April, 2018, on the Petition of Rover Operating, LLC (hereinafter the "Petitioner"), to Amend Special Rules for Bentonia Field, Yazoo County and Madison County, Mississippi, and for related relief; and

1.

WHEREAS, the Board finds that due, proper and legal notice of the meeting of the Mississippi State Oil and Gas Board for the purpose of considering and taking action with respect to such matter was given in the manner and way provided by law and the Rules and Regulations of this Board; that due, legal and sufficient Proofs of Publication are on file with the Board in said matter; and that the Board has full jurisdiction of the subject-matter to hear and determine same; and

2.

WHEREAS, pursuant to said notice a public hearing was held by the said Board in the Hearing Room of the Mississippi State Oil and Gas Board located at 500 Greymont Avenue, Suite E, Jackson, Mississippi, commencing at 10:00 O'clock, A.M. on April 18, 2018, at which hearing all persons present who desired to be heard in said matter were heard and all testimony and documentary evidence duly considered by those present at said meeting; and

3.

WHEREAS, the Board having considered the Petition and the evidence, and being fully advised in the premises, is of the opinion and finds that the relief requested

by the Petitioner should be and the same is hereby granted. The Board further finds and determines as follows:

4.

Bentonia Field in Yazoo County and Madison County, was discovered in December 1962 with production from the Washita-Fredericksburg Oil Pool. Since that date, approximately 36 wells have been drilled and approximately 3 M barrels of oil has been produced from multiple oil pools. The Special Field Rules for Bentonia Field, Yazoo County and Madison County, Mississippi, were last amended on December 20, 2017 in Docket No. 450-2017-D, Order No. 690-2017. The Special Field Rules established the geographic limits of the Bentonia Field and defined the Upper Tuscaloosa Oil Pool, the Lower Tuscaloosa, the Washita-Fredericksburg Oil Pool, the 7,500 Foot Washita-Fredericksburg Oil Pool, the Paluxy Oil Pool, the Mooringsport Oil Pool, the Rodessa Oil Pool, Sligo Oil Pool, and the Upper Hosston Oil Pool, and the Lower Hosston Oil Pool, within the field and prescribed spacing requirements applicable to wells drilled and completed in said pools.

5.

The Special Field Rules for Bentonia Field in Docket No. 450-2017-D include definitions of the Upper Tuscaloosa Oil Pool, the Lower Tuscaloosa, the Washita-Fredericksburg Oil Pool, the 7,500 Foot Washita-Fredericksburg Oil Pool, the Paluxy Oil Pool, the Mooringsport Oil Pool, the Rodessa Oil Pool, Sligo Oil Pool, and the Upper Hosston Oil Pool in the Bentonia Field as separate and distinct underground reservoirs or pools or accumulations of hydrocarbons within the field area. In related and companion Docket No. 61-2018-D, the Mississippi State Oil and Gas Board established and approved a compulsory unit within the Upper Tuscaloosa Oil Pool, the Lower Tuscaloosa, the Washita-Fredericksburg Oil Pool, the 7,500 Foot Washita-Fredericksburg Oil Pool, the Paluxy Oil Pool, the Mooringsport Oil Pool, the Rodessa Oil Pool, Sligo Oil Pool, and the Upper Hosston Oil Pool to form the Bentonia Unitized Oil Pool underlying three (3) separate drilling and production units and/or tracts of land comprising 464 acres, more or less, all within the existing geographic limits of

Bentonia Field. The compulsory unit was established pursuant to the provisions of the Conservation Laws of the State of Mississippi, specifically, Miss. Code Ann. Sections 53-3-101 through 53-3-119 (1972) (as amended). The compulsory unit is designated as the Bentonia Field Unit, Bentonia Unitized Oil Pool, Bentonia Field, Yazoo County and Madison County, Mississippi, and consists of the following described lands:

Yazoo County, Mississippi

Township 9 North, Range 1 West
In Section 3:

Lot 3, (sometimes referred to as E 1/2 of NW 1/4);
Lot 4, (sometimes referred to as W 1/2 of NW 1/4);
Lot 5, (sometimes referred to as W 1/2 of SW 1/4);
Lot 6, (sometimes referred to as E 1/2 of SW 1/4, and
all SE 1/4 Lying West of Big Black River)

Township 10 North, Range 1 West
In Section 34:

S 1/2 of SW 1/4

Containing 464 acres, more or less.

6.

Each of the Upper Tuscaloosa Oil Pool, the Lower Tuscaloosa, the Washita-Fredericksburg Oil Pool, the 7,500 Foot Washita-Fredericksburg Oil Pool, the Paluxy Oil Pool, the Mooringsport Oil Pool, the Rodessa Oil Pool, Sligo Oil Pool, and the Upper Hosston Oil Pool, is a separate and distinct reservoir, but the separate oil pools form a single designated area as the Bentonia Unitized Oil Pool for the purposes of secondary recovery of the Bentonia Unitized Oil Pool.

7.

The Board finds that the compulsory unit has been established and approved by the Mississippi State Oil and Gas Board, and it is necessary that the existing Special Field Rules for Bentonia Field be amended and revised to define the Bentonia Field Unit and to establish spacing and production allocation requirements applicable to said unit.

In addition, it is necessary that the said Special Field Rules be amended and revised to provide rules governing the operation of said unit for the purpose of conducting secondary recovery, pressure maintenance, repressuring operations, cycling operations, water flooding operations, the injection of extraneous substances, and any combination thereof, or any other form of joint effort calculated to substantially increase the ultimate recovery of oil or gas, or both, from the said unit.

8.

The Board finds that the Special Field Rules for the Bentonia Field, Yazoo County and Madison County, Mississippi, should be amended and revised for the hereinabove specified purposes by adding thereto a new **RULE 2 (“BENTONIA FIELD UNIT”)**, all as more fully set forth on the attached **Exhibit “A”** which is incorporated herein and made a part hereof by reference for all purposes.

9.

The Board finds that a copy of the Special Field Rules for the Bentonia Field, Yazoo County and Madison County, Mississippi, as amended and revised for the hereinabove described purposes, is attached hereto and made a part hereof by reference for all purposes as **Exhibit “A.”**

10.

The Board finds that the amendment and revision of the Special Field Rules for the Bentonia Field, Yazoo County and Madison County, Mississippi, all as hereinafter more fully set forth on the attached **Exhibit “A.”** will promote conservation, will prevent waste, will avoid the drilling of unnecessary wells, and will fully protect the co-equal and correlative rights of all parties in interest. In addition, the adoption of the amendments to the Special Field Rules will facilitate the more efficient and economical operation of the Bentonia Field Unit and will ultimately result in the recovery of more oil and/or other hydrocarbons from the Bentonia Field than would otherwise be recovered.

IT IS, THEREFORE, ORDERED AND ADJUDGED, that the Special Field Rules for the Bentonia Field, Yazoo County and Madison County, Mississippi, are hereby amended to define the Bentonia Field Unit, Bentonia Unitized Oil Field, Yazoo County

and Madison County, Mississippi; to establish spacing and production allocation requirements applicable to said unit; and to prescribe rules governing the operation of said Unit for the purpose of conducting secondary recovery, pressure maintenance, repressuring operations, cycling operations, water flooding operations, the injection of extraneous substances, and any combination thereof, or any other form of joint effort calculated to substantially increase the ultimate recovery of oil or gas, or both, from said Unit, and the amended Special Field Rules for Bentonia Field are set forth on the attached **Exhibit "A,"** made a part hereof by reference.

IT IS FURTHER ORDERED AND ADJUDGED that Rover Operating, LLC., shall acquire all other permits, if any, required by any other permitting authority.

IT IS FURTHER ORDERED AND ADJUDGED that this Order shall be in force and effect from and after April 18, 2018.

SO ORDERED this the 4th day of May, 2018.

**MISSISSIPPI STATE OIL AND GAS
BOARD**

By: 

ORDER SUBMITTED BY:

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ATTORNEYS FOR PETITIONER

EXHIBIT "A"

SPECIAL FIELD RULES FOR THE BENTONIA FIELD YAZOO AND MADISON COUNTY, MISSISSIPPI

A. FIELD AREA:

The Bentonia Field, as used herein, is that geographical area consisting of the following described lands, to-wit:

Yazoo County and Madison County, Mississippi

The Bentonia Field, as used herein, is that area consisting of Sections 33 and 34, Township 10 North, Range 1 West, Yazoo County, Mississippi; and Section 4, Township 9 North Range 1 West, Yazoo County, Mississippi; and that part of Sections 3 and 10 of Township 9 North, Range 1 West, Yazoo and Madison Counties, Mississippi, underlain by the Upper Tuscaloosa Oil Pool, the Lower Tuscaloosa, the Washita-Fredericksburg Oil Pool, the 7,500 Foot Washita-Fredericksburg Oil Pool, the Paluxy Oil Pool, the Mooringsport Oil Pool, the Rodessa Oil Pool, Sligo Oil Pool, the Upper Hosston Oil Pool, and the Lower Hosston Oil Pool in Bentonia Field, all as hereinafter defined and all productive extensions thereof.

B. POOL DEFINITIONS:

- 1.1 The Upper Tuscaloosa Oil Pool in the Bentonia Field shall be construed to mean those strata of the Upper Tuscaloosa Formation productive of oil in the interval between 6680 feet and 6,950 feet as indicated on the electric log of the Humble Oil & Refining Company Bentonia Oil Unit No. 2 Well No. 1, Section 10, Township 9 North, Range 1 West, and all sands correlative therewith.
- 1.2 The Lower Tuscaloosa Oil Pool in the Bentonia Field shall be construed to mean those strata of the Lower Tuscaloosa Formation productive of oil in the interval between the top of the marine shale at 6,967 feet and the top of the Lower Cretaceous at 7,178 feet as indicated on the electric log of the Humble Oil & Refining Company Dorothy Farmer No. 2 Well Section 3. Township 9 North, Range 1 West, and all sands correlative therewith.
- 1.3 The Washita-Fredericksburg Oil Pool in the Bentonia Field shall be construed to mean those strata of the Washita-Fredericksburg Formation productive of oil in the interval between 7,200 feet and 7,650 feet as indicated on the electric log of the Humble Oil & Refining Company Dorothy Farmer No. 2 Well Section 3. Township 9 North, Range 1 West, and all sands correlative therewith.
- 1.4 The 7500 Foot Washita-Fredericksburg Oil Pool in the Bentonia Field shall be construed to mean those strata of the Washita-Fredericksburg Formation productive of oil in the interval between 7,500 feet and 7,650 feet as indicated on the electric log of the Coho Resources, Inc., -Farmer 3-6 No. 5 Well located Section 3, Township 9 North, Range 1 West, Yazoo County, Mississippi, and all sands correlative therewith.
- 1.5 The Paluxy Oil Pool shall be construed to mean those strata of the productive of oil in the interval between 7,734 feet and 8,880 feet as indicated on the Array-Induction log of the Bulldog Operating Company, LLC-Farmer 3-15 No. 10 Well located 3,099 feet East of the West line and 622 feet North of the South line of Section 3, Township 9 North, Range 1 West, Yazoo County, Mississippi, and all sands

correlative therewith.

1.6 The Mooringsport Oil Pool in the Bentonia Field shall be construed to mean those strata of the Mooringsport Formation productive of oil in the interval between 8,872 feet and 9,084 feet as indicated on the electric log of the Coho Resources, Inc.-Farmer 3-6 No. 7 well located 2322.0 feet from the North line and 2128.0 feet from the West line of Section 3, Township 9 North, Range 1 West, Yazoo County, Mississippi, and all sands correlative therewith.

1.7 The Rodessa Oil Pool in the Bentonia Field shall be construed to mean those strata of the Rodessa Formation productive of oil in the interval between 9,090 feet and 9,500 feet as indicated on the electric induction log of the Coho Resources, Inc., Thompson 3-5 Well No. 4 Well Section 3, Township 9 North, Range 1 West, and all sands correlative therewith.

1.8 The Sligo Oil Pool should be construed to mean those strata productive of Oil in the interval between the electric log depths of 9531 feet and 10152 feet in the Rover Operating, LLC-Thompson 3-4 No. 7 Well in Section 3, Township 9 North, Range 1 West, Yazoo County, Mississippi, and all sands correlative therewith.

1.9 The Upper Hosston Oil Pool shall be construed to mean those strata of the Hosston Formation productive of oil in the interval between 10,152 feet and 10,555 feet as indicated on the dual induction log of the Coho Resources, Inc.-Thompson 3-4 Well No. 7 Section 3, Township 9 North, Range 1 West, and all sands correlative therewith.

1.10 The Lower Hosston Oil Pool shall be construed to mean those strata of the Hosston Formation productive of oil in the interval between 10,555 feet and 11,470 feet as indicated on the dual induction log of the Coho Resources, Inc.-Thompson 3-4 Well No. 7 Section 3, Township 9 North, Range 1 West, and all sands correlative therewith.

1.11 - THE BENTONIA UNITIZED OIL POOL:

Unitized Formation is the subsurface portion of the Unit Area described as those strata of the Bentonia Unitized Oil Pool productive of Unitized Substances in the interval between the measured depth of 6,680 feet in Upper Tuscaloosa Oil Pool as indicated on the electric log of the Humble Oil and Refining Company-Bentonia Oil Unit No. 2, Well No. 1 in Section 10, Township 9 North, Range 1 West, and the measured depth of 10,555 feet in the Upper Hosston Oil Pool, as indicated on the dual induction log of the Coho Resources, Inc.,-Thompson 3-4 Well No. 7, Section 3, Township 9 North, Range 1 West, all in Yazoo County, Mississippi, and including those strata productive of Unitized Substances which can be correlated with and/or in communication therewith. The Unitized Formation for the Bentonia Field Unit is correlative to and within the defined interval for the Bentonia Unitized Oil Pool in the Bentonia Field as stated in the Special Field Rules for the Bentonia Field and contains the following Oil Pools: the Upper Tuscaloosa Oil Pool, the Lower Tuscaloosa, the

Washita-Fredericksburg Oil Pool, the 7,500 Foot Washita-Fredericksburg Oil Pool, the Paluxy Oil Pool, the Mooringsport Oil Pool, the Rodessa Oil Pool, Sligo Oil Pool, and the Upper Hosston Oil Pool.

C. RULES:

RULE 1 -SPACING OF OIL WELLS:

1.2 The Characteristics of the Oil Pools in the Bentonia Field are such that a well located as hereinafter prescribed and drilled upon a drilling unit containing approximately eighty (80) contiguous surface acres conforming to the requirements of the rules herein contained will adequately and efficiently drain and produce the recoverable oil from such unit in said pool without avoidable waste. Every well drilled as an oil well in the Oil Pools as defined herein shall comply with the following spacing rules.

(A) Each such well shall be located on a drilling unit consisting of eighty (80) contiguous surface acres, or two (2) contiguous governmental quarter-quarter sections containing not less than seventy-two (72) acres or more than eighty-eight (88) acres, upon which no other drilling or producible well is located. The word "contiguous" as used herein shall mean bordering each other at more than one point;

(B) Any drilling unit not composed of two (2) governmental quarter-quarter sections must be completely encompassed by the perimeter of a rectangle 1600 feet by 2725 feet; provided, however, no unit shall be permitted which will create island acreage;

(C) The well shall be located at least 660 feet from every other drilling well or wells completed in or producing from the same pool located in conformity with the rule; and

(D) The well shall be located at least 330 feet from every exterior boundary of the drilling unit.

RULE 2 – BENTONIA FIELD UNIT - BENTONIA UNITIZED OIL POOL:

2.1 The Bentonina Field Unit is that portion of the following described lands lying within the Bentonina Field underlain by the unitized portion of the Bentonina Unitized Oil Pool and described as follows:

Yazoo County, Mississippi

Township 9 North, Range 1 West

In Section 3:

- Lot 3, (sometimes referred to as E 1/2 of NW 1/4);
- Lot 4, (sometimes referred to as W 1/2 of NW 1/4);
- Lot 5, (sometimes referred to as W 1/2 of SW 1/4);
- Lot 6, (sometimes referred to as E 1/2 of SW 1/4, and
all SE 1/4 Lying West of Big Black River)

Township 10 North, Range 1 West

In Section 34:

- S 1/2 of SW 1/4

Containing 464 acres, more or less

2.2 **Bentonina Unitized Oil Pool** is the subsurface portion of the Unit Area described as those strata of the Bentonina Unitized Oil Pool productive of Unitized Substances in the interval between the measured depth of 6,680 feet in Upper Tuscaloosa Oil Pool as indicated on the electric log of the Humble Oil and Refining Company-Bentonina Oil Unit No. 2, Well No. 1 in Section 10, Township 9 North, Range 1 West, and the measured depth of 10,555 feet in the Upper Hosston Oil Pool, as indicated on the dual induction log of the Coho Resources, Inc.,-Thompson 3-4 Well No. 7, Section 3, Township 9 North, Range 1 West, all in Yazoo County, Mississippi, and including those strata productive of Unitized Substances which can be correlated with and/or in communication therewith. The Unitized Formation for the Bentonina Field Unit is correlative to and within the defined interval for the Bentonina Unitized Oil Pool in the Bentonina Field as stated in the Special Field Rules for the Bentonina Field and contains

the following Oil Pools: the Upper Tuscaloosa Oil Pool, the Lower Tuscaloosa, the Washita-Fredericksburg Oil Pool, the 7,500 Foot Washita-Fredericksburg Oil Pool, the Paluxy Oil Pool, the Mooringsport Oil Pool, the Rodessa Oil Pool, Sligo Oil Pool, and the Upper Hosston Oil Pool.

2.3 SPACING OF WELLS IN BENTONIA FIELD UNIT:

- (A) Notwithstanding any other provisions contained in these Special Field Rules, the location of injection and production wells in the Bentonia Field 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 165.0 feet from any exterior boundary of the unit, except upon permit issued by the Mississippi State Oil and Gas Board, after notice and hearing.
- (B) The Operator may drill either injection or producing wells utilizing directional or horizontal drilling techniques designed to increase the ultimate recovery of hydrocarbons contained in the pool with required notice and without hearing; provided, however, that: (1) no portion of the wellbore located within the unitized interval or horizon of any such well so drilled shall be nearer than 165.0 feet from any exterior boundary of the Bentonia Field Unit, except upon permit issued by the Mississippi State Oil and Gas Board, after notice and hearing, and (2) the Operator shall file a directional survey and other information required by rule or written policy of the Board after completion.
- (C) Furthermore, the Operator may drill either injection or producing wells on the Bentonia Field Unit utilizing directional or horizontal drilling techniques as hereinabove regardless of whether the surface location of such wells is within or outside the unit boundaries of the unit.

2.4 PRESSURE MAINTENANCE AND SECONDARY RECOVERY PROGRAM AUTHORIZED:

Rover Operating, LLC, as Operator of the Bentonia Field Unit, is hereby authorized to conduct and carry out secondary recovery, pressure maintenance, repressuring operations, cycling operations, water flooding operations, and the injection of extraneous substances in the Bentonia Field Unit, and any combination thereof, or any other form of joint effort calculated of substantially increase the ultimate recovery of oil or gas, or both, from the unit as authorized by the Plan of Unitization placed into effect by the Mississippi State Oil and Gas Board. The Operator may use for injection purpose existing wells located in said Bentonia Field Unit which may be converted to injection wells or wells may be drilled on said unit for such purposes. Any such wells drilled as injection wells or converted to injection wells by Operator on the Unit as a part of pressure maintenance and/or secondary recovery operations may be approved by the Mississippi State Oil and Gas Board on administrative permit, upon twenty (20) days publication notice in the appropriate newspapers (but without the necessity of a public hearing), upon the Operator filing with the Board a duly executed FORM 2, the required permit fee for each such well, and all evidence and information required under Statewide Rule 63. In addition, existing unit injection wells may be converted to unit producing wells on administrative permit, upon twenty (20) days publication notice in the appropriate newspapers (but without the necessity of a public hearing), upon the Operator filing with the Board a duly executed FORM 2, the required permit fee for such well, and all other evidence and information the Board may require.

2.5 ALLOCATION OF PRODUCTION:

The allowable for the Bentonia Field Unit shall be established Mississippi State Oil and Gas Board. The allowable production of the said Unit may be produced from any well or wells on said unit; provided, however, that no well shall be operated in such a manner as to cause waste as defined by the Laws of the State of Mississippi.

2.6 SURFACE STORAGE, MEASUREMENT AND TRANSFER SYSTEMS:

(A) The Operator of the Bentonia Field 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 Unit. Separate measurement or storage for the wells and leases within the unit shall not be required.

(B) Automatic custody transfer systems which automatically test, sample, measure and transfer the production from the Operator to the purchaser are hereby authorized in said unit. 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 register the volume of oil passed though it in barrels or multiples thereof.

RULE 3 – DIRECTIONAL DRILLING WELLS:

3.1 Wells may be permitted by the Supervisor of the State Oil and Gas Board within the Bentonia Field Unit.

3.2 The Supervisor is authorized to issue permits approving the directional drilling of wells from available sites within developed areas in the Bentonia Field Unit to a bottomhole location to penetrate any of the productive formations in the Bentonia Field Unit, if the location of the well bore at the producing horizons of those pools is at least 165.0 feet from any exterior unit boundary.

3.3 The application for permit for directionally drilling well shall be accompanied by a survey plat showing the surface location, the bottomhole location, and the drilling unit assigned to the well.

3.4 A directional survey shall be conducted on each deviated hole prior to the setting of production casing and a duly certified copy thereof shall be furnished to the Mississippi State Oil and Gas Board within thirty (30) days thereof.

RULE 4 – APPLICABILITY OF STATEWIDE RULES:

4.1 All rules and regulations contained in Statewide Order No. 201-51, and any amendments thereto, not specifically covered in the foregoing Special Field rules are hereby adopted and shall apply to said field.

4.2 The Mississippi State Oil and Gas Board expressly reserves the right, after notice and hearing, to alter, amend or repeal any and all of the foregoing Special Field Rules, or to grant exceptions to all or any part thereof.

- END OF SPECIAL FIELD RULES -