

BEFORE THE STATE OIL AND GAS BOARD OF MISSISSIPPI

FILED FOR RECORD

RE: PETITION OF DENBURY ONSHORE, LLC TO  
AMEND THE SPECIAL FIELD RULES FOR THE  
KING BEE FIELD, PERRY COUNTY,  
MISSISSIPPI

JUN 09 2004

STATE OIL AND GAS BOARD  
WALTER BOONE, SUPERVISOR

DOCKET NO. 154-2004-793

ORDER NO. 319-2004

**ORDER**

THIS CAUSE came to be heard on the Petition of Denbury Onshore, LLC. ("Petitioner") requesting the Board to Amend the Special Field Rules for the King Bee Field in Perry County, Mississippi; and

WHEREAS, the Board finds that due, proper, and legal notice of the meeting of the Board for the purpose of considering and taking action with respect to such matter was given in the manner required by the rules and regulations of the Board; that due, legal, and sufficient proofs of publication and service are on file with the Board; and that the Board has full jurisdiction of the subject matter to hear and determine same; and

WHEREAS, pursuant to said Notice, a public hearing was held by said Board in the Hearing Room, Suite E, 500 Greymont Avenue, Jackson, Mississippi, commencing on May 19, 2004, at 9:30 o'clock a.m. at which hearing all persons present who desired to be heard on said matter were heard and all testimony and the evidence were duly considered by those present at said meeting; and

WHEREAS, the Board has fully considered said matter and the evidence and recommendations made in said hearing and finds as follows:

1.

Petitioner is the current operator of the Field. Special Field Rules for the Field were last adopted or amended for this Field in Docket No. 310-2001-793, Order No. 480-2001.

2.

The Field contains extremely heavy crude oil, being approximately 17 degrees API

gravity. That gravity of crude oil is difficult to produce and to handle once it is produced. Petitioner must maintain heating facilities to heat the oil in order for the oil to be removed from the storage tanks once it is produced. That requires Petitioner to maintain heating elements closer than 100 feet provided by Statewide Rule 16. Accordingly, the purpose of this Petition is to amend the Special Field Rules to provide that the Petitioner is entitled to establish and operate its heaters, treaters, storage tanks and other firing vessels without distance restrictions between vessels and storage tanks.

3.

An additional reason exists for the Amendment to the Special Field Rules. This Field is located in the Desoto National Forest owned by the United States Government. Severe surface restrictions exist and Petitioner is not allowed to use enough surface to provide the 100 feet distance required by Rule 16.

4.

The amendment to the Special Field Rules will promote conservation, protect the co-equal and correlative rights of all owners in interest, avoid the drilling of unnecessary wells and permit oil and gas to be produced which would not otherwise be recoverable.

**IT IS, THEREFORE, ORDERED AND ADJUDGED** by the State Oil and Gas Board of Mississippi that the Special Field Rules for the King Bee Field are hereby amended as follows:

**SPECIAL FIELD RULES  
KING BEE FIELD  
PERRY COUNTY, MISSISSIPPI**

**A. FIELD AREA**

King Bee Field, as used herein, is defined as that area consisting of all that portion of Sections 9, 10, 15, 16, 20, 21 and 22 of Township 2 North, Range 10 West, Perry County, Mississippi, productive of oil and/or gas and all productive extensions to such area.

**B. POOL DEFINITIONS**

(1) The Eutaw Oil Pool -- Fault Block M, as used herein, shall be construed to mean those strata of the Cretaceous Age Formations productive of oil which can be correlated with the strata indicated on the dual induction log of the Fina Oil and Chemical Company -- USA 10-13 No. 1 Well (located 1262 feet from the North line and 2270 feet from the East line of Section 10 of Township 2 North, Range 10 West, Perry County, Mississippi) between the depths of 10,150 feet and 10,550 feet (measured depths) [true vertical subsea depths of -9,074 feet and -9,417 feet] and all sands correlative to and in communication with said strata.

(2) The Eutaw Oil Pool -- Fault Block P, as used herein, shall be construed to mean those strata of the Cretaceous Age Formations productive of oil which can be correlated with the strata indicated on the dual induction log of the Fina Oil and Chemical Company -- USA 21-1 No. 1 Well (located 2000 feet from the East line and 700 feet from the South line of Section 21 of Township 2 North, Range 10 West, Perry County, Mississippi) between the depths of 11,020 feet and 11,780 feet (measured depths) [true vertical subsea depths of -9,664 feet to -10,384 feet], and all sands correlative to and in communication with said strata.

(3) The Lower Tuscaloosa Massive Oil Pool, as used herein, shall be construed to mean those strata of the Cretaceous Age Formations productive of oil which can be correlated with the strata indicated on the dual induction log of the Fina Oil and Chemical Company -- USA 21-6 No. 1 Well (located 2038 feet from the East line and 690 feet from the South line of Section 21 of Township 2 North, Range 10 West, Perry County, Mississippi) between the depths of 11,895 feet and 12,032 feet (measured depths) [true vertical subsea depths of -10,585 feet to -10,683 feet], and all sands correlative to and in communication with said strata, less and except that portion thereof lying within the Unit Area of the Lower Cretaceous Unit - South and defined as a part of the Lower Cretaceous Unitized Formation below.

(4) The Lower Tuscaloosa Pilot Oil Pool, as used herein, shall be

construed to mean those strata of the Cretaceous Age Formations productive of oil which can be correlated with the strata indicated on the dual induction log of the Fina Oil and Chemical Company -- USA 20-9 No. 1 Well (surface location being located 27.18 feet from the East line and 690 feet from the South line of Section 21 of Township 2 North, Range 10 West, Perry County, Mississippi) between the depths of 12,380 feet and 12,430 feet (measured depths) [true vertical subsea depths of -10,774 feet to -10,800 feet], and all sands correlative to and in communication with said strata, less and except that portion thereof lying within the Unit Area of the Lower Cretaceous Unit - South and defined as a part of the Lower Cretaceous Unitized Formation below.

(5) The Lower Cretaceous Oil Pool, as used herein, shall be construed to mean those strata of the Cretaceous Age Formations productive of oil which can be correlated with the strata indicated on the dual induction log of the Fina Oil and Chemical Company -- USA 21-6 No. 1 Well (located 2038 feet from the East line and 690 feet from the South line of Section 21 of Township 2 North, Range 10 West, Perry County, Mississippi) between the depths of 12,032 feet and 12,090 feet (measured depths) [true vertical subsea depths of -10,945 feet to -10,986 feet], and all sands correlative to and in communication with said strata, less and except that portion thereof lying within the Unit Area of the Lower Cretaceous Unit - South and defined as a part of the Lower Cretaceous Unitized Formation below.

(6) The Lower Cretaceous Unitized Formation, as used herein, shall be construed to mean those Cretaceous Age Formations as identified by the Dual Burst Thermal Decay log run in the USA 21-5 No. 1 Well lying within the Unit Area, with the top of the Lower Cretaceous Unitized Formation being found at a measured depth of 12,380 feet and a vertical depth of 11,035 feet below the surface (-10,774 feet subsea) and the base of the Lower Cretaceous Unitized Formation being found at a measured depth of 13,168 feet and a vertical depth of 11,465 feet below the surface (-11,204 feet subsea) or to the stratigraphic equivalent thereof and all sands correlative to and in communication

with said strata, insofar as said Cretaceous Age Formations are located within the Unit Area. The surface location of the USA 21-5 No. 1 Well is located 2118 feet from the East line and 690 feet from the South line of Section 21 of Township 2 North, Range 10 West, Perry County, Mississippi, and the bottomhole of said well is located in the Southwest Quarter of the Northwest Quarter (SW 1/4 of NW 1/4) of said Section 21.

**C. RULES**

**RULE 1 - Spacing of Oil Wells**

(1) With respect to the Eutaw Oil Pool -- Fault Block M, Eutaw Oil Pool -- Fault Block P, the Lower Tuscaloosa Massive Oil Pool, the Lower Tuscaloosa Pilot Oil Pool and the Lower Cretaceous Oil Pool, every oil well:

(a) Shall be located on a unit consisting of forty (40) contiguous surface acres, or a governmental quarter-quarter section containing not less than thirty-six (36) acres nor more than forty-four (44) acres. The word "contiguous" as used herein shall mean bordering each other at more than one point.

(b) Any unit not a governmental quarter-quarter section must be completely encompassed by the perimeter of a rectangle 1810 feet by 1445 feet; provided, however, no unit shall be permitted which will create island acreage.

(c) The location of the portion of the wellbore lying in said pool shall be at least 660 feet from the location of that portion of the wellbore in the same pool of every other well completed in or producing from said pool located in conformity with this rule.

(d) The location of the portion of the wellbore lying in said pool shall be at least 330 feet from every exterior boundary of the unit.

(e) No portion of the unit upon which the well is located shall be

attributed, in whole or in part, to the production unit for any other producible well in the same pool.

(f) With respect to directionally drilled wells, temporary 160 acre = drilling units may be approved by the Supervisor of the Board in accordance with Rule 2 below.

RULE 2 -- Directional Drilling of Wells

Most of King Bee Field lies within a restricted military area of Camp Shelby, where surface drilling and production operations are prohibited by the Mississippi National Guard. In order to fully develop King Bee Field, it is necessary that most wells be directionally drilled. The Supervisor of the Board is authorized to issue administrative drilling permits in accordance with the following rules:

(1) The Supervisor of the State Oil and Gas Board is authorized to issue permits approving the directional drilling of wells from surface sites approved by the Mississippi National Guard and the United States Forest Service to bottomhole locations in King Bee Field on temporary 160 acre drilling units if the application for permit to drill meets the following conditions, to-wit:

(a) The temporary 160 acre drilling unit consists of (i) a governmental quarter section containing not less than one hundred forty-four (144) acres nor more than one hundred seventy-six (176) acres, or (ii) four (4) contiguous governmental quarter-quarter sections containing not less than one hundred forty-four (144) acres nor more than one hundred seventy-six (176) acres, or (iii) one hundred sixty (160) contiguous surface acres which are completely encompassed by the perimeter of a rectangle 2,640 feet by 3,500 feet. The word "contiguous" as used herein shall mean bordering each other at more than one point.

(b) The anticipated location of the portion of the wellbore lying within the objective formation is at least 660 feet from the location of that same formation in the wellbore of every other drilling or producible well in the field.

(c) The anticipated location of the portion of the wellbore lying within the objective formations is not less than 330 feet from every exterior boundary of the temporary 160 acre drilling unit.

(d) The application for permit to drill is accompanied by a survey plat showing the surface location, the anticipated bottomhole location, the anticipated location of the tops and bottoms of all objective formations and the boundaries of the temporary 160 acre drilling unit.

(2) The surface facilities of wells drilled under this rule may be located outside of the temporary 160 acre drilling unit and the operator is authorized to cross drilling unit lines in connection with the drilling of directional wells as authorized herein.

(3) Upon completion of a well drilled under this rule on a temporary 160 acre drilling unit as a well capable of producing hydrocarbons in commercial quantities, the operator thereof shall promptly petition this Board to reform the temporary 160 acre drilling unit to a permanent production unit in compliance with the appropriate spacing rules established by this Board. The reformation of the temporary 160 acre drilling unit to a permanent production unit shall be made effective as of the date of first production from the well.

(4) A complete angular deviation and directional survey of the finished hole of any well directionally drilled under this rule shall be made at the expense of the operator and a certified copy of such survey shall be filed with the Board within thirty (30) days of the completion thereof.

(5) This rule shall not apply to the directional drilling of wells to the Lower Cretaceous Unitized Formation. Rules governing the directional drilling of wells to the Lower Cretaceous Unitized Formation appear below in these Special Field Rules.

RULE 3 -- Lower Cretaceous Unit - South

Upon the unitization of the Lower Cretaceous Unit - South by this Board, the Unit Area of the Lower Cretaceous Unit - South shall be considered and treated as a single drilling axed producing unit as to all tracts therein contained insofar as the Lower Cretaceous Unitized Formation is concerned. The following additional rules shall apply with respect to the Lower Cretaceous Unit - South:

(1) Unit Area of Lower Cretaceous Unit - South. The Unit Area of the Lower Cretaceous Unit - South shall consist of the following-described lands situated in Sections 20 and 21 of Township 2 North, Range 10 West, Perry County, Mississippi, to wit:

Section 20: The South Half of the North Half of the Northeast Quarter of the Northeast Quarter, the South Half of the Northeast Quarter of the Northeast Quarter, the Southeast Quarter of the Northwest Quarter of the Northeast Quarter, the South Half of the Southwest Quarter of the Northwest Quarter of the Northeast Quarter, South Half of the Northeast Quarter, the Northeast Quarter of the Northeast Quarter of the Southeast Quarter and the North Half of the Northwest Quarter of the Northeast Quarter of the Southeast Quarter.

Section 21: The South Half of the Northwest Quarter of the Northeast Quarter, the South Half of the North Half of the Northwest Quarter, the



Southwest Quarter of the Northeast Quarter, the South Half of the Northwest Quarter, the Northwest Quarter of the Northwest Quarter of the Southeast Quarter, the Northeast Quarter of the Southwest Quarter, the North Half of the Northwest Quarter of the Southwest- Quarter, the Southeast Quarter of the Northwest Quarter of the Southwest Quarter and the North Half of the Southwest Quarter of the Northwest Quarter of the Southwest Quarter.

(2) Lower Cretaceous Unitized Substances. The Lower Cretaceous Unitized Substances shall be all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate, and all associated and constituent liquid or liquefiable hydrocarbons within or produced from the Lower Cretaceous Unitized Formation.

(3) Spacing of Wells in Lower Cretaceous Unit - South. Notwithstanding any other provisions contained in these Special Field Rules, the location of injection and production wells in the Lower Cretaceous Unit - South shall be selected by the operator of said Unit and shall be governed by the standards of geology and petroleum engineering designed to promote the greatest ultimate recovery of Lower Cretaceous Unitized Substances from the said Unit. However, no well may be drilled, injected into or produced from the Lower Cretaceous Unitized Formation nearer than 100 feet from any exterior boundary of the Unit Area, except upon permit issued by the Mississippi State Oil and Gas Board, after notice and hearing. When a well is drilled at any location less than 330 feet from any exterior boundary of the Unit Area, a directional survey shall be run and submitted to the Board within thirty (30) days of the completion date of the well in accordance with Rule 14 of the Statewide Rules and Regulations.

(4) Directional Drilling of Wells for the Lower Cretaceous Unit - South. The Supervisor of the State Oil and Gas Board is authorized to issue administrative permits approving the directional drilling of Unit Wells for

the Lower Cretaceous Unit - South from surface sites approved by the Mississippi National Guard and the United States Forest Service to bottomhole locations in the Unit Area if the application for permit to drill meets the following conditions, to-wit:

(a) The anticipated location of the portion of the wellbore lying within the Lower Cretaceous Unitized Formation is not less than 100 feet from every exterior boundary of Unit Area of the Lower Cretaceous Unit - South; and

(b) The application for permit to drill is accompanied by a survey plat showing the surface location, the anticipated bottomhole location, the anticipated location of the top and bottom of the Lower Cretaceous Formation and the boundaries of the Unit Area of the Lower Cretaceous Unit - South.

The surface facilities of wells drilled under this rule may be located outside of the Unit Area of the Lower Cretaceous Unit - South and the operator is authorized to cross boundaries of said Unit Area in connection with the drilling of directional wells as authorized herein. A complete angular deviation and directional survey of the finished hole of any well directionally drilled under this rule shall be made at the expense of the operator and a certified copy of such survey shall be filed with the Board within thirty (30) days of the completion thereof.

(5) Pressure Maintenance and Enhanced Recovery Program for Lower Cretaceous Unit - South. The operator of the Lower Cretaceous Unit - South is authorized to conduct and carry out enhanced recovery operations, pressure maintenance or any other method generally recognized and approved by the industry designed to increase the ultimate recovery of oil

and/ or gas, including, but not limited to the injection of gas, carbon dioxide, water and other extraneous substances, and any combination thereof, or any other form of joint effort calculated to substantially increase the ultimate recovery of Lower Cretaceous Unitized Substances from the Lower Cretaceous Unit -South. The operator may use for injection purposes existing wells located in the Lower Cretaceous Unit - South 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 the operator on the unit as a part of pressure maintenance and/or enhanced recovery operations may be approved by the Mississippi State Oil and Gas Board by administrative permit, without hearing, upon the operator filing with the Board a duly executed Form 2, well location plat, the required permit fee for each such well, and all evidence and information required under Statewide Rule 63 and upon publication of public notice of the same not less than twenty (20) days prior to the issuance of the administrative permit. In addition., unit injection wells may be converted to unit producing wells and unit producing wells may be converted to unit injection wells by administrative permit, without hearing, upon the operator filing with the Board a duly executed Form 2, the required permit fee for each such well, and all other evidence and information the Board may require, and upon publication of public notice of the same not less than twenty (20) days prior to the issuance of the administrative permit.

(6) Allowable for Lower Cretaceous Unit - South. The allowable for the Lower Cretaceous Unit - South shall be established by the 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.

**RULE 4 – Surface Treating and Storage Facilities**

All heaters, treaters, storage tanks, and other fired vessels which are installed or replaced and necessary to maintain the temperature of the crude oil produced from the Field sufficiently above pour point for production into and sales from storage facilities or tanks, shall be located and operated without distance restrictions between vessels and storage tanks.

**RULE 5 -- Amendment of Special Field Rules**

The Board expressly reserves the right, after notice and hearing, to alter, amend or repeal any and all of the above rules and regulations, or to grant exceptions to all or any part thereof.

**RULE 6 -- Applicability of Statewide Rules**

All rules and regulations contained in Statewide Order No. 201-51, and all amendments thereto, are hereby adopted and shall apply to King Bee Field to the extent not inconsistent with the above rules.

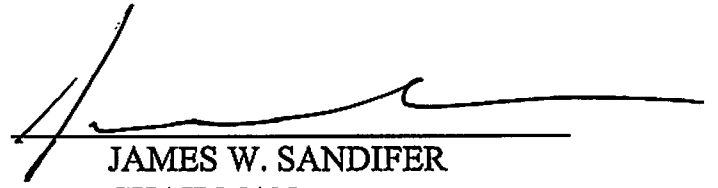
**\*\*\*END OF SPECIAL FIELD RULES\*\*\***

**IT IS FURTHER ORDERED AND ADJUDGED** that this Order shall be in force and effect from and after May 19, 2004.

**IT IS FURTHER ORDERED AND ADJUDGED** that Petitioner shall acquire any other permits, if any, required by any other permitting authority.

**ORDERED AND ADJUDGED** this 9<sup>th</sup> day of June, 2004.

STATE OIL AND GAS BOARD OF  
MISSISSIPPI



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JAMES W. SANDIFER  
CHAIRMAN

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