

BEFORE THE STATE OIL AND GAS BOARD OF MISSISSIPPI

RE: PETITION OF DENBURY ONSHORE, LLC TO AMEND THE SPECIAL FIELD RULES FOR THE GLUCKSTADT FIELD TO ENLARGE THE FIELD AREA AND TO ALLOW TUBINGLESS COMPLETION IN CO<sub>2</sub> WELLS IN THE GLUCKSTADT FIELD, MADISON COUNTY, MISSISSIPPI

FILED FOR RECORD

DEC 28 2010

STATE OIL AND GAS BOARD  
LISA IVSHIN, SUPERVISOR

DOCKET NO. 489-2010-D

ORDER NO. 800-2010

**EMERGENCY ORDER**

**THIS CAUSE** came to be heard on the Emergency Petition of Denbury Onshore, LLC ("Petitioner") requesting the Board to amend the Special Field Rules for the Gluckstadt Field ("the Field") to allow tubingless completions in Madison County, Mississippi; and

**WHEREAS**, the Board finds that although 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 not given in the manner required by the rules and regulations of the Board, the Board has full jurisdiction of the subject matter to hear and determine same solely as an emergency matter; and

**WHEREAS**, a public hearing was held by said Board in the Hearing Room, Suite E, 500 Greymont Avenue, Jackson, Mississippi, commencing on December 15, 2010, at 10:00 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 drilled several wells in the Field. These Wells are CO<sub>2</sub> wells. Special Field Rules for the Field have been adopted for this Field in Docket No. 72-2010-444.

Petitioner has also drilled several recent wells which have not yet been completed for CO<sub>2</sub> sales.

2.

The Special Field Rules need to be amended to allow tubingless completion in CO<sub>2</sub> wells. Petitioner drills the wells and sets production casing with a special chromium casing specially designed for high pressure wells. The casing will be rated no less than 7,580 psi. The maximum tubing pressure for these wells is ±7,000 psi. No need exists to set tubing inside the special casing and would add extra cost to the Wells. In addition, the Field Area needs to be enlarged based upon the results of recent drilling.

1.

The amendment of the Special Field Rules for the Field promotes conservation, protects the co-equal and correlative rights of all owners in interest, avoids the drilling of unnecessary wells and the expenditure of unnecessary costs, and permits CO<sub>2</sub> 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 Gluckstadt Field shall be and here are amended, on an emergency basis, as follows:

**SPECIAL FIELD RULES  
FOR THE GLUCKSTADT FIELD  
MADISON COUNTY, MISSISSIPPI**

A. The Gluckstadt Field, as used herein, is that area consisting of the following described land, to wit:

**Township 8 North, Range 2 East  
Madison County, Mississippi**

Section 25: Entire Section  
Section 26: Entire Section  
Section 35: Entire Section  
Section 36: Entire Section

**Township 8 North, Range 3 East  
Madison County, Mississippi**

Section 30: The W<sup>1</sup>/<sub>2</sub> of the W<sup>1</sup>/<sub>2</sub>  
Section 31: The W<sup>1</sup>/<sub>2</sub> of the W<sup>1</sup>/<sub>2</sub>

**Township 7 North, Range 2 East**  
**Madison County, Mississippi**

Section 1: Entire Section  
Section 2: Entire Section

**Township 7 North, Range 3 East**  
**Madison County, Mississippi**

Section 6: The W $\frac{1}{2}$  of the NW $\frac{1}{4}$

underlain by the Norphlet CO<sub>2</sub> Gas Pool hereinafter defined, and all productive extensions thereof.

B. The Norphlet CO<sub>2</sub> Gas Pool shall be construed to mean those strata productive of CO<sub>2</sub> in the interval between the depths of 16,547 feet measured depth and 17,407 feet measured depth as indicated on the Array Induction Log of the Denbury Onshore, LLC - L. H. Kuriger, et al 35-16 Well No. 1 at a bottom hole location 153 feet from the East line and 847 feet from the South line of Section 35, Township 8 North, Range 2 East, Madison County, Mississippi and all correlative intervals.

C. The characteristics of the Norphlet CO<sub>2</sub> Gas Pool herein defined in said field are such that gas wells located and drilled upon drilling units may contain up to 1,280 acres each conforming to the requirements of the spacing rules herein prescribed will efficiently drain and produce the recoverable CO<sub>2</sub> gas in said pool without avoidable waste.

**RULE 1 - SPACING OF GAS WELLS:**

With respect to the Norphlet CO<sub>2</sub> Gas Pool, every gas well:

A. Shall be located on a drilling unit consisting of up to 1,280 contiguous surface acres;

B. A gas drilling unit must be completely encompassed by the perimeter of a rectangle 11,880 feet by 11,880 feet; provided, however, no unit shall be permitted which will create island acreage;

C. The top perforation in each deviated well shall be located at least 1,000 feet from the top perforation of every other drilling or producible well located in conformity with this rule;

D. The top perforation of each intentionally deviated well shall be located not less than 1,000 feet from every exterior boundary of the unit; and

E. Each Norphlet CO<sub>2</sub> unit may contain up to four (4) producing wells with each well entitled to a full allowable.

F. As to wells intentionally deviated, there shall be no restriction on the surface location (either on or off the Unit) so long as the bottom hole location is more than 1,000 feet from the bottom hole location of other wells and all unit lines.

#### RULE 2 - AUTOMATIC CUSTODY TRANSFER SYSTEMS AUTHORIZED:

Automatic custody transfer systems which automatically test, sample, measure and transfer the production from the Operator to the purchaser are hereby authorized.

Each such system 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 the basic sediment and water content can be determined.

Each such system will be equipped with a volume displacement type metering device which registers the volume of oil, condensate, and gas passed through it in barrels, MFC, or multiples thereof; said metering device will compensate for temperature, will be so equipped as to provide a cumulative total of all oil transferred by such system and will have an accuracy standard equivalent to the accuracy obtained in measurements made in calibrated stock tanks.

#### RULE 3 - USE OF METERS

A. The use of meters for testing and for measurement of production shall be subject to and in accordance with the following provisions:

(1) Only a volume displacement type metering device or vessel which registers the volume of condensate, gas, and oil passed through it in barrels, MCF, or multiples thereof may be used.

(2) All meters shall be downstream of the necessary separating or treating vessels. However, the Operator is authorized to use separators at each well site with meters which accurately separate the CO<sub>2</sub> oil, condensate, water, and gas which will then be individually measured for each well, then recombined for delivery to the plant and central tank site for ultimate sale. All meters shall be designed and installed in conformance with recognized metering practices and shall be subject to the approval of the Supervisor of the Oil and Gas Board.

(3) All meters and equipment affecting meter accuracy shall be kept in good working order. Each meter shall be calibrated at least once a month by means of a calibrated tank, a calibrated meter prover or a master meter. When a meter is found to deviate in its recording by more than two percent, it must be adjusted to conform to the said tolerance limitation of two percent or the meter calibration factor corrected.

(4) The corrected meter reading at 7:00 a.m. on the first day of each month for each meter shall be reported on the bottom of the Form 9 reporting the monthly production from the wells being measured by such meter.

#### RULE 4 - MEASUREMENT PROCEDURES AND FACILITIES

A. The Operator of the Field shall be permitted to commingle production at the surface from all individual units for collection, processing, treatment, and sale at a central tank battery as part of its treatment facilities. This includes a central tank battery and a central treatment facility for CO<sub>2</sub> condensate, oil, water, natural gas liquids, and natural gas production. The oil and gas production from the Fields may be commingled in a common storage system. The Operator shall install a flowline, header and measurement system that allows each well in each unit in the Field to be separately and individually tested. If, upon a sale therefrom, a variance exists between the measurement from the common storage system and the measurement from the production of all the wells commingled in such common storage system, then such variance shall be allocated back

to each of the wells producing into the common storage system proportionately to the production measured from each of the wells on the basis of the periodic tests.

B. Each producing well shall be so equipped that gas/oil ratio and bottomhole or other pressure test may be made.

C. Each producing well shall be connected to a metering system as will permit the adequate testing of each individual well under usual operating conditions without the necessity of closing in any other well. Separators, stock tanks or measuring devices and connections thereto shall be subject to approval by the Supervisor.

#### RULE 5 – TUBINGLESS COMPLETION

A. The Operator of the CO<sub>2</sub> Wells in the Field may produce the Wells through special chromium casing without tubing, as tubingless completions.

#### RULE 6 - APPLICABILITY OF STATEWIDE RULES:

A. 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.

B. 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 \*\*\***

**IT IS FURTHER ORDERED AND ADJUDGED** that this Order shall be in force and effect from and after December 15, 2010.

**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 28<sup>th</sup> day of December, 2010.

STATE OIL AND GAS BOARD OF  
MISSISSIPPI

  
\_\_\_\_\_  
CHAIRMAN

Prepared by:  
William F. Blair  
Blair & Bondurant, P.A.  
P. O. Box 321423  
Jackson, MS 39232  
(601) 992-4477  
[bill@bbfirm.com](mailto:bill@bbfirm.com)