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RAILROAD COMMISSION OF TEXAS HEARINGS DIVISION

OIL AND GAS DOCKET NO. 04-0310416

**APPLICATION OF FROSTWOOD ENERGY, LLC TO AMEND THE FIELD RULES FOR THE
TAFT (4000) FIELD, SAN PATRICIO COUNTY, TEXAS**

OIL AND GAS DOCKET NO. 02-0310417

**APPLICATION OF FROSTWOOD ENERGY, LLC TO AMEND THE FIELD RULES FOR THE
WEST RANCH (WARD) FIELD, JACKSON COUNTY, TEXAS**

HEARD BY: Karl Caldwell – Technical Examiner
Lynn Latombe – Administrative Law Judge

HEARING DATE: June 29, 2018
RECORD CLOSED: July 2, 2018
CONFERENCE DATE: August 21, 2018

APPEARANCES: **REPRESENTING:**

APPLICANT: Frostwood Energy, LLC

John Soule
Brian Gaudet

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Frostwood Energy, LLC, Operator No. 288391 (Frostwood), requests to amend the field rules for the Taft (4000) Field in San Patricio County, Texas and the West Ranch (Ward) Field in Jackson County, Texas. Frostwood proposes the same field rules for each field, with the exception of different designated correlative intervals.

For the Taft (4000) Field in San Patricio County, Texas, Frostwood proposes the following field rules:

1. Field Interval from 3984' to 4360' as shown on the Neutron Density and Gamma Ray Log for the Flinn No. 13D Well (API No. 42-409-33078). The field interval is commonly referred to as the Catahoula reservoir and is correlative across much of the South Texas Gulf Coast.
2. Spacing 330'/0'.
3. Density 20-Acre Standard Units; 10-Acre Optional Units.
4. Allocation 100% acreage, with acreage assigned for allowable purposes identified on a table attached to Form P-15 or on Form P-16, with a plat permitted, but not required to be filed.
5. Top Allowable: 10 BOPD/acre.

For the West Ranch (Ward) Field in Jackson County, Texas, Frostwood proposes the following field rules:

1. Field Interval from 5733' to 5805', as shown on the Compensated Neutron Density and Gamma Ray Log for the Turner-Plummer No. 1 Well (API No. 42-239-33591). The field interval is the upper portion of the Frio formation and is commonly referred to as the Ward reservoir.
2. Spacing 330'/0'.
3. Density 20-Acre Standard Units; 10-Acre Optional Units.
4. Allocation 100% acreage, with acreage assigned for allowable purposes identified on a table attached to Form P-15 or on Form P-16, with a plat permitted, but not required to be filed.
5. Top Allowable: 10 BOPD/acre.

Frostwood originally requested cancellation of any overproduction as of the date of the final order but withdrew this request at the hearing as there is no overproduction in the fields at this time. Notice of each application was sent to the P-5 address for operators in the field and each application is unopposed. The Technical Examiner and Administrative Law Judge (collectively, "Examiners") recommend approval of the applications.

DISCUSSION OF THE EVIDENCE

Frostwood is focused on the acquisition of prolific, mature, conventional assets along the Gulf Coast, with a focus on re-development of those assets that have historically only been produced with vertical wells. Frostwood plans to re-develop these assets with

new technologies, namely, horizontal drilling. Frostwood is targeting the top of sand "oil column" in the thick sands in the subject fields. Frostwood's engineering witness, Brian Gaudet, testified that oil in these fields will be recovered most efficiently by horizontal drilling. Using state-of-the art rotary steerable tools allows Frostwood to steer the wells within one-to-two foot windows, and there is a thick aquifer underneath the oil column. Over time, Frostwood will refine the target window for horizontal well geo-steering, improving production results.

For both the Taft (4000) Field in San Patricio County and the West Ranch (Ward) Field in Jackson County, Frostwood is requesting the same field rules, other than the correlative interval (Rule No. 1), as four recently approved field rule amendments:

1. Ganado, West (4700 Zone) Field, Final Order No. 02-0308632.
2. Placedo Field, Final Order No. 02-0308631.
3. McFaddin (4400) Field, Final Order No.02-0308635.
4. Portilla (Frio) Field, Final Order No. 04-0309350.

The request for lease line spacing of 330 feet with no minimum between well spacing will provide flexibility in drilling wells to maximum ultimate recovery from the field which will result in the recovery of additional oil that may otherwise go unrecovered. The proposed 20-acre standard density with 10-acre option is the same density rule adopted in fields 1-4 above, and 20-acre density is the current rule in the West Ranch (Ward) Field, while the current density in the Taft (4000) Field is 10-acres.

The current allowable for the Taft (4000) Field is a 63 BOPD MER and the allocation formula is based on 100% acres, while the current allowable for the West Ranch (Ward) Field is a 82 BOPD MER with an allocation formula based on 50% acres and 50% per well. Frostwood is requesting an allocation formula based on 100% acreage, which is the current rule in the Taft (4000) Field, and this same allocation formula has been adopted in fields 1-4 above. Frostwood is requesting the same oil allowable as previously adopted in fields 1-4 above which is 10 BOPD per acre assigned. Frostwood's completions are open hole completions, with lateral lengths of 1,000 to 2,500 feet. Frostwood incorporates screens and gravel packs around the screens, which results in highly productive wells.

In applying Statewide Rule 86 to assign additional acreage to horizontal wells, an operator in the subject fields would be able to assign roughly 100 acres per horizontal well to these wellbore lengths, and the requested allowable of 10 BOPD per acre assigned equates to the 1,000 BOPD realized from the horizontal wells completed in similar reservoirs in the area on 24-hour initial potential tests. Frostwood expects similar results for wells completed in the subject fields.

The Taft (4000) Field was discovered September 1, 1968. The June 2018 oil and gas proration schedules for the Taft (4000) Field does not list Frostwood as an operator

in the field. However, Frostwood has drilled and completed two horizontal wells in this field:

1. Form W-2 for the Flinn-Mayo Lease, Well No. 1H (42-409-33086) shows the well is completed in the Taft (4000) Field, with a completion date of May 22, 2018. Initial potential test data shows the well produced 267.9 BOPD, with 102 Mcfd gas, with a gas-oil ratio of 380.
2. Form W-2 for the Mayo Lease, Well No. 93H (42-409-33088) shows the well is completed in the Taft (4000) Field, with a completion date of June 10, 2018. Initial potential test data shows the well produced: 487 BOPD, 113 Mcfd gas, a GOR of 232, and 2,986 bwpd.

The West Ranch (Ward) Field was discovered August 1, 1950. The June 1, 2018 oil and gas proration schedule for the West Ranch (Ward) Field shows that none of the wells on the oil proration schedule are producing wells. The gas proration schedule shows Frostwood has one inactive well in the field, while Hillcorp Energy Company is the operator for all other wells on the gas proration schedule, and all wells are inactive. Based on the June 2018 oil and gas proration schedules for the West Ranch (Ward) Field, no operators have producing wells at this time. Frostwood's engineering witness believes this is a dead field other than the wells Frostwood is planning to drill, and the proposed field rules will result in the recovery of additional oil that may otherwise go unrecovered.

Frostwood agreed that, pursuant to the provisions of Texas Government Code §2001.144(a)(4)(A), this Final Order shall be effective on the date a Master Order relating to this Final Order is signed.

FINDINGS OF FACT

1. Frostwood Energy, LLC, Operator No. 288391 (Frostwood), requests to amend the field rules for the Taft (4000) Field in San Patricio County, Texas and the West Ranch (Ward) Field in Jackson County, Texas.
2. Notice of each application was sent to the P-5 address for operators in the Taft (4000) Field and the West Ranch (Ward) Field and each application is unopposed.
3. Frostwood originally requested cancellation of any overproduction as of the date of the final order but withdrew this request at the hearing as there is no overproduction in the fields at this time.
4. Frostwood proposes the same field rules pertaining to well spacing, density, allocation, and top allowable for each field.
5. For both the Taft (4000) Field in San Patricio County and the West Ranch (Ward) Field in Jackson County, Frostwood is requesting the same field rules pertaining

to well spacing, density, allocation, and top allowable as four recently approved field rule amendments:

- a. Ganado, West (4700 Zone) Field, Final Order No. 02-0308632.
 - b. Placedo Field, Final Order No. 02-0308631.
 - c. McFaddin (4400) Field, Final Order No.02-0308635.
 - d. Portilla (Frio) Field, Final Order No. 04-0309350.
6. The request for lease line spacing of 330 feet with no minimum between well spacing will provide flexibility in drilling wells to maximum ultimate recovery from the field, resulting in the recovery of additional oil that may otherwise go unrecovered.
 7. The Taft (4000) Field was discovered September 1, 1968.
 8. The West Ranch (Ward) Field was discovered August 1, 1950.
 9. Frostwood is focused on the acquisition of prolific, mature, conventional assets along the Gulf Coast, with a focus on re-development of those assets that have historically only been produced with vertical wells. Frostwood plans to re-develop these assets with new technologies, namely, horizontal drilling.
 10. The proposed field rules will result in the recovery of additional oil that may otherwise go unrecovered.
 11. Frostwood agreed, that, pursuant to the provisions of Texas Government Code §2001.144(a)(4)(A), this Final Order shall be effective on the date a Master Order relating to this Final Order is signed.

CONCLUSIONS OF LAW

1. Proper notice was issued as required by all applicable statutes and regulatory codes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Amending the field rules for the Taft (4000) Field and the West Ranch (Ward) Field will allow operators in the fields to recover additional reserves and prevent waste.

4. Pursuant to §2001.144(a)(4)(A), of the Texas Government Code, and the consent of the applicants, this Final Order is effective when a Master Order relating to this Final Order is signed.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend that the Commission amend the field rules for Taft (4000) Field in San Patricio County, Texas and the West Ranch (Ward) Field in Jackson County, Texas

Respectfully submitted,



Karl Caldwell
Technical Examiner



Lynn Latombe
Administrative Law Judge