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RAILROAD COMMISSION OF TEXAS HEARINGS DIVISION

OIL AND GAS DOCKET NO. 02-0308631

THE APPLICATION OF FROSTWOOD ENERGY, LLC TO AMEND FIELD RULES FOR THE PLACEDO FIELD, VICTORIA COUNTY; TEXAS

OIL AND GAS DOCKET NO. 02-0308632

THE APPLICATION OF FROSTWOOD ENERGY, LLC TO AMEND FIELD RULES FOR THE GANADO, WEST (4700 ZONE) FIELD, JACKSON COUNTY; TEXAS

OIL AND GAS DOCKET NO. 02-0308635

THE APPLICATION OF FROSTWOOD ENERGY, LLC TO AMEND FIELD RULES FOR THE MCFADDIN (4400) FIELD, VICTORIA AND REFUGIO COUNTIES, TEXAS

OIL AND GAS DOCKET NO. 04-0309350

THE APPLICATION OF FROSTWOOD ENERGY, LLC TO AMEND FIELD RULES FOR THE PORTILLA (FRIO) FIELD (NO. 72484020) SAN PATRICIO COUNTY, TEXAS

HEARD BY:

Richard Eyster, P.G. – Technical Examiner
Clayton J. Hoover – Administrative Law Judge

APPEARANCES:

REPRESENTING:

APPLICANT:

John Soule, Attorney
Brian Gaudet

Frostwood Energy, LLC

HEARING DATE:
SUBMISSION DATE:

April 3, 2018

CONFERENCE DATE:**EXAMINERS' REPORT AND RECOMMENDATION****STATEMENT OF THE CASE**

Frostwood Energy, LLC seeks to amend existing special field rules for the following four fields ("the Fields"):

- Placedo Field, Victoria County;
- Ganado, West (4700 Zone) Field, Jackson County;
- McFaddin (4400) Field, Victoria and Refugio Counties; and
- Portilla (Frio) Field, San Patricio County.

The four applications were consolidated for hearing.

Frostwood requests the following amended rules for the Fields:

1. 330' minimum property, lease or subdivision line spacing and 0' minimum between-well spacing.
2. 20-acre standard drilling and proration units for oil wells, with up to 10-acres tolerance for the last well on a lease or pooled unit.
3. 20-acre standard drilling and proration units for gas, with 10% tolerance.
4. 10-acre optional units for oil or gas wells.
5. Proration unit plats not required to be filed, but permitted at the operator's option.
6. 100% acreage allocation for oil and gas allowables and continued suspension of the allocation formula for gas wells in the Portilla (Frio) Field.
7. Oil allowable of 10 barrels of oil per day per acre assigned.

For two of the Fields, Frostwood has requested adoption of a special field rule specifying the geologic interval for the field:

- Ganado, West (4700 Zone) Field: 4727' to 4980' MD as shown on the Dual Induction Focused Log for the Liberty Gray No. 5 Well (API No. 42-469-31801)
- McFaddin (4400) Field: 4374' to 4695' MD as shown on the Simultaneous Triple Induction/Sonic/Spectral Density/Neutron/Gamma Ray Log for the Mcfaddin No. 181 Well (API# 42-469-34093)

The Portilla (Frio) Field already has a rule specifying the field interval. Frostwood provided an API number 9API No. 409-01642) for the well used to identify the interval and requested that it be added to the existing rule. The request for adoption of a field interval rule for the Placedo Field was withdrawn at the hearing.

Frostwood proposes cancellation of all field rules not specifically requested as amended rules in these applications.

Frostwood is also requesting cancellation of accumulated overproduction as of the date of the Final Orders.

The subject applications are unopposed. Frostwood was the only party to present evidence at the hearing. The Administrative Law Judge and Technical Examiner recommend that the applications be approved.

DISCUSSION OF THE EVIDENCE

Mr. Brian Gaudet testified as an expert petroleum engineer on behalf of Frostwood. Mr. Gaudet is Chief Operating Officer at Frostwood.

Frostwood submitted as exhibits copies of the oil and gas proration schedules for the Fields. Notices of the subject applications were mailed to all active operators in the Fields on March 1, 2018.

Frostwood is the principal operator in the Placedo Field. Frostwood recently acquired the lease and five oil wells in the Placedo Field that were operated by Freddy's Well Service, Inc. There are four other oil wells on the proration schedule that are not operated by Frostwood. Two of the three leases on which those wells are located are severed. Notice was sent to those two operators – IWR Operating, LLC and Sure Flow Oil & Gas, Inc. The operator (S&D Oil & Gas Company, Inc.) of one well on the other lease is on the Commission's §91.114 list of operators prohibited from conducting business subject to the Commission's jurisdiction. S&D has no current address on file with the Commission. Notice was therefore not sent to S&D.

Frostwood is the only active operator in the Ganado, West (4700 Zone) Field. Two other operators of one well each, API Operating Co. and Oil Coast Corp., are on the Commission's §91.114 list of operators prohibited from conducting business subject to the Commission's jurisdiction. Neither has a current address on file with the Commission. Notice was therefore not sent to API or Oil Coast.

Frostwood is the only operator in the McFaddin (4400) Field and the Portilla (Frio) Field.

The Fields are all oil fields. There are also gas fields for the Placedo, McFaddin (4400) Fields and Portilla (Frio) Fields. There is no gas field for the Ganado, West (4700 Zone) Field. There are no gas wells in the Placedo or McFaddin (4700) Fields. Frostwood is operator of four wells in the Portilla (Frio) Gas Field. Three of those wells are shut in; the other is a disposal well.

Frostwood submitted maps of each of the fields as exhibits. The maps show all wells on the proration schedule for each field. Frostwood acquired its acreage in each of the Fields within the last three years. All vertical wells in the Fields were drilled by previous operators. Frostwood has drilled multiple horizontal wells in each of the Fields, which are all identified on the maps submitted by Frostwood.

The Fields are located along the Texas Gulf Coast from San Patricio County north to Jackson County. Production from the Fields began as early as the 1930s. Millions of barrels of oil have been produced from the Fields. Production has declined so that there is only marginal

production from the remaining vertical wells. Frostwood is using modern horizontal well technology to re-develop the Fields. That technology allows Frostwood to drill horizontal wells in the relatively thin targeted interval in the Frio formation, which occurs at relatively shallow depths of approximately 4,500 feet in the Fields. Frostwood submitted exhibits showing stratigraphic columns and logs for each of the Fields showing the targeted intervals. The targeted interval in the Placedo, Ganado, West (4700) and McFaddin (4400) Fields is the Greta formation. The Greta is in the upper portion of the Upper Frio. In the Portilla (Frio) Field, Frostwood targets the Middle and Lower Frio. The Frio in all of the Fields has good porosity, permeability and productivity.

Mr. Gaudet testified the proposed spacing and density rules are appropriate for further development with horizontal wells in of the Fields. The requested between-well spacing rules (0') will facilitate horizontal drilling and is the rule in many fields in Texas being developed with horizontal wells. The requested lease-line spacing rules (330') are unchanged except in the McFaddin (4400) Field where the current rule is 233'. A lease-line spacing rule of 330' is also common in many fields in Texas being developed with horizontal wells.

The requested standard unit size (20 acres) is unchanged in three of the Fields. The current density rule in the Placedo Field is 10 acres. The requested optional unit rule (10 acres) will facilitate the drilling of horizontal wells by allowing a reduction in acres assigned to vertical wells with very low production rates so that acreage can be assigned to horizontal wells to provide additional allowable.

Frostwood submitted exhibits showing the initial potential and production from each of its horizontal wells in the Fields. Initial potentials range from several hundred barrels of oil per day to more than 2,000 barrels per day. Mr. Gaudet testified the wells can produce at these rates without having any adverse impact on ultimate recovery. Frostwood's laterals range in length from approximately 1,500 feet to approximately 3,000 feet. Pursuant to the requested density rules, the length of the laterals, the acreage available in each of Frostwood's leases in the Fields and applicable provisions of Statewide Rule 86, Frostwood plans to assign 80-120 acres to each horizontal well at the time of completion. The requested allowable of 10 barrels of oil per acre assigned will cover most of the expected initial production from Frostwood's future horizontal wells. As the wells decline and no longer need as much allowable, the acreage will be reassigned to other more recently drilled horizontal wells.

Frostwood has accumulated some overproduction. None of that production has negatively impacted ultimate recovery from the Fields. Therefore, Frostwood requests cancellation of overproduction as of the effective date of the Final Orders.

Frostwood also proposes cancellation of all field rules not specifically requested as amended rules in these applications. For example the Placedo field has a rule requiring the installation of blowout preventers (Rule 6) and Rule 7 which states that when coming out of the hole with drill pipe a fill up line must be put into the casing to fill up the hole. These types of field rules are unnecessary because they are covered in Rule §3.13.

Acreage will be assigned for allowable purposes using the Form P-16. Consistent with Statewide Rule 86 and special field rules in other fields being developed with horizontal wells,

Frostwood requests that proration unit plats not be required, but that operators be permitted to file such plats at the operator's option.

In summary, Frostwood seeks amended rules that are appropriate for development with horizontal wells. At the hearing, Frostwood agreed on the record that the Final Orders for each of the Fields will be effective on the date the Master Order is signed.

FINDINGS OF FACT

1. Frostwood Energy, LLC ("Frostwood") seeks to amend field rules for the Placedo Field, Victoria County; the Ganado, West (4700 Zone) Field, Jackson County; the McFaddin (4400) Field, Victoria and Refugio Counties and the Portilla (Frio) Field, San Patricio County, Texas (the "Fields").
2. Notice of the subject applications were mailed by U.S. Mail to all operators in good standing in the Fields on March 1, 2018. Three operators no longer authorized to conduct business under the jurisdiction of the Commission and whose addresses on file with the Commission are not current were not sent notice.
3. The subject applications are unprotested.
4. Frostwood seeks the following amended special field rules for the Fields:
 - a. A designated interval for the Ganado, West (4700 Zone) Field from 4727' to 4980' MD as shown on the Dual Induction Focused Log for the Liberty Gray No. 5 Well (API No. 42-469-31801).
 - b. A designated interval for the McFaddin (4400) Field from 4374' to 4695' MD as shown on the Simultaneous Triple Induction/Sonic/Spectral Density/Neutron/Gamma Ray Log for the Mcfaddin No. 181 Well (API# 42-469-34093).
 - c. 330' minimum property, lease or subdivision line spacing and 0' minimum between-well spacing.
 - d. 20-acre oil drilling and proration units with up to 10-acres tolerance for the last well on a lease or pooled unit.
 - e. 20-acre gas drilling and proration units with 10% tolerance.
 - f. 10-acre optional units for oil or gas.
 - g. The filing of proration unit plats permitted, but not required. Form P-16 or its successor used to identify the number of acres assigned to each well for allowable purposes
 - h. 100% acreage allocation for oil and gas allowables, with suspension of the formula gas wells (AOF) to remain in effect.
 - i. Oil allowable of 10 barrels of oil per day per acre assigned.

5. Amending field rules for the Fields, as proposed by Frostwood, is appropriate and will provide for additional development of the Fields with horizontal wells.
6. Cancellation of overproduction as of the effective date of the Final Orders will not have an adverse effect on the ultimate recovery of oil from the Fields and will not harm correlative rights.
7. Cancellation of unnecessary field rules is appropriate.
8. At the hearing, Frostwood agreed on the record that the Final Orders in these cases are to be effective when the Master Order is signed.

CONCLUSIONS OF LAW

1. Resolution of the subject applications is a matter committed to the jurisdiction of the Railroad Commission of Texas – Tex. Nat. Res. Code §81.051.
2. Legally sufficient notice has been provided to all affected persons.
3. Amending field rules for the Placedo Field, Ganado, West (4700 Zone) Field, the McFaddin (4400) Field and the Portilla (Frio) Field, as proposed by Frostwood Energy, LLC, will prevent waste and protect correlative rights.
4. Pursuant to §2001.144(a)(4)(A), of the Texas Government Code, and the agreement of the applicant, these final orders are effective when a Master Order related to these Final Orders is signed.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend amending field rules and canceling overproduction for the Placedo Field, the Ganado, West (4700 Zone) Field, the McFaddin (4400) Field and the Portilla (Frio) Field, Various Counties, Texas.

Respectfully submitted,



Richard Eyster, P.G.
Technical Examiner



Clayton J. Hoover
Administrative Law Judge