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RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL & GAS DOCKET NO. 06-0308519

APPLICATION OF SABINE OIL AND GAS CORPORATION FOR A BLANKET AUTHORITY FOR STATEWIDE RULE 10 EXCEPTION TO DOWNHOLE COMMINGLE IN THE HENDERSON, E. (COTTON VALLEY), MINDEN (TRAVIS PEAK CONS.), OAK HILL (PETTIT), OAK HILL (TRAVIS PEAK) AND CARTHAGE (HAYNESVILLE SHALE) FIELDS, RUSK, HARRISON, GREGG, AND PANOLA COUNTIES, TEXAS

HEARD BY: Robert Musick - Technical Hearings Examiner
Jennifer N. Cook - Administrative Law Judge

HEARING DATE: February 23, 2018

CONFERENCE DATE: May 22, 2018

APPEARANCES:

Dale E. Miller

REPRESENTING:

Sabine Oil & Gas Corporation

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Sabine Oil & Gas Corporation ("Sabine") seeks a blanket exception to Statewide Rule 10 allowing downhole commingling of the following fields (collectively, "Fields"): Henderson, E. (Cotton Valley) Field; Minden (Travis Peak Cons.) Field; Oak Hill (Pettit) Field; Oak Hill (Travis Peak) Field; and Carthage (Haynesville Shale) Field. The Fields are in Rusk, Harrison, Gregg, and Panola Counties, Texas.

Sabine has demonstrated that the amendment will prevent waste, protect correlative rights, promote conservation and provide for the orderly development of the Fields.

Proper notice was given to all operators in the Fields, and the application was not protested, and no protesting party appeared at the hearing. The Technical Examiner and Administrative Law Judge (collectively, "Examiners") recommend that the amended field rules be granted as proposed by Sabine.

DISCUSSION OF THE EVIDENCE

Statewide Rule 10 generally prohibits production of oil and gas produced from different strata through the same string of tubulars. An Operator may apply for an exception to this general prohibition if the commingled production will prevent waste, promote conservation or protect correlative rights. Sabine is requesting blanket authority to commingle the Fields.

There are numerous existing wells that are producing from one or two of the Fields and are nearing the end of their economically productive lives. Downhole commingling the wells from one or more of the Fields will extend the productive lives of the wells and recover more hydrocarbons than would otherwise be economically feasible. The Fields subject to this application are described below in descending stratigraphic order:

- Oak Hill (Pettit) Field (No.66461333): This Field is an associated field and the depth to the gas reservoir is 7,465 feet and the depth to the oil reservoir is 7,165 feet. There are two (2) gas wells of which one (1) well is active and one (1) well has a Rule 10 exception. In addition, five (5) of six (6) oil wells are active on the February 2018 proration schedule.
- Oak Hill (Travis Peak) Field (No.66461666): This Field is an associated field and the correlative interval is defined from 6,990 feet to 8,940 feet. There are 14 gas wells of which three (3) gas wells are active and six (6) have Rule 10 exceptions. In addition, 10 out of 12 oil wells are active on the February 2018 proration schedule.
- Minden (Travis Peak Cons.) Field (No.61792380): This Field is an associated field and the correlative interval is defined from 7,408 feet to 9,218 feet. This Field is the product of the consolidation of 62 different Travis Peak fields. There are 116 gas wells of which 46 gas wells are active and 47 have Rule 10 exceptions. In addition, 44 of a total of 70 oil wells are active on the February 2018 proration schedule.
- Henderson, E. (Cotton Valley) Field (No.40356200): This Field is a non-associated gas field and the correlative interval is defined from 9,600 feet to 11,000 feet. There are 305 gas wells of which 250 are active on the February 2018 proration schedule.
- Carthage (Haynesville Shale) Field (No.16032300): This Field is a non-associated gas field and the correlative interval is defined from 9,568 feet to 11,089 feet. There are 1,171 gas wells of which 1,030 gas wells are active and 39 wells have Rule 10 exceptions on the February 2018 proration schedule.

The Fields are geographically overlapping to each other and Sabine has previously obtained Blanket Rule 10 authorities with various combinations of these Fields, but all four associated reservoirs (collectively, "Reservoirs") identified as Cotton Valley, Travis Peak, Pettit and Haynesville Shale, have not been commingled in a single Blanket Rule 10 authorization.

Testimony by Sabine in the hearing indicate there are both mechanical and reservoir justifications in favor of downhole commingling the Fields instead of attempting to install and operate multiple strings of production tubulars in the wells. These associated Reservoirs are very tight, limiting the possibility of cross-flow communication between different fields.

The application contains the Oak Hill (Travis Peak) Field and the Minden (Travis Peak Cons.) Field, which are the same reservoir, but established as two different fields in the same geographical area. The two fields have grown together over time and there is no distinct boundary to determine which field is appropriate. The Travis Peak reservoir is identical with respect to either field designation. Thus, only one of the Travis Peak reservoirs will ever be included in any Rule 10 exception with the other three subject fields: Henderson, E. (Cotton Valley) Field; Oak Hill (Pettit) Field; and Carthage (Haynesville Shale) Field.

Testimony in the hearing indicate these Reservoirs are blanket depositions and productivity is possible in any or all the Reservoirs at any location throughout the area of interest. Testimony also indicated that the Pettit has been the least developed of the Reservoirs as it is the shallowest of the Reservoirs and has limited production capacity, thus the production volume from the Pettit may not justify an individual completion due to the economics of producing it as a single completion and the economic limit of production.

Testimony indicated that commingling the Fields will result in a combined economic rate that could not be attained on an individual basis. Sabine indicated that allowing the Fields to produce to a lower bottom hole pressure and individual reservoir production rate will increase their ultimate expected recoverable reserves, thereby preventing waste and protecting correlative rights. Sabine indicates each Reservoir completion will incrementally increase the ultimate recovery from commingling Fields. Sabine estimated a well will increase recovery by approximately 34,600 thousand cubic feet (MCF) of gas per each additional completed reservoir.

Without authority to commingle the Fields, the wells will be prematurely plugged and abandoned as they near the end of their economically productive lives.

In the hearing the Applicant agreed on the record that the Final Order in this case is to be final and effective when the Master Order is signed.

FINDINGS OF FACT

1. Notice of this hearing was provided to all persons entitled to notice at least ten (10) days prior to the date of the hearing.
2. The hearing was not protested.
3. This application is for blanket authority for Statewide Rule 10 exception for the following fields: Henderson, E. (Cotton Valley) Field; Minden (Travis Peak Cons.) Field; Oak Hill (Pettit) Field; Oak Hill (Travis Peak) Field; and Carthage (Haynesville Shale) Field.
4. Sabine has previously obtained Blanket Rule 10 authorities with various combinations of the Fields, but not all combinations have been commingled in a single Blanket Rule 10 authorization.
5. These Reservoirs are very tight with very low permeability, limiting the possibility of cross-flow communication between Fields.
6. The reservoir fluids are known to be compatible.

7. Commingling the Fields will result in combined economic rate that the wells could not attain on an individual basis.
8. Without authority to commingle the Fields, some of the wells will be prematurely plugged and abandoned as they are nearing the end of their economically productive lives.
9. The requested blanket authority for Statewide Rule 10 exception is necessary to prevent waste, protect correlative rights, promote conservation and provide for the orderly development of the Fields.
10. In the hearing the Applicant agreed on the record that the Final Order in this case is to be final and effective when the Master Order is signed.

CONCLUSIONS OF LAW

1. All notice requirements have been satisfied. 16 Tex. Admin. Code § 1.42.
2. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051.
3. The requested blanket authority for Statewide Rule 10 exception is necessary to prevent waste, protect correlative rights, promote conservation and provide for the orderly development of the Fields.
4. Pursuant to § 2001.144 (a)(4)(A) of the Texas Government Code and the agreement of the applicant, this Final Order is final and effective when a Master Order relating to the Final Order is presented at Commission conference and signed by the Commissioners.

EXAMINER'S RECOMMENDATION

Based on the above findings of facts and conclusions of law, the Examiners recommend the Commission enter an order granting the application of Sabine to approve the blanket exception to Statewide Rule 10 for the Henderson, E. (Cotton Valley) Field, Minden (Travis Peak Cons.) Field, Oak Hill (Travis Peak) Field, Oak Hill (Pettit) Field and Carthage (Haynesville Shale) Field.

Respectfully submitted,



Robert Musick
Technical Hearings Examiner



Jennifer N. Cook
Administrative Law Judge