



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL & GAS DOCKET NO. 08-0298501

THE APPLICATION OF BURLINGTON RES O & G CO – MIDLAND TO CONSIDER AN EXCEPTION TO STATEWIDE RULE 10, AN MER, AND A NET GAS-OIL RATIO FOR THE WADDELL, W. N. ET AL. LEASE, ALL WELLS, SAND HILLS (MCKNIGHT), SAND HILLS (SAN ANGELO, UPPER), SAND HILLS (TUBB), SAND HILLS (WICHITA ALBANY) AND SAND HILLS (WOLFCAMP) FIELDS IN CRANE COUNTY, TEXAS

HEARD BY: Peggy Laird, P.G. – Technical Examiner
Laura Miles-Valdez– Hearings Examiner

SUBMITTED BY: Peggy Laird, P.G. - Technical Examiner
Jennifer N. Cook - Administrative Law Judge

HEARING DATE: November 24, 2015

CONFERENCE DATE: December 6, 2016

APPEARANCES:

Jamie Nielson
Greg Cloud

REPRESENTING:

Burlington Res. O & G Co-Midland

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Burlington Res O & G Co – Midland (“Burlington”) seeks a blanket exception to Statewide Rule 10 (16 Tex. Admin. Code §3.10) allowing operators to commingle hydrocarbon production from the Sand Hills (McKnight), Sand Hills (San Angelo, Upper), Sand Hills (Tubb), Sand Hills (Wichita Albany), and Sand Hills (Wolfcamp) Fields (“Subject Fields”) in the Waddell, W. N. Et Al. Lease in Crane County, Texas. Burlington also requests the establishment of a Maximum Efficient Rate (“MER”) of 300 barrels of oil per day (“BOPD”) for lease wells commingling production from the Subject Fields, the establishment of a net gas-oil ratio (“GOR”) with a 1,500 MCF per day (“MCFD”) casinghead gas limit for lease wells comingling production from the Subject Fields, and the cancellation of any accumulated overproduction. The application was not protested.

The Technical Examiner and Administrative Law Judge (collectively referred to as "Examiners") recommend Burlington's application be granted.

DISCUSSION OF EVIDENCE

Statewide Rule 10(a) provides a general prohibition against the production of hydrocarbons from different strata (i.e., different commission-designated fields) through the same string of tubulars. Statewide Rule 10(b) provides for exceptions to the general prohibition if commingled production will prevent waste or promote conservation or protect correlative rights. Burlington is an operator of wells in the Subject Fields and has obtained exceptions to commingle all or some of the Subject Fields in twenty-two (22) wells. Burlington anticipates drilling and commingling production of additional wells in the future. Therefore, Burlington seeks a blanket exception to ease the administrative burden on operators and Commission staff. Burlington requests that all commingled production be assigned to the Sand Hills (Wichita Albany) Field, because staff had previously assigned commingled wells on the lease to the same field.

In addition to the exception to Statewide Rule 10, Burlington requests an MER of 300 barrels of oil per day ("BOPD") for the commingled wells, a net GOR with a 1,500 MCF per day casinghead gas limit for commingled wells, and the cancellation of any accumulated overproduction.

The W. N. Waddell et al Lease holds the Subject Fields, and contains 23,711 acres. The applicant reports that the fields are typical tight west Texas carbonate reservoirs, and each is fracture stimulated. The multizone area wells are tightly spaced as a result of the reservoir characteristics. Burlington reports that the formations are not capable of producing without artificial lift, and casing does not provide sufficient room to lift more than one zone. The only way reserves will be recovered is through a downhole commingle of the zones.

The Sand Hills (McKnight) Field was discovered in 1944, at a depth of 3,420 feet. The field is currently on Special Rules, which prescribe 40-acre units, 330-foot lease line spacing, and 660-foot between well spacing. The top oil allowable is 185 BOPD. The field has demonstrated a cumulative production of 135,934,756 barrels of oil.

The Sand Hills (San Angelo, Upper) Field was discovered on May 13, 1963, at a depth of 3,618 feet. The field is currently on Special Rules, which prescribe 10-acre units, 330-foot lease line spacing, and 660-foot between well spacing. The top oil allowable is 84 BOPD. The field has demonstrated a cumulative production of 4,510,773 barrels of oil.

The Sand Hills (Tubb) Field was discovered in 1930, at a depth of 4,500 feet. The field is currently on Special Rules, which prescribe 40-acre units, 330-foot lease line spacing, and 660-foot between well spacing. The top oil allowable is 93 BOPD. The field has demonstrated a cumulative production of 114,919,778 barrels of oil.

The Sand Hills (Wichita-Albany) Field was discovered on January 19, 1958, at a depth of 5,340 feet. The field is currently on Statewide Rules, which prescribe 40-acre units, 467-foot lease line spacing, and 1,200-foot between well spacing. The top oil allowable is 82 BOPD. The field has demonstrated a cumulative production of 586,293 barrels of oil.

The Sand Hills (Wolfcamp) Field was discovered on June 1, 1958, at a depth of 5,684 feet. The field is currently on Special Rules, which prescribe 40-acre units, 467-foot lease line spacing, and 933-foot between well spacing. The top oil allowable is 102 BOPD. The field has demonstrated a cumulative production of 3,003,641 barrels of oil.

Burlington provided the SWR 10 Exception Data Sheet for one well, the Waddell, W. N., Et Al Well 2049, as an example of a typical commingled well drilled on this lease. The current shut-in bottom hole pressures for the five zones are estimated to be as follows: (1) McKnight is 300 pounds per square inch (psi); (2) San Angelo is 785 psi; (3) Tubb is 738 psi; (4) Wolfcamp is 1,400 psi; and (5) Wichita Albany is 1,400 psi. The current wells are all produced using artificial lift. Burlington provided formation fluid sampling and analysis results to assess fluid compatibility. The analyses were performed on fluid samples from individual and combined zones. The results indicated the formation fluids from the five zones were compatible and would not result in harm to the recovery of hydrocarbon resources.

Burlington estimates remaining recoverable reserves for each zone without commingling to be zero. The abandonment rate for each zone with commingling is estimated to be one BOPD. Commingling all five zones will recover an estimated 43,000 barrels of oil per well. Without commingling Burlington stated the wells would not be drilled, and economic constraints would cause hydrocarbons to remain in the ground.

Burlington presented data that demonstrated production in several of the wells previously authorized for commingling exceeded the daily allowable for oil and gas. They request the allowable be increased to 300 BOPD MER and net GOR with a casinghead gas limit of 1500 MCFD to accommodate the commingled production. Burlington's expert petroleum engineer stated the requested allowable will not cause waste or harm correlative rights and will promote production of reserves.

FINDINGS OF FACT

1. Notice of this hearing was given to all parties entitled to notice at least ten days prior to the date of the hearing.
2. The Sand Hills (McKnight) Field was discovered in 1944 at a depth of 3,420 feet with a top oil allowable of 185 BOPD.
3. The Sand Hills (San Angelo, Upper) Field was discovered on May 13, 1963, at a depth of 3,618 feet with a top oil allowable of 84 BOPD.

4. The Sand Hills (Tubb) Field was discovered in 1930 at a depth of 4,500 feet with a top oil allowable of 93 BOPD.
5. The Sand Hills (Wichita-Albany) Field was discovered on January 19, 1958, at a depth of 5,340 feet with a top oil allowable of 82 BOPD.
6. The Sand Hills (Wolfcamp) Field was discovered on June 1, 1958, at a depth of 5,684 feet with a top oil allowable of 102 BOPD.
7. Burlington is an operator of wells in the five subject fields and has obtained exceptions to commingle all or some of the Subject Fields in twenty-two (22) wells.
8. The current wells are all produced using artificial lift.
9. The formation fluids from the five zones are compatible and will not harm the recovery of hydrocarbon resources.
10. Commingling all five zones will recover an estimated 43,000 barrels of oil per well.
11. Without commingling, economic constraints would cause hydrocarbons to remain in the ground.
12. Production in several of the wells previously authorized for commingling exceeded the daily allowable for oil and gas.

CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051
2. All notice requirements have been satisfied. 16 Tex. Admin. Code § 3.10(c)
3. Granting the subject application will prevent waste and protect correlative rights. 16 Tex. Admin. Code § 3.10(b)

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend the Commission enter an order:

1. Granting the application of Burlington Res O & G Co – Midland for a blanket exception to downhole commingle production from the Sand Hills (McKnight), Sand Hills (San Angelo, Upper), Sand Hills (Tubb), Sand Hills (Wichita Albany), and Sand Hills (Wolfcamp) Fields ("Subject Fields") in the Waddell, W. N. Et Al. Lease in Crane County, Texas;

2. Assigning production to the Sand Hills (Wichita-Albany) Field (ID No. 80473744);
3. Establishing an MER of 300 BOPD for all wells that are commingling production from the Subject Fields;
4. Increasing the net GOR authority with a casinghead gas limit of 1,500 MCFD; and
5. Cancelling all accumulated overproduction for the Waddell, W. N. et al. Lease in the Subject Fields.

Respectfully submitted,



Peggy Laird, P.G.
Technical Examiner



Jennifer N. Cook
Administrative Law Judge

