

THE APPLICATION OF SANDRIDGE EXPL. AND PROD., LLC TO CONSOLIDATE THE TEX-MEX, SE. (SAN ANDRES) AND THE TEX-MEX, S.E. (UPPER CLEARFORK) FIELDS INTO THE TEX-MEX, SE. (WICHITA ALBANY) FIELD AND TO AMEND THE FIELD RULES FOR THE TEX-MEX, SE. (WICHITA ALBANY) FIELD, GAINES COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner

DATE OF HEARING: April 23, 2010

APPEARANCES:

REPRESENTING:

APPLICANT:

Bill Spencer
John Miller

Sandridge Expl. and Prod., LLC

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Sandridge Expl. and Prod., LLC ("Sandridge") requests to consolidate the Tex-Mex, SE. (San Andres), ID No. 89010 500, and the Tex-Mex, S.E. (Upper Clearfork), ID No. 89010 600, Fields into the Tex-Mex, SE. (Wichita Albany), ID No. 89010 700, Field. Although the Tex-Mex, S.E. (Upper Clearfork) Field was not included in the original notice of hearing, Sandridge is the only operator in the field and the correlative interval is contained within the proposed correlative interval for the consolidated field.

Field Rules for the Tex-Mex, SE. (Wichita Albany) Field were originally adopted by Final Order No. 8A-80,948, effective October 31, 1983, as amended. The rules currently in effect for the field are summarized as follows:

1. Designation of the field as the correlative interval from 6,806 feet to 7,700 feet;
2. 467'-933' well spacing;
3. 80 acre units with optional 40 acre density;
4. Allocation based on 100% acres with a top allowable of 198 BOPD;

5. Field wide permitted gas-oil ratio of 15,000 cubic feet of gas per barrel of oil produced.

Sandridge requests that the Field Rules be amended as follows:

1. Designation of the field as the correlative interval from 4,350 feet to 7,700 feet;
2. 330'-0' well spacing;
3. 80 acre units with optional 20 acre density;
4. Allocation based on 95% W-10 potential and 5% per well with a top allowable of 198 BOPD;
5. Field wide permitted gas-oil ratio of 15,000 cubic feet of gas per barrel of oil produced.

This application was unprotested and the examiner recommends approval of the field consolidation and amending the Field Rules for the Tex-Mex, SE. (Wichita Albany) Field, as requested by Sandridge.

DISCUSSION OF THE EVIDENCE

The Tex-Mex, SE. (San Andres) Field was discovered in September 1963 at an average depth of 4,300 feet. There are currently 11 producing wells carried on the proration schedule and Sandridge operates the majority of the wells. Two other operators each operate one well in the field. The field operates under rules providing for 330'-660' well spacing, 40 acres units and has allocation based on 100% acres. Cumulative production from the field through January 2010 is 510.3 MBO and 424.8 MMCFG.

The Tex-Mex, S.E. (Upper Clearfork) Field was discovered in May 2007 at an average depth of 6,700 feet. There is currently only 1 producing well carried on the proration schedule and Sandridge is the only operator in the field. The field operates under Statewide Rules and has allocation based on 95% W-10 potential and 5% per well. Cumulative production from the field through March 2010 is 4.2 MBO and 4.9 MMCFG.

The Tex-Mex, SE. (Wichita Albany) Field was discovered in February 1983 at an average depth of 7,500 feet. There are currently 114 producing wells carried on the proration schedule and Sandridge operates the majority of the wells. Five other operators have 16 producing wells in the field. Cumulative production from the field through January 2010 is 8.1 MMBO and 16.0 BCFG.

Sandridge is proposing to consolidate the San Andres and Clearfork fields into the Tex-Mex, SE. (Wichita Albany) Field. The proposed designated interval for the

consolidated field is the entire correlative interval between 4,350 feet and 7,700 feet as shown on the log of the Petroleum Technical Services - Hancock Lease, Well No. 4 (API No. 42-165-35086). This interval will include all zones between the top of the San Andres formation and the base of the Wichita Albany formation.

The fields are geographically intermingled and there are no other fields contained within the proposed correlative interval. All of the reservoirs are continuous across the field area and contain fractured dolomites that are deposited over a Northwest-Southeast trending anticline. The producing zones are heterogenous lenticular deposits that have an average porosity of 8.5%, an average water saturation of 45% and a cumulative average net pay thickness of 76 feet. The primary drive mechanism is a solution gas drive and the fields are in the later stages of primary depletion.

Sandridge estimated a recovery factor of 12% and performed a drainage calculation for 59 wells located on 12 different leases. On the wells studied, the net pay ranged from 42 feet up to 130 feet and the estimated ultimate recoveries ranged from 124,000 BO up to 348,000 BO. The calculated drainage areas ranged from 16 acres up to 72 acres. Twenty six wells had a drainage area of approximately 20 acres and the average drainage area was 38 acres.

The proposed consolidated field is almost developed down to 40 acres per well and Sandridge plans to further develop the field down to a density of 20 acres. Based on the drainage calculations submitted by Sandridge, additional wells are needed to effectively drain the reservoirs. Minimum well spacing of 330 foot lease line spacing with no minimum distance between wells and 80 acre proration units with optional 20 acre density will provide flexibility in locating wells for future development in the area.

Sandridge will be actively developing the consolidated interval by drilling infill wells and completing existing wells into additional zones and needs the flexibility to downhole commingle production to increase the economic viability of the wells. To date, there have been seven Statewide Rule 10 exceptions approved by the Commission to commingle production from various combinations of the three Tex-Mex, SE. fields. No scaling tendencies have yet been identified by Sandridge on the commingled wells.

Sandridge stated that producing all of the reservoirs simultaneously would reduce the abandonment rate for each zone and increase the ultimate recovery of hydrocarbons from all of the reservoirs. Assuming an economic limit of 2 BOPD and a 17% exponential decline rate for each reservoir, Sandridge calculated the incremental reserves to be recovered from each infill well to be 4,235 BO and 3,176 MCFG. Since Sandridge has plans to drill 50 infill wells, the total additional oil to be recovered from the consolidated field as a result of the entire project is approximately 200 MBO, thereby preventing waste and promoting conservation.

A multi-factor allocation formula is necessary for the protection of correlative rights pursuant to State Statutes. The fields contain heterogenous lenticular deposits and acreage does not represent a well's potential. Therefore, to avoid having a well's allowable restricted, Sandridge proposed a two-factor allocation formula based on 95% W-10 potential and 5% per well. Since the Wichita Albany formation occurs at 7,500 feet, Sandridge requested that the top oil allowable be set at the 1965 Yardstick Allowable of 198 BOPD for an 80 acre well.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and there were no protests.
2. The Tex-Mex, SE. (San Andres) Field was discovered in September 1963 at an average depth of 4,300 feet.
 - a. There are currently 11 producing wells carried on the proration schedule and Sandridge operates the majority of the wells.
 - b. Two other operators each operate one well in the field.
 - c. The field operates under rules providing for 330'-660' well spacing, 40 acres units and has allocation based on 100% acres.
3. The Tex-Mex, S.E. (Upper Clearfork) Field was discovered in May 2007 at an average depth of 6,700 feet.
 - a. There is currently only 1 producing well carried on the proration schedule and Sandridge is the only operator in the field.
 - b. The field operates under Statewide Rules and has allocation based on 95% potential and 5% per well.
4. The Tex-Mex, SE. (Wichita Albany) Field was discovered in February 1983 at an average depth of 7,500 feet.
 - a. There are currently 114 producing wells carried on the proration schedule and Sandridge operates the majority of the wells.
 - b. Five other operators have 16 producing wells in the field.
 - c. The field operates under rules providing for a correlative interval from 6,806 feet to 7,700 feet, 467'-933' well spacing, 80 acre units with optional 40 acre density and allocation based on 100% acres.

5. The Tex-Mex, SE. (San Andres) and Tex-Mex, S.E. (Upper Clearfork) Fields should be consolidated into the Tex-Mex, SE. (Wichita Albany) Field.
6. The designated interval for the consolidated field should be the entire correlative interval between 4,350 feet and 7,700 feet as shown on the log of the Petroleum Technical Services - Hancock Lease, Well No. 4 (API No. 42-165-35086). This interval will include all zones between the top of the San Andres formation and the base of the Wichita Albany formation.
7. The fields are geographically intermingled and there are no other fields contained within the proposed correlative interval. All of the reservoirs are continuous across the field area and contain fractured dolomites that are deposited over a Northwest-Southeast trending anticline.
8. Sandridge will be actively developing the consolidated interval by drilling infill wells and completing existing wells into additional zones and needs the flexibility to downhole commingle production to increase the economic viability of the wells. To date, there have been seven Statewide Rule 10 exceptions approved by the Commission to commingle production from various combinations of the three Tex-Mex, SE. fields.
9. Assuming an economic limit of 2 BOPD and a 17% exponential decline rate for each reservoir, Sandridge calculated the incremental reserves to be recovered from each infill well to be 4,235 BO and 3,176 MCFG.
10. Minimum well spacing of 330 foot lease line spacing with no minimum distance between wells and 80 acre proration units with optional 20 acre density will provide flexibility in locating wells for future development in the area.
11. Since Sandridge has plans to drill 50 infill wells, the total additional oil to be recovered from the consolidated field as a result of the entire project is approximately 200 MBO, thereby preventing waste and promoting conservation.
12. Since the Wichita Albany formation occurs at 7,500 feet, the requested top oil allowable based on the 1965 Yardstick Allowable of 198 BOPD for an 80 acre well is appropriate.
13. The fields contain heterogenous lenticular deposits and acreage does not represent a well's potential. The proposed two-factor allocation formula based on 95% W-10 potential and 5% per well will avoid having a well's allowable restricted and satisfy State Statutes.

CONCLUSIONS OF LAW

1. Proper notice of this hearing was given to all persons legally entitled to notice.
2. All things have occurred or been accomplished to give the Railroad Commission jurisdiction in this matter.
3. Consolidation of the Tex-Mex, SE. (San Andres) and Tex-Mex, S.E. (Upper Clearfork) Fields into the Tex-Mex, SE. (Wichita Albany) Field and amending the Field Rules for the Tex-Mex, SE. (Wichita Albany) Field will prevent waste, protect correlative rights, satisfy statutory requirements and promote development of the field.

EXAMINER'S RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends the consolidation of the Tex-Mex, SE. (San Andres) and Tex-Mex, S.E. (Upper Clearfork) Fields into the Tex-Mex, SE. (Wichita Albany) Field. It is further recommended that the Field Rules for the Tex-Mex, SE. (Wichita Albany) Field be amended, as requested by Sandridge.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Hearings Examiner