



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 7B-0289290

**APPLICATION OF L. C. S PRODUCTION COMPANY TO AMEND AND RENUMBER
FIELD RULES FOR THE CORSICA (BEND CONGLOMERATE) FIELD, STONEWALL
COUNTY, TEXAS**

HEARD BY: Paul Dubois – Technical Examiner
Michael Crnich – Hearings Examiner

DATE OF HEARING: July 2, 2014

APPEARANCES:

Dale Miller
Richard Atkins, P. E.

REPRESENTING:

L. C. S. Production Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

L. C. S. Production Company (LCS) proposes to amend and renumber field rules for the Corsica (Bend Conglomerate) Field (ID No. 20803 250) in Stonewall County, Texas. Field rules were established for the field on November 3, 1953 (Docket No. 125, 7-27,686) following field discovery in June, 1953. LCS proposes that the field rules be amended and renumbered as follows:

1. Establish a correlative interval from 5,950 feet to 6,020 feet;
2. Establish between well spacing of 330 feet and maintain lease line spacing at 330 feet;
3. Maintain 40-acre standard drilling and proration units, add optional 20-acre units, and provide for acreage assignments by Form P-15 without the need for individual well proration unit plats or diagonal limitations; and
4. Establish a salvage classification for the field with no restrictions on oil or gas production.

All operators of wells in the field were notified of the application. The application was not protested. The examiners recommend that the application of LCS to amend and renumber the field rules for the Corsica (Bend Conglomerate) Field be approved.

DISCUSSION OF THE EVIDENCE

The Corsica (Bend Conglomerate) Field was discovered on June 4, 1953 at a depth of 5,884 feet in Stonewall County, Texas. Following a hearing on September 22, 1953, field rules were established on November 3, 1953 in Oil & Gas Docket No. 125, 7-27,686. These rules are still in effect and include the following provisions:

1. Establish minimum lease line spacing at 330 feet and minimum between well spacing of 933 feet;
2. Establish a 40-acre standard proration unit, with a maximum diagonal distance of 2,100 feet and 20-acre tolerance provisions;
3. An allowable allocation formula based on 50 percent acreage and 50 percent per well; and,
4. Surface casing construction requirements.

Since 1953, 128 wells have been completed in the field. Total field production was 5,231,174 bbl oil and 1,901,047 mcf gas (1.9 billion cubic feet gas). The June 2014 proration schedule carries 61 total wells, 44 of which are currently producing oil wells and 44 wells are assigned acreage. There are eight severed leases. Five wells are shut-in with plugging exceptions to the requirements of 16 Tex. Admin. Code §3.14(b)(2), one well is temporarily shut in, and there are three injection wells in the field. LCS is the largest of 11 operators in the field with 32 producing wells, most of which have been drilled in the last three years. Initial potential tests produced up to 744 bbl oil per day, up to 605 mcf gas per day, and up to 285 bbl water per day. The average potential tests were 104 bbl oil per day, 66 mcf gas per day, and 42 bbl water per day. The top allowable in the field is 102 bbl oil. LCS has reviewed the completion and production test data for 128 wells in the field.

LCS has completed an initial waterflood pilot study, which has resulted in increased production beginning in 2011. LCS is now seeking to amend the field rules to facilitate its continued development and secondary recovery operations. In 2013, the field produced more than 100,000 bbl oil, the highest annual oil production since 1990-1991. 2014 production is expected to be greater still.

Consistent with current Commission practice, LCS seeks to adopt a correlative interval for the field. Based on the Schlumberger electric log of the Skelly Oil Co., G. D.

Franklin Well No. 1 (API No. 42-433-01457)¹, LCS proposes a correlative interval of 5,950 feet to 6,020 feet, corresponding to the top and base of the Bend Conglomerate, respectively. The top of the Caddo Formation, which overlies the Bend Conglomerate, is interpreted by LCS on the log to occur at a depth of 5,765 feet.

LCS estimates the average porosity of the Bend Conglomerate to be 13 percent with an average permeability of 15.2 millidarcies. The water saturation is 37 percent. In the 70 foot correlative interval there are 25 feet gross oil pay thickness and 15 feet net. The average gravity is 39° API. The original reservoir pressure was 2,650 psi at 155° F. The formation volume factor is 1.5 reservoir barrels per stock tank barrel. The reservoir had a solution gas primary drive mechanism, but is in the late secondary stage of depletion.

LCS evaluated decline curve, volumetrics, and drainage area calculations for 15 wells in field to represent field-wide conditions and variability; only three wells are currently producing from 2.2 to 4 bbl oil per day. Based on this analysis, LCS estimated per-well drainage areas to range from 1 to 53 acres. The currently developed field density is about 25 acres per well. The distribution of drainage areas suggest that 40 acre base units and 20 acre optional units were appropriate for field development: Nine of the 15 wells had drainage areas less than 20 acres, and six wells had drainage areas greater than 20 acres. Two wells exhibited estimated drainage areas of 42 and 53 acres. Reducing the between-well spacing requirements to 330 feet is appropriate to accommodate infill drilling with the higher optional well densities.

Finally, LCS requests that the field be classified as 'salvage', eliminating allowable production constraints. LCS believes this is appropriate as the field is in the late secondary stages of depletion. Thus the existing Field Rule No. 3 establishing an allocation formula will no longer be necessary. Similarly, the existing Field Rule No. 4 is obsolete as surface casing requirements are governed by Statewide Rule 13.

FINDINGS OF FACT

1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the hearing.
2. The hearing was not protested.
3. The Corsica (Bend Conglomerate) Field was discovered in 1953.
 - a. 128 wells have been completed in the field.

¹ This is the field discovery well. Following unitization, the well was renamed the Corsica/Bend Conglomerate/Unit No. 17.

- b. The field has produced 5,231,174 bbl oil and 1,901,047 mcf gas.
 - c. LCS has completed an initial waterflood pilot study, which has resulted in increased production beginning in 2011.
 - d. In 2013, the field produced more than 100,000 bbl oil, the highest annual oil production since 1990-1991.
- 4. Per-well drainage area estimates range from 1 to 53 acres.
 - 5. 40-acre standard units and 20-acre optional units are appropriate based on the drainage area calculations.
 - 6. 330-foot between well spacing is appropriate for wells in the field.
 - 7. The field is in the late-secondary stage of production and salvage classification without allowable constraints is appropriate.

CONCLUSIONS OF LAW

- 1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas.
- 2. All notice requirements have been satisfied.
- 3. The proposed field rules will prevent waste and protect correlative rights in the field.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions of law, the examiners recommend the application of LCS to amend and renumber the field rules for the Corsica (Bend Conglomerate) Field be approved.

Respectfully submitted,


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Technical Examiner


Michael Crnich
Hearings Examiner