



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 01-0282679

THE APPLICATION OF STRAND ENERGY, L.C., FOR BLANKET AUTHORITY FOR EXCEPTION TO STATEWIDE RULE 10 FOR THE BRISCOE RANCH (EAGLEFORD) AND LORENZO (AUSTIN CHALK) FIELDS, ATASCOSA, DIMMIT, FRIO, LA SALLE, MAVERICK, MCMULLEN, WEBB AND Zavala COUNTIES, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
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DATE OF HEARING: June 12, 2013

APPEARANCES: REPRESENTING:

APPLICANT:

Dale Miller

Strand Energy, L.C.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Strand Energy, L.C. (Strand) requests that the Commission approve blanket authority for exception to Statewide Rule 10 for all wells in the Briscoe Ranch (Eagleford) Field (ID No. 12018 200) and the Lorenzo (Austin Chalk) Field (ID No. 54928 500).

The application is unopposed and the examiners recommend approval of the requested blanket authority for exception to Statewide Rule 10, as requested by Strand.

DISCUSSION OF THE EVIDENCE

The Briscoe Ranch (Eagleford) Field is a large hydrocarbon resource play in Southwest Texas. The field was discovered on November 5, 2007 and includes parts of eight counties, including Atascosa, Dimmit, Frio, La Salle, Maverick, McMullen, Webb and Zavala. The correlative interval is from 7,160 feet to 7,535 feet. Field rules allow for 330 feet lease line spacing, zero feet between well spacing, and 80 acre well

density, as well as rules for horizontal wells. The June 2013 proration schedules carry 514 gas wells and 511 oil wells. The top allowable is 800 BOPD for oil; gas wells are absolute open flow. Three of the oil wells are operated by Strand, which is developing Briscoe Ranch (Eagleford) acreage in Zavala County. The Briscoe Ranch (Eagleford) is a hydrogen sulfide (H₂S) field regulated under Statewide Rule 36.

The Lorenzo (Austin Chalk) Field is much smaller than the Briscoe Ranch (Eagle Ford), both in areal extent and development. Although the Austin Chalk overlies the Eagle Ford Shale throughout the region, the Lorenzo (Austin Chalk) field currently consists of three oil wells in Zavala County, including the area of interest to Strand. The Lorenzo (Austin Chalk) Field was discovered on October 26, 2009. A correlative interval for the field has not been established, but the discovery well had a depth of 5,187 feet. Statewide rules allow for 467 feet lease line spacing, 1,200 feet between well spacing, and 40 acre well density. The yardstick allowable is 102 BOPD. The Lorenzo (Austin Chalk) is not an H₂S field regulated under Statewide Rule 36.

The Commission has granted four exceptions under Statewide Rule 10 providing authority to commingle hydrocarbons from the Briscoe Ranch (Eagleford) and Lorenzo (Austin Chalk) fields, all in Zavala County. One of the wells has been plugged and abandoned; the other three are reported on the Briscoe Ranch (Eagleford) proration schedule. The Briscoe Ranch (Eagleford) field is the appropriate reporting field for commingling because of its H₂S status.

Two of the four Rule 10 exceptions are for Strand wells. In its horizontal well development of the Eagle Ford shale, Strand is using an open-hole packer completion system. In these two wells, the placement of the liner and packer system resulted in a situation where the well was possibly in violation of Statewide Rules 7 and 13 because of the potential for fluid communication between the Austin Chalk and Eagle Ford formations. Surface casing is placed for the horizontal section of the wellbore. The curve and lateral are open hole, with the placement of an uncemented liner. The liner is secured by open hole packers. To reach the Eagle Ford formation for a horizontal well, the curve begins in the Austin Chalk formation. Rule 7 requires that formation fluids be confined to their producing stratum, and Rule 13 governs the placement of cement to isolate productive and non-productive zones. The open hole packer system used by Strand does not use cement as an isolating mechanism and thus may result in compliance issues when the open hole crosses through adjacent formations.

Several possible remedies are available in this situation. First, the operator may apply for a Rule 10 exception allowing the commingling of hydrocarbons from the two formations. For a valid Rule 10 exception to be granted, an actual completion path must exist for both intervals. Therefore, the liner in the Austin Chalk interval must be perforated, creating a pathway for formation fluids to enter the wellbore. This is the option chosen by Strand.

A second option would be to perforate the casing in the Austin Chalk interval and

perform a cement squeeze, isolating the Austin Chalk. With the formation properly isolated per Rule 13, the cement in the liner would be drilled out. Strand has expressed the opinion that such a procedure in the curved portion of the wellbore would carry high risk of failure resulting in the abandonment of the well and loss of recoverable reserves. Other options would include using different completion methods, such as cemented production casing, that isolate the overlying formations.

To resolve the issue, and in accordance with Commission staff guidance, Strand perforated the Austin Chalk interval to provide a completion path for hydrocarbons in that formation to the wellbore and requested the Rule 10 exception. Strand is seeking blanket Rule 10 exception authority to enable it to continue to use this completion method for both formations. The blanket authority will (1) reduce the administrative burden of applying for Rule 10 exceptions for individual wells, and (2) eliminate the technical challenges and risks of isolating the Austin Chalk that may result in an unusable wellbore and waste of resources.

Strand provided information to substantiate that the Lorenzo (Austin Chalk) is productive of hydrocarbons in Zavala County, the formation fluids of the Austin Chalk and Eagle Ford are compatible, and the potential for fluid crossflow between the formations is low. Strand would not normally target the Austin Chalk hydrocarbons which are being produced by a few horizontal wells in the area. However, since the Austin Chalk is productive in the area, some otherwise unrecoverable reserves may be produced from commingled wells. The Commission has authorized commingling of these zones in the past, and there does not seem to be a reason to avoid doing so in the future.

FINDINGS OF FACT

1. Notice of this application and hearing was provided to all persons entitled to notice at least ten (10) days prior to the date of the hearing.
2. The Briscoe Ranch (Eagleford) Field is a prolific and significantly developed field in Zavala and seven other counties.
3. The Lorenzo (Austin Chalk) Field is being developed in Zavala County primarily with horizontal wells.
4. The completion method employed by Strand uses an uncemented liner that typically starts in the Austin Chalk interval and may result in compliance issues with Statewide Rules 7 and 13.
5. Strand can bring such wells into compliance by obtaining Rule 10 exceptions, which it has in the past, and completing the well in both the Lorenzo (Austin Chalk) and Briscoe Ranch (Eagleford) Fields.

6. Other options for compliance would require greater risk of failure and higher costs.
7. Rule 10 exceptions for these two fields allows for the additional production of hydrocarbons from the Lorenzo (Austin Chalk), which may not be significant but would otherwise go unproduced.
8. The Commission has approved Rule 10 exceptions for these two fields in the past; it has also approved exceptions for other fields within these same two formations. There are no concerns with regard to fluid compatibility, cross flow, or the potential for reservoir damage.
9. A blanket Rule 10 exception for the two fields would reduce Strand's administrative burden.
10. Approval of a blanket Statewide Rule 10 exception for all wells in the Briscoe Ranch (Eagleford) and Lorenzo (Austin Chalk) Fields is appropriate.

CONCLUSIONS OF LAW

1. Proper notice was issued as required by all applicable codes and regulatory statutes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Approval of the requested blanket authority for exception to Statewide Rule 10 for all wells in the Briscoe Ranch (Eagleford) and Lorenzo (Austin Chalk) Fields will prevent waste and will not harm correlative rights.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve blanket authority for exception to Statewide Rule 10 for all wells in the Briscoe Ranch (Eagleford) and Lorenzo (Austin Chalk) Fields, as requested by Strand Energy, L.C.

Respectfully submitted,



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