

THE APPLICATION OF ANADARKO E & P COMPANY LP TO ADOPT TEMPORARY FIELD RULES FOR THE BRISCOE RANCH (EAGLEFORD) FIELD, DIMMITT AND WEBB COUNTIES, TEXAS

Heard by: Andres J. Trevino, P.E. on February 3, 2010.

Appearances:

Ana Maria Marsland-Griffith
David Christian
Chris Edwards

Representing:

Anadarko E & P Company LP

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Anadarko E & P Company LP requests that the following temporary field rules be adopted for the Briscoe Ranch (Eagleford) Field. The proposed rules are summarized as follows:

1. Designation of the field as the correlative interval from 7,160 feet to 7,535 feet as shown on the log of the Briscoe Catarina West Well No. 1;
2. 467'-0' well spacing; special spacing rules for horizontal wells;
3. 80 acre density for gas wells; 40 acre density for oil wells;
4. Allocation based on 100% acreage with AOF status for gas field.

This application was unopposed and the examiner recommends adoption of the field rules proposed by Anadarko on a temporary basis, subject to review in 18 months.

DISCUSSION OF THE EVIDENCE

The Briscoe Ranch (Eagleford) Field was discovered in 2007 at a depth of approximately 7,700 feet. The field is classified as associate prorated, with 7 gas wells on the current proration schedule and there are several more completed wells which have not yet been built to the proration schedule. Several wells were completed as oil wells but have now been reclassified as gas wells. There are no oil wells currently producing from the field. Anadarko operates all of the wells in the field except the Briscoe G No. 1H which is operated by St. Mary Land & Exploration. The subject field is west of the Hawkville (Eagleford Shale) Field which is also undergoing significant horizontal development.

The Eagleford Shale at the subject field was uplifted, separating the Briscoe Ranch from other Eagleford Shale fields. The rock at Briscoe Ranch is shallower and less mature than other Eagleford fields to the east, resulting in higher liquid yield and lower pressures. A cross-section across the Briscoe Ranch area demonstrates similar log properties across the area. However, these properties differ from the Eagleford rock in fields to the east.

The Eagleford is very brittle, resulting in natural fracturing of the rock. A core of the Eagleford in the San Pedro No. 1 demonstrates the fracturing. Production is from both the fractures and the matrix rock.

The Catarina Ranch No. 2H was fracture stimulated in 10 stages. Microseismic events related to the fracturing were recorded at distances as far as 2,000 feet from the well. In other wells, microseismic events have been observed as far as 3,600 feet away during fracture stimulation. Anadarko believes the long distance microseismic events were a result of fracture stimulation occurring along natural faulting in the area.

Anadarko believes that the spacing rule for the field requires only 100 feet from lease lines for take points perpendicular to property lines and 467 feet from lease lines for take points parallel to property lines. It is estimated that 10-20% of reserves will be unrecovered if the take points perpendicular are required to be 467 feet from lease lines.

Density rules for Shale fields vary significantly. Anadarko believes that 80 acre density for gas wells, with 40 acre density for oil wells. There is not sufficient data available at the present time to make any determination of actual drainage area. Anadarko believes that 80 acre density is appropriate as the area affected by fracture stimulation is approximately 80 acres in a vertical well.

Anadarko requests that the Briscoe Ranch (Eagleford) Field be designated as the correlative interval from 7,160 feet to 7,535 feet as shown on the log of the Briscoe Catarina West Well No. 1. This interval is from the top of the Eagleford to the top of the Buda.

Anadarko requests that the allocation formula in the field be based on 100% acreage allocation and that the allocation formula be suspended.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten days prior to the date of hearing.
2. The Briscoe Ranch (Eagleford) Field was discovered in 2007 at a depth of approximately 7,700 feet and is undergoing significant development with horizontal wells. The field is classified as associated prorated, though there are currently no wells classified as oil wells.

3. The Briscoe Ranch (Eagleford) Field should be designated as the correlative interval from 7,160 feet to 7,535 feet as shown on the log of the Briscoe Catarina West Well No.1. This interval is from the top of the Eagleford to the top of the Buda.
4. The Briscoe Ranch (Eagleford) Field differs from other Eagleford Shale fields across the state in that it has been uplifted, is shallower and less mature, and has higher liquid yield and lower reservoir pressures.
5. Development of the field on 80 acre density for gas wells and 40 acre density for oil wells is appropriate on a temporary basis.
 - a. Micro seismic events related to the fracturing in the Catarina Ranch 2H were recorded at distances as far as 2,000 feet from the well. In other wells, microseismic events have been observed as far as 3,600 feet away during fracture stimulation.
 - b. Density rules for Shale fields vary significantly.
 - c. There is not sufficient production data available at the present time to make any determination of actual drainage area for wells in the field.
 - d. The approximate area affected by fracture stimulation in a vertical well is 80 acres.
6. The proposed spacing rule requiring 100 feet from the lease lines for take points perpendicular to property lines and 467 feet from lease lines for take points parallel to property lines will maximize wellbore length and reserves.
7. There is a market for all gas produced from the field.
8. Allocation based on 100% acreage is a reasonable formula which will protect correlative rights of mineral owners in the field.

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. Adopting temporary field rules for the Briscoe Ranch (Eagleford) Field as proposed by Anadarko is necessary to prevent waste and protect correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that field rules be adopted for the Briscoe Ranch (Eagleford) Field on a temporary basis, subject to review in 18 months.

Respectfully submitted,

Andres J. Trevino, P.E.
Technical Examiner