

OIL AND GAS DOCKET NO. 08-0250591

THE APPLICATION OF KINDER MORGAN PRODUCTION COMPANY, LP TO AMEND THE SPACING RULE FOR THE YATES FIELD, PECOS AND CROCKETT COUNTIES, TEXAS

Heard by: Donna K. Chandler on March 19, 2007

Appearances:

David Jackson
John McBeath

Representing:

Kinder Morgan Production Company, LP

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Kinder Morgan Production Company, LP requests that the between-well spacing rule for the Yates Field be eliminated. Current rules provide for a minimum of 330 feet from lease lines and 660 feet between wells.

This application was unopposed and the examiner recommends approval of the proposed field rule amendment.

DISCUSSION OF THE EVIDENCE

The Yates Field was discovered in 1926 and has produced over 1.4 billion BO. The field was unitized in 1976, with approximately 26,000 acres in the Yates Field Unit, now operated by Kinder Morgan. There are currently 536 producing wells, 115 injection wells and almost 1,000 inactive wells on the unit. Current production from the unit is about 28,000 BOPD. There are only a few wells producing from the field which are not within the unit boundary.

Various secondary recovery techniques have been used in the Yates Field, beginning with waterflooding in 1979. Polymer injection was added in the 1980's. CO₂ was injected into the gas cap in the 1980's and 1990's for pressure maintenance. Nitrogen injection was initiated in 1993, also to aid in pressure maintenance. In 1998, surfactant was added to the injected water in an attempt to alter the wettability of the reservoir. From 1999-2002, a steam injection pilot was evaluated but was deemed unsuccessful. Recently,

a sophisticated program was implemented to remove water from the reservoir in an effort to maintain the gas-oil contact and water-oil contact.

The Yates Field produces from the Seven Rivers, Queen, Grayburg and San Andres formations. The formations have vertical fractures and many horizontal wells have been drilled in the field, some as early as 1987. Horizontal wells are much more effective in allowing gravity drainage of oil from the gas cap than vertical wells. In the thin oil column which exists in the field, horizontal wellbores form a continuous connected pathway of fractures which cannot be achieved with vertical wellbores. Of the 609 producing horizontal wells that have been drilled in the field since 1987, 600 have required exceptions to Rule 37 for between-well spacing. Kinder Morgan plans a minimum of 160 new horizontal wells in the field, almost all of which will require between-well Rule 37 exceptions.

Production from horizontal drainhole wells has increased from less than 6,000 BOPD in 2004 to almost 22,000 BOPD in late 2006. The requested field rule change will allow placement of additional horizontal wells at optimum locations to increase ultimate recovery from the field.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and there were no protests.
2. The Yates Field was discovered in 1926 and has produced over 1.4 billion BO. Current field rules require that wells be a minimum of 330 feet from lease lines and 660 feet between wells.
3. The 26,000 acres Yates Field Unit was formed in 1976 for secondary recovery and there are currently 536 producing wells, 115 injection wells and almost 1,000 inactive wells on the unit.
4. The Yates Field produces from the Seven Rivers, Queen, Grayburg and San Andres formations which are vertically fractured.
5. Horizontal drainhole wells are more effective in providing fracture connectivity within the formation than vertical wells. The horizontal wells are effective in allowing gravity drainage of oil in the field.
6. Elimination of the between-well spacing rule in the field will allow for the placement of horizontal drainholes at locations necessary to recovery reserves which would not be recovered by vertical wells. Almost all of the proposed horizontal wells are proposed at locations which would require exceptions to the current between well spacing rule of 660 feet.

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. Amending the spacing rule for the Yates Field is necessary to prevent waste, protect correlative rights, and promote orderly development of the field.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the between-well spacing rule for the Yates Field be eliminated.

Respectfully submitted,

Donna K. Chandler
Technical Hearings Examiner