

THE APPLICATION OF EOG RESOURCES, INC. TO AMEND FIELD RULE 2 FOR THE ROMA, EAST (5650) FIELD, STARR COUNTY, TEXAS

Heard by: Richard D. Atkins, P.E. - Technical Examiner

Hearing Date: October 23, 2008

Appearances:

Representing:

Doug Dashiell
Mimi Winetroub

EOG Resources, Inc.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Field rules for the Roma, East (5650) Field are summarized as follows:

1. Designation of the field as the correlative interval from 5,700 feet to 7,200 feet as shown on the log of the EOG Resources, Inc. - Jones Family Lease, Well No. 2;
2. 467'-933' well spacing;
3. Allocation based on 95% deliverability and 5% per well.

EOG Resources, Inc. requests that Field Rule 2 be amended to provide 467 feet lease line spacing with no minimum between well spacing and include a special provision that distances for horizontal wells be based on the nearest perforation and not the penetration point or terminus. EOG also requests that the allocation formula in the field remain suspended.

At the hearing, the examiner recommended that EOG include a special provision that distances for horizontal wells be based on the closest "take point" in a horizontal well instead of the nearest perforation. EOG did not consider this recommendation to be adverse.

The application was unopposed and the examiner recommends that the field rules for the Roma, East (5650) Field be amended as proposed by EOG.

DISCUSSION OF EVIDENCE

The Roma, East (5650) Field was discovered in June 1994. The field is a non-associated gas field with 21 gas wells carried on the proration schedule. EOG operates 20 of the wells and Legend Natural Gas III, LP is the only other operator in the field. The allocation formula is currently suspended. Cumulative production from the field through September 2008 is 10.5 BCFG and 63.3 MBC.

EOG is currently developing the field with horizontal wellbores. EOG requests 467 feet lease line spacing and no minimum between well spacing. EOG also requests that a field rule be adopted which includes language relevant to measurement of distances to lease lines for horizontal drainhole wells. EOG's proposed rule specifies that, for purposes of lease line and between-well spacing, the nearest "take point" in a horizontal well be used. This take-point could be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased well. Similar rules have been adopted in other tight reservoirs, including the Barnett Shale and Cotton Valley Sand fields.

The proposed rule will allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 467 feet to a lease line, as long as no take-point is closer than 467 feet to any lease line. This will allow for sufficient lateral distance that is critical to building the minimum curvature needed for the horizontal drainhole to penetrate sufficient volumes of the intermittent lower permeability lowstand sandstones within lease boundaries and obtain a commercially productive well. Horizontal drainhole length on a lease is then maximized, resulting in the additional recovery of gas. At a minimum, several sets of lateral perforations will be missed in the planned average 3500 foot length drainholes because the minimum drainhole curvature will be reached after part of the target acreage is passed.

The bulk of the Roma East (5650) Field production is from a highstand series within fairly uniform stratigraphy representing the middle and upper shoreface sandstones and middle shelf shales. The top of the subject field is the top of the Reklaw formation. To the north and east, the highstand sandstones are increasingly eroded and replaced by more intermittent lowstand sandstones. The lowstand sands expand to the north to a gross thickness of over 100 feet of thin, low permeability sands. These sands are interpreted to be lowstand turbidite deposits and are by nature more heterogeneous.

EOG has recently drilled two horizontal wells that have targeted only the lower low-permeability sandstone of this highstand series with a marker for the target lower-permeability sandstones referred to as the RK 37 sand. Effective drilling for these sandstone reservoirs requires more flexibility on well spacing in order to economically penetrate sufficient volumes of sandstone within lease boundaries. Elimination of the between-well spacing rule will allow for placement of future horizontal wellbores in the best technical location from a geological and engineering standpoint to produce the reserves from the tight, heterogeneous reservoirs in the Roma East (5650) field area without being affected by the location of the existing vertical wells.

Without the proposed rule, commercial development of existing lowstand reserves in the north and east will not be economically feasible. Future EOG plans include the drilling and completing with fracture stimulations 10 horizontal wells targeting only the lower permeability lowstand sandstones. EOG estimates the horizontal wells will yield an incremental 20 BCF of gas reserves that would not otherwise be produced.

For purposes of the assignment of additional acreage pursuant to Rule 86, it is proposed that the distance between the first and last take-point in a horizontal well be used.

EOG also requests that the allocation formula remain suspended, as there is a 100% market for all the gas produced from the field.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Roma, East (5650) Field was discovered in June 1994. The field is a non-associated gas field with 21 gas wells carried on the proration schedule. The allocation formula is currently suspended.
3. Field rules for the Roma, East (5650) Field provide for a designated interval, 467'-933' well spacing and allocation based on 95% deliverability and 5% per well.
4. EOG is currently developing the field with horizontal wellbores. A spacing rule which utilizes "take-points" in a horizontal well for determination of distances to lease lines will prevent waste and will not harm correlative rights.
 - a. The lowstand sands are thin, low permeability sands and are not commercially productive unless fracture-stimulated.
 - b. A take-point in a horizontal well in this field may be a perforation, if a horizontal well is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.
 - c. Adoption of the proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 467 feet to a lease line, as long as no take-point is closer than 467 feet to any lease line.

- d. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
5. By moving the penetration point closer to the lease line, EOG estimates the 10 infill horizontal wells will yield an incremental 20 BCF of gas reserves that would not otherwise be produced.
6. Elimination of the between-well spacing rule will allow for placement of future horizontal wellbores in the best technical location from a geological and engineering standpoint to produce the reserves from the tight, heterogeneous reservoirs in the Roma East (5650) field area without being affected by the location of the existing vertical wells.
7. For purposes of assignment of additional acreage pursuant to Rule 86, the distance between the first and last take-point in a horizontal well should be used.
8. Suspension of the allocation formula in the field is appropriate because there is a 100% market for any gas produced from the field.

CONCLUSIONS OF LAW

1. Proper notice of this hearing was issued.
2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.
3. Amending the Field Rule 2 for the Roma, East (5650) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends that the Commission amend Field Rule 2 for the Roma, East (5650) Field as proposed by EOG Resources, Inc.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner