

**THE APPLICATION OF NATURAL GAS ANADARKO COMPANY TO AMEND THE
FIELD RULES FOR THE PAN PETRO (CLEVELAND) FIELD, OCHILTREE COUNTY,
TEXAS**

Heard by: Donna K. Chandler on May 20, 2009

Appearances:

Mickey Olmstead
Clark Jobe
James Clark

Representing:

Natural Gas Anadarko Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Field rules for the Pan Petro (Cleveland) Field were adopted in Order No. 10-79,758, effective July 11, 1983. The rules in effect for the field are summarized as follows:

1. 933'-1,867' well spacing;
2. 160 acre oil units with 40 acre tolerance;
3. 100% acreage allocation;

Natural Gas Anadarko requests that the field rules be amended as follows:

1. Designation of the field as the correlative interval from 7,120 feet to 7,268 feet as shown on the log of the Robert H. Urban A No. 1;
2. 330'-933' well spacing, with no minimum well spacing between vertical and horizontal wells; special provisions for "take points";
3. 160 acre oil units with 40 acre tolerance with special provisions for assignment of acreage to horizontal wells;
4. 100% acreage allocation;

Pan Petro had also requested that gas limit for gas wells in the field not be restricted by Rule 49(b) and that two wells be transferred into the Pan Petro (Cleveland) Field. The examiner recommends that the field rules for the Pan Petro (Cleveland) Field be amended as proposed by Natural Gas Anadarko, with the exception of the gas well allowable rule and the well transfers. Applicant did not consider this to be an adverse recommendation.

DISCUSSION OF EVIDENCE

The Pan Petro (Cleveland) Field was discovered in 1974 and a total of 10 wells have been completed in the field. Cumulative production from the field is approximately 180,000 BO. Only four wells are currently producing from the field, all of which are vertical wells. Horizontal development of the field is expected in the future based on the horizontal development ongoing in the nearby Kiowa Creek (Cleveland) and Lipscomb, SE (Cleveland) Fields.

Applicant requests that the field be defined as the correlative interval from 7,120 feet to 7,268 feet as shown on the log of the Robert H. Urban A No. 1. This interval includes the entire Cleveland interval. The primary target for horizontal well development is the Cleveland 3.

Natural Gas Anadarko requests 330'-933' well spacing with horizontal spacing based on take points with no minimum between well spacing requirement from take points in a horizontal drainhole well to any vertical well. The 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 the two previously mentioned Cleveland fields.

The proposed rule would allow operators to drill horizontal wells with penetration points, as defined by Rule 86, at distances closer than 330 feet to a lease line, as long as no take-point is closer than 330 feet to any lease line. Horizontal drainhole length on a lease is then maximized, resulting in additional recovery of reserves. For purposes of 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. The proposed horizontal rules are consistent with those adopted previously by the Commission for other Cleveland fields in the area.

Applicant submitted volumetric calculations for two vertical wells in the field to confirm 160 acre drainage. The Robert H. Urban A No. 1 is plugged and produced 60,000 BO. The calculated drainage area for this well is 123 acres. The Robert H. Urban No. 1 is expected to recover 71,000 BO, with a calculated drainage area of 147 acres.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Pan Petro (Cleveland) Field was discovered in 1974 and a total of 10 wells have been completed in the field.
4. Field rules for the Pan Petro (Cleveland) Field were adopted in 1983 and provide for 933'-1,867' well spacing, 160 acre oil units with 40 acre tolerance and 100% acreage allocation.
5. There are currently four producing wells in the field, all of which are vertical wells. Horizontal well development is expected based on ongoing Cleveland development in other nearby fields.
6. The Pan Petro (Cleveland) Field should be defined as the correlative interval from 7,120 feet to 7,268 feet as shown on the log of the Robert Urban A No. 1.
7. Flexibility in well spacing and elimination of the between-well spacing limitation between horizontal and vertical wells will provide for orderly development of the field with horizontal wells.
8. The proposed "take point" rule for horizontal wells will result in maximum recovery by horizontal drainhole wells.
 - 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 330 feet to a lease line, as long as no take-point is closer than 330 feet to any lease line.
 - d. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
9. 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.

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 rules for the Pan Petro (Cleveland) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends that the Commission amend the field rules for the Pan Petro (Cleveland) Field as proposed by Natural Gas Anadarko Company.

Respectfully submitted,

Donna K. Chandler
Technical Examiner