



# RAILROAD COMMISSION OF TEXAS

## OFFICE OF GENERAL COUNSEL

**OIL AND GAS DOCKET NO. 08-0277588**

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**THE APPLICATION OF COG OPERATING, LLC TO AMEND THE FIELD RULES FOR THE HOEFS T-K (WOLFCAMP) FIELD, REEVES COUNTY, TEXAS**

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**HEARD BY:** Brian Fancher, P.G. - Technical Examiner  
Terry Johnson - Legal Examiner

**DATE OF HEARING:** August 29, 2012

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Michael E. McElroy  
Greg Cloud, P.E.  
Robert C. Heller

COG Operating, LLC

**INTERVENOR:**

Nathan Wickett

Red Willow Production, LLC

Joel Loshak

Forest Oil Corporation

**EXAMINERS' REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

The temporary field rules governing wells in the Hoefs T-K (Wolfcamp) Field were adopted in Oil and Gas Final Order No. 08-0263733, effective February 23, 2010. Originally, the temporary field rules' expiration date initiated on February 23, 2012; however, per Oil and Gas Final Order 08-0273458, the temporary field rules for the subject field expire on August 13, 2013. The current rules in effect for the field are summarized as follows:

1. Designation of the field as the correlative interval from 7,298 feet to 7,530 feet as shown on the log of the Sidwell Oil & Gas, Inc. - Wilson Trust Lease, Well No. 1 (API No. 42-197-30341);



2. 467'-933' well spacing;
3. 160-acre oil units with a special provision for an additional acreage assignment to horizontal drainhole wells based on the formula  $A = (L \times 0.11488) + 160$ ;
4. Allocation based on 100% acres with a Top Oil Allowable based on the 1965 Yardstick Allowable of 353 barrels of oil per day.

COG Operating, LLC ("COG") requests that the temporary field rules in effect be amended as follows:

1. No change.
2. 467'-933' well spacing with special provisions for horizontal wells that provide 100' lease line spacing for the first and last take point in horizontal drainhole wells, no minimum between well spacing limitation between vertical and horizontal drainhole wells or horizontal wells that are parallel or sub-parallel and do not overlap more than 500 feet and special provisions for "take points", a 50 foot "box" rule and "off-lease" penetration point for horizontal drainhole wells;
3. 160 acre oil units with a special provision for an additional acreage assignment to horizontal drainhole wells based on the formula  $A = (L \times 0.15) + 160$  and elimination of the maximum diagonal;
4. No change.

During the hearing, the examiners opined the proposed lease line spacing of 100' first and last take points for horizontal wells as inappropriate at the time, due to the lack of supporting evidence.

In addition, the examiners concluded the proposed additional acreage assignment formula of  $A = (L \times 0.15) + 160$  for horizontal wells is also inappropriate due to the lack of supporting evidence and that additional acreage to horizontal wells in the subject field conform to the current formula in effect. COG did not consider the examiners' opinion adverse to its application.

There were no protests to this application and the examiners recommend approval of the amended field rules for the Hoefs T-K (Wolfcamp) Field, as ultimately requested by COG.

### **DISCUSSION OF EVIDENCE**

The Hoefs T-K (Wolfcamp) Field was discovered in February 1988 at an average depth of 10,500 feet. There are three wells carried on the oil proration schedule, of which, two are currently producing. Chesapeake and Roy E. Kimsey, Jr. operate one well each, but COG testified its Big Chief Lease, Well No. 3305H was recently completed in the field. Moreover, COG testified it has

plans to drill additional horizontal wells in the future, thus the reasoning for its requested amended field rules. Cumulative production from the field through August 2012 is 49.4 thousand barrels of oil and 128.3 million cubic feet of gas.

COG is proposing to develop the field with horizontal wells and requests Field Rules to promote the efficient and effective development of the remaining hydrocarbons. COG seeks to include field rules that provide for 100' lease line spacing for the first and last take point, no minimum between well spacing limitation between vertical and horizontal drainhole wells or horizontal wells that are parallel or sub-parallel and do not overlap more than 500 feet and special provisions for "take points", a 50 foot "box" rule and "off-lease" penetration point. Additionally, COG seeks to allocate additional acreage to horizontal wells based on a formula that deviates from Statewide Rule 86. Moreover, COG seeks to remove the maximum diagonal provision for proration units in the subject field.

As indicated in the Notice of Hearing dated August 09, 2012, COG requests that the current field rules include language relevant to the measurement of distances to lease lines for horizontal drainhole wells. COG's proposed rule specifies that, for purposes of lease line spacing, the nearest "take point" in a horizontal well be used. This take-point could be a perforation in a horizontal well that 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 reservoirs, including the Eagle Ford, Cotton Valley and Barnett Shale formations.

COG testified that its proposed 100' leaseline spacing for the first and last take points will result in an additional recovery of reserves that would otherwise be unrecoverable. Moreover, COG testified it is in the process of acquiring seismic data in the area of the subject field to determine if 100' first and last take points are appropriate. As a result, the examiners concluded it inappropriate to recommend the adoption of 100' first and last take points for horizontal wells in the subject field, due to the lack of supporting evidence. Consequently, COG and the examiners agreed upon 300' first and last take points for the subject field at this time. COG did not consider the examiners' opinion as adverse to its application.

COG proposes a tolerance "box rule" for horizontal drainhole wells that would allow drainholes to deviate 50 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. As drilled wells for which all points are located within the "box" would be considered in compliance with their drilling permits.

In some cases, it is beneficial to penetrate the reservoir off lease, while still having "take points" no closer to lease lines than allowed under the field rules. COG requests that Field Rules for the subject field provide for an "off-lease" penetration point. Statewide Rule 86 requires that the penetration point of a horizontal drainhole be on the lease. In this field, a well generally requires approximately 600 feet of horizontal displacement to make the 90 degree turn from vertical to

horizontal. If the penetration point is required to be on the lease, then the first point of production would be about 600 feet from the lease line. The proposed rule will provide additional producing drainhole, resulting in the recovery of additional oil and gas reserves. The Commission has adopted similar rules allowing offsite penetration points in other fields, after the operator has given notice to the mineral owners of the off-lease tract on which the penetration point is to be located and received no protest.

For purposes of the assignment of additional acreage pursuant to horizontal wells, COG seeks to amend the exception to Statewide Rule 86 of  $A = (L \times 0.11488) + 160$ , currently in effect for the field rules governing the subject field. COG requested that additional acreage assignment to horizontal drainhole wells be based on the formula  $A = (L \times 0.15) + 160$ . COG testified its proposed deviation from the current formula is based on other fields in Texas that provide an exception to Statewide Rule 86 for wells completed in their respective fields. The examiners opined that it would be inappropriate to allow the proposed formula, as it was requested, and instead, concluded it appropriate to retain the current formula in effect for the field rules. COG did not consider the examiners' opinion adverse.

#### **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. COG Operating, LLC ("COG") seeks to amend the temporary field rules in effect for the Hoefs T-K (Wolfcamp) Field in Reeves County, Texas.
3. COG's Big Chief Lease, Well No. 3305H is currently completed in the Hoefs T-K (Wolfcamp) Field.
4. The Hoefs T-K (Wolfcamp) Field is actively being developed with horizontal drainhole wells.
5. Field Rules providing for 467'-660' well spacing, 300' lease line spacing for the first and last take point in horizontal drainhole wells, no minimum between well spacing limitation between vertical and horizontal drainhole wells or horizontal wells that are parallel or sub-parallel and do not overlap more than 500 feet and special provisions for "take points", a 50 foot "box" rule and "off-lease" penetration point for horizontal drainhole wells will provide consistency in developing the field and will allow greater flexibility in selecting future drilling locations.

6. 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. A take-point in a horizontal well in this field may be a perforation in a horizontal well that is cased and cemented, an external casing packer in a cased well, or any open-hole section in an uncased portion of the wellbore.
  - b. Adoption of the proposed rule will allow the horizontal drainhole length on a lease to be maximized.
  - c. For purposes of assignment of additional acreage pursuant to the special formula, the distance between the first and last take-point in a horizontal well should be used.
7. The proposed 50’ “box” rule is necessary to allow operators reasonable minor deviations from the wellbore track that has been permitted.
8. Allowing an “off-lease” penetration point will result in maximum producing drainhole length, thereby increasing ultimate recovery from horizontal drainhole wells. To protect correlative rights, prior notice and opportunity to object should be given to the mineral owners of “off-lease” surface locations.
9. A 300’ leaseline spacing for the first and last take points will result in an additional recovery of reserves.
10. Similar Field Rules have been adopted in other reservoirs, including the Eagle Ford, Cotton Valley and Barnett Shale formations.

**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. Approval of the amended Temporary Field Rules for the Hoefs T-K (Wolfcamp) Field, as ultimately proposed, will prevent waste, protect correlative rights and promote the orderly development of the field.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission amend the Temporary Field Rules in effect for the proposed Hoefs T-K (Wolfcamp) Field, as requested by COG Operating, LLC.

Respectfully submitted,

  
Brian Fancher, P.G.  
Technical Examiner

  
Terry Johnson  
Legal Examiner