



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 08-0265981

THE APPLICATION OF J. CLEO THOMPSON TO CONSIDER STANDING, AND IF STANDING IS APPROVED, TO CONSOLIDATE VARIOUS WOLFCAMP/BONE SPRINGS FIELDS INTO A SINGLE FIELD KNOWN AS THE WOLFBONE (TREND AREA) FIELD AND TO ADOPT FIELD RULES FOR THE PROPOSED NEW FIELD, PECOS, REEVES AND WARD COUNTIES

Heard by: Donna K. Chandler, Technical Examiner
Marshall F. Enquist, Hearings Examiner

Appearances:

Representing:

Applicant:

John Soule
Jeff Bryden
Tim Smith

J. Cleo Thompson

Protestants:

Robert Hatter
Dan Guitierrez
Peter Boone
Matthew Scott

General Land Office

Jon St. Clair

Himself and family

Gwen Geltemeyer

Herself and 46 other mineral owners

Helen Allen

Herself and family

Observers:

Robert Dickey
Darrell Garrett

PAR Minerals Corporation

Cary Billingsley

Atlantic Operating, Inc.

Bill Spencer

Chesapeake Operating, Inc.

John Griffin

Himself

Procedural history:

Application received:	May 21, 2010
Notice of Hearing:	June 8, 2010
Hearing held:	June 29, 2010
Transcript date:	July 7, 2010
PFD issued:	August 10, 2010
Exceptions Received:	August 25, 2010
Amended PFD issued:	September 8, 2010

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

J. Cleo Thompson ("Thompson") requests standing in this hearing to consolidate various fields. Thompson is not an operator in all of the 12 fields proposed for consolidation, but has a large leasehold in the area. Thompson's standing was not opposed.

Thompson requests that the following fields be consolidated into a single field called the Wolfbone (Trend Area) Field:

Balmorhea Ranch (Bone Springs) Field
Blount (Bone Spring) Field
Cable (Wolfcamp) Field
Guthrie (Wolfcamp) Field
Hoban (Bone Springs) Field
Hoban (Wolfcamp) Field
Hoban, S. (Wolfcamp) Field
Marsden (Permian) Field
Ripplinger (Wolfcamp) Field
Rojo Caballos (Wolfcamp) Field
Toro (Wolfcamp) Field
Worsham-Bayer (Wolfcamp) Field

Thompson further requests that the following field rules be adopted for the consolidated field:

1. Designation of the field as the correlative interval from 8,070 feet (top of Bone Springs) to 13,092 feet (base of Wolfcamp/Permian) as shown on the log of the Collier Well No. 1, Reeves County;

2. 467'-0' well spacing;
3. Horizontal spacing rules providing for take-points allowing "no-perf zones", off-lease penetration point, box rule allowing 50 feet tolerance;
4. 640 acre density for gas wells and 320 acre density for oil wells; 40 acre optional units for oil and gas wells; no maximum diagonal limit and no P-15 and plat for individual wells;
5. Allocation based on 75% acreage and 25% deliverability/potential; AOF status for gas field.

Thompson requests that the proposed rules be adopted on a temporary basis, subject to review in 18 months.

The application was protested by several mineral owners in the field area, including the General Land Office. Protestants are opposed to the density rule proposed for the consolidated field and believe that the proposed rules will result in operators being allowed to hold acreage under leases without adequate development of the leases.

Exceptions to the Proposal for Decision were filed by the General Land Office, Chesapeake Operating, and Thompson. Based on the exceptions, the examiners issued an amended Proposal for Decision recommending incorporation of spacing language authorizing no-perf zones (NPZ's).

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

The area which is the subject of this hearing is in the Delaware Basin in portions of Reeves, Ward and Pecos Counties, with the majority of the area in Reeves County. There are numerous other Wolfcamp and Bone Springs fields in the Delaware Basin which have not been proposed for consolidation at this time. Thompson limited the area proposed for consolidation in this hearing to the area in which it holds leases.

The 12 fields which are the subject of this hearing were discovered beginning in the 1950's, with the most recent discovery approved in 2009. Many of the 12 fields are "overlapping" geographically. Several of the fields do not have any active wells and several other fields have only a single well. The Hoban (Wolfcamp) Field has the most wells, with 5 producing oil wells.

Only two of the 12 fields proposed for consolidation have field rules which define the correlative interval for the field and the other ten fields do not have such rules. The designated field intervals for the two fields, the Hoban (Bone Springs) and Hoban

(Wolfcamp) Fields, include portions of the Bone Springs and/or Wolfcamp reservoirs. The reservoir names included in the specific field names are inconsistent. The designated interval for the Hoban (Bone Springs) Field includes the 1st, 2nd and 3rd Bone Springs and the Upper Wolfcamp. The designated interval for the Hoban (Wolfcamp) Field includes only the 3rd Bone Springs. The inconsistency in nomenclature is a result of local descriptions used by different operators. This inconsistency is also present in numerous other Wolfcamp and Bone Springs fields outside the area covered by the current docket.

Thompson requests that the consolidated field be designated to include the entire Bone Springs series and the entire Wolfcamp, down to the top of the Penn formation. The proposed designated interval is from 8,070 feet to 13,092 feet as shown on the log of the Collier No. 1. Consolidation of the fields to combine the Bone Springs and Wolfcamp reservoirs will result in increased recovery from wells due to a lower combined economic limit. Because this interval includes multiple, separate accumulations of hydrocarbons, a two factor allocation formula is required by statute (TEX. NAT. RES. CODE ANN. §85.053(b)(ii)). Thompson requests that allocation of allowable in the consolidated field be based on 75% acreage and 25% deliverability.

Only three of the 12 fields operate under special field rules. The remaining fields operate under Statewide Rules. The density rule in both the Hoban (Bone Springs) and Hoban (Wolfcamp) Fields provides for 160/optional 40 acre density. The rules for both of these fields also include special provisions for horizontal wells. The third field with special field rules is the Ripplinger (Wolfcamp) Field which has a 40 acre density rule and no special provisions for horizontal wells. The spacing rule for all 12 fields is 467'-1,200'.

Thompson requests that rules for the consolidated field provide for a density rule of 640 acres per well for gas wells and a density rule of 320 acres per well for oil wells, with optional 40 acre density for both oil and gas wells. This requested density rule is based primarily on rules already in effect for other Wolfcamp and Bone Springs fields in the Delaware Basin. In addition, Thompson submitted a drainage area calculation for one of its wells, the Graves State No. 1. This is a vertical well which Thompson has completed in 2007 in the 3rd Bone Springs of the Hoban (Wolfcamp) Field. The estimated ultimate recovery for this well ranges from 112,000 BO to 125,000 BO, depending on the decline rate which the well follows. Cumulative production to date is approximately 33,000 BO. Based on the reservoir parameters for the completion interval, the calculated drainage area for the well is between 223 and 249 acres.

Thompson presented data for approximately 80 Bone Springs and Wolfcamp fields in the Delaware Basin which have had special field rules adopted. Of these fields which have special field rules, 12 are Bone Springs fields and 69 are Wolfcamp fields. The majority of the Bone Springs fields are oil fields, 6 of which have 160 acre density, 2 have 40 acre density and 2 have 320 acre density. For Bone Springs gas fields, one has 320 acre rules and one has 160 acre rules. For the Wolfcamp fields, more than 50 are gas fields, of which 18 fields have 640 acre density, 9 have 320 acres, 9 have 160 acres, 5 have 80 acres and 11 have 40 acres. For Wolfcamp oil fields, 8 have 160 acre density,

2 have 80 acre density and 6 have 40 acre density. Several fields have optional 40 acre units. Based on this historical field rule data for similar fields, Thompson believes that its proposed 640 acre base units for gas wells and 320 acre base units for oil wells is appropriate on a temporary basis.

Horizontal rules

There are 31 active permits for completion in the various fields proposed for consolidation, 20 of which are Thompson permits. Thompson is drilling vertical wells at this time, but is evaluating the drilling of horizontal wells for these reservoirs. Because horizontal drilling is anticipated, Thompson has requested that "take point" rules be adopted for the consolidated field, as opposed to the Statewide Rule 86 language regarding definitions of penetration point, terminus and horizontal drainhole length. Thompson requested that the language specifically allow "no perf zones" for determination of measurement to lease lines and between wells. Such language has been approved by the Commission in various fields which are undergoing horizontal development.

Thompson also requests that the spacing rule for the consolidated field require a minimum of 467 feet from lease lines, with no minimum between-well spacing requirement. Elimination of a between well spacing requirement is appropriate between horizontal and vertical wells in order to drill horizontal wells where necessary without regard to existing vertical wells. This is common language for field rules which have been adopted to accommodate horizontal drilling. Additionally, in this field, Thompson believes that "0" between well spacing is appropriate between horizontal wellbores. The thick correlative interval for the field is likely to require horizontal drainholes in different vertical sections of the correlative interval for the field. These horizontal drainholes would not be competing for the same reserves and therefore there is no reason to have a between-well spacing rule.

It is also requested that a "box rule" be adopted for horizontal drainhole wells to specify that the drainhole will be considered in compliance with its drilling permits as long as the as-drilled drainhole is within 50 feet either side of the permitted drainhole location. Similar language has been adopted for many fields which have special horizontal drainhole rules.

Another request regarding horizontal drainhole wells relates to off-lease penetration points. Thompson requests that the standard language be adopted for the consolidated field which allows penetration points to be off-lease, after appropriate notice. This will allow for maximum drainhole length and maximum recovery of reserves.

The two oil fields in the vicinity which already have 320 acre density are the Phantom (Wolfcamp) and Two Georges (Bone Springs) Fields. The Phantom (Wolfcamp) Field has a special provision for the assignment of acreage to horizontal wells, up to a maximum of 704 acres. Thompson requested the same provision for the subject consolidated field, but stated that a recommendation based on Rule 86 for additional acreage assignment would not be adverse.

Protestants' Position and Evidence

Several protestants gave statements regarding their objections to the density rule proposed by Thompson. Generally, they believe that Thompson should have to prove that wells in each of the fields proposed for consolidation are capable of draining the areas requested for the density rule for the consolidated field. Protestants do not believe that Thompson presented sufficient evidence to support the 640 acre density for gas wells and 320 acre density for oil wells. Not one of the 12 fields proposed for consolidation have field rules providing for more than 160 acres per well, and most are on Statewide Rules.

EXAMINERS' OPINION

The examiners recommend that the subject 12 fields be consolidated into a single field called the Wolfbone (Trend Area) Field and that temporary field rules be adopted for the field, subject to review in 18 months.

The only contested issue in this hearing is the density rule to be adopted for the consolidated field. The examiners recommend that a 320 acre density rule, with optional 40 acre density, be applied to both oil and gas wells. Thompson presented a drainage area calculation for only a single oil well in the 12 fields, the Graves State No. 1. The calculated drainage area for this well is at least 223 acres. The examiners believe that the calculations for this well are valid and indicative that a vertical well drilled with current technology can reasonably be expected to drain more than 160 acres, and therefore a 320 acre base density unit is appropriate on a temporary basis. The optional 40 acre density rule is necessary for wells which have lesser capability. A density rule including 40 acre options is common in many of the fields in the area.

The remaining rules for horizontal drainhole spacing, including take points, NPZ's, box rule and off-lease penetration points, are common rules adopted by the Commission for many other fields. The proposed spacing rules for horizontal wells were not contested by any party. It is recommended that the between well spacing requirement be eliminated between horizontal and vertical wells and between horizontal wells for the reasons previously discussed. It is recommended that well spacing between vertical wells be a minimum of 933 feet.

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. J. Cleo Thompson ("Thompson") requests that the following 12 fields be consolidated into a single field called the Wolfbone (Trend Area) Field and that field rules be adopted for the consolidated field:

Balmorhea Ranch (Bone Springs) Field
Blount (Bone Spring) Field
Cable (Wolfcamp) Field
Guthrie (Wolfcamp) Field
Hoban (Bone Springs) Field
Hoban (Wolfcamp) Field
Hoban, S. (Wolfcamp) Field
Marsden (Permian) Field
Ripplinger (Wolfcamp) Field
Rojo Caballos (Wolfcamp) Field
Toro (Wolfcamp) Field
Worsham-Bayer (Wolfcamp) Field

3. The application was protested by several mineral owners in the field area, including the General Land Office.
4. The 12 fields proposed for consolidation are "overlapping" geographically.
5. There is inconsistency in the field reservoir names of the 12 fields as a result of local descriptions used by different operators. This inconsistency is also present in numerous other Wolfcamp and Bone Springs fields outside the area covered by the current docket.
6. The correlative interval for the consolidated interval includes the entire Bone Springs series and the entire Wolfcamp, down to the top of the Penn formation. The proposed designated interval is from 8,070 feet to 13,092 feet as shown on the log of the Collier No. 1.
7. Consolidation of the fields to combine the Bone Springs and Wolfcamp reservoirs will result in increased recovery from wells due to a lower combined economic limit, thereby preventing waste.
8. Only three of the 12 fields proposed for consolidation operate under special field rules. The remaining fields operate under Statewide Rules.
 - a. The density rule in both the Hoban (Bone Springs) and Hoban (Wolfcamp) Fields provides for 160/optional 40 acre density, with special provisions for horizontal wells.
 - b. The Ripplinger (Wolfcamp) Field has a 40 acre density rule and no special provisions for horizontal wells.
9. Adoption of a density rule providing for 320/optional 40 acre units is appropriate for the Wolfbone (Trend Area) Field on a temporary basis.
 - a. The Graves State No. 1 is a vertical well completed by Thompson in the 3rd Bone Springs interval only.

- b. The Graves State No. 1 is carried in the Hoban (Wolfcamp) Field.
 - c. The estimated ultimate recovery for the Graves State No. 1 ranges from 112,000 BO to 125,000 BO, depending on the decline rate which the well follows.
 - d. The calculated drainage area for the Graves State No. 1 is between 223 and 249 acres.
 - e. The largest density for any of the 12 fields proposed for consolidation is 160 acres.
 - f. The largest density for a Bone Springs oil or gas field in the Delaware Basin area is 320 acres.
 - g. The largest density rule for a Wolfcamp oil field in the Delaware Basin area is 160 acres and the largest density rule for a Wolfcamp gas field in the Delaware Basin area is 640 acres.
 - h. Several Bone Springs and Wolfcamp fields in the area have optional 40 acre units.
10. A spacing rule providing for a minimum of 467 feet from lease lines for all wells and 933 feet between vertical wells, with no minimum distance requirement between horizontal and vertical wells and no minimum distance requirement between horizontal wells, will provide flexibility in drilling horizontal wellbores in the field.
 11. The distance between the first and last take-point in a horizontal well should be used for purposes of assignment of additional acreage pursuant to Rule 86.
 12. The proposed box rule will allow operators reasonable minor deviations from the permitted wellbore path.
 13. Special provisions for "take points", no perf zones, and off-lease penetration points for horizontal wells will provide greater flexibility in selecting future drilling locations and allow for maximum horizontal drainhole length.
 14. Because the correlative interval for the Wolfbone (Trend Area) Field includes multiple, separate accumulations of hydrocarbons, a two factor allocation formula is required by statute. Allocation of allowable in the consolidated field based on 75% acreage and 25% deliverability for both oil and gas wells is a reasonable formula which will protect correlative rights of mineral owners in the field.

15. There is a market for 100% of the gas produced from wells in the consolidated field.

CONCLUSIONS OF LAW

1. Proper notice of hearing was timely issued by the Railroad Commission to appropriate persons legally entitled to notice.
2. All things necessary to the Commission attaining jurisdiction over the subject matter and the parties in this hearing have been performed.
3. Consolidation of the subject 12 fields is necessary to prevent waste by promoting orderly development of the Wolfcamp and Bone Springs reservoirs.
4. Adoption of the recommended field rules on a temporary basis is necessary to prevent waste, protect correlative rights and promote development of the field.
5. Suspension of the allocation formula in the Wolfbone (Trend Area) Field is appropriate pursuant to Statewide Rule 31(j).

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend that the subject 12 fields be consolidated into a single field called the Wolfbone (Trend Area) Field and that the following rules be adopted for the consolidated field on a temporary basis, subject to review in 18 months:

1. Designation of the field as the correlative interval from 8,070 feet (top of Bone Springs) to 13,092 feet (base of Wolfcamp/Permian) as shown on the log of the Collier Well No. 1, Reeves County;
2. 467'-933' well spacing, with no minimum between-well spacing requirement between a horizontal well and a vertical well or between horizontal wells;
3. Horizontal spacing rules providing for take-points, "no-perf zones"; off-lease penetration point; box rule allowing 50 feet tolerance;
4. 320 acre density for oil and gas wells with 40 acre optional units; no maximum diagonal limit and no P-15 and plat for individual wells;
5. Allocation based on 75% acreage and 25% deliverability/potential; AOF status for gas field.

Respectfully submitted,


Donna K. Chandler
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Marshall F. Enquist
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