



# RAILROAD COMMISSION OF TEXAS

## OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 08-0267636

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THE APPLICATION OF CHESAPEAKE OPERATING, INC. FOR NEW FIELD DESIGNATION AND ADOPTION OF TEMPORARY FIELD RULES FOR THE (PROPOSED) SANDBAR (BONE SPRING) FIELD, LOVING COUNTY, TEXAS

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Heard by: Andres J. Trevino, P.E. on October 25, 2010

**Appearances:**

Bill Spencer  
Cary McGregor

**Representing:**

Chesapeake Operating, Inc.

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Chesapeake Operating, Inc. requests a new field designation called the Sandbar (Bone Spring) Field be approved for its Johnson 54-2-34 Well No. 1. Chesapeake also requests that the following temporary rules be adopted for the new field:

1. Designation of the Sandbar (Bone Spring) Field as the correlative interval from 8,007 feet and 11,067 feet as shown on the log of the Anadarko Petroleum Sandbar 54-2-39 Well No. 1;
2. 467' - 933' well spacing, take point language, 50 foot "box rule" and 0 feet between vertical and horizontal wells;
3. 320 acre proration units with a maximum diagonal of 6,500 feet, additional acreage based on horizontal lateral length per table;
4. Allocation based on 95% acreage and 5% per well.

There were no protests to this application and the examiner recommends approval of the new field designation and adoption of temporary field rules.

### DISCUSSION OF EVIDENCE

Chesapeake completed its Johnson 54-2-34 Well No. 1 in April 2010 with a horizontal completion in the Upper Bone Spring between 8,396 and 8,488 feet TVD. The horizontal lateral was perforated between 8,550 to 12,500 feet MD. The well was originally placed into the Two Georges (Bone Spring) Field. On initial test, the well produced at a rate of 122 BOPD, 440 MCFPD and 1,799 BWPD. Production from the well was shut in for approximately 45 days while a pipeline connection was prepared. When production was re-established, the production increased and stabilized at a rate of 350 BOPD.

The new field designation should be approved for the subject well. There are 40 other wellbores within a 2 ½ mile radius of the Johnson 54-2-34 No. 1. Twenty seven of the wells were drilled shallower than the Bone Spring and tested the Delaware Sands at a depth of 4,500 feet. The majority of the Delaware tests were dry holes. Four of the remaining producing wells that have penetrated the Bone Spring are producing below 15,000 feet in the Strawn, Atoka or Morrow Sands. The remaining wells drilled below the Bone Spring were abandoned locations or dry holes. The top of the Bone Spring is found at 8,007 feet while base of the Bone Spring formation is found at a depth of 11,067 feet in the area. There are no other wells currently producing from the Bone Spring Formation within a 2 ½ mile radius of the Johnson 54-2-34 No. 1. The nearest Bone Spring production is found in the Two Georges (Bone Spring) Field located 17 miles to the east. Production in this field and other Bone Spring fields in the area is from the Middle to Lower Bone Spring members.

Chesapeake requests that the entire correlative interval between 8,007 feet and 11,067 feet as shown on the log of the Anadarko Petroleum Sandbar 54-2-39 Well No. 1 be considered a single field. The interval includes all three members of the Bone Spring Formation. The Upper Bone Spring is considered mostly shale with some sand. The Middle Bone Spring is an equal mix of shale and sand, while the Lower Bone Spring is mainly sand with some shale layers. The sand in the entire Bone Spring interval is lenticular and varies from well to well.

The production history for the Johnson 54-2-34 Well No. 1 is short and Chesapeake was unable to perform accurate decline curve analysis. The Sandbar (Bone Spring) Field will be developed with horizontal wells similar to other Bone Spring fields in the area. Chesapeake requests 320 acre oil units with additional acreage assigned based on the length of the lateral, 467' - 933' spacing, take points and a 50 foot "box" rule. Chesapeake also requests that allocation for wells in the field be based on 95% acreage and 5% per well. These rules are similar to the rules adopted in the Phantom (Wolfcamp) Field (Bone Spring production), Hoban (Bone Spring) Field and the Two Georges (Bone Spring) Field. The proposed temporary rules will provide for orderly and effective development of the field with horizontal wells.

**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. Chesapeake Operating, Inc. completed its Johnson 54-2-34 Well No. 1 in April 2010 with a horizontal completion in the Upper Bone Spring between 8,396 and 8,488 feet TVD. The horizontal lateral was perforated between 8,550 to 12,500 feet MD.
3. On initial test, the well produced at a rate of 122 BOPD, 440 MCFPD and 1,799 BWPD. The well's production later increased and stabilized at a rate of 350 BOPD.
4. The Johnson 54-2-34 Well No. 1 is entitled to a new field as there is no other comparable Bone Spring production within 2 ½ miles of the Johnson 54-2-34 Well No. 1.
5. The nearest Bone Spring production is found in the Two Georges (Bone Spring) Field located 17 miles to the east. Production in this field and other Bone Spring fields in the area is from the Middle to Lower Bone Spring members.
6. The entire correlative interval between 8,007 feet and 11,067 feet as shown on the log of the Anadarko Petroleum Sandbar 54-2-39 Well No. 1 should be designated as the Sandbar (Bone Spring) Field.
7. The interval includes all three members of the Bone Spring Formation. The Upper Bone Spring is considered mostly shale with some sand. The Middle Bone Spring is an equal mix of shale and sand, while the Lower Bone Spring is mainly sand with some shale layers. The sand in the entire Bone Spring interval is lenticular and varies from well to well.
8. The Sandbar (Bone Spring) Field will be developed with horizontal wells similar to other Bone Spring fields in the area.
9. Chesapeake requests 320 acre oil units with additional acreage assigned based on the length of the lateral, 467' - 933' spacing, take points and a 50 foot "box" rule similar to other Bone Spring fields in the area.
10. The proposed temporary rules are similar to the rules adopted in the Phantom (Wolfcamp) Field, (Bone Spring production), Hoban (Bone Spring) Field and the Two Georges (Bone Spring) Field.

11. Allocation based on 95% acreage and 5% per well meets statutory requirements.

**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 requested new field designation and adoption of temporary field rules will prevent waste, protect correlative rights and promote the orderly development of the field.

**RECOMMENDATION**

Based on the above findings and conclusions of law, the examiner recommends approval of the new field designation and adoption of temporary field rules for the Sandbar (Bone Spring) Field.

Respectfully submitted,



Andres J. Trevino, P.E.  
Technical Examiner