

THE APPLICATION OF CONOCOPHILLIPS COMPANY TO ADOPT FIELD RULES AND A MER ALLOWABLE FOR THE GREENE RANCH (ATOKA) FIELD, HANSFORD COUNTY, TEXAS

Heard by: Andres J. Trevino, P.E., Technical Examiner

Hearing Date: June 19, 2009

Appearances:

Representing:

Jamie Nielson
Greg Cloud

ConocoPhillips Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

This is the unprotested application of ConocoPhillips Company to adopt field rules, for the Greene Ranch (Atoka) Field and adopt a MER allowable for two wells in the field. The proposed rules are summarized as follows:

1. Designation of the field as the correlative interval from 6,580 feet to 6,650 feet as shown on the log of the ConocoPhillips Company Green B Lease No. 2;
2. 467'-933' for oil and gas well spacing;
- 3a. 80 acre oil units with 40 acre tolerance, 4,000 maximum diagonal;
- 3b. 640 acre gas units with 10% tolerance, 13,500 maximum diagonal;
4. Allocation based on 100% acreage, MER allowables of 400 BOPD each for the Knutson Trust 14, Well No. 2 and the Greene D, Well No. 1.

During the hearing, ConocoPhillips dropped the requests for Net GOR approval and multiple 49(b) allowables and agreed to have the field rules be permanent instead of temporary. This application was unprotested and the examiner recommends that the field rules for the Greene Ranch (Atoka) Field be adopted as requested and adopt the MER allowable for the two wells.

DISCUSSION OF EVIDENCE

The Greene Ranch (Atoka) Field was discovered in February 2009 at a depth of 6,585 feet. The initial discovery was thought to be of a gas field. Additional wells drilled in the field proved the field is an oil field with a gas cap and an oil/water contact. As of June 2009, there are 4 active oil wells and one gas well in the field. There are no other operators in the field.

The Greene Ranch (Atoka) Field is a narrow (approximately 900 foot by 20,000 foot long) channel sand reservoir. The Atoka sand in this reservoir is a high quality sand with 21 to 24% porosity and high permeability. The wells require no stimulation to produce at high rates of oil and gas. The discovery well, the Greene B No. 2 had an initial potential of 4 MMCFPD with a flowing wellhead pressure of 1,325 psia. The subsequent wells were oil wells that had initial potentials between 195 BOPD to 662 BOPD. Bottom hole pressure analysis verifies that the reservoir fluids are in pressure communication and the field is an oil field with a gas cap. ConocoPhillips requests 467'-933' well spacing for the Greene Ranch (Atoka) Field so that it can place wells in optimum locations within the narrow channel sand reservoir. The drainage radius calculations demonstrate the need for larger drilling units. Based on an estimated recovery factor of 15%, ConocoPhillips estimates that the No. 2 will ultimately recover 175,000 BO. This well is expected to drain about 78 acres.

ConocoPhillips also request MER of 400 BOPD each for the Knutson Trust 14, Well No. 2 and the Greene D, Well No. 1. On the initial test the Knutson Trust 14, Well No. 2 produced at a rate of 662 BOPD with 90 psi flowing tubing pressure. The Greene D, Well No. 1 produced at a rate of 403 BOPD and 262 MCFD on initial test, with a flowing tubing pressure of 134 psi. The two wells produce at rates above the current allowable of 111 BOPD as they are completed in the thickest portion of the oil column.

The Knutson Trust 14, Well No. 2 was tested at various rates during May-June 2009 to determine rate sensitivity. The choke size was decreased from open to 17/64" during the testing. Oil production ranged from an average of 92 BOPD to 575 BOPD. Water production was minimal at 0-3 BWPD. The gas oil ratio at the various rates was very constant, ranging only from about 607 cubic feet per barrel to about 778 cubic feet per barrel.

The Greene D, Well No. 1 was also tested in June-July 2009. The choke on this well was varied from 28/64" to 16/64". The oil rate varied from about 98 BOPD to over 420 BOPD. The producing gas-oil ratio during testing was also very constant, ranging from about 719 cubic feet per barrel to about 739 cubic feet per barrel. There a was no water production. The testing indicate that wells can produce at rates of at least 400 BOPD without causing waste. It is requested that any overage be canceled.

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. State wide field rules for the Greene Ranch (Atoka) Field provide for 467'-1,200' well spacing, 40 acre oil and gas units and allocation based on 100% per well.
3. The Greene Ranch (Atoka) Field was discovered in February 2009 at a depth of 6,585 feet and was initially classified as a gas discovery. Currently the top allowable for the field is 111 BOPD and 222 MCFGPD.
4. Initial production from the 4 active oil wells in the field range from 195 BOPD to 662 BOPD.
5. The Greene Ranch (Atoka) Field produces from the Atoka sand, a high quality, highly productive narrow channel sand deposit.
6. Drainage radius calculations for the Knutson Trust 14, Well No. 2 shows the well will drain up to 78 acres.
7. Development of the field on 80 acre density for oil wells and 640 acre density for gas wells will allow the placement of flexible well locations within the narrow channel sand reservoir to maximize recovery from the field.
8. The proposed 467'-933' well spacing will accommodate flexible development on the long and narrow channel sand reservoir.
9. Variable rate testing of the Knutson Trust 14, Well No. 2 indicates that producing at rates of up to 400 BOPD will not cause waste.
 - a. During testing, the choke size was increased from 17/64" to 28/64" during the testing and oil production ranged from an average of 92 BOPD to 575 BOPD.

- b. During testing, the gas oil ratio was very constant, ranging only from about 607 cubic feet per barrel to about 778 cubic feet per barrel.
10. Variable rate testing of the Greene D, Well No. 1 indicates that producing at rate of up to 400 BOPD will not cause waste.
- a. During testing, the choke on this well was varied from 16/64" to 28/64" and oil production ranged from about 98 BOPD to over 420 BOPD.
 - b. The producing gas-oil ratio during testing was very constant, ranging from about 719 cubic feet per barrel to about 739 cubic feet per barrel.

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. Adopting field rules for the Greene Ranch (Atoka) Field is necessary to prevent waste and protect correlative rights.
- 4. Approval of an MER of 400 BOPD for the Knutson Trust 14, Well No. 2 and the Greene D, No. 1 and cancellation of overproduction for the wells in the Greene Ranch (Atoka) Field will not cause waste and will not harm correlative rights.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends that field rules for the Greene Ranch (Atoka) Field be adopted to provide for 640 acre gas units, 80 acre oil units, 467'-933' well spacing and MER allowables of 400 BOPD for the Knutson Trust 14, Well No. 2 and the Greene D, No. 1.

Respectfully submitted,

Andres J. Trevino, P.E.
Technical Examiner