

THE APPLICATION OF DELTA EXPLORATION COMPANY TO AMEND RULES FOR THE FT. TRINIDAD, S. (OTTOS SAND) FIELD, HOUSTON COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: May 11, 2005

Hearing held: July 6, 2006

Appearances

John F. Miller

Representing

Delta Exploration Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The field rules adopted June 3, 1974, in Final Order No. 3-63,918 as amended, for the Ft. Trinidad, S. (Otto Sand) Field can be summarized as follows:

1. 660'-1867' well spacing;
2. 160 acre oil proration units with 4500' maximum diagonal; and
3. allocation based on acreage.

Delta Exploration Company ("Delta") proposed that field rules be amended as follows:

2. 330-660' well spacing;
3. 640 acre gas proration units with 20 acre optional units; and
4. allocation based 75% on deliverability and 15% on acreage, with the formula suspended.

At the hearing, 1. Designated interval from 8350' to 10,238' as shown on the log of the NAPECO Nellie Metcalf Lease Well No. 1;

Delta stated that it wants the same rules as in the Carthage (Cotton Valley) Field which is contiguous to the south. The density in the Carthage (Cotton Valley) Field is 320 acres with 40 acre optional units.

DISCUSSION OF THE EVIDENCE

Delta has a farm-out from Comstock to develop the Yarborough Gas Unit 1 in the Ft. Trinidad,

SE (Ottos Sand) Field. It has standing to bring this application as it has two drilling permits in the Ft. Trinidad, SE (Ottos Sand) Field.

The Ft. Trinidad, SE (Ottos Sand) Field was discovered in 1977 and produces from the Cotton Valley formation above the Bossier formation. The proposed designated interval is based on the log of the discovery well and extends from 8350' to 10,238' on the log of the NAPECO Nellie Metcalf Lease Well No. 1. This is stratigraphically equivalent to the interval 7940'-9630' in the Exxon W.R. Banks No. 3 which is the designated interval in the Carthage (Cotton Valley) Field.

Thirty-eight wells have been completed in the Ft. Trinidad, SE (Ottos Sand) Field and their cumulative production has been 16 BCF and 300,000 barrels of condensate. There are now 10 operators with 26 wells on the proration schedule, with 15 of the wells active.

The contiguous Carthage (Cotton Valley) is a very large field to the south of Beckville, North, with 2430 wells producing from the same interval. There are several Carthage (Cotton Valley) Field wells along the western edge of the Yarborough GU 1, all with 40 acres assigned. Delta believes the same rules are appropriate for the Ft. Trinidad, SE (Ottos Sand) Field as in the Carthage (Cotton Valley) Field. The Ft. Trinidad, SE (Ottos Sand) and Carthage (Cotton Valley) Fields have grown together and could be consolidated, however the large service list in Carthage (Cotton Valley) discouraged Delta from this course.

In 1990, 160 acre optional units were added to the rules for the Ft. Trinidad, SE (Ottos Sand) Field. Of the six wells studied at that time, three were predicted to drain about 40 acres, one 100 acres, one 200 acres and one to drain 470 acres. Delta re-evaluated the drainage areas of these wells and found that the 1990 predictions were reasonably accurate.

The initial reservoir pressure was about 3703 psi and Delta has assumed the abandonment pressure would be 1000 psi. The average porosity is 8%, water saturation is 40% and recovery factor is 73%. This results in an estimated 302 MCF of recoverable gas per acre-foot. Delta estimated that the net feet of pay were 8% of the gross perforated interval and calculated the net pay for the 19 inactive (and presumably depleted) wells. The net pay ranges from 4 to 104' and ultimate recoveries range from 175 to 717 MMCF. Thirteen wells drained less than 40 acres, five drained between 83 and 40 acres and one drained 302 acres.

Well spacing of 467-933' is standard for 40 acre optional units. A two-factor allocation formula is necessary due to the multiple lenticular reservoirs in the designated interval, though the allocation formula should remain suspended. A formula based 75% on deliverability and 25% on acreage should be adopted if the allocation formula is ever reinstated.

FINDINGS OF FACT

1. Notice of this hearing was mailed to all operators in the Ft. Trinidad, SE (Ottos Sand) Field on May 15, 2006.
2. The Ft. Trinidad, SE (Ottos Sand) Field was discovered in 1977 and has 26 wells with 15 of

- them active wells.
3. Current field rules provide for 990'-1867' well spacing, 640/160 acre gas proration units and allocation based on acreage.
 4. Cumulative production in the Ft. Trinidad, SE (Ottos Sand) Field has been 16 BCF and 300,000 barrels of condensate.
 5. Three hundred twenty acre gas proration units with 40 acre optional units are appropriate for the density rule in the Ft. Trinidad, SE (Ottos Sand) Field.
 - a. The net pay in nineteen inactive (and presumed depleted) wells ranges from 4 to 104' and their ultimate recoveries range from 175 to 717 MMCF.
 - b. Thirteen of nineteen wells drained less than 40 acres, five drained between 83 and 40 acres and one drained 302 acres.
 - c. These are the same rules as in the contiguous Carthage (Cotton Valley) Field which produces from the same correlative interval.
 6. The proposed well spacing of 467'-933' is standard for 40 acre optional units.
 7. A designated interval between 8350' and 10,238' as shown on the log of the NAPECO Nellie Metcalf Lease Well No. 1, will include all of the Cotton Valley formation to the top of the Bossier formation and is stratigraphically equivalent that designated in the adjacent Carthage (Cotton Valley) Field.
 8. Two factor allocation is required by statute due to the multiple, lenticular nature of the designated interval.
 9. The allocation formula is suspended but should it ever be reinstated one based 75% on deliverability and 25% on acreage will satisfy statutory requirements.

CONCLUSIONS OF LAW

1. Proper notice was given as required by statute.
2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.
3. The requested amendments to the Ft. Trinidad, SE (Ottos Sand) Field rules will prevent waste, protect correlative rights and promote orderly development of the field.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends approval of the request by Delta Energy L.L.C. for amended field rules in the Ft. Trinidad, SE (Ottos Sand) Field, as per the attached order.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner