### OIL AND GAS DOCKET NO. 06-0253480

APPLICATION OF XTO ENERGY, INC. TO CONSOLIDATE THE CHEROKEE TRACE (JUR. BRADSHAW) AND CHEROKEE TRACE (JUR.-HARRISON) FIELDS INTO THE CHEROKEE TRACE (JURASSIC) FIELD AND AMEND THE FIELD RULES FOR THE CHEROKEE TRACE (JURASSIC) FIELD, UPSHUR COUNTY, TEXAS

**HEARD BY**: Thomas H. Richter, P.E. **DATE OF HEARING:** October 22, 2007

APPEARANCES:

**REPRESENTING:** 

XTO Energy, Inc.

Rick Johnston Jason Blakemore

# EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

This is the unprotested application of XTO Energy for the Commission to consider consolidating the Cherokee Trace (Jur. Bradshaw) and Cherokee Trace (Jur.-Harrison) Fields into the existing Cherokee Trace (Jurassic) Field. The field rules as adopted by Order No. 6-61,777, issued effective May 23, 1972, as amended. for the Cherokee Trace (Jurassic) Field are as follows:

- 1. Minimum well spacing of 933'/1867' (leaseline/between well);
- 2. Gas proration units of 320 acres and 10% tolerance and a maximum diagonal of 6000' and optional 160 acre density and a maximum diagonal of 4500';
- 3. An allocation formula based on 100% acreage; and
- 4. Surface casing rule.

XTO Energy proposes amending the rules as follows:

1. The entire combined correlative interval from 11,772' to 13,210' as shown on the Computer Processed log of the XTO Energy, Inc., Huggins GU 1 Well No. 3, (API No. 42-459-31347), Jeremiah Henson Survey, A-224, Upshur County, Texas, should be designated as the Cherokee Trace (Jurassic) Field.

- 2. Minimum well spacing of 467'/1200' (leaseline/between well);
- 3. Provide for optional 40 acre density and a maximum diagonal of 2100';
- 4. An allocation formula based on 95% deliverability and 5% per well and suspension of the allocation formula.

The examiner recommends that existing Special Field Rule No. 4 (the surface casing rule) be rescinded as the rule is now addressed by Statewide Rule No. 13.

## DISCUSSION OF THE EVIDENCE

The Cherokee Trace (Jur. Bradshaw) Field was discovered in 1982 at 11,856' subsurface depth. Special field rules were adopted by Order No. 6-83,271 effective April 1, 1985. The rule provide for minimum well spacing of 933'/1867', 320 acre and optional 160 acre density and 100% acreage. The field is designated an Non-Associated Prorated and the allocation formula has been suspended since 1995. There are two operators in the field and 7 producing wells. Cumulative production from the field is 8.9 BCF of gas and 214 MBO.

The Cherokee Trace (Jur.-Harrison) Field was discovered in 1984 at 12,088' subsurface depth. The field is governed by Statewide Rules, designated as Non-Associated and there are no wells in the field. Cumulative production from the field is 398 MMCF of gas and 8.7 MBO. The last production from the field was in 1993.

The Cherokee Trace (Jurassic) Field was discovered in 1971 at 11,760' subsurface depth. Special field rules were adopted by Order No. 6-61,777 effective May 23, 1972. The rule provide for minimum well spacing of 933'/1867', 320 acre and optional 160 acre density and 100% acreage. The field is designated an Non-Associated Prorated and there are no producing wells in the field. Cumulative production from the field is 4.2 BCF of gas and 220 MBO.

Consolidation of the subject fields will provide for the orderly development of fields and the efficient and effective recovery of reserves that otherwise would go unrecovered. The field reservoirs have overlapped during development. The Jurassic includes the Cotton Valley Lime Formation. Optional 40 acre density is necessary and appropriate for effect drainage of the various lenticular, porosity-lenses of the Harrison and Bradshaw sands. Volumetric analysis of the Huggins GU 1 Well No. 2, completed in the Cherokee Trace (Jur. Bradshaw) Field, estimates ultimate recovery (EUR) from the well to be 2.54 BCF of gas. The calculated drainage area is 117.5 acres. Analysis was performed on five other wells that have produced from the other two fields. The EUR's range from 44 MMCF to 3.8 BCF. The calculated drainage areas range from 5 acres to 44 acres.

The entire combined correlative interval from 11,772' to 13,210' as shown on the Computer Processed log of the XTO Energy, Inc., Huggins GU 1 Well No. 3, (API No. 42-459-31347),

Jeremiah Henson Survey, A-224, Upshur County, Texas, should be designated as the Cherokee Trace (Jurassic) Field.

A two-factor allocation formula based on 95% deliverability and 5% per well is appropriate and is required by State Statute for the protection of correlative rights. Because of the lenticular nature of the Harrison and Bradshaw Sands, the gas reserves that a well recovers is not contingent on the lateral acreage extent of the sand but the porosity development. Suspension of the allocation formula is appropriate as there is a market for 100% of the gas produced from the field.

## **FINDINGS OF FACT**

- 1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.
- 2. There was no protest at the call of the hearing.
- 3. The Cherokee Trace (Jur. Bradshaw) Field was discovered in 1982 at 11,856' subsurface depth.
  - a. Special field rules were adopted by Order No. 6-83,271 effective April 1, 1985. The rule provide for minimum well spacing of 933'/1867', 320 acre and optional 160 acre density and 100% acreage.
  - b. The field is designated an Non-Associated Prorated and the allocation formula has been suspended since 1995.
- 4. The Cherokee Trace (Jur.-Harrison) Field was discovered in 1984 at 12,088' subsurface depth.
  - a. The field is governed by Statewide Rules, designated as Non-Associated and there are no wells in the field.
- 5. The Cherokee Trace (Jurassic) Field was discovered in 1971 at 11,760' subsurface depth.
  - a. Special field rules were adopted by Order No. 6-61,777 effective May 23, 1972 that provide for minimum well spacing of 933'/1867', 320 acre and optional 160 acre density and 100% acreage.
  - b. The field is designated an Non-Associated Prorated and there are no producing wells in the field.
- 6. The entire combined correlative interval from 11,772' to 13,210' as shown on the Computer Processed log of the XTO Energy, Inc., Huggins GU 1 Well No. 3, (API No. 42-459-31347), Jeremiah Henson Survey, A-224, Upshur County, Texas, should be designated as the

Cherokee Trace (Jurassic) Field.

- 7. Consolidation of the subject fields will provide for the orderly development of fields and the efficient and effective recovery of reserves that otherwise would go unrecovered. The field reservoirs have overlapped during development.
- 8. Optional 40 acre density is necessary is appropriate for effect drainage of the various lenticular, porosity-lenses of the Harrison and Bradshaw sands.
  - a. Analysis was performed on five wells that have produced from the fields.
  - b. The EUR's range from 44 MMCF to 3.8 BCF.
  - c. The calculated drainage areas range from 5 acres to 44 acres.
- 9. A two-factor allocation formula based on 95% deliverability and 5% per well is appropriate and is required by State Statute for the protection of correlative rights. Suspension of the allocation formula is appropriate as there is a market for 100% of the gas produced from the field.

## **CONCLUSIONS OF LAW**

- Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.
- 2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
- 3. Consideration for consolidation of fields and field rules, a determination of the effectiveness of the rules and appropriate actions is a matter within the Commission jurisdiction.
- 4. Consolidation of fields and adoption of the proposed field rules will prevent waste, foster conservation and protect correlative rights.

#### **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions of law, the examiner recommends approval of the proposed field consolidation of the Cherokee Trace (Jur. Bradshaw) and Cherokee Trace (Jur. Harrison) Fields into the existing Cherokee Trace (Jurassic) Field and amending the field rules for the Cherokee Trace (Jurassic) Field.

Respectfully submitted,

Thomas H. Richter, P.E. Technical Examiner Office of General Counsel