

**OIL AND GAS DOCKET NO. 08-0257100**

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**THE APPLICATION OF CONOCOPHILLIPS COMPANY TO CONSOLIDATE THE EMBAR (5600) FIELD INTO THE EMBAR (PERMIAN) FIELD, ANDREWS, ECTOR AND REAGAN COUNTIES, TEXAS**

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**Heard by:** Donna K. Chandler on June 18, 2008

**Appearances:**

Jamie Nielson  
Greg Cloud

Alvin Collins

**Representing:**

ConocoPhillips Company

Sunray Energy, Inc.

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

ConocoPhillips Company requests that the Embar (5600) Field be consolidated into the Embar (Permian) Field and that field rules for the Embar (Permian) Field be adopted as follows:

1. Designation of the field as the correlative interval from 5,328 feet to 7,263 feet as shown on the log of the University Andrews Well No. 31;
2. 330'-660' well spacing;
3. 40 units with optional 20 acre units.;
3. Allocation based on 75% acreage and 25% per well for gas wells, with continuation of the AOF status.

This application was unopposed and the examiner recommends approval of the requested field consolidation and field rules.

**DISCUSSION OF THE EVIDENCE**

The Embar (5600) Field was discovered in 1955. There are 36 oil wells and 2 gas wells in the field. The field operates under rules providing for 550'-1,050 feet well spacing and 40 acre density. The allocation formula is based on 75% acreage and 25% per well.

The field produces from the Upper Clear Fork. Cumulative production is 6.5 million BO.

The Embar (Permian) Field was discovered in 1942 and produces from the Lower Clear Fork and Wichita Albany. The field operates under Statewide Rules. There are 52 oil wells and 2 gas wells in the field. The gas field is AOF and the oil field is classified as exempt. Cumulative production is 7.2 million BO.

Average daily oil production from the Embar (5600) Field is 2 BOPD. Average daily oil production from the Embar (Permian) Field is 7 BOPD. More than half of the wells operated by ConocoPhillips in the two fields are already being downhole commingled.

Estimated ultimate recovery from the University Andrews lease operated by ConocoPhillips is 8.1 million BO. This figure represents recovery from both of the subject fields. The average per well recovery is approximately 86,000 BO. With average porosity of 8% and average water saturation of 35%, the calculated average drainage area for wells in the Upper Clear Fork and Lower Clear Fork is 29 acres. With infill development on 20 acre density, it is estimated that an additional 1.7% of original oil in place, or 4.5 million BO, can be recovered from that lease.

The reservoir pressures in the two fields are largely depleted. In the Lower Clear Fork, the pressure is only 724 psi, or about 25% of original pressure. In the Upper Clear Fork, reservoir pressure in 2002 was down to 942 psi, or about 33% of original pressure.

ConocoPhillips requests that the Embar (Permian) Field be designated as the correlative interval from 5,328 feet to 7,263 feet as shown on the log of the University Andrews Well No. 31. This interval includes the Upper Clear For, Tub, Lower Clear Fork and Wichita Albany. Similar intervals have been adopted in field consolidations involving both the Goldsmith (Clear Fork) Field and the Martin (Consolidated) Field.

A spacing rule providing for a minimum of 330 feet from lease lines and 660 feet between wells is requested in conjunction with the optional 20 acre units. This spacing is standard for 20 acre development.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice and there were no protests.
2. The Embar (5600) Field was discovered in 1955 and the Embar (Permian) Field was discovered in 1942. Both fields are associated fields. The Embar (5600) Field has 36 oil wells and 2 gas wells; the Embar (Permian) Field has 52 oil wells and 2 gas wells.
3. Many wells are already downhole commingling in the two fields pursuant to Rule 10 exceptions.
4. Consolidation of the Embar (5600) Field into the Embar (Permian) Field will allow operators to produce both reservoirs as a single completion without obtaining individual Rule 10 exceptions.

5. The Embar (5600) Field produces from the Upper Clear Fork and average daily production is 2 BOPD. The Embar (Permian) Field produces from the Lower Clear Fork and Wichita Albany and average daily production is 7 BOPD. These averages include commingled production for some wells.
6. The calculated drainage area for a typical well producing from both the Upper and Lower Clear Fork is 29 acres. This estimate is based on average recovery of 86,000 BO per well.
7. Estimated additional recovery as a result of 20 acre infill drilling on the University Andrews lease operated by ConocoPhillips is 2.5 million BO.
8. The consolidated Embar (Permian) Field should be designated as the correlative interval from 5,328 feet to 7,263 feet as shown on the log of the University Andrews Well No. 31. This interval includes the Upper Clear For, Tub, Lower Clear Fork and Wichita Albany. Similar intervals have been adopted in field consolidations involving both the Goldsmith (Clear Fork) Field and the Martin (Consolidated) Field.
9. The proposed well spacing of 330'-660' is standard for 20 acre development.

**CONCLUSIONS OF LAW**

1. Proper notice of this hearing was given to all persons legally entitled to notice.
2. All things have occurred or been accomplished to give the Railroad Commission jurisdiction in this matter.
3. Consolidation of the Embar (5600) Field into the Embar (Permian) Field and amending the field rules as proposed by ConocoPhillips Company is necessary to prevent waste and protect correlative rights.

**EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiner recommends that the Embar (5600) Field be consolidated into the Embar (Permian) Field and that field rules be adopted for the Embar (Permian) Field.

Respectfully submitted,

Donna K. Chandler  
Technical Examiner