

June 8, 2005

**OIL AND GAS DOCKET NO. 7C-0242732**

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**APPLICATION OF EOG RESOURCES, INC. TO CONSIDER AMENDING THE FIELD RULES FOR THE DAVIS (DEVONIAN) FIELD AND TO TRANSFER WELLS FROM THE AMACKER-TIPPET (DEVONIAN) FIELD TO THE DAVIS (DEVONIAN) FIELD, UPTON COUNTY, TEXAS**

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**HEARD BY:** Thomas H. Richter, P.E.

**DATE OF HEARING:** May 26, 2005

**APPEARANCES:**

Philip Whitworth, attorney  
Scott Crump

**REPRESENTING:**

EOG Resources Inc.

**EXAMINER'S REPORT AND RECOMMENDATION**  
**STATEMENT OF THE CASE**

This is the unprotested application of EOG Resources, Inc. for the Commission to consider amending the field rules for the Davis (Devonian) Field as adopted in Order No. 7C-55,348, effective March 27, 1965 which provide for:

1. Minimum gas well spacing of 550'/1100' (lease line/between well),
2. 160 acre gas proration units with 10% tolerance and maximum diagonal of 4,300';
3. An allocation formula based on 100% acreage. The allocation formula has been suspended since July 1, 1996.
4. Surface casing of at least 350' and cementing instructions.

EOG Resources proposes the following:

1. The entire correlative interval and its stratigraphic equivalent from 11,510' to 12,298' as shown on the Open Hole Platform Express, High Resolution Laterolog Array log of the EOG, Dovie Davis "16" Lease Well No. 1H (API No. 42-461-34506), Section 16, Blk 41, T-5-S, T&P RR Co. Survey, A-908, Upton County, Texas should be designated as the Davis (Devonian) Field.

2. Minimum well spacing of 467'/933' (lease line/between well), provided that there be no between well spacing restriction shall apply between a horizontal drainhole well and any previously existing vertical well or between the drainholes of two horizontal drainhole wells within the first one hundred (300) feet or the last one hundred (300) feet of either horizontal well;
3. Provide for 160 acre gas proration units and a maximum diagonal of 4,500' for vertical wells and for horizontal wells the length of the drainhole and the diagonal. Optional 80 acre units, a maximum diagonal of 3,250' for vertical wells and for horizontal wells the length of the drainhole and the diagonal;
4. 40 acre oil proration units with 20 acre tolerance and a maximum diagonal of 2,100';
5. Allocation formula based on 67% acreage and 33% per well for oil or gas. It is requested that the allocation formula remain suspended.

It is also proposed that 7 wells be transferred from the Amacker-Tippett (Devonian) Field to the Davis (Devonian) Field. One of the wells has been placed on schedule, four wells have recently been completed and the forms have been filed with the Commission (as of the time of the hearing) and three wells are being drilled. The examiner recommends approval

### **DISCUSSION OF THE EVIDENCE**

The Davis (Devonian) Field was discovered in 1963 at 11,900' subsurface depth. Samson is the only operator in the field with 2 scheduled wells. The field is classified as Associated - 100% AOF and the allocation formula has been suspended since July 1, 1996.

The Amacker-Tippett (Devonian) Field was discovered in 1955 at 10,900' subsurface depth. This is a very large, multi-operator multi-well field. Special field rules provide for 467'/933' minimum wells spacing, 160/optional 80 acre proration unit density and an allocation formula based on 67% acreage and 33% per well. Special field rules governing horizontal drainhole wells were adopted in September 2003. EOG proposes rules identical to the rules for the Amacker-Tippett (Devonian) Field. The Davis (Devonian) Field though separated from the Amacker-Tippett (Devonian) Field by several miles is nearly identical in reservoir properties (gas gravity, liquid gravity, average porosity and average water saturation) and therefore similar governing special field rules should apply. Therefore it is proposed that the entire correlative interval and its stratigraphic equivalent from 11,510' to 12,298' as shown on the Open Hole Platform Express, High Resolution Laterolog Array log of the EOG, Dovie Davis "16" Lease Well No. 1H (API No. 42-461-34506), Section 16, Blk 41, T-5-S, T&P RR Co. Survey, A-908, Upton County, Texas should be designated as the Davis (Devonian) Field.

160 acre/optional 80 acre proration unit density is necessary to provide for the efficient and effective depletion of the subject field. Cumulative production from the Davis (Devonian) Field is 4.47 BCF of gas. EOG is maintaining an ongoing horizontal well drilling program. The Devonian

is naturally fractured with east-west oriented fractures. The horizontal laterals are typically north-south oriented. In order to encounter as many natural fractures as possible on a lease, it is proposed that the penetration point and terminus point be 100 feet from the lease line. In addition, it is proposed that the drainholes be allowed to overlap up to 300' and without requiring a rule 37 exception, however, the remainder of the drainhole laterals must come no closer than 933'. The perpendicular distance from the horizontal drainhole lateral shall be no closer than 467' to any property/lease line. The maximum diagonal of a horizontal well proration unit should be based on the maximum diagonal of 4,500' (160 acre unit) plus the length of the horizontal drainhole lateral and 3,250' (80 acre unit) plus the length of the horizontal drainhole lateral.

The proposed minimum well spacing, 467'/933' (leaseline/between well), is necessary for flexibility in locating wells in the field. The adoption of no between well spacing between vertical wells and horizontal wells is necessary to provide for the effective and efficient depletion of the reservoir. There is no data to indicate that horizontal wells completed close to existing vertical wells show communication/ depletion. Incremental reserves will be recovered as a result of no between well spacing between vertical wells and horizontal drainhole wells.

It is proposed that the subject rules be adopted for either gas or oil well classifications. As in the Amacker-Tippett Field the Devonian produces as a retrograde condensate reservoir. Therefore there are times when the Commission has re-classified wells from gas to oil based on gas-liquid yields. There are three wells currently being scheduled in the Davis (Devonian) "oil" Field.

EOG permitted eight of its wells in the Amacker-Tippett (Devonian) Field because of the horizontal drainhole rules that were in effect. The wells are indeed located in the Davis (Devonian) Field. The five completed wells are the Dovie Davis "16" Lease Wells No. 1H and 2H, Railway Ranch "9" Unit Well No. 1H, Railway Ranch "17" Unit Well No. 1H and Railway Ranch "21" Lease Well No. 1H (the completion forms have been filed with the Commission). The current permitted- drilling wells are the Railway Ranch "9" Unit Well No. 2H and Railway Ranch "20" Lease Well No. 1H.

The proposed allocation formula based on 67% acreage and 33% per well for oil or gas will provide for the protection of correlative rights. It is requested that the allocation formula remain suspended.

#### **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 Davis (Devonian) Field was discovered in 1963 at 11,900' subsurface depth.

- a. The field is classified as Associated - 100% AOF and the allocation formula has been suspended since July 1, 1996.
  - b. Field rules for the Davis (Devonian) Field were adopted by Order No. 7C-55,348, effective March 27, 1965 which provide for: Minimum gas well spacing of 550'/1100' (lease line/between well), 160 acre gas proration units with 10% tolerance and maximum diagonal of 4,300', an allocation formula based on 100% acreage and surface casing of at least 350' and cementing instructions.
4. The Amacker-Tippett (Devonian) Field was discovered in 1955 at 10,900' subsurface depth and special field rules provide for 467'/933' minimum wells spacing, 160/optional 80 acre proration unit density and an allocation formula based on 67% acreage and 33% per well.
- a. Special field rules governing horizontal drainhole wells were adopted in September 2003.
  - b. The proposed rules are identical to the rules for the Amacker-Tippett (Devonian) Field.
  - c. The Davis (Devonian) Field and the Amacker-Tippett (Devonian) Field have nearly identical in reservoir properties (gas gravity, liquid gravity, average porosity and average water saturation).
5. The entire correlative interval and its stratigraphic equivalent from 11,510' to 12,298' as shown on the Open Hole Platform Express, High Resolution Laterolog Array log of the EOG, Dovie Davis "16" Lease Well No. 1H (API No. 42-461-34506), Section 16, Blk 41, T-5-S, T&PRR Co. Survey, A-908, Upton County, Texas should be designated as the Davis (Devonian) Field.
6. Proration unit density of 160 acre/optional 80 acre is necessary to provide for the efficient and effective depletion of the subject field.
- a. The Devonian is naturally fractured with east-west oriented fractures and the horizontal laterals are typically north-south oriented.
7. The proposed minimum well spacing, 467'/933' (lease line/between well), is necessary for flexibility in locating wells in the field.
- a. The adoption of no between well spacing between vertical wells and horizontal wells is necessary to provide for the effective and efficient depletion of the reservoir.
  - b. There is no data to indicate that horizontal wells completed close to existing vertical wells show communication/ depletion.

- c. Incremental reserves will be recovered as a result of no between well spacing between vertical wells and horizontal drainhole wells.
8. The subject rules should apply for either gas or oil well classifications as the Davis (Devonian) Field produces as a retrograde condensate reservoir. Therefore there are times when the Commission has re-classified wells from gas to oil based on gas-liquid yields.
9. The proposed allocation formula based on 67% acreage and 33% per well for oil or gas will provide for the protection of correlative rights and the allocation formula should remain suspended.
10. EOG permitted eight of its wells in the Amacker-Tippett (Devonian) Field because of the horizontal drainhole rules that were in effect.
  - a. The wells are indeed located in the Davis (Devonian) Field.
  - b. The five completed wells are the Dovie Davis "16" Lease Wells No. 1H and 2H, Railway Ranch "9" Unit Well No. 1H, Railway Ranch "17" Unit Well No. 1H and Railway Ranch "21" Lease Well No. 1H (the completion forms have been filed with the Commission).
  - c. The current permitted- drilling wells are the Railway Ranch "9" Unit Well No. 2H and Railway Ranch "20" Lease Well No. 1H.
11. Termination of the special casing rule is warranted as Statewide Rules prevail.

**CONCLUSIONS OF LAW**

1. 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 of field rules, a determination of their effectiveness and appropriate actions is a matter within the Commission jurisdiction.
4. Adoption of the proposed amended 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 amended field rules for the Davis (Devonian) Field and the transfer of EOG Resources wells as stated.

Respectfully submitted,

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