



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

**OIL AND GAS DOCKET NO. 03-0298325**

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**THE APPLICATION OF EOG RESOURCES, INC. TO AMEND FIELD RULES FOR THE FORT TRINIDAD, EAST (BUDA) FIELD, HOUSTON, WALKER, AND MADISON COUNTIES, TEXAS**

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**HEARD BY:** Karl Caldwell – Technical Examiner  
Randall Collins – Administrative Law Judge

**HEARING DATE:** November 10, 2015  
**CONFERENCE DATE:** February 23, 2016

**APPEARANCES:** **REPRESENTING:**

**APPLICANT:**

Flip Whitworth  
Rick Johnston  
Greg Geis  
Mason Gadberry

EOG Resources, Inc.

**INTERVENER:**

George Neale

Burk Royalty Co., Ltd.

**OBSERVER:**

Tereasa Montemayor

Llewellyn Operating Co. LLC

**EXAMINERS' REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Field rules for the Fort Trinidad, East (Buda) Field, were adopted in Final Order No. 3-56,036, effective February 14, 1966. The field rules were last amended in Final

Order No. 03-0294698, effective April 28, 2015. The current field rules in effect for the field are summarized as follows:

- Rule 1. Designated correlative interval from 9,130 feet to 9,377 feet as shown on the log of the Texas Oil & Gas Corp. - Jones "FF" Lease, Well No. 1 (API No. 42-313-30307), H. Walker Survey, A-34, Madison County
- Rule 2: 467'-933' well spacing;
- Rule 3: 640 acre oil and gas proration units, with 64 acre tolerance and 80 acre optional units; additional acreage assigned to horizontal wells based on a special formula, capped at 1280 acres; and
- Rule 4: Maximum Daily Oil Allowable of 1,740 BO per day per 640 acres (2.72 BO per acre).

EOG Resources, Inc. ("EOG") proposes the following field rule amendments:

- Rule 1: No change;
- Rule 2: 0 feet between well spacing for horizontal and horizontal wells and horizontal and vertical wells, while maintaining the current 933 feet between well spacing for vertical wells and other vertical wells in the field;  
  
A take points rule for horizontal wells of 100 feet from first and last take point to lease, unit and property lines, and 467 feet from all other take points to lease, unit and property lines;  
  
A 50 foot box rule; and  
  
An off-lease penetration point rule.
- Rule 3: Eliminate the requirement to file proration unit plats for individual oil and gas wells and allow the assignment of acreage with Form P-15, with the option of the operator to file individual proration plats if the operator so desires;
- Rule 4: Amend the maximum daily oil allowable for each vertical well in the field from the current 1,740 BOPD to 6,400 BOPD<sup>1</sup>;

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<sup>1</sup> The Applicant did not consider amending the requested Rule 4 maximum daily allowable from the originally requested 6,400 BOPD to 5,000 BOPD as the operator did not know exactly how 6,400 BOPD was determined, but did provide the rationale for 5,000 BOPD.

Amend the allocation formula from 100% acreage to 50% acreage and 50% per well; and

Rule 5 (new): Adopt a stacked lateral well field rule. The Applicant did not consider a 5,000 BOPD maximum allowable to be adverse.

The requested field rules will provide for additional horizontal well development which will maximize production in the most prudent manner. The proposed rules will facilitate oil and gas development and recover additional reserves, preventing waste. The application is unopposed and the Examiners recommend approval of the application.

### **DISCUSSION OF THE EVIDENCE**

The Fort Trinidad, East (Buda) Field, was discovered on April 27, 1965. A composite production plot for all wells that have ever reported production in the subject field shows wells have produced 9,411 MBO and 19,609 MMcf of gas. An EOG engineering witness believes that the increase in field production in 2012 is a result of horizontal well completions in the field.

The November 1, 2015 oil proration schedule shows there are currently 88 producing oil wells in the field. There are also numerous gas wells listed on the November 2015 gas proration schedule. Statewide Rule 10 authority has been granted for the Fort Trinidad, East (Buda) Field (Oil and Gas Docket No. 03-0263210). As a result, there are several wells with perforations in the correlative interval for the Fort Trinidad, East (Buda) Field with production reported in a different field.

EOG has completed several horizontal wells in the Fort Trinidad, East (Buda) Field and is seeking to amend and adopt field rules related horizontal well development of the field. The correlative interval for the field is 250 feet to 300 feet thick and contains both the Buda and Georgetown Formations. The EOG Three Amigos No. 3H horizontal well was completed in the Buda Formation only. A daily production plot of the Three Amigos No. 3H shows that between day 10 and day 35 the well consistently produced more than 2,000 BOPD, and between 2,500 and 2,600 BO for some days. As a result, EOG, or any operator in the field, would require a stacked lateral field rule to be able to assign the same acreage to a lateral completed in the Georgetown Formation and a lateral completed in the Buda Formation. The requested stacked lateral rule will allow for horizontal wells to be drilled in the Buda and Georgetown Formations.

The current top allowable for a well on 640 acres is 1,740 BOPD. EOG is requesting a top allowable of 6,400 BO for a 640 acre well. The basis for this request is a result of the Three Amigos No. 3H producing 2,500 BOPD from the Buda Formation

only. If EOG were to drill a stacked lateral well in the Georgetown Formation, EOG would require an increase in the allowable. With improvements in completion technology, EOG anticipates even greater production from the field interval in the future. EOG proposed a top allowable of 6,400 BOPD but did not know exactly how this number was determined. EOG did not consider a top allowable of 5,000 BOPD to be adverse, which would be twice the rate of 2,500 BOPD that the Three Amigos No. 3H produced from the Buda Formation only, as EOG anticipates that a well completed in the Georgetown Formation will yield similar results.

EOG is requesting no minimum between well spacing between horizontal wells and other horizontal wells, and between horizontal wells and vertical wells. This proposed field rule for horizontal wells will provide flexibility to determine the optimum horizontal well spacing for the field. In addition, there are some existing, old vertical wells in the field and EOG desires the ability to drill horizontal wells among the existing vertical wells to recover additional reserves that might otherwise go unrecovered. Burk Royalty Co., Ltd. would like to retain the current 933 feet well spacing between vertical wells and other vertical wells in the field and would consider a change to this spacing at this time to be adverse. EOG is in agreement with maintaining 933 feet between well spacing for vertical wells and other vertical wells in the field.

EOG has proposed a dual-take point rule for horizontal wells and asked that the language currently used in field rule language be altered. In the alternative, EOG does not consider dual take point language similar to the language in EOG Exhibits 15 to 27 to be adverse. According to the Applicant, there is little fracture growth and stimulation along the ends of first and last take points. There is also a strong degree of natural fracturing in the Buda Formation.

The stacked lateral language requested by EOG did not contain any set distance or percent offset for the length of the 660 foot wide box, other than the maximum distance between take points on the same horizontal lateral drainhole of the stacked lateral well. As alternative language, a multiplier of 1.2 times this distance was proposed, which is the multiplier contained in the stacked lateral language definition in the proposed Statewide Rule 86 horizontal drainhole well rule amendment.

EOG is also requesting to amend the allocation formula to 50% acreage and 50% per well as there are multiple stratigraphic accumulations of oil or gas within the correlative interval.

#### **FINDINGS OF FACT**

1. Notice of this hearing was provided to all operators in the field at least ten (10) days prior to the date of the hearing and no protests were received.
2. Adopting rules for horizontal well development will prevent waste.

- a. The correlative interval for the field is 250 feet to 300 feet thick and contains the Buda and Georgetown Formations. The requested stacked lateral rule will allow for separate laterals to be drilled in the Buda and Georgetown Formations; and
  - b. A stacked lateral rule will allow for horizontal wells to be completed in the Buda and Georgetown Formations with the ability to assign the same acreage to a lateral completed in the Buda and Georgetown Formations within the correlative interval.
3. Amending the well spacing between horizontal wells and other horizontal wells and horizontal wells and vertical wells will prevent waste.
  - a. The flexibility to drill horizontal wells among the existing vertical wells in the field provides operators the opportunity to recover additional reserves that might otherwise go unrecovered; and
  - b. The ability to drill horizontal wells closer than 933 feet will allow for horizontal wells to be drilled closer together to determine the optimum well spacing to maximize the recovery of reserves.
4. Adopting a multi-factor allocation formula is appropriate.
  - a. The correlative interval includes the Buda and Georgetown Formations; and
  - b. There are multiple stratigraphic accumulations of oil or gas within the correlative interval.

#### **CONCLUSIONS OF LAW**

1. Proper notice was issued as required by all applicable statutes and regulatory codes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Amending the field rules for the Fort Trinidad, East (Buda) Field will prevent waste.

**EXAMINERS' RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the Examiners recommend that the Commission amend the field rules for the Fort Trinidad, East (Buda) Field.

Respectfully submitted,



Karl Caldwell  
Technical Examiner



Randall Collins  
Administrative Law Judge