



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

OIL AND GAS DOCKET NO. 04-0286668

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THE APPLICATION OF EOG RESOURCES, INC. TO CONSIDER AN MER ALLOWABLE FOR ALL WELLS IN THE LA GLORIA (ATLEE-B-ZONE) FIELD, BROOKS COUNTY, TEXAS

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HEARD BY: Richard Atkins, P.E. - Technical Examiner  
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ER&R PREPARED BY: Karl Caldwell - Technical Examiner

HEARING DATE: February 19, 2014

APPEARANCES: REPRESENTING:

APPLICANT:

Doug Dashiell  
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EOG Resources, Inc.

### EXAMINERS' REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

EOG Resources, Inc. ("EOG") requests that a MER allowable of 270 BOPD be established for all wells completed in the La Gloria (Atlee-B-Zone) Field. EOG also requests that all over-production in the field be cancelled. The application is unopposed and the examiners recommend approval of the requested MER and cancellation of over-production.

#### DISCUSSION OF EVIDENCE

The La Gloria (Atlee-B-Zone) Field was discovered in November 1946. There have been 12 wells completed in this field, but at the present time, there are no oil wells listed on the oil proration schedule, and only two wells are listed on the gas proration schedule, one of which is listed as shut-in. EOG has recently drilled and completed two new wells on the outer edge of the field where the previous production had occurred and intend to drill more wells in this area. Cumulative production from the field as of November 2013 is 563 MBO and 2392 MMCF of gas.

The current top allowable in the La Gloria (Atlee-B-Zone) Field is 90 BOPD with a 2,000:1 GOR. EOG recently completed the J. Murphy Lease, Well No. 1 which had an initial potential of 250 BOPD, 100 MCF gas per day, and a GOR of 400:1. EOG has performed tests and determined that the pressure in the productive zone of the field, which occurs at a depth of approximately 7500 feet in this area, is at the original reservoir pressure that was encountered when the field was first discovered, and the oil wells can be produced more efficiently at a higher MER.

During January and February of 2014, EOG tested the J. Murphy Lease, Well No. 1 at various rates to determine sensitivity. The results of the test are summarized as follows:

<u>choke size</u>	<u>oil rate</u>	<u>gas rate</u>	<u>gas-oil ratio</u>	<u>FTP</u>
6/64"	16 BOPD	69 MCFD	12,919 cuft/bbl	1,207 psi
7/64"	120 BOPD	53 MCFD	469 cuft/bbl	1,310 psi
8/64"	77 BOPD	70 MCFD	935 cuft/bbl	1,290 psi
10/64"	226 BOPD	101 MCFD	451 cuft/bbl	1,325 psi

The producing gas-oil ratio was extremely high (12,919:1) on the 6/64" choke due to the well loading up. As the well was tested on larger choke sizes, the GOR started to stabilize. The lowest GOR from the testing occurred on the largest choke size (10/64" choke) which produced a stable rate, determined to be the optimum for maximum oil recovery. The daily rate during the five days that the well flowed on the 10/64" choke ranged from 198 BOPD to 258 BOPD. EOG requests a MER of 270 BOPD for all oil wells in the La Gloria (Atlee-B-Zone) Field. If this were a newly discovered field, the daily allowable at this depth would be 270 BOPD, which is also very close to the highest daily rate of production measured during testing on the optimal choke size.

The Murphy-Kruse GU Lease, Well No. 1, a gas well with a date of first production of December 6, 2013, was also tested at various rates in January and February of 2014 to determine sensitivity. The results of the test are summarized as follows:

<u>choke size</u>	<u>oil rate</u>	<u>gas rate</u>	<u>gas-oil ratio</u>	<u>FTP</u>
6/64"	18 BOPD	297 MCFD	15,735 cuft/bbl	2,287 psi
7/64"	14 BOPD	183 MCFD	13,743 cuft/bbl	2,161 psi
8/64"	33 BOPD	576 MCFD	17,171 cuft/bbl	2,527 psi
10/64"	78 BOPD	1,158 MCFD	14,832 cuft/bbl	2,592 psi
12/64"	97 BOPD	1,390 MCFD	15,064 cuft/bbl	2,628 psi

The tests results show that the GOR started to stabilize when the well flowed on the larger choke sizes of 10/64" and 12/64". The average daily oil production from the gas well

when flowed on the 10/64" and 12/64" choke sizes were 78 BOPD and 97 BOPD, respectively. The current MER in this field for oil wells is 90 BOPD, which is less than the oil produced from the test gas well when flowed on the 12/64" choke size, which was the optimum choke size as determined from the flow test.

Due to testing the two wells at rates in excess of the current oil allowable, the wells are over-produced. EOG requests that all over-production in the field be cancelled.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice at least ten days prior to the date of hearing.
2. The La Gloria (Atlee-B-Zone) Field was discovered in November 1946.
3. Cumulative production from the field as of November 2013 is 563 MBO and 2392 MMCF gas.
4. There have been 12 wells completed in this field, but at the present time, no wells are listed on the oil proration schedule, and only two wells are listed on the gas proration schedule, one of which is listed as shut-in.
  - a. EOG have recently completed two wells, one classified as an oil well and one classified as a gas well, which have yet to appear on the proration schedules;
  - b. EOG plans to drill more wells in the La Gloria (Atlee-B-Zone) Field.
5. The current top oil allowable in the field is 90 BOPD with a 2,000:1 GOR.
6. The J. Murphy Lease, Well No. 1 had an initial potential of 250 BOPD.
7. Test data shows the current pressure in this zone is at the original pressure, as measured when the field was first discovered in 1946.
8. Variable rate testing of the J. Murphy Lease, Well No. 1 indicates that producing at rates of up to 270 BOPD will not cause waste.
  - a. The daily maximum oil rate measured was 258 BOPD on a 10/64" choke;
  - b. The well produced at an average daily rate of 226 BOPD on a 10/64" choke;

- c. The well's GOR remained fairly low, and nearly constant between 469 and 451 scf/bbl when the well was tested between 120 and 226 BOPD on 7/64" and 10/64" choke sizes, respectively;
  - d. The nearly constant GOR indicates the well is not rate sensitive.
- 9. At an average depth of approximately 7,500 feet, this field would be assigned a top allowable of 270 BOPD if it were a new field discovery.
  - 10. A field-wide MER of 270 BOPD for all present and future oil wells in this field is appropriate.
  - 11. The wells in the La Gloria (Atlee-B-Zone) Field are over-produced due to sensitivity analysis testing.

**CONCLUSIONS OF LAW**

- 1. Notice of this hearing was given as specified in the provisions of all regulatory codes.
- 2. All things have occurred or been accomplished to give the Commission jurisdiction in this matter.
- 3. Approval of a field-wide MER of 270 BOPD for wells completed in the La Gloria (Atlee-B-Zone) Field and cancellation of all over-production will not cause waste and will not harm correlative rights.

**RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve a top MER oil allowable of 270 BOPD and cancellation of all over-production of each well in the La Gloria (Atlee-B-Zone) Field in Brooks County, Texas.

Respectfully submitted,



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Technical Examiner



Michael Crnich  
Legal Examiner