



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 06-0286064

THE APPLICATION OF QUANTUM RESOURCES MANAGEMENT, LLC TO CONSIDER AN MER ALLOWABLE AND INCREASED NET GAS-OIL RATIO AUTHORITY T.B. HARRIS LEASE, WELL NO. 10 WILLOW SPRINGS (PETTIT) FIELD, GREGG COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Marshall F. Enquist - Legal Examiner

ER&R PREPARED BY: Karl Caldwell - Technical Examiner

HEARING DATE: February 2, 2014

APPEARANCES: REPRESENTING:

APPLICANT:

James M. Clark

Quantum Resources Management, LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Quantum Resources Management, LLC ("Quantum") requests approval of a MER allowable of 135 BOPD, and a net GOR gas allowable of 775 MCFPD for the T. B. Harris Lease, Well No. 10, Willow Springs (Pettit) Field, Gregg County, Texas. Quantum also requests that all over-production for the well be canceled, which has been estimated to be 4181 BO and 36,698 MCF through January 30, 2014.

The application is unopposed and the examiners recommend approval of the requested 135 BOPD MER allowable, a net GOR gas allowable of 775 MCFPD and cancellation of all over-production for the T. B. Harris Lease, Well No. 10, as requested by Quantum.

DISCUSSION OF EVIDENCE

The Willows Springs (Pettit) Field was discovered in 1941 and there are currently 8 operators, 18 active gas wells, and 7 active oil wells in the field according to the proration

schedule. The subject well is the T.B. Harris Lease, Well No. 10 which does not yet appear on the proration schedule. This well was completed and has been producing since November 2013. According to the proration schedule for the Willow Springs (Pettit) Field, the maximum allowable oil production is 121 BOPD with a casinghead gas limit of 242 MCFPD based on the GOR ratio of 2,000:1. Current cumulative monthly production in the Willow Springs (Pettit) Field is approximately 2,000 BO and 50,000 MCF. These numbers do not include the subject well, which would contribute approximately an additional 4,000 BO per month. Historical cumulative production from the field from late 1941 through November, 2013, is 1289 MBO and 111,879 MMCF.

The initial potential test for the T.B. Harris Lease, Well No. 10 was conducted over a 24 hour period where the well flowed on an 18/64" choke at a rate of 204 BOPD, 576 MCFPD, and 0 BWPD, with a gas-oil ratio of 2,823 cubic feet per barrel. During the period of January 1 - 27, 2014, Quantum tested the well 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> |
|-------------------|-----------------|-----------------|----------------------|------------|
| 10/64" | 43 BOPD | 257 MCFPD | 6,021 cuft/bbl | 1,070 psi |
| 14/64" | 105 BOPD | 549 MCFPD | 5,225 cuft/bbl | 845 psi |
| 18/64" | 128 BOPD | 742 MCFPD | 5,797 cuft/bbl | 648 psi |

From January 1-9, 2014, the well flowed on an 18/64" choke, at an average rate of 128 BOPD, 742 MCFPD, 0 BWPD, with an average GOR of 5,797. Between January 10 and 14, a workover procedure was performed to remove some type of deposit that had started to build-up inside the tubing. As a result, production was not stabilize between January 10 - 15. From January 16 - 21, the well flowed on a 10/64" choke, producing 43 BOPD, 257 MCFPD, and 0 BWPD, with an average GOR of 6,021. At this rate, daily gas production is close to the top allowable of 242 MCFPD for this well as based on the 2,000 GOR and top allowable oil of 121 BOPD. Quantum feels that the top allowable gas is a limiting factor for this well and they do not feel that the well will produce at a 2,000:1 GOR at any rate. The well was flowed on a 14/64" choke from January 24 - 27 and tested at an average rate of 105 BOPD, 549 MCFPD, and 0 BWPD with an average GOR of 5,225.

Based on the test results, Quantum feels that the workover treatment that was performed between January 10 and January 14 had some effect on the gas rate that was observed after this work was completed. This would provide a possible explanation as to why the rates on the 14/64" choke did not fall between the rates on the 10/64" and 18/64" chokes as would typically be expected. The producing gas-oil ratio remained fairly constant throughout the various rate tests, which indicates that the well is not rate sensitive. In comparing the GOR vs BOPD, the GOR does not show a significant increase at the higher oil rate. In comparing GOR to casinghead gas rate, there was no increase in GOR at the highest gas production rate of 775 MCFPD. The highest daily rate measured during the testing was 135 BOPD and 775 MCFPD, which are the rates Quantum is requesting as the MER and net GOR allowable for the subject well.

Based on the results of the potential test for this well as reported in the W-2 (204 BOPD, 576 MCFPD) that was filed, Quantum expects that the well will receive a maximum casinghead gas allowable of 242 MCFPD, with a GOR penalized oil allowable of 86 BOPD.

If these are the allowables assigned to this well, it will have over-produced 4,181 BO and 36,698 MCF through January 30, 2014. Quantum is requesting a MER oil allowable of 135 BOPD and a net GOR gas allowable of 775 MCFPD for the T.B. Harris Lease, Well No. 10. Quantum also requests that all over-production be cancelled for this well.

FINDINGS OF FACT

1. Notice of this hearing was given to all parties entitled to notice at least ten days prior to the date of hearing.
2. The T.B. Harris Lease, Well No. 10 was completed in the Willow Springs (Pettit) Field, Gregg County, Texas, which was originally discovered in 1941.
 - a. On initial test, the well flowed on an 18/64" choke at a rate of 204 BOPD, 576 MCFPD and 0 BOPD with a gas-oil ratio of 2,823 cubic feet per barrel.
 - b. The top allowable in the field is 121 BOPD with an allowable gas-oil ratio of 2,000 cubic feet per barrel.
 - c. The Gas-Oil Ratio remained fairly constant throughout the various rate tests, indicating that the well is not rate sensitive.
 - d. Producing the T.B. Harris Lease, Well No. 10 at rates up to 135 BOPD and 775 MCFPD will not cause waste.
3. Due to producing the well at rates in excess of its current allowable, T.B. Harris Lease, Well No. 10, is over-produced 4,181 BO and 36,698 MCF through January 30, 2014.

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 MER oil allowable of 135 BOPD, and a net GOR gas allowable of 775 MCFPD, and cancellation of all over-production for the T. B. Harris Lease, Well No. 10, Willow Springs (Pettit) Field, Gregg County, Texas will

prevent waste, promote development of the field, and will not harm correlative rights.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend approval of a MER oil allowable of 135 BOPD, and a net GOR gas allowable of 775 MCFPD, as well as cancellation of all over-production for the T. B. Harris Lease, Well No. 10, Willow Springs (Pettit) Field, Gregg County, Texas, as requested by Quantum Resources Management, LLC.

Respectfully submitted,



Karl Caldwell
Technical Examiner



Marshall F. Enquist
Legal Examiner