

THE APPLICATION OF UNIT PETROLEUM COMPANY TO CONSIDER AN MER ALLOWABLE AND A NET GAS OIL RATIO FOR THE WINTERS LEASE, WELL NO. 1 IN THE LIVINGSTON (WILCOX) FIELD, POLK COUNTY, TEXAS

Heard by: Andres J. Trevino, P.E. on June 30, 2010

Appearances:

Dale Miller

Representing:

Unit Petroleum Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Unit Petroleum Company requests that an MER allowable of 150 BOPD and an increased net gas-oil ratio authority with a daily gas limit of 1,500 MCFD be established for its Winters Lease, Well No. 1 in the Livingston (Wilcox) Field. Unit Petroleum also requests that all accumulated overproduction be cancelled for this lease.

The application is unopposed and the examiner recommends approval of the requested MER, increased net gas-oil ratio authority and cancellation of overproduction.

DISCUSSION OF EVIDENCE

The Livingston (Wilcox) Field was discovered in 1942 and currently has thirteen producing wells on the proration schedule. The top allowable for the field is 121 BOPD with a casinghead gas limit of 242 MCFGPD. There are five other operators in the field.

Unit Petroleum completed the Winters Lease, Well No. 1, on January 2009 into a Wilcox sand as a flowing well. The No. 1 was completed at a depth of 6,871 feet and produced thru the tubing. The well had an initial potential of 156 BOPD, 67 MCFPD and no water with a flowing tubing pressure of 857 psi. The well was produced at a reduced rate while Unit Petroleum secured a gas pipeline right of way. The well has produced at a maximum rate of 224 BOPD and 1,000 MCFPD.

During May and June 2010, Unit Petroleum tested the Winters 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>
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12/64"	131 BOPD	952 MCFD	7,311 cuft/bbl	1,490 psi
11/64"	101 BOPD	806 MCFD	8,024 cuft/bbl	1,470 psi
9/64"	68 BOPD	549 MCFD	8,076 cuft/bbl	1,500 psi
7/64"	52 BOPD	333 MCFD	6,413 cuft/bbl	1,550 psi
6/64"	28 BOPD	200 MCFD	7,273 cuft/bbl	1,570 psi

The producing gas-oil ratio remained nearly constant through out the rate testing. At the highest daily test rate of 131 BOPD and 952 MCFD, the GOR decreased to 7,311 cuft/bbl. Testing shows the well can produce above the top allowable and maintain efficient use of reservoir energy. When the well was produced below the allowable, the well's fluids production rate dropped off rapidly indicating the well was loading up.

The reservoir energy is primarily derived from a solution gas drive. Unit Petroleum believes that gas production will increase over time as the GOR will increase as the pressure drops in the reservoir.

The well is estimated to be overproduced by 1,207 BO as of April 2010. Unit Petroleum requests that this overage be cancelled.

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 Livingston (Wilcox) Field was discovered in 1942 with a top allowable of 121 BOPD with a casinghead gas limit of 242 MCFGPD. There are thirteen producing wells in the field.
3. Unit Petroleum completed the Winters Well No. 1, on January 2009 into a Wilcox sand at a depth of 6,871 feet. The well had an initial potential of 156 BOPD, 67 MCFPD and no water with a flowing tubing pressure of 857 psi.
4. Variable rate testing of the Winters Well No. 1 indicates that producing at rates of up to 150 BOPD and a casinghead gas limit of 1,500 MCFGPD will not cause waste.
 - a. The maximum oil rate was 149 BOPD on a 12/64" choke.
 - b. The well began to load up as the well was choked back to produce below the allowable. The oil rate dropped off to 20 BOPD on a 6/64" choke.
 - c. The well's GOR remained nearly constant between 6,413 to 8,076 scf/bbl when the well was tested between 20 and 149 BOPD.

5. The reservoir energy is primarily derived from a solution gas drive. The GOR will increase as the reservoir pressure drops.
6. The well is estimated to be overproduced by 1,207 BO as of April 2010. Cancellation of this overage will not harm correlative rights.

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 an MER of 150 BOPD, authorization to produce under net gas-oil ratio authority with a daily gas limit of 1,500 MCFGPD for the Winters Lease, Well No. 1 and cancellation of overproduction for the well in the Livingston (Wilcox) Field will not cause waste and will not harm correlative rights.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends approval of an MER of 150 BOPD, authorization to produce under net gas-oil ratio authority with a daily gas limit of 1,500 MCFGPD and cancellation of overproduction for the Winters Lease Well No. 1 in the Livingston (Wilcox) Field in Polk County, Texas.

Respectfully submitted,

Andres J. Trevino, P.E.
Technical Examiner