

November 17, 2000

OIL AND GAS DOCKET NO. 06-0226248

APPLICATION OF HOUSTON EXPLORATION COMPANY TO CONSIDER AN INCREASED NET GAS-OIL RATIO AUTHORITY FOR THE JOE TOLAR LEASE WELL NO. 2, WILLOW SPRINGS (TRAVIS PEAK) FIELD, GREGG COUNTY, TEXAS

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

DATE OF HEARING: November 14, 2000

APPEARANCES:

Charles Salmon

REPRESENTING:

Houston Exploration Company

EXAMINER'S REPORT AND RECOMMENDATION
STATEMENT OF THE CASE

This is the unprotested application of Houston Exploration Company for a net gas-oil ratio which results in a casinghead gas limit of 600 MCF per day for its Joe Tolar Lease Well No. 2 in the Willow Springs (Travis Peak) Field. The applicant also seeks that all overproduction from the Joe Tolar Lease be canceled.

DISCUSSION OF THE EVIDENCE

The Willow Springs (Travis Peak) Field was discovered in 1955 at approximately 7,638' subsurface depth. Special field rules provide for minimum well spacing of 467'/1200', 80 acre density and 100% acreage allocation formula. The top oil allowable for a well in the field is 161 BOPD and a casinghead gas limit of 322 MCFD. This is a multi-operator, multi-well field.

The Houston Exploration Company, Joe Tolar Lease Well No. 2 was originally completed on November 13, 1990 in the Willow Springs (Cotton Valley) Field (a gas field) through perforations from 10,531' to 10,644' subsurface depth. By December 1999, production had decreased to 240 MCFD and 2 barrels of condensate per day. The producing GOR was in excess of 100,000:1. On January 4, 2000, the subject well was re-completed to the Willow Springs (Travis Peak) Field (an oil field) through perforations from 7,598' to 7,670' subsurface depth. By February 23, 2000, production had declined to 35 BOPD and 595 MCF of casinghead gas per day and 23 BOPD. The producing GOR was 17,000:1. The flowing tubing pressure was only 370 psig.

Because of wellbore fluid loading, the Travis Peak and the Cotton Valley zones were downhole commingled on March 22, 2000 (Rule 10 exception having been granted by the Commission). The additional gas volume produced by the Cotton Valley zone is effective in assisting the lifting of formations fluids from the Travis Peak Formation. In addition the well was placed on compression. The well currently produces 25 -27 BOPD, 550 to 600 MCFD and 23 -27

BWPD. The producing gas oil ratio is approximately 35,000:1. The maximum casinghead gas limit for this well is 310 MCFD. As a commingled well, the well is prorated in the oil zone, the Willow Springs (Travis Peak) Field.

A maximum gas limit of 600 MCFD will provide for the efficient and effective depletion of the reservoirs. At flow rates approaching 300 MCFD analysis shows that the Cotton Valley zone almost ceases production. Flow rate/pressure analysis of the Travis Peak interval shows that there is a 13% pressure drop across the sand face between the flow rates of 575 MCFD and 335 MCFD. The same analysis for the Cotton Valley interval shows an alarming 51% pressure drop. The extra gas is coming from the Cotton Valley and not the Travis Peak. Therefore, there is no waste of reservoir energy (premature expansion of solution gas coming out of the oil) in the Travis Peak.

It is further requested that any oil production and casinghead gas production that was produced in excess of the penalized allowable be canceled. Cancellation of any oil and gas overproduction will not adversely affect correlative rights.

FINDINGS OF FACT

1. Notice of this application was given to all person entitled to notice at least ten (10) days prior to the hearing.
2. There was no protest of the application.
3. The Willow Springs (Travis Peak) Field was discovered in 1955 at approximately 7,638' subsurface depth. Special field rules provide for minimum well spacing of 467'/1200', 80 acre density and 100% acreage allocation formula.
 - a. The top oil allowable for a well in the field is 161 BOPD and a casinghead gas limit of 322 MCFD.
 - b. This is a multi-operator, multi-well field.
4. The Houston Exploration Company, Joe Tolar Lease Well No. 2 was originally completed on November 13, 1990 in the Willow Springs (Cotton Valley) Field (a gas field) through perforations from 10,531' to 10,644' subsurface depth.
 - a. On January 4, 2000, the subject well was re-completed to the Willow Springs (Travis Peak) Field (an oil field) through perforations from 7,598' to 7,670' subsurface depth.
 - b. The Travis Peak and the Cotton Valley zones were downhole commingled on March 22, 2000 (Rule 10 exception having been granted by the Commission).
 - c. The additional gas volume produced by the Cotton Valley zone is effective in assisting the lifting of formations fluids from the Travis Peak Formation.

5. A maximum gas limit of 600 MCFD will provide for the efficient and effective depletion of the reservoirs. At flow rates approaching 300 MCFD analysis shows that the Cotton Valley zone almost ceases production.
6. Cancellation of any oil or casinghead gas overproduction will not adversely affect correlative rights.

CONCLUSIONS OF LAW

1. Notice of this hearing was provided in accordance with all applicable regulatory statutes and rules.
2. All things have occurred or been accomplished to afford the Commission the jurisdiction to consider and decide this matter.
3. Consideration and approval of this application for a net gas-oil ratio is a matter properly within the jurisdiction of the Commission to foster conservation and prevent waste.
4. Approval of the proposed application of Houston Exploration Company for Commission consideration for a net gas-oil ratio resulting in a casinghead gas limit of 600 MCFD will foster conservation and prevent waste.
5. Cancellation of any oil and gas overproduction in excess of the penalized allowable will not harm correlative rights.

EXAMINER'S RECOMMENDATION

It is recommended that the application of Houston Exploration Company for a net gas-oil ratio which results in a casinghead gas limit of 600 MCF per day for its Joe Tolar Lease Well No. 2 in the Willow Springs (Travis Peak) Field and cancellation of all overproduction from the Joe Tolar Lease be approved.

Respectfully submitted,

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