

OIL AND GAS DOCKET NO. 08-0254565

THE APPLICATION OF CONOCOPHILLIPS COMPANY TO CONSIDER AN MER AND NET GOR FOR EACH WELL IN THE EMBAR (DEVONIAN) FIELD, ANDREWS AND ECTOR COUNTIES, TEXAS

Heard by: Andres J. Trevino on February 22, 2008

Appearances:

Jamie Nielson
Greg Cloud
W.J. "Bill" Burns, P.E.
Alva Franco

Representing:

ConocoPhillips Company

Lionel Milberger
Dorothy Milberger

Observers

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

ConocoPhillips Company requests approval of an MER of 1,250 BOPD and an increased net gas-oil ratio authority with a daily gas limit of 2,500 MCFD for each well in the Embar (Devonian) Field. ConocoPhillips also requests that all overproduction for the wells be canceled. ConocoPhillips initially requested an MER of 1,000 BOPD and an increased net gas-oil ratio authority with a daily gas limit of 2,000 MCFD for each well, however production from the Worker Bee "D" No. 2 exceeded 1,100 BOPD and the Worker Bee "D" No. 1 exceeded 2,200 MCFD. ConocoPhillips Company is the only operator in the field.

The application is unopposed and the examiner recommends approval of the requested MER, increased net gas-oil ratio authority with a daily gas limit of 2,500 MCFD and cancellation of overproduction for all wells in the field.

DISCUSSION OF EVIDENCE

The Embar (Devonian) Field was discovered in 1954 upon completion of the Embar "B" No. 3 by Phillips Petroleum. Two additional wells the Embar "B" No. 5 and 6 were completed in 1954. The three wells on the Embar "B" lease initially produced an average of 100 BOPD in 1955 and currently average 1.7 BOPD. Cumulative production on the Embar "B" lease has totaled 1,368,099 BO. In 1956 Special field rules and an MER allowable of 197 BOPD were adopted Oil and Gas Docket 8-34,056. The current top allowable in the

field is 197 BOPD with a casinghead gas limit of 394 MCFD.

In 2006 ConocoPhillips drilled two wells on the Queenbee lease, the Queenbee Nos. 1 and 2. The Queenbee No. 2 produced at a rate of 524 BOPD and 597 MCFD after a fracture stimulation treatment. In November 2006, oil production stabilized at 500 BOPD and the GOR remained constant at 1,100. ConocoPhillips received an MER of 500 BOPD for the well upon issuance of Final Order No. 08-0249516 on January 10, 2007.

The Worker Bee "D" No. 1 produced at a rate of 860 BOPD, 1,602 MCFD and 30 BWPD on initial test, with a flowing tubing pressure of 1,150 psi. The initial GOR for the well was 1,863 cubic feet per barrel.

The Worker Bee "D" No. 1 has been producing at rates of 900-950 BOPD since completion, with a gas-oil ratio of approximately 2,200 cubic feet per barrel. ConocoPhillips provided updated production information justifying a higher casinghead gas limit. The casinghead gas production is approximately 2,200 MCFD, exceeding the initial proposed 2,000 MCFD daily gas limit. As the choke size is increased from 32/64ths to 52/64ths, production shows a slight increase in oil rate and a slight GOR increase to 2,200 from 1,863 cubic feet per barrel.

ConocoPhillips provided updated production information justifying a higher MER allowable for the field. A second Worker Bee well, the Worker Bee No. 2, was completed in May 2008. This well has been producing at rates of 1,000-1,099 BOPD since completion, with a gas-oil ratio of approximately 1,100 cubic feet per barrel. Production data shows when the well was choked back from 64/64ths to 46/64ths the GOR decreased from 1,300 to 1,100 cubic feet per barrel.

These wells are completed in Devonian age deposits that are faulted into isolated blocks. The productive interval found in each well varies from 34 feet in the University Queenbee No. 1 to over 845 feet in the Worker Bee "D" No.1. The variability in a well's productivity is related to the well's productive interval thickness. The variability in a well's productive interval can not be predicted due to the complexity associated with the faulted blocks and internal faulting within each block. Production data demonstrate the blocks are isolated from each other and have varying degrees of water drive assistance. The high rate wells have low GORs ranging from 2,200 to 1,100 cubic feet per barrel.

The testing indicate that wells in the field can produce at rates up to 1,250 BOPD and 2,500 MCFD without causing waste.

It is requested that all overage in the Worker Bee "D" lease be canceled.

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 Embar (Devonian) Field was discovered in 1954 upon completion of the Embar "B" No. 3 by Phillips Petroleum. There are currently eight producing wells in the field, all operated by ConocoPhillips.
3. The top allowable in the field is 197 BOPD and casinghead gas limit of 394 MCFD and the field operates under Special Rules.
4. ConocoPhillips received an MER of 500 BOPD for the Queenbee No. 2 upon issuance of Final Order No. 08-0249516 on January 10, 2007.
5. Production data of the Worker Bee "D" No. 1 indicates that producing at rates of up to 2,500 MCFPD will not cause waste.
 - a. During testing, the choke size was increased from 32/64" to 52/64" during the testing and oil production ranged from an average of 900 BOPD to 950 BOPD.
 - b. The casinghead gas production increased from 1,700 MCFD to approximately 2,200 MCFD
 - c. During testing, the gas oil ratio was very constant, ranging only from about 1,863 cubic feet per barrel to about 2,200 cubic feet per barrel.
6. Production data of the Worker Bee "D" West No. 2 indicates that producing at rate of up to 1,250 BOPD will not cause waste.
 - a. During testing, the choke on this well was varied from 64/64" to 46/64" and oil production ranged from about 466 BOPD to 1,099 BOPD.
 - b. The producing gas-oil ratio during testing was declining, ranging from about 1,300 cubic feet per barrel to about 1,100 cubic feet per barrel.
7. The field is completed in Devonian age deposits that are faulted into isolated blocks.
 - a. The productive interval varies from 34 feet in the University Queenbee No. 1 to over 845 feet in the Worker Bee "D" No.1.
 - b. The isolated fault blocks are faulted within each block.
 - c. Production data indicates the wells are assisted moderate to strong water drives.
8. The Worker Bee "D" lease is overproduced.

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 1,250 BOPD and an increased net gas-oil ratio authority with a daily gas limit of 2,500 MCFD for each well in the Embar (Devonian) Field will not cause waste and will not harm correlative rights.
4. Cancellation of overproduction in the Embar (Devonian) Field will not cause waste or harm correlative rights.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends approval of an MER of 1,250 BOPD and an increased net gas-oil ratio authority with a daily gas limit of 2,500 MCFD for each well in the Embar (Devonian) Field. It is further recommended that all overproduction in the field be cancelled.

Respectfully submitted,

Andres J. Trevino
Technical Examiner