
**THE APPLICATION OF EXXON MOBIL CORP. FOR INCREASED GAS OIL RATIO
AUTHORITY FOR ITS PARKER LEASE WELL NO. 3, MARTIN (CONSOLIDATED)
FIELD, ANDREWS COUNTY, TEXAS**

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: November 30, 2000

Hearing held: January 26, 2001

Appearances

Tim George

William T. Duncan

Representing

Exxon Mobil Corp.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Exxon Mobil originally requested both an MER and increased net gas/oil ratio authority for its Parker Lease, Well No. 3. Step rate test results showed that the well is not capable of producing more oil than its current allowable, and the applicant has withdrawn its request for an MER. Exxon Mobil is still seeking increased gas/oil ratio authority to allow this well to produce up to 1700 MCF per day.

DISCUSSION OF THE EVIDENCE

The Martin (Consolidated) Field was formed in November of 2000, from four fields that produce from the Clear Fork and Wichita formations. The consolidated field has many wells and nine operators in addition to Exxon Mobil. When the Martin (Consolidated) Field was formed, field rules were adopted specifying 40 acre density, with 20 acre optional units. The field rules established a specific daily oil allowable for wells on 40 acres of 164 barrels and for wells on 20 acres of 82 barrels. A specific daily casinghead gas limit of 900 MCF/D was set for all wells in the consolidated field.

The Parker Lease Well No. 3 is located near the center of a large lease, and was recompleted within the designated interval of the Martin (Consolidated) Field, during December 2000. The well was perforated from 6235 to 6298 feet in the lower Clear Fork and 5587 to 5750 feet in the upper Clear Fork formations. December 20, 2000, the first day on production, the well produced at a rate of 273 BO, 5 BW, and 2039 MCF.

Well No. 3 was tested on various choke sizes between December 20, 2000, and January 22, 2001, to show that it could produce greater amounts of oil and gas without causing waste. On an open choke the average daily rates were 78 BO and 1600 MCF, for a gas/oil ratio of 20410 cubic feet per barrel. When the choke size was decreased to 45/64th inches, the well produced an average of 53 BO and 1164 MCF per day, for an average gas/oil ratio of 21962. The choke size was then decreased to 20/64th inches where the daily rates averaged 44 BO and 1328 MCF, for a gas/oil ratio of 30182 cubic feet per barrel. When the choke size was reduced further to 4/64th inches, the daily oil rate decreased to 26 barrels and the daily gas rate decreased to 796 MCF, for a gas/oil ratio of 30615. There was a problem with emulsion in the flowline during the second test period, but Exxon Mobil believes the data clearly show that the gas/oil ratio increased as production was restricted. During the test, the average water cut remained about 50%, though the flowing tubing pressure increased slightly.

The applicant is requesting a net gas/oil ratio with a daily gas limit of 1700 MCF per day. During the step-rate test, the well accumulated 12 MMCF of gas overproduction that Exxon Mobil would like to have canceled.

FINDINGS OF FACT

1. The Commission issued notice of this hearing on December 21, 2000, to Exxon Mobil Corp. but not to any other operators in the field.
2. Notice that the hearing was held was mailed to the all operators in the Martin (Consolidated) Field, on January 31, and no one requested the hearing be re-opened by February 14, 2001.
3. The Martin (Consolidated) Field was formed in November of 2000, from four fields producing in the Clear Fork and Wichita formations.
4. Field rules specify an allowable of 164 BOPD for wells on 80 acres, 82 BOPD for wells on 40 acres, and a daily gas limit of 900 MCF for all wells.
5. The subject well, the Parker No. 3 was recompleted to the Martin (Consolidated) Field in December of 2000, with perforations from 6235 to 6298 feet in the lower Clear Fork and 5587 to 5750 feet in the upper Clear Fork formations.
6. The initial daily rate for the subject well was 273 BO, 5 BW, and 2039 MCF, for a gas/oil ratio of 7470 cubic feet per barrel.
7. The well was step-rate tested between December 20, 2000, and January 22, 2001, and the results show that it can produce at higher rates without causing waste.
 - a. On an open choke, the average daily rates were 78 BO and 1600 MCF, for a gas/oil ratio of 20410 cubic feet per barrel.
 - b. When the choke size was decreased to 45/64th inches, the well produced an average of 53 BO and 1164 MCF per day, for an average gas/oil ratio of 21962.

- c. The choke size was then decreased to 20/64th inches, where the daily rates averaged 44 BO and 1328 MCF, for a gas/oil ratio of 30182 cubic feet per barrel.
 - d. When the choke size was reduced further to 4/64th inches, the daily oil rate decreased to 26 barrels and the daily gas rate decreased to 796 MCF, for a gas/oil ratio of 30615.
 - e. During the test flowing tubing pressure did increase slightly at smaller choke sizes, indicating possible liquid loading.
8. Requiring the well to stay within its current daily gas limit of 900 MCF will not increase the well's ultimate oil recovery nor decrease the recovery of any other well in the field.
 9. This well is located near the center of a large lease and requiring it to make up overproduction that occurred during the testing period is not necessary to protect correlative rights.

CONCLUSIONS OF LAW

1. Proper notice was given as required by statute.
2. All things have been done or occurred to give the Railroad Commission jurisdiction to resolve this matter.
3. The requested increase in gas allowable for the Parker Lease Well No. 3 will not cause waste and will protect correlative rights within the field.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the Exxon Mobil Corp. Parker Lease Well No. 3, Martin (Consolidated) Field be allowed to produce up to 1700 MCF of gas per day. All overproduction for this well should be canceled.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: February 22, 2001

Exhibits

1. Map
2. Wellbore schematic
3. Field rule order
4. Step rate test data
5. Graph of gas rate test data over time
6. Graph of averaged test data over time
7. Graph of GOR test data over time
8. Graph of water cut over time
9. Graph of GOR vs gas rate
10. Gas overage