

OIL AND GAS DOCKET NO. 02-0228534

THE APPLICATION OF SHANA PETROLEUM COMPANY FOR INCREASED GAS-OIL RATIO AUTHORITY FOR ITS TRAYLOR-MITCHELL LEASE, WELL NO. 1, PROVIDENT CITY (YEGUA N, WEST) FIELD LAVACA COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: June 4, 2001

Hearing held: July 12, 2001

Appearances

Bob Tierney
Steven A. Henley

Representing
Shana Petroleum Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Shana Petroleum Company wants to produce its Traylor-Mitchell Lease Well No. 1, Provident City (Yegua N, West) Field, Lavaca County, Texas, under increased gas-oil ratio authority, with a daily gas limit of 800 MCF. Shana also requests that the overproduction for this well be canceled.

DISCUSSION OF THE EVIDENCE

The Provident City (Yegua N, West) Field was discovered in 1975 and only one gas well has ever been completed in it. In April of 2001, Shana re-activated the field by completing its Traylor-Mitchell Lease Well No. 1 as an oil well. The top perforation of the discovery gas well is listed as 5832 feet, and the perforations in Shana's well are between 5842 and 5846 feet. Based on the log of Shana's well, its perforations are at the very base of a 32-foot thick Yegua sandstone in an associated reservoir.

The initial potential of the Traylor-Mitchell well was 75 BO and 700 MCF per day, for a gas/oil ratio of 9333 cubic feet per barrel. The daily allowable for oil wells in this field is 102 BO and 204 MCF. The high gas/oil ratio of Shana's well causes its oil allowable to be penalized to 22 barrels per day.

The well was step-rate tested between June 6 and July 10, 2001. On an 11/64th inch choke, daily production averaged 65 barrels oil and 835 MCF, with a gas/oil ratio of 12,822 cubic feet per barrel. When the choke size was decreased to 8/64th inches, the gas/oil ratio increased to 15,388 cubic feet per barrel. The average daily gas and oil rates dropped to 25 BO and 387 MCF, but not enough to comply with the well's allowable. The choke size was then decreased to 6.5/64th inches, and daily production rates decreased further to 15 BO and 204 MCF, for a gas/oil ratio of 13,573 cubic feet per barrel. The lowest gas/oil ratio, that of 12,305 cubic feet per barrel, occurred when the choke was increased again to 10/64th inches. The daily production rates on this choke size averaged 57 BO and 697 MCF.

The well has accumulated 32 MMCF and 2900 barrels of overproduction since April, 2001. This is the only active well in the subject field, and requiring it to make up this overproduction would not prevent waste or protect correlative rights.

FINDINGS OF FACT

1. Notice of this hearing was issued to operators of record in the Provident City (Yegua N, West) Field on June 22, 2001.
2. The Provident City (Yegua N, West) Field was discovered in 1975, by the completion of a gas well with the uppermost perforation at 5832 feet.
3. The field was inactive until Shana completed the Traylor-Mitchell Well No. 1 as an oil well in April of 2000.
4. Statewide rules specify an allowable of 102 BOPD with a daily gas limit of 204 MCF for oil wells at this depth.
5. The subject well was perforated from 5842 to 5846 feet, at the base of a 32-foot thick sandstone, in a associated reservoir.
6. The initial daily rate for the subject well was 75 BO and 700 MCF, for a gas/oil ratio of 9333 cubic feet per barrel.
7. The well was step-rate tested between June 6, and July 10, 2001, and the results show that it can produce more efficiently at higher rates, thus preventing waste.
 - a. On an 11/64th inch choke, daily production averaged 65 barrels oil and 835 MCF, for a gas/oil ratio of 12,822 cubic feet per barrel.
 - b. On a choke of 8/64th inches, daily production averaged 25 BO and 387 MCF, for a gas/oil ratio of 15,388 cubic feet per barrel.
 - c. On a choke of 6.5/64th inches, daily production rates decreased to 15 barrels of oil and 204 MCF, for a gas/oil ratio of 13,573 cubic feet per barrel.
 - d. When the choke was increased again to 10/64th inches, the daily production averaged 57 BO and 697 MCF, producing the lowest tested gas/oil ratio of 12,305 cubic feet per barrel.
8. Requiring the well to stay within its current daily gas limit of 204 MCF will not increase the well's ultimate oil recovery.
9. This is the only well in the field and requiring it to make up overproduction will not prevent waste nor 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. Granting increased gas oil ratio authority for the Traylor-Mitchell Well No. 1 will prevent waste and protect correlative rights.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that increased net gas/oil ratio authority, with a daily gas limit of 800 MCF, be approved for Shana Petroleum Company's Traylor-Mitchell Lease Well No. 1, Provident City (Yegua N, West) Field, Lavaca County, Texas. All overproduction for this well should also be canceled.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: August 7, 2001