

OIL AND GAS DOCKET NO. 03-0228656

THE APPLICATION OF ESENJAY EXPLORATION, INC., FOR A DESIGNATED INTERVAL AND TWO-FACTOR ALLOCATION FORMULA, GRAND SLAM (CLAUGHTON) FIELD, MATAGORDA COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: May 18, 2001

Hearing held: July 6, 2001

Appearances

Michael McElroy
Dale Alexander

Representing
Esenjay Exploration, Inc.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Esenjay is proposing the following permanent field rules for the Grand Slam (Claughton) Field:

1. Designated interval from 12,930 to 14,430 feet as shown on the log of the Esenjay Runnells Gas Unit Well No. 3; and
2. allocation for gas wells based 5% per well and 95% on deliverability.

No spacing or density rule would be adopted. The examiner suggested a vertical well that shows a thicker correlative interval be designated as the type well and the applicant agreed.

DISCUSSION OF THE EVIDENCE

The Grand Slam (Claughton) Field was discovered August 8 of 2000, by the completion of the Esenjay Exploration, Inc., Runnells Gas Unit Well No. 3. According to the completion forms for the discovery well, it was capable of producing 22 MMCF per day and the bottom-hole pressure was 12,761 psi. The well was perforated between 14,081 and 14,371 feet, measured depth. The lower Frio Formation comprises a thick sand/shale sequence and the operator would like to perforate some of the shallower sandstones in the section. These sandstones are lenticular and contain multiple reservoirs. Their areal extent is small and, if some of the sandstones have to be produced as single completions, they will be uneconomic to complete. These are deep wells in overpressured zones and mechanical risks would be increased if the operator attempted a multiple completion.

The top of the productive lower Frio is at 12,930 feet in the discovery well, and the base is at 14,430 feet. Well No. 3 was drilled after seismic showed a location 2000 feet south of the L. M. Steele Trust Well No. 1, originally drilled by Ashland, would be updip. The Steele well, now operated by Whiting was not completed in the proposed designated interval despite some small gas shows in the section. The discovery well is not only structurally higher but also has a much thinner lower Frio section than the Steele No. 1. Because of this thicker section, log of the Steele No. 1 shows the correlative interval (occurring between 12,945 feet and 15,022 feet) more fully than does the discovery well. In the Steele No. 1, the top of the correlative interval (top of the Anomalina) is at 12,945 feet and the base is a local marker found at 15,022 feet.

The current perforations in Well No. 3 are still producing about 20 MMCF per month but over the last year, the flowing tubing pressure has declined from 9000 psi to 1500 psi. The produced gas contains 3.2% CO₂ and 3.167 gallons of liquid per MCF. Esenjay is now drilling a second field well, the Runnells No. 5, to the northeast of Well No. 3. This well blew out in the sands in the upper part of the proposed designated interval. The gas produced during this blow out contained no CO₂ and less liquid hydrocarbons. Esenjay is hoping that commingling the gas from both intervals in Well No. 3 will bring the combined gas stream within the pipeline specifications.

Currently, an amine plant and JT valve heat exchanger are used on Well No. 3 to meet pipeline specifications. If the commingled gas could meet these standards without the additional processing, it would reduce operating costs on the lease by \$10,000 per month. These are expensive wells to drill and complete, and lowering the monthly operating expenses by \$10,000 could result in incremental production of a half to one BCF per well.

The requested allocation formula, based 95% on deliverability and 5% per well, is very close to the Statewide Rule for gas wells which bases allocation on deliverability. A two-factor allocation formula is required by statute, due to the multiple reservoirs in the designated interval.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the field and to all offset operators to the discovery tract on May 31, 2001.
2. The new field was discovered in November of 2000, by the completion of the Esenjay Runnells Lease Well No. 3, which was completed between 14,081 and 14,371, measured depth.
3. The initial producing rate of the Runnells No. 3 was 22 MMCF/D and the initial bottom-hole pressure was 12,761 psi.
4. The lower Frio perforations in this well still produce 20 MMCF per month, though flowing tubing pressure has declined significantly.
5. While the second well in the field was being drilled, it blew out in lower Frio sands above the perforated interval in the Runnells No. 3.

6. The lower Frio sandstones within the proposed designated interval are lenticular and discontinuous.
7. These sands cover small areal extents and are not economic if completed separately.
8. These are very expensive and difficult wells due to the overpressure, and multiple completions pose increased risk of losing the well.
9. Commingling production may reduce the percent of impurities in the gas, decreasing lease operating expenses by \$10,000 by month.
10. Lowering the economic limit may result in the recovery of an additional one half to one BCF per well.
11. The thickest and most complete correlative interval is shown on the log of the Ashland L.M. Steele Trust Well No. 1, about 2000 feet north of the discovery well.
12. The Ashland Steele No. 1 had gas shows in the proposed correlative interval, which extends from 12,945 to 15,022 feet, but this well was completed in a different section.
13. Allocation based 95% on deliverability and 5% per well will satisfy the statutory requirement for two factors in multiple-reservoir fields.

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 field rules will prevent waste, protect correlative rights within the field, and promote orderly development of the reservoirs.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends a designated interval from 12,945 feet to 15,022 feet as shown in the Ashland L.M. Steele Trust Lease Well No. 1 and a two-factor allocation formula be adopted for the Grand Slam (Claughton) Field.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: July 24, 2001