APPLICATION OF LEWIS OPERATING COMPANY TO AMEND THE FIELD RULES FOR THE KNIGHT FIELD, YOUNG COUNTY, TEXAS

HEARD BY: Andres J. Trevino, P.E.

DATE OF HEARING: September 5, 2008

APPEARANCES: REPRESENTING:

Joe T. Sanders Rick Johnston

Lewis Operating Company

# EXAMINER'S REPORT AND RECOMMENDATION STATEMENT OF THE CASE

This is the unprotested application of Lewis Operating Company to amend the field rules as adopted in Special Order No. 7-540, issued effective January 5, 1939, as amended, for the Knight Field that currently provide for the following:

- 1. 20 acre proration units with 20 acre tolerance, minimum well spacing of 466'/933' (lease line/between well);
- Casing program requirements, set in accordance with TWDB letters on each well; and
- 3. An allocation formula based on 50% acreage and 50% per well.
- Gas-Oil Ratio limit of 2,000:1

Lewis Operating Company proposes the following:

- 1. Designation of the entire correlative interval between 3,718 feet and 3,934 feet, as shown on the log of the Roye Operating Co. Stoffers Well No. 1:
- Minimum well spacing of 466'/0' (lease line/between well);
- 3. 20 acre proration units with 10 acre tolerance and a maximum diagonal of 1500'; and
- 4. An allocation formula based on 100% acreage, 1947 yardstick allowable.
- 5. Gas-Oil Ratio limit of 3,000:1

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During the hearing, Lewis Operating's representative agreed to designate an interval for the field. Additionally, Lewis requested a 3,000 to 1 gas-oil ratio limit approved in 1942 be reinstated. This application was unprotested and the examiner recommends that the field rules for the Knight Field be amended as requested.

# **DISCUSSION OF THE EVIDENCE**

The Knight Field was discovered in 1938 at a depth of 3,800' subsurface depth. The field is governed by special field rules as adopted by Special Order No.7-540, issued effective January 5, 1939, as amended. The gas-oil ratio limit was increased to 3,000 to 1 by Special Order No.9-4067, issued effective September 30, 1942. The current proration schedule does not reflect the increased GOR limit. The field is in the process of under going waterflood operations. The field has a cumulative production of 898,322 BO.

The Unitization and Secondary Recovery Authority was approved by Oil and Gas Docket No 09-0251826 on July 17, 2007 for the Southern Gate Caddo Unit in the Knight Field. Lewis Operating will be implementing the waterflood project approved by the Commission. Lewis Operating is currently drilling both producing and injection wells. Lewis wishes to experiment with various unit densities to evaluate waterflood response. Lewis Operating is asking for 0' between well spacing to allow flexibility to place new wells at optimum locations around existing producers or injection wells without the need for Rule 37 exceptions.

Lewis Operating is requesting an allocation formula of 100% acreage. The 100% acreage allocation is needed for the efficient and effective depletion of the reservoir. Lewis Operating requests to reinstate the 3,000 to 1 GOR limit authorized by Special Order in 1942. Some of the wells have GOR's above the 2,000 to 1 and the increased limit will add some relief.

## FINDINGS OF FACT

- 1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.
- 2. There was no protest at the call of the hearing.
- 3. The Knight Field was discovered in 1938 at a depth of 3,800' subsurface depth.
- 4. The field is governed by special field rules as adopted by Special Order No. 7-540, issued effective January 5, 1939, as amended which provides for minimum well spacing of 466'/933' (lease line/between well); 20 acre proration units with 20 acre and; and an allocation formula based on 50% acreage and 50% per well.
- 5. The gas-oil ratio limit was increased to 3,000 to 1 by Special Order No.9-4067,

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issued effective September 30, 1942. The current proration schedule does not reflect the increased GOR limit.

- 6. The Knight Field should be designated as: the entire correlative interval between 3,718 feet and 3,934 feet, as shown on the log of the Roye Operating Co. Stoffers Well No. 1.
- 7. The 0' between well spacing rule is needed for the efficient and effective sweep and depletion of the reservoir.
  - a. The 0' between well spacing will allow flexible placement of wells between producers and injection wells without the need for Rule 37 exceptions.
  - b. The 0' between well spacing will allow placing the wells at varying waterflood unit densities.
  - c. Lewis Operating will evaluate sweep efficiencies at various densities to determine the appropriate pattern field-wide.

## **CONCLUSIONS OF LAW**

- 1. Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.
- 2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
- 3. Consideration of field rules, a determination of their effectiveness and appropriate actions are a matter within the Commission jurisdiction.
- 4. Adoption of the proposed amended field rules will prevent waste, foster conservation and protect correlative rights.

## **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions of law, the examiner recommends approval of the proposed amended field rules for the Knight Field.

Respectfully submitted,

Andres J. Trevino, P.E. Technical Examiner Office of General Counsel