

THE APPLICATION OF COBRA OIL & GAS CORPORATION TO ADOPT THE FIELD RULES FOR THE KNOTT, WEST (SPRABERRY) FIELD, HOWARD & MARTIN COUNTIES, TEXAS

Heard by: Andres J. Trevino, P.E. on March 9, 2007

Appearances:

Philip Whitworth
Rick Johnston

Representing:

Cobra Oil & Gas Corporation

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The Knott, West (Spraberry) Field currently operates under Statewide rules. Cobra Oil & Gas Corporation requests that the following rules be adopted for the field :

1. Designation of the field as the correlative interval from 6,770 feet to 9,250 feet as shown on the log of the Phillips Unit No. 1 Well (API No. 42-317-34043);
2. 330' - 660' well spacing for vertical wells and no between well spacing for horizontal drainhole wells and any vertical well, or between the drainholes of two horizontal drainhole wells with in the first 200' or the last 200' of either horizontal well;
3. 80 acre units with a 40 acre tolerance for the last well on the lease;
4. Allocation based on 95% acreage and 5% on W-10 potential.

This application was unopposed and the examiner recommends that the field rules for the Knott, West (Spraberry) Field be adopted as proposed by Cobra Oil & Gas Corporation.

DISCUSSION OF EVIDENCE

The Knott, West (Spraberry) Field was discovered as an oil field in March 1977. The discovery well had an initial potential of 6.2 BOPD. A total of 4 wells have been completed in the field with a cumulative production of 32.3 MBO prior to the Phillips Unit No. 1 recompletion. There is currently the Phillips Unit No. 1 and one other well with a 14(b)2

extension in the field. The Phillips Unit No.1 was recompleted into the Knott, West (Spraberry) Field from the Middleton (Canyon Reef) Field in August 2006 and currently produces at an approximate rate of 50 BOPD. The field currently operates under Statewide Rules.

Cobra is planning to reactivate this previously shut in oil field by drilling horizontal wells. The horizontal drainholes will maximize reservoir contact and will penetrate zones of higher permeability within the Spraberry Formation which is heterogeneous, both vertically and horizontally. Cobra requests 330' - 660' well spacing for vertical wells and no between well spacing for horizontal drainhole wells and any vertical well, or between the drainholes of two horizontal drainhole wells with in the first 200' or the last 200' of either horizontal well. The spacing request will provide flexibility in planning and placing the horizontal wells. Drainage calculations on the Phillips Unit No. 1 shows it will drain an estimated 74.7 acres. Cobra request 80 acre spacing to avoid drilling unnecessary wells. Cobra is requesting an allocation formula based on 95% acreage and 5% W-10 potential due to the numerous separate hydrocarbon accumulations that exist within the interval.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.
2. The Knott, West (Spraberry) Field was discovered in March 1977 as an oil field and operates under Statewide Rules.
3. There are currently two wells in the field, the Phillips Unit No. 1 and Endeavor Energy's Lillian Spalding SWD No. 2D (14(b)2 extension).
4. The Spraberry Formation is a mature, tight oil reservoir that is heterogeneous, both vertically and horizontally and contains separate hydrocarbon accumulations that are not in communication.
5. In order to efficiently and effectively drain the reservoir, horizontal wells must be drilled. Horizontal drainholes will maximize reservoir contact and will penetrate zones of higher permeability within the Spraberry Formation which is heterogeneous, both vertically and horizontally.
6. A 330' - 660' well spacing for vertical wells and no between well spacing for horizontal drainhole wells and any vertical well, or between the drainholes of two horizontal drainhole wells with in the first 200 feet or the last 200 feet of either horizontal well will provide flexibility in developing this field using

horizontal drainhole wells.

CONCLUSIONS OF LAW

1. Proper notice of this hearing was issued.
2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.
3. Adopting the proposed field rules for the Knott, West (Spraberry) Field is necessary to prevent waste, protect correlative rights and promote development of the field.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends that the Commission adopt the field rules for the Knott, West (Spraberry) Field as proposed by Cobra Oil & Gas Corporation.

Respectfully submitted,

Andres J. Trevino, P.E.
Technical Examiner