
THE APPLICATION OF DIMOCK OIL COMPANY FOR SPECIAL RULES FOR THE K & L (CADDO) FIELD, WILBARGER COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: November 23, 1999

Hearing held: December 13, 1999

Appearances

Glenn George

Representing
Dimock Operating Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The K & L (Caddo) Field operates under County Regular Rules which provide for 20 acre density and 330-933 foot well spacing. Dimock is requesting the following field rules for the K & L (Caddo) Field:

1. Designated interval from 4336 to 4530 feet as shown on the log of the Dimock Operating (formerly Texas Crude) Hazel Baker Well No. 1;
2. 467-1200 foot well spacing;
3. 40 acre proration units with 20-acre tolerance for the last well on a lease and a maximum diagonal of 2100 feet; and
3. Allocation based on acreage.

DISCUSSION OF THE EVIDENCE

The K & L (Caddo) Field was discovered in 1997, after Dimock plugged back a well from the Devonian. There were two wells in the field, but Dimock completed a third well in October of 1999. The two older wells have current potentials of 5 BOPD apiece, while the initial potential of the new Black Cat No. 1 was 112 BOPD and 22 MCF/D.

The discovery well, the Hazel Baker No. 1, has produced 13,000 BO while the second well has recovered only 4000 BO. The newest well has produced 3000 BO since October and, if it declines at 35% per year, will recover 46,000 BO. A volumetric calculation indicates 1140 barrels of recoverable oil per acre and if the Black Cat No. 1 produces 46,000 BO it will drain 40 acres.

The field produces from a faulted anticline along the Red River Arch. The reservoir in the Black Cat No. 1 is twenty-eight feet thick, while the reservoir in the discovery well is only 8 feet thick. The porosity ranges from 4 to 12% and the water saturation is estimated to be 30%. The water cut is negligible, and the recovery factor is estimated to be 15%.

At least one well in this field will drain 40 acres, twice as large an area as the current County Regular density of 20 acres. Statewide spacing rules for fields on 40 acre density are 467 feet from lease lines and 1200 feet between wells. Allocation on acreage will protect correlative rights. The discovery well was perforated between 4374 and 4385 feet, but the interval from 4336 to 4530 feet as shown on the log of this well encompasses the productive interval in this Caddo reservoir.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the K & L (Caddo) Field on December 2, 1999.
2. The field was discovered in 1997, and has two older wells and the newly drilled Black Cat Well No. 1, all operated by Dimock.
3. The discovery well, the Dimock Hazel Baker No. 1, is perforated from 4374 to 4385 feet.
4. Forty acre proration units approximate the drainage areas of field wells.
 - a. There are an estimated 1140 barrels of recoverable oil per acre-foot.
 - b. The discovery well, the Hazel Baker No. 1 has eight net feet of pay and has produced more than 13,000 BO.
 - c. The Black Cat No. 1, the newest well in the field, has 28 net feet of pay and has already produced 3000 BO since October of 1999.
 - d. If production from the Black Cat No. 1 declines 35% per year, the well will recover 46,000 BO, the recoverable reserves under 40 acres.
5. Well spacing of 467-1200 feet is standard for wells on 40-acre density.
6. An allocation formula based on acreage will protect correlative rights.
7. The Caddo interval between 4336 and 4530 feet, as shown on the log of the discovery well,

can be considered productive in this field.

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 the requested rules will prevent the drilling of unnecessary wells, protect correlative rights within the field, and promote orderly development of the reservoir.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the requested field rules for the K & L (Caddo) Field be adopted on a permanent basis.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: January 11, 2000

Exhibits

1. Proration schedule
2. Map
3. Form W-2 for Black Cat No. 1
4. Production tabulation
5. Production from Black Cat No. 1
6. Estimate of ultimate recovery for Black Cat No. 1
7. Volumetric calculations
8. Reservoir data
9. Log