OIL AND GAS DOCKET NO. 09-0223355

THE APPLICATION OF DIMOCK OIL COMPANY TO AMEND RULES FOR THE K & L (ELLENBURGER) FIELD, WILBARGER COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: November 23, 1999
Hearing held: December 13, 1999

Appearances

	Representing
Glenn George	Dimock Operating Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Temporary field rules for the K & L (Ellenburger) Field, adopted February 27, 1978, under Docket No. 9-68,343, are summarized as follows:

1. 660-1320 foot well spacing;

2. 80 acre proration units with 40-acre tolerance for the last well on a lease and a maximum diagonal of 3250 feet; and

3. Allocation based on acreage.

These rules were made permanent under Docket No. 9-72,602, effective September 24, 1979.

In 1995, Madison Oil Company, the operator at the time, had the rules amended to provide for spacing of 467-1200 feet and density of 40 acres. Dimock, the current operator, wants the density returned to 80 acres, without changing the current spacing and allocation rules. The examiner suggested adopting a designated interval rule. Dimock had no objection but pointed out that none of the wells in the field had been drilled deep enough to encounter the base of the Ellenburger.

DISCUSSION OF THE EVIDENCE

The K & L (Ellenburger) Field was discovered in 1977, and now has three producing wells, all operated by Dimock. The three existing wells have current potentials of 5, 5 and 20 BOPD but Dimock is completing a new well. The new well has a lost circulation interval and is taking longer to complete than Dimock expected.

Evidence submitted at the 1995 hearing to amend rules, indicated that the Hazel Baker Unit Well No. 2 would recover 88,000 BO and drain 87 acres. Despite this evidence the density rule was amended from 80 to 40 acres. The Hazel Baker Unit No. 2 has already produced 103,000 BO and the applicant has calculated the ultimate recovery to be 104,000 BO which will drain 103 acres. The ultimate recovery from the Harold Bonner Well No. 2-A was estimated in 1995, at 41,000 BO which would drain 40 acres. This well's recovery to date has been 43,000 BO and it therefor will drain more than 40 acres. The third well, the Gfeller "A" No. 2 produced 38,000 BO since 1997, and it is now producing at the highest rate in the field.

The field produces from a faulted anticline along the Red River Arch. The reservoir is eight feet thick and has 8% porosity and 30% water saturation. The water cut has increased to 50%, indicating the field probably has a water drive, and the recovery factor is estimated to be 35%. Most Ellenburger wells in this area are only drilled into the top of the formation, making determination of a designated interval difficult. The top of the Ellenburger is about 4750 feet in the Hazel Baker Unit No. 1 and the total depth of this well is 4768 feet.

Because the wells in this field are draining over 40 acres and at least one well will drain over 80 acres, the Dimock believes that the field should have been left on 80-acre proration units. The newest wells have been drilled on spacing of 467-1200 feet and Dimock believes there is no reason to change the spacing rule.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the K & L (Ellenburger) Field on December 2, 1999.

2. The field was discovered in 1977, and has three producing wells and one newly drilled well.

3. The K & L (Ellenburger) Field has a strong water drive and the estimated recovery factor is 35%.

4. Eighty acre proration units more closely approximate the drainage areas of field wells than do proration units under the current forty acre density rule.

   a. The well with the greatest production to date is expected to produce 104,000 BO and

drain 103 acres.

b. The second well in the field has already drained more than 40 acres.

c. The third well was completed in 1997 has already drained almost 40 acres and it has the highest current producing rate in the field.

5. Well spacing of 467-1200 feet was adopted in 1995, and the two newest wells were drilled under this spacing rule.

6. The allocation formula is based on acreage and this formula is protecting correlative rights.

7. The top of the Ellenburger is at 4750 feet as shown on the log of the Hazel Baker Unit Well No. 1 but no well in the field has penetrated the base of the Ellenburger, assumed to be the base of the productive interval.

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. Amending the density rule to 80 acres 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 field rules for the K & L (Ellenburger) Field be amended to provide for 80 acre density and for the adoption of a designated interval.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: January 11, 2000

Exhibits

1. Proration schedule
2. Map
3. Original temporary rules
4. Permanent rules
5. Amended rules
6. Drainage area calculations
7. Cumulative production
8. Recalculation of drainage area
9. Reservoir data
10. Log