OIL AND GAS DOCKET NO. 02-0265005

THE APPLICATION OF HILCORP ENERGY COMPANY TO AMEND THE FIELD RULES IN THE LAKE PASTURE (H-440 SAND) FIELD, REFUGIO COUNTY, TEXAS

Heard by: Donna K. Chandler, Technical Examiner

Hearing Date: April 7, 2010

Appearances:	**Representing:**
Dale Miller Russell Parker	Hilcorp Energy Company
Roger Dixon	T-C Oil Company

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Field rules for the Lake Pasture (H-440 Sand) Field were initially adopted by Order No. 2-30,294, effective July 6, 1954. The rules have been amended several times and the rules in effect for the field are summarized as follows:

1. 467' lease line spacing with "0" between well spacing requirement;

2. 40 acre oil units with optional 5 acre units;

3. Capacity oil allowable for all wells in the field.

Hilcorp requests that the rules be amended to provide for a maximum withdrawal of 8,400 MCFD of casinghead gas, with 65% of the gas production allocated to Hilcorp and 35% to T-C.

T-C Oil Company, the only other operator in the field, supports this application and the examiner recommends that the field rules for the Lake Pasture (H-440 Sand) Field be amended as requested by Hilcorp.

DISCUSSION OF EVIDENCE

The Lake Pasture (H-440 Sand) Field was discovered in 1959. 348 well completions have been made in the field and cumulative production from the field is over 70 million BO and 498 BCF of gas. Of the 498 BCF of gas, 454 BCF has been re-injected into the gas cap of the reservoir, pursuant to the permissible gas-oil ratio of 231 cubic feet per barrel. There are two operators in the field, Hilcorp Energy Company and T-C Oil Company. All wells in the field have been classified as oil wells.

The field covers approximately 4,500 acres and has a strong bottom water drive. The original oil-water contact was -4,470 feet. The original gas-oil contact was -4,427 feet. Over time, the oil-water contact has moved up and in some areas is into the original gas cap. In other areas, tight streaks in the reservoir have prevented movement of the oil column up into the gas cap. It is these areas where tight streaks are present that there is remaining oil to be produced. Increasing gas withdrawals from the gas cap will not affect these small areas of oil trapped beneath the tight streaks.

Since 2001, 88 wells have been drilled in the field, recovering an incremental 4.1 million BO. Current production from the 131 producing wells is approximately 1,600 BOPD. Water cut is approximately 96%. With original oil-in-place of 129.6 million BO, recovery to date is 54.2%. Estimated ultimate oil recovery from the field is 73.9 million BO, or 57% of original oil-in-place.

Hilcorp's Tom O'Connor complex uses produced gas from hundreds of Tom O'Connor and Lake Pasture fields to operate production facilities and to provide gas for gas lift operations in many fields. Unless gas production from the H-440 field is increased, Hilcorp will be forced to start purchasing gas to fuel its facilities by 2011. Purchasing gas would not be economic and would ultimately result in the loss of 2.4 million BO. Under the proposed plan, a maximum of 8,400 MCFD would be produced from the H-440 field, which is equivalent to 3.1 BCF per year. Remaining gas-in-place in the field is estimated to be 139 BCF, 65% of which underlies Hilcorp acreage and 35% of which underlies TC acreage.

Between 1984 and 1996, the reservoir pressure was essentially flat at approximately 1,680 psi. Total reservoir voidage during that time period was more than the total reservoir voidage proposed under the plan.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten days prior to the date of hearing.

2. The Lake Pasture (H-440 Sand) Field was discovered in 1959 at a depth of approximately 4,491 feet.

3. Cumulative production from the field is over 70 million BO and 498 BCF of gas. Pursuant to the 231 cubic feet per barrel gas-oil ratio rule, 454 BCF of gas has been re-injected into the gas cap of the reservoir.

4. Current production from the 131 producing wells is approximately 1,600 BOPD. Water cut is approximately 96%. With original oil-in-place of 129.6 million BO, recovery to date is 54.2%.

5. The reservoir has a strong water drive. Over time, the oil-water contact has moved up and in some areas is into the original gas. In other areas, tight streaks in the reservoir have prevented movement of the oil column up into the gas cap.

6. Estimated remaining oil reserves is about 4 million BO. This oil will be recovered from small traps beneath the tight streaks in the reservoir. Increasing gas withdrawals from the gas cap will not affect these small areas of oil trapped beneath the tight streaks.

7. Increasing gas withdrawals from the Lake Pasture (H-440) Field is necessary to continue operations at the Tom O'Connor production complex and to continue providing gas for gas lift operations in many wells.

8. By 2011, the fuel source will be depleted and Hilcorp will be forced to start purchasing gas to fuel its facilities. Purchasing gas would not be economic and would ultimately result in the loss of 2.4 million BO.

9. Remaining gas-in-place in the field is estimated to be 139 BCF, 65% of which underlies Hilcorp acreage and 35% of which underlies TC acreage.

10. Withdrawal of 8,400 MCFD from the subject field will not result in reduced reservoir pressure. Total reservoir voidage between 1984 and 1986 exceeded the amount of total reservoir voidage under the proposed rule.

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. Amending the field rules to increase casinghead gas withdrawals to 8,400 MCFD in the Lake Pasture (H-440 Sand) Field is necessary to prevent waste and will not harm correlative rights.

RECOMMENDATION

Based on the above findings and conclusions of law, the examiner recommends that the field rules for the Lake Pasture (H-440 Sand) Field be amended as requested by Hilcorp Energy Company.

Respectfully submitted,

Donna K. Chandler
Technical Examiner