

June 19, 2000

OIL AND GAS DOCKET NO. 04-0225074

THE APPLICATION OF COASTAL OIL & GAS CORPORATION TO AMEND FIELD RULES IN THE JEFFRESS (VICKSBURG S) FIELD, HIDALGO COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: June 7, 2000

Hearing held: June 29, 2000

Appearances

John Soule
Terry Payne

Representing
Coastal Oil & Gas Corporation

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The existing rules for the Jeffress (Vicksburg S) Field were adopted November 7, 1977, under Docket No. 4-68,084, as amended, and are summarized as follows:

1. Well spacing of 467-1200 feet;
2. 160 acre gas proration units, with 80-acre optional units; and
3. Allocation based on acreage.

Coastal is proposing the following amended rules:

1. Designated interval between 9122 feet and 9610 feet as shown on the log of the Coastal Oil & Gas Regina Brann Lease Well No. 7;
2. Well spacing of 467-933 feet;
3. 160 acre gas proration units, with 40-acre optional units; and
4. Allocation based 95% on acreage and 5% per well.

DISCUSSION OF THE EVIDENCE

Common field rules for the Jeffress (Vicksburg S) Field and some of the other Jeffress area fields were adopted November 7, 1977. These rules provided for 160 acre density with spacing of 467-1200 feet. About half of the Jeffress; Jeffress, NE; and Jeffress, E Vicksburg fields have 160 acre density with 40 acre optional units, while others are on 40 acre density. The Jeffress area has numerous productive Vicksburg sandstones and the various productive strata have been broken into different reservoirs by faulting. Coastal has been an operator in the area for some time and now actively developing the area with recompletions and new wells. Rules that are consistent among the various fields will make it easier to downhole commingle and recomplete wells to the different Vicksburg sandstones.

The Jeffress (Vicksburg S) Field was discovered in 1968, with the completion of the Coastal States Gas Producing Company Van Scherpe Well No. 1. This well produced 4.3 BCF before being plugged in 1982. Two other now-abandoned wells produced a total of 2 BCF from the Vicksburg S. There is now only one well, the Coastal Oil & Gas Van Scherpe Well No. 3-J, on the field's proration schedule and it was shut-in during March, 2000, after producing 884 MMCF of gas. The average net pay in these now-inactive wells was 17 feet, and the drainage areas of these wells ranged from 49 to 204 acres.

Coastal has drilled four recent wells on the Regina Brann Lease that have perforations in the Vicksburg S sand. Three of these wells have Rule 10 exceptions and are on the proration schedule of the Jeffress (Vicksburg T) Field. The average net pay of the new wells is 128 feet, and Coastal believes these completions are each capable of producing 3 to 6 BCF from the Vicksburg S sands. The radial drainage areas for three of the new wells is estimated to be between 15 and 62 acres.

The Coastal Regina Brann Lease Well No. 7, the type log proposed for the subject field, is selectively perforated in several sandstones between 9133 and 9512 feet. The total Vicksburg S interval extends from 9122 to 9610 feet and a two-factor allocation formula will be required because of the multiple reservoirs in this interval. The Vicksburg S sandstone porosity in this well is 19% and water saturation is 38%--both values typical of Vicksburg S sandstones. All of the Vicksburg sandstones have very low permeability.

Amending the between-well spacing to 933 feet will facilitate infill drilling between the existing wells. In order to drill wells on 40 acre proration units where wells must be at least 1200 feet apart, each well has to be located within a 1.3 acre square in the middle of its 40-acre proration unit. If wells can be as close of 933 feet to each other, the square in the center of each 40-acre unit for a regular well location, increases to 13.7 acres.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the Jeffress (Vicksburg S) Field on April 18, 2000.
2. The Jeffress area has several Vicksburg sandstone intervals that are productive in different fault blocks, and the area is now being actively developed.

3. Field rules for the Jeffress (Vicksburg S) Field provide for 160 acre density with 80-acre optional units and 467-1200 foot well spacing.
4. The Jeffress (Vicksburg S) Field was discovered in 1969, and now has five wells, though three of them are downhole commingled and prorated in the Jeffress (Vicksburg T) Field.
5. Adding optional units of 40 acres to the current density rule is appropriate.
 - a. Several older wells produced from 800 MMCF to 4.3 BCF before being shut-in or plugged.
 - b. The average net pay in these older wells was 17 feet and the calculated drainage areas of these wells ranged between 49 and 204 acres.
 - c. Four wells, completed in the Vicksburg S sand during 2000, have net pay over 100 feet and are expected to recover 3 to 6 BCF from the S interval.
 - d. The estimated drainage areas of the new wells range from 15 to 62 acres.
6. Redevelopment and recompletion of the various Vicksburg reservoirs will be facilitated by having similar rules in the Jeffress Vicksburg fields, and almost all of the nearby Vicksburg fields permit 40-acre density.
7. Most of the nearby Vicksburg field rules permit wells to be drilled as close as 933 feet to each other and 933-foot between-well spacing will make it easier to drill infill wells on 40 acre density.
8. The designated interval proposed for the Jeffress (Vicksburg S) Field extends from 9122 feet to 9610 feet as shown on the log of the Coastal Oil & Gas Regina Brann Lease Well No. 7.
9. Because of the multiple reservoirs within the proposed designated interval, a two-factor allocation formula is required by statute.

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. The requested amended field rules for the Jeffress (Vicksburg S) Field will prevent waste, protect correlative rights within the field, and satisfy statutory requirements.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the existing rules for the Jeffress (Vicksburg S) Field be amended to include the proposed designated interval, 40-acre optional units, 933-foot between-well spacing and a two-factor allocation formula.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission action: July 25, 2000.

Exhibits

1. Area Map
2. Map of field wells
3. Proration schedule
4. New field designation
5. Field rule order
6. Gamma ray log of type well
7. Well completion data
8. Production data sheet
9. Rate vs time curves
10. Drainage areas
11. Other fields with similar rules