OIL AND GAS DOCKET NO. 04-0225620

THE APPLICATION OF COASTAL OIL & GAS CORPORATION FOR NEW FIELD DESIGNATIONS WITH OPERATING RULES; AND RULE 10 EXCEPTION FOR HOUTS LEASE WELL NO. 1, (PROPOSED) MONTE CHRISTO, N. (VICKSBURG S), (VICKSBURG T) AND (VICKSBURG LO. T) FIELDS, HIDALGO COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: July 17, 2000
Hearing held: August 14, 2000

Appearances

	Representing
James Cowden	Coastal Oil & Gas Corporation
Terry Payne	

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Coastal Oil & Gas is seeking to have its Houts Lease Well No. 1, designated the discovery well for three new Vicksburg fields, each with a separate depth interval, in the North Monte Christo area. The Monte Christo, N. (Vicksburg S) Field would be between 13,837 and 14,430 feet, the Monte Christo, N. (Vicksburg T) Field would be between 15,169 and 16,480 feet and the Monte Christo, N. (Vicksburg Lo T) Field would be between 16,745 and 17,820 feet. Coastal is proposing the following rules for all three fields:

1. Designated intervals as indicated above from the log of the Coastal Oil & Gas Houts Lease Well No. 1;

2. well spacing of 467-933 feet; and

3. allocation based 5% per well and 95% on deliverability.

The statewide density requiring 40 acre drilling units would remain in effect and there would be no rule prescribing proration units. Coastal is also seeking an exception to Statewide Rule 10 to downhole commingle production from these three newly designated fields in its Houts No. 1.

The examiner recommends that the third new field be designated as the Monte Christo N (Vicksburg T Lo) Field to keep to the Commission's limit of 32 characters and to keep the subject

fields designated as (Vicksburg T) and (Vicksburg T Lo) close to each other in the alphabetic list of field names.

DISCUSSION OF THE EVIDENCE

The Houts Lease Well No. 1 was selectively perforated in lower Vicksburg T sandstones on February 28, 2000, and the initial bottom-hole pressure was calculated to be 15,939 psi. The perforations are from 16,748 to 17,762 feet in a lower Vicksburg T sand interval that extends between 16,745 feet and 17,820 feet. The Form G-1 test rate was 560 MCF/D. After the lower T sands were temporarily plugged, the T sandstones were tested March 12, 2000, and found to have a bottom-hole pressure of 13,206 psi. The T sands extend from 15,169 to 16,480 feet but the perforations are near the top, between 15,172 and 15,467 feet. The maximum producing rate on this test was 2383 MCF/D.

The T sands were then isolated and the Houts No. 1 was perforated in the Vicksburg S sandstones on March 19, 2000. The static bottom-hole pressure in the S sands was 12,718 psi, and the G-1 test rate was 4684 MCF/D. The Vicksburg S sand extends from 13,837 to 14,430 feet though the only perforations are again only at the top of the interval. The bottom-hole pressure gradient of 0.9 psi per foot of depth is typical for this area.

When the Houts No. 1 was drilled, the closest Vicksburg S and T wells were 1-1/2 to 2 miles to the south, in the Monte Christo Vicksburg field area. There is no production comparable to the lower T sands within 2-1/2 miles of the discovery well. Coastal has recently drilled and completed a well just to the east of the Houts No. 1 that is producing from the T sand.

Initial commingled production from the S and T sands was about 10 MMCF per day, but daily production has dropped to about 1 MMCF. If this application is approved Coastal will remove the temporary plug above the lower T sands and commingle the lower T with the S and T sands.

Coastal is very actively developing the Vicksburg in this area. There are numerous Vicksburg wells in the area, carried in several different fields. The Vicksburg is highly faulted creating numerous separate reservoirs. The subject fields are located in beds that dip west and northwest along the western side of a major north-south fault. Because the faults change position with depth, the S, T and lower T reservoirs discovered by the Houts No. 1 have different sizes and configurations. Because future development wells may encounter only one of the three new fields covered in this application, Coastal believes each should be designated as a separate field at this time.

However, Coastal also believes that these three newly-designated fields should be commingled in the Houts No. 1. Most of the Vicksburg sandstones are shaly and all have low permeability. The economic limit for a single completion in this area is about 3 MMCF per month. If allowed to perforated all three fields at the same time, Coastal can lower the economic limit for each reservoir. Producing these three fields together in the Houts No. 1 will reduce the economic

limit to 1 MMCF per month per field, and allow the production of an incremental 720,000 MCF from this well (assuming an annual decline rate of 10%). The Vicksburg S, T and lower T sandstones contain similar fluids as shown by gas and water analyses. Numerous Vicksburg fields have already been approved for downhole commingling.

The proposed designated interval for each of the three new fields includes multiple sandstones. As each interval probably contains multiple reservoirs, a two-factor allocation formula is required for statutory reasons. The requested formula, based 5% per well and 95% on deliverability, is close to the Statewide allocation formula and is common for Vicksburg fields in South Texas. Lease-line spacing of 467 feet and between-well spacing of 933 feet is standard for 40-acre units, though Coastal is not asking that 40 acres be adopted as a special field rule. Between-well spacing of 933 feet will also facilitate drilling in this area of multiple targets.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the proposed Monte Christo, N. (Vicksburg S) Field; Monte Christo, N. (Vicksburg T) Field; and Monte Christo N (Vicksburg T Lo) Field, and to all offset operators to the discovery Houts Lease on August 1, 2000.

2. The discovery well for all three proposed new fields is Coastal's Houts Lease Well No. 1.

3. The Vicksburg S sand between 13,837 and 14,430 feet in the Houts No. 1 is a previously undiscovered reservoir and entitled to be treated as a new field.

    a. The Houts No. 1 was perforated from 13,838 feet to 13,972 feet in the S sand on March 19, 2000, and the G-1 test rate was 4684 MCF/D.

    b. The bottom-hole pressure of 12,718 psi shows a pressure gradient of 0.9 psi per foot and indicates virgin pressure for this area and depth.

    c. The closest Vicksburg S sand production is about 1-1/2 miles to the south.

4. The Vicksburg T sand between 15,169 and 16,480 feet in the Houts No. 1 is a previously undiscovered reservoir and entitled to be treated as a new field.

    a. The Houts No. 1 was perforated from 15,172 feet to 15,467 feet in the T sand on March 12, 2000, and tested at a rate of 2383 MCF per day.

    b. The bottom-hole pressure of 13,206 psi, shows a pressure gradient of 0.9 psi per foot and indicates virgin pressure for this area and depth.

    c. The closest Vicksburg T sand production is about 1-1/2 miles to the south.

5. The Vicksburg lower T sand between 16,745 feet and 17,820 feet in the Houts No. 1 is a previously undiscovered reservoir and entitled to be treated as a new field.

   a. The lower T sand in the Houts No. 1 was perforated from 16,748 to 17,762 feet, on February 28, 2000, and tested at a rate of 560 MCF per day.

   b. The bottom-hole pressure of 15,939 psi, shows a pressure gradient of 0.9 psi per foot and indicates virgin pressure for this area and depth.

   c. The closest Vicksburg lower T sand production is over 2-1/2 miles to the south-southwest.

6 Between-well spacing of 933 feet is standard for 40 acre development and will facilitate drilling in this multi-target area.

7. No special field rules regarding well density is necessary and the field can be prorated under the Statewide density rule.

8. Because of the multiple reservoirs in each proposed new field, a two-factor allocation formula is required for statutory reasons.

9. Allocation based 5% per well and 95% on deliverability is the same one found in most other Monte Christo Vicksburg fields and will protect correlative rights.

10. A Rule 10 exception to allow downhole commingling of the Vicksburg S, Vicksburg T and Vicksburg lower T sands is appropriate for the Houts No. 1.

    a. The Vicksburg sandstones have low permeability and virgin pressure, reducing the possibility of cross flow.

    b. The Vicksburg S, T and lower T sandstones contain similar fluids as shown by gas and water analyses, reducing any harm from possible small amounts of cross flow.

    c. Downhole commingling the subject fields in the Houts No. 1 will reduce the economic limit to 1 MMCF per month per field, and allow the production of an incremental 720,000 MCF from this well.

    d. The economic limit for a single completion in this area is about 3 MMCF per month.

    e. Numerous Vicksburg fields have already been approved for downhole commingling.

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 designated intervals in the discovery well for the Vicksburg S, Vicksburg T and Vicksburg lower T sands, are entitled to be considered new field discoveries as they produce from reservoirs that have not been produced before.

4. The requested designated intervals, well spacing and allocation formula will prevent waste and protect correlative rights within the proposed new fields.

5. Granting the requested Rule 10 exception for the Houts No. 1 will encourage conservation and prevent waste.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the Coastal Houts Lease Well No. 1, within the three proposed designated intervals, be considered the discovery well for the Monte Christo, N. (Vicksburg S), Monte Christo, N. (Vicksburg T), and Monte Christo N (Vicksburg T Lo) Fields be approved. A Rule 10 exception to allow downhole commingling of these three fields in the Houts No. 1 should also be approved.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: September 25, 2000

Exhibits

1. P-7 for S
2. P-7 for T
3. P-7 for lower T
4. Map of 2 1/2 mile radius
5. List of wells within 2 1/2 miles, sorted by lowest perforation
6. List of well within 2 1/2 miles, by map ID number
7. Completion forms
8. S type log
9. T type log
10. Lower T type log
11. Production data
12. Pressure data
13. Gas analyses
14. Water analyses
15. Field rule summary from other fields
16. Map of area fields
17. Rule 10 data sheet
18. Previous field consolidations nd commingling
19. Wellbore schematics
20. Incremental reserves
21. Agreement to test for scale
22. Summary