December 27, 2001

OIL AND GAS DOCKET NO. 7C-0230124

THE APPLICATION OF RICKS EXPLORATION, INC. FOR PERMANENT FIELD RULES IN THE OZONA (CLEAR FORK, UPPER) FIELD, CROCKETT COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: November 29, 2001
Hearing held: December 14, 2001

Appearances

	Representing
Keith Masters	Ricks Exploration, Inc.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Ricks Exploration seeks the following permanent rules:

1. Designated interval from 2560 to 3400 feet as shown on the log of the Wagner & Brown Montgomery "D" Well No. 1-13;

2. oil well allocation based on acreage, gas well allocation based on deliverability; and

3. gas/oil ratio of 10,000 cubic feet per barrel for casinghead gas.

Because there are multiple reservoirs within the proposed designated interval, two-factor allocation formulae are necessary. The applicant had no objection.

DISCUSSION OF THE EVIDENCE

The Ozona (Clear Fork, Upper) gas field was discovered in March of 1978, and has four active gas wells, three of which are operated by the application. The proration schedule still shows the field classified as non-associated, 100% AOF. In September of 2001, Ricks completed an oil well in between the existing gas wells, the Montgomery "A" Lease Well No. 310. This well had an initial potential of 270 BOPD, with 545 BWPD. The field's top oil allowable is 78 BOPD, based on the yardstick for wells at this depth, with a daily gas limit of 156 MCF.

Since September, 2001, Well No. 310 has produced 3234 BO and 6034 MCF. It produced no gas for the first month. Gas production started at abut 300 MCF/D in late October, and has declined to about 200 MCF/D. The gas/oil ratio has varied from about 3000 to 9000 cubic feet per barrel, though it has spiked as high as 15,000. Current production is about 40 BOPD, with a gas/oil ratio of

4000 to 5000 cubic feet per barrel.

The discovery gas well was the Wagner & Brown (now Ricks Exploration) Montgomery "D" Lease, Well No. 1-13. This well was perforated from 2795 to 2801' and had an AOF potential of 370 MCF/D. The applicant proposes that the interval, between 2560 and 3400' as shown on the log of this well, be the designated interval for the field. The discovery well was perforated near the top of the Clear Fork, but most subsequent wells have been completed near the base of the proposed interval.

The Clear Fork formation has been a salvage interval, perforated after wells had depleted their deeper Canyon completions. The discovery well had cumulative production of only 26 MMCF but the applicant hopes that subsequent wells will produce about 250 MMCF. Ricks plans to perforate whichever sandstones appear productive in the Clear Fork rather than producing them sequentially. Many lenses are too marginal to be perforated and produced separately.

It is difficult to know before perforating which lenses will be oil-bearing and which gas-bearing. For this reason, a rule allowing a high gas/oil ratio will allow both oil and gas lenses to be commingled in a well classified as an oil well thereby improving the recovery from marginal sandstones. A casinghead gas/oil ratio of 10,000 cubic feet per barrel will allow an oil well to produce up to 780 MCF per day.

The applicant is also requesting that gas wells be allowed to produce their deliverability, as they are under salvage conditions. Under Rule 49(b), the gas wells would be limited to about 803 MCF/D, based on initial pressure of 1230 psia and a Z factor of 0.860. Current gas deliverabilities range from 53 to 230 MCF/D, but initial producing rates of gas wells have been as much as 950 MCF/D. Restricting gas production will not increase the ultimate oil recovery as the producing lenses are small and isolated.

The numerous producing sandstones within the Clear Fork formation are not in communication, and two-factor allocation formulae are necessary for statutory reasons. The applicant has no objection to a gas formula based 75% on deliverability and 25% per well, as long as the allocation formula remains suspended. An oil allocation formula based 25% per well and 75% on potential is very close to the Statewide Rules currently in effect.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the Ozona (Clear Fork, Upper) Field on November 30, 2001.

2. The discovery well for the Ozona (Clear Fork, Upper) Field was the Wagner & Brown (now Ricks Exploration) Montgomery "D" Lease, Well No. 1-13, completed in 1978

3. The discovery well was perforated from 2795 to 2801', had an AOF potential of 370 MCF/D, and produced only 26 MMCF of gas.

4. The field is still classified as non-associated, 100% AOF, but a new oil well, with an initial potential of 270 BOPD and 545 BWPD, was completed in September, 2001.

5. The field's top oil allowable will be 78 BOPD, based on the yardstick for wells at this depth, with a daily gas limit of 156 MCF.

6. Current production from the oil well is about 40 BOPD, with a gas/oil ratio of 4000 to 5000 cubic feet per barrel, but the gas/oil ratio has been as high as 15,000.

7. The interval, between 2560 and 3400' as shown on the log of the discovery well, includes the discovery well's perforations as well as the lower section where most subsequent wells have been completed.

8. The Clear Fork formation has been a salvage interval, perforated after wells have depleted the deeper Canyon formation, and the applicant hopes that subsequent wells will produce about 250 MMCF.

9. Perforating together all sandstones appearing productive in the Clear Fork, rather than producing them sequentially, will allow recovery from many lenses that are too marginal to be perforated and produced separately.

10. It is not possible to know beforehand which lenses will be oil-bearing and which gas-bearing.

11. A rule allowing a high gas/oil ratio of 10,000 cubic feet per barrel, will improve the recovery of marginal sandstones.

    a. This will allow both oil and gas lenses to be commingled.

    b. A casinghead gas/oil ratio of 10,000 cubic feet per barrel will allow an oil well to produce up to 780 MCF per day.

12. Allowing gas wells to produce their deliverability will improve gas recovery under these salvage conditions.

    a. Under Rule 49(b), the gas wells would be limited to about 803 MCF/D, based on an initial pressure of 1230 psia and a Z factor of 0.860.

    b. Current gas deliverabilities range from 53 to 230 MCF/D, but initial producing rates have been as much as 950 MCF/D.

c. Restricting gas production will not increase the ultimate oil recovery as the producing lenses are small and isolated.

13. The numerous producing sandstones within the Clear Fork formation are not in communication, and two-factor allocation formulae are necessary for statutory reasons.

a. A gas formula based 75% on deliverability and 25% per well, is similar to the current Statewide rule, though the allocation formula will remain suspended.

b. An oil allocation formula based 25% per well and 75% on potential is very close to the Statewide Rules currently in effect.

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 field rules along with 2-factor allocation formulae for the Ozona (Clear Fork, Upper) Field will prevent waste, protect correlative rights within the field, and provide for orderly development of the field.

EXAMINER'S RECOMMENDATION

Based on the above findings and conclusions, the examiner recommends that the proposed rules for the Ozona (Clear Fork, Upper) Field be approved along with 2-factor allocation formula.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission action: January 8, 2002

Exhibits

1. Location map
2. Type log
3. Gas proration schedule
4. Oil proration schedule
5. Production history
6. Wellbore schematics for Amacker 106-1
7. Reservoir data
8. Calculated drainage areas
9. Requested rule amendments