

OIL AND GAS DOCKET NO. 08-0226271

THE APPLICATION OF RUWCO OIL & GAS CORPORATION FOR TEMPORARY FIELD RULES IN THE HOKIT, NW. (WOLFCAMP, LOWER) FIELD, PECOS COUNTY, TEXAS

Heard by: Margaret Allen, Technical Hearings Examiner

Procedural history

Application received: September 29, 2000

Hearing held: October 24, 2000

Appearances

Dick Schmidt	Representing Ruwco Oil & Gas Corp.
Ron Widmayer	Texas General Land Office

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Ruwco Oil & Gas Corp. is seeking the following temporary field rules:

1. Designated interval from 6422 to 6473 feet as shown on the log of the Ruwco Arbol Lease Well No. 1;
2. 660-1320 feet well spacing;
3. 160 acre oil proration units with 40 acre tolerance for the last well on a lease, and a maximum diagonal of 4500 feet; and
4. allocation based on acreage.

A representative of the General Land Office appeared at the hearing as an observer. The applicant is requesting temporary field rules, though the Notice of Hearing incorrectly stated that the application was for permanent field rules. The applicant requested standing to bring this application because its new well is not yet on the proration schedule for the subject field.

DISCUSSION OF THE EVIDENCE

The Hokit, NW. (Wolfcamp, Lower) Field was discovered in 1964, at a depth of 6610 feet. Five wells have been carried on the proration schedule for this field at some time during the 1960's, 1970's or 1980's but only two of these were completed in the same correlative interval. The discovery well, the Arapaho Petroleum Mary McKenzie No. 1, produced 2357 barrels of oil before it was reclassified as a gas well in 1965. This well produced another 2893 barrels of condensate and 339 MMCF of gas before being abandoned in 1971. The Chevron USA, Inc., State Lo No. 1 produced 654 barrels of oil from the same correlative interval in 1963 before being abandoned. The reported perforations in the other three wells carried in this field at one time or another, indicate they were not producing from the lower Wolfcamp.

The field was re-activated in September of 2000, when Ruwco successful completed its Arbol Lease Well No. 1 in the lower Wolfcamp. The Arbol No. 1 is about one mile east of the discovery well of the Hokit, NW. (Wolfcamp, Lower) Field, and produces from the same correlative interval in the lower Wolfcamp as the discovery well for the subject field. The Arbol No. 1 does not, however, appear to be in pressure communication with the discovery well for the subject field. The reservoir pressure measured in the Arbol No. 1 was 2833 psi, slightly higher than the initial pressure in the discovery well.

There are several other small structural highs shown on a seismic map of top of the Wolfcamp reef section. Ruwco plans additional wells based on its seismic interpretation but does not know if these wells will be in pressure communication with each other or with either of the prior lower Wolfcamp wells. These wells will probably be drilled fairly close to each other and getting a new field designation for each well would be unnecessarily complicated. The requested well spacing of 660-1320 feet will allow additional flexibility in locating wells at the optimum locations indicated on seismic maps.

The Arbol Well No. 1, was perforated from 6438 to 6458 feet, and produced at a daily rate of 198 barrels of oil and 101 MCF, with no water, on the W-2 test conducted September 21, 2000. No production decline is apparent yet and the well has already produced 5810 BO and 2905 MCF, with a steady flowing tubing pressure of 860 psi. There is little production history available to estimate the ultimate drainage area of the Arbol No. 1. Ruwco assumed the well's production would remain steady for two more years and then declines 20% thereafter. Under these assumptions, Ruwco calculated that the Arbol No. 1 could eventually produce 400,000 BO.

Porosity in this lower Wolfcamp section is 5% and the water saturation equals 70%. The net pay in the Arbol No. 1 is 43 feet, but Ruwco has assumed the average net pay throughout the well's drainage area to be 25 feet. The recovery factor is assumed to be 25%. Based on these reservoir parameters, there are 9194 barrels of recoverable oil per acre, and therefor 400,000 barrels of oil would drain 174 acres in this reservoir.

Several other Wolfcamp oil fields in Pecos County have 160 acre proration rules. After 18 months there should be sufficient production history to determine if wells in the Hokit, NW.

(Wolfcamp, Lower) Field will be able to drain 160 acres, and therefore whether these rules should be made permanent.

Allocation based on acreage will protect correlative rights. The applicant requested that the designated interval for the Hokit, NW. (Wolfcamp, Lower) Field be from 6422 to 6472 feet, as shown on the log of the Arbol No. 1.

FINDINGS OF FACT

1. Notice of this hearing was given to all operators in the field and to all offset operators and unleased mineral interest owners to the discovery tract on October 6, 2000.
2. The Hokit, NW. (Wolfcamp, Lower) Field was discovered in 1964, and produced about 339 MMCF of gas and 5904 barrels of oil and condensate before being abandoned in 1971.
3. The applicant reactivated the field by successfully completing its Arbol Well No. 1 in the lower Wolfcamp in September of 2000.
4. This new well encountered essentially virgin pressure though it is only about a mile from the discovery well for the subject field.
5. Other wells will be drilled on other nearby seismic highs which may or may not be in communication with each other or with prior wells in the lower Wolfcamp in this area.
6. Oil proration units of 160 acres are appropriate for temporary field rules.
 - a. The initial potential of the Arbol No. 1 was 198 BO and 101 MCF, with no water, and the well has shown no decline to date.
 - b. Using reasonable assumptions, the Arbol No. 1 may be able to ultimately produce 400,000 BO.
 - c. Volumetric calculations indicate that 400,000 BO would drain 174 acres in this reservoir.
 - d. There are other lower Wolfcamp oil fields in Pecos County that have 160-acre proration units.
7. Well spacing of 660-1320 feet will provide extra flexibility in locating wells in the optimal locations shown on seismic maps.
8. The productive lower Wolfcamp section extends from 6422 feet to 6473 feet as shown on the log of the Ruwco Arbol Well No. 1.

9. Allocation based on acreage will protect correlative rights.

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 temporary field rules will prevent waste, 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 requested temporary field rules be adopted for the Hokit, NW. (Wolfcamp, Lower) Field, and be reviewed in 18 months.

Respectfully submitted,

Margaret Allen
Technical Hearings Examiner

Date of Commission Action: November 9, 2000

Exhibits

1. Proration schedule
2. Map
3. Completion data
4. Cross section
5. Form W-2
6. Monthly production
7. Graph of production
8. Log
9. Reservoir data sheet
10. Volumetric and drainage calculations
11. Other Wolfcamp field rules