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**THE APPLICATION OF PURE RESOURCES FOR TEMPORARY FIELD RULES IN THE PORTER RANCH (DEVONIAN) FIELD, TERRELL AND PECOS COUNTIES, TEXAS**

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**Heard by:** Margaret Allen, Technical Hearings Examiner

**Procedural history**

Application received: May 3, 2001

Hearing held: May 30, 2001

**Appearances**

Flip Whitworth  
Greg Fitzgerald

Representing  
Pure Resources

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Pure Resources is seeking the following temporary field rules for the Porter Ranch (Devonian) Field:

1. Designated interval from 13,054 to 13,458 feet as shown on the log of the Pure Resources ACU 57 Lease Well No. 1;
2. 467-1200 feet well spacing;
3. 640 acre gas proration units with 10% tolerance and a maximum diagonal of 8500 feet; 320 acre optional units with a maximum diagonal of 6500 feet; and
4. allocation based on acreage.

**DISCUSSION OF THE EVIDENCE**

The Porter Ranch (Devonian) Field was discovered in March of 1995, by the completion of the Ultra Petroleum (U.S.A.) Inc. ACU Lease Well No. 3401. A pipeline was not connected to this well until 1997 and the well has produced just under 1/2 BCF since then. Current production is about 150 MCF/D and declining slowly.

Pure Resources completed its first well in the field, the ACU 57 Well No. 1, as a horizontal well in April of 2001. The lateral on this well extends 3800 feet from southwest to northeast. Pure has decided that the fractures artificially induced in this well are parallel to the lateral and is drilling its second well to be perpendicular to the fracture trend. This well is being drilled from southeast to northwest, with a lateral over 4000 feet long. The top of the Devonian in the ACU 57 Well No. 1 is at 13,054 feet and the base at 13,458 feet. The entire Devonian section appears to be connected and to form a single reservoir.

The initial producing rate of the ACU 57 Well No. 1 was 3.3 MMCF per day and the well is now producing about 1.3 MMCF per day. Pure Resources analyzed this well foot-by-foot and determined that the net pay is 58 feet out of a gross thickness of 404 feet. Volumetric analysis indicates that there were 30.3 BCF of gas originally in place under 640 acres around this wellbore. Assuming recovery factors of 70 to 80%, the recoverable gas from a 640 acre unit around this wellbore is 21.2 to 24.2 BCF.

Pure Resources also analyzed the vertical discovery well and determined the net pay in this well to be 112 feet. Volumetric calculations show the recoverable reserves underneath 640 acres around this wellbore to be 43.9 to 50.2 BCF. The applicant believes that this well was poorly completed because, among other reasons, it was perforated only at the very top of the section. Even if it were recompleted, however, it is unlikely to produce anything close to 45 BCF.

Pure Resources is requesting 640 acre proration units for temporary rules. Several much-older Devonian gas fields in Pecos County, along the same trend as the Porter Ranch (Devonian) Field, have 640 acre proration rules. Individual wells in these other Devonian gas fields in Pecos County have produced as much as 30 to 66 BCF each. The reservoir and fluid properties in these fields are comparable to those of the Parker Ranch (Devonian) Field. The reservoir porosity in the Porter Ranch (Devonian) Field is 9%, water saturation is 25% and the original bottom-hole pressure was 5523 psi.

The applicant believes that it possible to improve the recovery efficiency in Porter Ranch (Devonian) wells by better stimulation techniques. After 18 months there should be sufficient production history to determine if wells in the subject field will produce as well as those in the other Devonian gas fields and be able to drain 640 acres. Because the discovery well is going to produce much less than the recoverable reserves underneath 640 acres even if recompleted, the applicant requested optional 320-acre density.

Pure Resources intends to drill other wells in this field. It is requesting much smaller than standard spacing so that its horizontal wells can contact as much reservoir as possible. The operator has over 10,000 acres under lease in the field. Also, topographic maps show that this is a rugged area of canyons and plateaus. It is difficult to find a flat location to put a drilling pad. The requested well spacing of 467-1200 feet will allow additional flexibility in locating drilling rigs at optimum locations. Allocation based on acreage will protect correlative rights.

**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 May 9, 2001.
2. The Porter Ranch (Devonian) Field was discovered in 1995, but production from the discovery well, the Ultra Petroleum (U.S.A.) Inc. ACU Lease Well No. 3401. was not established until 1997.
3. The discovery well has produced less than 1/2 BCF and is now producing only about 150 MCF/D.
4. Pure Resources ACU 57 Well No. 1 was completed in April, 2001, with an initial maximum test rate of 2400 MCF/D.
5. Gas proration units of 640 acres, with optional 320-acre units, are appropriate for temporary field rules.
  - a. The initial producing rate of the ACU 57 Well No. 1 was 3.3 MMCF per day and the well is now producing about 1.3 MMCF per day. Pure Resources analyzed this well foot-by-foot and determined that the net pay is 58 feet out of a gross thickness of 404 feet.
  - b. Volumetric analysis indicates that there were 21.2 to 24.2 BCF of recoverable gas originally in place under 640 acres around this wellbore.
  - c. Volumetric calculations show the recoverable reserves underneath 640 acres around the discovery well to have been 43.9 to 50.2 BCF.
  - d. Even if the completion problems in this well are corrected, it is unlikely to produce close to 45 BCF.
  - d. There are other lower Devonian gas fields in Pecos County that have 640-acre proration units.
  - e. Individual wells in these other Devonian gas fields in Pecos County have produced as much as 30 to 66 BCF each.
  - f. The reservoir and fluid properties in these fields are comparable to those of the Parker Ranch (Devonian).
7. Well spacing of 467-1200 feet will provide extra flexibility in locating horizontal wells in rugged terrain of southern Pecos County.
8. The Devonian formation extends from 13,054 feet (measured depth) to 13,458 feet

(measured depth) as shown on the log of the Pure Resources ACU 57 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 Porter Ranch (Devonian) Field, and be reviewed in 18 months.

Respectfully submitted,

Margaret Allen  
Technical Hearings Examiner

Date of Commission Action: June 21, 2001