

March 1, 2000

**OIL AND GAS DOCKET NO. 7B-0223678**

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**THE APPLICATION OF SKY DEVELOPMENT CORPORATION FOR PERMANENT  
FIELD RULES IN THE P.K. (CONGL. 4000) FIELD, STEPHENS COUNTY, TEXAS**

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

**Procedural history**

Application received: January 10, 2000

Hearing held: February 22, 2000

**Appearances**

George C. Neale

Richard A. Johnston

Representing

Sky Development Corporation

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

Sky Development is requesting that the following field rules be adopted for the P.K. (Congl. 4000) Field:

1. Designated interval from 4010 to 4113 feet as shown on the log of the Sky Development Repass Lease Well No. 2 (originally the Brahman Oil Repass Lease Well No. 1 );
2. 330-933 foot well spacing;
3. 160 acre proration units with 10% tolerance; and
4. Allocation based 95% on deliverability and 5% per well.

There is sufficient production history for permanent rules to be adopted rather than temporary rules. The examiner noted that standard spacing for 160-acre units is considerably greater than the requested spacing. The applicant did not give any reason for its requested spacing and agreed to 660-foot lease-line and 1320 feet between-well spacing.

**DISCUSSION OF THE EVIDENCE**

The P.K. (Congl. 4000) Field was discovered in 1984, and has one permitted and four producing wells, all operated by the applicant. The requested designated interval in its Repass Well No. 2, extends from 4040 to 4113 feet and comprises a single conglomerate. The well is perforated between 4087 and 4100 feet.

The reservoir porosity averages 16%, reservoir thickness varies from 10 to 25 feet, and the water saturation is calculated to be 25%. The reservoir pressure initially encountered was 1718 psi, but the bottom-hole pressure of the newest well was 612 psi. An abandonment pressure of 250 psi was assumed in order to calculate drainage areas. Sky Development's Repass Well No. 1 has already produced 461 MMCF. The cumulative production of the two other older wells is 339 MMCF and 1,040 MMCF respectively. The newest well, the Todd No. 1, was drilled in 1999, and is producing 211 MCF/D. The three older wells are producing less than 200 MCF/D but have been steadily producing relatively small amounts of gas for several years. There were sharp increases in each well's production after approximately 1997.

If Sky Development's Repass Well No. 1, which has 12 feet of pay, ultimately produces the predicted 725 MMCF, it will drain 87.8% of the original gas underneath 100 acres. The calculated drainage area for the Repass Well No. 2, which has 10 feet of pay, is 132 acres. Both the Dofflemeyer Well No. 1 and Todd No. 1 have 25 feet of pay and the older well is predicted to drain 101 acres. The Todd Well No. 1 was drilled in 1999, and encountered partially depleted pressure. This well has only one month of reported production, but is predicted to recover 700 MMCF, which is the recoverable gas underneath 214 acres.

The field is currently operating under the Stephens County Regular density of 20 acres. Well spacing of 660-1320 feet is close to standard for wells on 160 acre proration units. Because there are some shaly beds within the designated interval, the applicant is requesting a two-factor allocation formula based 95% on deliverability and 5% per well. There are no offset operators to this field.

**FINDINGS OF FACT**

1. Notice of this hearing was given to Sky Development Corp., the only operator in the P.K. (Congl. 4000) Field, on February 7, 2000.
2. The field was designated in 1984, and has three older producing wells and one newly drilled well.
3. Rules specifying 160 acre proration units are appropriate for permanent rules.
  - a. The three older wells have already produced 461, 339 and 1040 MMCF respectively.
  - b. These older wells reliably produce relatively small amounts of gas and have done so for years.

- c. Calculated ultimate drainage areas of the older wells range from 100 to 132 acres.
  - d. There is a newly drilled well that is producing somewhat better than the older wells despite encountering partially depleted pressure.
- 4. Minimum well spacing of 660-1320 feet is close to standard rules for 160-acre proration units, and will allow some flexibility in locating wells.
  - 5. The productive conglomerate section in this reservoir extends from 4010 feet to 4113 feet, as shown on the log of the applicant's Repass Lease Well No. 2.
  - 7. Allocation based 5% per well and 95% on deliverability is close to Statewide rules.

**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 recommended 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 field rules for the P.K. (Congl. 4000) Field, with a spacing rule of 660-1320 feet, be approved on a permanent basis.

Respectfully submitted,

Margaret Allen  
Technical Hearings Examiner

Date of Commission Action: March 10, 2000

Exhibits

1. Requested rules
2. Proration schedule
3. Log
4. Production history from four wells
5. Volumetric calculations
6. Map