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**OIL AND GAS DOCKET NO. 06-0249813**

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**APPLICATION OF SAMSON LONE STAR LP TO CONSIDER FIELD RULES FOR THE HUXLEY (FREDRICKSBURG) FIELD, SHELBY COUNTY, TEXAS**

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**HEARD BY:** Thomas H. Richter, P.E.

**DATE OF HEARING:** January 5, 2007

**APPEARANCES:**

James M. Clark

**REPRESENTING:**

Samson Lone Star LP

**EXAMINER'S REPORT AND RECOMMENDATION**  
**STATEMENT OF THE CASE**

This is the unprotested application of Samson Lone Star LP for the Commission to consider field rules for the Huxley (Fredricksburg) Field that provide for:

1. The entire correlative interval from 3,162' to 3,362' subsurface depth as shown on the Array Induction Dual Spaced Neutron Spectral Density of the Samson Lone Star Partnership, Ltd., Hansen G.U. Lease Well No. 1-1, John Hailey Survey, A-291, Shelby County, Texas should be recognized and designated as the Huxley (Fredricksburg) Field.
2. Minimum well spacing of 330'/660' (lease line/between well) for vertical wells. Horizontal drainhole wells shall have minimum lease line spacing of 100' to one lease line and 330' perpendicular to the next closest lease line. No horizontal drainhole well shall be drilled closer than 600' to another horizontal drainhole well except for the first 100' or last 100' of a lateral overlap. There shall be no between well spacing between a vertical well and a horizontal well.
3. The standard proration unit shall be 40 acres and a maximum diagonal of 2,100'. The maximum acreage assignable to a horizontal drainhole shall be determined by the formula:  
$$A = (L \times 0.11488) + 40$$
where L is the length of the longest horizontal lateral. The result of the acreage assignment shall be rounded upward to the next number evenly divisible by 40.
4. The allocation formula shall be based on 100% acreage.

The examiner recommends approval.

**DISCUSSION OF THE EVIDENCE**

The Huxley (Fredricksburg) Field was discovered in 1986 at 3,198' subsurface depth as classified as an oil field. In June 2006, the first gas well was designated. As of December 2006, there are two gas wells operated by Ellora Operating. There are two operators and 6 oil wells. The field is designated as Associated - Exempt and the top allowable for a well in the field is 84 BOPD. The field operates pursuant to Statewide Rules. The wells are horizontal drainhole wells. The allowables for the horizontal wells are based on application of Statewide Rule 86 parameters. It is believed that all future wells will be drilled and completed as horizontal drainhole wells.

It is proposed that the entire correlative interval from 3,162' to 3,362' subsurface depth as shown on the Array Induction Dual Spaced Neutron Spectral Density of the Samson Lone Star Partnership, Ltd., Hansen G.U. Lease Well No. 1-1, John Hailey Survey, A-291, Shelby County, Texas should be recognized and designated as the Huxley (Fredricksburg) Field.

Base proration unit density of 40 acres is necessary to provide for the efficient and effective depletion of the reservoir. The Fredricksburg Formation is a naturally fractured reservoir with a specific fracture orientation much like the Austin Chalk but not nearly as permeable. The horizontal lateral technology has advanced in multiple capabilities. Laterals can originate from a single vertical well and be drilled semi-parallel to one another. Laterals can be branches from a lateral. The Samson Lone Star, Fred Lease Wells No. 1H potentialed at 462 BOPD and a GOR of 1157:1 as a flowing well. Using Rule 86, Samson assigned 220 acres to the well. Cumulative production from the well is 28,000 BO and 74 MMCF of gas. Other horizontal wells in the field have proration unit assignments ranging from 140 to 160 acres. The standard proration unit should be 40 acres and additional acreage assigned, if available, based on the length of the drainhole which is reflective of the acreage effected by the well. It is proposed that the maximum acreage assignable to a horizontal drainhole shall be determined by the formula:

$$A = (L \times 0.11488) + 40$$
, where L is the length of the longest horizontal lateral. The result of the acreage assignment shall be rounded upward to the next number evenly divisible by 40.

Though vertical wells will most likely not be drilled and completed in the field in the future, minimum well spacing rules should be adopted in the event. The proposed minimum well spacing, 330'/660' (leaseline/between well) for vertical wells will provide flexibility in locating wells in the subject field area. Because of the unique geology of the Fredricksburg Formation, horizontal drainhole well laterals should have minimum lease line spacing of 100' to one lease line and 330' perpendicular distance to the nearest parallel or sub-parallel lease line. No horizontal drainhole well should be drilled closer than 600' to another horizontal drainhole well except for the first 100' or last 100' of overlap of a lateral. There should be no between well spacing limitation between a vertical well and a horizontal well.

An allocation formula based on 100% acreage will provide for the protection of correlative rights.

#### **FINDINGS OF FACT**

1. Notice of this hearing was sent to all operators in the subject field at least ten (10) days prior to the subject hearing.
2. There was no protest at the call of the hearing.
3. The Huxley (Fredricksburg) Field was discovered in 1986 at 3,198' subsurface depth as classified as an oil field.
  - a. There are two operators and 8 wells and the field is designated as Associated - Exempt and the top allowable for a well in the field is 84 BOPD.
  - b. The allowables for the horizontal wells are based on application of Statewide Rule 86 parameters.
4. The entire correlative interval from 3,162' to 3,362' subsurface depth as shown on the Array Induction Dual Spaced Neutron Spectral Density of the Samson Lone Star Partnership, Ltd., Hansen G.U. Lease Well No. 1-1, John Hailey Survey, A-291, Shelby County, Texas should be recognized and designated as the Huxley (Fredricksburg) Field.
5. Base proration unit density of 40 acres is necessary to provide for the efficient and effective depletion of the reservoir.
  - a. The horizontal lateral technology has advanced in multiple capabilities so that laterals can originate from a single vertical well and be drilled semi-parallel to one another and laterals can be branches from a lateral.
  - b. The Samson Lone Star, Fred Lease Wells No. 1H potentialized at 462 BOPD and a GOR of 1157:1 as a flowing well with cumulative production of 28,000 BO and 74 MMCF of gas.
  - c. The standard proration unit should be 40 acres and additional acreage assigned, if available, based on the length of the drainhole which is reflective of the acreage effected by the well. It is proposed that the maximum acreage assignable to a horizontal drainhole shall be determined by the formula:  
  
$$A = (L \times 0.11488) + 40$$
where L is the length of the longest horizontal lateral. The result of the acreage assignment shall be rounded upward to the next number evenly divisible by 40.
6. The proposed minimum well spacing, 330'/660' (leaseline/between well) for vertical well will provide flexibility in locating wells in the subject field area.
  - a. Horizontal drainhole well laterals should have minimum lease line spacing of 100' to one lease line and 330' perpendicular distance to the nearest parallel or sub-

parallel lease line.

- b. No horizontal drainhole well should be drilled closer than 600' to another horizontal drainhole well except for the first 100' or last 100' of overlap of a lateral and no between well spacing limitation between a vertical well and a horizontal well.
7. An allocation formula based on 100% acreage will provide for the protection of correlative rights.

#### **CONCLUSIONS OF LAW**

1. Proper notice was given to all parties as set out in the provisions of all applicable codes and regulatory statutes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Consideration of field rules, a determination of their effectiveness and appropriate actions is a matter within the Commission jurisdiction.
4. Adoption of the proposed field rules will prevent waste, foster conservation and protect correlative rights.

#### **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions of law, the examiner recommends approval of the proposed field rules for the Huxley (Fredricksburg) Field.

Respectfully submitted,

Thomas H. Richter, P.E.  
Technical Examiner  
Office of General Counsel