October 30, 2000

OIL AND GAS DOCKET NO. 06-0226308

APPLICATION OF SAMSON LONE STAR L.L.P. TO CONSIDER PERMANENT FIELD RULES FOR THE LA NANA BAYOU (JAMES LIME) FIELD, NACOGDOCHES COUNTY, TEXAS

HEARD BY: Thomas H. Richter, P.E.
DATE OF HEARING: October 27, 2000

APPEARANCES:	**REPRESENTING:**
Kerry Pollard	Samson Lone Star L.L.P.

PROTESTANT: none

EXAMINER'S REPORT AND RECOMMENDATION
STATEMENT OF THE CASE

This is the unprotested application of Samson Lone Star L.L.P. for the Commission to consider permanent field rules for the La Nana Bayou (James Lime) Field that provide for rules for horizontal drainhole wells. The proposed rules are summarized as follow:

1. The entire correlative interval from 8,902' to 9,086' as shown on the Platform Express Array Induction Density/Neutron log of the Samson Lone Star, Fern Lake Fishing Club lease Well No. 1, in the Andresbermen Survey, A-10, Nacogdoches County be designated as the La Nana Bayou (James Lime) Field.

2. 640 acre gas proration units

3. Formula for assigning acreage to a horizontal well as follows:
   $A = [L \times 0.11488 + 640]$
   Where L is the length of the horizontal drainhole that penetrates the designated interval; and

4. A 100 feet head-to-toe lease line spacing along the principle axis of the horizontal wellbore.

DISCUSSION OF THE EVIDENCE

The La Nana Bayou (James Lime) Field was discovered in 1985 at approximately 8,768 feet subsurface depth. The field is classified as a non-associated gas field operating under Statewide Rules. The allocation formula is suspended. It is proposed that the allocation formula remain suspended. Samson Lone Star is the only operator in the field with one horizontal drainhole well.

Samson Lone Star completed its Fern Lake Fishing Club Well No. 1 on July 8, 2000. The subject well is a horizontal drainhole well with a drainhole length of 7,008 feet. The well potentialed at 3,247 MCFD and an absolute open flow rate of 9,497 MCFD. The well is completed in the open hole interval of 8,997' to 9,118' TVD. The measured length is from 9,156' to 15,999'. It is proposed that the entire James Lime Formation be designated as the La Nana Bayou (James Lime) Field. Basic reservoir parameters are: average porosity is 7%, average water saturation is 37%, average net pay is 8 feet. The initial reservoir pressure is 5,200 psig. The entire correlative interval from 8,902' to 9,086' as shown on the Platform Express Array Induction Density/Neutron log of the Samson Lone Star, Fern Lake Fishing Club lease Well No. 1, in the Andresbermen Survey, A-10, Nacogdoches County, should be designated as the La Nana Bayou (James Lime) Field.

A horizontal drainhole well rule will provide for the efficient and effective depletion of the reservoir. The producing reservoir is the James Lime Formation which is approximately 200 feet thick, which is similar to the Austin Chalk Formation, is a naturally, vertically fractured formation with a definite fracture strike orientation. The natural vertical fractures form extensive networks of "fracture swarms" which are continuous over long distances. The purpose of a horizontal drainhole well is to encounter as many of these fracture swarms as possible. Hence, the horizontal drainholes are drilled as near perpendicular as possible to the fracture strike to encounter the fracture swarms.

The proposed 100 feet overlap of opposing horizontal drainholes is to insure that all the fractures that maybe present on a lease are encountered. The 100 feet from lease line at the horizontal drainhole penetration point and the terminus is also to insure that as many fractures as possible will be encountered under a lease. The 467 feet minimum lease line spacing requirement along the perpendicular length of the drainhole remains consistent with Statewide Rules for vertical wells.

Cumulative production from the well is 111.179 MMCF of gas. The well is currently producing at a rate of 1.3 MMCF per day. Production decline analysis estimates remaining recoverable reserves to be 2.56 BCF of gas. Volumetric analysis calculates gas-in-place to be 5.83 BCF. The following recovery factors indicate volumetric recoveries: 20% = 1.166 BCF; 40% = 2.333 BCF; and 60% = 3.499 BCF.

Base proration units of 640 acres will insure a minimum proration unit density for horizontal or vertical wells. This density has been adopted in other James Lime Formation Fields in the area such as the Bridges, East; Trawick and White Oak Creek Fields. the proposed formula for the

assignment of acreage for a horizontal well will provide for an area that can reasonably be affected by a horizontal well. The proposed formula is: A = [L x 0.11488 + 640], where L is the length of the horizontal drainhole that penetrates the designated interval.

FINDINGS OF FACT

Based on the evidence presented, the examiner proposes the following findings:

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 La Nana Bayou (James Lime) Field was discovered in 1985 at approximately 8,768 feet subsurface depth.

    a. The field is classified as a non-associated gas field operating under Statewide Rules.

    b. The allocation formula is suspended.

    c. Samson Lone Star is the only operator in the field with one horizontal drainhole well.

4. A horizontal drainhole well rule will provide for the efficient and effective depletion of the reservoir.

    a. The producing reservoir, the James Lime Formation, is a naturally, vertically fractured with a definite fracture strike orientation. The purpose of a horizontal drainhole well is to encounter as many of these fractures as possible.

    b. The proposed 100 feet overlap of opposing horizontal drainholes is to insure that all the fractures that maybe present on a lease are encountered. The 100 feet from lease line at the horizontal drainhole penetration point and the terminus is also to insure that as many fractures as possible will be encountered under a lease.

5. No between well restriction between an existing vertical well and a horizontal drainhole well is warranted because of the limited drainage area of the vertical well.

6. The entire correlative interval from 8,902' to 9,086' as shown on the Platform Express Array Induction Density/Neutron log of the Samson Lone Star, Fern Lake Fishing Club lease Well No. 1, in the Andresbermen Survey, A-10, Nacogdoches County, should be designated as the La Nana Bayou (James Lime) Field.

7. Samson Lone Star completed its Fern Lake Fishing Club Well No. 1 on July 8, 2000. The subject well is a horizontal drainhole well with a drainhole length of 7,008 feet. The well potentialed at 3,247 MCFD and an absolute open flow rate of 9,497 MCFD.

8. Base proration units of 640 acres will insure a minimum proration unit density for horizontal or vertical wells. This density has been adopted in other James Lime Formation Fields in the area such as the Bridges, East; Trawick and White Oak Creek Fields.

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 La Nana Bayou (James Lime) Field.

Respectfully submitted,

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