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THE APPLICATIONS OF BASS ENTERPRISES PRODUCTION CO. FOR EXCEPTIONS TO STATEWIDE RULES 11, 26, 27, 37, 51, 52, 53 AND 86 AND FIELD RULE 13 FOR THE SUN DENTON LEASE WELL NO. 7, S. A. SLAUGHTER "B" WELL NO. 43H, S. A. SLAUGHTER "B" WELL NO. 38H, SUN DENTON LEASE WELL NO. 6, R. L. SLAUGHTER JR. TR 33 WELL NO. 41A, AND SLAUGHTER (SAN ANDRES) TR 20 LEASE WELL NO. 25H, SLAUGHTER FIELD, HOCKLEY COUNTY, TEXAS

**Heard by:** Donna Chandler, Technical Examiner

James M. Doherty, Hearings Examiner

Hearing Date: July 28, 2006

Appearances: Representing:

Bob Grable Bass Enterprises Production Co. Cary McGregor

#### EXAMINER'S REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

Bass Enterprises Production Co. requests exceptions to various Statewide Rules and Rule 13 of the Slaughter Field Rules for three well "pairs". Bass plans to re-enter three existing vertical wells and drill horizontal drainholes which would cross the adjoining lease line and approach another vertical well on its own offsetting lease. (See attached Bass Exh. 5).

This application was unprotested and the examiners recommend approval of the requested exceptions.

#### DISCUSSION OF THE EVIDENCE

The Slaughter Field was discovered in 1937 and has been under waterflood since the early 1960's. Beginning in March 2000, Bass began its "enhanced" skewed 4-spot waterflood pattern on its leases. (See Attached Bass Exh. 3). This enhancement consisted of drilling one or two horizontal laterals in existing vertical wells to create a "stairstep" pattern to more efficiently sweep the reservoir by water injection. Bass has drilled a total of 55 of

these laterals to date, using 31 vertical wellbores. To complete this skewed 4-spot (stairstep) pattern on its leases, additional laterals must be drilled across lease lines.

To accomplish the drilling of the subject wells, Bass has filed two Form W-1's for each well pair. For example, referring to Bass Exh. 5, the Sun Denton No. 6 well will be reentered and the horizontal lateral will be drilled in the San Andres directly toward the S. A. Slaughter "B" No. 38 well. The proposed terminus of the wellbore is expected to be approximately 70 feet from the No. 38 well. The portion of the lateral on the Sun Denton Lease will be known as the Sun Denton No. 6; the portion of the lateral on the S. A. Slaughter "B" Lease will be known as the S. A. Slaughter "B" No. 38H. The entire lateral is expected to be approximately 800 feet long. The second well pair is the re-entry of the Sun-Denton No. 7 vertical well, with the lateral crossing the common lease line with the S. A. Slaughter "B" lease to the south. This lateral will have a terminus near the No. 43 well on the S. A. Slaughter "B" lease. The lateral will be known as the Sun-Denton No. 7 and the S. A. Slaughter "B" No. 43H. The third well pair is the re-entry of the R. L. Slaughter, Jr. Tr-33 Well No. 41A. This lateral will cross the common lease line with the Slaughter (San Andres) Tr-20 lease, with a terminus near the No. 25 well on that lease. The lateral will be known as the R. L. Slaughter, Jr. Tr-33 Well No. 41A and the Slaughter (San Andres) Tr-20 Well No. 25H.

For potential test determinations, production reporting purposes and royalty payment, baseline declines for each pre-existing vertical well will be the basis used to calculate the production attributable to each lease associated with the lateral. All incremental production from the lateral wells will be considered as originating from both leases and will be allocated to each lease on a 50%-50% basis. Bass owns 100% of the working interest in the leases involved in the subject three wells. Bass has obtained waivers from 98% of the royalty interest ownership of the three proposed wells. Notice of this hearing was given to all interest owners and no protests were received and no one appeared at the hearing in protest.

Water cut of production from this field averages 97% and the field is obviously very near its secondary economic limit. With the drilling of the horizontal laterals since 2000, Bass has already recovered almost 600,000 barrels of incremental oil from 33 laterals on three leases, with an average of 15,000 to 20,000 BO per well. Bass expects that each lateral will recover a minimum of 30,000 barrels of incremental oil, with some recovering significantly more. Re-entering a vertical well to drill the proposed 800 foot horizontal lateral will cost approximately \$365,000. Of this total cost, only \$50,000 is attributed to the drilling of the 800 foot horizontal section. The most expensive part of drilling a horizontal lateral is making the turn from vertical. Bass estimates that re-entering two vertical wells and drilling two separate, shorter horizontal laterals "toward" each other, stopping just short of the lease line, would cost \$680,000. Bass can save about \$315,000 per wellbore "pair" by drilling a single lateral across a lease line, as opposed to two shorter laterals, one from each of the vertical wells on each lease. Pooling the subject leases is not a viable option for Bass because it's severance tax exemptions under Rule 50 for the leases would possibly be lost.

# **EXAMINERS' OPINION**

Bass requests exception to various Statewide Rules in order to accomplish the proposed development. Foremost, exceptions to Statewide Rule 11(a) are required. Statewide Rule 11 (a) states that ".....Nothing in this section shall be construed to permit the drilling of any well in such a manner that the wellbore crosses lease and/or property lines (or unit lines in cases of pooling) without special permission." Bass seeks exception to Rule 11(a) for all three well "pairs" so that the horizontal laterals are authorized to cross lease lines.

If exceptions to Statewide Rule 11(a) are approved for the three well "pairs", Bass believes that exceptions to the other stated Statewide Rules become secondary, and possibly unnecessary. Exceptions to Statewide Rules 26 and 27, which require that oil and gas be measured prior to leaving a lease, are necessary because the production from the portion of the lateral on one lease will be commingled with production from other portion of the lateral on the other lease. Production will leave the lease in the wellbore lateral prior to being measured.

Rule 37 requires minimum distances to lease lines for wellbores. Exceptions to Rule 37 are needed for these wells because wells will be zero feet from lease lines. The exceptions to Rule 37 may be approved pursuant to Statewide Rule 37(h)(2)(a) because there is no protest.

Rules 51, 52 and 53 pertain to oil well testing and completion reports. The well "pairs" will obviously not be able to meet the requirements of these rules which would require the testing of individual wells. Bass has submitted its proposal for allocating production to each lateral portion of the well pair.

Rule 86(b)(2) states that "No point on a horizontal drainhole shall be drilled nearer than 467 feet, or other lease-line spacing requirement under applicable rules for the field, from any property line, lease line, or subdivision line." Field rules for the Slaughter Field require a minimum of 440 feet to lease lines. These laterals will cross lease lines.

Rule 86(f)(2) requires drilling unit plats and Rule 86(f)(4) requires proration unit plats. These leases already have entity for density authority and are not required to file plats until final density.

The examiners recommend approval of Bass' applications, allowing the three proposed horizontal drainhole wells to cross lease lines. The placement of the wells is such that incremental reserves will be recovered in this substantially depleted field. Recent wells drilled on this skewed 4-spot pattern have been successful in recovering additional reserves. Requiring Bass to drill to a separate lateral from each of two old vertical wellbores would be economic waste and is not necessary to protect correlative rights. All of the interest owners in the three proposed well "pairs" have agreed to the allocation method proposed by Bass for well testing and production.

# **FINDINGS OF FACT**

- 1. Notice of this hearing was issued to all persons entitled to notice and no protests were received.
- 2. The three proposed horizontal lateral wells will cross lease lines of Bass operated properties. Separate drilling permit applications have been filed for the portion of the lateral on each lease.
  - a. The Sun Denton No. 6 vertical well will be re-entered and the horizontal lateral will be drilled in the San Andres directly toward the S. A. Slaughter "B" No. 38 well. The portion of the lateral on the Sun Denton Lease will be known as the Sun Denton No. 6; the portion of the lateral on the S. A. Slaughter "B" Lease will be known as the S. A. Slaughter "B" No. 38H.
  - b. The Sun-Denton No. 7 vertical well will be re-entered and the horizontal lateral will be drilled toward the No. 43 well on the S. A. Slaughter "B" lease. The lateral will be known as the Sun-Denton No. 7 and the S. A. Slaughter "B" No. 43H.
  - c. The R. L. Slaughter, Jr. Tr-33 Well No. 41A vertical well will be reentered and the horizontal lateral will be drilled toward the No. 25 well on the Slaughter (San Andres) Tr-20 lease. The lateral will be known as the R. L. Slaughter, Jr. Tr-33 Well No. 41A and the Slaughter (San Andres) Tr-20 Well No. 25H.
- 3. The three proposed wells will complete the enhancement of the skewed 4-spot waterflood pattern (stairstep) on Bass' leases. Bass has already drilled 55 laterals on its leases in the field, using 31 vertical wellbores. None of the existing 55 laterals crossed lease lines. There are no additional lateral locations available to complete the pattern, which do not cross lease lines.
- Average recovery to date from 33 of the recent laterals is 15,000 to 20,000 BO per well. Bass estimates incremental recovery of a minimum of 30,000 BO per well.
- 5. The method proposed by Bass for determining well potential, production and royalty payments attributable to each lease associated with the lateral is based substantially on the decline curves for the existing vertical wells associated with each lateral. The method has been approved by 98% of the royalty interest ownership. All owners were notified of the hearing and no protests were filed.
- 6. Exceptions to Statewide Rule 11(a) are required because the proposed three

laterals will cross lease lines.

- 7. Exceptions to Statewide Rules 26 and 27 are required because the production from portions of the lateral on two separate lease will not be measured prior to leaving the lease within the wellbore lateral.
- 8. Exceptions to Rule 37 are required for the three proposed wells because wells will be zero feet from lease lines. These exceptions may be approved pursuant to Statewide Rule 37(h)(2)(a).
- 9. Exceptions to Rules 51, 52 and 53 are required because the portions of the wellbores will exist on two separate leases and can not be tested separately.
- 10. Exceptions to Rule 86(b)(2) and Slaughter Field Rule No. 13 require a minimum of 440 feet from any point on a horizontal drainhole to the nearest lease line. These proposed laterals will cross lease lines.

# CONCLUSIONS OF LAW

- 1. Proper notice was issued as required by all applicable codes and regulatory statutes.
- 2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
- 3. Approval of exceptions to Statewide Rules 11, 26, 27, 37, 51, 52, 53 and 86 for the three proposed horizontal lateral wells will not cause waste or harm correlative rights and will not circumvent the purposes of these rules.

# **EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiners recommend approval of Bass' request for exceptions to the various Statewide Rules for the three subject horizontal lateral wells, as set out in the attached Final Order.

Respectfully submitted,

Donna K. Chandler Technical Examiner

James M. Doherty Hearings Examiner