



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

**OIL AND GAS DOCKET NO. 03-0289794**

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**THE APPLICATION OF VESS OIL CORPORATION TO AMEND FIELD RULES FOR  
THE KURTEN (WOODBINE) FIELD, BRAZOS COUNTY, TEXAS**

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**HEARD BY:** Karl Caldwell – Technical Examiner  
Marshall Enquist – Legal Examiner

**DATE OF HEARING:** July 31, 2014

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Clark Jobe  
Donna Chandler, P.E.  
Ronald Nutt, P.E.

Vess Oil Corporation

**PROTESTANT:**

Bill Jaehne

Leexus Oil LLC

### EXAMINERS' REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

Vess Oil Corporation ("Vess") requests that the Field Rules be amended for the Kurten (Woodbine) Field, Brazos County, Texas. Bill Jaehne, representing Leexus Oil LLC, appeared at the hearing in protest, but stated on the record at the conclusion of the hearing that Leexus Oil LLC, based on the exhibits and testimony provided by Vess, is withdrawing its protest at this time. As a result, this docket is being processed as an unprotested matter.

Field Rules for the Kurten (Woodbine) Field were originally adopted in Final Order No. 3-67,041, effective April 11, 1977. The field rules currently in effect for the subject field are summarized as follows:

1. 660' – 1,867' well spacing;
2. 160 acre oil units;
3. Allocation based on 100% acres.

Vess requests that the field rules be amended. The proposed changes are to designate a correlative interval for the field, provide for 330'-0' well spacing with special provisions for "take points", 100' lease line spacing for the first and last take points, a 33 foot "tolerance box", no-perf zone and "off-lease" penetration point provisions for horizontal drainhole wells. Vess proposes allowable and optional acreage add-on formulas for horizontal wells consistent with the field rules for the Madisonville, W. (Woodbine -A-) Field. Vess proposes that proration unit plats not be required for individual wells, but that Form P-15 be filed to designate the number of acres to be assigned to each well.

The application is unopposed and the examiners recommend that the Field Rules for the Kurten (Woodbine) Field be amended.

### **DISCUSSION OF THE EVIDENCE**

The Kurten (Woodbine) Field was discovered on October 15, 1976 at a depth of 8,217 feet. There are currently 133 producing oil wells and 13 operators carried on the proration schedule for the subject field. The current field rules currently provide for 660'-1,867' well spacing and 160 acre oil units. The top oil allowable is based on the 1965 Yardstick Allowable of 380 barrels of oil per day with an allowable gas-oil ratio of 2,000 cubic feet per barrel. Cumulative production from the field through October 2012 is 23.2 MMBO and 30.8 BCFG.

The Kurten (Woodbine) Field is located in the East Texas Basin between the Llano and Sabine uplifts. The Woodbine formation is correlative across the entire area and lies between the Austin Chalk and Buda formations. The Woodbine formation is a low permeability sandstone reservoir that requires fracture stimulation and has a solution gas drive as the primary drive mechanism.

Vess operates the Kurten (Woodbine) Unit, which is a secondary recovery unit that was approved by the Commission in Special Order Nos. 3-82,232 and 3-82,232 II in May 1984. The majority of the wells in the Kurten (Woodbine) Field are on the Kurten (Woodbine) Unit. Vess is proposing special field rules for horizontal drainhole wells to promote the efficient and effective recovery of the remaining hydrocarbons.

The Madisonville, W. (Woodbine -A-) field is adjacent to the Kurten (Woodbine) Field and both fields share a geologically similar correlative interval. The Madisonville, W. (Woodbine -A-) Field has adopted special field rules designed to facilitate the drilling of horizontal wells in a pattern that will prevent waste and maximize the ultimate recovery from the Woodbine formation. Since these fields are adjacent and correlative, Vess requests the same rules be adopted for the Kurten (Woodbine) Field.

Vess requests that the correlative zone found from 8,133 feet to 8,788 feet as shown on the log of the Gulf Oil Corporation Jones Enhanced Recovery Unit, Well No. 1 (API No. 42-041-30075), formerly known as the Amalgamated Bonanza Petroleum Limited – I. Jones Unit No. 1, Well No. 1, H. Cartmell Survey, A-87, Brazos County, Texas be designated as a single reservoir for proration purposes and designated as the Kurten (Woodbine) Field.

Vess requests 330'-0' well spacing with special provisions for "first and last take points" of 100 feet for the first and last take points, with perpendicular distance from take points to be the lease-line spacing of 330 feet. Vess also requests a 33 foot "tolerance box" and an off-lease penetration point for horizontal drainhole wells. The requested rules are identical to those adopted for the Madisonville, W. (Woodbine -A-) Field and are similar rules for horizontal development in many fields.

The "tolerance box" proposed by Vess for horizontal drainhole wells would allow horizontal drainholes to deviate 33 feet from either side of their permitted track without the necessity of obtaining a Statewide Rule 37 exception. As drilled wells for which all points are located within the "box" would be considered in compliance with their drilling permits. Also, Vess is requesting an explicit No Perforation Zone ("NPZ") rule.

In some cases, it is beneficial to penetrate the reservoir off lease, while still having "take points" no closer to lease lines than allowed under the field rules. Vess requests that field rules for the subject field provide for an "off-lease" penetration point. Statewide Rule 86 requires that the penetration point of a horizontal drainhole be on the lease. In this field, a well generally requires approximately 600 feet of horizontal displacement to make the 90 degree turn from vertical to horizontal. If the penetration point is required to be on the lease, then the first point of production would be about 600 feet from the lease line. The proposed rule will allow approximately 500 feet of additional producing drainhole, which will result in the recovery of additional reserves. The Commission has adopted similar rules allowing offsite penetration points in other fields, after the operator has given notice to the mineral owners of the off-lease tract on which the penetration point is to be located and received no protest.

In support of optional 40 acre density, Vess provided calculations showing that recoverable reserves beneath 40 acres are approximately 68,000 BO. Vess provided cumulative recoveries for twelve, one-well leases, which show cumulative recoveries ranging from approximately 13,000 BO to 101,000 BO. The drainage calculations indicate that some wells will drain less than 160 acres. Additionally, the adjacent Madisonville, W. (Woodbine -A-) Field has provisions for optional 40 acre density.

For consistency with the Madisonville, W. (Woodbine -A-) field, Vess is requesting the same formula for optional add-on horizontal wellbore acreage and the same 2.5125 barrel of oil per acre allowable formula. The allowable and horizontal wellbore add-on acreage factor in the Madisonville, W. (Woodbine -A-) Field Rules work together to produce the yardstick equivalent per acre of a vertical well on 160 acres. Using the same factors for both fields will ensure that the same allowable is available in the Woodbine formation in this area, regardless of the field assignment of the well.

Additionally, Vess requests that proration unit plats not be required for individual wells, but that Form P-15 be filed to designate the number of acres to be assigned to each well.

**FINDINGS OF FACT**

1. Notice of this hearing was given to operators in the subject field at least ten days prior to the date of hearing. Bill Jaehne, representing Leexus Oil LLC appeared at the hearing in protest, but stated on the record at the conclusion of the hearing that Leexus Oil LLC, based on the exhibits and testimony provided by Vess, is withdrawing its protest at this time.
2. Vess Oil Corporation requests to amend field rules to promote the drilling and completion of horizontal wells.
3. Adopting a correlative interval for the Kurten (Woodbine) Field is appropriate.

**CONCLUSIONS OF LAW**

1. Proper notice was issued as required by all applicable statutes and regulatory codes.
2. All things have occurred and been accomplished to give the Commission jurisdiction in this matter.
3. Amending the field rules for the Kurten (Woodbine) Field will promote development of the field.

**EXAMINERS' RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission amend the field rules for the Kurten (Woodbine) Field, Brazos County, Texas as requested by Vess Oil Corporation.

Respectfully submitted,



Karl Caldwell  
Technical Examiner



Marshall Enquist  
Legal Examiner