OIL AND GAS DOCKET NO. 03-0263039

THE APPLICATION OF BROWNING OIL COMPANY, INC. TO AMEND THE FIELD RULES FOR THE GINI (WILCOX) FIELD, FAYETTE COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner

HEARING DATE: November 18, 2009

APPEARANCES:	**REPRESENTING:**
APPLICANT:	
Michael McElroy C. Ronald Platt Brian Windham	Browning Oil Company, Inc.
INTERESTED PARTY:	
Rick Johnston	GSI Oil & Gas, Inc.

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Field Rules for the Gini (Wilcox) Field were adopted in Final Order No. 3-86,087, effective May 5, 1986, as amended. The Field Rules in effect for the field are summarized as follows:

1. 467'-933' well spacing;

2. 40 acre oil units with a 20 acre tolerance;

3. Allocation based on 100% acres;

4. 40 acre gas units, a maximum assignable of 80 acres with a 10% tolerance and a maximum 49B gas well allowable of 116 MCFGPD;

5. Maximum casinghead gas-oil ratio of 600 cubic feet per barrel;

Browning Oil Company, Inc. ("Browning") requests that the Field Rules for the subject field be amended to provide for capacity oil allowables with a maximum allowable casinghead gas limit of 375 MCFGPD and rescind the rule providing for a maximum casinghead gas-oil ratio of 600 cubic feet per barrel.

The application was unprotested and the examiner recommends that the Field Rules for the Gini (Wilcox) Field be amended as proposed by Browning.

DISCUSSION OF EVIDENCE

The Gini (Wilcox) Field was discovered in June 1985 at an average depth of 5,600 feet. The field is classified as associated-49B and there are 9 producing oil wells and 5 producing gas wells carried on the current proration schedules. Browning operates all but two wells in the field and the only other operator is GSI Oil & Gas, Inc. Current Field Rules provide for 467'-933' well spacing, 40 acre units, allocation based on 100% acres, a maximum 49B gas well allowable of 116 MCFGPD and a maximum casinghead gas-oil ratio of 600 cubic feet per barrel. Cumulative production through August 2009 is 4.9 MMBO and 7.3 BCFG.

Browning submitted a structure map, gross and net pay isopach maps and a north-south structural cross section. The Gini (Wilcox) Field produces from a Wilcox Channel Sand that trends north to south and is bounded to the west by a sand pinch-out and to the east by an oil-water contact with the aquifer. The sand has approximately 80 feet of gross thickness and an average porosity of 23%. The field contains a large gas cap and the primary drive mechanism is a strong water drive. The original gas-oil contact was at -5,226 feet subsea and the original oil-water contact was at -5,275 feet subsea. During the initial stage of depletion, most of the wells had an oil and gas column and some of the wells did not encounter the aquifer, as the base of the sand was above the oil-water contact.

Currently, the field is in the final stage of depletion, as the average gas-oil ratio is approximately 10,000 cubic feet per barrel and the average water cut is approximately 85%. Browning submitted wellbore plugback schematic drawings and individual well production data graphs that confirm oil and water are migrating updip into the gas cap. Under the current oil allowable of 102 BOPD with a maximum casinghead gas-oil ratio of 600 cubic feet per barrel, Browning believes that oil is migrating updip past the producing wellbores. This oil migration is allowing a residual oil saturation to develop in the gas cap that can never be produced and is causing waste.

As a result, Browning is requesting a capacity allowable for the oil wells with a maximum allowable casinghead gas limit of 375 MCFGPD and the elimination of the 600 cubic feet per barrel gas-oil ratio rules. No change to the current 116 MCFGPD gas well allowable for a well on an eighty acre unit is requested. Browning submitted a 3-D reservoir simulation study covering four field depletion scenarios and the resulting projections for field ultimate recovery. Producing the field under the current Field Rules with gas cap blowdown starting in 2020 resulted in an ultimate field recovery of 5.04 MMBO and 23.1 BCFG or 8.89 MMBOE. The best recovery projection was obtained by producing the field

under the proposed Field Rules that would allow for high volume oil withdrawal followed by gas cap blowdown. This scenario resulted in an ultimate field recovery of 5.30 MMBO and 23.56 BCFG or 9.23 MMBOE. The proposed Field Rules will generate an incremental field recovery of 260,000 BO and 460,000 MCFG or 337,000 BOE.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice and no protests were received.

2. The Gini (Wilcox) Field was discovered in June 1985 at an average depth of 5,600 feet. The field is classified as associated-49B and there are 9 producing oil wells and 5 producing gas wells carried on the current proration schedules.

3. Browning operates all but two wells in the field and the only other operator is GSI Oil & Gas, Inc. Current Field Rules provide for 467'-933' well spacing, 40 acre units, allocation based on 100% acres, a maximum 49B gas well allowable of 116 MCFGPD and a maximum casinghead gas-oil ratio of 600 cubic feet per barrel.

4. The Gini (Wilcox) Field produces from a Wilcox Channel Sand that trends north to south and is bounded to the west by a sand pinch-out and to the east by an oil-water contact with the aquifer. The field contains a large gas cap and the primary drive mechanism is a strong water drive.

5. During the initial stage of depletion, most of the wells had an oil and gas column and some of the wells did not encounter the aquifer, as the base of the sand was above the oil-water contact.

6. Currently, the field is in the final stage of depletion, as the average gas-oil ratio is approximately 10,000 cubic feet per barrel and the average water cut is approximately 85%.

7. Under the current oil allowable of 102 BOPD with a maximum casinghead gas-oil ratio of 600 cubic feet per barrel, Browning believes that oil is migrating updip past the producing wellbores. This oil migration is allowing a residual oil saturation to develop in the gas cap that can never be produced and is causing waste.

8. A capacity allowable for the oil wells with a maximum allowable casinghead

gas limit of 375 MCFGPD and the elimination of the 600 cubic feet per barrel casinghead gas-oil ratio rules is appropriate for the final stage of depletion in the field.

9. Producing the field under the current Field Rules with gas cap blowdown starting in 2020 results in an ultimate field recovery of 5.04 MMBO and 23.1 BCFG or 8.89 MMBOE.

10. The best recovery projection was obtained by producing the field under the proposed Field Rules that would allow for high volume oil withdrawal followed by gas cap blowdown. The proposed Field Rules will generate an incremental field recovery of 260,000 BO and 460,000 MCFG or 337,000 BOE.

CONCLUSIONS OF LAW

1. Proper notice of this hearing was issued.

2. All things have been accomplished or have occurred to give the Commission jurisdiction in this matter.

3. Amending the Field Rules for the Gini (Wilcox) Field is necessary to prevent waste and protect correlative rights.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends that the Commission amend the Field Rules for the Gini (Wilcox) Field, as proposed by Browning Oil Company, Inc.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner