



RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 03-0275946

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

HEARD BY: Brian Fancher, P.G. - Technical Examiner
Marshall Enquist - Legal Examiner

HEARING DATE: June 05, 2012

APPEARANCES:

REPRESENTING:

APPLICANT:

Michael McElroy
Brian Windham

Browning Oil Company, 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. Oil wells in field are assigned capacity allowable with maximum casing-head gas production of 375 MCFGPD per well;
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. Monthly gauging of production from wells completed in field and semi-annual W-10 well testing.



Browning Oil Company, Inc. (“Browning”) requests that the Field Rules for the subject field be amended to provide for capacity oil and gas for all wells completed in the subject field.

The application was unopposed and the examiners recommend that the Field Rules for the Gini (Wilcox) Field be amended, as proposed by Browning.

DISCUSSION OF EVIDENCE

As proposed, the subject application would allow oil and gas wells producing from the subject field to produce at an unrestricted rate, otherwise known as a capacity allowable.

The Gini (Wilcox) Field was discovered in June 1985 at an average depth of 5,600 feet. The field is classified as associated with nine producing oil wells and two producing gas wells carried on the June 2012 oil and gas proration schedules. Browning is one of the three operators in the field and operates nine of the eleven producing wells. GSI Oil & Gas, Inc. is identified as the other operator with producing wells in the field.

In its evidence, Browning submitted a history of the field rules and allowables that have governed the subject field since its discovery in 1985. In summation, temporary field rules were adopted on a permanent basis in August 1988. Beyond that, the field rules governing the subject field have been amended twice. Most recent, in November 2009, Oil and Gas Final Order 03-0263039 granted capacity oil allowables with 375 MCFGD and eliminated the 600 standard cubic foot (“SCF”)/barrel (“bbl”) gas-to-oil ratio.

At the hearing, Browning submitted a reservoir data sheet for the subject field. As presented, the Gini (Wilcox) Field produces from the a sandstone member within the Wilcox formation at a depth of approximately 5,666 feet below ground surface. The initial reservoir pressure was reported at 2,375 psig and exhibited 23% porosity, 30% water saturation, an oil gravity of 39 API, and solution GOR of 600 SCF/BBL. As of April 1, 2012, cumulative production from the field is 5.02 MMBO, 7.5 BCF casing-head gas, 2.2 BCF gas-well gas, and 19.9 MBC.

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 by an underlying 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. Browning testified the primary drive-mechanism for hydrocarbon production is a strong water-drive that has maintained reservoir pressure throughout the life of the field to within 100 psi of the virgin pressure recognized in the field discovery.

Browning testified the majority of the nine oil producing wells in the field are currently producing from the interval within the field that was initially determined to be the gas-cap above the oil column. Browning testified that through field proliferation, oil has been migrating upward in to

the gas cap as a consequence of the strong water-drive mechanism below the field and the restriction set forth in 16 TAC §3.49. In support of its claim, Browning evidenced nineteen wells, originally completed in the field as oil producing wells, have been watered out due to the migration of oil and the strong water-drive.

In support of its application, Browning submitted a field-wide production and pressure history graph that includes daily oil, gas, and water production accompanied by reservoir pressure. As presented, demonstrates the reservoir pressure remained consistent at approximately 2,300 psig prior to the granting of the capacity oil allowable granted in December 2009. Subsequently, oil production increased by 100 barrels per day, gas production increased by three to four thousand cubic feet per day, and water production increased by nearly twice the previous rate of 600 barrels per day.

Browning testified Currently, the field is in the final stage of depletion. In support of its application, Browning submitted a material balance estimate of oil migration in to the gas cap. As presented, Browning testified the original oil in place is estimated to be 15.2 MMSTB, oil production through November 2009 was 4.9 MMSTB, and the oil in place in November 2009 was 10.3 MMSTB. Beyond that, original gas in place was 22.2 BCFG and gas production through November 2009 was 7.3 BCFG,

Next, Browning testified that if the reservoir was continuously produced at rates restricting oil and gas production from the field, the estimated oil migration in to the gas cap is 859 MMSTB. By increasing the production rate to allow for the unrestricted production of gas, as oil is currently allowed to be produced at an unrestricted rate, Browning testified the estimated oil migration in to the gas cap is 512 MMSTB, thus an overall reduction in oil migration of 347 MMSTB. Browning testified that by restricting oil and gas production from the field, at the current stage of the field life, the migration of oil in to the gas cap has created a transition zone where hydrocarbons will remain unrecovered.

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 and there are 9 producing oil wells and 2 producing gas wells carried on the June 2012 proration schedules.
3. Browning operates all but two producing wells in the field and the only other active operator is GSI Oil & Gas, Inc. Current Field Rules provide for 467'-933' well spacing, 40 acre units, allocation based on 100% acres, unrestricted oil production, a maximum casinghead production of 375 MCFGPD, and a maximum gas allowable of 116 MCFGPD for a gas well assigned eighty acres.
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. The field is in its final stage of depletion. The current reservoir pressure is approximately one hundred pounds per square inch less than the original estimated reservoir virgin pressure.
7. As a consequence to the restriction of gas production from the field, 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. The original oil in place is estimated to be 15.2 million stock-tank barrels ("MMSTB"), oil production through November 2009 was 4.9 MMSTB, and the oil in place in November 2009 was 10.3 MMSTB. Beyond that, original gas in place was 22.2 billion cubic feet of gas ("BCFG") and gas production through November 2009 was 7.3 BCFG,
9. If the field is continuously produced at rates restricting oil and gas production from the field, the estimated oil migration in to the gas cap is 859 MMSTB.

10. By increasing the production rate to allow for the unrestricted production of gas the estimated oil migration in to the gas cap is 512 MMSTB, thus an overall reduction in oil migration of 347 MMSTB.

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 to allow for capacity allowable for oil and gas from the Gini (Wilcox) Field is necessary to prevent waste, protect correlative rights, and promote development of the field.

RECOMMENDATION

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

Respectfully submitted,



Brian Fancher, P.G.
Technical Examiner



Marshall Enquist
Legal Examiner