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RAILROAD COMMISSION OF TEXAS HEARINGS DIVISION

OIL & GAS DOCKET NO. 05-0305672

THE APPLICATION OF JAMEX, INC. TO CONVERT THE LAST PRODUCING WELL ON VARIOUS TRACTS TO INJECTORS ON THE FRUITVALE WATERFLOOD UNIT, WELL NOS. 201, 1301 AND 1401, FRUITVALE FIELD, VAN ZANDT COUNTY, TEXAS

HEARD BY: Richard Eyster, P.G. - Technical Examiner
Clayton J. Hoover - Administrative Law Judge

DATE OF HEARING: September 1, 2017

CONFERENCE: December 5, 2017

APPEARANCES:

REPRESENTING:

APPLICANT:

George C. Neale
Rick Johnston, P.E.
Kevin McQueen
Robert Konecny

Jamex, Inc.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

On January 24, 2017, Jamex, Inc. ("Jamex") received Commission authority for unitization of the Fruitvale Waterflood Unit ("Unit") and approval of secondary recovery

operations on said Unit. This application stems from the Final Order that authorized the unitization and secondary recovery. Terms and Condition No. 5 of that Final Order prohibits Jamex from converting the last well on a tract to injection when there is unsigned ownership in the tract, unless there is an exception granted after notice and hearing. In this hearing, Jamex seeks authority to convert three producing wells to injection wells where there are unsigned owners.

The application for conversion of three wells, the No. 201 Well, No. 1301 Well, and No. 1401 Well, was unopposed after notice, and the examiners recommend approval.

DISCUSSION OF EVIDENCE

The Fruitvale Field was discovered on December 5, 1943 at a depth of 8,700 feet, and Jamex is the only operator in the field. Existing special field rules apply provide for 467' lease line spacing, 600' between well spacing, and 160-acre base proration units with optional 40-acre units. The top allowable is 142 BOPD with an allowable gas-oil ratio of 2,000 cubic feet per barrel.

Jamex presented testimony from its landman, Mr. Kevin McQueen, regarding the Examiners' Report and Recommendation, and Final Order from the initial unitization and secondary recovery authority application. Mr. McQueen specifically testified regarding Item No. 5 from the terms and conditions portions of the Final Order, which states as follows:

In order to protect unsigned ownership, when 100% of the royalty and working interest owners in a tract have not joined the unit, the operator is not authorized to convert the last producing well on that tract to an injector unless an exception is granted after notice and hearing.

As stated by Mr. McQueen at the hearing, Jamex wishes to convert Well Nos. 201, 1301, and 1401 (prior to the establishment of the Unit, these wells were known as the Clyde Barber No. 1 Well, the Oxford No. 1 Well, and the Burrage No. 1 Well), which are the last (and only) producing wells on three discrete tracts, to injector wells to enhance secondary recovery.

Mr. McQueen presented the notice letter that was sent out to all of the unsigned royalty and overriding royalty owners in the three tracts, informing said owners of the intent of Jamex to seek authority to implement a waterflood program for the Unit to maximize recovery of the oil reserves to the benefit all owners in the Unit. This letter was sent out on June 22, 2017.

A Notice of Hearing was sent out by the Commission on July 18, 2017 to all unsigned owners of royalty and overriding royalty interests owners, informing each

owner of the purpose and date of the hearing, and what to do if the owner was interested in attending. In addition, a corrected Notice of Hearing was sent out by the Commission two days later to the same recipients, the only correction being the docket number from the original unitization hearing referenced in Appendix A. Finally, Jamex had notice of the hearing published in the *Van Zandt News* for four (4) consecutive weeks, on July 23 and 30, and August 6 and 13. Jamex filed with the Commission both the tear sheets of the notice, and the affidavit of publication prior to the hearing. Mr. McQueen believes that Jamex made a reasonable effort to locate and notice all unsigned royalty and overriding royalty owners of their rights regarding the subject application.

Finally, Mr. McQueen presented the current status of what percentage of the royalty interest, overriding royalty interest, and working interest that had signed (and were therefore participating) for each of the wells. As of the hearing, the percentage of interest ownership for Unit Well No. 201 that was participating was 94.35%; for Unit Well No. 1301, the percentage of interest ownership that was participating was 93.53%; and for Unit Well No. 1401, the percentage of interest ownership that was participating was 96.93%.

Jamex also presented the testimony of, and evidence prepared by Mr. Rick Johnston, P.E. a local consulting petroleum engineer. Mr. Johnston presented a Commission online system printout of the oil proration schedule for the Fruitvale Field in Van Zandt County, Texas, which showed that Jamex was the sole operator in the field. All wells in the Unit are currently producing wells, but Jamex believes that production will be enhanced by the conversion of three wells to injectors. Mr. Johnston also presented a structure map, a PHI-H map showing net pay, and a hydrocarbon pore volume map for the Fruitvale Field, all of which were presented in the original unitization hearing, and all of which support the No. 201, 1301, and 1401 Wells position to support enhanced recovery.

Also presented by Mr. Johnston was a series of decline curves indicating future performance for the wells that Jamex requests to convert to injection. The decline curve for Well No. 201 Well (Clyde Barber No. 1 Well) shows an exponential decline with an initial rate of 52 bbls per month in June 2017, and an effective decline rate of 22.27%. The decline curve for the No. 1301 Well (Oxford No. 1 Well) shows a hyperbolic decline with a hyperbolic exponent of 0.45, an initial effective decline rate 27.34%, and an initial rate of 410 bbls per month in June 2014. Finally, the decline curve for the No. 1401 Well, (Burrage No. 1 Well) shows an exponential decline with an initial rate of 250 bbls per month in June 2017, and an effective decline rate of 13.489%.

Mr. Johnston also presented spreadsheets using decline curve parameters for the three wells. In these spreadsheets, the future monthly oil production for each of the

three wells was calculated into the future. To protect the interests of the unsigned owners in the three tracts, Jamex proposes to pay the unsigned owners on a lease/tract basis using these decline curves and spreadsheets as long as the unit is active.

A Final Order from a consolidated Commission docket, Oil and Gas Docket Nos. 09-0303829, 09-0303832, 09-0303835, 09-0303837, 09-0303839, 09-0303841, and 09-0303845, was presented by Mr. Johnston to show that the Commission has recently approved similar methods of production attribution derived from decline curves.

Finally, Mr. Johnston presented evidence of the equations for exponential (effective and nominal) and hyperbolic decline curves in the form of an excerpt from a book regarding the valuation of oil property.

FINDINGS OF FACT

1. All unsigned royalty interest owners and overriding royalty interest owners were reasonably notified of the application for Jamex to convert the last remaining wells on three discrete tracts in the Unit to injector wells.
2. The proposed Unit consists of 27 tracts of land which contain 2,906.2054 acres.
3. The final order from the original unitization hearing established the Unit has the following listed in its terms and conditions: In order to protect unsigned ownership, when 100% of the royalty and working interest owners in a tract have not joined the unit, the operator is not authorized to convert the last producing well on that tract to an injector unless an exception is granted after notice and hearing.
4. According to the oil proration schedule for the Fruitvale Field in Van Zandt County, Texas, Jamex is the sole operator in the field. All wells in the Unit are currently producing wells, but Jamex believes that production will be enhanced by the conversion of three wells to injectors.
5. As of the hearing, the percentage of interest ownership for Unit Well No. 201 that was participating was 94.35%; for Unit Well No. 1301, the percentage of interest ownership that was participating was 93.53%; and for Unit Well No. 1401, the percentage of interest ownership that was participating was 96.93%.
6. Production will be enhanced by the conversion of three wells to injectors, production which would otherwise be unrecovered.

7. The decline curve for Well No. 201 Well (Clyde Barber No. 1 Well) shows an exponential decline with an initial rate of 52 bbls per month in June 2017, and an effective decline rate of 22.27%. The decline curve for the No. 1301 Well (Oxford No. 1 Well) shows a hyperbolic decline with a hyperbolic exponent of 0.45, an initial effective decline rate of 27.34%, and an initial rate of 410 bbls per month in June 2014. Finally, the decline curve for the No. 1401 Well, (Burrage No. 1 Well) shows an exponential decline with an initial rate of 250 bbls per month in June 2017, and an effective decline rate of 13.489%.
8. To protect the interests of the unsigned owners in the three tracts, Jamex proposes to pay the unsigned owners on a lease/tract basis using these decline curves and spreadsheets as long as the unit is active.
9. A Final Order from a consolidated Commission docket, Oil and Gas Docket Nos. 09-0303829, 09-0303832, 09-0303835, 09-0303837, 09-0303839, 09-0303841, and 09-0303845, shows that the Commission has recently approved similar methods of production attribution derived from decline curves.
10. The rights of the unsigned owners of the three tracts will be protected by the proposed production allocation method.
11. Jamex, Inc. agreed on the record at the hearing for this case that the effective date of this Final Order is to be the date the Master Order related to this Final Order is signed

CONCLUSIONS OF LAW

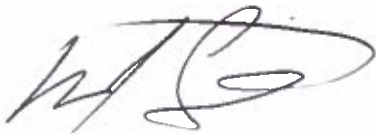
1. Proper notice was given to all persons legally entitled to notice.
2. All things have occurred or have been accomplished that are necessary to give the Commission jurisdiction in this matter.
3. Applicant's proposed secondary recovery project satisfies all of the requirements set out in TEX. NAT. RES. CODE ANN. §§ 101.001 et seq.
4. Approval of the conversion of the No. 201, 1301, and 1401 Wells for secondary recovery operations is in the public interest and is necessary to prevent waste and to promote the conservation of oil or gas or both.
5. Pursuant to § 2001.144(a)(4)(A) of the Texas Government Code and by

agreement of Foundation on the record, Foundation has waived the right to file a motion for rehearing and this Final Order can be effective on the date the Master Order relating to the Final Order is signed.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend approval of the conversion of the No. 201, 1301, and 1401 Wells of the Fruitvale Unit to injector wells, as set out in the attached order.

Respectfully submitted,



Richard Eyster, P.G.
Technical Examiner



Clayton J. Hoover
Administrative Law Judge