RAILROAD COMMISSION OF TEXAS

OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 08-0272344

THE APPLICATION OF BC OPERATING, INC. FOR AN MER ALLOWABLE, NET GAS-OIL RATIO RULE, AND CANCELLATION OF OVERPRODUCTION FOR VARIOUS LEASES IN THE GOLDSMITH (CLEAR FORK) FIELD, ECTOR COUNTY, TEXAS

HEARD BY: Brian K. Fancher - Technical Examiner
Marshall F. Enquist - Legal Examiner

HEARING DATE: December 02, 2011

APPEARANCES:	**REPRESENTING:**
Paul Tough	BC Operating, Inc.
Gerard G. Vavrek	
David Cromwell	

EXAMINER'S REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

BC Operating, Inc. ("BC") requests approval of an MER allowable of 500 BOPD and that all accrued over production be canceled for the following leases:

Lease Name	Well No.	API No.
CALEB	1	42-135-07128
DEBBIE	1	42-135-41200
ELIZABETH	2	42-135-41202
GIDEON	1	42-135-40845
GIDEON	2	42-135-41199
HALEY	1	42-135-40913
HENRY	1	42-135-40351
HENRY	2	42-135-40724
JAMES	1	42-135-40914
RICHARD	1	42-135-40344
RICHARD	2	42-135-40660

Lease Name	Well No.	API No.
RICHARD	3	42-135-40661
RICHARD	4	42-135-40848
TRIPP	1R	42-135-40741
TRIPP	2	42-135-40843
TRIPP	3	42-135-41201
VIVIAN	1	42-135-40854

At the hearing, the examiners concluded the requested MER oil allowable of 500 BOPD was not supported by the evidence submitted by representatives on behalf of BC. The examiner's opined an MER allowable of 400 BOPD per well better reflects the data included in the applicant's evidence and that the GOR should remain at 2,000 cubic feet per barrel for each lease. On December 29, 2011, counsel on behalf of BC submitted a letter to the Commission requesting to amend it's initial application to include an exception to Statewide Rule 49(a) for each of the leases identified in the Notice of Hearing dated October 24, 2011. By letter dated January 12, 2012, the examiners issued a letter to the parties identified in the Notice of Hearing dated October 24, 2011, explaining the amended request to the initial application submitted by BC. Further, the examiners explained that if any affected party seeks to protest BC's amended application, to provide a written objection to the examiners. No protest was received by the Commission.

The application is unprotested and the examiners recommend approval of the MER allowable of 400 BOPD per well, an exception to Statewide Rule 49(2), and cancellation of accrued overproduction for the subject leases.

DISCUSSION OF EVIDENCE

The Goldsmith (Clear Fork) Field is designated as an associated oil and gas field and was discovered in March 1946 at a depth of 6,300 feet. The December 2011 Oil and Gas Proration Schedules indicate a total of 1,104 oil wells and three gas wells producing from the field. Special field rules for the field provide for 330'-0' well spacing for both oil and gas wells, 40 acre base density for both oil and gas wells, 20 acre optional density for oil and wells and 10 acre optional density for gas wells, and two part allocation formulas that prescribe 75% acres and 25% per well for oil wells and 75% acres and 25% deliverability for gas wells. The top oil allowable is 102 BOPD, based upon the 1947 Yardstick Allowable. Cumulative production from the field through June 2011 is reported as 136.8 MMBO, 15.4 BCF of gas, and 82.8 MBC.

Currently, the formations comprising the Goldsmith (Clear Fork) Field include the Glorieta, Upper Clear Fork, Tubb, Lower Clear Fork, and Wichita Albany formations. The current designated correlative interval for the field extends from the top of the Gorieta Formation to the top of the Wolfcamp Formation. BC submitted a geologic descriptive of the Clear Fork Formation ("Clear Fork") and asserts the Clear Fork was originally deposited as a marine shelf-margin build-up. Production in the Clear Fork is found in stacked,

compartmentalized dolostone lithostratigraphy that is sequenced with shallow water shale. Oil entrapment is primarily structural and stratigraphic with lateral discontinuity established as the dominate critera. Representatives on behalf of BC testified that diagenesis in the Clear Fork formation lead to a heterogeneous fabric of secondary porosity and permeability, with petrophysical log values ranging from seven to fifteen percent porosity and one-half to thirty milidarcies of permeability, respectively, in the Goldsmith (Clear Fork) Field.

At the hearing, BC indicated it seeks to adopt the proposed 500 BOPD per well MER for leases it operates while maintaining a GOR of 2,000 cubic feet per barrel. Representatives on behalf of BC testified the requested MER allowable will allow BC flexibility in the production from the field without harming the reservoir or creating waste.

BC observed the well data used as evidence in its application, indicated that by continuing to produce wells completed in the subject field at higher rates than allowed by the field's top allowable, the data results suggest the water/oil ratio decreased while the GOR remained consistent. Further, the higher productive rates allow BC to capture hydrocarbon gas that would otherwise be bypassed if the wells were to remain governed by the field's top allowable and the MER allowable is not approved.

BC testified that although the Clear Fork Formation is a free-water bearing formation, there is no active water drive mechanism in-place. The Goldsmith (Clear Fork) Field has solution-gas as the primary drive mechanism. BC indicated that current completion techniques implemented in its wells completed in the subject field incorporate staged hydrofrac stimulation methods. Due to the reservoir's primary drive mechanism of solution gas drive and not water drive, BC indicated electric submersible pumps have been installed in the wells subject to this application. Moreover, the hydrofrac methods induced on wells completed in the subject field and operated by BC, were identified as consequentially producing higher volumes of connate water. BC concluded the implementation of down-hole pumps were an effort to not only produce greater volumes of hydrocarbons, but also to mitigate the additional produced water incurred down-hole.

By letter dated September 08, 2011, the Commission requested that BC conduct well testing for wells associated with the subject application. The letter indicated the individual well data should include producing rates for each well at the requested MER rate, current allowable rate, and one or two rates between the requested rate and current allowable rate. At the hearing, BC testified the seventeen wells subject to this application were either producing by means of a surficial pumping unit or an Electrical Submersible Pump (ESP). Of the wells producing with an ESP, the applicant indicated rate testing was performed by adjusting the submersible pumps' electrical frequency in increments of two Hertz every 30 days.Tthe subject wells were tested a total of 60 days.

In its evidence, BC submitted collective production information and observed a productive range from 25 BOPD and 126 MCFGPD to 637 BOPD and 2,647 MCFGPD. Throughout the MER rate adjustments, the production data suggests GORs for each well

maintained consistent ratios, indicating the wells were producing from the reservoir without coning. BC concluded the rate test data observed for the subject wells, producing through an ESP, indicate that wells producing at higher production rates are not rate sensitive. As such, the higher rates do not cause harm to the reservoir.

Finally, BC testified that each of the seventeen leases associated in the subject application have accrued overproduction. BC asserts the cancellation of overproduction will not effect the reservoir quality and will not harm correlative rights.

At the hearing, the examiners concluded the requested MER allowable of 500 BOPD per well was ultimately unjustified. The production curve data submitted for each of the subject wells depicts that one well, of the seventeen subject wells in the application, demonstrated producing at a rate of 500 BOPD since April 2011. The remaining sixteen wells produced at rates ranging from 200 BOPD to 400 BOPD. Therefore, the examiners suggested an MER allowable of 400 BOPD per well more appropriate, based upon the evidence submitted.

Subsequent to the hearing, by letter dated December 29, 2010, counsel on behalf of BC indicated the applicant sought to amend its original application and requested the seventeen wells associated with the application be granted an exception to Statewide Rule 49(a). In support of its amended request, BC's counsel opined the testimony and exhibits submitted in the application demonstrated the Clear Fork reservoir is produced through a solution gas drive mechanism and oil entrapment is primarily structural-stratigraphic, with lateral discontinuity being the dominant criteria. Further, the formations comprising the subject field are heterogeneous and do not operate under a gas cap.

Consequentially, on January 12, 2012, the examiner notified all affected parties of BC's amended request. Further, any party that wished to protest the amended application submitted by BC, provide its objection no later than January 22, 2012. No protest was received by the Commission.

FINDINGS OF FACT

1. Notice of this hearing was given to all parties entitled to notice at least ten days prior to the date of hearing.

2. The Goldsmith (Clear Fork) Field is designated as an associated oil and gas field and was discovered in March 1946 at a depth of 6,300 feet.

3. The top oil allowable is 102 BOPD, based upon the 1947 Yardstick Allowable.

4. The Goldsmith (Clear Fork) Field is governed by special field rules.

5. The Goldsmith (Clear Fork) Field includes the Glorieta, Upper Clear Fork, Tubb, Lower Clear Fork, and Wichita Albany formations.

6. Production in the Clear Fork is found in stacked, compartmentalized, dolostone lithostratigraphy that is sequenced with shallow water shale.

7. The Clear Fork formation is heterogeneous with petrophysical log values ranging from seven to fifteen percent porosity and one-half to thirty milidarcies of permeability, respectively.

8. The Goldsmith (Clear Fork) Field has solution-gas drive as the primary drive mechanism.

9. Production from ESP rate testing ranged from 25 BOPD and 126 MCFGPD to 637 BOPD and 2,647 MCFGPD, collectively.

10. GORs for each well maintained consistent ratios. The seventeen subject wells are not rate-sensitive.

11. Adoption of an MER allowable of 400 BOPD is appropriate for the seventeen subject wells.

12. The Goldsmith (Clear Fork) Field comprising the applicant's seventeen leases is heterogeneous with no gas cap; therefore, an exception to Statewide Rule 49(a) is appropriate.

13. Through December 2011, the seventeen subject leases are overproduced.

14. Cancellation of accrued overproduction for the seventeen subject leases will not harm correlative rights.

CONCLUSIONS OF LAW

1. Notice of this hearing was given as specified in the provisions of all regulatory codes.

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

3. Approval of an MER allowable of 400 BOPD and the exception to Statewide Rule 49(a) and cancellation of the overproduction for the seventeen leases in the Goldsmith (Clear Fork) Field will prevent waste, will not harm correlative rights, and will promote development in the field.

RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiner recommends approval of the MER allowable, exception to Statewide Rule 49(a), and cancellation of the lease overproduction, as ultimately requested by BC Operating, Inc.

Respectfully submitted,

Brian K. Fancher
Technical Examiner

Marshall F. Enquist
Legal Examiner