

**THE APPLICATION OF CONOCOPHILLIPS COMPANY TO CONSOLIDATE THE HOWARD GLASSCOCK, HOWARD-GLASSCOCK (GLORIETA), AND HOWARD GLASSCOCK (CLEARFORK, MI) FIELDS INTO THE HOWARD GLASSCOCK (CONSOLIDATED) FIELD AND TO ADOPT FIELD RULES FOR THE PROPOSED CONSOLIDATED FIELD, CRANE, GLASSCOCK, HOWARD, MIDLAND, MITCHELL, AND STERLING COUNTIES, TEXAS**

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**Heard by:** Brian K. Fancher

**Date:** October 31, 2011

**Appearances:**

Jamie Nielson  
Greg Cloud

Marcus Winkler

**Representing:**

ConocoPhillips Company

Tradition Resources, LLC

**EXAMINER'S REPORT AND RECOMMENDATION**

**STATEMENT OF THE CASE**

ConocoPhillips Company ("Conoco") requests that the Howard Glasscock, Howard-Glasscock (Glorieta), and Howard Glasscock (Clear Fork, MI) Fields be consolidated into the Howard Glasscock (Consolidated) Field, Field ID No. 42971 200, and that field rules for the Howard Glasscock (Consolidated) Field be adopted as follows:

1. A designated, correlative interval from 1,120 feet to 5,890 feet, as shown on the log of the ConocoPhillips Company, Sloan Chalk lease, Well No. 29;
2. 200 foot lease line spacing and no between well spacing;
3. 10 acre proration units with 5 acre optional units;
4. Allocation based on 95% per well and 5% acreage.
5. Maximum Efficient Rate (MER) allowable of 250 barrels of oil per day per well.

In addition, Conoco requests cancellation of accrued overproduction for wells in the subject fields. Further, the applicant requests that the transfer of wells to the proposed Howard Glasscock (Consolidated) Field occur without the need to file form W-1 (Application for Permit to Drill, Recomplete, or Re-Enter) for such wells.

This application was unprotested and the examiner recommends approval of the requested field consolidation and field rules, as requested by Conoco.

### **DISCUSSION OF THE EVIDENCE**

The Howard Glasscock and the Howard-Glasscock (Glorieta) Fields were discovered in the 1920s, while the Howard Glasscock (Clear Fork, MI) Field was established in January 1970. The Field Rules for the Howard Glasscock Field designate 200'-400' well spacing, 10 acre density units with 5 acre options, and a top allowable of 54 BOPD. The Howard Glasscock (Glorieta) and Howard Glasscock (Clear Fork, MI) Fields operate under Field Rules of 330'-660' well spacing, 20 acre units with 10 acre options and 40 acre units with 20 acre options, and 55 BOPD and 84 BOPD MERs, respectively. As of September 2011, the combined, cumulative production for the three fields is reported as 115.5 million BO and 7.9 BCFG.

The three subject fields are Permian in age and are located on the eastern shelf of the Midland Basin in West Texas. Production occurs from limestone, dolomite, and dolomitic and silicious sandstone rock types. The Howard Glasscock Field stratigraphically includes members of the Yates, Seven Rivers, Queen, Grayburg-San Andres, and Glorieta formations. Historically, the field produces primarily from the Grayburg-San Andres formation, as there have been minor amounts of production from the remaining constituent formations comprising the field. The correlative interval for the Howard Glasscock Field was identified on the type log referenced in the proposed field rules as occurring from the top of the Yates to the top of the Glorieta formations. According to the October 2011 oil proration schedule there are 972 producing oil wells listed in the field. Cumulative production as of October 2011 is 86.8 million BO.

The Howard-Glasscock (Glorieta) Field stratigraphically includes the Glorieta formation. The correlative interval for the field was identified on the type log referenced in the proposed field rules, as occurring from 2,580 feet to 2,920 feet. According to the October 2011 oil proration schedule there are 245 producing oil wells listed in the field. Cumulative production as of October 2011 is 23.4 million BO.

The Howard Glasscock (Clear Fork, MI) Field stratigraphically includes the Clearfork formation, situated in the upper Leonardian series of the lower Permian period. The Clear Fork was identified on the type log, referenced in the proposed field rules, from 2,920 feet to 5,890 feet. According to the October 2011 oil proration schedule there are 54 producing oil wells listed in the field. Cumulative production as of October 2011 is 5.3 million BO.

Average daily oil production from the Howard Glasscock, Howard-Glasscock (Glorieta), and Howard Glasscock (Clear Fork, MI) Fields is currently 5.1 BOPD, 4.6 BOPD, and 7.6 BOPD, respectively. Conoco submitted evidence that indicates 379 wells have obtained Rule 10 exceptions and are completed in the Howard Glasscock and Howard-Glasscock (Glorieta) Fields. Also, an additional four wells have received a Rule 10 exception and are completed in the Howard-Glasscock (Glorieta) and Howard Glasscock (Clear Fork, MI).

Conoco requests that the Howard Glasscock (Consolidated) Field be designated as the correlative interval from 1,120 feet to 5,890 feet, as shown on the log of the ConocoPhillips Company, Sloan Chalk lease, Well No. 29 (API No. 42-227-35726), Sec. 114, Block 29, W & NW RR Co./Harral, TE Survey, Abstract 1131, Howard County, Texas. This interval includes the top of the Yates formation through the top of the Clearfork formation.

Conoco is seeking to adopt a well spacing rule that provides for a minimum of 200 feet from lease lines and no between well spacing, in conjunction with the optional 10 acre density units with optional 5 acre density. Conoco submitted an average drainage area calculation for thirty-six (36) wells on it's Mary Chalk Lease indicating the average drainage area for the Howard Glasscock Field is currently 2.4 Acres. Correspondingly, average drainage area calculations for nineteen (19) wells completed in the Howard-Glasscock (Glorieta) and four wells (4) completed in the Howard Glasscock (Clear Fork, MI) Field indicate an average per well drainage area of 5.7 and 5.9 acres, respectively. Similar well spacing and density provisions currently exist in the Snyder (San Andres), Snyder (Glorieta), Snyder (Clear Fork), and Iatan, East Howard Fields immediately north of the Howard Glasscock Field.

In order to satisfy state statutes, Conoco is requesting a two factor allocation formula due to the consolidation of the three existing fields incorporating multiple isolated producing intervals. Conoco requests the allocation formula be based on 95% per well and 5% acreage. The examiner opines a two factor allocation formula is appropriate in this instance.

The applicant is seeking to adopt a Maximum Efficient Rate (MER) allowable of 250 barrels of oil per day per well. In support of it's request, Conoco submitted production information dated from May 2011 through October 2011 for individual wells completed in the Howard Glasscock, Howard Glasscock (Glorieta), and Howard Glasscock (Clear Fork, MI). The Sarah Hyman lease, Well No. 41, completed in the Howard Glasscock Field, indicated an average rate of 11 BOPD, 1 MCFGPD, and 245 BWPDP. The Sarah Hyman lease, Well No. 56, completed in the Howard-Glasscock (Glorieta) Field, indicated an average rate 76 BOPD, 1 MCFGPD, and 2,000 BWPDP. Production rates for the Sarah Hyman lease, Well No. 57, completed in the Howard Glasscock (Clear Fork, MI), indicated an average rate of 110 BOPD, 1 MCFGPD, and 2,000 BWPDP. Conoco testified that combining all three fields in a single wellbore will yield a maximum production target of 224 BOPD, ultimately justifying an increase in MER to 250 BOPD for the proposed consolidated

field.

Conoco expressed that by consolidating the three existing fields into one consolidated field, additional hydrocarbon recovery is possible by extending the margins of each zones economic life. Conoco opined the average per well operating cost in each of the aforementioned fields is approximately \$1,667 per month. When combined, the total operating cost equates to approximately \$5,000 per month. Representatives of Conoco indicated that with a late life decline rate of five percent (5%) per year, with comparison to the average per well operating cost, additional per well oil and gas reserves of 7,620 BO and 1.14MMCF will be recovered by consolidating the three fields into the Howard Glasscock (Consolidated) Field.

As of August 2011, Conoco indicated it's Sarah Hyman (Lease ID No. 19037) lease, completed in the Howard-Glasscock (Glorieta) Field, has accumulated 312 BO in overproduction due to the fifty-five (55) barrel of oil per day MER in effect for the field. Shortly after, the applicant requested cancellation of accrued overproduction for wells in the three existing subject fields. The representative on behalf of Conoco testified that the cancellation will not harm correlative rights due to the absence of a gas cap in each reservoir, indicated by the mature production characteristics of each field.

#### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice and there were no protests.
2. The Howard Glasscock and the Howard-Glasscock (Glorieta) Fields were discovered in the 1920s, while the Howard Glasscock (Clear Fork, MI) Field was established in January 1970.
3. The Field Rules for the Howard Glasscock Field provide 200'-400' well spacing, 10 acre density units with 5 acre options, and a top allowable of 54 BOPD. The Howard Glasscock (Glorieta) and Howard Glasscock (Clear Fork, MI) Fields operate under field rules of 330'-660' well spacing, 20 acre units with 10 acre options and 40 acre units with 20 acre options, and 55 BOPD and 84 BOPD MERs, respectively.
4. The Howard Glasscock, Howard Glasscock (Glorieta), and Howard Glasscock (Clear Fork, MI) Fields are Permian in age and are located on the eastern shelf of the Midland Basin in West Texas. Production occurs from limestone, dolomite, and dolomitic and silicious sandstone rock types.
5. The Howard Glasscock Field stratigraphically includes members of the Yates, Seven Rivers, Queen, Grayburg-San Andres, and Glorieta formations. The Howard-Glasscock (Glorieta) Field stratigraphically includes the Glorieta formation. The Howard Glasscock (Clear Fork, MI) Field stratigraphically

includes the Clearfork formation, situated in the upper Leonardian series of the lower Permian period.

6. 379 wells completed in the Howard Glasscock and Howard-Glasscock (Glorieta) Fields have obtained Statewide Rule 10 exceptions.
7. Four (4) wells completed in the Howard-Glasscock (Glorieta) and Howard Glasscock (Clear Fork, MI) have received a Rule 10 exception.
8. Additional oil and gas reserves of 7,620 BO and 1.14MMCF per well will be recovered by consolidating the three fields into the Howard Glasscock (Consolidated) Field.
9. The Howard Glasscock (Consolidated) Field should be designated as the correlative interval from 1,120 feet to 5,890 feet, as shown on the log of the ConocoPhillips Company, Sloan Chalk lease, Well No. 29 (API No. 42-227-35726), Sec. 114, Block 29, W & NW RR Co./Harral, TE Survey, Abstract 1131, Howard County, Texas. This interval includes the Yates formation through the top of the Clearfork formation.
10. Well Spacing of 200 foot lease line and no between well spacing is appropriate for the field.
11. Average drainage areas for the Howard Glasscock Field are currently 2.4 acres. Average drainage areas for wells completed in the Howard-Glasscock (Glorieta) and the Howard Glasscock (Clear Fork, MI) Field are currently 5.7 and 5.9 acres, respectively.
12. Allocation based on 95% per well and 5% acreage is a reasonable formula which will protect correlative rights and meet statutory requirements.
13. A Maximum Efficient Rate (MER) allowable of 250 barrels of oil per day per well is appropriate for the proposed consolidated field.
14. Consolidation of the Howard Glasscock, Howard Glasscock (Glorieta), and Howard Glasscock (Clear Fork, MI) Fields into the Howard Glasscock (Consolidated) Field will allow operators to produce all reservoirs as a single completion without obtaining individual Rule 10 exceptions.
15. As of August 2011, Conoco's Sarah Hyman (Lease ID No. 19037) lease is overproduced by 312 BO.

**CONCLUSIONS OF LAW**

1. Proper notice of this hearing was given to all persons legally entitled to notice.
2. All things have occurred or been accomplished to give the Railroad Commission jurisdiction in this matter.
3. Consolidation of the Howard Glasscock, Howard Glasscock (Glorieta), and Howard Glasscock (Clear Fork, MI) Fields into the Howard Glasscock (Consolidated) Field, and amending the field rules as proposed by ConocoPhillips Company, is necessary to prevent waste, protect correlative rights, and promote development of the fields.
4. Cancellation of accrued overproduction in each field will not harm correlative rights.

**EXAMINER'S RECOMMENDATION**

Based on the above findings and conclusions, the examiner recommends that the Howard Glasscock, Howard Glasscock (Glorieta), and Howard Glasscock (Clear Fork, MI) Fields be consolidated into the Howard Glasscock (Consolidated) Field and that field rules be adopted for the Howard Glasscock (Consolidated) Field, as requested by ConocoPhillips Company.

Respectfully submitted,

Brian K. Fancher  
Technical Examiner