



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

**OIL AND GAS DOCKET NO. 7C-0300348**

**THE APPLICATION OF COMPASS ENERGY OPERATING, LLC TO CONSIDER A NET GAS-OIL RATIO AUTHORITY AND CANCELATION OF OVERPRODUCTION FOR THE FARMAR '20' LEASE (18750), WELL NO. 2, LONESOME REEF (WOLFCAMP) FIELD, IRION COUNTY, TEXAS**

**HEARD BY:** Brian Fancher, P.G. – Technical Examiner  
Ryan Lammert – Administrative Law Judge

**HEARING DATE:** July 12, 2016  
**RECORD CLOSED:** July 19, 2016  
**SUBMISSION DATE:** October 12, 2016  
**CONFERENCE DATE:** October 25, 2016

**APPEARANCES:**

**REPRESENTING:**

**APPLICANT:**

Buddy Richter, P.E.

Compass Energy Operating, LLC

### EXAMINERS' REPORT AND RECOMMENDATION

#### STATEMENT OF THE CASE

Compass Energy Operating, LLC (Compass) seeks to increase the net gas-oil ratio (GOR) for its Farmar '20' Lease, Well No. 2 (Subject Well), completed in the Lonesome Reef (Wolfcamp) Field (Field), to 800,000 cubic feet of natural gas per day (800 MCFGD). Compass also requests that all overproduction accrued from the Subject Well be cancelled.

The subject application is unopposed and the Examiner and Administrative Law Judge (Examiners) recommend that it be approved, as requested by Compass.

#### DISCUSSION OF THE EVIDENCE

Buddy Richter, P.E., consulting petroleum engineer, testified on behalf of Compass. Mr. Richter is a licensed Professional Engineer through the Texas Board of Professional Engineers.

Notice of the Subject Application was sent by U.S. mail on June 9, 2016, to all operators in the Field with active wells.<sup>1</sup>

### Field and Well History

The Field was discovered in September 1994, and is classified as an associated-prorated field. All wells completed in the Field are governed by Statewide Rules (*i.e.*, no special field rules exist for the field). Unless further specified, all oil production from the Field is administered a maximum daily allowable of 111 barrels of oil per day, and a maximum GOR of 2,000 standard cubic feet of gas for each stock tank barrel of oil produced.<sup>2</sup>

The Subject Well was previously completed in the Sugg Ranch (Canyon) Field. It was recompleted in the Field on December 23, 2014, and it has since remained a flowing well. The Subject Well was subsequently tested for initial potential and resulted in 187 barrels of oil per day, 74 MCFGD, 3 barrels of water per day, and a GOR of 395 standard cubic feet of gas per stock tank barrel of oil.

Compass evidenced that the Commission granted a Final Order that provides a Maximum Efficient Rate (MER) for the Subject Well in the Field, effective December 12, 2015.<sup>3</sup> That MER limits oil production from the Field through the Subject Well at 175 barrels of oil per day.

### Compass's Argument

Statewide Rule 49(a) states:

Any oil well producing with a gas-oil ratio in excess of 2,000 cubic feet of gas per barrel of oil produced shall be allowed to produce daily on the that volume of gas obtained by multiplying its maximum daily oil allowable...by 2,000. The gas volume thus obtained shall be known as the daily gas limit of the well. The daily oil allowable of the well shall then be determined by dividing its daily gas limit...by its producing gas-oil ratio in cubic feet per barrel of oil produced.

On April 25, 2016, Compass submitted its written request for a hearing on the Subject Application. On April 29, 2016, the Examiners issued a "standard" letter to Compass that details well test instructions to be performed on the Subject Well in order to obtain proper data to support Compass's requested relief.

Accordingly, Compass performed a production test on the Subject Well between May 17<sup>th</sup> and June 4, 2016.<sup>4</sup> The Subject Well was tested at three choke sizes – 20/64"; 22/64"; and 15/64". The results of that test were as follows:

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<sup>1</sup> Compass Exh. No. 1.

<sup>2</sup> See Tex. Admin. Code §3.49.

<sup>3</sup> Compass Exh. No. 6. O&G Final Order 7C-0297837 was signed by the Commissioners on November 17, 2015.

<sup>4</sup> Compass Exh. No. 8.

Choke Size	Avg. Oil Rate (bpd)	Avg. Gas Rate (mcf/d)	Avg. GOR (mcf/bpd)
15/64"	24	433	19,104
20/64"	102	637	6,898
22/64"	100	757	7,639

As previously mentioned, Statewide Rule 49(a) limits casinghead gas production from oil wells to 2,000 cubic feet of gas per barrel of oil produced (*i.e.*, 2 mcf per barrel of oil). Consequently, the Subject Well is limited to 350 MCFD of casinghead gas.<sup>5</sup> In order to achieve that limitation, Compass would need to reduce the choke size on the Subject Well to a size that is smaller than 15/64" because the test results indicate that choke size results in about 433 MCFD of casinghead gas from the well. Therefore, based on Compass's well test results, the Subject Well's most efficient use of reservoir energy occurs at a GOR of about 7,639 cubic feet of gas per barrel of oil because the GOR increases exponentially when the well's choke size is further reduced. Consequently, Compass requests that a net-GOR of 800 MCFD be granted for the Subject Well in the event oil production declines while casinghead gas production remains consistent.<sup>6</sup>

Compass submitted copies of production reports filed to the Commission for the Subject Well from December 2014 through May 2016. Those production reports indicate that the Subject Well is overproduced in the Field by approximately 10,491 MCF at the end of that period. Mr. Richter testified that cancellation of that overproduction is appropriate because it will prevent waste and will not cause harm to correlative rights.

#### FINDINGS OF FACT

1. Compass Energy Operating, LLC (Compass) seeks to increase the net gas-oil ratio (GOR) for the Farmar '20' Lease, Well No. 2 (Subject Well) to 800,000 cubic feet of natural gas per day (800 MCFGD) located in the Lonesome Reef (Wolfcamp) Field (Field), Irion County, Texas (Subject Application).
2. Notice of the Subject Application was sent by U.S. mail on June 9, 2016, to all operators in the Field with active wells.
3. The Subject Application is unopposed.
4. The Field was discovered in September 1994 and is governed by Statewide Rules.
5. The Subject Well was completed in the Lonesome Field in December 23, 2014, and resulted in the following initial potential production rates:
  - a. 187 barrels of oil per day;
  - b. 74 MCFGD;
  - c. 3 barrels of water per day; and,
  - d. GOR of 395 standard cubic feet of gas per stock tank barrel of oil.

<sup>5</sup> The Subject Well's existing daily casinghead gas limit was determined by multiplying the Subject Well's MER and the daily casinghead gas limit prescribed in Statewide Rule 49(a) – 175 barrels of oil per day times 2 mcf/d equals 350 mcf/d.

<sup>6</sup> See email from Mr. Richter dated July 19, 2016.

6. A variable rate test was performed on the Subject Well from May 17<sup>th</sup> and June 4, 2016 (Test).
7. The Subject Well was placed on a range of choke sizes spanning from 15/64" to 22/64" choke throughout the Test.
8. The Subject Well's GOR increased when the choke size was made smaller during the Test.
9. Increasing the net GOR to 800 MCFGD in the Subject Well is reasonable and will prevent waste.
10. Cancellation of the Subject Well's overproduction is reasonable and will not cause harm.

### CONCLUSIONS OF LAW

1. Resolution of the subject application is a matter committed to the jurisdiction of the Railroad Commission of Texas – Tex. Nat. Res. Code §81.051.
2. Legally sufficient notice has been provided to all affected persons.
3. Approval of the increased net GOR authority with a casinghead gas limit of 800 MCFGD in the Subject Well and cancellation of the Subject Well's overproduction will not cause waste and will not harm correlative rights.

### EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend that the Commission authorize the Farmar '20' Lease, Well No. 2 to produce under a net gas-oil ratio of 800 MCFGD, and that all accumulated overproduction attributed to the well be canceled.

Respectfully submitted,



Brian Fancher, P.G.  
Technical Examiner



Ryan Lammert  
Administrative Law Judge

**RAILROAD COMMISSION OF TEXAS  
HEARINGS DIVISION**

**OIL AND GAS DOCKET  
NO. 7C-0300348**

**LONESOME (WOLFCAMP)  
FIELD, IRION COUNTY,  
TEXAS**

**FINAL ORDER  
APPROVING INCREASED NET GAS-OIL RATIO AUTHORITY AND  
CANCELLATION OF OVERPRODUCTION  
FARMAR '20' LEASE (18750)  
LONESOME (WOLFCAMP) FIELD  
IRION COUNTY, TEXAS**

The Commission finds that after statutory notice in the above-numbered docket heard on July 12, 2016, the presiding Technical Examiner and Administrative Law Judge (collectively "Examiners") have made and filed a report and recommendation containing findings of fact and conclusions of law, for which service was not required; that the proposed application is in compliance with all statutory requirements; and that this proceeding was duly submitted to the Railroad Commission of Texas at conference held in its offices in Austin, Texas.

The Commission, after review and due consideration of the Examiners' report and recommendation, the findings of fact and conclusions of law contained therein, hereby adopts as its own the findings of fact and conclusions of law contained therein, and incorporates said findings of fact and conclusions of law as if fully set out and separately stated herein.

Therefore, it is **ORDERED** by the Railroad Commission of Texas that Compass Energy Operating, LLC is hereby granted authority to produce the Farmar '20' Lease, Well No. 2 (API No. 42-235-35456), Lonesome (Wolfcamp) Field, Irion County, Texas, under increased net gas-oil ratio authority with a casinghead gas limit of 800 Mcf per day. The oil allowable for the Menielle, L.B. Lease, Well No. 25 shall not be penalized unless the above permitted casinghead gas limit is exceeded.

It is further **ORDERED** by the Railroad Commission of Texas that all accumulated overproduction for the Compass Energy Operating LLC, Farmar '20' Lease, Well No. 2 (API No. 42-235-35456), completed in the Lonesome (Wolfcamp) Field, Irion County, Texas, is hereby cancelled.

It is further **ORDERED** by the Commission that this order shall not be final and effective until 25 days after the Commission's order is signed, unless the time for filing a motion for rehearing has been extended under Tex. Gov't Code §2001.142, by agreement under Tex. Gov't Code §2001.147, or by written Commission Order issued pursuant to Tex. Gov't Code §2001.146(e). If a timely motion for rehearing of an application is filed by any party at interest, this order shall not become final and effective until such motion is overruled, or if such motion is granted, this order shall be subject to further action by the Commission. Pursuant to Tex. Gov't Code §2001.146(e), the time allotted for Commission action on a motion for rehearing in this case prior to its being overruled by operation of law is hereby extended until 90 days from the date Commission Order is signed.

Done this 25<sup>th</sup> day of October, 2016.

**RAILROAD COMMISSION OF TEXAS**

**(Order approved and signatures affixed by  
Hearings Divisions' Unprotected Master  
Order dated October 25, 2016)**