

CHRISTI CRADDICK, *CHAIRMAN*
RYAN SITTON, *COMMISSIONER*
WAYNE CHRISTIAN, *COMMISSIONER*



RANDALL D. COLLINS, *DIRECTOR*

RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 08-0307139

APPLICATION OF BLACKBEARD OPERATING, LLC, TO CONSIDER A MAXIMUM EFFICIENT RATE (MER) ALLOWABLE, INCREASED NET GAS-OIL RATIO, AND CANCELLATION OF ALL OVERPRODUCTION FOR THE LANDLUBBER LEASE (48393), ARMER (6350) FIELD, CRANE COUNTY, TEXAS

HEARD BY: Robert Musick, P.G. – Technical Examiner
Jennifer N. Cook – Administrative Law Judge

HEARING DATE: December 20, 2017

POST-HEARING CONFERENCE: March 19, 2018

CONFERENCE DATE: April 24, 2018

APPEARANCES:

Applicant

Dale E. Miller, P.E.

REPRESENTING:

Blackbeard Operating, LLC

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Blackbeard Operating, LLC ("Blackbeard") is seeking a maximum efficient rate ("MER") allowable of 150 barrels of oil per day ("BOPD") for each well, and, is also requesting to produce oil and gas under a previously adopted increase in net gas-oil ratio ("Net GOR") with a daily gas limit of 1,000 thousand cubic feet per day ("MCFPD") for each well on the Landlubber Lease (48393) in the Armer (6350) Field ("Field"), Crane County, Texas. Blackbeard is also requesting that accumulated overproduction on the Landlubber Lease be canceled.

The application was not protested. The technical examiner and the administrative law judge (collectively "Examiners") recommend that the application be granted as requested.

DISCUSSION OF THE EVIDENCE

The Field (No. 03644852) was discovered on September 2, 1955. The Field is observed beneath the Lease from 6080 to 6115 feet. Testimony at the hearing established that a solution-gas drive mechanism controls the production in the Field. Casinghead gas production has increased over the life of the Field because of a decrease in reservoir pressure which inhibits oil recovery. Wells are typically completed and put on artificial lift (i.e., beam pumps) because natural flow is not occurring for the newly installed wells in the Field.

Testimony indicates the Field has many older wells on the Oil Proration Schedule that have low potentials and low deliverability. The most recent wells in the Field have used fracking technology and are much more prolific producing on average from 60 to about 90 BOPD compared to older wells in the Field, without fracking technology, which produce about 15 BOPD.

The top oil allowable for the Field is 111 BOPD based on the 1947 allowable yard stick with a two-factor allocation formula. The March 2018 Oil Proration Schedule indicates a statewide rule Net GOR of 2,000 standard cubic feet ("SCF") of casinghead gas per barrel of oil, or 2,000:1 SCF/Barrel, is established for the Field.

The Landlubber Lease consists of 400 acres. Blackbeard has completed four wells on the Landlubber Lease: Well No. 3 on August 25, 2016; Well No. 6 on April 24, 2017; Well No. 1 on June 22, 2017; and, Well No. 9 on November 28, 2017. All oil wells produce with a moderate to high well gas-oil ratio ("Well GOR") and make significant volumes of water. These wells have all been producing on beam pumps since they were originally completed. Well No. 9 is the most recent completed well and is currently producing without an allowable while the completion paperwork is being prepared by Blackbeard for submittal to the Railroad Commission of Texas. Production details for each well is outlined below:

- Well No. 3 (API No. 42-103-36548) is producing from perforations at a depth of 5,976 to 6,086 feet. The initial potential test, dated September 9, 2016, show the initial production rates are 33 BOPD, 734 MCFPD of casinghead gas, and 550 barrels of water per day ("BWPD"), and a Well GOR of 22,242. Blackbeard subsequently retested Well No. 3 on October 25, 2016 and the reported production rates were 114 BOPD, 509 MCFPD and 626 BWPD, and a Well GOR of 4464. The maximum production rate for the Landlubber Lease Well No. 3 was 286 BOPD, with a daily average production history of 93 BOPD and 330 MCFPD of casinghead gas.

- Well No. 6 (API No. 42-103-36559) is producing from perforations at a depth of 5,950 to 6,115 feet. The initial potential test, dated July 26, 2017, show the initial production rates are 56 BOPD, 93 MCFPD of casinghead gas, 342 BWPD, and a Well GOR of 1,660. The maximum production rate for Landlubber Lease Well No. 6 was 210 BOPD with a daily average production history of 60 BOPD and 122 MCFPD of casinghead gas.
- Well No. 1 (API No. 42-103-36560) is producing from perforations at a depth of 5,912 to 6,110 feet. The initial potential test, dated July 20, 2017, show the initial production rates are 47 BOPD, 131 MCFPD of casinghead gas, 452 BWPD, and a Well GOR of 2,787. The maximum production rate for the Landlubber Lease Well No. 1 was 257 BOPD with an average production history of 70 BOPD and 153 MCFPD of casinghead gas.
- Well No. 9 (API No. 42-103-36560) is producing from perforations at a depth of 5,912 to 6,115 feet. The initial potential test, dated July 20, 2017, show the initial production rates of: 47 BOPD, 131 MCFPD of casinghead gas, 452 BWPD, and a Well GOR of 2,787. The maximum production rate for the Landlubber Lease Well No. 9 was 133 BOPD with a daily average production history from November 28, 2017 to March 18, 2018 of 26 BOPD and casinghead gas of 189 MFCPD.

The Landlubber Lease Well No. 3 has been assigned a penalized oil allowable of 50 BOPD because the potential test performed on October 25, 2016 exceeded the statewide rule Net GOR of 2,000 standard cubic feet (SCF) of casinghead gas per barrel; or, 2000 SCF/BBL. Also, Landlubber Lease Well No. 9 is not currently on the Proration Schedule since it was recently completed. The Landlubber Well Nos. 1 and 6 are not being penalized as the reported Well GOR does not limit the wells natural potentials to produce oil and gas.

On August 31, 2017, a letter from the Commission was sent to Blackbeard regarding the intent to cancel P-4 for the Landlubber Lease (No. 48393) in Crane County, Texas. The letter indicates overage of 23,044 barrels of oil (BO) and 59,559 thousand cubic feet ("MCF") of casinghead gas as of August 2017.

A letter dated September 26, 2017 was received from Blackbeard requesting a hearing. Blackbeard was seeking an MER oil allowable of 150 BOPD, an increased Net GOR with a daily gas limit of 500 MCFPD, and cancellation of overproduction for the Landlubber Lease.

A Notice of Hearing was issued by the Commission on November 17, 2017, to all parties entitled to notice, at least ten days prior to the date of the hearing. No protest was received from the Notice of Hearing.

A hearing was held on January 20, 2018. At the hearing, testimony indicated that the hearing notice was specific to Well No. 3, but Blackbeard requested the MER and increased Net GOR with a daily gas limit be for the entire Landlubber Lease. On January 3, 2018, the Hearings Division sent a letter to parties on the Service List to provide additional notice of proposed changes to the original notice, as requested by Blackbeard. No protest, objections or request for a hearing continuance was received from the second notice.

On February 12, 2018, the Hearings Division requested a step-rate test be performed on Landlubber Lease wells to demonstrate efficient production volumes when recovered at volumes proximal to the proposed MER of 150 BOPD. In response, Blackbeard requested for the Commission to convene a post-hearing conference to discuss the Hearings Division's letter dated February 12, 2018; and present new information for consideration. Blackbeard modified its initial hearing request to limit this docket (Oil and Gas docket 08-0307139) to:

- change the MER oil allowable for the Landlubber Lease;
- cancel all over-production; and,
- request that the Commission recognize the increased Net GOR authority with a daily gas limit of 1,000 MCFPD established by Docket No. 8-56,687, effective November 1, 1966;

In response to the Commission's letter regarding overproduction, Blackbeard provided the Form W-2, allocated daily production history logs and graphs for Landlubber Well Nos. 3, 6, 1 and 9.

Logs and graphs presented at the hearing and post-hearing conference indicate daily average oil production for the four wells range from 50 BOPD to about 100 BOPD with the daily maximum oil production rates ranging from a high of 286 BOPD to a low of 133 BOPD. Also, the fluid levels for Well Nos. 3, 6 and 1, are all within 100 feet of the surface demonstrating additional potential is available to produce these wells at a higher production rate supporting the MER oil allowable of 150 BOPD. Mr. Miller stated that the wells all produce very high volumes of water which indicates continuous pumping may be necessary to keep the oil flowing into the wellbores.

In the post-hearing conference held on March 19, 2018, one of the primary concerns by Blackbeard was the step-rate test requested by the Hearings Division in the February 12, 2018 letter. Testimony indicated that the beam pump wells have no mechanism to vary the speed of pumping to establish efficiencies as requested in the letter. Also, performing a step-rate test may not be warranted to establish efficiencies to demonstrate the MER. Blackbeard supported their MER request of 150 BOPD using the production logs, graphs and demonstrating that there is additional potential to produce these wells at a higher optimal rate based on static fluid levels in the wells at about 100 feet below surface. Blackbeard cited Docket No. 8A-0278562, which supports the use of fluid levels in the wellbore, as a demonstration of potential energy in the reservoir to

support optimal production of oil and gas near the 150 BOPD MER requested in the hearing.

During the post-hearing conference, Blackbeard presented information that indicates the Field was authorized to have an increased Net GOR with a daily gas limit of 1,000 MCFPD established by Docket No. 8-56,687, effective November 1, 1966. Therefore, Blackbeard requested the Commission recognize the previous authorized gas limit of 1,000 MCFPD.

Blackbeard testified that producing the Landlubber Lease wells in this field at the requested MER is necessary to effectively recover the remaining oil reserves that are available to each well.

The Examiners recommend approval of the requested MER oil allowable and cancellation of over-production for each well in the Landlubber Lease in the Armer (6350) Field. The Examiners also recommend that the increased Net GOR authority with a daily gas limit of 1,000 MCFPD that was authorized by Docket No. 8-56,687, effective November 1, 1966, be recognized and implemented.

FINDINGS OF FACT

1. Notice of this hearing was provided to all parties entitled to notice at least ten (10) days prior to the date of the hearing and no protests were received. On January 3, 2018, an additional notice of ten (10) days was sent to the Service List parties regarding proposed changes by the applicant in the hearing. The application was not protested. Also, no protest, objections or request for a hearing continuance was received from the second notice sent to the Service List dated January 3, 2018.
2. The Field (No. 03644852) is in Crane County, Texas and was discovered on September 2, 1955. The Field is observed beneath the Landlubber Lease (No 48393) from approximately 6080 to 6115 feet.
3. Wells are typically completed and put on artificial lift (i.e., beam pumps) because natural flow is not occurring in the Field.
4. The Landlubber Lease consist of 400 acres. Blackbeard has completed four wells on the Landlubber Lease: Well No. 3 on August 25, 2016; Well No. 6 on April 24, 2017; Well No. 1 on June 22, 2017; and, Well No. 9 on November 28, 2017.
5. The Oil Proration Schedule indicates the top allowable is 111 BOPD and the statewide rule Net GOR of 2,000 standard cubic feet ("SCF") per barrel of oil is utilized for the Field. The Landlubber Lease Well No. 3 has been assigned a penalized oil allowable of 50 BOPD because the potential test performed on October 25, 2016 exceeds the Net GOR of 2000 SCF/BBL. This has caused over-production in Well No. 3 for the Landlubber Lease.

6. A Commission letter dated August 31, 2017 was sent to Blackbeard regarding the intent to cancel P-4 for the Landlubber Lease (No. 48393) in Crane County, Texas. The letter indicates overage of 23,044 barrels of oil (BO) and 59,559 thousand cubic feet (MCF) of casinghead gas as of August 2017.
7. On September 26, 2017, Blackbeard requested a hearing, which convened on January 20, 2018. Blackbeard was seeking an MER oil allowable of 150 BOPD, an increased Net GOR with a daily gas limit of 500 MCFPD, and cancellation of overproduction for the Landlubber Lease.
8. On February 28, 2018, Blackbeard requested a post-hearing conference which convened on March 19, 2018. The following was discussed in the conference:
 - Blackbeard modified its initial request to limit this docket (Oil and Gas docket 08-0307139) to the 150 BOPD for the MER allowable for the Landlubber Lease and cancel all over-production;
 - Blackbeard requested the Commission recognize the previously adopted increase in Net GOR with a daily gas limit of 1,000 thousand cubic feet per day ("MCFPD") for each well on the Landlubber Lease (48393) established by Docket No. 8-56,687, effective November 1, 1966; and
 - Blackbeard presented updated logs, graphs and charts to demonstrate oil production efficiencies for the MER allowable for the Landlubber Lease.
9. Logs and graphs presented at the hearing and post-hearing conference indicate the maximum oil production rate observed from the Landlubber Lease wells (Well Nos. 3, 6, 1 and 9) range from a low of 133 BOPD to a high of 286 BOPD.
10. Fluid levels for Well Nos. 3, 6 and 1, are all within 100 feet of the surface demonstrating there is additional potential to produce these wells at a higher rate supporting the MER oil allowable of 150 BOPD.
11. There is no evidence to suggest that a top daily allowable of 150 BOPD with a 1000 MCFPD daily casinghead gas limit for the Landlubber Lease will cause waste or harm correlative rights.
12. The shut-in of pumping oil wells can damage the wellbores and cause a loss of productive performance.
13. Cancellation of the overage for the Landlubber Lease is proper to prevent having to shut-in wells and potentially harm the reservoir.
14. At the hearing, the applicant agreed on the record that the Final Order in this case is to be effective when the Master Order is signed.

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. All notice requirements have been satisfied. 16 Tex. Admin. Code §§ 1.43 and 1.45.
3. Pursuant to § 2001.144 (a)(4)(A) of the Texas Government Code and the agreement of the applicant, this Final Order is effective when a Master Order relating to the Final Order signed at Conference.

RECOMMENDATION

Based on the above findings of facts and conclusions of law, the Examiners recommend that the Commission enter an order granting the application of Blackbeard Operating, LLC for a MER oil allowable of 150 BOPD and cancel all over-production for each well in the Landlubber Lease in the Armer (6350) Field. The Examiners also recommend that the increased Net GOR authority with a daily gas limit of 1,000 MCFPD authorized by Docket No. 8-56,687, effective November 1, 1966, be recognized and implemented.

Respectfully submitted,



Robert Musick, P.G.
Technical Hearings Examiner



Jennifer N. Cook
Administrative Law Judge