

RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 03-0309793

APPLICATION OF DANMARK ENERGY SERVICES, INC. (199614) FOR AN INCREASED NET GAS OIL RATIO FOR THE EXXON MINERAL FEE (27260) LEASE, WELL NO. 6, JACKS CREEK (WILCOX A) FIELD, TYLER COUNTY, TEXAS

HEARD BY: Robert Musick, P.G. – Technical Examiner
Kristi M. Reeve - Administrative Law Judge

HEARING DATE: May 11, 2018

CONFERENCE DATE: August 21, 2018

APPEARANCES: **REPRESENTING:**

APPLICANT:

Dale E. Miller
G. Tyson McClead

Danmark Energy Services, Inc.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Danmark Energy Services, Inc. ("Danmark") is seeking an increase in the net gas-oil ratio ("GOR") authority to produce the Exxon Mineral Fee (27260) Lease, Well No. 6, under increased net gas-oil ratio (GOR) authority. At the hearing it was requested to grant authority to have a daily casinghead gas limit of 550 thousand cubic feet per day ("MCF/Day") for Exxon Mineral Fee (27260) Lease, Well No. 6, Jacks Creek (Wilcox A) Field, Tyler County, Texas.

Danmark also requests in the March 2, 2018 letter requesting the hearing, that accumulated overproduction on the Exxon Mineral Fee (27260) Lease, Well No. 6 be canceled.

The application is unopposed and the Technical Examiner and Administrative Law Judge, (collectively "the Examiners") recommend approval of the application as requested.

DISCUSSION OF THE EVIDENCE

The Jacks Creek (Wilcox A) Field, ("Field") was discovered as a gas field on January 2, 1991; and as an oil field on November 2, 2016. The Field (No. 45367645) is now an associated, one well Field. Testimony indicates the depth of the Field is 7,865 feet.

The Field has a top oil allowable of 121 barrels of oil per day ("BOPD"). A Net GOR of 2,000 cubic feet ("CF") of casinghead gas per barrel of oil, or 2,000:1 CF/Barrel, is established for the Field. The GOR provides for a current daily casinghead gas limit of 242 MCF/Day for wells in the Field. Testimony indicate the production data shows that the current standard GOR limitation is not appropriate for this Field.

Testimony at the hearing established that a solution-gas drive mechanism controls the production in the Field. Gas production has increased over the life of the Field because of a decrease in reservoir pressure which inhibits oil recovery.

As of May 2018, the Exxon Mineral Fee (27260) Lease, Well No. 6 (API No. 42-457-30455) (referred to as "Well No. 6") is the only producing oil well on the oil proration schedule. The proration schedule also identifies one injection well identified as Well No. 5 completed in 1995, and one shut-in gas well completed in 1991.

Well No. 6 was completed in November 2016 and is a flowing oil well on an 8/64-inch choke. Upon initial completion, the well was tested for the initial potential and resulted in 234 BOPD, 344 MCF/Day of casinghead gas, and a GOR of 1,470 CF/Barrel. Production reports indicate Well No. 6 has a GOR greater than 2,000 CF/Barrel, which results in overproduction.

The gas production data for the Exxon Mineral Fee (27260) Lease show accumulative production from November 2016 to February 2018 of 47,570 barrels of oil ("BO") and 162,520 MCF of gas. Also, the GOR for Well No. 6 has trended upward from an initial low GOR of 1,761 CF/Barrel in November 2016 to a high GOR of 6,446 CF/Barrel in September 2017. Danmark received a certified letter issued by the Railroad Commission of Texas dated January 24, 2018, stating that there was a violation for overproduction of casinghead gas.

Danmark performed a GOR test on Well No. 6 from March 9th through April 8th, 2018, at various choke sizes, ranging from a 9/64 inch to 14/64 inch. Testing data for the oil well demonstrate that when choked-back the production rate decreased, the GOR increased and the well began to load. Testimony and testing data indicate the oil well produced efficiently on the larger choke size (i.e., 14/64-inch) with 103 BOPD and a GOR of 4,649 CF/bbl. The 14/64-choke demonstrated the well would produce about 500 MCF/Day and remain unloaded and produce with a lower producing GOR compared to other testing rates during the well test.

On March 2, 2018, Danmark requested a hearing. A Notice of Hearing was issued by the Commission on April 2, 2018 to all parties entitled to notice at least ten days prior to the date of the hearing. A hearing was held on May 11, 2018.

The subject lease is overproduced by 51,288 MCF through the end of February 2018. The Examiners recommend approval of the requested net GOR authority with a daily gas limit of 550 MCF/Day, and cancellation of all over-production for Exxon Mineral Fee (27260) Lease, Well No. 6, Jacks Creek (Wilcox A) Field, Tyler County, Texas.

At the hearing, the applicant agreed on the record that the Final Order in this case is to be final and effective when the Master Order is signed.

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.
2. The Jacks Creek (Wilcox A) Field (No. 45367645) was discovered as a gas field on January 2, 1991; and discovered as an oil field on November 2, 2016. The Field is an associated, one well field.
3. As of May 2018, Well No. 6 is the only producing oil well on the oil proration schedule. The proration schedule also identifies one injection well identified as Well No. 5 completed in 1995, and one shut-in gas well completed in 1991.
4. Well No. 6 was completed in November 2016. Upon initial completion, the well was tested for the initial potential and resulted in 234 BOPD, 344 MCF/Day of casinghead gas, and a well GOR of 1,470 CF/Barrel. Production reports indicate Well No. 6 has a GOR more than 2,000 CF/Barrel, which results in monthly overproductions from the Lease.
5. The gas production data for the Exxon Mineral Fee (27260) Lease shows that the GOR for Well No. 6 has trended upward over time from an initial low well GOR of 1,761 CF/Barrel to a high well GOR of 6,446 CF/Barrel in September 2017.
6. A Commission letter dated January 24, 2018, was sent to Danmark regarding the intent to cancel P-4 for the Exxon Mineral Fee (27260) Lease, Well No. 6, Jacks Creek (Wilcox A) Field, Tyler County, Texas. The Lease is overproduced by 51,288 MCF through the end of February 2018.
7. On March 2, 2018, Danmark requested a hearing to have an increased net gas-oil ratio (GOR) authority and requests that accumulated overproduction on the Exxon Mineral Fee (27260) Lease, Well No. 6 be canceled.
8. A hearing was held on May 11, 2018. At the hearing it was requested to grant authority to have a daily casinghead gas limit of 550 MCF/Day for Exxon Mineral Fee (27260) Lease, Well No. 6, Jacks Creek (Wilcox A) Field, Tyler County, Texas.
9. A variable rate test was performed on Well No. 6 from March 9 through April 8, 2018. Based on the testing data, the oil well produced efficiently and resulted in a lower producing GOR with a 14/64-inch size choke size.
10. Approval of the increased net GOR authority with a casinghead daily gas limit of 550 MCF/Day for Well No. 6 and cancellation of the overproduction of the Lease will prevent waste and protect correlative rights.
11. The shut-in of the pumping oil well can damage the wellbore and cause a loss of productive performance.
12. Cancellation of the overage for the Exxon Mineral Fee (27260) Lease, Well No. 6, is proper

to prevent having to shut-in the well and potentially harm the reservoir.

13. At the hearing, the applicant agreed on the record that the Final Order in this case is to be final and 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 § 1.42.
3. Approval of the application will prevent waste and protect correlative rights.
4. Pursuant to § 2001.144 (a)(4)(A) of the Texas Government Code and the agreement of the applicant, this Final Order is final and effective when a Master Order relating to the Final Order signed at Conference.

EXAMINER'S RECOMMENDATION

Based on the above findings of facts and conclusions of law, the examiners recommend that the Commission authorize the Exxon Mineral Fee (27260) Lease, Well No. 6 to produce under an increased net gas-oil ratio with a daily casinghead gas limit of 550 MCF/Day. The examiners also recommend that all accumulated overproduction attributed to the lease be canceled.

Respectfully submitted,



Robert Musick, P. G.
Technical Examiner



Kristi M. Reeve
Administrative Law Judge