



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL & GAS DOCKET NO. 03-0301933

THE APPLICATION OF SM ENERGY COMPANY FOR APPROVAL OF TIGHT GAS SAND AREA DESIGNATION FOR THE AUSTIN CHALK, EAGLEFORD AND WOODBINE FORMATIONS, BEN UNIT, DEEP PINES (WDBN/AC) FIELD, WALKER COUNTY, TEXAS

OIL & GAS DOCKET NO. 03-0301934

THE APPLICATION OF SM ENERGY COMPANY FOR APPROVAL OF TIGHT GAS SAND AREA DESIGNATION FOR THE AUSTIN CHALK, EAGLEFORD AND WOODBINE FORMATIONS, DOC LEASE, DEEP PINES (WDBN/AC) FIELD, WALKER COUNTY, TEXAS

OIL & GAS DOCKET NO. 03-0301935

THE APPLICATION OF SM ENERGY COMPANY FOR APPROVAL OF TIGHT GAS SAND AREA DESIGNATION FOR THE AUSTIN CHALK, EAGLEFORD AND WOODBINE FORMATIONS, MATT DILLON STATE GU 1, DEEP PINES (WDBN/AC) FIELD, SAN JACINTO COUNTY, TEXAS

HEARD BY: Peggy Laird, P.G. – Technical Examiner
Clayton J. Hoover – Administrative Law Judge

HEARING DATE: June 9, 2017

CONFERENCE DATE: September 19, 2017

APPEARANCES:

Doug Dashiell
Frank J. Muser, P.E.

REPRESENTING:

SM Energy Company

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

Pursuant to Statewide Rule 101 (16 Tex. Admin. Code §3.101), SM Energy Company ("SMEC") (Operator No. 788997) seeks a tight formation area designation for

a portion of the Deep Pines (WDBN/AC) Field ("the Field"), Walker and San Jacinto Counties, Texas. The captioned dockets were heard on a joint record at the June 9, 2017 hearing. SMEC was the only party present at the hearing, and a summary of their presentation is presented below. SMEC provided evidence that the requested areas meet the technical requirements of Statewide Rule 101(f). The applications are unopposed. The Technical Examiner and Administrative Law Judge (collectively, "Examiners") recommend the applications be approved and the tight formation areas be designated.

STATUTORY AUTHORITY

Pursuant to Statewide Rule 101(f)(3)(B), an applicant for a tight formation area certification must provide engineering and geological exhibits, including a written explanation of each, to establish the following:

- (i) *That the in situ permeability throughout the proposed formation or specific portion thereof is 0.1 millidarcies or less, as determined by geometric mean or median analysis of available data from all wells that either have been tested or are completed in the proposed formation within the requested area. If no in situ permeability estimates are provided for wells that are in the requested area and have been tested and/or are completed in the proposed formation, an explanation shall be provided;*
- (ii) *That the pre-stimulation stabilized production rate against atmospheric pressure at the wellhead, as determined by a geometric mean or median analysis of available data from all wells within the requested area that either have been tested and/or are completed in the proposed formation or specific portion thereof, does not exceed the production rate listed in the following table;¹*
- (iii) *That no well drilled into the formation is expected to produce, without stimulation, more than five barrels of crude oil per day; and*
- (iv) *That the requested designated area does not extend beyond a two and one-half mile radius drawn from any data point well.*

DISCUSSION OF THE EVIDENCE

Background

On September 27, 2016, SMEC filed its applications for three tight formation area designations with the Commission in Austin, Texas. SMEC was the only operator of record for the subject field at the time of the applications.² On March 8, 2017, Commission

¹ See 16 TAC §3.101(f)(3)(B)(ii); the table is not reproduced here.

² SMEC stated that in early 2017, there was a change of ownership after the applications had been filed.

staff notified SMEC that the applications could not be granted administratively. SMEC subsequently requested a hearing on the applications, and on April 3, 2017, the applications were received by the Hearings Division. The hearing for the docketed applications was held on joint record June 9, 2017.

Each application is for an area around each of three wells. Each well is the data point well for each application, and is the only well completed in the proposed formation within the requested area. The portion of the Field considered for each application is within the completion interval of each well. The completion intervals are Woodbine Formation ("the Woodbine") with a thin segment of the Eagle Ford Formation ("Eagle Ford"). The Woodbine underlies the Eagle Ford and was formed during the late Cretaceous Period. The Woodbine represents ancient river and delta systems that originated from erosion of the Ouachita Uplift. Thin-bedded productive sands are located within the Woodbine, and form the targeted interval. SMEC stated that the Woodbine comprises most of the Field and the designated tight formation area is limited to the Woodbine. According to SMEC, the Eagle Ford portion within the requested intervals is not productive for several miles from the wells.

Data Points

The following are the three proposed tight formation areas and data point wells:

- (1) The requested area for **Docket No. 03-0301933** is within the P. Blanchet Survey A-7 in Walker County and contains 1,313 acres. The correlative interval for the tight formation area designation is from 13,120 feet to 13,500 feet true vertical depth ("TVD"), as shown on the log of the SM Energy Company Ben Unit, Well No. 1H, (API No. 471-30369). This well and docket will be referred to as the "Ben Unit" throughout the remainder of this report.;
- (2) The requested area for **Docket No. 03-0301934** is within the B. Resinhover Survey A-456 in Walker County and contains 2,290 acres. The correlative interval for the tight formation area designation is from 13,260 feet to 13,500 TVD, as shown on the log of the SM Energy Company Doc Lease, Well No. 1H, (API No. 42-471-30368). This well and docket will be referred to as the "Doc Lease" throughout the remainder of this report.; and
- (3) The requested area for **Docket No. 03-0301935** is within the A Mays A-232, S. Foremain A-295, J. Foster A-115, JC Hill A-467, E Jones A-183, and J.R. Johnson A-185 Surveys in San Jacinto County and contains 1,607 acres. The correlative interval for the tight formation area designation is from 12,900 feet to 13,100 TVD, as shown on the log of the SM Energy Company Matt Dillon State Gas Unit, Well No. 1H, (API No. 42-407-30740). This well and docket will be referred to as the "MDSG Unit" throughout the remainder of this report.

In-Situ Permeability

SMEC conducted production matching analysis with PROMAT software to evaluate the in-situ permeability of each data point well. The wells were completed within the subject Woodbine interval in the proposed tight area. Based on this analysis, SMEC determined that the in-situ permeability for the Ben Unit is 0.0059 millidarcies ("md"), the Doc Lease is 0.064 md, and the MDSG Unit is 0.0018 md. SMEC also presented permeability evidence from two other area wells, the SMEC Chester 1H (API No. 42-471-30375) with a permeability of 0.006 md, and the SMEC Horizon Properties 2H (API No. 42-407-30734) with a permeability of 0.0025 md. Both wells are completed in the Woodbine, and provided core data for additional permeability evidence. However, they are not considered data point wells. These results meet the requirement in Statewide Rule 101(f)(3)(B)(i), that the in situ permeability throughout the proposed formation or specific portion thereof is 0.1 millidarcies or less.

Pre-stimulation Stabilized Production Rates

The stabilized unstimulated production rate against atmospheric pressure for the data point wells was calculated using ONEPT software. Based on this analysis, SMEC determined that the pre-stimulation stabilized production rates are as follows:

- (1) Ben Unit, 130 thousand cubic feet per day ("MCFD"), which meets the requirement in Statewide Rule 101(f)(3)(B)(ii) to be less than 1,913 MCFD;
- (2) Doc Lease, 1,280 MCFD, which meets the requirement in Statewide Rule 101(f)(3)(B)(ii) to be less than 1,655 MCFD; and
- (3) MDSG Unit, 53 MCFD, which meets the requirement in Statewide Rule 101(f)(3)(B)(ii) to be less than 1,432 MCFD.

Oil Production

SMEC reported that the Deep Pines (WDBN/AC) Field is a non-associated field and wells in the Field would not be expected to produce more than 5 barrels per day of condensate without stimulation. Statewide Rule 101(f)(3)(B)(iii) requires production to be no more than 5 barrels of crude oil per day.

Distance to Data Points

Statewide Rule 101(f)(3)(B)(iv) requires that the designated area not extend beyond a 2.5 mile radius drawn from any data point well. Each of the requested tight formation areas are within 2.5 miles of a data point well.

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 the hearing.
2. The proposed tight formation area for Docket No. 03-0301933 is within the P. Blanchet Survey A-7 in Walker County and contains 1,313 acres. The correlative interval for the tight formation area designation is from 13,120 feet to 13,500 feet TVD, as shown on the log of the SM Energy Company Ben Unit, Well No., 1H, (API No. 471-30369).
3. The proposed tight formation area for Docket No. 03-0301934 is within the B. Resinhover Survey A-456 in Walker County and contains 2,290 acres. The correlative interval for the tight formation area designation is from 13,260 feet to 13,500 TVD, as shown on the log of the SM Energy Company Doc Lease, Well No. 1H, (API No. 42-471-30368).
4. The proposed tight formation area for Docket No. 03-0301935 is within the A Mays A-232, S. Foremain A-295, J. Foster A-115, JC Hill A-467, E Jones A-183, and J.R. Johnson A-185 Surveys in San Jacinto County and contains 1,607 acres. The correlative interval for the tight formation area designation is from 12,900 feet to 13,100 TVD, as shown on the log of the SM Energy Company Matt Dillon State Gas Unit, Well No. 1H, (API No. 42-407-30740).
5. SMEC determined that the in-situ permeabilities for the Ben Unit is 0.0059 md, the Doc Lease is 0.064 md, and the MDSG Unit is 0.0018 md, which meets the requirement in Statewide Rule 101(f)(3)(B)(i) to be less than 0.1 millidarcies.
6. SMEC determined that the pre-stimulation stabilized production rate for the Ben Unit is 130 MCFD, which meets the requirement in Statewide Rule 101(f)(3)(B)(ii) to be less than 1,913 MCFD.
7. SMEC determined that the pre-stimulation stabilized production rate for the Doc Lease is 1,280 MCFD, which meets the requirement in Statewide Rule 101(f)(3)(B)(ii) to be less than 1,655 MCFD.
8. SMEC determined that the pre-stimulation stabilized production rate for the MDSG Unit is 53 MCFD, which meets the requirement in Statewide Rule 101(f)(3)(B)(ii) to be less than 1,432 MCFD.
9. The Deep Pines (WDBN/AC) Field is a non-associated field and wells would not be expected to produce more than 5 barrels per day of condensate without stimulation, which meets the requirement of Statewide Rule 101(f)(3)(B)(iii).

10. Each of the requested tight formation areas is within 2.5 miles of a data point well, which meets the requirement in Statewide Rule 101(f)(3)(B)(iv).

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 §3.101.
3. The application for a tight formation area designation meets the requirements of Statewide Rule 101. 16 Tex. Admin. Code §3.101.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend the Commission enter an order granting the applications of SM Energy Company for a tight formation area designation for a portion of the Deep Pines (WDBN/AC) Field, Walker and San Jacinto Counties, Texas.

Respectfully submitted,



Peggy Laird, P.G.
Technical Examiner



Clayton J. Hoover
Administrative Law Judge

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**OIL & GAS DOCKET NO.
03-0301933**

**IN THE DEEP PINES (WDBN/AC)
FIELD, WALKER COUNTY, TEXAS**

**FINAL ORDER
GRANTING THE APPLICATION OF SM ENERGY COMPANY
PURSUANT TO STATEWIDE RULE 101
FOR THE DESIGNATION OF A PORTION OF THE DEEP PINES (WDBN/AC) FIELD AS A
TIGHT GAS FORMATION, WALKER COUNTY, TEXAS**

The Commission finds that after statutory notice in the above-numbered docket heard on June 9, 2017, the 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 complies 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 the application of SM Energy Company for a tight formation area designation for that portion of the Deep Pines (WDBN/AC) Field in Walker County, Texas, described below, is hereby **GRANTED**.

The designated tight formation area includes that portion of the Deep Pines (WDBN/AC) Field that consists of the correlative interval from 13,120 feet to 13,500 feet true vertical depth, as shown on the log of the SM Energy Company Ben Unit, Well No. 1H, (API No. 42-471-30369), and within the P. Blanchet Survey A-7 in Walker County containing 1,313 acres, as shown in the attached map, is hereby designated as a tight gas formation and therefore produces high cost gas pursuant to 16 TAC §3.101.

Pursuant to §2001.144(a)(4)(A), of the Texas Government Code, and by agreement of the Parties in writing or on the record, **the parties have waived right to file a Motion for Rehearing and this Final Order is effective on the date the Master Order relating to the Final Order is signed.**

Done this 19th day of September 2017.

RAILROAD COMMISSION OF TEXAS

**(Order approved and signatures affixed by
Hearings Division's Unprotected Master Order
dated September 19, 2017)**

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**OIL & GAS DOCKET NO.
03-0301934**

**IN THE DEEP PINES (WDBN/AC)
FIELD, WALKER COUNTY, TEXAS**

**FINAL ORDER
GRANTING THE APPLICATION OF SM ENERGY COMPANY
PURSUANT TO STATEWIDE RULE 101
FOR THE DESIGNATION OF A PORTION OF THE DEEP PINES (WDBN/AC) FIELD AS A
TIGHT GAS FORMATION, WALKER COUNTY, TEXAS**

The Commission finds that after statutory notice in the above-numbered docket heard on June 9, 2017, the 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 complies 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 the application of SM Energy Company for a tight formation area designation for that portion of the Deep Pines (WDBN/AC) Field in Walker County, Texas, described below, is hereby **GRANTED**.

The designated tight formation area includes that portion of the Deep Pines (WDBN/AC) Field that consists of the correlative interval from 13,260 feet to 13,500 feet true vertical depth, as shown on the log of the SM Energy Company Doc Lease, Well No. 1H, (API No. 42-471-30368), and within the B. Resinhover Survey A-456 in Walker County containing 2,290 acres, as shown in the attached map, is hereby designated as a tight gas formation and therefore produces high cost gas pursuant to 16 TAC §3.101.

Pursuant to §2001.144(a)(4)(A), of the Texas Government Code, and by agreement of the Parties in writing or on the record, **the parties have waived right to file a Motion for Rehearing and this Final Order is effective on the date the Master Order relating to the Final Order is signed.**

Done this 19th day of September 2017.

RAILROAD COMMISSION OF TEXAS

**(Order approved and signatures affixed by
Hearings Division's Unprotested Master Order
dated September 19, 2017)**

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**OIL & GAS DOCKET NO.
03-0301935**

**IN THE DEEP PINES (WDBN/AC) FIELD,
SAN JACINTO COUNTY, TEXAS**

**FINAL ORDER
GRANTING THE APPLICATION OF SM ENERGY COMPANY
PURSUANT TO STATEWIDE RULE 101
FOR THE DESIGNATION OF A PORTION OF THE DEEP PINES (WDBN/AC) FIELD AS A
TIGHT GAS FORMATION, SAN JACINTO COUNTY, TEXAS**

The Commission finds that after statutory notice in the above-numbered docket heard on June 9, 2017, the 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 complies 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 the application of SM Energy Company for a tight formation area designation for that portion of the Deep Pines (WDBN/AC) Field in San Jacinto County, Texas, described below, is hereby **GRANTED**.

The designated tight formation area includes that portion of the Deep Pines (WDBN/AC) Field that consists of the correlative interval from 12,900 feet to 13,100 feet true vertical depth, as shown on the log of the SM Energy Company Matt Dillon State Gas Unit, Well No. 1H, (API No. 42-407-30740), and within the A Mays A-232, S. Foremain A-295, J. Foster A-115, JC Hill A-467, E Jones A-183, and J.R. Johnson A-185 Surveys in San Jacinto County containing 1,607 acres, as shown in the attached map, is hereby designated as a tight gas formation and therefore produces high cost gas pursuant to 16 TAC §3.101.

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