

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

OIL & GAS DOCKET NO. 08-0309912

**THE APPLICATION OF SHELL WESTERN E&P PURSUANT TO STATEWIDE RULE
46 APPLICATION TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL OR
GAS FOR THE SABINE 53-2-15 LOV LEASE, WELL NO. 1D DIMMITT (DELAWARE
CONS) FIELD, LOVING COUNTY, TEXAS**

FINAL ORDER

The Commission finds that after statutory notice in the above-numbered docket heard on June 1 & 8, 2018, the presiding Examiners have made and filed a proposal for decision containing findings of fact and conclusions of law, which was served on all parties of record; that the proposed application submitted by Shell Western E & P, 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 consideration of the Examiners' proposal for decision, the findings of fact and conclusions of law contained therein, and any exceptions and replies thereto, hereby adopts as its own the findings of fact and conclusions of law as follows:

FINDINGS OF FACT

1. Shell Western E&P seeks a permit authorizing disposal operation pursuant to 16 Tex. Admin. Code § 3.46 for the Sabine 53-2-15 LOV Lease, Well No. 1D, Dimmitt (Delaware Consolidate) Field, Loving County, Texas.
 - a. The application for the Sabine 53-2-15 LOV Lease, Well No. 1D, was mailed to Texas Pacific Land Trust which is the surface owner of the tract where the well is located, and the Loving County Clerk. Notice was also given to the Iskandia Energy Operating, Inc. and Anadarko E&P Onshore LLC, the two operators with have active wells within the half-mile radius. 16 Tex. Admin. Code § 3.46(c)(1),(2).
 - b. Notice of the Sabine 53-2-15 LOV Lease, Well No. 1D disposal well application was published in the *Winkler County News* on November 2, 2017.
 - c. The application is protested by the offset operator Iskandia Energy Operating, Inc.
 - d. At least 10 days' notice of the hearing was provided to the surface owner and to the Loving County Clerk. 16 Tex. Admin. Code § 3.46(c)(5)(A).

2. The applicant requested maximum daily injection volume of 25,000 barrels per day, injection interval from 4,640 to 8,180 feet, and maximum surface pressure of 2,320 psi. The injection interval is from 4,640 to 8,180 feet, total of 3,540 feet. The saltwater injected into the Well No. 1D would originate from Phantom (Wolfcamp) Field.
3. A Groundwater Protection Determination letter states that to protect usable-quality groundwater at this location, the Groundwater Advisory Unit (GAU) of the RRC recommends the interval from the land surface to 1,000 feet must be protected. The GAU estimates the base of underground sources of drinking water (USDW) occurs at a depth of 2,150 feet at the site of the referenced well (API No. 301-33674).
4. The proposed construction of Sabine Well No. 1D is as follows: 9 5/8" casing set at 1,150 feet with cement to surface to protect the base of usable quality water at 1,000 feet; 7" casing set at a depth of 4,640 feet and cemented to surface, protecting GAU estimated base of USDW at a depth of 2,150 feet; 4 1/2" tubing placed within 100' from the top of the injection interval to surface.
5. The installation or use of this is in the public interest.
6. The Delaware Mountain Group sands, which include the producing Dimmitt (Delaware Consolidated) Field, are suitable for injection.
7. The proposed injection interval in the Delaware Mountain Group sands, has top and bottom seal represented by Castile Formation and the Bone Spring Formation respectively.
8. There is no evidence that communication exists between the productive and non-productive portions of the reservoir. Oil is produced at depths beneath non-productive depths.
9. The pressure-front calculation indicates that the increase in pressure in the non-productive zones will be minimal.
10. Communication between the productive and non-productive zones does not exist as evidenced by substantial pressure variance observed across the Dimmitt (Delaware Cons) Field, from native pressure (~2,500 psi) down to 472 psi.
11. 523 existing disposal well permits exist in Loving County. Numerous operators currently dispose into the disposal interval in the area that Shell proposes including the Protestant, Iskandia. There is no evidence current disposal operations have negatively impacted production from the Dimmitt (Delaware Cons) Field.
12. The estimated EUR for the Dimmitt (Delaware Consolidated) Field is between 223,000 and 1.8 million barrels of oil.

13. Shell Western E&P (Operator No. 774719) has an active P-5 on file with the Commission with an expiration date of January 31, 2019, and a \$250,000 letter of credit.
14. No seismic events have been reported within 100 square miles of the proposed disposal well location.

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. The proposed fluid disposal operations will not endanger oil, gas or geothermal resources.
3. Shell Western E & P established the application for the Sabine 53-2-15 LOV Lease, Well No. 1D, Dimmitt (Delaware Cons) Field, Loving County, Texas satisfies the requirement of Statewide Rule 46.
4. Approval of the application for the Sabine 53-2-15 LOV Lease, Well No, 1D, Dimmitt (Delaware Cons) Field, Loving County Texas prevents waste and protects correlative rights.

Therefore, it is **ORDERED** by the Railroad Commission of Texas that the application of Shell Western E & P to conduct disposal operations into the Sabine 53-2-15 Lease, Well No. 1D, Dimmitt (Delaware Cons) Field, Loving County, Texas at a rate of 25,000 bbls/d is hereby **GRANTED**, subject to the following terms and conditions:

SPECIAL CONDITIONS

1. As proposed by Item 17 on Form H-1A, the intermediate casing must be set and cemented to at least 4,640 feet.
2. Open hole completions shall have a plug-back depth no deeper than the bottom of the permitted injection interval.
3. The plug-back depth must be 8,180 feet or shallower.

STANDARD CONDITIONS

3. Injection must be through tubing set on a packer. The packer must be set no higher than 100 feet above the top of the permitted interval.
4. The District Office must be notified 48 hours prior to:
 - a. running tubing and setting packer;
 - b. beginning any workover or remedial operation; or
 - c. conducting any required pressure tests or surveys.

5. The wellhead must be equipped with a pressure observation valve on the tubing and for each annulus.
6. Prior to beginning injection and subsequently after any workover, an annulus pressure test must be performed. The test pressure must equal the maximum authorized injection pressure or 500 psig, whichever is less, but must be at least 200 psig. The test must be performed annually and the results submitted in accordance with the instructions of Form H-5.
7. The injection pressure and injection volume must be monitored at least monthly and reported annually on Form H-10 to the Commission's Austin office.
8. Within 30 days after completion, conversion to disposal, or any workover that results in a change in well completion, a new Form W-2 or G-1 must be filed to show the current completion status of the well. The date of the disposal well permit and the permit number must be included on the new Form W-2 or G-1.
9. Written notice of intent to transfer the permit to another operator by filing Form P-4 must be submitted to the Commission at least 15 days prior to the date of the transfer.
10. A well herein authorized cannot be converted to a producing well and have an allowable assigned without filing an amended Form W-1 and receiving Commission approval.
11. Unless otherwise required by conditions of the permit, completion and operation of the well shall be in accordance with the information represented on the application (Forms H-1 and H-1A).
12. This permit will expire when the Form W-3, Plugging Record, is filed with the Commission. Furthermore, permits issued for wells to be drilled will expire three (3) years from the date of the permit unless drilling operations have commenced.
13. The permit number shall be F-21232.

Provided further that, should it be determined that such injection fluid is not confined to the approved interval, then the permission given herein is suspended and the injection operation must be stopped until the fluid migration from such interval is eliminated. Failure to comply with all of the conditions of this permit may result in the operator being referred to enforcement to consider assessment of administrative penalties and/or the cancellation of the permit.

Each exception to the Examiners' proposal for decision not expressly granted herein is overruled. All requested findings of fact and conclusions of law which are not expressly adopted herein are denied. All pending motions and requests for relief not previously granted or granted herein are denied.

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 part at interest, this order shall not become final and effective until such a 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 100 days from the date the Commission Order is signed.

Done this 11th day of December 2018.

RAILROAD COMMISSION OF TEXAS

Christi Craddick

CHAIRMAN CHRISTI CRADDICK

Ryan

COMMISSIONER RYAN SITTON

Wayne Christian

COMMISSIONER WAYNE CHRISTIAN

ATTEST:

Kathy Way

SECRETARY

