

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

**OIL AND GAS DOCKET
NO. 06-0287587**

**IN THE CARTHAGE (RODESSA) FIELD,
PANOLA COUNTY, TEXAS**

**FINAL ORDER
APPROVING THE APPLICATION OF SAMSON LONE STAR, LLC
PURSUANT TO STATEWIDE RULE 46,
TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS,
POWELL BOTTOM LEASE, WELL NO. 2, CARTHAGE (RODESSA) FIELD,
PANOLA COUNTY, TEXAS**

The Commission finds that after statutory notice in the above-numbered docket heard on August 19, 2014, the presiding examiners have made and filed a report and proposal for decision containing findings of fact and conclusions of law, which was served on all parties of record; 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 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 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 Samson Lone Star, LLC is hereby authorized to conduct saltwater disposal operations in the Powell Bottom Lease, Well No. 2 (API No. pending), in the Carthage (Rodessa) Field, Panola County, Texas, subject to the following terms and conditions:

SPECIAL CONDITIONS:

1. Fluid shall be injected into the Rodessa and Pettit Formations in the subsurface depth interval between 4,950 feet and 6,055 feet.
2. The injection volume shall not exceed 12,000 barrels per day.
3. The maximum operating surface injection pressure shall not exceed 2,475 psig.
4. Surface casing (9 5/8-inch) shall be set to 500 feet with cement circulated to the surface.
5. Production casing (7-inch) shall be set at 6,150 feet with cement circulated to the surface.

6. Injected fluid shall be limited to produced saltwater and RCRA exempt wastes.
7. The operator shall perform an initial static bottom hole pressure test to quantify reservoir pressure prior to injection into a zone in the Pettit or Rodessa Formations.
8. The operator shall assure the initial static bottom hole pressure test is witnessed by Commission field personnel and shall provide raw data from the test to the District Office and the Technical Permitting section of the Oil and Gas Division within 48 hours of completing the test.
9. Measurement for the static bottom hole pressure test will be either via a drill stem test during drilling or a pressure bomb run after completion.
10. The normal pressure gradient for purposes of evaluating results of the initial static bottom hole pressure test shall be deemed to be 0.465 psi/ft, measured at the top of the injection interval.
11. The operator shall provide a log of the subject well with Form W-2 or G-1 for the purpose of identifying the depth of the Rodessa Formation. The operator shall provide Formation Tops of the Rodessa and Pettit Formations on Form W-2 or G-1. Predicted top and bottom depth of the Rodessa Formation in the subject well is 4950 and 5750 feet, respectively.
12. The permit to inject into the Rodessa Formation zone tested shall automatically terminate if the initial pressure gradient is 0.565 psi/ft or greater.
13. The operator shall notify the District Office and the Technical Permitting section of the Oil and Gas Division of the date it starts injection into a Rodessa Formation zone.
14. The operator shall conduct a pressure fall off test **six months** after injection has commenced in a Rodessa Formation zone. The operator shall provide the District Office at least 72 hours notice of the test time and date to allow the Commission to witness the test. The permit shall automatically terminate for the Rodessa Formation zone if the average reservoir pressure determined by analysis of the fall off test by a professional engineer registered in the state of Texas indicates a pressure gradient of 0.565 psi/ft or greater. The test analysis shall be filed with the Commission's Austin offices within 30 days of completion of the fall off test. This test analysis shall be signed, sealed, and dated by a Professional Engineer registered in the State of Texas.
15. The operator shall conduct a pressure fall off test **twelve months** after injection has commenced in a Rodessa Formation zone and provide the

Commission an opportunity to witness the test as stated above. The permit shall automatically terminate for the Rodessa Formation zone if the average reservoir pressure determined by analysis of the fall off test by a professional engineer registered in the state of Texas indicates a pressure gradient of 0.565 psi/ft or greater. The test analysis shall be filed with the Commission's Austin offices within 30 days of completion of the fall off test. This test analysis shall be signed, sealed, and dated by a Professional Engineer registered in the State of Texas.

16. The operator shall conduct a pressure fall off test in the Rodessa Formation zone used for injection/disposal **annually** from the twelve month test date and provide the Commission an opportunity to witness the test as stated above. The permit shall automatically terminate for the Rodessa Formation zone if the average reservoir pressure determined by analysis of the fall off test by a professional engineer registered in the state of Texas indicates a pressure gradient of 0.565 psi/ft or greater. The test analysis shall be filed with the Commission's Austin offices within 30 days of completion of the fall off test. This test analysis shall be signed, sealed, and dated by a Professional Engineer registered in the State of Texas.

STANDARD CONDITIONS:

1. Injection must be through tubing set on a packer.
2. The District Office must be notified 48 hours prior to :
 - a. Running tubing and setting packer;
 - b. Beginning any work over or remedial operation;
 - c. Conducting any required pressure tests or surveys, including the initial static bottom hole pressure test and subsequent pressure fall off tests required by the Special Conditions of this permit.
3. The wellhead must be equipped with a pressure observation valve on the tubing and for each annulus.
4. Prior to beginning injection and subsequently after any work over, 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 and the results submitted in accordance with the instructions of Form H-5.
5. 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.
6. Within 30 days after completion, conversion to disposal, or any work over which 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.

7. Written notice of intent to transfer the permit to another operator by filing a Form P-4 must be submitted to the Commission at least 15 days prior to the date of the transfer.
8. A well herein authorized cannot be converted to a producing well and have an allowable assigned to it, without first filing an amended Form W-1 and receiving Commission approval.
9. Unless otherwise required by conditions of the permit, completion and operations of the well shall be in accordance with the information represented on the application (Forms H-1 and H-1A).
10. 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.
11. The permit number shall be _____.

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 disposal 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.

This order will not be final and effective until 20 days after a party is notified of the Commission's order. A party is presumed to have been notified of the Commission's order three days after the date on which the notice is actually mailed. If a timely motion for rehearing 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 the order is served on the parties.

Done this ___th day of _____, 2014.

RAILROAD COMMISSION OF TEXAS

CHAIRMAN CHRISTI CRADDICK

COMMISSIONER DAVID PORTER

COMMISSIONER BARRY T. SMITHERMAN

ATTEST:

SECRETARY