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# RAILROAD COMMISSION OF TEXAS

## OIL AND GAS DIVISION PERMIT TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL AND GAS

PROJECT NO. F 4230

ARCO PERMIAN  
P O BOX 1610  
MIDLAND TX 79702

Based on information contained in your application (Forms H-1 and H-1A) dated October 31, 2000, you are hereby authorized to use the following well to inject fluid into the Grayburg Formation:

Block 31 Unit Lease, (09684), Well No. 101D, Block 31 (Grayburg) Field, Crane County, RRC District 08

Authority is granted to inject in accordance with Statewide Rule 46 of the Railroad Commission of Texas and subject to the following special and standard conditions:

### SPECIAL CONDITIONS:

1. Fluid shall only be injected into strata in the subsurface depth interval from 3038 feet to 4220 feet.
2. The injection volume of salt water, contaminated groundwater from 30 feet and exempt oil and gas plant waste water shall not exceed 3000 barrels per day.
3. The maximum operating surface injection pressure shall not exceed 1500 psig.
4. The authority to inject fluid is limited to the injection of salt water, contaminated groundwater from 30 feet and exempt oil and gas plant waste water.

### 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 workover or remedial operation;
  - c. conducting any required pressure tests or surveys.

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 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 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 fluid injection, or any workover which results in a change in well completion, a new Form W-2 or G-1 must be filed in duplicate with the District Office to show the current completion status of the well. The date of the injection permit and the project 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 must be submitted to the Commission at least 15 days prior to the date the transfer will occur by filing Form P-4.
8. 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.
9. Unless other wise 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).
10. This permit will expire when the Form W-3, Plugging Record, is filed with the Commission.

Provided further that, should it be determined that such injection fluid is not confined to the approved strata, then the permission given herein is suspended and the fluid injection must be stopped until the fluid migration from such strata is eliminated.

APPROVED AND ISSUED ON February 26, 2001.



Richard F. Ginn, Deputy Assistant Director  
for Underground Injection Control