



**DEPARTMENT of AGRICULTURE  
and NATURAL RESOURCES**

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August 28, 2023

Jeremy Wagner  
Citation Oil & Gas Corp.  
1016 E. Lincoln  
Gillette, WY 82716

Re: Case No. 4-2023 – Approval of Major Modification, 8-27H Clarkson well,  
SE/4 NE/4 Section 27, Township 21N, Range 3E, Harding County

Dear Mr. Wagner:

Thank you for your application filed June 14, 2023, requesting a modification of the existing permit to inject for the 8-27H Clarkson well, to support the water flood in the “B” zone of the Red River Formation in the West Buffalo ‘B’ Red River Unit for enhanced recovery of oil and gas.

The department published a Notice of Recommendation for Case No. 4-2023 recommending approval of the application. The final date for intervention was August 23, 2023, and no parties petitioned the Board of Minerals and Environment for a hearing on the application by the deadline.

Therefore, in accordance with the Administrative Rules of South Dakota (ARSD) 74:12:07 and 74:12:09, approval of the application is hereby granted. The permit is conditioned on compliance with all applicable requirements of South Dakota Codified Laws 45-9 and ARSD 74:12. Please refer to the enclosed Notice of Recommendation for specific terms and conditions.

Thank you for your interest in protecting the water resources of the state.

Sincerely,

Hunter Roberts  
Secretary

Enclosure

STATE OF SOUTH DAKOTA  
SECRETARY OF THE  
DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION OF CITATION OIL AND GAS CORP., HOUSTON, TEXAS, TO MODIFY ITS PERMIT TO INJECT FOR THE 8-27H CLARKSON WELL LOCATED IN THE SE¼ NE¼ SECTION 27, TOWNSHIP 21 NORTH, RANGE 3 EAST, IN THE WEST BUFFALO 'B' RED RIVER UNIT OF THE BUFFALO FIELD, HARDING COUNTY, ABOUT FIFTEEN MILES NORTHWEST OF BUFFALO, SOUTH DAKOTA, TO SUPPORT WATER FLOOD IN THE "B" ZONE OF THE RED RIVER FORMATION IN THE WEST BUFFALO 'B' RED RIVER UNIT FOR ENHANCED RECOVERY OF OIL AND GAS.

NOTICE  
OF  
RECOMMENDATION  
FOR MAJOR MODIFICATION OF  
PERMIT TO INJECT

OIL AND GAS  
CASE NO. 4-2023

Notice is hereby given to the public and to all interested persons that pursuant to South Dakota Codified Laws (SDCL) Chapter 1-26 and Chapter 45-9 and further pursuant to the Administrative Rules of South Dakota (ARSD) 74:12:07 and 74:12:09, the following matter has come to the attention of the Secretary of the Department of Agriculture and Natural Resources, hereinafter "Secretary."

Citation Oil and Gas Corp., hereinafter "Citation", has requested a Major Modification of its permit to inject for the existing 8-27H Clarkson well. The permit to inject for the 8-27H Clarkson well was previously authorized under South Dakota Oil and Gas Order No. 5-93. The request entails injection into the subsequently drilled horizontal lateral and modifying the injection pressure for the 8-27H Clarkson from 1540 psi to 2010 psi.

The 8-27H Clarkson well was completed with 1,584 feet of 9 5/8-inch steel surface casing, cemented to protect underground sources of drinking water, and 8,435 feet of 5 1/2-inch steel production casing, cemented to protect underground sources of drinking water. The injection zone remains the "B" zone of the Red River Formation. Injection water will be produced water from the "B" zone of the Red River formation. No domestic water wells are located within the one-half mile area of review. All wells within the one-half mile area of review and maximum calculated radius of influence are constructed such that the injection into the 8-27H Clarkson well will not affect any underground sources of drinking water.

The requested maximum injection pressure for water injection is 2,010 pounds per square inch and the total requested injection volume is 8,760,000 cumulative barrels of water.

The Secretary recommends approval of the application with the following conditions:

- 1) Injection operations authorized under the permit to inject must be conducted in accordance with SDCL Chapter 45-9, ARSD 74:12 and any applicable orders or rules promulgated by the South Dakota Board of Minerals and Environment;
- 2) The total number of barrels injected during the life of this permit may not exceed 8,760,000 barrels of water;
- 3) The maximum injection rate must not exceed 800 barrels of water per day;
- 4) The term of water injection may not exceed 30 years;

- 5) The maximum pressure for water injection must not exceed 2,010 pounds per square inch surface injection pressure during injection operations;
- 6) A mechanical integrity test must be successfully conducted prior to the commencement of water injection activity. The well must pass the mechanical integrity test at 1,000 pounds per square inch surface pressure. The operator is required to notify the Secretary a minimum of 72 hours prior to running a mechanical integrity test;
- 7) Once mechanical integrity is established, the well must be retested at least once every five years to ensure that mechanical integrity is maintained;
- 8) If an unsuccessful pressure test occurs, the operator must cease operations immediately if it is determined the injection will threaten any underground source of drinking water. If the failure is not threatening ground water, the operator must cease operations within 48 hours after receipt of the department Secretary's notice, and take corrective action on the well as soon as feasible. Corrective action options include repairing the well so that a successful test result can be obtained, plugging and abandoning the well, or any other action approved by the department.

Authority for the Secretary to approve this application is contained in ARSD 74:12:07 and 74:12:09. Unless a person files a petition requesting a hearing on the above application pursuant to the provisions of ARSD 74:09:01:01 and 74:09:01:04 on or before August 23, 2023, the Secretary's recommendation will be considered final and the Secretary will approve the application in accordance with that recommendation.

The application and notice of recommendation are also posted on the department's website at: <https://danr.sd.gov/Environment/MineralsMining/OilGas/OilGasCases.aspx> and <https://danr.sd.gov/public/default.aspx>. Additional information about this application is available from Jeff Klenner, Minerals and Mining Program, Department of Agriculture and Natural Resources, 523 East Capitol Avenue, Pierre, SD 57501, telephone (605) 773-4201, email [Jeff.Klenner@state.sd.us](mailto:Jeff.Klenner@state.sd.us).

August 3, 2023



Hunter Roberts  
Secretary

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