



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

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June 23, 2022

Peter MacIntyre
Continental Resources, Inc.
PO Box 269000
Oklahoma City, OK 73126

Re: Case No. 1-2022 – Approval of application for permit to inject, WBRRU 34-36H well, SW/4 SW/4 Section 36, Township 21N, Range 3E, Harding County

Case No. 2-2022 – Approval of application for permit to inject, SBRRU 13-32H well, NW/4 SW/4 Section 32, Township 21N, Range 4E, Harding County

Case No. 3-2022 – Approval of Major Modification, Koch 14-30 SBRRU well, SW/4 SW/4 Section 30, Township 21N, Range 4 E, Harding County

Dear Mr. MacIntyre:

Thank you for your applications filed May 04, 2022, requesting conversion of the WBRRU 34-36H well to a water injection well; conversion of the SBRRU 13-32H well to a water injection well; modification of the existing permit to inject to convert the Koch 14-30 SBRRU well to water, to support the water flood in the "B" zone of the Red River Formation in the South Buffalo Red River Unit and West Buffalo Red River Unit for enhanced recovery of oil and gas.

The department published Notice of Recommendations for Case Nos. 1-2022, 2-2022, and 3-2022 recommending approval of the applications. The final date for intervention was June 08, 2022, 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 applications is hereby granted. The permits are 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

Enclosures

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

IN THE MATTER OF THE APPLICATION OF CONTINENTAL RESOURCES, INC., OKLAHOMA CITY, OKLAHOMA, TO MODIFY ITS PERMIT TO INJECT FOR THE KOCH 14-30 SBRRU WELL LOCATED IN THE SW¼ SW¼ SECTION 30, TOWNSHIP 21 NORTH, RANGE 4 EAST, IN THE SOUTH BUFFALO RED RIVER UNIT OF THE BUFFALO FIELD, HARDING COUNTY, ABOUT FOURTEEN MILES NORTHWEST OF BUFFALO, SOUTH DAKOTA, TO SUPPORT WATER FLOOD IN THE "B" ZONE OF THE RED RIVER FORMATION IN THE SOUTH BUFFALO 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. 3-2022

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."

Continental Resources, Inc., hereinafter "Continental," has requested a Major Modification of its permit to inject for the existing Koch 14-30 SBRRU well. The permit to inject for the Koch 14-30 SBRRU well was previously authorized under South Dakota Oil and Gas Order No. 10-89f. The request entails modifying injection fluid for the Koch 14-30 SBRRU from air to water.

The Koch 14-30 SBRRU well was completed with 3,781 feet of 8 5/8-inch steel surface casing, cemented to protect underground sources of drinking water, and 8,629 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 and the Inyan Kara. 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 Koch 14-30 SBRRU well will not affect any underground sources of drinking water.

The requested maximum injection pressure for water injection is 1,700 pounds per square inch and the total requested injection volume is 18,250,000 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 18,250,000 barrels of water;
- 3) The maximum injection rate must not exceed 2,000 barrels of water per day;
- 4) The term of water injection may not exceed 25 years;

- 5) The maximum pressure for water injection must not exceed 1,700 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 on or before June 8, 2022, 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 Lucy Blocker, Minerals and Mining Program, Department of Agriculture and Natural Resources, 523 East Capitol Avenue, Pierre, SD 57501, telephone (605) 773-4201, email Lucy.Blocker@state.sd.us.

May 19, 2022



Hunter Roberts
Secretary

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