

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:**

**APPLICATION OF DAKOTA RESOURCES, INC. TO REINSTATE THE
INJECTION AUTHORIZED BY ORDER SWD-802, EDDY COUNTY, NEW
MEXICO.**

**CASE NO. 15676
ORDER NO. R-14394**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on May 25, 2017, at Santa Fe, New Mexico, before Examiners Scott Dawson and Phillip R. Goetze.

NOW, on this 14th day of July, 2017, the Division Director, having considered the testimony, the record, and the recommendations of Examiner Goetze,

FINDS THAT:

- (1) Due public notice has been given, and the Division has jurisdiction of this case and the subject matter.
- (2) Dakota Resources, Inc. (I) ("Applicant" or "Dakota") seeks authority to reinstate the authority to inject for its Trigg Federal Well No. 1 (API No. 30-015-25006; the "subject well"), located 1980 feet from the South line and 660 feet from the West line (Lot 3) of Section 7, Township 21 South, Range 28 East, NMPM, Eddy County, New Mexico, for disposal of produced water into the Bell Canyon formation through a perforated interval from 2926 feet to 3315 feet below surface. The original authority to inject for the subject well was approved by administrative order SWD-802 issued on June 6, 2001.
- (3) The Division, in a correspondence dated July 15, 2016, notified Dakota that the authority to inject for the subject well had terminated *ipso facto* pursuant to Rule 19.15.26.12(C) NMAC. The loss of authority was determined using the last month of reported injection of September, 2013 followed by 12 consecutive months with no reported injection.

(4) On October 24, 2016, Dakota submitted an administrative application (Application No. pMAM16300566805) to the Division for approval of the subject well for disposal of produced water as had been previously permitted by administrative order SWD-802. The review of the application by the Division identified issues including possible impacts to hydrocarbon resources which occur in the same interval as proposed for disposal. As a result, the Division denied the approval of the application by administrative process and requested that Dakota seek approval for the authority to inject by means of a Division hearing.

(5) Additionally, the Operator was identified as being out of compliance with Division Rule 19.15.5.9 NMAC for the allowable inactive well count.

(6) On March 14, 2017, Dakota submitted the application for the subject well to be placed on a hearing docket.

(7) The Applicant appeared through counsel and presented the following testimony:

- (a) The subject well is constructed with the following three casing strings: a 13 $\frac{3}{8}$ -inch surface casing set at 831 feet; an 8 $\frac{5}{8}$ -inch intermediate casing string set at 2505 feet, and a 5 $\frac{1}{2}$ -inch production casing set at 3366 feet.
- (b) The subject well has cement circulated to surface for the surface casing and 8 $\frac{5}{8}$ -inch intermediate casing string. The 5 $\frac{1}{2}$ -inch production casing has a top of cement at 2100 feet based on a temperature survey.
- (c) The Applicant originally proposed an average injection rate of 1500 barrels of water per day (BWPD), with a maximum injection rate not to exceed 2000 BWPD. At hearing, the Applicant revised the proposed injection rate by reducing the average injection rate to 150 BWPD and the maximum injection to 200 BWPD.
- (d) The Applicant has stated that the prior injection interval and the corresponding perforations approved under administrative order SWD-802 would not be changed with the approval of this application.
- (e) During the previous operation of the subject well, the maximum surface injection pressure averaged 500 pounds per square inch (psi). This average injection pressure was below the approved pressure limit of 585 psi provided in administrative order SWD-802.
- (f) The only source of produced water for disposal would be from Applicant's leases in the vicinity of the subject well. Applicant

stated that the subject well was not a commercial operation and that no additional sources from other operators or vendors would be accepted for disposal.

- (g) Applicant identified the deepest known source of fresh water in the vicinity of the subject well as shallow alluvial fill.
- (h) There were no fresh-water wells identified within a one-half mile radius of the subject well.
- (i) The results of the half-mile Area of Review (AOR) around the subject well found a total of five wells that penetrate the proposed injection interval. Two of these wells are plugged, and the remaining are active producers. All of these wells are properly cemented to protect underground sources of drinking water and not to allow migration of injected fluids from the proposed injection interval.
- (j) Applicant identified the Bell Canyon formation of the Delaware Mountain group for the disposal interval that also contained hydrocarbon production in the same formation within a two-mile radius of the subject well. Applicant testified that the 12 previous years of disposal in the same interval has not positively or negatively impacted the production of offsetting wells producing from the same formation.
- (k) Applicant provided analysis of formation waters for the Bell Canyon formation in the area that demonstrated a total dissolved solids concentration of approximately 144000 milligrams per liter.
- (l) Applicant's witness testified that he has examined the available geological and engineering data and found no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- (m) Applicant presented documentation of an Inactive Well Agreed Compliance Order (NMOCD-ACOI-315) with the Division for resolving the inactive well count issue. Applicant offered further evidence showing two of the inactive wells being returned to production, thereby reducing the Applicant's inactive well to compliance under Rule 19.15.5.9 NMAC.
- (n) Applicant stated that the economic necessity for disposal in the subject well is to support production.

- (o) Applicant provided evidence of proper notification including return receipts and affidavit of publication in a local newspaper of general circulation in the same county as the subject well.
- (p) Mewbourne Oil Company, an affected party, did not oppose this application after Applicant agreed to limit injection not to exceed 200 BWPD of produced water with the sources being only from leases operated by the Applicant.

(8) No other party appeared at the hearing, or otherwise opposed the granting of this application.

The Division concludes as follows:

(9) The Applicant submitted a revised C-108 application at hearing that resolved content issues identified in the administrative review of the original application.

(10) The Applicant provided a summary of oil and gas production in the Bell Canyon formation in the vicinity of the subject well that indicated no impacts to offsetting hydrocarbon production due to the disposal operation.

(11) The disposal fluids are compatible with existing formation fluids based on analytical results provided by Applicant.

(12) The application has been duly filed under the provisions of Division Rule 19.15.26.8 NMAC.

(13) Applicant has presented satisfactory evidence that all requirements prescribed in Division Rule 19.15.26.8 NMAC have been met.

(14) Division records indicate Dakota (OGRID 5691) as of the date of this order is in compliance with Division Rule 19.15.5.9 NMAC.

(15) Review of well logs in the Division's records for the area of the subject well found sufficient vertical separation between the top of the proposed injection interval and the base of the Capitan reef aquifer as to protect this underground source of drinking water from any impact by the proposed disposal operation. Further, the Applicant provided proof that the intermediate and production casing are sufficiently cemented as to isolate the Capitan reef aquifer from possible vertical communication of injection fluids.

(16) Approval of disposal in the subject well will enable Applicant to support existing production and future exploration in this area, thereby preventing waste, and will not impair correlative rights.

(17) The application for renewal of the authority to inject should be approved.

IT IS THEREFORE ORDERED THAT:

(1) Dakota Resources, Inc. (I) ("Dakota" or "operator") is hereby authorized to utilize Trigg Federal Well No. 1 (API No. 30-015-25006; the "subject well"), located 1980 feet from the South line and 660 feet from the West line (Lot 3) of Section 7, Township 21 South, Range 28 East, NMPM, Eddy County, New Mexico, for disposal of Underground Injection Control (UIC) Class II fluids.

(2) Disposal shall be through a perforated interval from approximately 2926 feet to 3315 feet below surface comprising the Bell Canyon formation of the Delaware Mountain group. This is the same disposal interval as previously approved in administrative order SWD-802. Injection is to be through plastic-lined tubing set in a packer within 100 feet above the top perforation of the permitted interval.

(3) Sources of the UIC Class II fluids for disposal in the subject well shall be limited to the production from wells operated by Dakota Resources Inc. (I). Sources of UIC Class II fluids from other operators or from wells not operated by Dakota shall not be permitted for disposal in the subject well.

(4) The maximum daily injection rate for the subject well shall not be greater than 200 barrels of water per day or 6000 barrels of water in any one monthly reporting period.

(5) The operator shall take all steps necessary to ensure that the disposed water enters only the permitted disposal interval and is not permitted to escape to other formations or onto the surface.

(6) After installation of tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

(7) The well shall pass a mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT procedures and schedules shall follow the requirements in Division Rule 19.15.26.11(A) NMAC.

(8) The wellhead injection pressure on the well shall be limited to **no more than 585 psi**. The disposal well shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

(9) The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the approved injection interval. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an

acceptable Step-Rate Test.

(10) The operator shall notify the supervisor of the Division's District II office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's District II office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 NMAC and 19.15.7.24 NMAC.

(11) Without limitation on the duties of the operator as provided in Rules 19.15.29 NMAC and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's District office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from or around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

(12) The injection authority granted under this order is not transferable except upon approval of the Division Director. The Director shall only approve a change of operator if the conditions of Ordering Paragraphs (3) and (4) are maintained by the new operator. If the new operator does not comply with these conditions, then the injection authority granted under this order shall terminate *ipso facto*. The Division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

(13) The Division may revoke this injection permit after notice and hearing if the operator is in violation of Division Rule 19.15.5.9 NMAC.

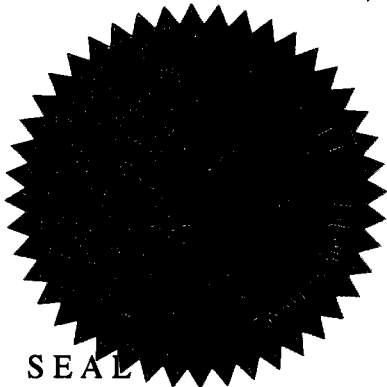
(14) The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

(15) One year after disposal into the subject well has ceased, the well will be considered abandoned and the authority to dispose will terminate *ipso facto*.

(16) Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

(17) Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order; whereupon the Division may, after notice and hearing or prior to notice and hearing in event of an emergency, terminate the disposal authority granted herein.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated,



SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in cursive script, reading "David R. Catanach".

DAVID R. CATANACH
Director