

**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:**

**CASE NO. 14834
ORDER NO. R- 13569**

**APPLICATION OF COBALT OPERATING, LLC
FOR AUTHORIZATION TO INJECT PRODUCED
WATER, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on May 10, 2012, at Santa Fe, New Mexico, before Examiners David K. Brooks and William V. Jones.

NOW, on this 14th day of June, 2012, the Division Director, having considered the testimony, the record and the recommendations of the Examiners,

FINDS THAT:

(1) Due notice has been given, and the Division has jurisdiction of the subject matter of this case.

(2) By this application, Cobalt Operating, LLC ("Applicant") seeks authority to inject produced water for the purpose of disposal into the Strawn formation through its Consolidated State Well No. 3 (API No. 30-025-29711) (the "subject well"), located 660 feet from the North line and 2128 feet from the West line (Unit C) of Section 9, Township 17 South, Range 37 East, NMPM, in Lea County, New Mexico. The proposed injection interval is 10,944 to 11,075 feet below the ground surface, and the proposed maximum injection pressure is 2,188 pounds per square inch (psi) surface injection pressure.

(3) At the hearing, Applicant appeared through counsel and presented engineering testimony and exhibits to the effect that:

(a) The subject well previously produced from the Strawn formation, and is considered depleted. Applicant seeks to convert the well to injection into

the Strawn in order to dispose of produced water from anticipated Devonian oil production from its wells on an adjoining lease.

(b) The subject well is located on State of New Mexico lands. The State owns both surface and minerals, and Applicant has an easement from the State Land Commissioner to use this well for disposal.

(c) The proposed maximum injection pressure of 2,188 psi is equal to 0.2 psi per foot of depth to the uppermost injection perforation. If a higher injection pressure is needed, applicant will apply to the Division for an increase in accordance with Division rules and practice.

(d) There are seven wells currently producing from the Strawn within one mile of the subject well, including one well within one-half mile of the subject well.

(e) There is an existing commercial disposal well located approximately 1,200 feet from the subject well that is injecting into the Strawn. This well, Dakota's New Mexico EX State Com. Well No. 2 (API No. 30-025-29440), commenced injection in late 2007.

(f) A comparison of the history of oil and water production from Chesapeake's Bubba 4 State Com. Well No. 1 (API No. 30-025-37420) with the injection history of the New Mexico EX State Com. Well No. 2 indicates that injection into the Strawn through the latter well did not materially affect production from the former well.

(g) Based on the comparison described in the foregoing subparagraph, and general analysis of the history of Strawn production in this area, the Strawn seems to be so far depleted that the quantities of water Applicant proposes to inject are not likely to affect remaining production from producing Strawn wells in the vicinity.

(h) Granting this Application will provide Applicant with an economic means to produce its Devonian wells, thereby producing oil that would otherwise be left in the formation.

(i) There are seven wells within the half-mile area of review (AOR) that penetrate the Strawn. Five of these have been plugged and abandoned. The plugged and abandoned wells in the area of review are properly plugged so as to prevent their becoming conduits for the movement of injected fluids into other formations or to the surface.

(j) The witness has examined all available geologic and engineering data and concludes that there are no open faults or other hydrologic connection

between the proposed injection formation and any underground source of drinking water.

(4) No other party appeared at the hearing or otherwise opposed the Application.

(5) Subsequent to the hearing, at the request of the Technical Examiner, Applicant submitted a detailed geologic analysis of the Strawn formation in the vicinity of the subject well. The conclusions of the geologist who prepared the analysis for Applicant were that:

(a) surrounding Strawn production is not connected to the same reservoir as the subject well; and

(b) the Strawn reservoir in the subject well and nearby has been well drained of any recoverable oil.

The Division concludes that:

(6) The injection of produced water into the Strawn formation through the subject well will prevent waste by facilitating production of oil from the Devonian formation that might not otherwise be recovered and will not impair correlative rights.

(7) All of the wells in the AOR appear to be adequately cased and cemented, so that none of them will become a conduit for the escape of injected fluids from the permitted injection formation into other formations or to the surface. Accordingly no remedial work on wells in the AOR need be required.

(8) Applicant should be authorized to inject fluids at a surface injection pressure not to exceed 2,188 psi; provided that Applicant may apply to the Division for a higher injection pressure upon satisfactorily demonstrating that an increase in injection pressure will not result in fracturing of the injection formation or confining strata.

(9) For the foregoing reasons, the Application should be approved.

IT IS THEREFORE ORDERED THAT:

(1) Cobalt Operating, LLC ("Applicant" or "Operator") is hereby authorized to inject produced water for the purpose of disposal into the Strawn formation through its Consolidated State Well No. 3 (API No. 30-025-29711) (the "subject well"), located 660 feet from the North line and 2128 feet from the West line (Unit C) of Section 9, Township 17 South, Range 37 East, NMPM, in Lea County, New Mexico. The permitted injection interval is the Strawn formation from 10,944 to 11,075 feet below the ground surface, and the permitted maximum injection pressure is 2,188 pounds per square inch (psi) surface injection pressure.

(2) Operator shall take all steps necessary to ensure that the injected fluid enters only the injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(3) Injection shall be accomplished through plastic lined tubing installed in a packer set in the casing below the top of the injection formation and within 100 feet of the uppermost injection perforations. The Division retains the right to require at any time wireline verification of completion and packer setting depths in this well. The casing-tubing annulus shall be filled with an inert fluid, and a gauge or approved leak-detection device shall be attached to the annulus in order to detect leakage in the casing, tubing or packer.

(4) Prior to commencing injection operations, and any time the operator pulls the tubing or resets the packer, the casing in the injection well shall be pressure tested throughout the interval from the surface down to the packer setting depth to assure mechanical integrity.

(5) The injection well shall be initially equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than 2,188 psi.

(6) The Division Director shall have the authority to administratively authorize an increase in injection pressure upon a showing by the operator that such higher pressure will not result in fracturing of the injection formation or confining strata.

(7) The operator shall give at least 72 hours advance notice to the supervisor of the Division's Hobbs District Office of the date and time (i) injection equipment will be installed, and (ii) the mechanical integrity pressure tests will be conducted, so these operations may be witnessed.

(8) The operator shall provide written notice of the date of commencement of injection to the Division's Hobbs District Office.

(9) The operator shall immediately notify the supervisor of the Division's Hobbs District Office of the failure of the tubing, casing or packer in the injection well, or the leakage of water, oil, gas or other fluid from or around any producing or abandoned well within ½ mile of the injection well, and shall take all steps that may be timely and necessary to correct such failure or leakage.

(10) Injection operations shall be governed by all applicable provisions of 19.15.26 NMAC. The operator shall submit monthly reports of the injection operations on Division Form C-115, in accordance with 19.15.26.13 NMAC.

(11) In accordance with 19.15.26.12.C NMAC, the injection authority granted herein shall terminate one year after the effective date of this Order if the

operator has not commenced injection operations; provided, however, the Division, upon written request by the Operator, may grant an extension for good cause.

(12) This Order does not relieve Operator of responsibility should its operations cause any actual damage or threat of damage to protectible fresh water, human health or the environment; nor does it relieve the operator of responsibility for complying with applicable Division rules or other state, federal or local laws or regulations.

(13) Upon failure of the operator to conduct operations (1) in such manner as will protect fresh water, or (2) in a manner consistent with the requirements in this order, the Division may, after notice and hearing, (or without notice and hearing in event of an emergency, subject to the provisions of NMSA 1978 Section 70-2-23), terminate the injection authority granted herein.

(14) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

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



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in cursive script, appearing to read "Jami Bailey".

JAMI BAILEY
Director