

**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. 14525  
ORDER NO. R-13325**

**APPLICATION OF BC OPERATING, INC.  
FOR AUTHORIZATION TO CONDUCT  
INJECTION OPERATIONS,  
LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on August 5, 2010, at Santa Fe, New Mexico, before Examiner Richard I. Ezeanyim.

NOW, on this 6<sup>th</sup> day of October, 2010, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

**FINDS THAT:**

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

(2) By this application, BC Operating, Inc. ("Applicant") seeks approval to inject produced water for purposes of disposal into its proposed South Denton 6 State Well No. 2 (API No. 30-025-39734), a new well to be drilled at a location 330 feet from the North and West lines (Unit D) of Section 6, Township 16 South, Range 38 East, in Lea County, New Mexico.

(3) Applicant proposes to inject up to 2,500 bbls of water per day, at a surface injection pressure not to exceed 0.2 psi per foot of depth to the uppermost injection perforation (unless otherwise authorized), into the San Andres formation at an interval between 5,200 and 6,500 feet below the surface.

(4) At the hearing, Applicant presented engineering testimony and exhibits to the effect that:

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(a) The San Andres formation is not productive of hydrocarbons within two and one-half miles of the proposed location. There are several other injection wells in the vicinity completed in the San Andres. The formation in this area consists of tin-gray, fine-grained crystalline dolomite, and porosity ranges from pinpoint to small buds. It is not prospective for hydrocarbon production.

(b) There is a tight dolomite cap that is 200 to 300 feet thick, and should be more than sufficient to contain the injected fluids.

(c) Inasmuch as the well has not been drilled, Applicant has not identified the most desirable injection depths. After completion, Applicant will file a completion report specifically identifying the depth of the injection perforations.

(d) Applicant proposes to inject an average of 2,000 bbls per day (maximum of 2,500 bbls/ day) of produced water from the Devonian formation at a surface injection pressure not to exceed 0.2 psi per foot of depth to the uppermost injection perforation (unless otherwise authorized).

(e) The proposed injection well will be cased with 8 5/8-inch surface casing set at 2,025 feet below the surface, with cement circulated to surface, and 5 1/2-inch injection string casing set at 6,500 feet and cemented to surface. Injection will be accomplished through 2 7/8-inch plastic-lined, 6.5-pound J-55 steel tubing set in a packer within 100 feet of the uppermost injection interval.

(f) Applicant's witness has studied all available geologic information and found no evidence of any open fault or other structure that would allow migration of injected fluids to any fresh water bearing formation.

(g) The only well in the Area of Review (AOR) surrounding the proposed injection well that has penetrated the San Andres is the Southern Union State Well No. 1, located 3722 feet from the North line and 660 feet from the West line (Unit L) of Section 6, Township 16 South, Range 38 East. That well was plugged and abandoned in 1972, and the plugging record on file with the Division indicates that it was plugged sufficiently to isolate the San Andres.

(5) Although four individuals filed written protests, no party filed a pre-hearing statement or appeared at the hearing to oppose the application.

The Division concludes that:

(6) The Applicant should be authorized to inject produced water into the San Andres formation at depths between 5,200 feet and 6,500 feet below the surface through the proposed well.

(7) The only well in the AOR appears to be adequately cased and cemented, so that it will not become a conduit for the escape of injected fluid from the permitted injection formation. 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 1,040 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) The proposed project will, in reasonable probability, prevent waste, and will not impair correlative rights.

(10) Accordingly, the application should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) BC Operating, Inc. [OGRID 160825] ("BC" or "operator") is hereby authorized to inject produced water for the purpose of disposal into the San Andres formation through its proposed South Denton 6 State Well No. 2 (API No. 30-025-39734), a new well to be drilled at a location 330 feet from the North and West lines (Unit D) of Section 6, Township 16 South, Range 38 East, in Lea County, New Mexico, through an injection interval at a depth from approximately 5,200 to 6,500 feet below the surface.

(2) The proposed well shall be cased with 8 5/8-inch surface casing set at approximately 2,025 feet below the surface and cemented to surface, and 5 1/2-inch injection string casing set at approximately 6,500 feet and cemented to surface.

(3) After the well is drilled, the Division Director may administratively amend this Order to confine the injection interval to the actual intervals perforated.

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

(5) Injection shall be accomplished through 2-7/8 inch, plastic-lined steel tubing installed in a packer set in the casing below the top of the injection formation or confining strata, and within 100 feet of the uppermost injection perforations. 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.

(6) Prior to commencing injection operations, the casing in the disposal well shall be pressure tested throughout the interval from the surface down to the packer setting depth to assure the integrity of such casing.

(7) The maximum injection pressure, unless otherwise authorized as herein provided, shall be 1,040 psi. 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 1,040 psi.

(8) The Division Director may 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.

(9) 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.

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

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

(12) The operation shall be governed by Division Rules No. 701 through 708. The operator shall submit monthly reports of the disposal operation on Division Form C-115, in accordance with Division Rules 706 and 1120

(13) In accordance with Rule 705.C, the injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced disposal operation; provided, however, the Division Director, upon written request by the operator filed prior to the expiration of such time, may grant an extension for good cause.

(14) Operator shall provide written notice to the Division upon permanent cessation of disposal.

(15) This order does not relieve the 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.

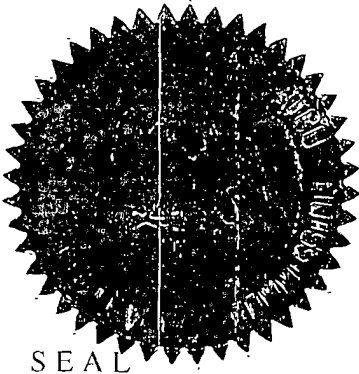
(16) Upon failure of the operator to conduct operations (1) in such manner as will protect fresh water, or (2) in a manner consistent with the requirements in this order, the Division may, after notice and hearing, (or without notice and hearing in event of an emergency, subject to the provisions of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

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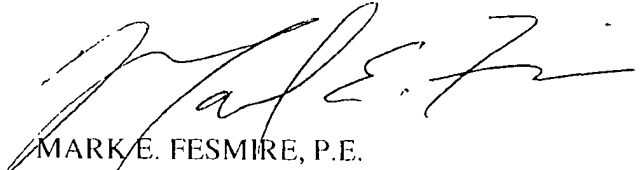
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(17) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

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



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
MARK E. FESMIRE, P.E.  
Acting Director