

**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. 14568  
ORDER NO. R-13349**

**APPLICATION OF ENDURANCE RESOURCES, LLC FOR APPROVAL OF A  
SALT WATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a. m. on November 18, 2010 and December 16, 2010, at Santa Fe, New Mexico, before Examiner Richard I. Ezeanyim.

NOW, on this 14<sup>th</sup> day of January, 2011, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner.

**FINDS THAT:**

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

(2) The applicant, Endurance Resources, LLC ("Endurance"), seeks approval to inject produced water for the purposes of disposal into its DL State Well No. 2 (API No. 30-025-28659), located 660 feet from the South and East lines of Section 18, Township 23 South, Range 33 East, NMPM.

(3) Endurance proposes to inject up to 3000 barrels of water per day, at a maximum pressure not to exceed 0.2 psi per foot of depth to the uppermost injection perforation (unless otherwise authorized), into the Ramsey Sand of the Delaware formation, Cruz-Delaware Pool, at an interval between approximately 5120 feet and 5132 feet below the surface.

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

(a) The Ramsey Sand of the Delaware formation is approximately

3,500 feet thick and consists of sand and shales. It is not prospective for hydrocarbon production.

- (b) Endurance has need for additional salt water disposal facilities to support its Delaware oil production operations in this area and the source of the salt water to be injected is from Endurance operated Delaware wells.
  - (c) The DL State Well No. 6 was drilled in 1988 as a producing well in the Delaware formation.
  - (d) Endurance acquired the well in January 2010 from Tritex Resources LLC.
  - (e) The well had been shut-in for an extended period of time and the Division wrote Endurance and advised that corrective action was required. One type of recommended corrective action was to convert the well to injection. Endurance filed its application in this case but it was not set for hearing until an agreement was reached on the Endurance wells on the Division's inactive well list.
  - (f) All wells within a one-half mile area of review are protected with adequate cement above and below the injection interval and will not provide conduits for injection water to migrate out of zone.
- (5) No other party appeared at the hearing or otherwise opposed the application.

**The Division concludes that:**

(6) Endurance is the only leasehold operator within the one-half mile area of review of the subject well and notice has been provided to the owner of the surface on which the well is located.

(7) Endurance should be authorized to inject produced water into the Delaware formation at depths between approximately 5120 feet and 5132 feet below the surface through the proposed well.

(8) All wells in the AOR appear to be adequately cased and cemented, so that they will not become conduits for the escape of injected fluid from the permitted injection formation. Accordingly, no remedial work on wells in the AOR need be required.

(9) Endurance should be authorized to inject fluids at a surface injection pressure not to exceed 0.20 psi per foot of depth to the top of the injection interval; provided that Endurance 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.

(10) The proposed project will prevent waste, and will not impair correlative rights.

(11) Accordingly, the application should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) Endurance Resources, LLC [OGRID 270329] ("Endurance" or "operator") is hereby authorized to inject a maximum volume of 3000 barrels of produced water per day for the purpose of disposal into the Ramsey Sand of the Delaware formation, Cruz-Delaware Pool, through its DL State Well No. 2 (API No. 30-025-28659), located 660 feet from the South and East lines of Section 18, Township 23 South, Range 33 East, NMPM, Lea County, New Mexico, in an injection interval at a depth of approximately 5120 feet and 5132 feet below the surface.

(2) The well shall be cased with 8 5/8-inch surface casing set at approximately 680 feet below the surface and cemented to the surface, and 5 1/2-inch casing set in a packer at approximately 5075 feet with injection through a perforated interval from 5120 feet to 5132 feet.

(3) 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.

(4) Injection shall be accomplished through 2 7/8-inch, plastic-lined steel tubing installed in a packer set in the casing at an approximate depth of 5075 feet, 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.

(5) 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.

(6) The maximum surface injection pressure shall be 1024 psi. The injection well shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to no more than the pressure authorized herein.

(7) 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.

(8) 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.

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

(10) 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.

(11) The operator shall be governed by Division Rules 19.15.26.1 through 19.15.26.15 NMAC. The operator shall submit monthly reports of the disposal operation on Division Form C-115, in accordance with Division Rules 19.15.26.13 NMAC and 19.15.7.24 NMAC.

(12) In accordance with Rule 19.15.26.12.C(1) NMAC, the injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced disposal operations; 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.

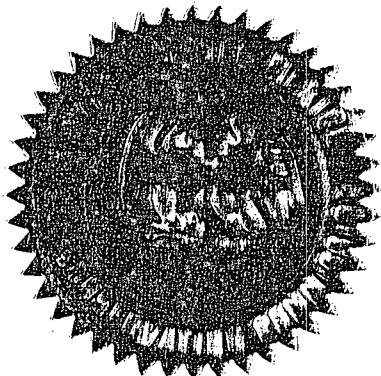
(13) Operator shall provide written notice to the Division upon permanent cessation of disposal.

(14) This order does not relieve the operator of responsibility should its operations cause any actual damage or threat of damage to protectable 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.

(15) 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.

(16) 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.



SEAL

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read "Daniel Sanchez", with a long, sweeping horizontal line extending to the right.

DANIEL SANCHEZ  
Acting Director