

**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 THE:**

**APPLICATION OF BTA OIL PRODUCERS FOR APPROVAL OF A LEASE  
WATERFLOOD PROJECT AND TO QUALIFY THE PROJECT FOR THE  
RECOVERED OIL TAX RATE PURSUANT TO THE ENHANCED OIL  
RECOVERY ACT, EDDY COUNTY, NEW MEXICO**

**CASE NO. 14385  
ORDER NO. R-13195**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This case came on for hearing at 8:15 a.m. on September 17, 2009, at Santa Fe, New Mexico before Examiner Richard Ezeanyim.

NOW, on this 19<sup>th</sup> day of November, 2009, the Division Director, having considered the testimony, the record and the recommendations of the Examiners,

**FINDS THAT:**

- (1) Due public notice has been given and the Division has jurisdiction of this case and its subject matter.
- (2) BTA Oil Producers ("BTA" or "Applicant"), seeks approval of a lease waterflood project in the lower Brushy Canyon interval of the Delaware formation containing 80 acres, more or less, consisting of the W/2 NW/4 of Section 11, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico.
- (3) The waterflood project would initially consist of one injection well and two producing wells, and if successful, the applicant seeks to expand the waterflood project without the need for further hearing. The Applicant seeks to utilize its 8808 JV-P Pardue D Well No. 2 (**API No. 30-015-26406**) located 990 feet from the North line and 660 feet from the West line of Section 11 to inject water from area wells producing from the Brushy Canyon zone into the Lower Brushy Canyon member of the Delaware formation at depths of 4,722 feet to 6,134 feet.
- (4) Applicant also seeks to qualify the proposed project as an "Enhanced Oil

Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5, as amended).

(5) The Applicant notified all affected parties as defined in Division Rule 26.8 NMAC of the intent to inject into the proposed injection well and has received no objections.

(6) No other parties appeared in this case or otherwise opposed this application.

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

(a) The Delaware Mountain Group has a total thickness in excess of 3,500 feet within this locality. It is comprised of alternating units of siltstone, sandstone and limestone with minor units of shale. Oil production occurs from sandstone located near the top of the Brushy Canyon formation within the Delaware Mountain Group.

(b) The sands are continuous across the area and are very good candidates for waterflood projects.

(c) The nearby Parkway Delaware Unit waterflood project in the Upper Brushy Canyon interval has proven successful in this area.

(d) The fresh water in the area exists from the surface to 250 feet. All surface casing will be set from 314 feet to 575 feet to protect any underground sources of drinking water.

(e) The estimated total capital cost and project cost would be \$368,000. The estimated additional oil recovery would be 246,000 stock tank barrels. Additional revenue would be \$18.2.

(f) Production from the existing wells is now extremely low, and the wells can be considered to be "stripper" wells.

(g) All wells within the ½ mile area of review are adequately cemented in order to isolate the injection to the intended injection interval. There are no faults or conduits which could transport injected waters out of the injection interval.

(8) An examination of all wellbores within ½ mile of the proposed injection well indicates that there is no Area of Review ("AOR") remedial cementing required prior to implementing this project.

(9) The water analysis demonstrates that there are no compatibility issues between the injected water and the native water.

(10) The proposed waterflood within the project area is feasible and should result in the recovery of additional oil and gas that would not otherwise be recovered. The proposed waterflood project will prevent waste, protect correlative rights, and the environment.

(11) The Applicant presented evidence and exhibits containing all the information required by Division rules to qualify this project under the Enhanced Oil Recovery Act.

(12) The evidence establishes that the secondary recovery project meets all the criteria for certification by the Division as a qualified "Enhanced Oil Recovery (EOR) Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5).

(13) Within 5 years of the first injection date and after the operator identifies a positive production response, the operator should apply to the Division, asking the Division to certify this positive production response to the New Mexico Taxation and Revenue Department. The EOR project area and/or the producing wells within this area eligible for the recovered oil tax rate may be contracted or expanded depending upon the evidence presented by the applicant in its demonstration of the occurrence of a positive production response.

(14) This application should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) BTA Oil Producers ("BTA" or "Applicant") is hereby approved to implement a lease waterflood project in the lower Brushy Canyon interval of the Delaware formation containing 80 acres, more or less, consisting of the W/2 NW/4 of Section 11, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico.

(2) BTA Oil Producers is granted approval to utilize its 8808 JV-P Pardue D Well No. 2 (**API No. 30-015-26406**) located 990 feet from the North line and 660 feet from the West line of Section 11 to inject water from area wells producing from the Brushy Canyon zone into the Lower Brushy Canyon member of the Delaware formation at depths of 4,722 feet to 6,134 feet.

(3) The Division Director may administratively authorize additional injection wells within the lease waterflood project without the need for further hearing.

(4) BTA Oil Producers is hereby designated the operator of the lease waterflood project.

(5) The operator shall ensure that all available electric logs run on wells within this lease including temperature surveys and cement bond logs are available on the Division's online imaging system. Logs not appearing on this system shall be copied and provided to the Artesia district office for scanning.

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

(7) Injection into this well shall be accomplished through 2-7/8 inch plastic-lined tubing installed in a packer located within 100 feet of the uppermost injection perforation. 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 determine leakage in the casing, tubing, or packer.

(8) The casing-tubing annulus shall be pressure tested from the surface to the packer setting depth to assure mechanical integrity. Thereafter, mechanical integrity tests (MITs) shall be conducted every five years.

(9) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute that will limit the surface injection pressure to 944 psi.

(10) The Division Director may administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata or damage to the reservoir.

(11) The unit operator shall give 72 hours advance notice to the supervisor of the Division's Artesia District Office of the date and time (i) injection equipment will be installed, and (ii) the mechanical integrity pressure test will be conducted on the approved injection well, so that these operations may be witnessed.

(12) The unit operator shall immediately notify the supervisor of the Division's Artesia District office of any failure of the tubing, casing or packer in the injection well or the leakage of water, oil or gas from or around any nearby producing or plugged and abandoned well, and shall promptly take all steps necessary to correct such failure or leakage.

(13) The unit operator shall conduct injection operations in accordance with Division Rules 26.8 NMAC through 26.15 NMAC, and shall submit monthly progress reports in accordance with Division Rules 26.13 NMAC and 7.24 NMAC.

(14) The injection authority granted herein for this well shall terminate one year after the date of this order if the unit operator has not commenced injection operations into the well; provided, however, the Division, upon written request postmarked or received prior to the one-year deadline, may grant an extension for good cause. The injection authority shall also terminate *ipso facto*, one year after injection operations into the well have ceased.

(15) The injection authority granted under this order is not transferable except upon Division approval. The Division may require the operator to demonstrate

mechanical integrity of each injection well that will be transferred prior to approving transfer of authority to inject.

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

(17) The Lease Waterflood Project is hereby approved and certified as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5).

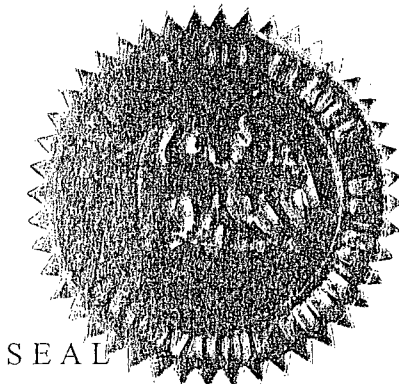
(18) At such time as a positive production response occurs, and within five years from the date the project was certified to the New Mexico Taxation and Revenue Department, the unit operator must apply to the Division for certification of a "positive production response." The Division may review the application administratively or set it for hearing. Based upon the evidence presented, the Division will certify to the New Mexico Taxation and Revenue Department those wells that are eligible for the EOR tax rate.

(19) This application for "positive production response" shall identify the area benefiting from enhanced oil recovery operations and the specific wells eligible for the EOR tax rate. The area and/or the producing wells eligible for the enhanced oil recovery (EOR) tax rate may be contracted or expanded based upon the evidence presented by the unit operator in its demonstration of a positive production response.

(20) This order does not relieve the operator of responsibility should its operations cause any 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 federal, state or local laws or regulations.

(21) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem 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 water or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, or without prior notice and hearing in the event of an emergency, terminate the injection 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 dark ink, appearing to read "Mark E. Fesmire".

MARK E. FESMIRE, P.E.  
Director