

**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 CELERO ENERGY II, LP TO INSTITUTE A
WATERFLOOD PROJECT AND A TERTIARY RECOVERY PROJECT FOR
THE NORTH CAPROCK CELERO QUEEN UNIT AREA, CHAVES AND LEA
COUNTIES, NEW MEXICO**

**CASE NO. 14915
ORDER NO. R-13674**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on October 18, 2012, and again on November 29, 2012, at Santa Fe, New Mexico before Examiner David K. Brooks.

NOW, on this 29th day of January, 2013, 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) Celero Energy II, LP ("Celero" or "applicant"), seeks approval to install a secondary and tertiary (CO₂ injection) recovery project within its North Caprock Celero Queen Unit and qualify the project for the Enhanced Oil Tax Rate.
- (3) In companion Case No. 14914, the Division has approved the Unit Agreement, the Unit Operating Agreement, and Statutorily Unitized the North Caprock Celero Queen Unit. Both cases were combined for purposes of presenting testimony and exhibits and separate orders are being issued.
- (4) The North Caprock Celero Queen Unit consists of portions of the Caprock- Queen Pool (Pool Codes 8551 and 8553) and covers 2846.66 acres, more or less, of the following State and fee lands:

Township 12 South, Range 31 East, NMPM, Chaves County

Section 36: S/2 NE/4, SE/4 SW/4, and SE/4

Township 12 South, Range 32 East, NMPM, Lea County

Section 30: S/2 SE/4

Section 31: Lots 3, 4, E/2, NE/4 NW/4, and E/2 SW/4

Section 32: SW/4 NE/4, W/2, and NW/4 SE/4

Township 13 South, Range 32 East, NMPM, Lea County

Section 5: Lots 3, 4, SW/4 NW/4, and NW/4 SW/4

Section 6: Lots 1-7, S/2 NE/4, SE/4 NW/4, E/2 SW/4, and SE/4 (All)

Section 7: E/2 and E/2 W/2

Section 8: NW/4 NW/4, S/2 NW/4, and SW/4

(5) The Commission in hearing Order No. R-1145 issued in Case No. 1395 on April 3, 1958 approved the North Caprock Queen Unit covering essentially the same acreage as is now contained in the North Caprock Celero Queen Unit. Wells within that unit were drilled and produced under primary and secondary operations in the Queen formation. As of this date, all Queen formation producing wells have been plugged and that unit has terminated.

(6) This application asks for approval of secondary operations within this North Caprock Celero Queen Unit by re-entering wells as producers and using one initial well for injection of only water, then obtaining approval for conversions to injection as the project expands.

(7) Celero in this case requests permission to inject water into the Queen formation unitized interval for secondary recovery purposes into the State 32 Well No. 4 (30-025-00209) located 1980 feet from the South line and 660 feet from the West line (Unit letter L) of Section 32, Township 12 South, Range 32 East, Lea County, New Mexico, through an open hole from 3013 feet to 3043 feet with lined tubing set within 100 feet of the top of the injection interval.

(8) The one half mile Area of Review ("AOR") around this first injection well currently has 14 plugged and abandoned wells and no active wells. All AOR wells are cased and cemented so as to protect fresh water and confine injection to the Unitized interval.

(9) All acreage within the AOR is leased by Celero and contained in the newly unitized North Caprock Celero Queen Unit. The surface owner of this initial injection well is the State of New Mexico. Notice was provided to the State Land Office of Celero's intent to re-enter and utilize this well for injection.

(10) The State 32 Well No. 4 was spud February 4, 1948 targeting Queen oil sands from 3030 feet to 3036 feet. It was converted to a water injection well into an open hole in 1958 as allowed by Commission Order No. R-972-A issued in Case No. 1433 on May 28, 1958. The well was proposed for plugging in 1976 and finally plugged

September 24, 2004 by Mayo Marrs.

(11) The only productive portion of the Queen formation sands are as shown on the Unit type log for the North Caprock Queen Unit Tr. 27 Well No. 5Y (API No. 30-025-24155) located in Unit letter E of Section 8, Township 13 South, Range 32 East, NMPM as the porosity interval from approximately 3052 feet to 3070 feet. The Unitized formation, portions of which will be included in open hole completions, extends from 3002 feet to 3116 feet on that log. The gross interval of the Queen formation Unitized interval is not productive, except in its vertical center.

(12) Celero Energy II, LP (OGRID 247128) is the operator of this unit and is in compliance with Division Rule 19.15.5.9 NMAC and therefore eligible for approval of injection permits.

(13) The applicant has notified all affected parties of the intent to inject into the proposed injection wells and has received no objections. No other parties appeared in this case or otherwise opposed this application.

(14) Celero presented exhibits and testimony indicating the following:

(a) The Queen formation structure is monoclonal, dips gently without any evidence of faulting, and contains gas up dip and water down dip.

(b) The wells in this area are drilled on 40-acre well density. Celero mentioned no plans for infill drilling and intends to create 80-acre, 5-spot patterns for secondary and tertiary recovery.

(c) Analogous evidence from the Rock Queen Unit located to the south indicates secondary and tertiary reserves exist in the North Caprock Celero Queen Unit.

(d) Miscibility pressure for CO₂ tertiary recovery is approximately 1069 psi. Celero intends to implement CO₂ injection operations as soon as feasible and after first implementing water flood operations.

(15) The proposed secondary recovery operation within this Unit is feasible and should result in the recovery of additional oil and gas that would not otherwise be recovered.

(16) The estimated additional costs of the proposed operations will not exceed the estimated value of the additional oil and gas recovered plus a reasonable profit.

(17) The proposed project will prevent waste, protect correlative rights, and should be approved and called the North Caprock Celero Queen Unit Secondary Recovery Project. The area to be affected by these operations (the project area) should consist of the entire North Caprock Celero Queen Unit area.

(18) Celero should be approved to inject water into the proposed well at depths within the Queen formation specified in its application. Provisions should be made for the operator of the Unit to apply administratively for additional or alternative water injection wells as needed.

(19) There is a proposed Acid Gas Injection rulemaking in progress that will be complete within the next few months which will cover in part CO₂ injection projects. There was a lack of evidence presented at these hearings for field operations of CO₂ or produced gas injection. The automation system was not mentioned or how annulus and tubing pressures and rates would be monitored and recorded and available to District personnel. The MIT testing schedule, the H₂S contingency plan, and the injection pressure limits under various injection schemes were not mentioned. After prior water flooding and subsequent abandonment, the state of the reservoir saturations are unknown as is the reservoir pressure as it compares to miscibility pressure.

(20) Prior to commencing CO₂ injection or re-injection of produced gas within any well in this project, the operator should be required to obtain permission for such action after hearing at either the Division or the Commission. Permission to inject CO₂ or produced gases within wells in this unit should not be granted by administrative permit unless or until decreed by the Division or Commission.

(21) Injection pressure for water injection should be initially set at a surface gradient of 0.2 psi per foot over the top of the open hole interval. Celero should run step rate tests and present evidence to the Division administratively seeking a higher injection pressure limit if a higher limit is needed.

(22) Celero presented exhibits containing the information required by Division rules to qualify this project under the Enhanced Oil Recovery Act.

(23) 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). The certified project area should consist of the entire North Caprock Celero Queen Unit area.

(24) 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.

IT IS THEREFORE ORDERED THAT:

(1) Celero Energy II, LP ("Operator") [OGRID 247128] is hereby authorized to implement secondary operations within the North Caprock Celero Queen Unit ("NCCQU") by injection of water into the Queen formation, Caprock-Queen Pool (Pool Codes 8551 and 8553).

(2) Operator is permitted to inject water into the Queen formation unitized interval of the North Caprock Celero Queen Unit for secondary recovery purposes into the State 32 Well No. 4 (API No. 30-025-00209) located 1980 feet from the South line and 660 feet from the West line (Unit letter L) of Section 32, Township 12 South, Range 32 East, NMPM, Lea County, New Mexico, through an open hole from 3013 feet to 3043 feet with lined tubing set within 100 feet of the top of the injection interval.

(3) The North-Caprock Celero Queen Unit Secondary Recovery Project is hereby approved and shall consist of the entire North Caprock Celero Queen Unit area and contained vertically within that Unitized interval.

(4) Prior to commencing CO₂ injection or re-injection of produced gas within any well in this project, the operator shall be required to obtain permission for such action after hearing at either the Division or the Commission. Permission to inject CO₂ or produced gases within wells in this unit shall not be granted by administrative permit unless or until the Division or Commission so orders after appropriate notice and hearing.

(5) The Division Director may administratively authorize alternative or additional water injection wells within this Unit as provided in 19.15.26.8 NMAC.

(6) The operator 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 any approved injection well within this project shall be accomplished through 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 detect any leakage in the casing, tubing, or packer.

(8) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute that will limit the maximum surface injection pressure to 603 psi.

(9) The Division Director may administratively authorize a pressure limitation in excess of the above, upon a showing supported by approved Step Rate Tests that such higher pressure will not result in the fracturing of the injection formation or confining strata or damage to the reservoir.

(10) As per Division Rule 19.15.26.11A NMAC, the operator shall test any injection well on this project for mechanical integrity ("MIT") prior to commencing injection into that well and prior to resuming injection each time the packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in any injection well.

(11) The operator shall provide notice, 72 hours in advance, to the supervisor of the Division's district office of the date and time of the installation of injection equipment and of any mechanical integrity test so that the same may be inspected and witnessed.

(12) The operator shall provide written notice of the date of commencement of injection to the Division's district office. In accordance with Division rules, the operator shall submit monthly reports of the disposal operations on Division Form C-115.

(13) Without limitation on the duties of the operator as provided in Division rules, 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.

(14) The North Caprock Celero Queen Unit Secondary Recovery Project is hereby certified to the New Mexico Taxation and Revenue Department as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (NMSA 1978 Sections 7-29A-1 through 7-29A-5).

(15) The area to be affected by the enhanced oil recovery project shall consist of the area within the North Caprock Celero Queen Unit. Provided, 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.

(16) 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." 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.

(17) 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.

(18) 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 any injection well that will be transferred prior to approving transfer of authority to inject.

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

(20) The injection authority granted herein shall terminate two years after the

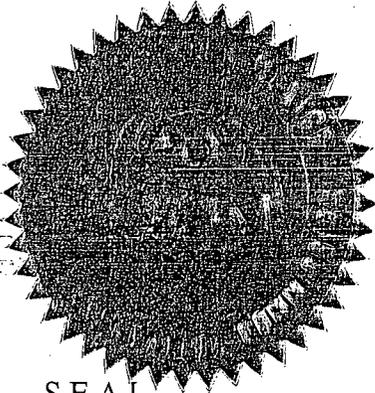
effective date of this order if the operator has not commenced injection operations into at least one of the permitted injection wells, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

(21) One year after all injection into the project area has ceased (or last reported), the Division shall consider the project abandoned, and the authority to inject will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to that termination date, may grant an extension thereof for good cause.

(22) 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.

(23) 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 without prior notice and hearing in case of 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

JAMI BAILEY
Director