

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. 14752
ORDER NO. R-13494

APPLICATION OF CIMAREX ENERGY COMPANY OF COLORADO FOR
APPROVAL OF A WATER DISPOSAL WELL, EDDY COUNTY, NEW
MEXICO.

ORDER OF THE DIVISION

This case came for hearing at 8:15 a. m. on October 27, 2011, at Santa Fe, New Mexico, before Examiner Richard Ezeanyim.

NOW, on this 21st day of December, 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, Cimarex Energy Company of Colorado ("Cimarex" or "Applicant"), seeks approval to re-enter and utilize its Secret et al Well No. 1 API No. 30-015-22321 (the subject well), located 660 feet from the North line and 1980 feet from the East line of Section 7, Township 19 South, Range 26 East, NMPM, Eddy County, New Mexico for the purpose of disposing oil field produced water.

(3) Cimarex proposes to dispose of produced water from its nearby operated wells into the Pennsylvanian Canyon formation; at an interval between approximately 7780 feet and 8010 feet below the surface.

(4) Cimarex submitted this application administratively to the Division on August 31, 2011. The application was protested by both COG Operating LLC ("COG") and Nearburg Producing Company ("Nearburg"). Cimarex applied for an examiner hearing and COG withdrew its protest on October 25, 2011, just before the hearing.

(5) Nearburg appeared at the hearing through counsel and questioned the presentation of Cimarex but presented no evidence.

(6) No other party appeared at the hearing or otherwise opposed the application.

(7) At the hearing, Cimarex presented facts including the required Division form C-108. Division records and the Cimarex presentation indicate the following:

(a) This well is located approximately 3 miles northwest of Lake McMillan in Eddy County, just east of the North Dagger Draw-Upper Pennsylvanian Pool.

(b) Cimarex operates oil wells within the Yeso formation that produce large volumes of water along with the oil. This disposal well is needed in order to economically produce those oil wells.

(c) The subject well was drilled in 1977 as a Pennsylvanian Morrow test to a depth of 9415 feet. Intermediate casing was set at 1315 feet but no production pipe was installed. The well was deemed a dry hole and immediately plugged and abandoned.

(d) As preparation for disposal, Cimarex plans to re-enter the subject well to the existing cement plug located at 8470 feet, run 5-1/2 inch casing to that depth and cement to surface. The well will be perforated from 7780 to 8010 feet, acidized, and 2-7/8 inch plastic coated tubing run to 7740 feet and set with an injection packer.

(e) The Pennsylvanian aged Canyon formation is not prospective for hydrocarbon production within 1/2 mile of this well and disposal into this formation within the proposed vertical interval will not adversely affect the recovery of oil or gas.

(f) The Pennsylvanian Canyon formation at this location consists of interbedded limestone and dolomite. A drill stem test over the proposed disposal interval yielded high volumes of sulfur water with a trace of oil and gas.

(g) According to the geologist testifying at the hearing, the Pennsylvanian Canyon near the subject well is structurally and stratigraphically distinct from the North Dagger Draw-Upper Pennsylvanian Pool.

(h) The Pennsylvanian Canyon formation will contain the disposed waters and waters will not escape to other formations or into fresh water sands or onto the surface.

(i) Other than the subject well, there are two plugged wells located within the 1/2 mile Area of Review, and these wells were cased, cemented,

and then plugged in a manner sufficient to ensure zonal isolation of the offsetting disposed waters.

(j) There is one non-plugged well within ½ mile of the subject well that was drilled to depths of the Pennsylvanian Canyon formation. This well is considered as “temporarily abandoned” and has an adequate cement top.

(k) Fresh water exists from 69 to 371 feet and is protected by multiple steel casing and cement. Cimarex will maintain and monitor a tubing-casing annulus down to the 7740 feet packer setting depth to ensure fresh waters are protected and disposed waters enter only the intended disposal interval.

(l) Cimarex located only one fresh-water well within 1 mile of the subject well, but it was inactive.

(m) Cimarex Energy Company of Colorado (OGRID 162683) operates approximately 1216 oil and gas wells in New Mexico and currently has no wells considered “inactive” and no additional required bonds and is in compliance with Division Rule 19.15.5.9 NMAC.

(n) According to Cimarex, the surface owner of this well-site is Virginia Weinmann Trust et al c/o Harding & Carbone Inc. of Houston Texas. Mailed certified notice to this affected person was stamped on August 24, 2011.

(o) Operators, lessees, and un-leased mineral owners of tracts located within ½ mile of this well were provided notice of this application to use this well for disposal.

(8) The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

(9) Cimarex’s proposal to use the subject well for disposal of oil field produced waters (UIC Class II only) into the Pennsylvanian Canyon formation from depths of 7780 feet and 8010 feet will protect correlative rights, prevent waste and protect the environment.

(10) The Cimarex application as proposed should be approved.

IT IS THEREFORE ORDERED THAT:

(1) Cimarex Energy Company of Colorado [OGRID 162683] (“Cimarex” or “operator”) is hereby authorized to re-enter and utilize its Secrest et al Well No. 1 (API

No. 30-015-22321), located 660 feet from the North line and 1980 feet from the East line, Unit letter B of Section 7, Township 19 South, Range 26 East, NMPM, Eddy County, New Mexico for disposing oil field produced water (UIC Class II only) into the Pennsylvanian aged Canyon formation through perforations from approximately 7780 to 8010 feet through lined tubing with a packer set less than 100 feet above the permitted disposal interval.

(2) 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.

(3) After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

(4) The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated. All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC.

(5) The wellhead injection pressure on the well shall be limited to **no more than 1556 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

(6) The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

(7) The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

(8) Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, 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 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.

(9) 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.

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

(11) The disposal authority granted herein shall terminate:

- a. Two years after the effective date of this order if the operator has not commenced injection operations into the subject well; or
- b. One year after the last date of reported disposal into this well.

(12) In either such event, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

(13) 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.

(14) 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.

(15) 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

Gabrielle A. Servat

for JAMI BAILEY
Director

SEAL