

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:

APPLICATION OF HIGH ROLLER WELLS LLC FOR AUTHORIZATION TO
INJECT, EDDY COUNTY, NEW MEXICO.

CASE NO. 15278
ORDER NO. R-14091

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on April 30, 2015, at Santa Fe, New Mexico, before Examiner Phillip R. Goetze.

NOW, on this 8th day of December, 2015, 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 the subject matter.

(2) High Roller Wells, LLC (the "Applicant" or "High Roller") seeks authority to drill and utilize its Gossett SWD Well No. 1 (API No. 30-015-pending; the "proposed well"), located 313 feet from the South line and 921 feet from the East line (Unit P) of Section 33, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, for commercial disposal of produced water into the Bell Canyon and Cherry Canyon formations of the Delaware Mountain group through a perforated interval from 2500 feet to 5000 feet below surface.

(3) On December 23, 2014, High Roller submitted an administrative application (Application No. pMAM1435736225) to the Division for approval of the proposed well for commercial disposal of produced water. Prior to the submittal of the application, the Division received a notification of protest by BK Exploration Company. A second notification of protest was filed by Mewbourne Oil Company on January 6, 2015. In the three week period following the receipt of the application, an additional 22 individual

Exhibit No. <u>2</u>
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High Roller Wells, LLC

protests were filed with the Division. All of these protests were from surface owners notified under the requirements for review of the application by administrative process.

(4) On March 3, 2015, the Division received a request from High Roller to place the application for the proposed well on a hearing docket.

(5) Subsequently, Mewbourne Oil Company, BTA Oil Producers, LLC and COG Operating LLC filed pre-hearing statements for appearance regarding the application.

(6) At hearing, Mewbourne Oil Company and BTA Oil Producers, LLC (collectively referred to as the "Opponent") appeared in opposition through separate legal counsels. COG Operating LLC appeared at hearing through legal counsel, but did not oppose the granting of the application.

(7) Ms. Gloria Vasquez, a surface property owner and representative for several adjacent surface owners notified through the application process, appeared *pro se* in opposition to the application but did not offer expert testimony regarding the application's content. The testimony by Ms. Vasquez presented concerns regarding the potential for environmental and safety issues if the application were to be approved.

Applicant appeared at hearing through counsel and presented the following testimony.

(8) Applicant seeks to drill the proposed well to an approximate total depth of 4600 feet below surface. The injection will occur through perforations from approximately 2500 feet to approximately 4500 feet below surface. At hearing, Applicant decreased the total depth of the proposed well by 500 feet from the total depth of 5000 feet provided in the original application.

(9) The proposed well is to be constructed with 10 $\frac{1}{4}$ -inch surface casing set at 550 feet below surface with cement circulated to surface. This depth will protect the deepest measured water well in the area. The second string of casing, the 7-inch production casing, will be set at the total depth of 4600 feet with cement placed with separate stages through a diverter valve tool at approximately 2000 feet below ground surface.

(10) Applicant proposed a maximum injection rate of 17,500 barrels of water per day (BWPD), a reduction from the maximum injection rate of 30,000 BWPD proposed in the original application. The average injection rate is expected to be 8000 BWPD to 10,000 BWPD.

(11) The primary source for disposal in the proposed well would be both flowback water and produced water from horizontal wells completed in the Bone Spring formation. These sources are compatible with existing formation fluids in the proposed injection interval.

(12) No active fresh-water wells were identified within a two-mile radius of the proposed well. One inactive fresh-water well (former stock windmill) was identified within approximately 200 feet of the proposed well; however, the proposed well is to be completed (with regards to the proposed casing and cement program) as to isolate any fresh water intervals.

(13) The results of the half-mile Area of Review (AOR) around the proposed well found five wells that penetrated the proposed injection interval: three plugged and abandoned wells and two active producing wells. The producing wells appear to be sufficiently cased and cemented and the abandoned wells properly plugged to protect underground sources of protectable water and not allow migration of injection fluids from the proposed injection interval.

(14) Applicant reduced the proposed injection interval by 500 feet from the original administrative application that proposed a total depth of 5000 feet below surface. Applicant removed the deeper portion of the interval to provide a buffer from potential hydrocarbon resources and production in the Brushy Canyon formation of the Delaware Mountain group.

(15) Applicant provided an overview of historical hydrocarbon production which has occurred in the area around the proposed well. Applicant identified limited hydrocarbon development of the Cherry Canyon formation to townships north of the subject area and stated that there is no indication that similar resources are present in the immediate area of the proposed well. However, Applicant's witnesses, in testimony, stated that Applicant did not consider the potential for exploration and development of possible hydrocarbon occurrences in the Cherry Canyon formation utilizing horizontal well completions.

Opponent appeared at hearing through counsel and presented the following testimony.

(16) Opponent stated in testimony that significant mineral acreage was held in the area including leased acreage immediately surrounding the tract containing the proposed well.

(17) Opponent presented the mud log from the Mewbourne Oil Company's Layla 35 MD Well No. 1H (API No. 30-015-40210), a horizontal well with a surface location 1.25 miles east of the proposed well, that indicated hydrocarbon potential in the Cherry Canyon formation and the upper portion of the Brushy Canyon formation in addition to existing production from two different intervals in the lower portion of the Brushy Canyon formation.

(18) By means of geophysical log interpretation presented in exhibits, Opponent disputed the presence of porosity barriers offered by Applicant that would isolate the Cherry Canyon formation from the Brushy Canyon formation. Opponent also stated that the 500-foot decrease in the proposed injection interval would not provide the protection

of hydrocarbon potential in the Cherry Canyon and Brushy Canyon formations as stated by the Applicant.

(19) Opponent stated that the lack of porosity barriers and the injection within the interval proposed by Applicant will impact the potential hydrocarbon resources in Opponent's mineral leases that are adjacent and down dip of the proposed well.

(20) Opponent contended that the proposed injection rate of 8000 BWPD to 10,000 BWPD was not consistent with average disposal rates of injection wells in the area. Observed averages for injection rate were 2000 BWPD to 3000 BWPD with injection pressures close to those approved in administrative orders. Opponent further testified that the proposed range of injection rates and corresponding pressures would be capable of inducing fracturing based on Opponent's data from hydraulic fracturing of horizontal wells in the lower Brushy Canyon formation.

The Division concludes as follows:

(21) The testimony of Ms. Vasquez, a surface property owner, presented environmental and surface use issues. These issues are not relevant to the content of the application and are outside the Division's authority under the permitting process of the Underground Injection Control (UIC) program.

(22) The application has been duly filed under the provisions of Division Rule 19.15.26.8 NMAC.

(23) Applicant has presented satisfactory evidence that all requirements prescribed in Division Rule 19.15.26.8 NMAC have been met.

(24) Division records indicate High Roller Wells, LLC (OGRID 370154) as of the date of this Order is in compliance with Division Rule 19.15.5.9 NMAC.

(25) Opponent's testimony and evidence supported a viable potential for occurrences of hydrocarbon resources in both the Cherry Canyon and Brushy Canyon formations.

(26) Opponent stated interest in investigating both the Cherry Canyon and Brushy Canyon formations for hydrocarbon resources with development using horizontal wells.

(27) Both Applicant and Opponent confirmed low potential in this area in the Bell Canyon formation for hydrocarbon resources that would support further investigation and possible development.

(28) Based on evidence by both Applicant and Opponent, the vertical limits for the Bell Canyon formation in the proximity extended from approximately 2600 feet below surface to approximately 3400 feet below surface.

(29) Under Section 70-2-12(B)(4) NMSA, 1978, the Division is required to prevent the drowning by water any stratum or part thereof capable of producing oil and gas in paying quantities and to prevent the premature and irregular encroachment of water or any other kind of water encroachment that reduces, or tends to reduce, the total ultimate recovery of crude petroleum oil or gas from any pool.

(30) The application should be approved with an injection interval that would not impede adjacent mineral owner's correlative rights including the ability to explore and develop hydrocarbon resources in the Cherry Canyon and Brushy Canyon formations. The permitted interval should only include the formation with low hydrocarbon potential and be sufficiently separated from deeper formations with higher potential for exploration and development.

IT IS THEREFORE ORDERED THAT:

(1) High Roller Wells, LLC ("High Roller" or "operator") is hereby authorized to utilize its Gossett SWD Well No. 1 (API 30-015-Pending; "proposed well") located 313 feet from the South line and 921 feet from the East line (Unit P) of Section 33, Township 23 South, Range 28 East, NMPM, Eddy County, New Mexico, as a commercial disposal well for UIC Class II fluids.

(2) Disposal shall be through perforations from 2600 feet to 3200 feet below surface in a permitted injection interval comprising only the Bell Canyon formation of the Delaware Mountain group. Injection is to be through plastic-lined tubing and a packer set within 100 feet above the top perforation of the permitted interval. Total depth of the proposed well shall not be greater than 3400 feet.

(3) The operator shall submit a revised drilling, cement and casing program for the proposed well to Division's District II for approval under Division Rule 19.15.14.8 NMAC which addresses the limits of the permitted injection interval described in Ordering Paragraph (2).

(4) Prior to commencing injection, the operator shall provide to Division's District II office cement bond log (or equivalent) confirming placement of cement from total depth to surface for the production casing with the perforations in the permitted interval.

(5) The operator shall supply the Division with copies of a geophysical log suite over the permitted disposal interval sufficient to determine hydrocarbon potential. The operator shall notify the Division's District II office of significant hydrocarbon shows that are observed during drilling, and provide Division's District II office and the Santa Fe engineering bureau with copies of the logs for review prior to perforation of the permitted interval. If significant hydrocarbon shows indicate the potential for the permitted interval to be classified as a stratum capable of producing hydrocarbons in paying quantities, then this disposal order shall be terminated *ipso facto* under Section 70-2-12(B)(4) NMSA, 1978.

(6) The operator of this well shall run an injection survey (tracer/temperature or equivalent) using operating pressures of the injection interval within one (1) year after commencing disposal into this well. The operator will supply both the Division District II office and Santa Fe engineering bureau with a copy of the survey log. If the Division does not receive the log within the prescribed time period, then this disposal order shall be terminated *ipso facto*.

(7) The operator shall take all steps necessary to ensure that the disposed water enters only the permitted disposal interval and is not permitted to escape to other formations or onto the surface.

(8) After installation of 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.

(9) 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 procedures and schedules shall follow the requirements in Division Rule 19.15.26.11(A) NMAC.

(10) The wellhead injection pressure on the well shall be limited to no more than 520 psi. In addition, the disposal well 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.

(11) 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 approved injection interval. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate Test. Operator shall provide notification of the injection pressure increase application following Division Rule 19.15.26.8(B)(2). If the application is protested within 15 days of receipt of notification, the application shall be sent to hearing before the Division for consideration.

(12) The operator shall notify the supervisor of the Division's District II 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 II 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 NMAC and 19.15.7.24 NMAC.

(13) Without limitation on the duties of the operator as provided in Division Rules 19.15.29 NMAC 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 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 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.

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

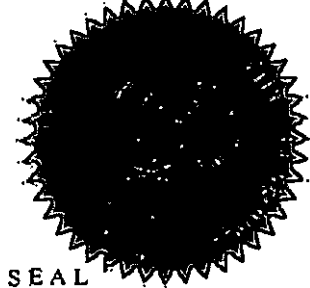
(16) The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the proposed well, provided however, the Division, upon written request, mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

(17) One year after disposal into the well has ceased, the well will be considered abandoned and the authority to dispose will terminate *ipso facto*.

(18) 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.

(19) 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 prior to notice and hearing in event of an emergency, terminate the disposal authority granted herein.

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



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

David R. Catanach

DAVID R. CATANACH
Director