RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION

OIL AND GAS DOCKET NO. 08-0322551 / TRACKING NO. 50760

APPLICATION OF RANCHWATER DISPOSAL, LLC (690687) PURSUANT TO STATEWIDE RULE 46 FOR A COMMERCIAL PERMIT TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS FOR THE DOMINGUEZ 2-3 LEASE, WELL NO. 1D, MATTHEWS (BRUSHY CANYON) FIELD, REEVES COUNTY, TEXAS

AMENDED PROPOSAL FOR DECISION

HEARD BY: Petar Buva – Technical Examiner
Kristi M. Reeve – Administrative Law Judge

PROCEDURAL HISTORY:

Application Filed:	May 2, 2019
Protest Received:	June 28, 2019
Request for Hearing Received:	July 16, 2019
Prehearing Conference:	October 18, 2019
Hearing on the Merits:	December 10, 2019
Record Closed:	April 8, 2020
Transcript Received:	December 30, 2020
Proposal for Decision Issued:	July 28, 2020
Amended PFD Issued:	August 11, 2020

APPEARANCES:

APPLICANT:

Ranchwater Disposal, LLC

David Nelson, Attorney, *Gross and Nelson*
Barry Hagemann, Consultant, Regulatory Specialist
Evan Villarruel, President, Ranchwater Disposal, LLC
Nguyen Ngoc, P.G., Consulting Engineer

PROTESTANTS:

Priest Petroleum Corporation

William Hayenga, Attorney, *McElroy, Sullivan, Miller & Weber*
Roy Oliver Priest, President, Priest Petroleum Corporation
Michael Wiggins, P.E., Priest Petroleum Corporation

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I. Statement of the Case

Applicant Ranchwater Disposal, LLC ("Ranchwater" or "Applicant"), filed an application seeking commercial authority pursuant to 16 Tex. Admin. Code § 3.46 ("SWR 46") to dispose of oil and gas waste by injection into a formation productive of oil or gas for the Dominguez 2-3 Lease, Well No. 1D, Matthews (Brushy Canyon) Field, Reeves County, Texas ("Application"). The proposed Well No. 1D ("Subject Well") is located approximately 2.8 miles north of Orla, Texas, which is the nearest town in Reeves County.

Ranchwater requests authority to dispose of 40,000 barrels of water per day ("bwpd") of produced water, including saltwater and Resource Conservation and Recovery Act ("RCRA") exempt waste, into the Delaware Mountain Group formation from a depth of 2,900 feet to 6,000 feet, with a maximum surface injection pressure at 2,250 pressure square inch, gauge ("psig"). Ranchwater's Application was determined to be administratively complete by Commission[1] technical staff ("Staff"). At the hearing, Ranchwater amended the injection interval, decreasing the interval to 2,900 feet to 5,530 feet.

The application is protested by Priest Petroleum Corporation ("Priest" or "Protestant"), an operator with several producing wells in the Delaware Mountain Group less than one half-mile from the Subject Well. Priest contends that the proposed commercial disposal well will cause waste and harm correlative rights. Priest also contends that Ranchwater does not have a good faith claim to dispose of fluids into a productive zone.

Commission took official notice of the General Land Office's ("GLO") letter dated December 5, 2019. The GLO letter supports Priest's protest, because the proposed Subject Well would inject into the formation less than 1,000 feet from where Priest produces on state-mineral classified lands. The GLO believes the proposed Subject Well would water-out the productive formations in the area and reduce the royalty revenue generated from Priest's oil and gas production which benefits the GLO's University Fund.

Based on the evidence in the record, the Administrative Law Judge and Technical Examiner (collectively "Examiners") recommend the Application be denied.

II. Notice and Jurisdiction

Sections 81.051 and 81.052 of the Texas Natural Resources Code provide the Commission with jurisdiction over all persons owning or engaged in drilling or operating oil or gas wells in Texas, and the authority to adopt all necessary rules for governing and regulating persons and their operations under the jurisdiction of the Commission.

Ranchwater published a notice of application for the Subject Well in the *Pecos Enterprise*, a newspaper of general circulation in Reeves County, Texas, on April 25, 2019, as required by SWR 46. On October 4, 2019, Ranchwater also provided notice of

[1] Railroad Commission of Texas.

the Application to the Reeves County Clerk, offset operators, and each affected person described in SWR 46.[2]

On September 27, 2019, the Hearings Division of the Commission sent a Notice of Prehearing Conference ("Notice") for the Application via first-class mail to Applicant and all affected persons setting a prehearing conference date of October 18, 2019. The Notice contains: (1) a statement of the time, place, and nature of the pre-hearing conference; (2) a statement of the legal authority and jurisdiction under which the hearing is to be held; (3) a reference to the particular sections of the statutes and rules involved; and (4) a short and plain statement of the matters asserted.[3] The prehearing conference was held on October 18, 2019, as noticed. The hearing on the merits was set for December 10, 2019, and the parties were provided notice on the record at the conclusion of the prehearing conference. Applicant and Protestant appeared and participated in the prehearing conference and the hearing on the merits. Consequently, all parties received more than 10 days' notice of the hearing and an opportunity for hearing.

III. Applicable Law

The Commission may grant an application for a disposal well permit under Texas Water Code§ 27.051(b) and 16 Tex. Admin. Code § 3.46 may issue the permit if it finds:

(1) that the use or installation of the injection well is in the public interest;

(2) that the use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation;

(3) that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution; and

(4) that the applicant has made a satisfactory showing of financial responsibility if required by Section 27.073.[4]

IV. Discussion of the Evidence[5]

At the hearing, Nguyen Ngoc, Petroleum Engineer, and Barry Hagemann, Regulatory Specialist, appeared on behalf of Ranchwater to offer sworn expert testimony and to sponsor documentary evidence. Roy Priest, President of Priest Petroleum Corporation, and Michael Wiggins, Petroleum Engineer, appeared on behalf of Priest to offer sworn expert testimony and to sponsor documentary evidence. Additionally, Evan

[2] Ranchwater Ex. No. 8.
[3] *See* Tex. Gov't Code §§ 2001.051, .052; 16 Tex. Admin. Code §§ 1.41, 1.42, 1.45, 3.46.
[4] Section 27.073 of the Texas Water Code authorizes the Commission to require financial assurance in order to issue an injection well permit. Statewide Rule 78 does require financial assurance for operators of disposal wells. *See, e.g.,* Tex. Admin. Code § 3.78(a)(6), (d), (g).
[5] The hearing transcript in this case is referred to as "Tr. Pg.[page(s)], Ln. [line(s)]." Applicant's exhibits are referred to as Ranchwater Ex. No. [Exhibit Number]. Protestant's exhibits are referred to as Priest Ex. No. [Exhibit No.].

Villarruel, Principal at Ranchwater Disposal, LLC, was called to testify by Priest Petroleum Corporation.

A. Applicant's Evidence

1. Application

The Subject Well, identified as Well No. 1D, on the Dominguez 2-3 Lease, in the Matthews (Brushy Canyon) Field, Reeves County, Texas, would be a newly drilled injection well. Ranchwater proposed the following design and operation limitations:[6]

1. Drilled to a total depth of 5,580 feet;
2. Long string (7 5/8-inch) set at 5,580 feet and cemented to the surface;
3. Tubing (5 ½-inch) with a packer set at 2,850 feet;
4. Surface casing (10 3/4-inch) to 900 feet, cemented to the surface;
5. Disposal interval of 2,900 - 5,530 feet, which includes the Bell Canyon, Cherry Canyon, and upper Brushy Canyon formations;
6. A maximum daily injection volume equal to 40,000 bwpd; and
7. A maximum surface injection pressure equal to 2,250 psig.

Originally, Ranchwater requested an injection interval from 2,900 to 6,000 feet. At the hearing, Ranchwater amended the injection interval to be from 2,900 to 5,530 feet, with a total well depth of 5,580 feet.[7]

2. Geology and Area of Review

The proposed disposal zone for the Subject Well is in the Delaware Mountain Group, which includes the Bell Canyon, Cherry Canyon, and Brushy Canyon.[8] Statewide Rule 3.46(e)(1) provides:

> Except as otherwise provided in this subsection, the applicant shall review the data of public record for wells that penetrate the proposed disposal zone within a 1/4-mile radius of the proposed disposal well to determine if all abandoned wells have been plugged in a manner that will prevent the movement of fluids from the disposal zone into freshwater strata. The applicant shall identify in the application any wells which appear from such review of public records to be unplugged or improperly plugged and any

[6] Ranchwater Ex. Nos. 14 and 7A; Tr. Pg. 48-49, Ln. 23-25.
[7] Tr. Pg. 14, Ln. 10-13.
[8] Tr. Pg. 41, Ln. 1-4; Ranchwater Ex. Nos. 9 and 7A.

other unplugged or improperly plugged wells of which the applicant has actual knowledge.[9]

Ranchwater performed a 1/4-mile and 1/2-mile area review to assess the active and plugged wells surrounding the Subject Well. Ranchwater's witness, Mr. Berry Hagemann, presented the review studies. The 1/4-mile area of review for the proposed Well 1D shows a single wellbore, the Jean No. 2 well, API 42-371-32368, operated by Priest Petroleum Corporation.[10] The Jean No. 2 well is producing from the Delaware Mountain Group formation, the same formation Ranchwater is proposing to inject into.[11] Additionally, within the 1/4-mile radius from the proposed Well BHP Billiton Petroleum (TXLA Operating) Company has a drilling permit, but as of the date of this hearing the well has not yet been drilled.

The 1/2-mile area of review for the Subject Well shows one injection well and three additional producing wells.[12] All operators within half-mile radius from the proposed Well No. 1D have been notified, as required by the Statewide Rule 46.[13]

Mr. Nguyen Ngoc testified that the injection fluid would be contained within the amended disposal interval and could not migrate to other producing formations.[14] Mr. Ngoc presented a well log for the Jean No. 2, the well closest to the proposed Well. The log shows multiple impermeable shale barriers below the base of the injection interval. According to Mr. Ngoc, these are barriers comprised of 130 to 140 feet of impermeable shale over a 408 foot interval.[15] In addressing the upper confining layer, Mr. Ngoc discussed the proposed casing program and concluded that it will contain the injected water within the injection interval.[16] The geology of the upper confining layer was not discussed.

3. Public Interest

Mr. Hagemann reviewed and analyzed the area within the 2.5-mile radius surrounding the proposed disposal well. He testified that within the area of review, 30 gas wells and 41 oil wells were identified, with an additional seven wells identified during the review that were marked as both oil/gas, probably reclassification wells. Additionally, he identified 92 horizontal wells, 56 permitted locations to be drilled, and 12 active injection wells within the 2.5-mile radius review area.[17] Mr. Ngoc stated in his testimony that horizontal wells in the Wolfcamp formation produce a lot of water in order to produce oil.[18] He indicated that horizontal wells with extensive laterals or multiple stage frac wells

[9] 16 Tex. Admin. Code § 3.46(e)(1).
[10] Ranchwater Ex. No. 8.
[11] Tr. Pg. 23-4, Ln. 23-2.
[12] Ranchwater Ex. No. 8.
[13] Tr. Pg. 30, Ln. 22-24.
[14] Tr. Pg. 50, Ln. 7-9.
[15] Tr. Pg. 45-46, Ln. 18-2; Ranchwater Ex. No. 13.
[16] Tr. Pg. 47-48, Ln. 17-1.
[17] Tr. Pg. 19-20, Ln. 24-13; Ranchwater Ex. Nos. 4 and 11.
[18] Tr. Pg. 50, Ln. 23-5.

produce as much as 500,000 barrels of water ("bbls/water") per well.[19] Therefore, Mr. Ngoc argued that there are clear indicators of industry need.[20]

4. Protection of Useable Quality Water Aquifers

The Commission's Groundwater Advisory Unit ("GAU") determined that to protect the usable-quality groundwater at the Subject Well, the interval from the land surface to the base of Rustler, which is estimated to occur at a depth of 800 feet, must be protected. The Base of Underground Sources of Drinking Water ("USDW") is estimated to occur at a depth of 850 feet at the site of the Subject Well.[21] Ranchwater proposes the Subject Well will be protective of the USDW by running 10 3/4-inch surface casing to 900 feet deep and cementing it back to the surface; and running 7 5/8-inch string casing to 5,580 feet and cementing it to surface.[22]

5. Financial Assurance

Ranchwater has an active Form P-5 Organization Report. Ranchwater demonstrated financial security in the form of a $25,000 cash deposit.[23]

B. Protestant's Evidence

The protestant, Priest Petroleum Corporation, maintains that Ranchwater's proposed commercial disposal well will harm correlative rights and cause waste. Priest is an operator with several wells in the Delaware Mountain Group less than ½ mile from the proposed Subject Well.[24] Priest also contends that Ranchwater does not have a good faith claim to dispose liquids into a productive zone.

Priest indicates the proposed disposal well is designed to inject into the Matthews (Brushy Canyon) Field from approximately 2,900 to 5,530 feet, which overlaps the correlative interval of Priest's wells in the vicinity.[25] Mr. Roy Priest, President of Priest Petroleum Corporation, testified to the historic production of the field. He indicated that since 2006 this field has produced 734,830 bbls/oil and 1.5 million cubic feet ("bcf") of gas.[26] In the six years preceding consolidation, which excludes all production prior to 2000, these formations in the field produced a total of 1.3 million bbls/oil and 3 bcf of gas.[27] In 2010, an independent consultant prepared a reserve report and predicted an economic life of 45 years for Lasell State No. 2 Well, a nearby well in the field.[28] The well has since exceeded projected performance.[29] The report for the Jean No. 2 well, which is the closest well to the Subject Well, projects an economic life of 27 years in the Brushy

[19] Tr. Pg. 51, Ln. 10-14.
[20] Tr. Pg. 51, Ln. 5-7.
[21] Ranchwater Ex. No. 8(E).
[22] Ranchwater Ex. No. 14.
[23] Ranchwater Ex. 8R.
[24] Priest Ex. No. 1A.
[25] Tr. Pg. 108, Ln. 20-23.
[26] Priest Ex. No. 3; Tr. Pg. 105-6, Ln. 24-7.
[27] Priest Ex. No. 3A.
[28] Priest Ex. No 6A.
[29] Tr. Pg. 135, Ln. 1-25.

Canyon formation, with a potential to recomplete in higher zones.[30] Mr. Priest maintains that these reserve reports represent the reserves threatened by the proposed disposal well.

Mr. Priest further testified that Priest Petroleum Corporation has nine wells in the vicinity of the Subject Well that have reserves in every zone of the Delaware Mountain formation within one-mile from the proposed disposal well.[31] Based on a core analysis from the Lowe State No. 2 well, which is centrally located in the field, and nearest to the proposed well, the net geometric mean permeability of the formation is 3.274 millidarcies ("mds").[32] None of the 56 data points from the core sample were above 40 mds, which in contrast to 75 mds indicated on the application for the subject disposal well.[33] Mr. Priest maintains that isopach maps show net pay of Priest's wells directly connected to the Subject Well's net pay.[34] Mr. Priest concluded that with the formation porosity and permeability the injected water will go right through the Delaware sands because there is nothing to stop it.

According to Mr. Priest, his wells are already suffering harm from the existing disposal wells in the area.[35] Currently there are three active disposal wells within a 1.6 mile radius of Priest's wells, injecting into Delaware Mountain Group formation.[36] Since August of 2019, these wells that have historically had fluid levels thousands of feet beneath the surface, are now flowing at the surface.[37] Priest presented video evidence taken on August 23, 2019 of the Lasell State No. 2 well (API 42-389-32367) flowing at the surface.[38] He testified that water coming from the Lasell State No. 2 was not native, because a 2012 analysis of the formation water showed chlorides at 143,000 parts per million ("ppm"), while analysis of the water flowing at surface on August 23, 2019, had chlorides at 46,000 ppm.[39] Mr. Priest concluded that these commercial disposal wells are harming Priest's production and adding Ranchwater's proposed Well would make the negative impact being observed worse.

Mr. Priest testified that its wells in the field exhibit flat production curves up to a point of economic limit. Once the economic limit is reached for its wells, the wells are typically plugged back, moved up-hole to the next potentially productive zone.[40] Historically these wells have relatively flat production of approximately two bbs/day until

[30] Priest Ex. No. 6B, Tr. Pg. 136, Ln. 12-22.
[31] Priest Ex. No. 6D; Tr. Pg. 141, Ln. 3-16.
[32] Priest Ex. No. 4. Tr. Pg. 120-1, Ln. 24-22.
[33] Ranchwater Ex. No. 7A.
[34] Priest Ex. Nos. 5A-E.
[35] Tr. Pg. 133-4, Ln. 13-13.
[36] Priest Ex. 7B.
[37] Priest Ex. Nos. 7D and 14 (e-filed).
[38] Priest Ex. No. 14A.
[39] Priest Ex. No. 5A. Tr. Pg. 161-2, Ln. 14-8.
[40] Tr. Pg. 119, Ln. 1-15.

an abrupt drop-off in 2019.[41] Mr. Priest argues the drop-off in production is due to a watering out caused by the surrounding disposal wells.

Priest's sole injection well is the North Matthews PVOG No. 1. The PVOG No.1 is a noncommercial injection well permitted to injection 5,000 bpd of liquid at 1,600 psi into the nonproductive interval from 3,210 to 3,475 feet.[42] The actual injection averages approximately 500 bpd of liquid.[43] From January 2013 through January 2019, Priest's PVOG No. 1 well injected 919,000 barrels total.[44] Priest maintains that, if approved, the Subject Well will inject more in one month than the POVG No. 1 has in six years.[45]

Priest maintains that the minimizing of the injection interval for the Subject Well from 2,900 to 6,000 feet to 2,900 to 5,530 feet, while well-intended, does not solve the issue of harming correlative rights, as the injection interval still overlaps with Priest's nearest well, the Jean No. 2.

Priest also contends that Ranchwater does not have a good faith claim to dispose into a productive zone. Ranchwater's basis for the operation of the Subject Well is a surface use agreement.[46] Priest maintains that surface rights afford an operator rights to inject into a non-productive reservoir, but the same does not apply to injection into productive zone. In support of its position Protestant cited the Oil and Gas Docket No. 08-0312799.[47] In this Docket, Aqua Terra Permian, LLC ("ATP") had an agreement with the owner of the surface, but did not have title rights to the mineral estate underlying the proposed well's 10-acre site.[48] The Examiners denied the application for disposal into a productive formation where the applicant ATP did not own the mineral rights. Priest maintains that Ranchwater's application mirrors ATP's denied application.

V. Examiners' Analysis of the Evidence

The Examiners conclude that the evidence demonstrates that Ranchwater's proposed injection well does not meet the requirements of the Texas Water Code and Statewide Rule 46.

A. Protection of Oil, Gas and Geothermal Resources

The Examiners find the evidence does not demonstrate that the proposed injection well will be drilled, completed, or operated in a manner that will not endanger or injure oil, gas, or geothermal resource, as required by the Texas Water Code and SWR 46.

[41] Priest Ex. No. 3F, Tr. Pg. 117-8, Ln. 23-7.
[42] Priest Ex. 3A; Tr. Pg. 115, Ln. 15-16 and Pg. 117, Ln. 12-13.
[43] Tr. Pg. 115, Ln. 17-25.
[44] Tr. Pg. No. 116, Ln. 15-16.
[45] Tr. Pg. 116, Ln. 16-20.
[46] Tr. Pg. 84, Ln. 2.
[47] Priest Ex. No. 12A.
[48] Priest Ex. No. 12A.

Ranchwater presented the proposed design of disposal Well No. 1D, that includes long string (7 5/8-inch) set at 5,580 cemented to the surface, and a surface casing (10 3/4-inch) to 900 feet cemented to the surface, with a disposal interval of 2,900 to 5,530 feet.[49] The Examiners find the proposed design to be sufficiently protective of oil, gas, and geothermal resources. Ranchwater also presented evidence of multiple impermeable shale barriers below the base of the injected interval at the location of the proposed well. According to Mr. Ngoc, petroleum engineer and expert witness for Ranchwater, these are barriers comprised of 130 to 140 feet of impermeable shale over the 408 foot interval.[50] In addressing the upper confining layer, Mr. Ngoc discussed the proposed casing program and concluded that it will contain the injected water within the injection interval.[51] The Examiners note that Mr. Ngoc, and other Ranchwater witnesses failed to discuss the geology above the disposal interval or to describe the nature of an upper confining layer, if there is one. Whether there is no upper confining interval or Ranchwater failed to recognize the importance to address it, the Examiners find that the lack of data regarding a confining layer above the injection interval leaves a question of the potential to injure oil, gas, or geothermal resource and warrants denial of the Application.

At the hearing, Priest expressed concern about Ranchwater's proposed commercial disposal well harming correlative rights and causing waste. Priest is an operator of several producing wells in the Delaware Mountain Group within one-half mile from the proposed Well No. 1D.[52] Priest showed evidence of active injection into Delaware Mountain Group formation from three disposal wells within 1.6 miles radius from its producing wells.[53] Since August of 2019 Priest's wells, which historically had fluid levels thousands of feet beneath the surface, began flowing at the surface. Examiners find that Priest's wells are flowing at the surface as a direct result of nearby injection operations and are damaging correlative rights.

Priest presented video evidence from August 23, 2019, that shows the tank battery connected to the Lasell State No. 2 (API 42-389-32367) spewing water from the top.[54] Priest tendered evidence that the water flowing out of the tank battery had chlorides at 46,000 ppm. Priest then compared that result against the 2012 analysis showing chlorides in the formation water to be at 143,000 ppm.[55] Priest did not attempt to determine which of the three surrounding commercial disposal wells, or more than one, may be impacting its wells. The Examiners find the difference in chlorides concentrations is strong evidence that the water flowing at the surface of Lasell State No. 2 is not native to the formation. The difference in chlorides concentrations along with the increased water levels is an indicator of the field being watered-out. While further investigation may be necessary to show the source of the invasive water, the Examiners find the proposed disposal well will further harm the productive interval from which Priest produces, and therefore recommend denial of the Application.

[49] Ranchwater Ex. No. 14 and 7A.
[50] Tr. Pg. 45-6, Ln. 18-2; Ranchwater Ex. No. 13.
[51] Tr. Pg. 47-8, Ln. 17-1.
[52] Priest Ex. No. 1A.
[53] Priest Ex. 7B.
[54] Priest Ex. No. 14A.
[55] Priest Ex. No. 5A. Tr. Pg. 161-2, Ln. 14-8.

B. Protection of Ground and Surface Fresh Water

The evidence presented demonstrates that the proposed injection well will be constructed in a manner that will be protective of groundwater. Drilled to a total depth of 5,580 feet, the proposed well will have a long string (7 5/8-inch) casing set at 5,580 feet and cemented to the surface; and the surface casing (10 3/4-inch) will be set at 900 feet and cemented to the surface. The GAU letter stated that the base of USDW from 850 feet to surface must be protected, which is met by the proposed well design.

While the proposed well design is protective of the groundwater, the Examiners find there is a lack of evidence showing the Subject Well can be operated in a manner protective of groundwater. With the proposed top of the disposal interval at 2,900 feet, and the base of groundwater requiring protection at 850 feet, it is an upper confining interval that would inhibit injected fluids from migrating to shallow fresh groundwater. In addressing a direct question from his counsel on the upper confining interval, Mr. Ngoc discussed the proposed casing program,[56] without describing the local geology and the specific lithology of an upper confining layer to protect shallow groundwater in vicinity of the Subject Well.

The Examiners note the importance of the upper confining layer, since fluids show general tendency to migrate into the area of lower pressure, which, absent an anomaly, is upward. As discussed in the Oil, Gas, and Geothermal Resources section of this PFD, whether there is no upper confining interval or the Applicant failed to recognize the importance to address it, the Examiners find that the Applicant failed to show the proposed injection operation will not harm groundwater, and therefore recommend denial of the Application.

C. Financial Responsibility

Ranchwater has an active Form P-5 Organization Report. Ranchwater demonstrated financial assurance in the form of a $25,000 cash deposit.[57]

D. Public Interest

Section 27.051 of the Texas Water Code requires that the use or installation of a proposed injection well or facility be in the "public interest."[58] In the absence of a statutory definition, the Commission is tasked with interpreting the meaning of "public interest" in the Water Code.[59] Because traffic, noise, dust, smells and other generalized matters of public concern are outside the Commission's jurisdiction, the focus of a "public interest" analysis in this context is limited to matters related to oil and gas production.[60] Prior examiners have noted that "public interest" is a "separate and independent prerequisite"

[56] Tr. Pg. 47-8, Ln. 17-1.
[57] Ranchwater Ex. No. 8R.
[58] Tex. Water Code §27.051(b)(1).
[59] *See Railroad Comm'n v. Citizens for Safe Future*, 336 S.W.3d 619, 625 (Tex. 2011).
[60] *See Id.*

from the other required findings outlined in Chapter 27 of the Texas Water Code.[61] The burden of proof to establish that a proposed commercial disposal facility is in the public interest as required by Chapter 27 of the Texas Water Code is placed upon the applicant for the permit.[62] Neither Chapter 27 of the Water Code nor Statewide Rule 46 defines the term, "public interest," however.

It is generally understood that safe and efficient disposal of produced water is necessary to the proper maintenance of oil and gas development and production. The Commission has traditionally considered the following as evidence that the installation of a disposal well is in the public interest:

1. Injection of water into a disposal well is a preferred method of disposal in terms of overall environmental protection.

2. The economic life of a producing well will be extended and more oil produced if an operator has a means of disposing of his produced water.

3. Extra disposal capacity is needed in the area of the proposed well.[63]

These generally accepted proofs of public interest have often been expressed in terms of "industry need." If an applicant submits evidence of a lack of nearby disposal facilities or lack of capacity at existing facilities is shortening the economic life of oil and gas wells, this has customarily been considered proof of industry need for additional disposal capacity and thus proof of public interest. For example, industry need has been shown for past disposal applications where truck wait times at area facilities were so excessive as to compel traveling greater distances at greater expense to disposal of produced water.[64] Evidence in the form of disposal contracts or letters of support from nearby operators has also been accepted by the Commission to demonstrate industry need if coupled with some evidence of a lack of capacity.[65]

More recently, the Commission has been willing to consider an applicant's readiness to incur the expense of drilling and operating a disposal well based upon a factually supported market assessment of area need as evidence of public interest.[66] In addition, past examiners have noted the utility of redundancy in disposal operations.[67]

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[61] Oil and Gas Docket No. 02-0285578, *Application of Supreme Vacuum Services, LLC*, Examiners' Proposal for Decision (5-20-2014), pg. 8.

[62] See e.g. Oil and Gas Docket No. 09-0262947, *Application of IWOC, Inc.*, Examiners' Proposal for Decision (1-1-2010), p. 11

[63] *See* Discussions of Law Practice and Procedure (1992) p. 67. Evidence that extra capacity is not needed, standing alone, has not customarily been considered by the Commission as proof that the proposed well is not in the public interest. *See id.*

[64] See, e.g., Oil and Gas Docket No. 06-0273122, Application for Chireno Disposal, LLC, Examiners' Proposal of Decision (10-10-2012), pg. 6.

[65] *See id.*

[66] Oil and Gas Docket No. 08-0289657, *Application of Lotus LLC*, Examiners' Proposal for Decision (1-27-2015), p. 12

[67] *See, e.g.,* Oil and Gas Docket No. 06-0273122, *Application of Chireno Disposal, LLC*, Examiners' Proposal for Decision (10-10-2012), p. 6.

The area surrounding the proposed disposal Well has been rapidly developing oil and gas resources.[68] Ranchwater identified 30 gas wells and 41 oil wells within the 2.5-mile radius surrounding the proposed disposal Well. Mr. Hagemann testified that there are 56 approved drilling permits for wells that have yet to be drilled in that 2.5-mile area.[69] Ranchwater testified in that same area there are currently 12 active injection wells, presumably servicing these producing wells and wells yet to be drilled.[70]

Mr. Ngoc testified that horizontal wells in the Wolfcamp formation produce a lot of water with the produce oil.[71] He stated that horizontal wells with extensive laterals and multiple stage fracs require disposal often as much as 500,000 bbls/water per well.[72] According to Mr. Ngoc, these 500,000 bbls/water per well, along with the formation water, is a clear indicator of industry need.[73]

Although the applicant showed a potential industry need for an injection well in the area, the Examiners find the proposed disposal well will harm the productive interval, as discussed in the section V.A. *Protection of Oil, Gas and Geothermal Resources,* and therefore is not in the public interest.

E. Good Faith Claim

According to Priest, Ranchwater does not have a good faith claim to dispose liquids into a productive zone. Priest's position is based on the principle that in order to inject into a formation productive of oil or gas, one must have a good faith claim to the minerals in the formation or must have permission from a party holding such rights. In support of this argument, Priest cites to Oil and Gas Docket No. 08-0312799.[74] In this Docket, Aqua Terra Permian, LLC had an agreement with the owner of the surface but did not have title rights to the mineral estate underlying the proposed well's 10-acre site.[75] In that Docket, the Examiners recommended, and the Commission approved Examiners' recommendation, to deny the application for disposal into a productive formation where the applicant did not own the mineral rights.

At the hearing, it was established that in this application, Ranchwater has a surface use agreement.[76] In Texas, the owner of the surface holds the right to possess the physical space in which minerals may be located.[77] The right of the surface owner to use

[68] Ranchwater Ex. No. 5.
[69] Ranchwater Ex. No. 2 and 3.
[70] Tr. Pg. 19-20, Ln. 24-13; Ranchwater Ex. Nos. 4 and 11.
[71] Tr. Pg. 50, Ln. 23-5.
[72] Tr. Pg. 51, Ln. 10-14.
[73] Tr. Pg. 51, Ln. 5-7.
[74] Priest Ex. No. 12A.
[75] Priest Ex. No. 12A.
[76] Tr. Pg. 84, Ln. 2.
[77] *Lightning Oil Co. v. Anadarko E&P Onshore, LLC*, 520 S.W.3d 39, 49 (Tex. 2017). *See also Humble Oil & Refining Co. v. West*, 508 S.W.2d 812 (Tex. 1974, reh'g denied) (characterizing the surface owner's interests as ownership of the reservoir storage space, as the surface owner's property, and those ownership rights include the geological structures beneath the surface and distinguishing between the earth surrounding hydrocarbons and earth embedded with hydrocarbons); and *Springer Ranch, Ltd. v. Jones*, 421 S.W.3d 273, 283 (Tex. App.—San Antonio 2013, no pet.) (stating ownership of the hydrocarbons does not give the mineral owner ownership of the earth surrounding those substances).

this physical space does not include the right to unreasonably interfere with the mineral lessee's ability to access the minerals, however.[78] Ranchwater testified it had a recorded surface lease from the surface owner of the tract on which the proposed Well is to be located.[79] Priest is the owner of mineral interest in the proposed injection interval of the tract the where the proposed Well is to be located.

In accordance with *Lightning*, Ranchwater only needs the consent of the surface owner of the tract to establish a factually supported claim based upon a recognized legal theory to the reservoir space within the proposed injection interval.

By virtue of its agreement with the surface owner, the Examiners find Ranchwater made a reasonably satisfactory showing of a factually supported claim based upon a recognized legal theory to the reservoir space within the proposed injection interval. Accordingly, the Examiners find Ranchwater has a good faith claim right to operate the proposed well.

VI. Findings of Fact and Conclusions of Law

The Examiners recommend that the Commission adopt the following Findings of Fact and Conclusions of Law:

Findings of Fact

1. On April 25, 2019, Ranchwater Disposal LLC ("Ranchwater" or "Applicant") published notice of the Application for Well No. 1D, Dominguez 2-3 Lease, in the Pecos Enterprise, a newspaper of general circulation in Reeves County, Texas.

2. On October 4, 2019, Ranchwater provided notice of the Application for Well No. 1D, Dominguez 2-3 Lease, to the Reeves County Clerk, operators of wells within 1/2-mile of the proposed location, and all other affected persons, as required by 16 Tex. Admin. Code § 3.46.

3. On June 28, 2019, Priest Petroleum Corporation ("Priest" or "Protestant") filed with the Commission a protest of the Application.

4. On August 16, 2019, Ranchwater filed a request for hearing on its Statewide Rule 46 Application for a permit to dispose of oil and gas waste by injection into a reservoir productive of oil or gas. On August 19, 2019, Injection-Storage Permits Unit ("UIC") forwarded Ranchwater's hearing request to the Hearings Division. The Application is administratively complete, and the hearing was requested because the Application is protested.

[78] *See Lightning Oil Co*., 520 S.W.3d at 49 ("[A]n unauthorized interference with the place where the minerals are located constitutes a trespass as to the mineral estate only if the interference infringes on the mineral lessee's ability to exercise its rights.").
[79] Tr. Pg. 83-84.

5. On September 27, 2019, the Hearings Division of the Commission sent a Notice of Prehearing Conference ("Notice") via first-class mail to Applicant and all affected persons setting a prehearing conference date of October 18, 2019. The Notice contains: (1) a statement of the time, place, and nature of the pre-hearing conference; (2) a statement of the legal authority and jurisdiction under which the hearing is to be held; (3) a reference to the particular sections of the statutes and rules involved; and (4) a short and plain statement of the matters asserted. The pre-hearing conference was held on October 18, 2019, as noticed. The hearing on the merits was set for December 10, 2019, and the parties were provided notice. Applicant and Protestant appeared and participated in the prehearing conference and the hearing on the merits. Consequently, all parties received more than 10 days' notice of the hearing and an opportunity for hearing.

6. The proposed location for Well No. 1D, Dominguez 2-3 Lease, is located approximately 2.8 miles north of Orla, Texas, which is the nearest town in Reeves County, Texas.

7. The proposed Well No. 1D, Dominguez 2-3 Lease, would be completed and operated as follows:

   a) Drilled to a total depth of 5,580 feet;

   b) Long string (7 5/8-inch) set at 5,580 feet and cemented to the surface;

   c) 5 ½ inch tubing and a packer at 2,850 feet;

   d) Surface casing (10 3/4-inch) to 900 feet, cemented to the surface;

   e) Disposal interval of 2,900 - 5,530 feet, which includes the Bell Canyon, Cherry Canyon, and upper Brushy Canyon formations;

   f) A maximum daily injection volume equal to 40,000 bwpd; and

   g) A maximum surface injection pressure equal to 2,250 psig.

8. GAU determined the base of usable quality ground water at the proposed location of Well No. 1D, Dominguez 2-3 Lease, to occur at a depth of approximately 800 feet. The water-bearing strata from the land surface to a depth of 800 feet, which is the base of the Rustler Formation, must be protected in accordance with GAU letter number 239570. The Base of Underground Sources of Drinking Water at this location is estimated to occur at a depth of 850 feet.

9. The proposed injection well will be sufficiently cased and cemented to protect groundwater resources.

10. Ranchwater failed to provide evidence of a top confining interval which would prevent potential fluid migration upward.

11. A 1/4-mile area of review from the Well No. 1D, Dominguez 2-3 Lease, shows the Jean No. 2 Well, API 42-37132368, operated by Priest Petroleum Corporation, as the only well within the ¼ mile area. The ½ mile area of review for the proposed Well No. 1D shows one injection well and three additional producing wells.

12. There is one plugged and abandoned well within the ½ mile radius from the Subject Well.

13. There are four producing wells within ½ mile radius from the proposed SWD well. All four wells are listed as a producer in the proposed injection zone. All four wells are operated by Priest.

14. Priest's Lasell State No. 2 well was flowing at the surface. Water overflowing from the associated tank battery was not native water based on the chloride's concentration. The 2012 formation water analysis shows chlorides at 143,000 ppm, while analysis of the water flowing at surface on August 23, 2019, has chlorides at 46,000 ppm.

15. Priest's production from the Delaware Mountain Group is endangered by the three existing injection wells and installation of the proposed injection well is likely to cause further harm to any oil, gas, or other mineral formation.

16. As the well is likely to harm oil, gas, or other mineral formation, the use or installation of the proposed injection well is in not the public interest.

17. Ranchwater is not the owner of any mineral interest in the proposed injection interval of the tract the Well No. 1D is proposed to be located. Ranchwater has a surface use agreement via the surface owner of the tract.

18. The Ranchwater's surface lease is an adequate showing of "good faith claim" to inject into the proposed interval.

19. Ranchwater has an active Form P-5 Organization Report.

20. Ranchwater has financial assurance in the form of a $25,000 cash deposit.

Conclusions of Law

1. Resolution of the Application is a matter committed to the jurisdiction of the Commission. Tex. Nat. Res. Code § 81.051.

2. All notice requirements have been satisfied. 16 Tex. Admin. Code § 3.46.

3. Ranchwater holds a good faith claim right to operate the proposed well.

4. Ranchwater did not meet its burden of proof, and the subject Application did not satisfied the requirements of Chapter 27 of the Texas Water Code and Commission Statewide Rule 46.

    a. The use or installation of the proposed injection wells is not in the public interest. See Texas Water Code § 27.051(b)(1); 16 Tex. Admin. Code § 3.46.
    b. The proposed injection well will endanger oil, gas, or geothermal resources or cause the pollution of freshwater strata unproductive of oil, gas, or geothermal resources. Texas Water Code § 27.051(b)(2); 16 Tex. Admin. Code § 3.46.
    c. Ranchwater did not present sufficient evidence that both ground and surface fresh water will be adequately protected from pollution. Texas Water Code § 27.051(b)(3); 16 Tex. Admin. Code § 3.46.
    d. Ranchwater has made a satisfactory showing of financial responsibility. Texas Water Code § 27.051(b)(4); 16 Tex. Admin. Code § 3.46.

VII. Examiners' Recommendation

Based on the evidence, the Examiners recommend denial of the Application of Ranchwater Disposal, LLC for a commercial permit to dispose of oil and gas waste by injection into the Cherry Canyon, Brushy Canyon and Bell Canyon Formations, porous formations productive of oil and gas, for the Dominguez 2-3 Lease, Well No. 1D, in the Matthews (Brushy Canyon) Field, Reeves County, Texas.

Respectfully submitted,

Petar Buva
Technical Examiner

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Kristi M. Reeve
Administrative Law Judge