



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL & GAS DOCKET NO. 01-0286570

THE APPLICATION OF PRIME OPERATING COMPANY, PURSUANT TO STATEWIDE RULE 9 FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, WAGNER FARMS SWD LEASE, WELL NO. 1, PEARSALL (AUSTIN CHALK) FIELD, DIMMITT COUNTY, TEXAS.

HEARD BY: Paul Dubois – Technical Examiner
Marshall Enquist – Hearings Examiner

APPEARANCES:

APPLICANT:

Greg Cloud
Rick Rodriguez

REPRESENTING:

Prime Operating Company

PROTESTANTS:

Theodore J. Nelson
Maxine Nelson

Pro se

PROCEDURAL HISTORY

Application Published:	July 24, 2014
Application Filed:	September 10, 2013
Protest Received:	August 1, 2013
Request for Hearing:	December 10, 2013
Notice of Hearing:	January 30, 2013
Date of Hearing:	March 28, 2014
Transcript Received:	April 11, 2014
Proposal For Decision Issued:	July 23, 2014

EXAMINERS' REPORT AND PROPOSAL FOR DECISION**STATEMENT OF THE CASE**

This is the Application of Prime Operating Company (hereinafter "Prime") (Operator No. 677770), pursuant to Statewide Rule 9 for a commercial permit to dispose of oil and gas waste by injection into a porous formation not productive of oil or gas, Wagner Farms Lease (No. 14930), Well No. 1, Pearsall (Austin Chalk) Field, Dimmitt County, Texas. The proposed well is located about eight miles northeast of Carrizo Springs in Dimmitt County and about four miles southeast of Crystal City, which is in Zavala County. Prime proposes to convert an existing horizontal well completed in the Austin Chalk to a disposal well by plugging back the wellbore and perforating it in the Olmos and Elaine sands.

Notice of the application was given as required by Statewide Rule 9 to adjacent surface owners and the Dimmitt County Clerk in Carrizo Springs on September 10, 2013. Notice of the application was published in the *Carrizo Springs Javelin*, a newspaper of general circulation in Dimmitt County, Texas, on July 24, 2013. The application is protested by Theodore and Maxine Nelson, adjoining land owners.

DISCUSSION OF THE EVIDENCE**Applicant's Evidence**

Prime proposes to convert the existing Wagner Farms Lease, Well No. 1 (API No. 42-127-33295) to a commercial disposal well injecting produced salt water and RCRA-exempt¹ waste into the Olmos and Elaine sands at a depth of 3,560 feet to 4,700 feet. The well is located on a 5 acre tract 8.2 miles northeast of Carrizo Springs in Dimmitt County. Prime asserts and provided evidence that there is a need for additional disposal capacity in the area and that the construction and operation of the disposal well will meet the requirements of Chapter 27 of the Texas Water Code and the Commission's Statewide Rule 9.

The area map (Attachment 1) shows the proposed well location². Prime currently operates its Prestage SWD Well (API No. 42-127-33478, injection permit no. 101297) on the southwest corner of FM 1433 and David Wagner Road (a caliche-paved county

¹ Resource Conservation and Recovery Act: Examples of RCRA-exempt oil and gas waste includes produced water, drilling fluids, frac flowback fluids, rigwash and workover wastes.

² Applicant's Exhibit No. 21-L.

road). With this application Prime is seeking to develop its nearby Wagner Farms SWD. The Wagner Farms SWD Well No. 1 is located about 4,000 feet northwest of the Prestage SWD location. The Proposed Wagner Farms SWD surface facilities (unloading station, tank battery, etc.) will be located on the north side of David Wagner Road about 3,000 feet west of FM 1433. Fluids to be disposed will be pumped about 2,200 feet north of the surface facilities to the Wagner Farms SWD Well No. 1 through a buried pipeline. Attachment 1 illustrates the location of these facilities.

The existing Wagner Farms Well No. 1 wellbore was drilled and completed by Patterson Petroleum LP in February 2006. It was a horizontal well producing from two laterals completed in the Pearsall (Austin Chalk) Field. The completion reports indicate the wellbore encountered the Olmos Formation at a depth of 3,365 feet. The well was drilled vertically to a total depth of about 5,625 feet. The well is completed with 9 5/8-inch surface casing to a depth of 1,555 feet, and cement was circulated to the surface. The 7-inch long-string casing was set to a depth of 5,625 feet, and the top of cement was calculated to be at 2,385 feet per the completion reports. On the Form W-14 for the current application Prime calculates that the top of cement on the 7-inch long-string casing may be no higher than 3,033 feet below ground surface (bgs).

To convert the well to disposal service, Prime plans to alter the wellbore and re-complete it as follows (see Attachment 2):

- Set a bridge plug at 4,800 feet, below the proposed injection interval, to close off the two existing Pearsall (Austin Chalk) Field laterals.
- Place 100 feet of cement on top of the bridge plug.
- Perform a cement squeeze behind the 7-inch casing to close the annulus from the top of cement, estimated to be at 3,033 ft bgs, to the surface.³
- Perforate the well in the disposal interval from 3,560 feet to 4,700 feet.
- Set 3 ½ inch tubing on a packer at 3,460 feet.

³ On its initial application, Prime proposed conducting a cement bond log (CBL) to determine the top of cement behind the 7-inch casing and to squeeze cement behind the casing if the top was less than 100 feet above the disposal zone. To resolve a protest by the Wintergarden Groundwater Conservation District, Prime agreed to squeeze cement to the surface behind the entire 7-inch casing.

Operationally, Prime requests that the disposal well be permitted to provide for the following:

- Commercial disposal of salt water and RCRA-exempt waste into the Olmos and Elaine sand formations in the depth interval from 3,560 feet to 4,700 feet.
- The maximum daily injection volume will be 10,000 barrels per day (bpd).
- The average daily injection volume will be 8,000 bpd.
- The maximum surface injection pressure will be 1,780 psig.
- The average surface injection pressure will be 1,000 psig.

The Commission's Groundwater Advisory Unit (GAU) has indicated that the interval from the land surface to a depth of 1,500 feet, representing the base of usable-quality groundwater (BUQW), must be protected. Moreover, the Carrizo aquifer, which is estimated to occur from 800 feet to 1,150 feet contains water of superior quality which must be isolated from water in the overlying and underlying beds. The base of underground sources of drinking water (USDW) is estimated to occur at a depth of 2,200 feet. Further, the GAU has issued a 'no harm' letter stating that the proposed well disposing of oil and gas waste into the depth interval from 3,560 feet to 4,700 feet will not endanger fresh water in the area. The subject well has surface casing set to 1,550 feet, covering the interval from the ground surface through the BUQW. Additionally, the cement squeeze behind the long string casing will be circulated to the surface, providing full overlap with the surface casing.

A well log for the subject well indicated a thick and continuous shale interval from a depth of about 3,000 feet to the top of the disposal interval at 3,560 feet. From about 4,600 feet to 5,000 feet the gamma ray and spontaneous potential curves indicate a continuous shale stratum underlying the disposal interval. Within the disposal interval were two significant sand sequences: The Olmos sand from about 3,590 feet to about 3,950 feet, and the Elaine sand from about 4,510 feet to 4,570 feet. The two disposal zones appear to be separated by shale. Prime's expert engineering witness stated that the shale strata provide adequate confinement to protect water and hydrocarbon resources.

The Olmos Formation is known to produce hydrocarbons in the general area of the proposed disposal well, but no Olmos production was identified within a two-mile radius.

There were no wellbores or other artificial penetrations into the disposal zone

within the one-quarter mile area of review. The area of review was based on the surface location of the Wagner Farms No. 1 well, because the two laterals will be isolated below the disposal interval by a cast iron bridge plug and 100 feet of cement; as re-completed, the Wagner Farms SWD No. 1 will not be a horizontal disposal well. Within a one-half mile radius of the Wagner Farms SWD No. 1 well there is one producing well. This well, operated by Chesapeake Operating, Inc.⁴, is a horizontal well (API No. 127-35311) completed in the Eagle Ford Formation, which is below the Austin Chalk and therefore below the proposed disposal interval. The lateral portion of the Chesapeake wellbore crosses slightly into the one-half mile radius; the surface location is nearly one mile southwest of the proposed disposal well.

Three dry holes are also within a one-half mile radius of the Wagner Farms SWD No. 1 well and are to the west and northwest. The three wellbores, which penetrated the proposed disposal interval, have each been plugged with multiple plugs. Each well has a plug set across the BUQW. Prime's expert engineering witness stated that the three wells were plugged in accordance with Commission standards.

Prime has operated disposal wells for at least five years. Mr. Ricardo Rodriguez testified to Prime's experience and operational practices. Currently, Prime operates the Prestage SWD which is located about 4,000 feet southeast from the proposed Wagner Farms SWD Well No. 1. The Prestage SWD well is located on the southwest corner of the intersection of FM 1433 and David Wagner Road. The Prestage SWD surface facilities include a tank battery that is enclosed by an earthen berm for containment, and an "earthen concrete" pit that is used for unloading.⁵ Mr. Rodriguez stated that the Wagner SWD primary and secondary containment facilities would be constructed of concrete; they would not include an earthen berm.

Mr. Rodriguez stated the Prestage SWD well has reached capacity limitations in terms of injection volume and injection pressure. Recently Prime obtained an amended permit for that well to add perforations to resolve the capacity issues. Due to the level of exploration and production activity in Dimmit and nearby Zavala Counties, Prime expects the need for disposal capacity to increase. Prime believes there will be a continued and growing need for disposal capacity in the area, and therefore it is seeking to permit its Wagner SWD well.

Prime (Operator P-5 No. 677770) has a current active Form P-5 (Organization

⁴ During the hearing Mr. Nelson stated that the Chesapeake well was now operated by another operator. For the purposes of this PFD, the well will be referred to as the Chesapeake well to be consistent with the Applicant's evidence.

⁵ Transcript, page 50, line 19, to page 51, line 1.

Report) and has posted a \$250,000 bond as blanket financial assurance.

Protestants' Evidence

The application was protested at the hearing by Theodore and Maxine Nelson. The Nelsons own property adjacent to the west of the Wagner tract on which the disposal well and facilities are to be located. Mr. Nelson put on a direct case in which he identified several specific objections to the proposed disposal well.

Mr. Nelson's first area of concern was the potential for contamination of groundwater. He identified a number of plugged wellbores and other facilities within a half mile or so of the proposed disposal well. However, Mr. Nelson made reference to the Wintergarden Groundwater Conservation District's withdrawal of its protest following negotiations with Prime, and indicated his deferral to their expertise on groundwater issues.⁶ Mr. Nelson did, however, recall hearing rumors about a blowout or possible damage to the Wagner Farms Well No. 1, but he provided no other evidence.⁷

Mr. Nelson is very concerned about the potential for contamination of surface water from the proposed disposal well facility and facility activities. The proposed site is in the Nueces River Basin, and he described the site area as "an island" bounded by Espantosa Lake to the west and the Nueces River to the east.⁸ Espantosa Lake winds around from about one-half mile north of the well location to about one mile west.⁹ According to Mr. Nelson, Espantosa Lake is managed by the Zavala-Dimmit Water Improvement District No. 1, which, he confirmed with the Applicant, was not notified of the disposal well application. He stated that Espantosa Lake stores water for agricultural and recreational use.

Mr. Nelson provided evidence to show that the well and proposed facility location are both located in what is termed a "Zone A" special flood hazard area¹⁰ (i.e., flood plain). The "island" area in which the proposed SWD and facilities are located has

⁶ Transcript, page 55, lines 7-14.

⁷ Transcript, page 34, lines 5-9.

⁸ Transcript, page 72, lines 14-20.

⁹ The Commission's online GIS system identifies Espantosa Lake as "Espantosa Slough", which appears to be a part of Turkey Creek, which flows south to Souldier Slough and into the Nueces River, which continues on to the southeast.

¹⁰ Nelson's Exhibit Nos. 3 and 4, reproductions of U.S. Department of Housing and Urban Development, Federal Insurance Administration, Dimmit County maps. Exhibit No. 4 included topographic contours.

much less vertical relief than the areas east of the Nueces River or West of Espantosa Lake. Several center-pivot irrigation systems are present in the flood plain, but not in the areas of greater relief to the east or west of the low "island" topographic feature. Mr. Nelson stated that he built a house on his property, which is also in the Zone A flood plain, but first had to elevate it above the flood plain to secure a building permit in Dimmit County. Further, he is concerned about surface water flow during storm events, and that the natural surface drainage course for a large area of land drains right through the proposed location of the surface facilities off of David Wagner Road¹¹. The topographic map indicates drainage and intermittent/ephemeral ponding of water in this area; it is not identified as a permanent or intermittent stream bed. The surface drainage course was also evident on an aerial photograph of the area.¹² Attachment 3 is a copy of Nelson's Exhibit No. 5, a topographic map on which Mr. Nelson annotated the surface water flow pathway.

From the location of the proposed surface facilities, the natural surface water drainage course flows to the southwest onto Mr. Nelson's property. Mr. Nelson stated that a pond on his property receives drainage from this pathway. Ultimately, he said, the surface water runoff crosses his property and enters Espantosa Lake, which forms the western boundary of his property.

With regard to the potential for pollution of surface water, Mr. Nelson acknowledged that the main concern was with the surface facilities and access from David Wagner Road, not the well location itself. He entered into evidence several photographs that indicate flooding, scouring, and damage to culverts that convey surface water runoff under David Wagner Road.¹³

Mr. Nelson also expressed concerns regarding the continuous use of David Wagner Road by heavy trucks, and his photographic evidence also identified damaged drainage culverts under David Wagner Road near the location of the proposed surface facilities.

Mr. Nelson stated that the air quality has degraded since the opening of Prime's Prestage SWD, and he is concerned that the Wagner SWD would cause additional odors. He stated that his home is about 7,000 feet downwind (northwest) of the Prestage SWD facility, and fumes from the SWD are noticeable on some days. His home will be about 4,000 feet downwind from the new Wagner Farms SWD well. Also, since the proposed Wagner SWD facility will operate 24 hours a day, Mr. Nelson is

¹¹ Nelson's Exhibit No. 5, an annotated USGS topographic map.

¹² Nelson's Exhibit No. 6.

¹³ Nelson's Exhibit Nos. 7, 11, 12, 16, 17, 19, and 20 (photographs).

concerned about the resulting light pollution. He suggests and recommends that Prime explore downward or directional lighting for their facility to minimize the impacts of light.

Finally, Mr. Nelson expressed concern about how the proposed facility may limit his access to his property. He stated that David Wagner Road is his primary route of access, and that truck traffic associated with the proposed facility may limit his ability to get onto or off of his property. He stated that the only other way to access his property would be to use Burns Subdivision Road, which would incur an additional mile of driving.

In regards to all of his concerns, Mr. Nelson specifically requested the Commission act to require the following:

- The surface facilities be constructed on an elevated pad, above the flood plain;
- Possibly moving the surface facility north so it is adjacent to the well site, which is also in the flood plain, but away from the surface water drainage course where it crosses David Wagner Road;
- Conducting a drainage study and implementing the necessary suggestions;
- Improve David Wagner Road for issues related to load ratings, drainage, access, and two-way traffic;
- Consider using access off of Wagner Road, which is closer to the injection well location (not David Wagner Road); and
- Install air quality monitors and downward-directed lighting.

Examiners' Request for Additional Information

Typically, at Rule 9 disposal well hearings the applicant will submit a site plan showing the location of the disposal well, associated surface facilities, roadways, and other salient features. At the hearing, Prime did not offer an exhibit identifying the location of the surface facilities. Applicant's exhibit nos. 7, 9, 15 and 20, all show the existing Wagner Farms well location; none show the location of the proposed surface facilities, pipeline or David Wagner Road. There was testimony by Mr. Rodriguez on behalf of the Applicant about the general location of the surface facilities being off of

David Wagner Road, about one-half to three-quarters of a mile west of FM 1433.¹⁴ The Protestant, testified that the surface facilities were to be located at the low-water crossing on David Wagner Road.¹⁵ The examiners determined that additional information was necessary to locate the surface facilities with respect to the area's natural drainage features and patterns.

On June 5, 2014, the examiners requested additional information from the Applicant regarding the specific location of the surface facilities, giving special consideration to surface drainage and any additional information the Applicant deemed to be appropriate. On June 20, 2014, Prime submitted a late-filed exhibit in response to the examiners' request. On July 3, 2014, Mr. Nelson submitted comments to the Applicant's late-filed exhibit. Mr. Nelson commented that the Applicant's late-filed exhibit did not fully respond to the examiners' request for information, and he took exception to certain statements in the exhibit. Mr. Nelson's comments reiterated his request for further study of impacts to constructing the facility in the flood plain. The examiners conclude that Mr. Nelson's comments were consistent with his testimony and concerns expressed at the hearing. Mr. Nelson did not expressly object to the late-filed exhibit being admitted into evidence. Therefore, the examiners admitted the Applicant's late-filed exhibit (No. 21-L) into the evidentiary record.

Prime's late-filed exhibit no. 21-L included several items:

- Field notes for the Wagner Farms SWD surface unloading facilities providing a brief overview of design and construction details;
- A map of the area showing the generalized location of the surface facilities with respect to certain other area features;
- Three design sketches showing the surface facility layout and the structural designs for the tank battery secondary containment structure and the unloading station.¹⁶

These facilities will be located in the J. McGee Survey, A-620, Subdivision No. 57, with access off of David Wagner Road. To access the subject Wagner Farms SWD,

¹⁴ Transcript page 50, lines 16-17. As scaled on Applicant's exhibit no. 20, one-half mile west of FM 1433 is about at the boundary of the Wagner tract blocks 57 and 64. The surface facilities location was not marked on the Exhibit.

¹⁵ Transcript page 63, lines 13-15.

¹⁶ The design sketches were not signed or sealed by a Registered Professional Engineer.

vehicles will drive from FM 1433 southwest on David Wagner Road approximately 3,000 feet to the surface facility location. David Wagner Road is a caliche-paved county road. The Wagner Farms SWD well itself will be located approximately 2,200 feet north of the road, or about 1,800 feet north of the surface facilities. Fluids to be disposed by injection will be piped from the surface facility to the well. The surface facilities will provide the various infrastructure necessary to service the Wagner Farms SWD; surface facilities will not be shared between the Wagner Farms SWD and Prime's existing nearby Prestage SWD.

The field notes stated, "The unloading station is used for truck unloading only and will not be used for any fluid storage," and "The unloading station will be 80 feet by 50 feet ... cement lined on bottom and all sides. The unloading station is 10 feet deep with cement walls that extend 5 feet above the ground surface."

EXAMINERS' OPINION

The Railroad Commission may grant an application for a permit under Chapter 27 of the Texas Water Code, Subchapter C in whole or part and may issue a permit if it finds:

1. The use or installation of the injection well is in the public interest;
2. The use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation;
3. With proper safeguards, both ground and surface fresh water can be adequately protected from pollution; and
4. The applicant has made a satisfactory showing of financial responsibility as required by Section 27.073.

It is the examiners' recommendation that the application be approved. The examiners conclude the Applicant has met its burden of proof under Texas Water Code § 27.051(b)(1 through 4).

Public Interest

The examiners conclude that the proposed well is in the public interest. The Applicant testified to a continuing need for disposal capacity in the area. The Applicant's nearby Prestage SWD has recently obtained a permit amendment to enlarge the disposal interval and increase disposal capacity. The Protestant did not introduce any evidence to challenge the Applicant's assertion that the proposed well is

in the public interest.

Endanger or Injure Any Oil, Gas, or Other Mineral Formation

The examiners conclude that the proposed well will not endanger or injure any oil, gas, or other mineral formation. The proposed well will inject waste for disposal into the Olmos and Elaine sands. There is no Olmos production within two miles of the proposed well. Further, the well log of the existing Wagner Farms Well No. 1 indicates a thick and continuous shale interval from a depth of about 3,000 feet to the top of the disposal interval at 3,560 feet. From about 4,600 feet to 5,000 feet the gamma ray and spontaneous potential curves indicate a continuous shale stratum underlying the disposal interval. Within the disposal interval were two significant sand sequences: The Olmos sand from about 3,590 feet to about 3,950 feet, and the Elaine sand from about 4,510 feet to 4,570 feet. The two disposal zones appeared on the log to be separated by shale. Prime's expert engineering witness stated that the shale strata provide adequate confinement to protect hydrocarbon resources in the underlying Austin Chalk and Eagle Ford Formations.

Protection of Fresh Groundwater

The examiners conclude that the proposed well will protect and not cause pollution of groundwater resources. The Applicant has agreed to conduct a cement squeeze on the existing production casing to bring the top of cement in this casing string to the surface. The well is completed with 9 5/8-inch surface casing to a depth of 1,555 feet, and cement was circulated to the surface. The Commission's Groundwater Advisory Unit (GAU) has indicated that the interval from the land surface to a depth of 1,500 feet, representing the base of usable-quality groundwater (BUQW), must be protected. Moreover, the Carrizo aquifer, which is estimated to occur from 800 feet to 1,150 feet, contains water of superior quality which must be isolated from water in the overlying and underlying beds. The base of underground sources of drinking water (USDW) is estimated to occur at a depth of 2,200 feet. Further, the GAU has issued a 'no harm' letter stating that the proposed well disposing of oil and gas waste into the depth interval from 3,560 feet to 4,700 feet will not endanger fresh water in the area. The subject well has surface casing set to 1,550 feet, covering the interval from the ground surface through the BUQW. Additionally, the cement squeeze behind the long string will be circulated to the surface, providing full overlap with the surface casing. Further, the Protestant stated on the record that, with regard to groundwater issues, he deferred his concerns to the expertise and interests of the Wintergarden Groundwater Conservation District.

With regard to Mr. Nelson's report of rumors regarding a blowout or other problem at the David Wagner Well No. 1, the examiners note the Commission's records

do not report any incidents for the subject well.¹⁷

Protection of Fresh Surface Water

The examiners conclude that, with proper safeguards, surface fresh water can be adequately protected from pollution. The examiners' conclusion is based on regulatory concerns within the Commission's jurisdictional authority and those provided by other regulatory jurisdictions. The Protestant has raised several important issues with regard to the surface water regime, towards which the examiners will now focus their attention.

Permits for all commercial disposal well facilities include specific provisions regarding the construction and operation of facilities to ensure that oil and gas waste is managed in accordance with applicable statutes and rules. Specifically, these conditions require secondary containment structures, concrete catchments for spills, and that any associated pits be independently permitted under Statewide Rule 8. These rules and conditions also ensure that contact storm water—that is, water that may have come into contact with oil and gas wastes—is contained and disposed of properly. Further, Statewide Rule 8 authorizes the Commission to suspend or cancel a permit if the permitted activities have resulted in pollution.

Based on the information entered into evidence, the unloading station will be a 10-foot deep concrete pit constructed below ground surface with a five foot concrete wall above ground. Waste haulers will empty their fluid loads into the pit, from which the waste will be pumped to the tank battery equipment. It is the examiners' opinion that the unloading station meets the definition of a collecting pit under Statewide Rule 8:

*Collecting Pit – Pit used for storage of saltwater or other oil and gas wastes prior to disposal at a disposal well or fluid injection well. In some cases, one pit is both a collecting pit and a skimming pit.*¹⁸

Such a pit is not authorized by rule, but it instead must be independently permitted. The Applicant stated in its Exhibit No. 21-L (Field Notes page) that, "*The unloading station is used for truck unloading only and will not be used for any fluid storage.*" Such pits associated with disposal wells are regularly permitted independently by the Commission, and the definition of a Collecting Pit in the Rule even anticipates their use at disposal wells and subsequent need to be permitted. The examiners note that based on testimony by Mr. Rodriguez, Prime's Prestage well

¹⁷ <http://www.rrc.state.tx.us/oil-gas/compliance-enforcement/blowouts-and-well-control-problems/>, accessed on July 17, 2014.

¹⁸ Tex. Admin Code § 3.8(a)(3)

contains a similar pit, which may itself require a permit.¹⁹ In such cases, the standard for permit issuance is:

*A permit to maintain or use a pit for storage of oil field fluids or oil and gas wastes may only be issued if the commission determines that the maintenance or use of such pit will not result in ... the pollution of surface or subsurface waters.*²⁰

Thus, the unloading station is a commercial pit that will require an additional permit under Statewide Rule 8. That permitting process is separate and apart from the present matter under consideration and will include separate notice requirements, the pit design must be sealed by a professional engineer registered in Texas, and other requirements.

The examiners' recommendation in the present matter of the Wagner Farms SWD requires the Applicant's successful permitting of the unloading station as a collecting pit—or perhaps a facility redesign that does not include a pit as defined by Statewide Rule 8 and Commission practice. The examiners believe that the proposed facilities—as constructed, operated and maintained within the conditions of their permits—will provide proper safeguards that will adequately protect surface water from pollution.

However, the Protestant also raises a concern for pollution not directly resulting from an environmental release of oil and gas waste, but instead one that is caused by the potential for erosion and sedimentation from facility construction and operation in a flood plain and adjacent to a surface water drainage path. The examiners note two applicable definitions of pollution:

*Pollution of surface or subsurface water – The alteration of the physical, thermal, chemical, or biological quality of, or the contamination of, any surface or subsurface water in the state that renders the water harmful, detrimental, or injurious to humans, animal life, vegetation, or property, or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.*²¹

"Pollution" means the alteration of the physical, chemical, or biological quality of, or the contamination of, water that makes it harmful, detrimental, or injurious to

¹⁹ Transcript, page 50, line 19, to page 51, line 1.

²⁰ Tex. Admin Code § 3.8(d)(6)(A)

²¹ 16 Tex. Admin. Code §3.8(a)(28)

*humans, animal life, vegetation, or property or to public health, safety, or welfare, or impairs the usefulness or the public enjoyment of the water for any lawful or reasonable purpose.*²²

The Protestant's argument is that erosion and sedimentation resulting from construction and operation of the proposed disposal well facility may alter the surface water of Espantosa Lake in such a way as to result in a loss by pollution to the water body; such pollution could be caused by sediment affecting water quality, as indicated by the regulatory definitions of pollution. This is a valid theory, the probability and severity of which remains an open question. Mr. Nelson asserts this theory should be further explored by engineering studies before the Commission makes a determination on whether or not to permit the facility. The examiners do not agree.

This has not been an area where the Commission has historically claimed jurisdiction, and, what is more, other regulatory agency jurisdictions exist. Erosion control and storm water runoff, where runoff does not contact oil field waste, is not a matter under Commission jurisdiction. With regard to lease and facility operation and construction, the Commission encourages operators to follow best management practices, but does not have set rules for how construction is to be executed or for the management of non-contact stormwater and the potential for subsequent erosion and sedimentation.

The examiners agree with Mr. Nelson that the proposed disposal well, surface facilities, and public access roadway are all located within a "Zone A" special flood hazard area as designated federal flood insurance maps. Further, the examiners note that aerial photographs entered into evidence indicate significant amounts of cultivated land in the area²³; the disposal facility is not the only potential source of anthropogenic erosional material. The examiners take official notice of the definition of a Zone A special flood hazard area, which is:

*Zone A Definition: Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.*²⁴

The Railroad Commission generally does not regulate activities within flood

²² Tex. Water Code §27.002 (4)

²³ Nelson Exhibit No. 6

²⁴ 44 Code of Federal Regulations §59.1 and §64.3

plains in non-coastal areas, with very limited exceptions provided by rule, none of which apply in this case. Flood plain development is, however, regulated by other authorities. Dimmit County is a community participating in the Federal Emergency Management Agency's National Flood Program. Construction and development activity in special flood hazard areas within Dimmit County require a development permit application obtained through the County.

Similarly, activities that result in the placement of fill into the waters of the United States—which include wetlands—may require a permit from the U.S. Army Corps of Engineers. No evidence or testimony was introduced into the record to indicate whether or not the proposed facilities are to be constructed in a wetland. If wetlands are present and potentially impacted, a permit from the Corps of Engineers may be necessary.

Financial Responsibility

The examiners conclude the applicant has made a satisfactory showing of financial responsibility as required by Section 27.073 of the Texas Water Code. Prime (Operator P-5 No. 677770) has a current active Form P-5 (Organization Report) and has posted a \$250,000 bond as blanket financial assurance. Further, Prime has testified to its experience in production and disposal well operations.

Protestants' Other Concerns

The Protestant provided evidence and testimony that David Wagner Road may not be capable of safely handling the heavy truck traffic anticipated to use the proposed disposal well, if constructed. The Protestant also testified to his concerns that surface water may be impacted by either spills or altered drainage patterns from deteriorating road conditions caused by facility-related traffic. The evidence indicates and both parties agree that David Wagner Road is a public county road. It is well established that the Commission has no jurisdiction over matters of highway or roadway traffic safety.

The Protestant's concerns regarding odors and air quality are not within the Railroad Commission's jurisdiction, but are instead within the jurisdiction of the Texas Commission on Environmental Quality (TCEQ).

The Protestant is concerned about light pollution from the proposed facility, and has requested that the Applicant install downward directional lighting equipment. The Railroad Commission has no jurisdiction with regard to facility lighting.

FINDINGS OF FACT

1. Notice of the application was given to the surface owner, adjacent surface owners, the Dimmitt County Clerk in Carrizo Springs, and operators within one-half mile on September 10, 2013.
2. Notice of the application was published in the *Carrizo Springs Javelin*, a newspaper of general circulation in Dimmitt County, Texas, on July 24, 2013.
3. The application is protested by Theodore and Maxine Nelson, adjoining land owners.
4. The Applicant, Prime Operating Company, is the operator of record for the Wagner Farms Lease (No. 14930), and as operator Prime is responsible for the physical operation and control of the lease, including lease and facility construction activities.
5. Prime Operating Company proposes to convert the existing Wagner Farms Well No. 1 (API No. 42-127-3295) into a commercial disposal well.
 - a. The well bore will be plugged with a cast-iron bridge plug at 4,800 feet and topped with 100 feet of cement, isolating the two Pearsall (Austin Chalk) Field laterals.
 - b. Prime will perform a cement squeeze on the 7-inch long-string casing, bringing cement to the surface.
 - c. Prime will perforate the injection interval in the Olmos and Elaine sands in the depth interval from 3,560 feet to 4,700 feet.
6. The proposed disposal well is in the public interest as there is a need for the disposal of produced salt water and liquid oil and gas waste generated in and around Dimmitt County.
7. The use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation
 - a. The Olmos and Elaine sands are not productive within two miles of the proposed disposal well.
 - b. The injection interval is bounded by thick shale formations that will confine injected fluids to the disposal interval; a shale formation of

at least 300-feet thick is directly below the base of the disposal interval from about 4,700 feet to 5,000 feet.

- c. The Austin Chalk and Eagle Ford Formations are productive in the area. The Austin Chalk occurs at a depth of 5,485 feet; the Eagle Ford underlies the Austin Chalk.
8. With proper safeguards, fresh ground water can be adequately protected from pollution.
 - a. The BUQW occurs at a depth of 1,500 feet, the Carrizo aquifer from 800 feet to 1,150 feet contains water of superior quality, and the USDW is estimated to occur at a depth of 2,200 feet
 - b. The existing surface casing is set to 1,555 feet and cemented to the surface.
 - c. A cement squeeze on the 7-inch long-string casing will bring the top of cement to the surface, providing full overlap with the cemented surface casing.
 - d. There are no artificial penetrations into the proposed injection interval within one-quarter mile of the proposed location.
 - e. Three dry holes are within a one-half mile radius of the Wagner Farms SWD No. 1 well. The three wellbores penetrated the proposed disposal interval and have been plugged with multiple plugs. Each well has a plug set across the BUQW.
 - f. The injection interval is bounded by thick shale formations that will confine injected fluids to the disposal interval.
 9. With proper safeguards, fresh surface fresh water can be adequately protected from pollution.
 - a. The site is located within a Zone A special flood hazard area within the Nueces River basin and adjacent to a surface water drainage course.
 - b. The unloading station meets the definition of a Collecting Pit pursuant to 16 Tex. Admin. Code §3.8(a)(3); the Applicant is required to obtain a permit for this pit independently of the disposal well.

- c. Standard permit conditions for commercial disposal wells provide proper safeguards to adequately protect surface water from pollution.
10. Prime Operating Company has a current approved Form P-5 (Organization Report) and has posted a \$250,000 bond as financial assurance.
11. The Railroad Commission does not have jurisdiction concerning construction or operations in a floodplain, wetlands, roadway and traffic safety, odors and air quality, or light pollution.

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.
2. All things have occurred to give the Railroad Commission jurisdiction to consider this matter.
3. The use or installation of the proposed injection well is in the public interest.
4. The use or installation of the proposed injection well will not endanger or injure any oil, gas, or other mineral formation.
5. With proper safeguards, as provided by terms and conditions in the attached final order, which are incorporated herein by reference, both ground and surface fresh water can be adequately protected from pollution.
6. Prime Operating Company has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.
7. Prime Operating Company has met its burden of proof and satisfied the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9.

EXAMINERS' RECOMMENDATION

The examiners recommend that Prime Operating Company's application for its proposed Wagner Farms SWD No. 1 commercial disposal well be approved.

Respectfully Submitted,



Paul Dubois
Technical Examiner



Marshall Enquist
Hearing Examiner



After Squeeze Wellbore Diagram
Prime Operating Company
Wagner Farms SWD

01-0286570

PFD ATTACHMENT 2 – Well Diagram

Applicant Exhibit No. 5

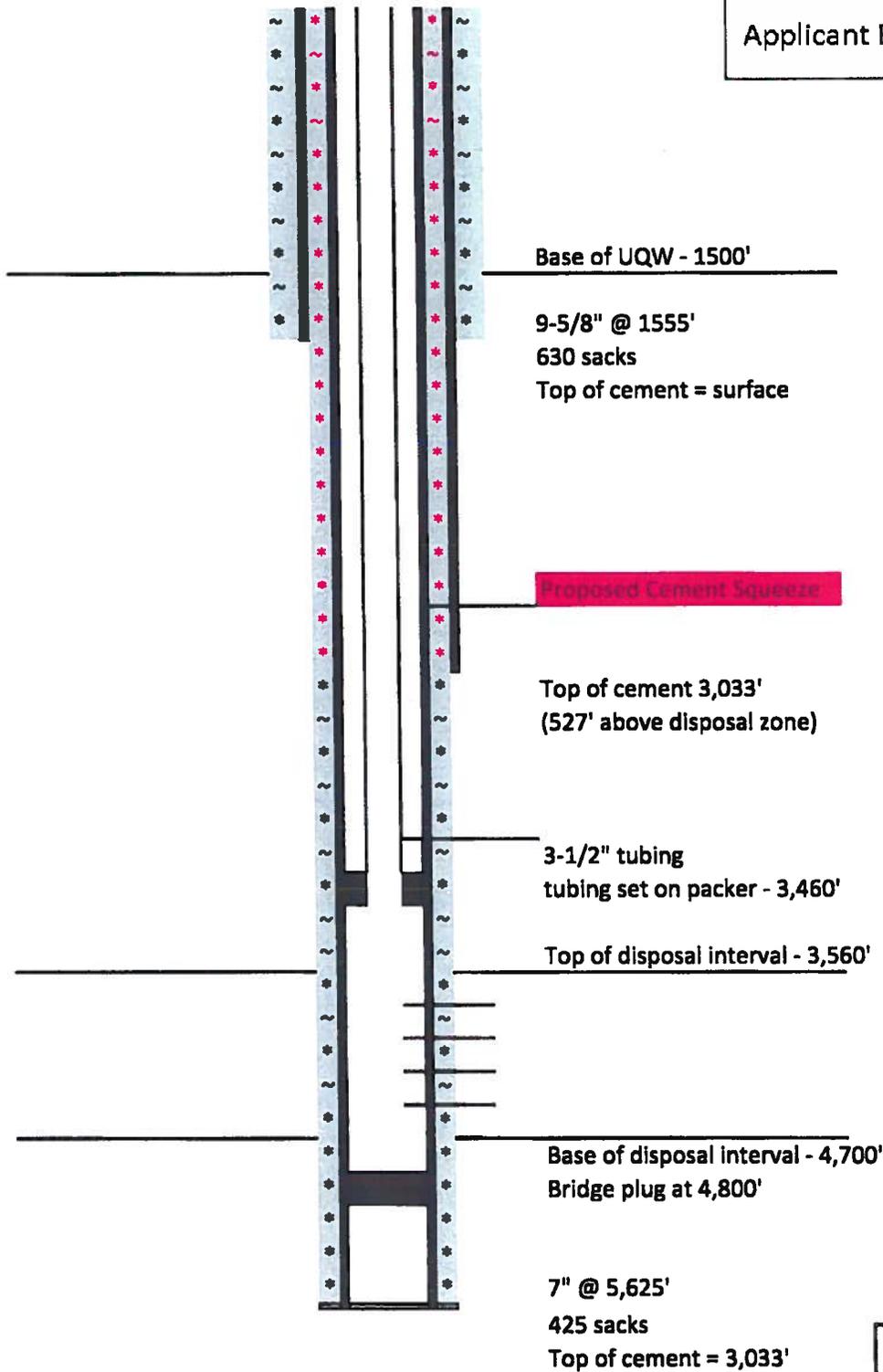
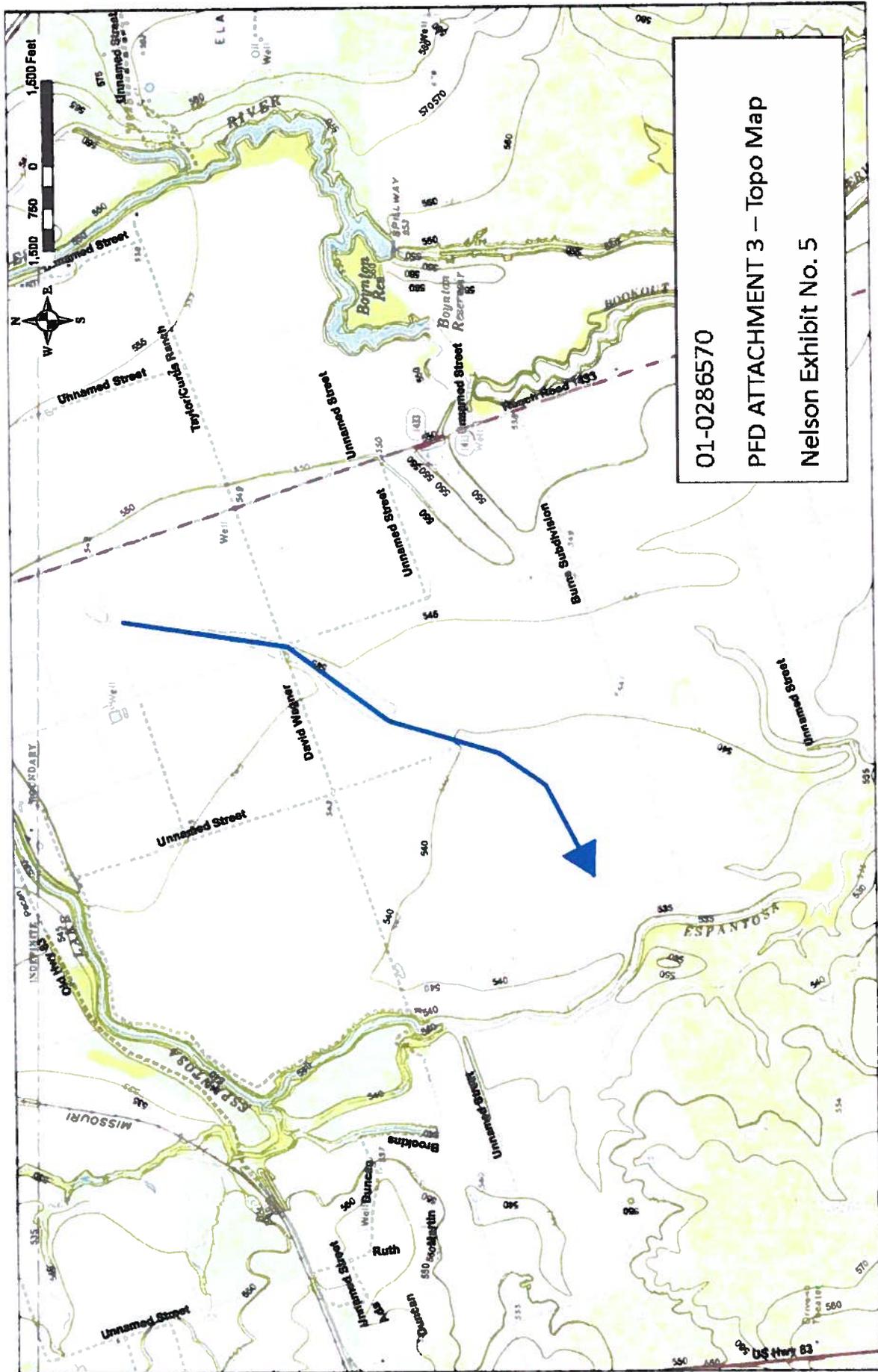


Exhibit No. 5
O&G Docket No. 01-0286570
Date: February 19, 2014
Prime Operating Company



01-0286570
 PFD ATTACHMENT 3 – Topo Map
 Nelson Exhibit No. 5

*Nelson
 Ex 5*