



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

November 20, 2018

OIL AND GAS DOCKET No. 03-0311102:

### NOTICE TO THE PARTIES

The attached document is a Proposal for Decision and recommended Final Order issued by the examiner(s) in this case. Under Section 1.45 of the Commission's General Rules of Practice and Procedure, we are required to circulate the document to each party or its authorized representative. This is only a proposal and is not to be interpreted as a final decision unless an official order adopting the proposal is signed and issued by the Commission.

Under Section 1.122 of the General Rules of Practice and Procedure (16 T.A.C. §1.122), you have the right to file a written statement disagreeing with the proposal and setting out your reasons for this position. This document is referred to as "Exceptions" and must be filed with the Docket Services Section of the Hearings Division (Room 12-123) within 15 days of the date above. You have the right to respond in writing to any exceptions filed by another party. This document is referred to as "Replies to Exceptions" and must be filed with the Docket Services Section of the Hearings Division (Room 12-123) within 10 days after the deadline for filing exceptions.

In addition to written exceptions and replies, the parties may file with the Commission a one page summary of the case. The summary shall be filed with the Commission at the time exceptions are due. The summary is specifically limited to one page and shall contain only information of record or argument based on the record. The summary shall not be submitted in reduced print. If the summary contains any material not of record, has reduced print, or exceeds one page (8-1/2" x 11"), the examiner(s) will reject the summary and it will not be submitted to the Commissioners for their review.

The summary shall contain the name of the party, the status of the party, the name and docket number of the case, the issue(s), the key facts, the legal principles involved (including proposed conclusions of law), and the action requested. (See enclosed form.)

In view of the due dates stated above, all parties are reminded that pleadings are considered filed only upon **actual receipt by the Docket Services Section of the Hearings Division** (Room 12-123 of the William B. Travis Building). **Furthermore, each pleading must be served upon all Parties of Record and a statement certifying such and giving complete names and addresses must be included.**

Exceptions and replies may not be filed by telephonic document transfer unless otherwise directed by the examiner(s). **An original plus TEN copies of exceptions, replies and summaries should be submitted to the Commission by mail or hand delivery. PLEASE DO NOT STAPLE.**

The proposal for decision, and all exceptions and replies will be submitted to the Commissioners for their consideration at one of their regularly scheduled conferences. The agenda for the scheduled conferences will be published in the *Texas Register* and posted in the office of the Secretary of State. The conferences are open meetings; you may attend and listen to the presentation of the case.

#### **RULE §1.7 EX PARTE COMMUNICATIONS**

- (a) Ex parte communications are prohibited in contested cases as provided in the APA and other applicable rules including the Texas Disciplinary Rules of Professional Conduct.
- (b) Each party shall provide all other parties with a copy of all documents submitted to an examiner.
  - (1) The attachment of a certificate of service stating that a document was served on a party creates a rebuttable presumption that the named party was provided a copy.
  - (2) Failure to provide a copy to all other parties may result in rejection and return of the document without consideration.

#### **RULE §1.22 ELECTRONIC FILINGS**

Pursuant to 16 TAC §1.22, some filings may be filed electronically (please see 16 TAC §1.22 for electronic filing eligibility). Electronic filings may be sent to the following email address: [Hearingsdivision.efile@rrc.texas.gov](mailto:Hearingsdivision.efile@rrc.texas.gov)

**Note that if a filing is made to this email address and is considered timely filed, if received and file stamped by the Docket Services Section on or before 5 pm (or unless the examiner sets the filing deadline at a time earlier than 5 p.m.) of the filing deadline, then a hard copy does not need to be filed.**

**SERVICE LIST**

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**CASE SUMMARY**

PREPARED BY:

STATUS:

EXAMINER(S):

DOCKET NO./CASE NAME:

ISSUE(S):

KEY FACTS:

LEGAL PRINCIPLES INVOLVED:

ACTION REQUESTED:



# RAILROAD COMMISSION OF TEXAS

## HEARINGS DIVISION

OIL & GAS DOCKET NO. 03-0311102

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**APPLICATION OF WILDHORSE RESOURCES MANAGEMENT COMPANY, LLC (923453) PURSUANT TO STATEWIDE RULE 9 FOR A PERMIT TO DISPOSE OF OIL & GAS BY WASTE INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL AND GAS FOR THE SUNNY UNIT LEASE, WELL NO. 1, GIDDINGS (EDWARDS GAS) FIELD, BURLESON COUNTY, TEXAS**

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### PROPOSAL FOR DECISION

**HEARD BY:** Robert Musick, P.G. - Technical Hearings Examiner  
Kristi M. Reeve - Administrative Law Judge

### PROCEDURAL HISTORY:

Application Filed:	May 2, 2018
Notice of Pre-Hearing Issued:	May 29, 2018
Pre-Hearing Conference:	July 9, 2018
Hearing Date:	August 3, 2018
Hearing Transcript Received:	September 3, 2018
Close of Record:	September 21, 2018
Proposal for Decision Issued:	November 20, 2018

### APPEARANCES:

#### For Applicant:

#### Wildhorse Resources Management Company, LLC:

George C. Neale, (Attorney) – Austin  
Michael Sliva (Petroleum Engineering) for Wildhorse  
Tony Villasana (Operation Specialist) for Wildhorse  
Dr. Jerome J. Schubert (P.E.) for Wildhorse  
Byron Barnes (Landman) for Wildhorse

**For Protestants:**

Bowers and Goetsch Families:

Lauren Morgan (Attorney) Dore Law Group, P.C. – Houston <sup>1</sup>  
David Nelson (Attorney) Gross & Nelson – Austin <sup>2</sup>  
Brad Bowers (Adjacent Neighbor)  
Dawn Bowers (Adjacent Neighbor)  
Rebecca Goetsch (Adjacent Neighbor)  
Kenneth Goetsch (Adjacent Neighbor)

Post Oak Savannah Groundwater Conservation District (POSGCD)

Barbara Boulware-Wells (Attorney) The Knight Law Firm – Austin  
Dr. Matthew Uliana (Hydrologist) for POSGCD  
Gary Westbrook (Manager) for POSGCD

**Observers:**

Jacquelyn Stone  
Charles Stone  
Polly Bowers  
Harry Bowers  
Christine Fogtman  
Mark Fogtman

**CASE SUMMARY<sup>3</sup>**

Wildhorse Resources Management Company, LLC (“Wildhorse”) is requesting to convert an existing gas well into a non-commercial saltwater disposal well. Wildhorse (Operator No. 923453) submitted a completed Form W-14 (*Application to Dispose of Oil and Gas Waste by Injection into a Formation Not Productive of Oil and Gas*) to the Commission proposing to inject a maximum volume of 50,000 barrels per day (bpd) of saltwater into the Edwards formation at a depth interval from 7,508 feet to 7,594 feet. The proposed saltwater disposal well (“SWD well”) is identified as the Sunny Well No. 1.

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<sup>1</sup> Withdrew as counsel for protestants post-hearing.

<sup>2</sup> Added as counsel for protestants – hired post hearing.

<sup>3</sup> The transcript for the pre-hearing conference held on July 9, 2018 is referred to as “PHC Tr. [page:line(s)].” and the transcript for the hearing held on August 3, 2018 is referred to as “Hearing Tr. [page:line(s)].” Applicant’s exhibits are referred to as “PHC Applicant Ex. [exhibit no].” or “Hearing Applicant Ex. [exhibit no].”; and the POSGCD exhibits are referred to as “PHC POSGCD Ex. [exhibit no].” or “Hearing POSGCD Ex. [exhibit no].”. Protestants Bowers and Goetsch did not provide any exhibits noted in this PFD.

The Form W-14 ("Application") is protested by adjacent landowners and the Post Oak Savannah Groundwater Conservation District ("POSGCD"). The protestants concerns include potential groundwater and surface water contamination, increased seismicity in the region, and traffic safety.

Based on the evidence, the Technical Examiner and Administrative Law Judge (collectively, "Examiners") recommend approval of the Application.

### **APPLICABLE LAW**

Any person who disposes of saltwater or other oil and gas waste by injection into a porous formation not productive of oil, gas, or geothermal resources shall be responsible for complying with 16 Tex. Admin. Code § 3.9, Texas Water Code, Chapter 27, and Title 3 of the Natural Resources Code. Pursuant to the Texas Water Code § 27.051(b):

*The Railroad Commission may grant an application for a permit under Subchapter C in whole or part and 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.*

### **DISCUSSION OF THE EVIDENCE**

#### **Applicant's Evidence (Wildhorse Resources Management Company, LLC)**

##### ***Form W-14 Application***

Wildhorse's initial version of the Application was dated December 13, 2017.<sup>4</sup> On February 12, 2018, the Commission sent a letter to Wildhorse identifying deficiencies with the Application.<sup>5</sup> The Commission noted deficiencies with the field designation; the published notice language, the affidavit of publication; and recompletion specifications.<sup>6</sup>

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<sup>4</sup> Hearing Tr. at 2:8-14.

<sup>5</sup> Hearing Tr. at 13:5-10.

<sup>6</sup> Hearing Tr. at 28-30.

Wildhorse responded with an amended Application (Form W-14 dated March 22, 2018).<sup>7</sup> On March 28, 2018, the Oil and Gas Division issued a letter for the amended Application establishing it to be administratively complete.<sup>8</sup>

In accordance with Statewide Rule (SWR) 9<sup>9</sup>, a notice of the Application was published in the Burleson County Tribune, a newspaper having general circulation in Burleson County Texas, on Thursday, November 30, 2017; and published again on March 8, 2018. In addition, on November 27, 2017 and again on March 22, 2018, a notice of Application and a copy of the Application was mailed to the surface owner (Wilkens Family Partnership, LP), the County Clerk of Burleson County, and any operator with active wells within one-half mile radius of the proposed non-commercial SWD well as required by SWR 9.<sup>10</sup> It is noted that Wildhorse is the only active operator within a one-half mile radius of the proposed SWD well (a.k.a. Sunny Well No. 1), therefore notice was "self-notice" to fulfill the regulatory requirement.<sup>11</sup> On March 16, 2018, a protest was received to the notice of Application, therefore Wildhorse requested a public hearing to address the public's concern.<sup>12</sup>

### ***Pre-Hearing Conference and Hearing***

On June 28, 2018, prior to the pre-hearing conference, Wildhorse filed a Motion to Dismiss the protestants due to lack of standing. On July 9, 2018, a pre-hearing conference was held to establish parties with standing.<sup>13</sup> At the pre-hearing conference, it was determined that the persons that filed a protest, but did not appear at the pre-hearing conference, waived their right to continue as protestants and those parties were dismissed.<sup>14</sup> For the Bowers and Ms. Goetsch who filed protests and appeared at the pre-hearing conference and requested an opportunity to be heard, the ALJ ruled that a hearing on the merits should proceed.<sup>15</sup> As for the POSGCD, the ALJ indicated that directions would not be given regarding whether a protest can still be filed or not.<sup>16</sup> On July 26, 2018, following the pre-hearing conference, the POSGCD filed a protest to the application.

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<sup>7</sup> Hearing Tr. at 27:1-17; Hearing Applicant Ex. 2.

<sup>8</sup> Hearing Tr. at 37:1-19; Hearing Applicant Ex. 5.

<sup>9</sup> Statewide Rule (SWR) 9 refers to 16 Tex. Admin. Code § 3.9.

<sup>10</sup> PHC Applicant Ex. 1.

<sup>11</sup> PHC Tr. at 13:21-24; Regulatory requirement SWR 9 refers to 16 Tex. Admin. Code § 3.9.

<sup>12</sup> Hearing Tr. at 39:1-5; Hearing Applicant Ex. 6.

<sup>13</sup> PHC Tr. at 8.

<sup>14</sup> PHC Tr. at 74:12-25 and 75:1-2.

<sup>15</sup> PHC Tr. at 75:9-24.

<sup>16</sup> PHC Tr. at 75:3-5.



On August 3, 2018, a hearing on the merits was held. Wildhorse entered an objection to the party status of POSGCD as a protestant.<sup>17</sup> The ALJ ruled that decisions as to party status would be dealt with in the proposal for decision (PFD) and that all may participate.<sup>18</sup> The Examiners find that all who appeared in protest, Bowers, Goetsch and POSGCD, have party status as protestants.

### ***Proposed Saltwater Disposal Well***

Wildhorse is proposing in their Application to convert an existing vertical gas well into a non-commercial saltwater disposal well ("SWD Well"). The Sunny Well No. 1 (API No. 051-33651), was completed as a wildcat well on an 80-acre tract, located about 3.6 miles in a northwesterly direction from Caldwell, Texas, in Burleson County, Texas. Commission records indicate the gas well's target zone was the Giddings (Buda) Wildcat Field (Field No. 34733600).

The gas well was originally spudded on September 19, 2008, and completed April 30, 2009, by Clayton Williams Energy, Inc.<sup>19</sup> Testimony in the hearing asserts that the gas well was uneconomic and never operated.<sup>20</sup> In April 2009, Commission records indicate the gas well was shut-in.

In the hearing, testimony established that Wildhorse purchased the gas well as part of a larger acquisition of assets. Wildhorse's Application identifies the Sunny Well No. 1, as the proposed SWD well. Wildhorse submitted to the Commission a well completion report dated April 18, 2018, documenting the conversion of the gas well to the proposed SWD well.<sup>21</sup> The report included a pressure test, a recompletion report, well diagram/log and a completed Form W-15, (*Cement Report*).<sup>22</sup> The Form W-15 (*Cement Report*), documents the abandoning of the lower portion of the Sunny Well No. 1 to convert the gas well to the proposed SWD well upon issuance of the disposal permit.<sup>23</sup>

The completion report identifies the following:

- a. Surface casing is set from the surface to 3,694 feet;<sup>24</sup>

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<sup>17</sup> Hearing Tr. at 10-11:18-24.

<sup>18</sup> Hearing Tr. at 11:21-24.

<sup>19</sup> Hearing Tr. at 71; Hearing Applicant Ex. 11.

<sup>20</sup> Hearing Tr. at 71:15-23.

<sup>21</sup> Hearing Tr. at 42-43; Hearing Applicant Ex.8.

<sup>22</sup> Hearing Tr. at 42-43.

<sup>23</sup> Hearing Applicant Ex. 8.

<sup>24</sup> Hearing Applicant Ex. 7.

- b. Production casing runs the length of the original gas well to 17,315 feet total depth (TD);<sup>25</sup>
- c. From December 28, 2017 to March 27, 2018, the gas well was recompleted by placing a bridge plug at 7,720 feet deep and placing about 75 feet of cement on top of the bridge plug. The final well depth is 7,645 feet TD;<sup>26</sup>
- d. Production casing annulus was cemented from 10,507 feet to 6,000 feet (top of cement) to isolate the injection interval which is from 7,508 to 7,594 feet;
- e. Tubing in the proposed SWD well is 5 ½ inches in diameter with a packer at 7,458 feet and a perforated interval from 7,508 feet to 7,594 feet;<sup>27</sup>
- f. The injection formation is the Edwards formation.<sup>28</sup>

### ***Protection of Useable Quality Water Aquifers***

In the vicinity of the proposed SWD well, the Commission's Groundwater Advisory Unit (GAU) estimates the base of usable-quality water (BUQW) at 3,150 feet deep and the base of the Underground Source of Drinking Water (USDW) at 3,450 feet deep.<sup>29</sup> Geologic isolation from the BUQW and USDW is estimated to be 3,950 feet deep. Therefore, over 3,000 feet separate the nearby freshwater aquifers from the proposed injection zone identified for the proposed SWD well.

Testimony from Michael Sliva, Petroleum Engineer (PE), representing Wildhorse, asserts that freshwater, surface water and subsurface resources will not be endangered because injection fluids will be confined to the injection interval.<sup>30</sup>

### ***Productive Intervals within 2 miles***

The Eagle Ford, Austin Chalk and Buda formations are the identified productive intervals within two miles of the proposed SWD well. The Austin Chalk formation is to a depth of 6,300 feet; Eagle Ford formation is to a depth of 6,800 feet; and the Buda formation is to a depth of 7,100 feet. The deepest productive formation is about 500 feet shallower than the proposed injection interval within the Edwards formation and geologically isolated based on log data.<sup>31</sup>

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<sup>25</sup> Hearing Applicant Ex. 7.

<sup>26</sup> Hearing Applicant Ex. 2; TD refers to "total depth".

<sup>27</sup> Hearing Applicant Ex. 7.

<sup>28</sup> Hearing Tr. at 90:5-13; Hearing Applicant Ex. 8.

<sup>29</sup> November 30, 2017 letter from Commission.

<sup>30</sup> Hearing Tr. at 65-66.

<sup>31</sup> Late Filed Exhibit dated August 22, 2018.

### **Wells Within One-Quarter Mile of the Proposed Disposal Well**

A review of well bores within one-quarter mile of the proposed SWD well reveal a total of two vertical wells:<sup>32</sup>

- Hickory Know Ranch Lease, Well No. 2, identified as API 051-30300, approved for drilling on October 3, 1977, to about 8,000 feet. Commission records indicate no completion records. Testimony in the hearing contend the well was not drilled.
- Hickory Know Ranch Lease, Well No. 1, identified as API 051-30290, completed in August 1979, to 7,521 feet deep into the Giddings (Austin Chalk-3) Field (Field No. 34733500). Testimony in the hearing contend the well was plugged and abandoned.<sup>33</sup>

### ***Seismic Activity in Area***

SWR 9(3)(B)<sup>34</sup> requires the applicant for a disposal well permit to provide the results of a survey of information from the United States Geological Survey (USGS) regarding the locations of any historical seismic events within 100 square miles (a circle with a radius of 9.08 kilometers) centered around the proposed disposal well location.<sup>35</sup> A review of the USGS database for seismic events within a radius of 9.08 kilometers around the proposed SWD well did not identify any known seismic activities.<sup>36</sup>

### ***Financial Assurance***

Based on Commission records, Wildhorse (Operator No. 923453) has an active P-5 and \$250,000 financial assurance.

### ***Source of Saltwater***

The source of the saltwater for the proposed SWD well will be from Wildhorse operations in Burleson and surrounding counties. Wildhorse's current saltwater production from their oil wells in Burleson and surrounding counties exceed the current disposal capabilities in the area. Mr. Villasana, the Operation Specialist for Wildhorse, states,

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<sup>32</sup> Hearing Applicant Ex. 3.

<sup>33</sup> Hearing Tr. at 33-35; Hearing Applicant Ex. 3.

<sup>34</sup> State Wide Rule (SWR) 9(3)(b) refers to 16 Tex. Admin. Code § 3.9(3)(B).

<sup>35</sup> State Wide Rule (SWR) 9(3)(b) refers to 16 Tex. Admin. Code § 3.9(3)(B).

<sup>36</sup> Hearing Tr. at 261 and 265.

*So, we have been shutting in our lower producer wells to maintain the higher producer wells that we have injection capacity with those other facilities.<sup>37</sup>*

In a second comment, Mr. Sliva, PE for Wildhorse states,

*...you can lose your lease if you leave a well shut in too long... and ... you don't want to shut in the same well over and over. It's not good for the reservoir and the production.<sup>38</sup>*

### ***Injection Strata and Injection Pressure***

The Application is seeking authorization to inject salt water into subsurface strata from 7,508 feet to 7,594 feet deep, identified as the Edwards formation.<sup>39</sup> Wildhorse is requesting to inject saltwater at a maximum volume of 50,000 barrels per day ("bpd").<sup>40</sup> At the hearing, Mr. Villasana for Wildhorse, maintains that a pipeline delivery system is currently planned to transport saltwater to the disposal site. Since a pipeline is scheduled to be installed, Mr. Villasana stated in his testimony that Wildhorse would not consider it adverse to limit the maximum delivery by truck to be 30,000 bpd.<sup>41 42</sup> In the Application, Wildhorse is requesting a maximum surface injection pressure of 3,754 pounds per square inch, gage (psig).

During cross-examination by Ms. Boulware-Wells with POSGCD, Mr. Villasana was asked if the requested change from 50,000 to 30,000 bpd (maximum volume of saltwater delivered by truck) would alter the average daily injection volume. Mr. Villasana maintained in the testimony that the change in maximum barrels delivered by truck would not alter the average volume injection estimate or the injection pressure, which is a function of depth and not injected volume.<sup>43</sup>

### ***Well Testing***

As part of a review of well integrity, Wildhorse maintains a formation integrity test ("FIT") was performed in October 2008, to assess the surface casing and annular cement associated with the Sunny Well No. 1. Results of the FIT, establish that surface casing

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<sup>37</sup> Hearing Tr. at 57:1-20 and 109-110.

<sup>38</sup> Hearing Tr. at 109-111.

<sup>39</sup> Hearing Tr. at 94:23-25.

<sup>40</sup> Hearing Tr. at 56:6-23.

<sup>41</sup> Hearing Tr. at 56:20-23.

<sup>42</sup> Hearing Tr. at 58:9-25.

<sup>43</sup> Hearing Tr. at 126-128.

and annular cement from the ground surface to 3,616 feet below the surface passed the FIT assessment.<sup>44</sup> Testimony in the hearing by Mr. Michael Sliva, PE, maintains the FIT indicates the well's casing and cement have integrity and will be protective of groundwater aquifers.<sup>45</sup> Mr. Villasana, also contends that the FIT demonstrates that the proposed SWD well will not negatively impact the surface or subsurface waters.<sup>46</sup>

On February 19, 2018, a casing pressure test was conducted on the 11 7/8-inch production casing to confirm the bridge plug at 7,720 feet deep was working as designed.<sup>47</sup> Wildhorse contends the results of the production pressure test using 1,000 psi pressure for the surface casing and 4,000 psi pressure for production casing indicate that the surface and production casings are holding, thus the casing integrity passed the pressure test.<sup>48</sup>

On cross-examination, Ms. Boulware-Wells, attorney for the POSGCD, asked what pressures are sustained in an injection well. Mr. Sliva, PE, maintained that the proposed SWD well will be under roughly 1,800 psi on average when saltwater is being injected.<sup>49</sup> Mr. Sliva, PE, also testified that the maximum surface injection pressure in the SWD well will be 3,754 psi, which dictates what pressures are possible to inject fluids.<sup>50</sup>

As part of the modification of the gas well to a disposal well, Wildhorse asserts that four (4) cement squeeze events were performed on the well to increase the bonding between the casing and geologic formations. Wildhorse re-tested the cement bonding after each squeeze event to determine if cement bonding met the requirements established by the Commission. Wildhorse contends that after each cement squeeze event, an acoustic cement bond log was performed on the well to assess the cement bond in the well's annulus. Wildhorse asserts that the bonding in the annular space above and below the injection interval meets the requirements established by SWR 9 and is documented by the final acoustic cement bond log performed on March 14, 2018.<sup>51 52</sup> Wildhorse's testimony maintains that at least 100 feet of cement is located above and below the injection zone with an 80 percent cement bond.

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<sup>44</sup> Hearing Tr. at 73-74.

<sup>45</sup> Hearing Tr. at 75:12-25 and 76:1-5.

<sup>46</sup> Hearing Tr. at 76:4-7.

<sup>47</sup> Hearing Tr. at 77-78; Hearing Applicant Ex. 12.

<sup>48</sup> Hearing Tr. at 79 and 88.

<sup>49</sup> Hearing Tr. at 162:8-25.

<sup>50</sup> Hearing Tr. at 62-163.

<sup>51</sup> Hearing Tr. at 82-83.

<sup>52</sup> Hearing Tr. at 92-95; Hearing Applicant Ex. 18.

In addition, testimony from Dr. Jerome Schubert, a PE and associate professor at Texas A&M University, a witness for Wildhorse, contends that the cement bond log and volume of cement used in the proposed SWD well will protect groundwater.<sup>53</sup> Dr. Schubert asserts that the 1,000 psi pressure used to assess the surface casing indicate no leaks were detected.<sup>54</sup> He also asserts that the production casing held 4,000 psi pressure, which indicates the production casing will not burst.<sup>55</sup>

Dr. Schubert asserts that in addition to the pressure test and FIT, an acid treatment was performed on the well's injection interval. He contends that the acid treatment stimulates the flow of fluids from the production casing into the geologic formation. He also asserts that the signatures of the acoustic cement bond log show washout as you get to 7,200 feet deep which may be attributed to casing size and the acoustic bond centralizer.<sup>56</sup> On cross-examination by Ms. Boulware-Wells, it was determined that Dr. Shubert was relying on Baker-Hughes in selecting the right tool for the well, thus causing concern by the protestant POSGCD that the interpretations regarding well integrity and the testing may not be correct.<sup>57</sup>

Concerns generated by INTERA, an engineering consulting firm representing POSGCD,<sup>58</sup> caused Wildhorse to request Baker Hughes to assess the final acoustic cement bond log data using new calibration information for the well. The results of the recalibrated logs with existing data confirms the initial results that at least 100 feet of cement located above and below the proposed injection interval has an 80 percent cement bond signature.<sup>59</sup> In addition, Baker Hughes assessed the final *Acoustic Cement Bond Log Report* and found a typing error. Wildhorse and Baker Hughes assert the error did not affect the log's interpretation or conclusions.<sup>60</sup>

During cross-examination, Ms. Boulware-Wells with POSGCD, requested clarification on the 80 percent cement bond requirement. Mr. Sliva, PE asserts that 80 percent cement bond is the goal that was conveyed and expected by the Commission to provide protection to aquifers for the 100 feet above and below the injection zone.<sup>61</sup> Mr. Sliva, PE asserted in his testimony that four cement squeezes in the proposed well's

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<sup>53</sup> Hearing Tr. at 229.

<sup>54</sup> Hearing Tr. at 232.

<sup>55</sup> Hearing Tr. at 233.

<sup>56</sup> Hearing Tr. at 238-239.

<sup>57</sup> Hearing Tr. at 244.

<sup>58</sup> Hearing Tr. at 147-148.

<sup>59</sup> Hearing Tr. at 101-102 and 155:16-22; Hearing Applicant Ex. 18, 19, 20.

<sup>60</sup> Hearing Tr. at 107:18-21.

<sup>61</sup> Hearing Tr. at 153.

production casing annular space was performed to get 80 percent cement bonding above and below the proposed injection interval.<sup>62</sup> Also on cross-examination, Ms. Boulware-Wells with POSGCD, asked Mr. Sliva, PE about recalibration of log data. Mr. Sliva, PE responded by stating,

*Recalibration is – you’re just changing the view of it. It’s all the same data from the last log. ... You would not get more accurate information by running a new bond log.*<sup>63</sup>

### **Protestants’ Evidence**

The Application is protested by two groups, the protestants Brad and Dawn Bowers and Kenneth and Rebecca Goetsch presented together in the hearing; and the POSGCD.

Evidence for the Bowers and Goetsch families was presented in the hearing by attorney Lauren Morgan, with the DORE Law Group, P.C., Houston, Texas.<sup>64</sup> Post-hearing, Ms. Morgan withdrew from the case and David Nelson of Gross & Nelson, Austin, was retained to represent the Bowers and Goetsch families.<sup>65</sup> In the hearing, Ms. Morgan asserts that a Commission letter dated February 12, 2018, identified administrative errors in the initial Application (dated December 13, 2017).<sup>66</sup> Ms. Morgan also argues that a completion permit has not been issued by the Commission, but work continues on the disposal well in violation of the Texas Water Code (TWC), Section 27.031.<sup>67</sup> Ms. Morgan contends that 150 trucks per day will travel to the disposal site with each truck hauling about 130 barrels to be disposed of at the proposed SWD well.<sup>68</sup> She asserts that the Application (December 13, 2017) requested a maximum volume of 25,000 bpd to be disposed of in the proposed well, but modified that volume to 50,000 bpd in the amended Application dated March 22, 2018, which is the same volume as a commercial saltwater disposal well in the area.<sup>69</sup> In addition, Ms. Morgan asserts that the only cement bond log performed on the well was by Clayton Williams Energy in February 2009.<sup>70</sup>

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<sup>62</sup> Hearing Tr. at 158:17-18.

<sup>63</sup> Hearing Tr. at 155:19-20 and 156:5-6.

<sup>64</sup> Hearing Tr. at 12:23-25.

<sup>65</sup> Letter dated September 12, 2018 from David Nelson, Gross & Nelson.

<sup>66</sup> Hearing Tr. at 13:5-10.

<sup>67</sup> Hearing Tr. at 13:17-19.

<sup>68</sup> Hearing Tr. at 14:18-25 and 15:1.

<sup>69</sup> Hearing Tr. at 15:12-21.

<sup>70</sup> Hearing Tr. at 17:1-11.

In Summary, Ms. Morgan argues that based on noncompliance with the Texas Administrative Code and the Texas Water Code and the potential for the well to pollute groundwater, Wildhorse should not be granted the issuance of this saltwater disposal permit because it is not in the public's interest.<sup>71</sup>

### ***Protestants Bowers***

On direct examination, Ms. Morgan called her first witness, Mr. Brad Bowers. Testimony and evidence submitted into the record indicate the Bowers residence is located about one-half mile from the proposed disposal well.<sup>72</sup> Mr. Bowers operates a family farm which consists of 12 acres for the house property and about 50 acres leased for agricultural activities. The farm runs about 25 cows in the winter months and produces up to 800 round bales-of-hay per year generating about \$70 to \$80 per bale. Mr. Bowers asserts that the bales-of-hay benefit the region/county by feeding up to 10 cows per bale and servicing numerous customers in the Burleson county area.<sup>73</sup>

Mr. Bowers contends that the sale of hay and cows are a secondary source of income which make up about 25 percent of his total annual salary.<sup>74</sup> Mr. Bowers testified that the agriculture activities on the Bowers farm resulted in an agriculture exemption which affect his annual income.<sup>75</sup> The Examiners asked a follow-up question about the economic impact if an agricultural exemption was lost. Mr. Bowers asserts that he could no longer afford to live on the farm if the agriculture exemption was lost.<sup>76</sup>

Mr. Bowers testimony established that his family farm is located on County Road 316, which will be the primarily route for trucks entering the Wildhorse facility. Mr. Bowers has concerns about the safety of residences and potential customers of his hay sales business if large trucks hauling saltwater to the disposal well use the road along with the small agricultural trailers picking up hay from his farm. Mr. Bowers asserts that County Road 316 narrows and has "blind hills" which require a reduction in speed from 45 miles per hour to 30 miles per hour.<sup>77</sup>

During cross-examination, Mr. Bowers, established that the March 16<sup>th</sup> letter filed with the Commission to protest the Application (dated December 13, 2017) was signed by about 70 persons in the rural community including himself, Dawn Bowers, Rebecca

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<sup>71</sup> Hearing Tr. at 17:12-25.

<sup>72</sup> Hearing Tr. at 49:1-11. Hearing Applicant Ex. 9.

<sup>73</sup> Hearing Tr. at 170:13-25.

<sup>74</sup> Hearing Tr. at 166-168.

<sup>75</sup> Hearing Tr. at 178.

<sup>76</sup> Hearing Tr. at 179 -181.

<sup>77</sup> Hearing Tr. at 169.



Goetsch and Kenneth Goetsch. The protest letter asserts that the disposal well will impact many water wells in the area. Cross-examination testimony by Brad Bowers established that the Bower's residence was connected to city water via a pipeline. On cross-examination, Mr. Bowers maintained that a study has not been performed to substantiate the statement in the protest letter dated March 16, 2018, that water wells would be impacted by the proposed SWD well.<sup>78</sup>

### ***Protestants Goetsch***

On direct examination, Ms. Rebecca Goetsch testified that the Goetsch residence is about 1.3 miles from the proposed disposal well and about 3/10<sup>th</sup> mile from County Road 316.<sup>79</sup> Primary concerns of the Goetsch family include impacts to groundwater and traffic safety in the vicinity of their residence.

### ***Protestant Post Oak Savannah Groundwater Conservation District***

The Post Oak Savannah Groundwater Conservation District (POSGCD) was identified as a protestant in the hearing.<sup>80</sup> Evidence for POSGCD was presented by their attorney Barbara Boulware-Wells, with the Knight Law Firm LLP.<sup>81</sup>

In the opening statement, Ms. Boulware-Wells asserts the Commission has full authority to grant permits and look at the aquifers; and the POSGCD is tasked with conservation and protection of aquifers in the geographical areas.<sup>82</sup> The POSGCD is responsible for management of the aquifers in both Milam and Burleson Counties and include protection of the water quality. The POSGCD has requested to be a protestant to this case because of concerns about the proposed disposal well potentially being harmful to aquifers in the POSGCD's geographical area.<sup>83</sup> POSGCD argues their protest is based on insufficient information on the construction of the well prior to and up to the hearing held on August 3, 2018.<sup>84</sup>

At the hearing, evidence was presented through testimony by Dr. Matthew Uliana, PhD, PG, a senior hydrogeologist with INTERA Inc. On direct examination, Dr. Uliana discussed his evaluation of the disposal well application in light of the potential for

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<sup>78</sup> Hearing Tr. at 176.

<sup>79</sup> Hearing Tr. at 50:11-15.

<sup>80</sup> Hearing Tr. at 11:21-24.

<sup>81</sup> Hearing Tr. at 10:6-10.

<sup>82</sup> Hearing Tr. at 18:22-25 and 186-187.

<sup>83</sup> Hearing Tr. at 19:2-5.

<sup>84</sup> POSGCD Ex. 1.

impacting water quality.<sup>85</sup> Dr. Uliana's stated his main task was to evaluate the cement bond log for the annular space outside of the casing near the injection interval as presented in Applicant's Exhibit 18, *The Acoustic Cement Bond Log Report*.<sup>86</sup>

Dr. Matthew Uliana, for POSGCD, asserts the aquifers in the area include three to four stratigraphic units associated with the Wilcox group and the overlying Carrizo, Sparta and Queen City aquifers.<sup>87</sup> The deepest aquifer is part of the Wilcox, the Hooper, at about 3,000 feet deep.<sup>88</sup>

Based on testimony from Dr. Uliana, the primarily basis of the protest for the POSGCD was concerns with the *Acoustic Cement Bond Log Report*.<sup>89</sup> He assessed the cement in the well's annular space and presented his concerns in a July 26, 2018 memo to the POSGCD.<sup>90</sup> Dr. Uliana's asserts that free-standing pipe (without cement) was observed through the production casing interval with insufficient cement in the annulus space, thus cement bonding was not observed in large portions of the production casing.<sup>91</sup> In the testimony, Dr. Uliana used the POSGCD Exhibit 1, as an illustration tool to explain the fundamentals of his interpretation and his conclusion that the *Acoustic Cement Bond Log Report* did not document proper bonded cement in the annular space associated with the production casing. Dr. Uliana argues that the well will allow injected fluids to migrate through the annulus at the injection interval and will pose a threat to aquifers under POSGCD jurisdiction.

During his testimony, Dr. Uliana explained his interpretation of the POSGCD Exhibit 1, based on data presented to him in the *Acoustic Cement Bond Log Report*. Testimony by Mr. Sliva, PE established that an error in investigation factors (i.e., millivolts and percentages) resulted in the initial data to be recalibrated and re-assessed by Baker Hughes to ensure accuracy.

On cross-examination, Dr. Uliana testified about his July 26, 2018 memo. He asserts that based upon information received via testimony during the day's hearing proceedings, concerns have been addressed with the amplitude issues and with the surface casing. Dr. Uliana stated,

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<sup>85</sup> Hearing Tr. at 186:15-25.

<sup>86</sup> Hearing Tr. at 187:14-15.

<sup>87</sup> Hearing Tr. at 188:1-17.

<sup>88</sup> Hearing Tr. at 213 - 214.

<sup>89</sup> Hearing Tr. at 188:22-25.

<sup>90</sup> Hearing Tr. at 189:1-5 and 217:16-22; POSGCD Ex.1.

<sup>91</sup> Hearing Tr. at 191:19-25 and 192:1-12.

*I'm not concerned with the amplitude issues. The surface casing, I would like to have seen a bond log but that's not within the regulations and they satisfied the regulations in terms of cement placement. So, I'm not concerned about that.*<sup>92</sup>

In the cross-examination, Mr. Neale asked Dr. Uliana:

*So if you look at the way this well is completed. It's not only protective of the usable quality water, it's also protected through the depth of the underground source drinking water. Dr. Uliana responded, Yeah, I agree with that.*<sup>93</sup>

Dr. Uliana testified that the amplitude curve (using Millivolt) gives a better idea of bond percentage which gives you an idea of how much cement is actually there. The variable density log trace (using percentage) gives you an idea of how affective the cement is actually bonding to the casing. In response to the regulatory requirement established by SWR 13<sup>94</sup>, Dr. Uliana states,

*I don't believe that the variable density log shows that it's completely sealed and cemented. I believe that cement is in place. I believe that there is an 80 percent bond for at least 100 feet worth of interval above that. So, in that sense, yeah, I do agree that cement is in place in there. I don't believe that the variable density log is showing that it's properly bonded to the casing. Maybe it is. Maybe there's something wrong with this. I'm not saying that it's not -- it's not fulfilling those regulations. I'm just saying that this variable density log doesn't show that it's properly bonded to the casing.*<sup>95</sup>

### **EXAMINERS' ANALYSIS OF THE EVIDENCE**

#### ***Public Interest***

Based on the evidence in the record, the Examiners conclude that the proposed non-commercial SWD well is in the public's interest. The non-commercial disposal well:

- will provide disposal capacity for the Applicant in the area where the volume of saltwater generated by oil and gas activity is greater than the volume of water currently being disposed; and

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<sup>92</sup> Hearing Tr. at 205:9-15.

<sup>93</sup> Hearing Tr. at 208:5-9.

<sup>94</sup> State Wide Rule (SWR) 13 refers to 16 Tex. Admin. Code § 3.13.

<sup>95</sup> Hearing Tr. at 211:2-15 and 218-219.

- will allow Wildhorse to produce hydrocarbons from wells currently shut-in due to lack of water disposal availability.

Mr. Sliva, PE asserted that Wildhorse is currently prioritizing the shut-in of their smaller volume producing wells over larger volume producing wells because of the lack of capacity in the area. Testimony in the hearing established the need for the additional disposal capacity in the area. It is noteworthy that no evidence was provided in the hearing by the protestants arguing that capacity exceeded the demand in the area. The Examiners found the testimony about the need for disposal capacity persuasive.

Protestants Bowers and Goetsch families argued that the proposed SWD well is not in the public's interest because of non-compliance with the Texas Water Code and Texas Administrative Code, citing TWC Section 27.031, to support the argument of noncompliance based on the well being converted to a disposal well before issuance of a disposal permit. Beyond the comment asserted by Ms. Morgan in the opening statement, no testimony from the protestants, Mr. Brad Bowers, Ms. Elizabeth Goetsch, or the POSGCD, addressed Wildhorse's compliance history.

Also, Ms. Morgan asserts that a Commission letter dated February 12, 2018, identified administrative errors in the completed Form W-14 application. Wildhorse responded with an amended W-14 Application dated March 22, 2018. On March 28, 2018, the Oil and Gas Division issued a letter for the amended Application (dated March 22, 2018) establishing it to be administratively complete. The Examiners did not find the protestants argument on noncompliance persuasive.

It is noteworthy that the Bowers and Goetsch families were concerned about heavy traffic and safety associated with County Road 316. Based on testimony, truck traffic traveling to and from the Wildhorse proposed SWD well will use County Road 316. Ms. Morgan's opening statement asserts that about 150 trucks a day will use the small county road to travel to and from the Wildhorse SWD well hauling about 130 barrels of saltwater or a volume of 19,500 bpd. Although these issues may be appropriate for discussion, these safety and traffic issues are not within the jurisdiction of the Commission. During direct examination regarding truck traffic and safety, Wildhorse offered to limit the delivery of saltwater by truck to 30,000 bpd. The Examiners have added a condition of the disposal permit limiting the volume of saltwater traveling by vehicle to the disposal well to 30,000 bpd as proposed by Mr. Villasana for Wildhorse.

In testimony by Mr. Bowers, it was asserted that he operates a family farm located about ½ mile from the proposed SWD well. The farm runs about 25 cows in the winter and produces up to 800 round bales-of-hay per year for sale. Mr. Bowers' asserts the hay benefits numerous customers in the Burleson county area. Evidence regarding damages to his agriculture business was limited to safety and traffic on the county road and a brief discussion about potential impacts to groundwater in the area. Brad Bowers asserts that

the Bowers' residence was connected to city water via a pipeline. Also, during cross-examination, Brad Bowers asserts that a study has not been performed to substantiate the claims of the protestants that water wells would be impacted by the proposed SWD well.

The Examiners were not persuaded by the arguments by the protestants that the proposed SWD Well is not in the public's interest.

***Endanger or injure Any Oil, Gas, or Other Mineral Formation***

Wildhorse contends that the proposed disposal well will not injure any oil, gas, or other mineral formations pursuant to Texas Water Code § 27.051(b)(2). The proposed SWD well will inject saltwater into the Edwards formation at a depth interval from 7,508 feet to 7,594 feet. An assessment of the productive intervals within two miles of the proposed SWD well show geologic stratigraphic separation by at least 500 feet of low permeable formations to the nearest productive formation, the Buda formation.

In addition, it is noted that cement has been circulated in the surface casing annulus from 3,694 feet to the surface and also in the production casing from 10,507 to 6,000 feet to prevent migration from the well to freshwater aquifers.

***Prevent Pollution of Ground and Surface Water***

Wildhorse demonstrated that the proposed disposal well will not cause the pollution of ground or surface fresh water by performing a series of test on the integrity of the well. Specifically, Wildhorse performed a FIT assessment and pressure test on the surface and production casing; and an acoustic cement bond assessment on cement within the annular space of the proposed SWD well. Wildhorse contends all the assessments and test performed on the proposed SWD well met or exceeded the requirements established by SWR 9.<sup>96</sup>

It is noteworthy that the POSGCD's hydrologist, maintains that an 80 percent cement bond in the proposed SWD well's annulus may not isolate the injection zone, thus resulting in a release to groundwater. The Examiners note the objection by the POSGCD, but evidence suggest that SWR 9 was met with regards to the well's casing integrity and annular space cement bonding. The testimony from POSGCD carried weight, but ultimately the evidence and testimony regarding the cement bonding, well integrity testing and operation limitations persuaded the Examiners that groundwater will be protected. It is also noteworthy that the other protestants, Brad and Dawn Bowers and Kenneth and Rebecca Goetsch, did not provide any evidence regarding their concerns about the well's integrity and potentially impacts to groundwater that was claimed in their protest letter dated March 16, 2018.

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<sup>96</sup> State Wide Rule (SWR) 9 refers to 16 Tex. Admin. Code § 3.9.

Testimony maintains that the BUQW is estimated to occur at a depth of 3,150 and the USDW is estimated at 3,450 feet. Based on testimony and exhibits, the surface casing is 3,694 feet and cemented through both the BUQW and USDW. In addition, the production casing annulus is cemented from 6,000 feet to 10,507 feet, which isolates the injection formation above and below the injection interval.

Wildhorse maintains there is geologic isolation of the disposal unit as identified on the Array Induction/Compensated Neutron Litho Density/Gamma Ray/SP log submitted as a late exhibit on August 22, 2018. The log indicates the Kiamichi Edwards, a low permeable formation, isolates the injection interval from fresh-water aquifers. There is geologic confinement between the top of the disposal interval and the BUQW with the Kiamichi Edwards formation and the Georgetown Edwards Limestone formation, about 300 feet and 200 feet thick, respectively.

The proposed operation pressure in the Application will limit the maximum surface injection pressure to 3,754 psig. Therefore, the Examiners are persuaded that the well's operation specifications in the Application will be protective of ground and surface waters in the area of the well.

### ***Demonstrate Financial Responsibility***

Wildhorse has an active Organization Report (Form P-5, Operator No. 923453), and on file a \$250,000 financial assurance. No testimony or evidence with regard to Wildhorse's ability to meet its financial assurance obligations was entered into the hearing record by the protestants. The evidence in the record demonstrates the applicant has made a satisfactory showing of financial responsibility as required by the Texas Water Code.

### **FINDINGS OF FACT**

1. Wildhorse (923453) filed a Form W-14 application ("Application") dated December 13, 2017 to operate a non-commercial saltwater disposal well ("SWD well") pursuant to the authority of Statewide Rule 9. On February 12, 2018, the Commission sent a letter to Wildhorse identifying deficiencies with the Application. Wildhorse responded with an amended Application (Form W-14 dated March 22, 2018). On March 28, 2018, the Oil and Gas Division issued a letter for the amended Application establishing it to be administratively complete.
2. Wildhorse is requesting to convert a gas well (API No. 051-33651) in the Giddings (Buda) Wildcat Field (Field No. 34733600) into a non-commercial SWD well.

3. The proposed SWD well will inject saltwater into the Edwards formation from 7,508 feet to 7,594 feet, a non-productive formation in Burleson County, Texas. The proposed SWD well is identified in the Application as the Sunny Well No. 1.
4. On November 30, 2017, a notice of the Application was published in the Burleson County Tribune, a newspaper having general circulation in Burleson County Texas; and published again on March 8, 2018. In addition, on November 27, 2017 and again on March 22, 2018, a notice of Application and a copy of the Application was mailed to the surface owner (Wilkins Family Partnership, LP), the County Clerk of Burleson County, and any operator with active wells within one-half mile radius of the proposed non-commercial SWD well as required by Statewide Rule 9.
5. On March 16, 2018, protests were received to the notice of Application.
6. On March 28, 2018, the Oil and Gas Division issued a letter for the amended Application (dated March 22, 2018) establishing the proposed SWD well to be administratively complete.
7. The Commission's Docket Services sent the Notice of Pre-Hearing to the service list on May 29, 2018, and a Hearing Notice ("Notice") identified as a supplemental list dated June 12, 2018.
8. On July 9, 2018, a pre-hearing conference was held to establish parties with standing.
9. On August 3, 2018, a hearing on the merits was held.
10. Brad and Dawn Bowers, Rebecca and Kenneth Goetsch, and Post Oak Savannah Groundwater Conservation District participated at the hearing as protestants to the Application.
11. The proposed disposal well construction specifications are:
  - a. Surface casing is set from the surface to 3,694 feet;
  - b. Production casing runs the length of the original gas well to 17,315 feet total depth (TD);
  - c. From December 28, 2017 to March 27, 2018, the gas well was recompleted by placing a bridge plug at 7,720 feet deep and placing about 75 feet of cement on top of the bridge plug. The final well depth is 7,645 feet TD;
  - d. Production casing annulus was cemented from 10,507 feet to 6,000 feet (top of cement) to isolate the injection interval which is from 7,508 to 7,594 feet;

- e. Tubing in the proposed SWD well is 5 ½ inches in diameter with a packer at 7,458 feet and a perforated interval from 7,508 feet to 7,594 feet;
  - f. The injection formation is the Edwards formation.
12. The maximum daily injection volume is proposed at 50,000 barrels per day;
13. Wildhorse proposed in the hearing to limit the volume of waste traveling to the facility by truck to 30,000 bpd. As a special condition of the disposal permit, the volume of waste entering the disposal site by vehicle is limited 30,000 bpd.
14. The maximum surface injection pressure will be 3,754 pounds per square inch gauge (psig).
15. The use or installation of the injection well is in the public interest.
- a. Wildhorse will provide disposal capacity for the Applicant in the area where the volume of saltwater generated by oil and gas activity is greater than the volume of water being disposed; and;
  - b. Wildhorse will to produce hydrocarbons from wells currently shut-in due to the lack of water disposal availability.
16. The use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation.
- a. The injection interval is part of the Edwards formation which is not productive of oil or gas within 2 miles of the SWD well.
  - b. There is geologic isolation and confinement of the injection interval in the Edwards formation caused by the overlying Kiamichi Edwards formation.
  - c. The long-string production casing annulus is cemented from 6,000 feet to 10,507 feet deep, protecting the confining units and injection interval.
  - d. The surface injection pressure will be limited to 3,754 psig.
17. With proper safeguards, both ground and surface fresh water can be adequately protected from pollution.
- a. The base of usable quality groundwater ("BUQW") occurs at a depth of 3,150 feet;



- b. The Underground Source of Drinking Water (USDW) is estimated at 3,450 feet;
  - c. The surface casing is cemented to surface through both the BUQW and USDW to a depth of 3,694 feet;
  - d. There is geologic confinement between the top of the disposal interval and the BUQW with the Kiamichi Edwards (clay) formation and the Georgetown Edwards Limestone formation, about 300 feet and 200 feet thick, respectively.
18. Wildhorse has an active Organization Report (Form P-5, Operator No. No. 923453), on file indicating a \$250,000 financial assurance. The applicant has made a satisfactory showing of financial responsibility as required by Section 27.073 of the Texas Water Code.
19. A seismic event assessment was performed for a radius of 9.08 kilometers around the proposed SWD well. The United States Geological Survey established no seismic event within the 9.08 kilometers radius of the proposed SWD well or 100 square mile area.

### **CONCLUSIONS OF LAW**

1. Resolution of the Application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051.
2. All notice requirements have been satisfied. 16 Tex. Admin. Code § 3.9.
3. The use or installation of the proposed disposal well is in the public interest. Texas Water Code § 27.051(b)(1).
4. The use or installation of the proposed disposal wells will not endanger or injure any oil, gas, or other mineral formation. Texas Water Code § 27.051(b)(2).
5. With proper safeguards, both ground and surface fresh water will be adequately protected from pollution. Texas Water Code § 27.051(b)(3).
6. Wildhorse Resources Management Company, LLC has made a satisfactory showing of financial responsibility. Texas Water Code § 27.051(b)(4).
7. Wildhorse Resources Management Company, LLC has met its burden of proof and its application satisfies the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's SWR 9.

**EXAMINERS' RECOMMENDATION**

Based on the above findings of fact and conclusions of law, the Examiners recommend the Commission enter an order granting the application of Wildhorse Resources Management Company, LLC for a non-commercial permit to dispose of saltwater waste by injection into the Giddings (Edwards Gas) Field at a depth interval from 7,508 feet to 7,594 feet.

Respectfully,



Robert Musick, P.G.  
Technical Examiner



Kristi M. Reeve  
Administrative Law Judge

**RAILROAD COMMISSION OF TEXAS  
HEARINGS DIVISION**

**OIL & GAS DOCKET NO. 03-0311102**

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**APPLICATION OF WILDHORSE RESOURCES MANAGEMENT COMPANY, LLC (923453) PURSUANT TO STATEWIDE RULE 9 FOR A PERMIT TO DISPOSE OF OIL & GAS BY WASTE INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL AND GAS FOR THE SUNNY UNIT LEASE, WELL NO. 1, GIDDINGS (EDWARDS GAS) FIELD, BURLESON COUNTY, TEXAS**

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**FINAL ORDER**

The Railroad Commission ("RRC" or "Commission") finds that after statutory notice in the above-docketed case, heard on August 3, 2018, the presiding Technical Examiner and Administrative Law Judge have made and filed a Proposal for Decision containing findings of fact and conclusions of law, which was served on all parties of record, and that this proceeding was duly submitted to the Railroad Commission of Texas at a conference held in its offices in Austin, Texas.

The Commission, after review and due consideration of the Proposal for Decision and the findings of fact and conclusions of law contained therein, and any exceptions and replies thereto, hereby adopts as its own the findings of fact and conclusions of law contained therein, and incorporates those findings of fact and conclusions of law as if fully set out and separately stated herein.

Therefore, it is **ORDERED** by the Railroad Commission of Texas that the application of Wildhorse Resources Management Company, LLC ("Wildhorse") is hereby **GRANTED**, and Wildhorse is authorized to conduct non-commercial saltwater disposal operations at the Sunny Unit Lease, Well No. 1, in the Edwards formation from 7,508 feet to 7,594, a porous formation not productive of oil and gas, Burleson County, Texas. Attached to this Final Order is the Permit to dispose of non-hazardous oil and gas waste by injection into a porous formation not productive of oil and gas.

Each exception to the Examiners' proposal for decision not expressly granted herein is overruled. All requested findings of fact and conclusions of law which are not expressly adopted herein are denied. All pending motions and requests for relief not previously granted or granted herein are denied.

It is further **ORDERED** by the Commission that this order shall not be final and effective until 25 days after the Commission's order is signed, unless the time for filing a motion for rehearing has been extended under Tex. Gov't Code §2001.142, by agreement under Tex. Gov't Code §2001.147, or by written Commission Order issued pursuant to Tex. Gov't Code § 2001.146(e). If a timely motion for rehearing of an application is filed by any party at interest, this order shall not become final and effective until such motion is overruled, or if such motion is granted, this order shall be subject to further action by

the Commission. Pursuant to Tex. Gov't Code § 2001.146(e), the time allotted for Commission action on a motion for rehearing in this case prior to its being overruled by operation of law is hereby extended until 90 days from the date Commission Order is signed.

Done this 23rd day of January 2019.

**RAILROAD COMMISSION OF TEXAS**

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**CHAIRMAN CHRISTI CRADDICK**

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**COMMISSIONER RYAN SITTON**

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**COMMISSIONER WAYNE CHRISTIAN**

**ATTEST:**

\_\_\_\_\_  
**SECRETARY**

**PERMIT TO DISPOSE OF NON-HAZARDOUS OIL AND GAS WASTE BY INJECTION INTO A  
POROUS FORMATION NOT PRODUCTIVE OF OIL AND GAS**

**WILDHORSE RESOURCES MNGT CO, LLC  
PO BOX 79588  
HOUSTON TX 77279**

Authority is granted to inject Non-Hazardous Oil and Gas waste into the well identified herein in accordance with Statewide Rule 9 of the Railroad Commission of Texas and based on information contained in the application (Form W-14) dated March 22, 2018 for the permitted interval of the EDWARDS formation and subject to the following terms and special conditions:

**SUNNY UNIT (254427) LEASE  
GIDDINGS (EDWARDS, GAS) FIELD  
BURLESON COUNTY, DISTRICT 03**

**WELL IDENTIFICATION AND PERMIT PARAMETERS:**

Well No.	API No.	UIC Number	Permitted Fluids	Top Interval (feet)	Bottom Interval (feet)	Maximum Liquid Daily Injection Volume (BBUday)	Maximum Gas Daily Injection Volume (MCF/day)	Maximum Surface Injection Pressure for Liquid (PSIG)	Maximum Surface Injection Pressure for Gas (PSIG)
1	05133651		Salt Water, and PRODUCED WATER	7508	7594	50000	N/A	3754	N/A

**SPECIAL CONDITIONS:**

Well No.	API No.	Special Conditions
1	05133651	<p><b>1. A bridge plug must be set below the injection interval at a depth of 7645 feet with 20 feet of cement on top. A copy of Form W-15 Cementing Report must be filed with the initial Form H-5 Injection Well Pressure Test Report documenting compliance with this Special Condition.</b></p> <p><b>2. Note: The subject well is on current RRC schedule: WILDCAT field and SUNNY UNIT (Dst-03, Lse-254427) lease. File W-2/G-1 Completion / Recompletion Report when well is converted.</b></p> <p><b>3. Wildhorse proposed in the hearing to limit the volume of waste traveling to the facility by truck to 30,000 bpd. As a special condition of the disposal permit, the volume of waste entering the disposal site by vehicle is limited 30,000 bpd.</b></p>

**STANDARD CONDITIONS:**

1. Injection must be through tubing set on a packer. The packer must be set no higher than 100 feet above the top of the permitted interval.
2. The District Office must be notified 48 hours prior to:
  - a. running tubing and setting packer;
  - b. beginning any work over or remedial operation;
  - c. conducting any required pressure tests or surveys.
3. The wellhead must be equipped with a pressure observation valve on the tubing and for each annulus.
4. Prior to beginning injection and subsequently after any work over, an annulus pressure test must be performed. The test pressure must equal the maximum authorized injection pressure or 500 psig, whichever is less, but must be at least 200 psig. The test must be performed and the results submitted in accordance with the instructions of Form H-5.
5. The injection pressure and injection volume must be monitored at least monthly and reported annually on Form H-10 to the Commission's Austin office.
6. Within 30 days after completion, conversion to disposal, or any work over which results in a change in well completion, a new Form W-2 or G-1 must be filed to show the current completion status of the well. The date of the disposal well permit and the permit number must be included on the new Form W-2 or G-1.
7. Written notice of intent to transfer the permit to another operator by filing Form P-4 must be submitted to the Commission at least 15 days prior to the date of the transfer.
8. This permit will expire when the Form W-3, Plugging Record, is filed with the Commission. Furthermore, permits issued for wells to be drilled will expire three (3) years from the date of the permit unless drilling operations have commenced.

Provided further that, should it be determined that such injection fluid is not confined to the approved interval, then the permission given herein is suspended and the disposal operation must be stopped until the fluid migration from such interval is eliminated. Failure to comply with all of the conditions of this permit may result in the operator being referred to enforcement to consider assessment of administrative penalties and/or the cancellation of the permit.