RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

PROPOSAL FOR DECISION

OIL AND GAS DOCKET NO. 08-0296951

THE APPLICATION OF MESQUITE SWD, INC. PURSUANT TO STATEWIDE RULE 46 FOR A PERMIT TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS, HARRISON 285 SWD LEASE, WELL NO. 1, ORLA, SOUTHEAST (DELAWARE) FIELD, REEVES COUNTY, TEXAS

HEARD BY: Richard Eyster, P.G. – Technical Examiner
Laura Miles-Valdez – Hearings Examiner
Jennifer Cook – Administrative Law Judge

APPEARANCES:	**REPRESENTING:**
APPLICANT:	
Jamie Nielson	Mesquite SWD, Inc.
Michael Glasscock	
Steve Towns	
Nguyen B. Ngoc	
PROTESTANT:	
Benito Klein	Pro Se
David Klein	Pro Se

PROCEDURAL HISTORY

Application Filed:	June 4, 2015
Protest Received:	August 10, 2015
Date of Hearing:	August 24, 2015
Transcript Received:	September 9, 2015
Proposal For Decision Issued:	February 23, 2016

STATEMENT OF THE CASE

Mesquite SWD, Inc. (Mesquite), requests authority pursuant to Statewide Rule 46 (16 Tex. Admin. Code §3.46) to inject fluid into the Delaware Formation. The proposed well is a commercial disposal well for the disposal of produced saltwater in the Harrison 285 SWD Lease, Well No. 1, Orla Southeast (Delaware) Field, Reeves County, Texas. The well site is located about 15 miles in a northwest of the town of Pecos, Reeves County, Texas.

On April 29, 2015, Notice of the subject application was mailed to the Reeves County Clerk, the surface owner of the subject disposal tract, the surface owners of adjacent tracts, and the operators of offset wells located within a one-half mile radius of the proposed well. Notice of the application was published in the *Pecos Enterprise*, a newspaper of general circulation in Reeves County, on April 10, 2015. Mesquite seeks authority to dispose of a maximum of 20,000 barrels per day (BBL/D) of salt water into the Delaware Formation at a depth of 3,900 ft to 5,500 ft at a maximum surface injection pressure of 1,950 psi. The proposed average injection volume will be 15,000 BBL/D.

The application is protested by Mr. David Klein and Mr. Benito Klein, (collectively, the Protestants). The Protestants operate a store located approximately 6,900 feet southeast of the proposed injection well location on Hwy 285. The Protestants believe there is a sufficient number of disposal wells in the area and do not believe the proposed injection well is necessary. The Protestant's also stated that they are concerned the proposed injection well so close to their business would result in traffic safety issues and a loss of revenue at their store.

As addressed below, the Administrative Law Judge and Technical Examiner (collectively "Examiners" recommend that the Railroad Commission of Texas (Commission) approve the application.

Applicable Law

The Railroad Commission may grant a permit under Chapter 27 of the Texas Water Code, Subchapter D[1], in whole or part and may issue a disposal permit to dispose of fluids by underground injection 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

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[1] Tex. Water Code §27.051(b)(1-4).

4. The applicant has made a satisfactory showing of financial responsibility if required by Section 27.073.

The Examiners conclude that Mesquite has met its burden of proof and recommend the permit be granted.

DISCUSSION OF THE EVIDENCE

APPLICANT'S EVIDENCE

Mesquite seeks authority to dispose a maximum volume of 20,000 BBL/D and a daily average of 15,000 BBL/D of saltwater into the Delaware Formation, on the Harrison 285 SWD Lease, Well No. 1, (Well No.1), Orla Southeast (Delaware) Field, Reeves County, Texas.

The proposed Harrison 285 SWD Lease, Well No. 1, (Well No. 1) injection well be will be completed and operated as follows:[2]

a. Surface casing (9 5/8-inch) will be set to a depth of 1,800 feet, 50 feet below the base of the usable-quality groundwater (BUQW) and 25 ft below the base of the Underground Source of Drinking Water (USDW). Cement will be circulated to surface.

b. Long-string casing (7-inch) will be set to a depth of 3,950 ft with cement circulated to surface.

c. Injection tubing (3 -1/2 inch) will be run inside the long string casing and a packer will be set at a depth of 3,850 ft, which is 50 ft above the top of the injection interval.

d. The injection interval will be from 3,900 ft to 5,500 ft into the Delaware Formation.

e. The maximum daily injection volume will be 20,000 barrels per day, with an average daily injection volume of 15,000 barrels per day.

f. The maximum surface injection pressure will be 1,950 psi.

g. The proposed well will receive produced salt water for disposal.

h. Surface facilities will comply with standard permit conditions for commercial disposal well facilities, including secondary containment.

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[2] Tr. Pg.,42 Lns 1-25, Pg.43, lns., 1-25. Pg.,44, lns., 1-12. Applicant's Exhibit No. 19. Well Schematic

1/4 MILE AREA OF REVIEW

There are no wellbores within one quarter-mile of the proposed injection well.

GROUNDWATER PROTECTION

The Commissions' Groundwater Advisory Unit (GAU) has determined that water-bearing strata from the land surface to a depth of 950 ft and the Rustler Formation, which is estimated to occur from 1,250 ft to 1,750 feet must be protected. The base of the USDW was determined to be 1,775 feet.[3] Mesquite asserts the proposed injection well will be cased and cemented to isolate the BUQW and USDW from the injection interval. The proposed well will have surface casing cemented to 1,800 ft with cement circulated to surface. In addition to casing there is a minimum of 400 ft of shale from 1,800 ft to the top of the injection interval at 3,900 ft which will serve as a confining interval preventing the vertical migration of fluid out of the injection interval.[4]

SEISMIC EVENTS

There were no seismic events in a radius of 9.08 kilometers around the proposed well from January 1, 1970 to April 1, 2015.

PUBLIC INTEREST

The Applicant stated that there is ongoing horizontal drilling in the Wolfcamp Formation and there is a need for additional disposal wells. Applicants Exhibit No. 17, a map showing only one disposal well within a 100 square mile area of the proposed injection well. The disposal well is the NGL Water Solutions, Trippet Saltwater Disposal Well No. 1 (API No. 389-34609). [5] The Trippet Disposal Well is located approximately 4.5 miles northwest of the proposed injection well. The Trippet Disposal Well was permitted in March 2014 for 30,000 barrels of water per day and is currently injecting 28,986 barrels of water per day which is 1,014 barrels per day under the Trippet Disposal Well's permitted disposal volume. The Applicant believes that additional horizontal wells requiring fracture stimulation are being drilled in the area and with the Trippet Disposal Well operating at near capacity and no other disposal wells within a ten mile radius of the proposed injection well, the Applicant believes there is need for additional disposal capacity.[6]

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[3] Applicants Exhibit No. 5, Tr. Pg., 20, lns 1-15.

[4] Applicant's Exhibit No. 21, well log.

[5] Applicant's Exhibit No.17.

[6] Tr. Pg., 15, lns., 11-20.

ENDANGER OR INJURE ANY OIL, GAS, OR OTHER MINERAL FORMATION

There has been historical production in the Delaware Formation within two miles of the proposed injection well[7], however, current production is from deep horizontal (+10,000 ft) wells. Applicant's Exhibit No. 7, an 1/2 mile radius map around the proposed injection well shows there is one active well within one-half mile of the proposed disposal well. It is a deep lateral of a producing horizontal oil well operated by Cimerex (API No. 389-34093). The Cimerex well is completed in the Phantom (Wolfcamp) Formation at 10, 968 ft, which is 5,468 feet below the bottom of the injection interval. There is over 1,000 ft of shale separating the base of the injection zone from the hydrocarbon producing zone.[8]

PROTESTANT'S EVIDENCE:

The Protestants asserted that there are sufficient injection wells in the area and the proposed injection well would increase traffic in the area. The Protestants did not call any witnesses, provide any evidence or exhibits to support the claim that additional disposal capacity is not needed in this area.

The Protestants stated they do not have any concerns about the technical aspects of the proposed injection well.[9] Mr. David Klein stated that he is aware that the Commission does not have jurisdiction over traffic but he is very concerned for the general public because of the increased traffic the proposed well might cause.[10]

EXAMINERS' OPINION

The Commission may grant a permit for a commercial disposal well if the application meets the requirements of the Texas Water Code § 27.051(b), (1-4). The Protestants offered statements in opposition to the application, but their concerns about traffic conditions are not within the Commission's jurisdiction. The Examiners conclude the Applicant has demonstrated that the proposed disposal well meets these requirements. As a result, the Examiners recommend the subject disposal well application be approved and the permit issued. The required elements of the Texas Water Code § 27.051(b) will be taken in turn.

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[7] Tr. Pg. 17 lns, 22-25. Pg. 18., lns., 5-6.

[8] Applicant's Exhibit No. 21, well log.

[9] Tr. Pg., 76 lns., 6-10, Pg. 81 lns.,17-24.

[10] Tr., Pg., 76, lns., 6-15.

Public Interest

The disposal of saltwater and other waste fluids is a necessary aspect of hydrocarbon production. Operators are continuing to drill and complete horizontal wells in Reeves County. The horizontal wells are fracture stimulated which produces large volumes of flowback and formation water. Further, there is only one disposal well to ship fluid to for producing operators within a 100 square mile area of the proposed injection well. Consequently, permitting the proposed injection well will provide additional disposal capacity for operators in the area.

The Examiners' conclude the Applicant has demonstrated that additional disposal capacity is needed in this area.

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

The evidence in the record demonstrates no oil, gas, or other mineral formations will be harmed by the proposed disposal well. There is one active well within one-half mile of the proposed disposal well, a lateral of a producing horizontal oil well completed in the Phantom (Wolfcamp) Formation at 10,968 ft, which is 5,468 feet below the base of the injection interval. The wellbore design and operational parameters of the proposed injection well will be protective of the underlying hydrocarbon bearing Phantom (Wolfcamp) Formation. There is also more than 1,000 ft of shale extending from the bottom of the injection interval at 5,500 ft to the top of the Phantom Wolfcamp Formation, effectively sealing the bottom of the injection interval from the underlying hydrocarbon producing formations.

The Examiners conclude the Applicant has demonstrated that the proposed injection well will not endanger or injure any oil, gas, or mineral formations.

Protect Water Resources

The evidence in the record demonstrates the proposed commercial disposal well contains proper safeguards for the adequate protection of ground and surface freshwater from pollution. The well will include two casing strings, surface casing set at 1,800 ft and long string casing set at 3,950 ft, both casing strings will be cemented to surface. The wellbore design and operational parameters will be protective of fresh groundwater at and above the 1,750 ft BUQW. In addition to the well construction, there is a minimum of 400 ft of shale from 1,800 ft to the top of the injection interval at 3,900 ft which will serve as a confining interval preventing the vertical migration of fluid out of the injection interval. There is also more than 1,000 ft of shale extending from the bottom of the injection interval at 5,500 ft effectively sealing the bottom of the injection interval. The facility will receive produced salt water for disposal by truck. The Surface Facilities will comply with standard permit conditions for commercial disposal well facilities, including secondary containment.

The Examiners conclude the record contains sufficient evidence to demonstrate that both ground and surface fresh water will be adequately protected from pollution.

Financial Responsibility

Mesquite, has made a satisfactory showing of financial responsibility as required by Texas Water Code §27.073. Commission records indicate Mesquite has an active Organization Report (Form P-5) on file, and a letter of credit in the amount of $50,000 for financial assurance.

FINDINGS OF FACT

1. Mesquite SWD, Inc. seeks a permit authorizing commercial disposal operations pursuant to 16 Tex. Admin. Code § 3.46 ("Statewide Rule 46") for the Harrison 285 SWD Lease, Well No. 1, Orla Southeast (Delaware) Field, Reeves County, Texas. ("Mesquite SWD Well No. 1).

2. Notice of this hearing was given to all parties entitled to notice at least ten days prior to the date of hearing.

3. Notice of the application was published in the Pecos Enterprise, a newspaper of general circulation in Reeves County, on April 10, 2015.

4. The application was protested by Benito Klein and David Klein.

5. The proposed injection well has not been drilled.

6. The proposed injection well will be a commercial disposal well for the disposal of saltwater. The proposed injection well is located about 15 miles northwest of the town of Pecos on a 636 acre tract in a rural area.

7. The proposed commercial disposal well will be constructed and operated in accordance with the requirements of Statewide Rule 46 and the Texas Water Code, including:

   a. Surface casing (9 5/8-inch) will be set to a depth of 1,800 ft, 50 ft below the base of the usable-quality groundwater (BUQW) and 25 ft below the base of the base of the Underground Source of Drinking Water, (USDW). Cement will be circulated to surface.

   b. Long-string casing (7-inch) will be set to a depth of 3,950 ft with cement circulated to surface.

   c. Injection tubing (3 -1/2 inch) will be run inside the long string casing and a packer will be set at a depth of 3,850 ft, which is50 ft above the top of the injection interval.

   d. The injection interval will be from 3,900 ft to 5,500 ft into the Delaware Formation.

e. The maximum daily injection volume will be 20,000 barrels of saltwater per day, with an average daily injection volume of 15,000 barrels of saltwater per day.

f. The maximum surface injection pressure will be 1,950 psi.

g. The proposed well will receive produced salt water for disposal.

h. Surface facilities will comply with standard permit conditions for commercial disposal well facilities, including secondary containment.

8. The use or installation of the proposed injection well is in the public interest.

a. The disposal of saltwater and other waste fluids is a necessary aspect of hydrocarbon production. Operators are continuing to drill and complete horizontal wells in Reeves County.

b. The horizontal wells are fracture stimulated which produce large volumes of flowback and formation water.

c. Permitting the proposed injection well will provide additional disposal capacity for operators in the area.

d. There is only one disposal well within 100 square miles of the Mesquite SWD Well No. 1.

9. With proper safeguards, both fresh ground and surface water can be adequately protected from pollution.

a. The BUQW occurs from the surface to a depth of 1,750 feet.

b. The base of the USDW is 1,775 feet.

c. The injection interval is directly overlain by a minimum of 400 ft of shale from 1,800 ft to the top of the injection interval at 3,950 ft which will serve as a confining interval preventing the vertical migration of fluid out of the injection interval ft isolating the disposal interval from the BUQW.

d. No wellbores penetrate the disposal interval within a one-quarter mile area of review of the proposed disposal well.

e. The Mesquite facility will incorporate all required standard containment design features for commercial disposal facilities designed to prevent pollution.

10. The use or installation of the Mesquite SWD No. 1 Well will not endanger or injure oil, gas, or other mineral formations.

    a. The active hydrocarbon development in the area will require disposal of salt water.

    b. The proposed well is located in the an area of active hydrocarbon development driven by fracture stimulated horizontal wells in the deep Phantom (Wolfcamp) Formation.

    c.. There has been historical production in the Delaware Formation within two miles of the proposed injection well, however, current production is from deep horizontal (+10,000 ft) wells.

    d. The injection interval is directly overlain by a minimum of 400 ft of shale from 1,800 ft to the top of the injection interval at 3,950 ft. Additionally there is also more than 1,000 ft of shale extending from the bottom of the injection interval at 5,500 ft to the top of the Phantom Wolfcamp Formation, effectively sealing the bottom of the injection interval from the underlying hydrocarbon producing formations.

11. Mesquite, has made a satisfactory showing of financial responsibility as required by the Texas Water Code §27.073.

    a. Mesquite holds a current Form P-5 Organization Report (Operator No. 561951

    b. Mesquite has filed a $50,000 Letter of Credit with the Commission for financial assurance.

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 Commission jurisdiction to consider this matter.

3. The use or installation of the proposed injection well is in the public interest.

4. The proposed fluid injection operations will not endanger oil, gas or geothermal resources or cause the pollution of freshwater strata unproductive of oil, gas or geothermal resources.

5. Mesquite SWD Inc., 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 46.

6. Mesquite SWD Inc., has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.

EXAMINERS' RECOMMENDATION

Based on the above findings of fact and conclusions of law, the Examiners recommend that the Mesquite SWD Inc., application for a commercial disposal well injecting into a porous formation productive of hydrocarbons for its Harrison 285 SWD Lease, Well No. 1, Orla Southeast (Delaware) Field, Reeves County, Texas be granted.

Respectfully submitted,

Richard Eyster, P.G.
Technical Examiner

Jennifer Cook
Administrative Law Judge