



# RAILROAD COMMISSION OF TEXAS

## OFFICE OF GENERAL COUNSEL

OIL AND GAS DOCKET NO. 8A-0271957

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THE APPLICATION OF MESQUITE SWD INC. FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS FOR THE BILLINGSLEY SWD LEASE WELL NO. 1W, GIN (SPRABERRY) FIELD, DAWSON COUNTY, TEXAS

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HEARD BY: Andres J. Trevino P.E., Technical Examiner  
Marshall F. Enquist, Hearings Examiner

### APPEARANCES:

#### APPLICANT:

David Gross  
Dale Miller  
Michael Glasscock

#### REPRESENTING:

Mesquite SWD, Inc.

#### PROTESTANTS:

Linda Boyd

Herself

### PROCEDURAL HISTORY

Application Filed:	August 9, 2011
Request for Hearing:	July 7, 2011
Notice of Hearing:	August 22, 2011
Date of Hearing:	September 22, 2011
Proposal For Decision Issued:	January 25, 2012

### EXAMINERS' REPORT AND PROPOSAL FOR DECISION

#### STATEMENT OF THE CASE

Mesquite SWD, Inc. requests authority pursuant to Statewide Rule 46 to operate Well No. 1W on its Billingsley SWD Lease in Dawson County as a commercial disposal well. The application was declared administratively complete by Doug Johnson, Manager

for Injection of the Storage Permits and Support Section of the Commission on June 9, 2011. This application is protested by Ms. Linda Boyd. Ms. Linda Boyd owns farmland property adjacent to the tract on which the proposed disposal well is located.

### **DISCUSSION OF THE EVIDENCE**

#### **Applicant's Evidence**

The subject well is a plugged dry hole that was drilled in January 5, 1985. The well was plugged on January 7, 1985. The well is drilled through the Spraberry and other formations to a maximum depth of 12,200 feet. The well has 492 feet of 13<sup>3</sup>/<sub>8</sub>" surface casing with cement circulated from the casing shoe to the ground surface, and 8<sup>5</sup>/<sub>8</sub>" casing set above the Spraberry, at a depth of 4,484 feet. The 8<sup>5</sup>/<sub>8</sub>" casing is cemented with 1,170 sacks of cement with the top of cement behind the longstring casing circulated at the surface. (See Wellbore Diagram attachment). The Texas Commission on Environmental Quality recommends that usable-quality ground water be protected from the land surface to a depth at 350 feet.

The proposed injection will be through 4<sup>1</sup>/<sub>2</sub>" tubing set on a packer at approximately 4,400 feet, but no higher than 100 feet above the top of the injection interval. The proposed injection interval includes the Spraberry, Wolfcamp, Penn Lime, Strawn, Atoka, Mississippian, Woodford and Siluro-Devonian formations, the top of which occurs at a depth of 4,484 feet. The proposed injection interval is between 4,484 and 12,200 feet. Injection will occur through an open hole section of the well from 4,484 and 12,200 feet. The proposed maximum injection volume is 20,000 BWPD, with an estimated average of 10,000 BWPD. The proposed maximum injection pressure is 2,242 psig.

There are no oil or gas wellbores within a 1/2 mile radius of the proposed disposal well. There are three wellbores within a 1 mile radius of the proposed disposal well. All three wellbores have adequate cemented surface casing set at depths between 364 to 435 feet, protecting the usable-quality groundwater depth to 350 feet. All three wells have adequate cement behind the longstrings to prevent migration of injected fluids from reaching ground water. One well, the Big Star Oil & Gas , Southern Cross 31 No. 1 has a zone that is not cemented across a 200 foot section of the proposed injection interval. This well is one mile a way from the proposed injection well and is an active producing well. In the unlikely event injected fluids reach this uncemented portion of the well, bradenhead pressure will increase and be recorded and reported by the active operator Big Star Oil & Gas.

There are four approved commercial disposal wells within the 900 square mile total area of Dawson County. The density of commercial disposal wells in the county is equivalent to one disposal well per 225 square miles. The Breck Operating Atlas II SWD well is located 6 miles to the east and is permitted for disposal into the Spraberry formation

from 4,560 feet to 4,800 feet. The Wichita Water, Lamesa SWD well is located 7 miles to the northeast and is permitted to inject into a deeper zone in the Spraberry formation from 5,500 feet to 7,990 feet. The Key Energy Services', Alma Brown well is located 10 miles to the east and is permitted for disposal into a shallower zone in the Spraberry formation from 3,749 feet to 7,304 feet. The Key Energy Services', Jeter-Farmer well is located 17.5 miles to the northwest and is permitted for disposal into a similar zone Spraberry formation as Mesquite's well from 4,694 feet to 12,300 feet.

Mesquite SWD plans to use the proposed well to dispose of produced water and frac water generated as a result of the active and ongoing development of the Wolfberry and Spraberry formations in this area. Currently there is active and increasing oil production activity in producing the "Wolfberry". The play combines all reservoirs from the Wolfcamp to the Spraberry and produces them simultaneously in an effort to make a commercial oil well. Additionally, throughout the Permian Basin, many older fields are being consolidated or commingled with the Spraberry in order to recover additional reserves from existing wells. These recent plays and development strategies will significantly increase drilling activity and increase the demand for safe and economical water disposal facilities.

The proposed facility will consist of water tanks, gun barrels, oil tanks and injection pumps. All tanks will sit inside a synthetically lined secondary containment basin. The containment basin will have a synthetic liner buried below the soil. The soil will protect the liner from punctures. The basin will have earthen dikes surrounding the tanks. The liner will lay along the earthen dike to contain the leaked fluids. The containment basin will be able to contain all fluids from the largest tank should the tank leak. Leaked fluids are required to be removed immediately after a leak has occurred. The Mesquite SWD site will incorporate all requirements the Commission imposes on all commercial disposal wells to operate in environmentally sound and safe manner.

Mesquite SWD Inc. has an active P-5 on file with the Commission, with a \$25,000 letter of credit financial assurance. There are no past or pending enforcement actions against Mesquite SWD Inc.

Notice of the subject application was published in the *Lamesa Press Reporter*, a newspaper of general circulation in Dawson County, on April 10, 2011. A copy of the application was mailed on April 19, 2011 to the Dawson County Clerk's Office, the surface owners, the offsetting surface owners and any operators within ½ mile of the proposed well. There are no offsetting operators within ½ mile of the proposed well.

### **Protestant's Evidence**

Ms. Linda Boyd did not present additional evidence or make a statement at the hearing. She referred to her protest letter that was filed with the Commission giving her concerns about the proposed disposal well's operations. Ms. Linda Boyd owns farm land adjacent to the proposed disposal well's location. She has concerns about the potential for

surface and groundwater contamination. Ms. Boyd is concerned a leak from a storage tank containing exploration and production waste would ruin her current cotton crop as well as future cotton crops. Ms. Boyd raised concerns of truck accidents resulting in the spilling of waste fluids on to her property. Ms. Boyd is concerned that trucks traveling in the area will create sandstorms and cause the loss of topsoil. Ms. Boyd is also concerned that a fire or explosion at the disposal site will threaten cotton crops and cause loss of life and church property which is located ½ mile away to the northwest.

### **EXAMINERS' OPINION**

The examiners believe that this application should be approved. The Billingsley SWD No. 1 will be completed in a manner which will confine disposal fluids to the proposed disposal interval in the Spraberry through the Siluro-Devonian formations. Surface casing is set and cemented through the base of usable quality water. The longstring production casing is also cemented with cement circulated to the surface to prevent migration from the injection interval. There are no oil or gas wells within the one-half mile radius of review. Standard requirements imposed by the Commission for above-surface commercial facilities such as secondary containment, spill prevention measures and alarms on tanks to prevent over topping will minimize spills, minimize wastes from migrating off site and reduce fire potential.

Approval of the requested permit is in the public interest. It is in the public interest to promote the development of the Wolfberry and Spraberry formations throughout the Permian Basin. Dawson County has four commercial disposal wells for the total county area of 900 square miles. Additional disposal capacity will be needed as the anticipated drilling increases. Having an additional disposal facility close to the active drilling area will increase competition and will reduce disposal cost.

The Commission does not have direct jurisdiction over issues regarding site selection and traffic patterns. The evidence indicates that the operation of the subject disposal well and facility will not adversely impact any surface or subsurface useable quality water.

### **FINDINGS OF FACT**

1. Notice of this hearing was given to all persons entitled to notice at least ten (10) days prior to the hearing. Notice of the subject application was published in the *Lamesa Press Reporter*, a newspaper of general circulation in Dawson County, on April 10, 2011. A copy of the application was mailed on April 19, 2011 to the Dawson County Clerk's Office, the surface owners, the offsetting surface owners and any operators within ½ mile of the proposed well.
2. The Billingsley SWD No. 1 was drilled as a dry hole in 1985. Mesquite SWD, Inc. plans to re-enter the well that was drilled to a maximum depth of 12,200 feet. The top of the Spraberry is found at approximately 4,484 feet.

3. The maximum requested injection volume is 20,000 barrels of water per day and the maximum requested surface injection pressure is 2,242 psi. The requested disposal interval is the Spraberry, Wolfcamp, Penn Lime, Strawn, Atoka, Mississippian, Woodford and Siluro-Devonian formations between approximately 4,484 and 12,200 feet.
4. The Billingsley SWD No. 1 will be cased and cemented in a manner to protect usable quality water and injection will be confined to the injection interval.
  - a. The subject well has 492 feet of 13<sup>3</sup>/<sub>8</sub>" surface casing cemented to surface.
  - b. The subject well has 4,484 feet of 8<sup>5</sup>/<sub>8</sub>" casing, cemented with 1,170 sacks of cement with a top of cement circulated at the surface.
  - c. Injection will be through 4<sup>1</sup>/<sub>2</sub>" tubing set on a packer no higher than 100 feet above the top of the injection interval.
  - d. The Texas Commission on Environmental Quality recommends that usable-quality water be protected to 350 feet in the area of the proposed well.
5. There are no wellbores within one-half mile of the proposed disposal well.
6. There are only four commercial disposal wells located within the 900 square mile total area of Dawson County.
7. Due to increasing development of the Wolfberry and Spraberry by combining reservoirs in the Permian Basin and in this area, large quantities of produced water and frac water must be disposed of.
8. Use of the Billingsley SWD No. 1 Well as a commercial disposal well is in the public interest to promote this development by providing a safe and economic means of disposal of the fluids associated with production.
9. Safeguards required by standard commercial permit requirements such as catch basins, secondary containment around tanks, tank gauges and alarms will minimize or prevent spills and offsite migration of wastes.
10. Mesquite SWD, Inc. has an active P-5 on file with the Commission, with \$25,000 letter of credit 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 Railroad Commission jurisdiction to consider this matter.

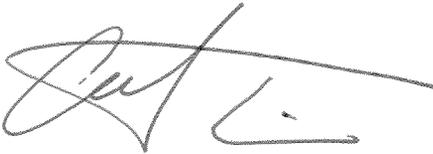
3. The use or installation of the proposed injection well is in the public interest as it will extend the life of producing wells and prevent the waste of oil.
4. The use or installation of the proposed injection well will not endanger or injure any oil, gas, or other mineral formation.
5. With proper 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.

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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.
7. 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.

**EXAMINERS' RECOMMENDATION**

Based on the above findings and conclusions, the examiners recommend that the application be approved as set out in the attached Final Order.



Andres J. Trevino, P.E.  
Technical Examiner

Respectfully submitted,



Marshall F. Enquist  
Hearings Examiner