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RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL AND GAS DOCKET NO. 7C-0283759

THE APPLICATION OF OPTIMUM DISPOSAL LLC FOR COMMERCIAL DISPOSAL AUTHORITY PURSUANT TO STATEWIDE RULE 9 FOR THE WC TANK UNIT 1 LEASE, WELL NO. 1, LIN (WOLFCAMP) FIELD, IRION COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
Laura Miles-Valdez - Legal Examiner

APPEARANCES:	**REPRESENTING:**
APPLICANT:	
Christopher S. Hotchkiss	Optimum Disposal LLC
George C. Neale	
Greg Cloud	
Lisa Hunter	
Kenneth Toudouze	
Steven Bredemeyer	
Nathaniel Byars	
Stephen Pattee	
PROTESTANT:	
Cory Hofacket	Jane Davis Murray and Elizabeth Rushing Childrens' Trusts
Linda Hofacket	
Racheal Pulver	
OBSERVER:	
William C. Tankersley	Himself

PROCEDURAL HISTORY

Application Filed:	April 10, 2013
Amended Application Filed:	May 10, 2013
Protest Received:	June 19, 2013
Request for Hearing:	July 18, 2013
Notice of Hearing:	August 14, 2013
Corrected Notice of Hearing:	August 16, 2013

Date of Hearing: September 3, 2013
Date of Transcript: September 5, 2013
Proposal for Decision Issued: October 2, 2013

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

Optimum Disposal, LLC ("Optimum") requests commercial disposal authority pursuant to Statewide Rule 9 for the WC Tank Unit 1 Lease, Well No. 1, Lin (Wolfcamp) Field, Irion County, Texas.

Notice of the subject application was published in the *San Angelo Standard-Times*, a newspaper of general circulation in Irion County, Texas, on April 1, 2013. Notices of the applications were sent to the Irion County Clerk, the surface owner and the surface owners of each tract which adjoins the disposal tract on April 16, 2013. There are no offset operators within ½ mile of the proposed well. An amended notice of application was sent to the same recipients on May 20, 2013.

The application was determined to be administratively complete by Commission staff, but the application is protested by Trustees of the Jane Davis Murray and Elizabeth Rushing Childrens' Trusts, which own land nearby, but not adjacent to the land on which the proposed facility and disposal well is located.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

The proposed disposal well is located on an 83 acre tract adjacent to and south of State Highway 67. The tract is in a rural area and is situated approximately 4 miles southwest of the town of Mertzon, Texas. Optimum plans to drill a new disposal well down to 10,000 feet, which will have three strings of casing that are each cemented back to surface. The well will have 13 3/8" surface casing set at 500 feet that will be cemented to the surface with 250 sacks of cement and 9 5/8" intermediate casing set at 1,500 feet that will be cemented to the surface with 450 sacks of cement. Optimum proposes to run 7" production casing to 10,000 feet that will be cemented to the surface. The well will be equipped with 3 1/2" tubing and packer set at 8,500 feet, but no higher than 100 feet above the top of the disposal interval (See attached Optimum Exhibit No. 3 - Wellbore Diagram).

The proposed disposal interval is located in the non-productive Cambrian formation between 8,500 feet and 10,000 feet. The depth to this formation is based on a series of nearby well logs, including the Shell Oil Company Tankersley Estate Lease, Well No. 1. The disposal interval is continuous and suitable for injection. There is at least 100 feet of continuous impermeable geologic separation immediately above the proposed disposal zone, and thousands of feet of geologic separation between the proposed disposal zone

and the base of the USDW, preventing vertical migration of the disposal fluids. Optimum requests authority to dispose of a maximum of 25,000 barrels of saltwater and RCRA[1] exempt waste per day with a maximum surface injection pressure of 4,000 psig.

The Commission Groundwater Advisory Unit ("GAU") recommends that usable-quality groundwater be protected down to a depth of 425 feet below the land surface. The base of the underground source of drinking water ("USDW") is 850 feet. Optimum submitted a GAU letter dated May 13, 2013, which stated that injection into the proposed injection interval will not harm usable-quality groundwater. There is one well located within the 1/4 mile radius of review and a total of four wells located within the 1/2 mile radius of review. None of the four wells penetrated the proposed disposal interval and all four wells are cased and cemented to protect usable-quality groundwater and have been properly plugged and abandoned.

The proposed disposal facility is located in the southeast quadrant of Irion County. There are only three commercial disposal wells located within an approximate 10 mile radius of the proposed disposal well and the total maximum capacity of the three existing disposal wells is only 12,200 barrels per day. The nearby horizontal development play is in the Lin (Wolfcamp) Field and Optimum's expert noted that the development is moving in an easterly direction toward the proposed facility. The horizontal wells in the Lin (Wolfcamp) field typically require multi-stage hydraulic fracturing, resulting in hundreds of thousands of barrels of water which must be disposed of properly. Optimum's expert submitted the proration schedule for the Lin (Wolfcamp) Field, which indicated that the wells in the field were producing large amounts of water.

The president of Optimum stated that if the application is approved, a local salt water hauler has committed to dispose at the proposed facility approximately half of the maximum daily injection volume of 25,000 barrels per day. Optimum believes that the proposed well is necessary to accommodate the increasing drilling and hydraulic fracturing activity in the area. Currently, salt water haulers must drive to, or in the direction of the town of Barnhart, Texas, increasing costs to operators in the area. The use of the proposed facility will cause a reduction in tank truck miles in Irion County, will decrease costs to operators for proper disposal of produced fluids and will extend the economic life of the oil and gas wells in the area.

The Facility

The area surrounding the proposed disposal facility is rural ranching and farmland. Access to the disposal facility will be off State Highway 67, which is a paved two-lane public highway, occasionally augmented with passing lanes. The surface facility will comply with all permit conditions requested by Commission staff. A consulting expert

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

engineer who assisted in the design of the facility testified that it will be of sufficient size to accommodate trucks on the facility without any trucks having to wait on the highway. The president of Optimum testified to the complexity and detailed specifications of applying for a railroad crossing permit, and further testified that Texas Pacifico Railroad had issued the crossing permit on April 3, 2013. Optimum stated that TXDOT would not evaluate and allow for application of a driveway permit until Texas Pacifico had issued its railroad crossing permit. TXDOT subsequently performed a traffic study and issued a permit for a driveway for ingress and egress to the facility on April 13, 2013.

The facility was designed with several safety features. There will be a four-foot berm surrounding the settling and injection tanks, a height sufficient to contain all the fluids in every tank if they were to rupture simultaneously. Furthermore, instead of a concrete retaining wall, Optimum has opted for an earthen berm which will be coated with a felt mesh and an impermeable foam, which would contain any and all spills that might occur within the tank battery. Any spills of significance within the berm could then be removed with a vacuum truck. The electric pumps will be raised on pedestals 4 feet in the air to alleviate any possibility that the pumps might get submerged. The saltwater will be offloaded using a "closed loop" system, rather than a grate or belly dump system, resulting in less odors, vapors, and noise. The hoses will be mounted 3 feet off the ground for ease of use and any inadvertent spills will be caught in a concrete catch basin that will drain toward a sump pump and then to one of the settlement tanks for subsequent disposal. There will be no open-top tanks, open pits or settling areas and all fluids will be pumped through an underground 6" line to the disposal well. Each of the six offloading bays will be covered and the facility features a 90 foot turning radius for the saltwater trucks, eliminating the need to back up.

Optimum submits that it has the expertise to build and manage the proposed facility. Optimum has a current approved Form P-5 (Organization Report), a posted $25,000 bond for financial assurance and no pending Commission enforcement actions.

Protestants' Evidence

The protestants are concerned that the use of the proposed commercial disposal well will adversely impact traffic safety, could possibly serve as an explosion hazard from lightning and adversely affect the quality of water in Spring Creek, due to the possibility of flooding in the region. The protestants offered no evidence as to any historical levels of rainfall or water runoff on the Spring Creek flood plain. In fact, Mr. Hofacket stated that in his years of living in the area, he had only seen one serious rainfall event in the last 20 years.

Applicant's Rebuttal Evidence

Optimum, through its consulting facility engineer, presented evidence wherein it extrapolated a "worst case scenario" from the only available FEMA flood plain evidence in the region. Optimum showed that even if a severe rain and flooding event were to strike

the region, it has taken sufficient steps to ensure that flooding of the facility will not occur. Optimum has pledged to raise the south end of the facility pad, making the entire pad above the extrapolated worst case scenario flood levels. However, even if the flood is worse than any recorded catastrophic rainfall event, the four-foot impermeable berm, sealed tanks, and raised pumps would virtually eliminate the possibility of pollution from the facility. Optimum further noted that the protestants' land contained at least two wells that were closer to Spring Creek than the proposed well, and also noted that one of the wells had a tank facility containing an open-top tank, which could cause pollution during a catastrophic flood event.

EXAMINERS' OPINION

The examiners recommend that the application for commercial disposal authority be approved. Optimum has established:

1. The water resources (surface and sub-surface) are adequately protected from pollution;

2. The proposed injection well will not endanger or injure any oil, gas, or mineral formations;

3. The proposed injection well is in the public interest;

4. A satisfactory showing of financial responsibility, as required under Texas Statutes and Commission Rules.

The proposed disposal well will be completed in a manner which will protect usable-quality water and confine injected fluids to the proposed disposal interval. The proposed disposal well will have three strings of casing and each string will be cemented to the surface. In addition, there is at least 100 feet of continuous impermeable geologic separation immediately above the disposal zone, and thousands of feet of geologic separation between the proposed disposal interval and the base of the USDW. Disposal will be through tubing set on a packer to confine injected fluids to the non-productive Cambrian interval between 8,500 and 10,000 feet. There is one well located within the 1/4 mile radius of review and a total of four wells located within the 1/2 mile radius of review. None of the four wells penetrated the proposed disposal interval and all four wells are cased and cemented to protect usable-quality groundwater and have been properly plugged and abandoned.

Approval of the requested disposal permit is in the public interest. Use of the proposed disposal well will provide a method in southeast Irion County for proper disposal of produced fluids associated with the ongoing and escalating development of the Lin (Wolfcamp) Field. There are only three commercial disposal wells located within an approximate 10 mile radius of the proposed disposal well and the total maximum capacity of the three existing disposal wells is only 12,200 barrels per day. The nearby horizontal

development play in the Wolfcamp formation is moving in an easterly direction toward the proposed facility.

The horizontal drainhole wells typically require multi-stage hydraulic fracturing, resulting in hundreds of thousands of barrels of water which must be disposed of properly. The proration schedule indicates that the wells in the field are producing large amounts of water. The proposed disposal well is necessary to accommodate the increasing drilling and hydraulic fracturing activity in the area. Currently, salt water haulers must drive to, or in the direction of the town of Barnhart, Texas, and the use of the proposed disposal well will reduce miles traveled and wait and travel times by waste hauling trucks, resulting in reduced costs to operators.

The location of the entrance to the disposal facility from State Highway 67 has sufficient sight distance in both directions. The surface facility will be newly constructed and will be of sufficient size as to accommodate trucks hauling water to the facility. Compliance with permit conditions will minimize the risk of spills at the facility and will prevent the migration of any spills that occur, thereby protecting both ground and surface water.

FINDINGS OF FACT

1. Notice of this application and this hearing was given to all persons entitled to notice at least ten (10) days prior to the hearing. Notice of the application was published in the *San Angelo Standard-Times*, a newspaper of general circulation in Irion County, Texas, on April 1, 2013.

2. Notices of the application were sent to the Irion County Clerk, any offset operators within 1/2 mile, the surface owner and the surface owners of each tract which adjoins the disposal tract on April 16, 2013.

3. The proposed injection into the WC Tank Unit 1 Lease, Well No. 1, will not endanger useable-quality groundwater.

   a. The Commission Groundwater Advisory Unit ("GAU") recommends that usable-quality groundwater be protected down to a depth of 425 feet below the land surface.

   b. The well will have 13 3/8" surface casing set at 500 feet that will be cemented to the surface with 250 sacks of cement and 9 5/8" intermediate casing set at 1,500 feet that will be cemented to the surface with 450 sacks of cement.

   c. There is at least 100 feet of continuous impermeable geologic separation immediately above the disposal zone, and thousands of

feet of geologic separation between the proposed disposal interval and the base of the USDW.

4. The proposed injection into the WC Tank Unit 1 Lease, Well No. 1, will not endanger production from other oil, gas or mineral bearing formations.

   a. Optimum Disposal LLC ("Optimum") plans to drill a new disposal well down to 10,000 feet.

   b. Optimum proposes to run 7" production casing to 10,000 feet that will be cemented to the surface.

   c. The well will be equipped with 3 1/2" tubing and packer set at 8,500 feet, but no higher than 100 feet above the top of the disposal interval.

   d. There is one well located within the 1/4 mile radius of review and a total of four wells located within the 1/2 mile radius of review. None of the four wells penetrated the proposed disposal interval and all four wells are cased and cemented to protect usable-quality groundwater and have been properly plugged and abandoned.

5. Use of the WC Tank Unit 1 Lease, Well No. 1, as a commercial disposal well is in the public interest because it will reduce hauling distances and will provide needed commercial disposal capacity for wells to be drilled, completed and produced in the area of the proposed facility.

   a. Use of the proposed disposal well will provide a method in southeast Irion County for proper disposal of produced fluids associated with the ongoing and escalating development of the Lin (Wolfcamp) Field.

   b. The nearby horizontal development play in the Wolfcamp formation is moving in an easterly direction toward the proposed facility.

   c. There are only three commercial disposal wells located within an approximate 10 mile radius of the proposed disposal well and the total maximum capacity of the three existing disposal wells is only 12,200 barrels per day.

   d. The proposed disposal well is necessary to accommodate the increasing drilling and hydraulic fracturing activity in the area. The proration schedule indicates that the wells in the field are producing large amounts of water.

e. Currently, salt water haulers must drive to, or in the direction of the town of Barnhart, Texas, and the use of the proposed disposal well will reduce miles traveled and wait and travel times by waste hauling trucks, resulting in reduced costs to operators.

6. Optimum has a current approved Form P-5 (Organization Report), a posted $25,000 bond for financial assurance and no pending Commission enforcement actions.

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.

2. All things necessary to give the Railroad Commission jurisdiction to consider this matter have occurred.

3. Approval of the application will not harm useable-quality water resources, will not endanger oil, gas, or geothermal resources, will promote further development in this area of Irion County and is in the public interest pursuant to Sec. 27.051 of the Texas Water Code.

4. Optimum Disposal 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 Statewide Rule 9.

EXAMINERS' RECOMMENDATION

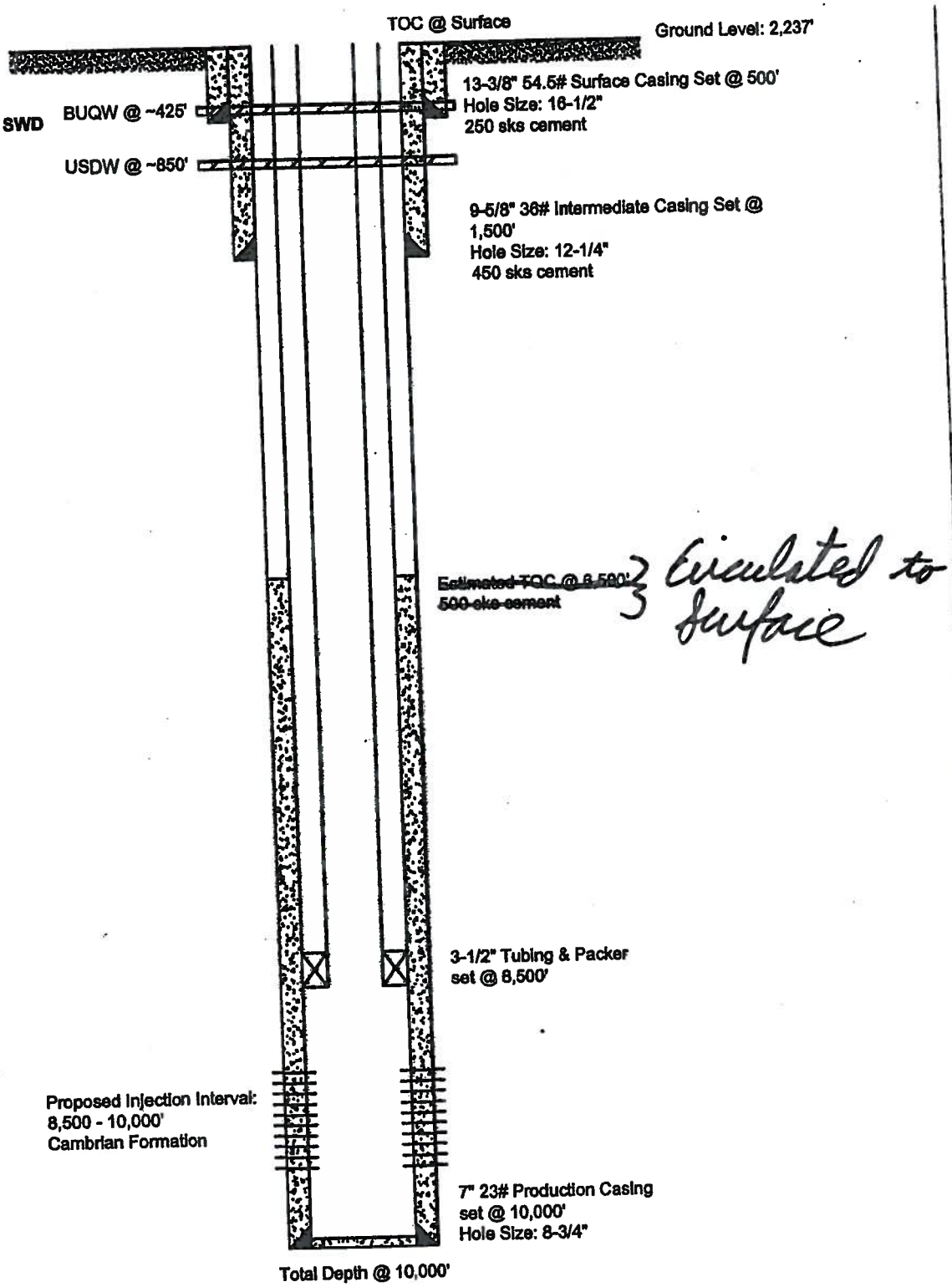
Based on the above findings of fact and conclusions of law, the examiners recommend that the Commission approve the application of Optimum Disposal LLC for commercial disposal authority pursuant to Statewide Rule 9 for the WC Tank Unit 1 Lease, Well No. 1, as set out in the attached Final Order.

Respectfully submitted,

Richard D. Atkins, P.E.
Technical Examiner

Laura Miles-Valdez
Legal Examiner

Well Information:
API No.: TBD
Well Name: WC Tank Unit No. 1 SWD
Location: Abstract 129
Field Name: Lin (Wolfcamp)
State: Texas
County: Irion



Wellbore Schematic - WC Tank Unit No. 1 SWD

3 Casing Strings

Exhibit No. 3
O & G Docket No. 7C-0283759
Date: September 3, 2013
Optimum Disposal LLC