

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE APPLICATION
OF OWL SWD OPERATING, LLC FOR
AUTHORIZATION TO INJECT, LEA COUNTY,
NEW MEXICO**


CASE NO. 15723

AFFIDAVIT

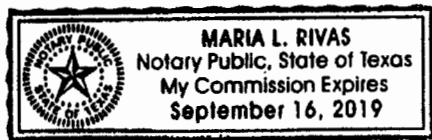
STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

Stephen Pattee, being first duly sworn, upon signature, states:

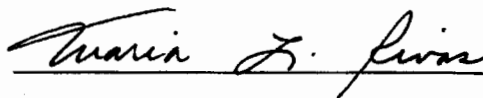
1. I am over the age of 18, and have personal knowledge of the matters stated herein.
2. I am the Regulatory Manager for Lonquist & Co. LLC, an energy advisory company employed by OWL SWD Operating, LLC, the applicant herein.
3. Lonquist & Co. LLC, has conducted a good faith, diligent effort to find the names and correct address of the interest owners entitled to receive notice of the application filed herein.
4. Notice of the application was provided to the interest owners, at their correct address, by certified mail. Copies of the notice letter and certified return receipt are attached hereto as Attachment A.
5. Applicant has complied with the notice provisions of the Oil Conservation Division Rules.


Stephen Pattee, P.G.

SUBSCRIBED AND SWORN to before this 31 day of July, 2017 by Stephen Pattee.



My Commission Expires: 09/16/2019



APPLICANTS
EX.# 15723

APPLICATION FOR AUTHORIZATION TO INJECT

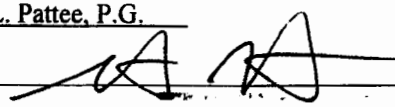
PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance X Disposal _____ Storage
Application qualifies for administrative approval? X Yes _____ No

OPERATOR: OWL SWD Operating, LLC

ADDRESS: 8214 Westchester Drive, Suite 850, Dallas, Texas 75255

CONTACT PARTY: Preston Carr

PHONE: 855-695-7937

- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes X No
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Stephen L. Pattee, P.G. TITLE: Consulting Engineer – Agent for OWL
- SIGNATURE:  DATE: 04/28/2017
- E-MAIL ADDRESS: steve@lonquist.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.
Please show the date and circumstances of the earlier submittal: _____

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

IV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days of the date this application was mailed to them.

INJECT. WELL DATA SHEET

OPERATOR: OWL SWD Operating, LLC

WELL NAME & NUMBER: Bobcat SWD No. 1

WELL LOCATION: 740' FSL & 705' FEL
FOOTAGE LOCATION

P UNIT LETTER 25 SECTION 25S TOWNSHIP 36E RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA
Surface Casing

See attached

Hole Size: 12.25" Casing Size: 9.625"
Cemented with: 485 sx. (100% Excess) or 875 ft³
Top of Cement: Surface Method Determined: Circulation
Long String
Hole Size: 8.75" Casing Size: 7.0"
Cemented with: 575 sx. (100% Excess) or 720 ft³
Top of Cement: Surface Method Determined: Circulation

Total Depth: 3,060'

Injection Interval
2,915 feet to 3,060 feet
(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEETTubing Size: 4.50" 9.50 lb/ft J-55 ST&C

Lining Material: Duoline

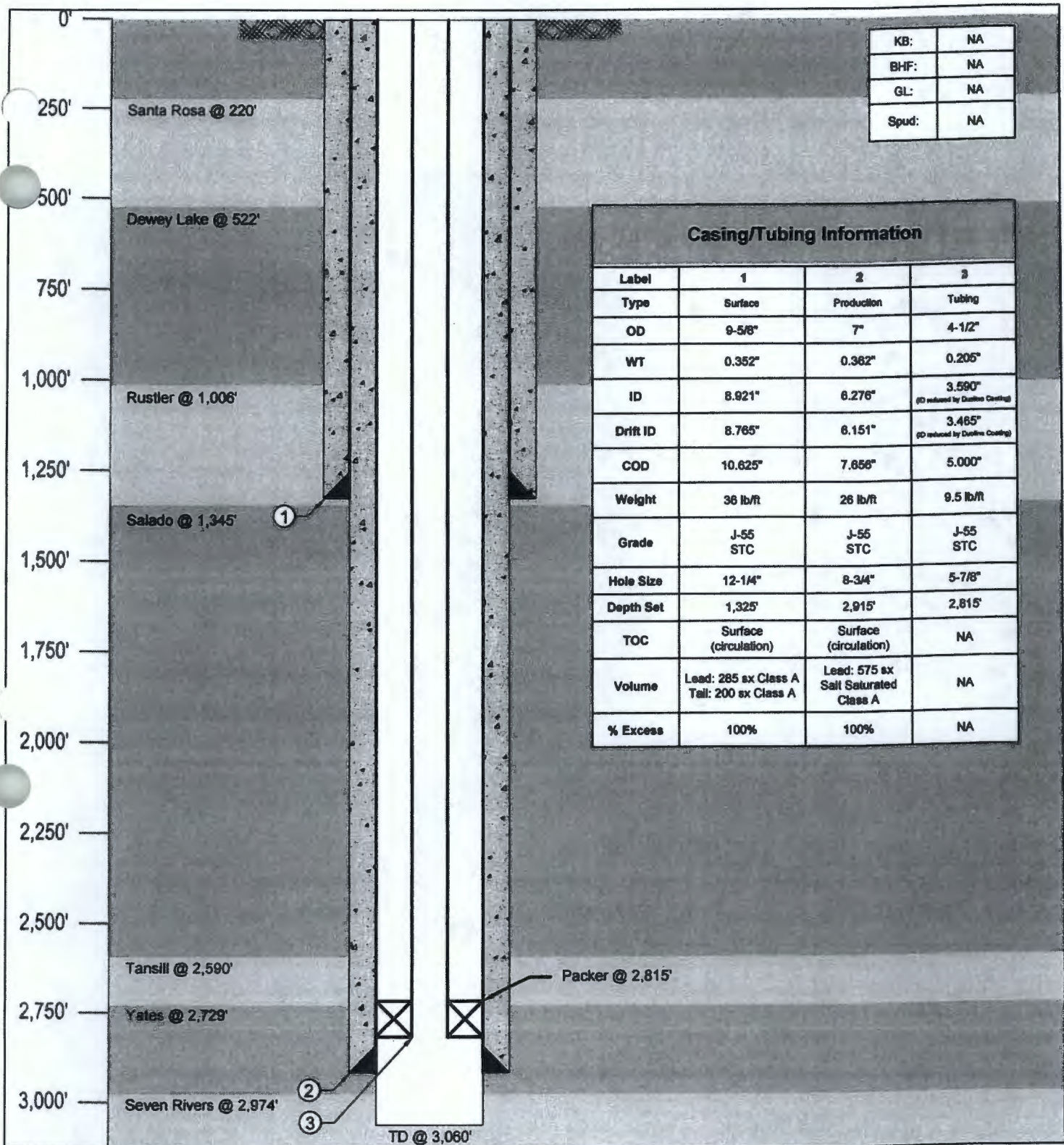
Type of Packer: 7.0" D&L Oil Tools Pernapak Single BorePacker Setting Depth: 2,815'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data1. Is this a new well drilled for injection? X Yes No

If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: Yates- Seven Rivers3. Name of Field or Pool (if applicable): SWD; Yates – Seven Rivers (96141)4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No, this is a new drill.5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Tansil @ 2,590'Yates @ 2,729'Seven Rivers @ 2,974'



LONQUIST

FIELD SERVICE

AUSTIN HOUSTON WICHITA CALGARY

Texas License F-9147

3345 Bee Cave Road, Suite 201
Austin, Texas 78746
Tel: 512.732.9812
Fax: 512.732.9816

OWL SWD Operating, LLC

Country: USA

Location:

API No:

State ID No:

Drawn: WHG

Rev No: 1

Bobcat SWD No. 1

State/Province: New Mexico

Site:

Field:

Project No:

Reviewed: SLP

Notes:

County/Parish: Lea

Survey/STR:

Well Type/Status: SWD / New Drill

Date: 4/27/17

Approved: SLP

OWL SWD Operating, Inc.

Bobcat SWD No. 1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1.

Well information	
Lease Name	Bobcat SWD
Well No.	1
Location	S-25 T-25S R-36E
Footage Location	740' FSL & 705' FEL

2.

a. Wellbore Description

Casing Information		
Type	Surface	Long String
OD	9.625"	7.0"
WT	0.352"	0.362"
ID	8.921"	6.276"
Drift ID	8.765"	6.151"
COD	10.625"	7.656"
Weight	36.0 #/ft	26.0 #/ft
Grade	J-55, ST&C	J-55, ST&C
Hole Size	12.25"	8.75"
Depth Set	1,325'	2,915'

b. Proposed Cementing Program

Cement Information		
Casing String	Surface	Long String
Lead Cement	12.4 lb/gal 2.24 cf/sk	15.6 lb/gal 1.25 cf/sk
Lead Cement Volume	285 sx	575 sx (37.2% Salt Saturated)
Tail Cement	15.6 lb/gal 1.25 cf/sk	N/A
Tail Cement Volume	200 sx	N/A
Method	Circulate to Surface	Circulate to Surface
Cement Excess	100%	10% in casing 100% in hole
TOC	Surface	Surface

3. Tubing Description

Tubing Information	
OD	4.5"
WT	0.205"
ID	3.590"
Drift ID	3.465"
COD	5.00"
Weight	9.5 #/ft
Grade	J-55, ST&C
Depth Set	2,815'

Tubing will be lined with Duoline.

4. Packer Description

D&L Oil Tools 7.0" Permapack Packer – Single Bore

B. Completion Information

1. Injection Formation: Yates – Seven Rivers
2. Gross Injection Interval: 2,915' – 3,060'

Completion Type: Open Hole

3. Well drilled for injection.
4. New drill; no prior perforated intervals.
5. Oil and Gas Bearing Zones within area of well:

Formation	Depth
Tansil	2,590'
Yates	2,729'
Seven Rivers	2,974'

VI. Area of Review

A table and map have been attached containing information on wells that are present within the one-half mile AOR. For each well within the AOR records and schematics demonstrating completion and P&A, where applicable, have been attached if available through the New Mexico OCD's website.

VII. Proposed Operation Data

1. Proposed Daily Rate of Fluids to be Injection:

Average Volume: 25,000 BPD
Maximum Volume: 30,000 BPD

2. Closed System
3. Anticipated Injection Pressure:

Average Injection Pressure: 550 PSI (surface pressure)
Maximum Injection Pressure: 580 PSI (surface pressure)

4. The injection fluid is to be locally produced water. Attached are produced water sample analyses taken from the closest wells that feature samples from the Delaware, Bone Spring, Devonian, and Yates-Seven Rivers formations.
5. There is historical production from the Yates-Seven Rivers formations within one mile of the proposed well location however most of the wells associated with this production have been plugged and abandoned. As such, a chemical analysis of disposal zone formation water is not

required. However, an offset Yates-Seven Rivers water sample analysis has been attached for record purposes.

VIII. Geological Data

The Yates Formation is a 150 to 200 ft thick siliciclastic unit in the Gauadalupian Artesia Group. The formation is composed of thick sandstone beds interbedded with thin carbonate and evaporites. It is a poorly consolidated, silty, fine-grained rock with porosities ranging from 15 to 28 percent. The Yates is overlain by thick carbonates and evaporites of the Tansill Formation and underlain by carbonates and evaporites of the Seven Rivers Formation.

The Seven Rivers Formation is also a member of the Artesia Group with the Shattuck sandstone member of the Queen at its base and overlain by the Yates Formation. The Seven Rivers Formation is composed of thick carbonate and evaporite beds. Lower porosities are due to the amount of anhydrite and tight carbonate rocks.

Production from these formations has been depleted for decades and they are most likely under pressured. Therefore, they will be able to take water until reaching initial pressure. Through the higher porosities in the injection interval, secondary porosity and an under-pressured formation, this injection interval will be able to take disposed water economically.

A. Injection Zone: Yates – Seven Rivers Formation

Formation	Depth
Santa Rosa	220'
Dewey Lake	522'
Rustler	1,006'
Salado	1,345'
Tansil	2,590'
Yates	2,729'
Seven Rivers	2,974'

B. Underground Sources of Drinking Water

The lowermost underground source of drinking water (USDW) is anticipated to be approximately 448' below the surface, and fresh water may be present above the Rustler formation. The top of the Rustler formation is estimated at a depth of 1,006'; therefore, the surface casing will be set at 1,325' which is below the Rustler and just above the top of the Salado salt formation (top of Salado @ 1,345').

IX. Proposed Stimulation Program

No proposed stimulation program.

X. Logging and Test Data on the Well

There are no logs or test data on the well. During the process of drilling and completion resistivity, gamma ray, and density logs will be run.

XI. Chemical Analysis of Fresh Water Wells

The closest fresh water well (CP-01129-POD2) is located 2,328' from the proposed well location. The well served as a monitoring well for Southern Union Gas Service and is not producing water. POD1 and POD2 both appear to be soil borings only which were plugged upon completion of sampling.

Another well, CP-00790 was also found within a 1-mile AOR of the Bobcat SWD No. 1 location. Records indicate that this well ID has been assigned to a well permit which has expired. A diligent attempt to locate and sample these locations will be made with results submitted to the OCD for record purposes.

A map has been attached featuring the proposed well location for Bobcat SWD No. 1 and the location of CP-01129-POD1, CP-01129-POD2, and CP 00790. In addition, the transaction summaries and water right summaries from the New Mexico Office of the State Engineer have been attached for record purposes.

XII. Affirmative Statement of Examination of Geologic and Engineering Data

Based on the available engineering and geologic data we find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

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PS Form 3800, April 2015 PSN 7520-02-000-9047 See Reverse for Instructions

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City

Dinwiddie Cattle Company LLC
 P. O. Box 963
 Capitan, New Mexico 88316

PS Form 3800, April 2015 PSN 7520-02-000-9047 See Reverse for Instructions