

## AE Order Number Banner

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**Application Number: pEG2523253047**

# Initial Application Part I

SWD-2665

LilyStream Water Solutions LLC [373500]

**Received: 8/13/2025**

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Geological & Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



### ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Applicant:** LilyStream Water Solutions, LLC **OGRID Number:** 373500  
**Well Name:** JDR 35 Fed SWD #1 **API:** 30-015-TBD  
**Pool:** SWD; Devonian-Silurian **Pool Code:** 97869

### SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]

A. Location – Spacing Unit – Simultaneous Dedication

☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [ I ] or [ II ]

[ I ] Commingling – Storage – Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[ II ] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery

☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

2) **NOTIFICATION REQUIRED TO:** Check those which apply.

- A. ☒ Offset operators or lease holders  
 B. ☐ Royalty, overriding royalty owners, revenue owners  
 C. ☒ Application requires published notice  
 D. ☐ Notification and/or concurrent approval by SLO  
 E. ☒ Notification and/or concurrent approval by BLM  
 F. ☒ Surface owner  
 G. ☒ For all of the above, proof of notification or publication is attached, and/or,  
 H. ☐ No notice required

#### FOR OCD ONLY

- ☐ Notice Complete  
☐ Application Content Complete

- 3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**Note: Statement must be completed by an individual with managerial and/or supervisory capacity.**

Ben Stone

Print or Type Name

Signature

8/12/2025

Date

903-967-5950

Phone Number

ben@sosconsulting.us

e-mail Address



August 12, 2025

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Attn: Mr. Gerry Razatos, Acting Director

*Re: Application of LilyStream Water Solutions, LLC to permit for salt water disposal its JDR 35  
Fed SWD #1, (API 30-015-TBD) located in Section 35, Township 21 South, Range 27 East,  
NMPM, Eddy County, New Mexico.*

Dear Mr. Razatos,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for disposal the subject well. This SWD prospect is proposed as a disposal into the Devonian and Silurian formations.

LilyStream Water Solutions, LLC seeks to build its core business by optimizing efficiency, both economically and operationally, of all its projects in southeast New Mexico. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran in the July 17, 2025, edition of the Artesia Daily Press and offset operators and other affected parties have been notified individually. The well is located on federal land and minerals.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

A handwritten signature in blue ink, appearing to read "Ben Stone", is written over a light blue horizontal line.

Ben Stone, Partner  
SOS Consulting, LLC  
Agent for LilyStream Water Solutions, LLC

Cc: Application attachment and project file

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL  
RESOURCES DEPARTMENT

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

FORM C-108  
Revised June 10, 2003

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: **Salt Water Disposal** and the application **QUALIFIES** for administrative approval.
- II. OPERATOR: **LilyStream Water Solutions, LLC**  
ADDRESS: **3219 E. Avenue D, Lovington, NM 88260**
- CONTACT PARTY: **Agent: SOS Consulting, LLC – Ben Stone (936) 967-5950**
- III. WELL DATA: **All Well Data and Applicable Wellbore Diagrams and Packer Info are ATTACHED.**
- IV. **This is not an expansion of an existing project.**
- V. **A map is attached** 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. A **Tabulation is ATTACHED** of data on all wells of public record within the area of review which penetrate the proposed injection zone. **There are NO (0) wells in the subject AOR which Penetrate the proposed DEVONIAN interval.** The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail.
- VII. **The following data is ATTACHED** 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. **Appropriate geologic data on the injection zone is ATTACHED** 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. **Stimulation program – a conventional acid job of up to 40,000 gals. may be performed to clean and open the formation.**
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **NEW Well Logs will be run when drilled for completion and further zone analysis.**
- \*XI. **There are 2 freshwater (pending) wells within one mile of the proposed salt water disposal well per OSE data. Nearby USGS located well found - Analysis is ATTACHED and included herein.**
- XII. **An affirmative statement is ATTACHED that available geologic and engineering data has been examined and no evidence was found** of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. **"Proof of Notice" section on the next page of this form has been completed and ATTACHED. There are 9 offset lessees and/or operators within ONE mile plus Federal and State minerals - all have been noticed. Location is BLM.**
- 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: **Ben Stone** TITLE: **SOS Consulting, LLC agent for LilyStream Water Solutions, LLC**

SIGNATURE:  DATE: **8/12/2025**

E-MAIL ADDRESS: **ben@sosconsulting.us**

- \* 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:

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office



**FORM C-108 – APPLICATION FOR AUTHORIZATION TO INJECT (cont.)****III. WELL DATA – *The following information and data is included (See ATTACHED Wellbore Schematic):***

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 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 details 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.

**XIV. PROOF OF NOTICE *pursuant to the following criteria is ATTACHED.***

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.**

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

<b>C-102</b>  Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>	Revised July 9, 2024	
		Submittal Type:	<input type="checkbox"/> Initial Submittal
			<input type="checkbox"/> Amended Report
			<input type="checkbox"/> As Drilled

## WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
Property Code	Property Name <b>JDR 35 SWD</b>	Well Number <b>1</b>
OGRID No.	Operator Name <b>LILYSTREAM WATER SOLUTIONS</b>	Ground Level Elevation <b>3202.6'</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

## Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>M</b>	<b>35</b>	<b>20-S</b>	<b>27-E</b>		<b>300 FSL</b>	<b>250 FWL</b>	<b>32.523409°N</b>	<b>104.259739°W</b>	<b>EDDY</b>

## Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>M</b>	<b>35</b>	<b>20-S</b>	<b>27-E</b>		<b>300 FSL</b>	<b>250 FWL</b>	<b>32.523409°N</b>	<b>104.259739°W</b>	<b>EDDY</b>

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> No	

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
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## First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
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## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
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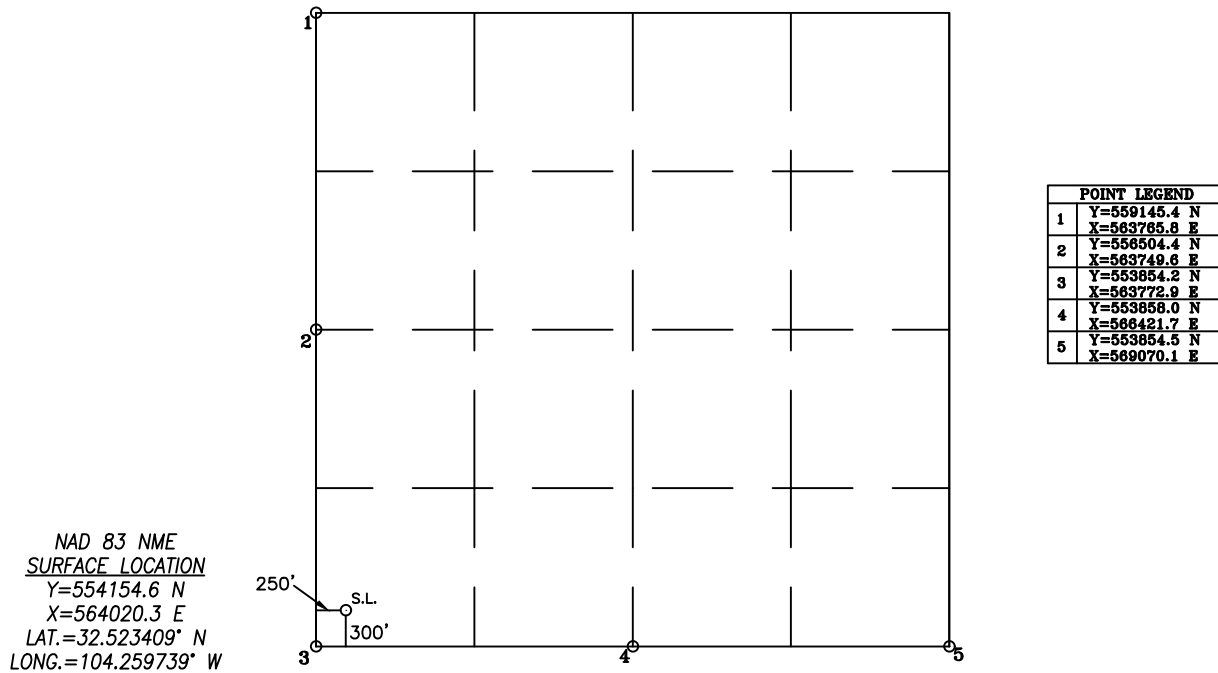
Unitized Area or Area of Uniform Interest	Spacing Unit Type <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation:
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<b>OPERATOR CERTIFICATIONS</b>  <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i>  <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i>		<b>SURVEYOR CERTIFICATIONS</b>  <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i>	
Signature	Date	Signature and Seal of Professional Surveyor	
Printed Name	Certificate Number	Date of Survey	
Email Address	<b>17777</b>	<b>JUNE 11, 2025</b>	
		W.O.#25-424	DRAWN BY: WN
		PAGE 1 OF 2	

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

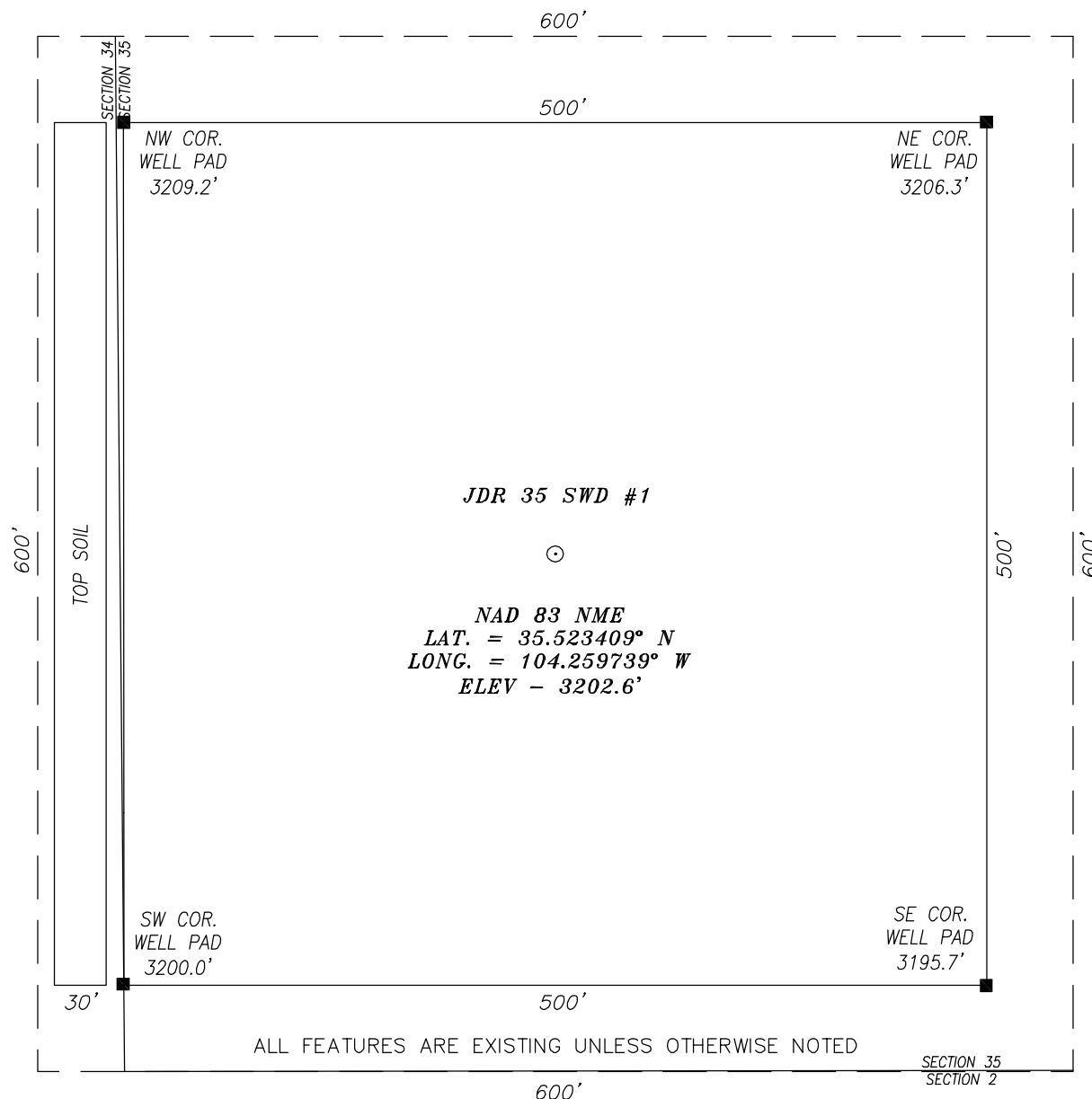
Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.



## SECTION 35, TOWNSHIP 20 SOUTH, RANGE 27 EAST, N.M.P.M.,

EDDY COUNTY

NEW MEXICO



## DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF GEORGE SHOUP RELIEF ROUTE AND ILLINOIS CAMP RD., GO NORTH ON ILLINOIS CAMP ROAD FOR APPROX. 2.3 MILES TO S. LAKE RD.; THEN TURN LEFT (NORTHWEST) AND GO APPROX. 2.3 MILES. TURN LEFT (WEST) AND GO APPROX. 0.1 MILES TO EXISTING MEWBOURNE WELLPAD. PROPOSED ROAD STARTS FROM SOUTHWEST CORNER OF PAD. WELL LIES SOUTHWEST APPROX. 2050 FEET.

## CERTIFICATION

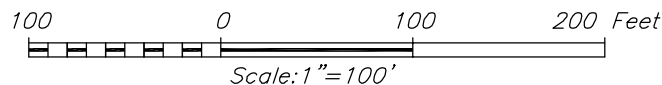
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

HARCROW SURVEYING, LLC

2316 W. MAIN ST, ARTESIA, N.M. 88210

PH: (575) 746-2158

c.harcrow@harcrowsurveying.com

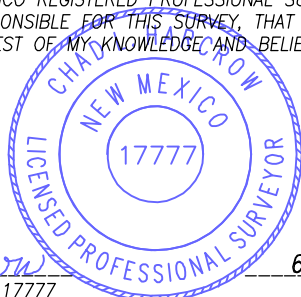


## LILYSTREAM WATER SOLUTIONS

SURVEY DATE: JUNE 11, 2025	600S
DRAFTING DATE: JUNE 18, 2025	PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: WN
	FILE: 25-424

Chad Harcrow

CHAD HARCROW N.M.P.S. NO. 17777



6/24/25  
DATE

## **C-108 - Items III, IV, V**

### **Item III - Subject Well Data**

Wellbore Diagram – PROPOSED  
Arrowset Packer Diagram & Datasheet

### **Item IV – Tabulation of AOR Wells**

NO (0) Wells Penetrate the Proposed Injection Interval.

### **Item V – Area of Review Maps**

1. Two Mile AOR Map with One-Mile Fresh Water Well Radius
2. One-Mile AOR Map

All Above Exhibits follow this page.



## WELL SCHEMATIC - PROPOSED JDR 35 SWD Well No. 1

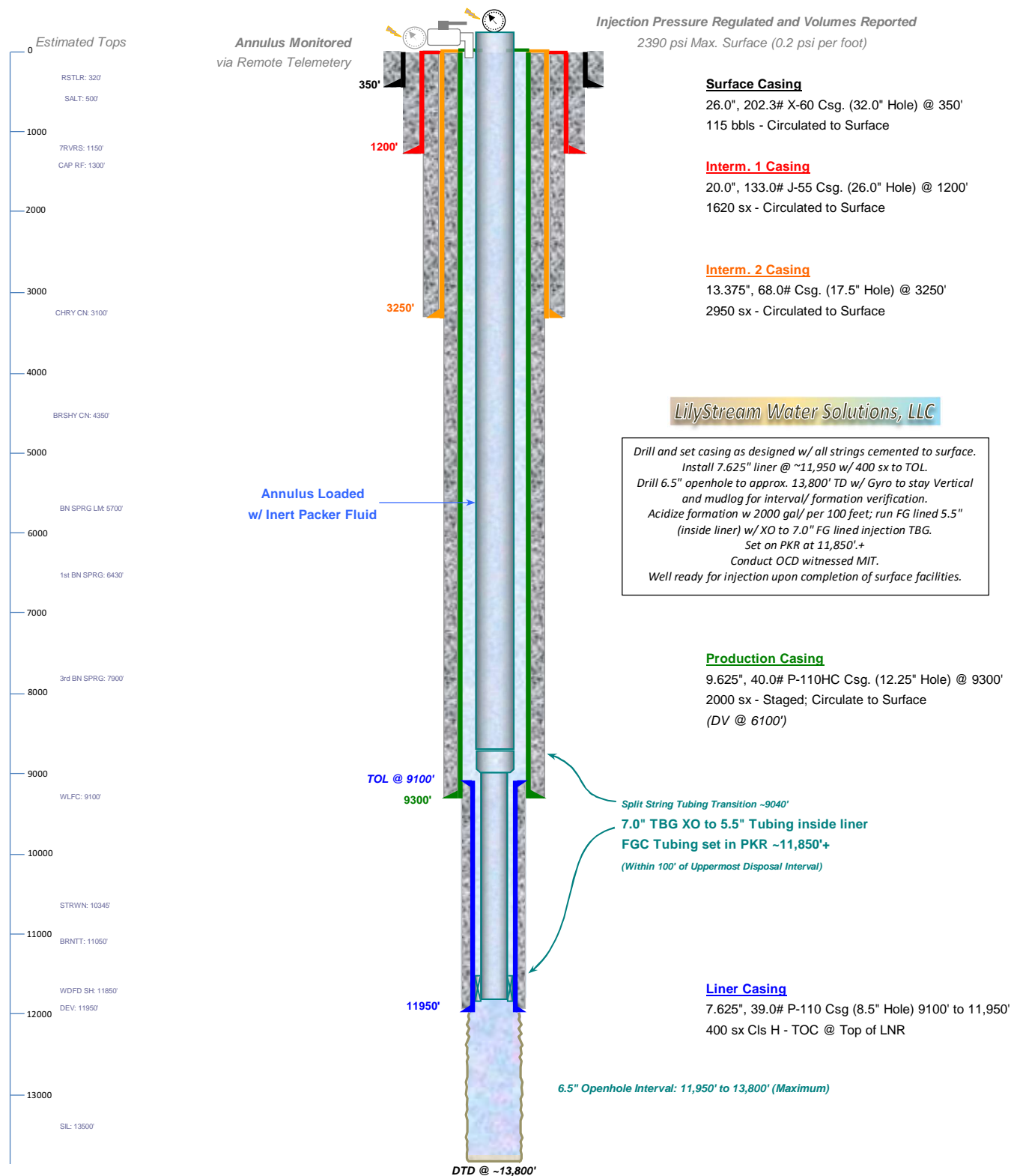
API 30-025-xxxxx

300' FSL & 250' FEL, SEC. 35-T20S-R27E  
EDDY COUNTY, NEW MEXICO

SWD; Devonian-Silurian (97869)

Spud Date: 7/20/2026

SWD Config Dt: 8/15/2026



Drawn by: Ben Stone, 7/25/2025



**Weatherford®**

Packer Systems

## *Arrowset I-X, I-X 10K, and I-X HP Mechanical Packers*

Weatherford's Arrowset I-X, I-X 10K, and I-X HP mechanical packers are versatile, field-proven retrievable double-grip packers for most production, stimulation, and injection. The packers can be set with tension or compression.

A large internal bypass reduces the swabbing effect during run-in and retrieval and closes securely when the packer is set. During release, the bypass is opened to equalize the pressure before the upper slips are released. A patented upper-slip releasing system reduces the force required to release the packer. A nondirectional slip is released first, making it easier to release the other slips.

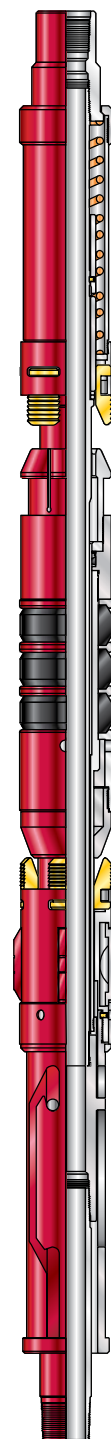
The I-X 10K packer has all the features of the I-X packer and can withstand 10,000 psi (69 MPa) of differential pressure above or below. The I-X HP packer can withstand 7,500 psi (52 MPa) of differential pressure above or below.

### *Applications*

- Production
- Pumping
- Injection
- Fiberglass tubing
- Zonal isolation

### *Features, Advantages and Benefits*

- The design holds high differential pressure from above or below, enabling the packer to meet most production, stimulation, and injection needs.
- The packer can be set with compression, tension, or wireline, enabling deployment in shallow and deep applications.
- The packer can be set and released with only a one-quarter turn of the tubing.
- The bypass valve is below the upper slips so that debris is washed from the slips when the valve is opened, reducing the times for circulation and total retrieval.
- The full opening enables unrestricted flow and the passage of wireline tools and other packer systems.
- The packer can be run with Weatherford's T-2 on-off tool, which enables the tubing to be disconnected and retrieved without retrieving the packer.





## Packer Systems

## Arrowset I-X, I-X 10K, and I-X HP Mechanical Packers

### Specifications (continued)

Casing				Packer					
OD (in./mm)	Weight (lb/ft, kg/m)	ID (in./mm)		Maximum OD (in./mm)	Minimum ID (in./mm)	Standard Thread Connection (in.)	1-X 10K and I-X HP	Wireline Set	1-X
		Minimum	Maximum						
7 177.8	17.00 to 26.00 25.30 to 38.69	6.276 159.41	6.538 166.07	6.000 152.40	2.485 63.12	2-7/8 EUE 8 RD	603-72-H	603-70-WLS-HT	603-72
	26.00 to 32.00 38.69 to 47.62	6.094 154.79	6.004 152.50	6.276 159.41			—		603-70
	26.00 to 35.00 38.69 to 52.09			5.875 149.23			2.411 61.24	603-70-H	
	29.00 to 35.00 43.16 to 52.09	5.875 149.23	6.184 157.07	5.813 147.65	2.485 63.12	—	603-71		
	17.00 to 26.00 25.30 to 38.69	6.276 159.41	6.538 166.07	6.000 152.40	3.000 76.20		603-74		
	26.00 to 35.00 38.69 to 52.09	6.004 152.50	6.276 159.41	5.875 149.23			3-1/2 EU 8 RD	603-73	
7-5/8 193.7	24.00 to 29.70 35.72 to 44.20	6.875 174.63	7.025 178.44	6.679 169.65	2.485 63.12	2-7/8 EUE 8 RD	—		603-76
	33.70 to 39.00 50.15 to 58.04	6.625 168.28	6.765 171.83	6.453 163.91			603-75-010 <sup>5</sup>	—	603-75
	24.00 to 29.70 35.72 to 44.20	6.875 174.63	7.025 178.44	6.672 169.47	3.000 76.20	3-1/2 EU 8 RD	—		603-78
	33.70 to 39.00 50.15 to 58.04	6.625 168.28	6.766 171.86	6.453 163.91					603-77
8-5/8 219.1	24.00 to 28.00 35.72 to 41.67	8.017 203.63	8.097 205.66	7.750 196.85	2.938 74.63	3-1/2 EU 8 RD	603-85-0HP <sup>5</sup>	—	603-85
	28.00 to 40.00 41.67 to 59.53	7.725 196.22	8.017 203.63	7.531 191.29			603-86-0HP <sup>5</sup>		603-86
	24.00 to 28.00 35.72 to 41.67	8.017 203.63	8.097 205.66	7.750 196.85	4.000 101.60	4-1/2 EUE 8 RD	—		603-83
	32.00 to 40.00 47.62 to 59.53	7.725 196.22	7.921 201.19	7.500 190.50					603-82

<sup>5</sup>The 7 5/8- through 9 5/8-in. (193.7- through 244.5-mm) sizes are rated to a 7,500-psi (52-MPa) differential.

**\*\* Nickle plating order + XO Nipple to 5.5" EUE**



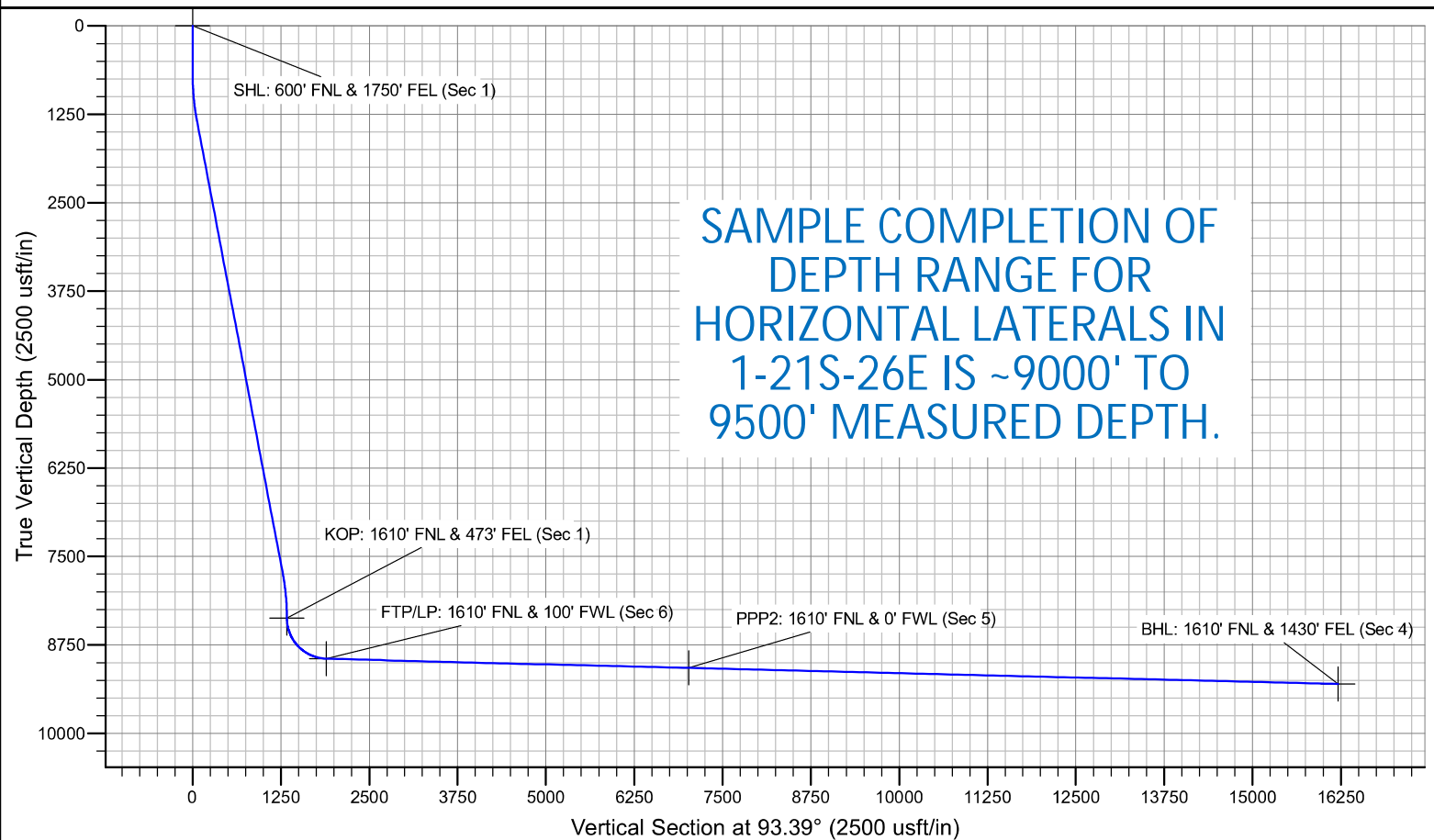
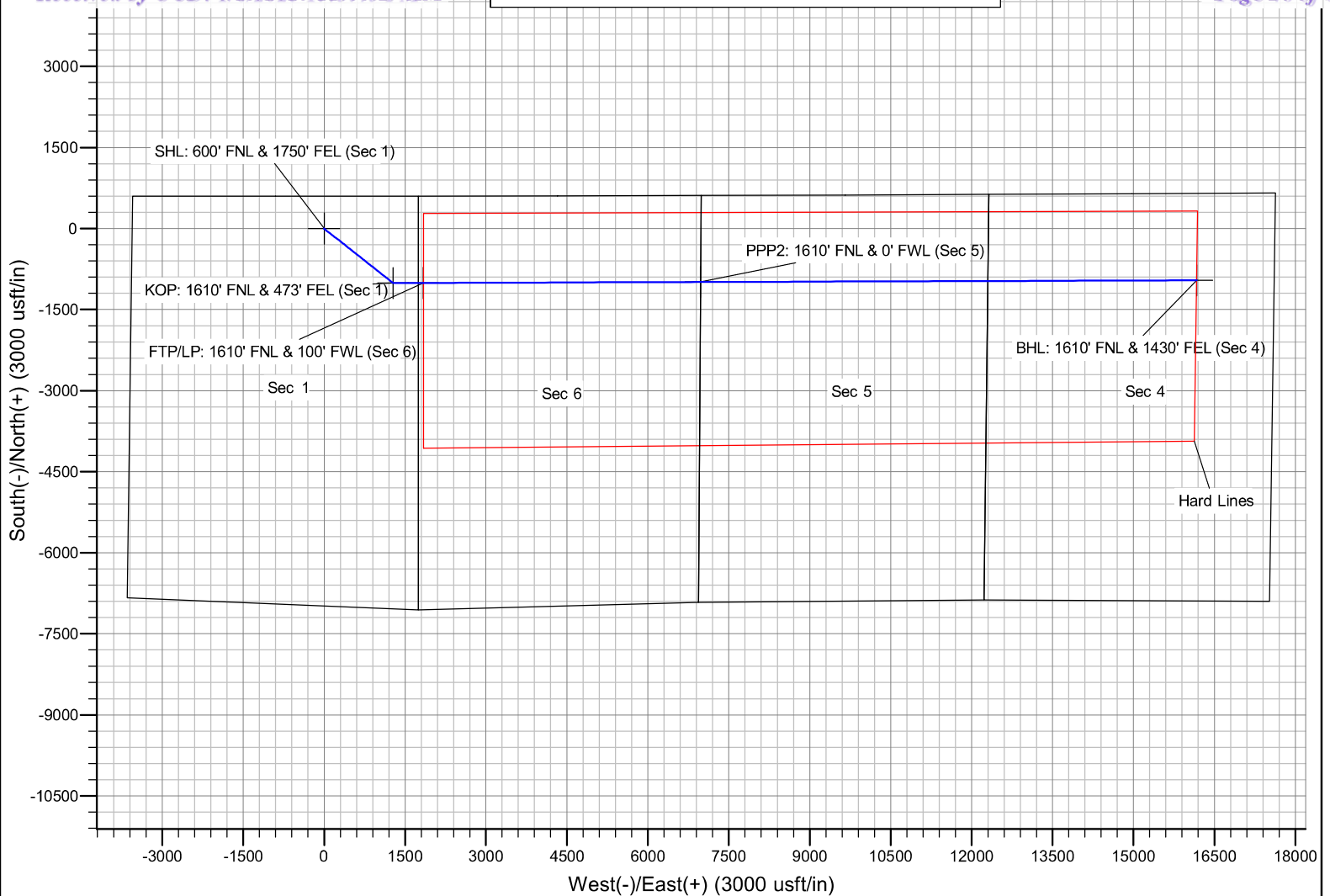
## Form C-108 Item VI - Tabulation of AOR Wells

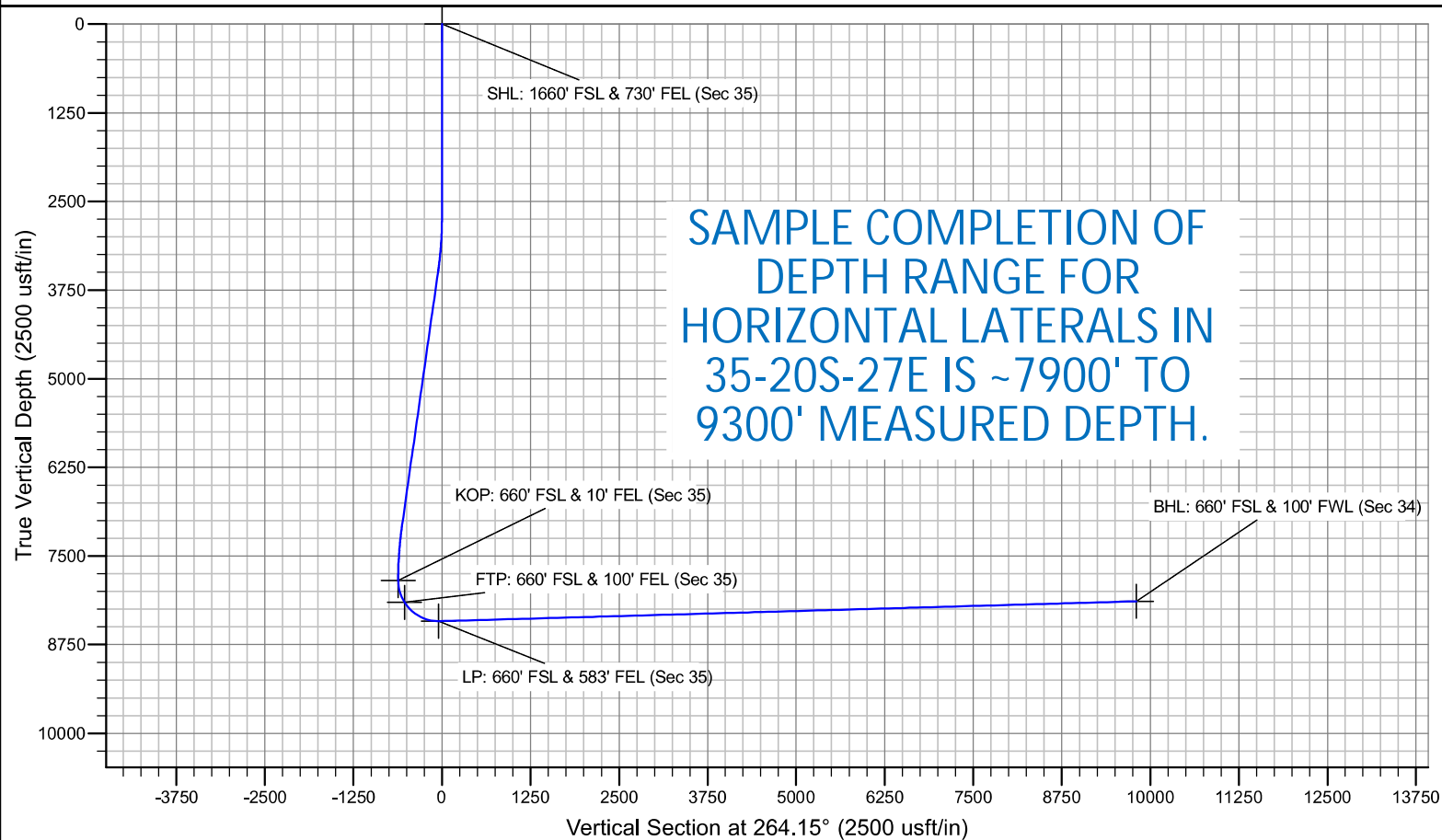
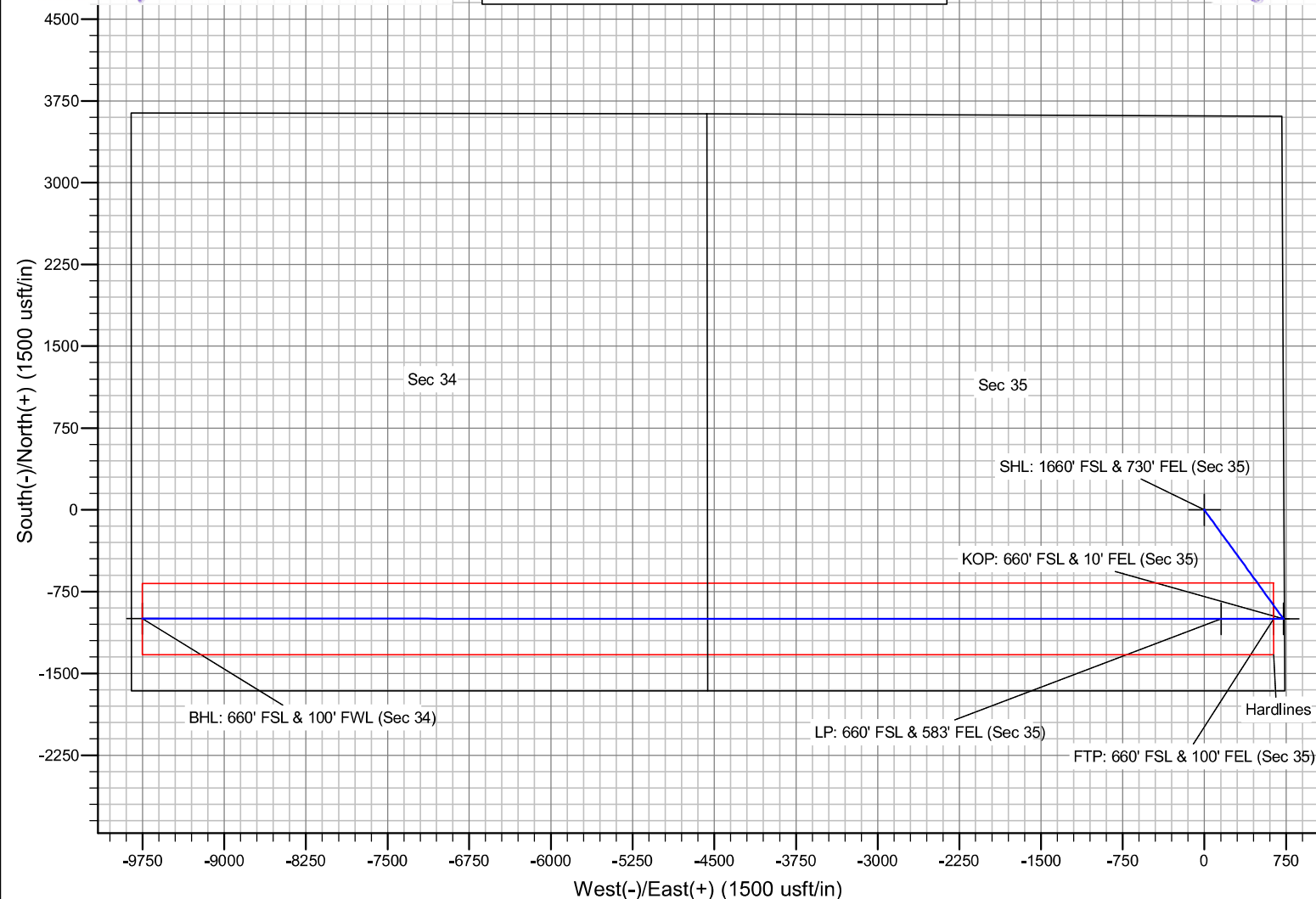
Top of Proposed DEVONIAN Interval 11,950'

NO (0) Wells Penetrate Proposed Interval.

API No.	Operator	Well Name & No.	Type	Status	ULSTR	Lease	SPUD Date	Vertical Depth	Plug Date
<u>Sections 1 to 3 Wells</u>									
30-015-21307	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #003	Gas	P&R-R	A-01-21S-26E	Federal	8/1/74	11250'	8/17/22
30-015-55999	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #711H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56000	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #712H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56002	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #714H	Oil	New	B-01-21S-26E	Federal	2/4/25	9200'-9700' v	
30-015-56105	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #854H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56106	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #852H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56107	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #851H	Oil	New	B-01-21S-26E	Federal	12/30/99	11279'	
30-015-05930	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	P&R-R	C-01-21S-26E	No Data	12/31/1899	11006'	12/30/99
30-015-24035	MEWBOURNE OIL CO	GULF FEDERAL COM #001	Gas	Active	C-01-21S-26E	Federal	1/29/82	9200'-9700' v	
30-015-23303	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #005	Gas	P&R-R	I-01-21S-26E	Federal	8/12/80	11,400'	5/7/23
30-015-10428	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	P&R-R	A-02-21S-26E	Federal	12/31/1899	11191'	12/31/1899
30-015-23902	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #007	Gas	P&R-R	C-02-21S-26E	Federal	8/30/81	11209'	6/12/23
30-015-23847	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #006	Gas	P&R-R	J-02-21S-26E	Federal	12/30/99	11104'	8/24/10
30-015-31721	MEWBOURNE OIL CO	EL PASO FEDERAL #014	Gas	Active	A-03-21S-26E	Federal	6/7/01	11,006'	
<u>Sections 34 to 35 Wells</u>									
30-015-30331	MEWBOURNE OIL CO	MARALO 34 FEDERAL #003	Gas	Active	H-34-20S-27E	Federal	4/11/99	11,104'	
30-015-01050	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	P&R-R	J-34-20S-27E	Federal	12/31/1899	150'	12/31/1899
30-015-10068	MARALO LLC	HANSON FEDERAL #001	Gas	P&R-R	N-34-20S-27E	Federal	12/30/99	11,880'	1/23/96
30-015-35695	MEWBOURNE OIL CO	MARALO 35 FEDERAL #005	Gas	Active	C-35-20S-27E	Federal	8/6/07	11,189'	
30-015-23302	MEWBOURNE OIL CO	MARALO FEDERAL #001	Gas	Active	J-35-20S-27E	Federal	6/26/80	11,360'	
30-015-23748	MEWBOURNE OIL CO	MARALO FEDERAL #002	Gas	Active	K-35-20S-27E	Federal	5/10/81	11,250'	
30-015-55866	MEWBOURNE OIL CO	CRIPPLE CREEK 35 34 FEDERAL #618H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55867	MEWBOURNE OIL CO	CRIPPLE CREEK 35 34 FEDERAL #716H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55872	MEWBOURNE OIL CO	OMAHA 36 31 FEDERAL COM #718H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55873	MEWBOURNE OIL CO	OMAHA 36 31 FEDERAL COM #715H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55874	MEWBOURNE OIL CO	OMAHA 36 31 B2MP FEDERAL COM #001H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55875	MEWBOURNE OIL CO	OMAHA 36 31 B2LI FEDERAL COM #001H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	

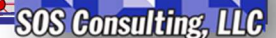
**SUMMARY: NO (0) wells penetrate the proposed disposal interval, 0 Active & 0 P&A.**







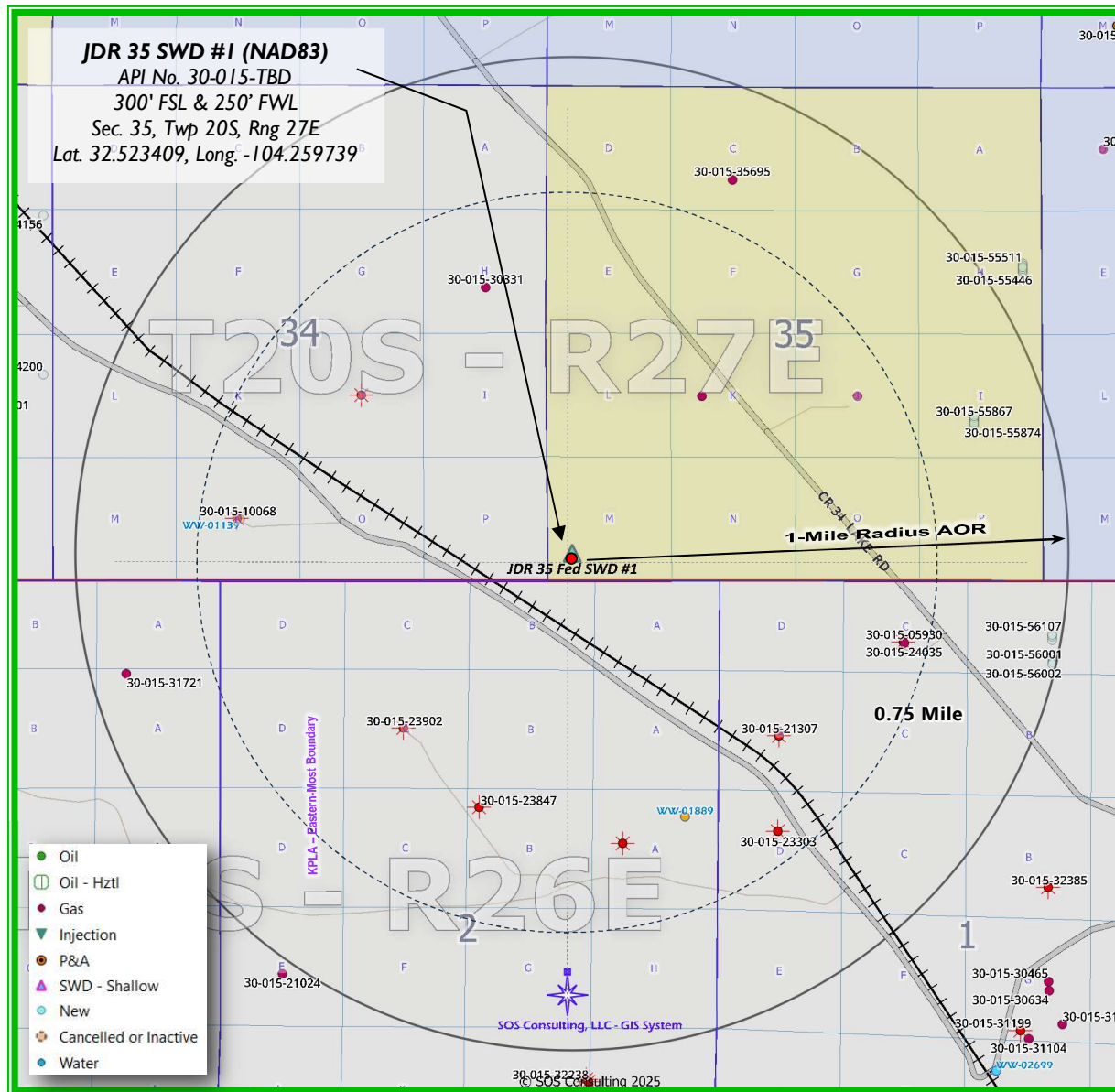
(Attachment to NMOCD Form C-108 - Item V)



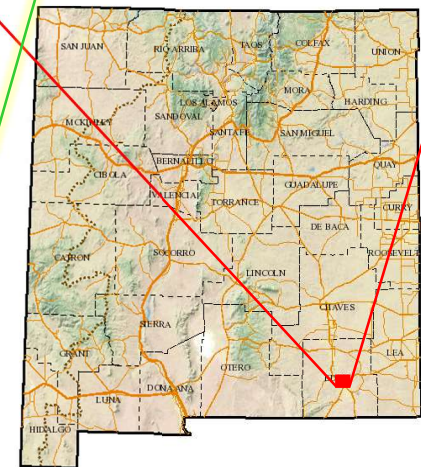
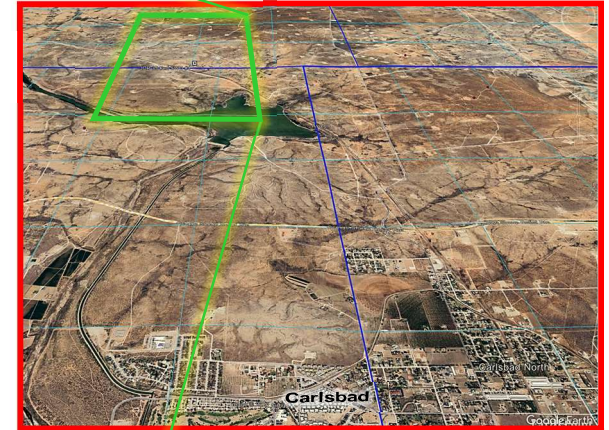


# JDR 35 SWD Well #1 - Area of Review / Overview Map

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



~4.0 miles N/NW of Carlsbad, NM



Eddy County, New Mexico



## **C-108 ITEM VII – PROPOSED OPERATION**

### **JDR 35 SWD No.1**

#### ***Commercial SWD Well and Facility (BLM Surface and BLM Minerals)***

Upon approval of all permits for SWD including the BLM APD Form 3160-3, planning for drilling and other scheduling operations would begin within 30 days. The prospect is located within the 4-String requirement area with the well designed to meet those requirements. During drilling, a gyro survey will be run to make sure the wellbore stays within vertical tolerance and the data and reports shall be furnished to offset operators that desire to confirm the results.

Subsequent completion of the well will take approximately 6-8 weeks would be followed closely by facility construction. Whatever ancillary operations that could commence during the same interval without access conflicts may also take place. This would include installation of the tank battery, berms, plumbing and other associated equipment. In any event, it is not expected for the construction phase of the project to last more than 90 days, depending on availability of contractors and equipment.

#### ***Configure for Salt Water Disposal***

Prior to commencing any work, an NOI sundry(ies – BLM as applicable) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD and BLM test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.

#### ***Operational Summary***

The SWD facility will not be fenced so that trucks may access for load disposal 24/7.

The well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.

The tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation.

Anticipated daily maximum volume is 30,000 bpd and an average of 18,500 bpd at a maximum surface injection pressure of 2390 psi (.2 psi/ft gradient – maximum pressure will be adjusted if the top of interval is modified after well logs are run).

Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbls. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC; as necessary and appropriate and OCD form C-141 will be submitted promptly.

All required OCD and BLM forms will be filed as appropriate and in a timely manner.

## **C-108 ITEM VII – PRODUCED WATER ANALYSES**

*Source and Disposal Waters are Reasonably Compatible.*

### **Item VII.4 – Water Analysis of Source Zone Water**

Delaware, Penn, Bone Spring, Wolfcamp

### **Item VII.5 – Water Analysis of Disposal Zone Water**

Devonian

*Water analysis summaries follow this page...*



# C-108 Item VII.5 - Produced Water Data

## LilyStream Water Solutions, LLC - JDR SWD Project

### SOURCE ZONE

#### DELAWARE

<b>API No.</b>	3001527070	<b>Lab ID</b>	
<b>Well Name</b>	SPIKE FEDERAL 001	<b>Sample ID</b>	5850
		<b>Sample No</b>	
<b>Location</b>	ULSTR 24 20 S 28 E 1650 N 1980 E	<b>Lat / Long</b>	32.56170 -104.12840
		<b>County</b>	Eddy
<b>Operator (when sampled)</b>	OXY USA INC		
	Field RUSSELL	<b>Unit</b>	G
<b>Sample Date</b>	2/10/1999	<b>Analysis Date</b>	2/23/1999
	<b>Sample Source</b>	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph	5.88	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity	1.024	hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	32128.8	resistivity_ohm_cm_temp_l	
tds_mgL_180C		conductivity	
chloride_mgL	20379.6	conductivity_temp_F	
sodium_mgL	5253.12	carbonate_mgL	0
calcium_mgL	4235.26	bicarbonate_mgL	109.568
iron_mgL	1123.33	sulfate_mgL	158.72
barium_mgL	4.096	hydroxide_mgL	
magnesium_mgL	1028.1	h2s_mgL	
potassium_mgL	361.472	co2_mgL	
strontium_mgL	246.784	o2_mgL	
manganese_mgL		anionremarks	
<b>Remarks</b>			

(Produced water data courtesy of NMT Octane NM WAIDS database.)



**C-108 Item VII.5 - Produced Water Data**  
**LilyStream Water Solutions, LLC - JDR SWD Project**

**SOURCE ZONE**

**PENN**

<b>API No.</b>	3001526290	<b>Lab ID</b>	
<b>Well Name</b>	JOHN AGU 001	<b>Sample ID</b>	6113
		<b>Sample No</b>	
<b>Location</b>	ULSTR 14 20 S 24 E	<b>Lat / Long</b>	32.57882 -104.56101
	660 N 1980 W	<b>County</b>	Eddy
<b>Operator (when sampled)</b>	YATES PETROLEUM CORPORATION		
	Field	DAGGER DRAW SOUTH	Unit C
<b>Sample Date</b>	6/12/2000	<b>Analysis Date</b>	6/20/2000
	<b>Sample Source</b>	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph	7	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity	1.013	hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	12790.2	resistivity_ohm_cm_temp_l	
tds_mgL_180C		conductivity	
chloride_mgL	4584.84	conductivity_temp_F	
sodium_mgL	3000.51	carbonate_mgL	0
calcium_mgL	954.246	bicarbonate_mgL	1130.51
iron_mgL	79.014	sulfate_mgL	2820.19
barium_mgL	0.05065	hydroxide_mgL	
magnesium_mgL	277.562	h2s_mgL	
potassium_mgL	88.131	co2_mgL	
strontium_mgL	21.273	o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)



**C-108 Item VII.5 - Produced Water Data**  
**LilyStream Water Solutions, LLC - JDR SWD Project**

**SOURCE ZONE**

**BONE SPRING**

<b>API No.</b>	3001527288	<b>Lab ID</b>	
<b>Well Name</b>	COLT FEDERAL 001	<b>Sample ID</b>	5975
		<b>Sample No</b>	
<b>Location</b>	ULSTR 04 20 S 28 E	<b>Lat / Long</b>	32.59869 -104.17523
	990 S 660 E	<b>County</b>	Eddy
<b>Operator (when sampled)</b>	OXY USA INC		
	Field OLD MILLMAN RANCH	<b>Unit</b>	P
<b>Sample Date</b>	4/9/1998	<b>Analysis Date</b>	4/22/1998
	<b>Sample Source</b>	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph	7.22	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity	1.004	hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	6037.86	resistivity_ohm_cm_temp_l	
tds_mgL_180C		conductivity	
chloride_mgL	3352.36	conductivity_temp_F	
sodium_mgL	2217.84	carbonate_mgL	0
calcium_mgL	26.104	bicarbonate_mgL	220.88
iron_mgL	36.144	sulfate_mgL	141.564
barium_mgL	0.0502	hydroxide_mgL	
magnesium_mgL	6.024	h2s_mgL	
potassium_mgL	58.232	co2_mgL	
strontium_mgL	3.012	o2_mgL	
manganese_mgL		anionremarks	
<b>Remarks</b>			

(Produced water data courtesy of NMT Octane NM WAIDS database.)



**C-108 Item VII.5 - Produced Water Data**  
**LilyStream Water Solutions, LLC - JDR SWD Project**

**SOURCE ZONE**

**WOLFCAMP**

<b>API No.</b>	3001522299	<b>Lab ID</b>	
<b>Well Name</b>	STATE AC COM 001	<b>Sample ID</b>	3428
		<b>Sample No</b>	
<b>Location</b>	ULSTR 21 20 S 28 E 1980 S 1980 E	<b>Lat / Long</b>	32.55729 -104.17995
		<b>County</b>	Eddy
<b>Operator (when sampled)</b>			
	Field BURTON FLAT NORTH	<b>Unit</b>	J
<b>Sample Date</b>	3/31/1978	<b>Analysis Date</b>	
	<b>Sample Source</b> SWAB	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph	6.2	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	41597	resistivity_ohm_cm_temp_l	
tds_mgL_180C		conductivity	
chloride_mgL	25000	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	449
iron_mgL		sulfate_mgL	76
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
<b>Remarks</b>			

(Produced water data courtesy of NMT Octane NM WAIDS database.)



**C-108 Item VII.5 - Produced Water Data**  
**LilyStream Water Solutions, LLC - JDR SWD Project**

**DISPOSAL ZONE**

**DEVONIAN**

<b>API No.</b>	3001502475	<b>Lab ID</b>	
<b>Well Name</b>	BIG EDDY UT 001	<b>Sample ID</b>	5253
		<b>Sample No</b>	
<b>Location</b>	ULSTR 36 21 S 28 E	<b>Lat / Long</b>	32.44191 -104.04179
	660 N 1980 W	<b>County</b>	Eddy
<b>Operator (when sampled)</b>			
	Field	<b>Unit</b>	C
<b>Sample Date</b>		<b>Analysis Date</b>	
	<b>Sample Source</b> DST	<b>Depth (if known)</b>	
	<b>Water Type</b>		
ph		alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	19941	resistivity_ohm_cm_temp_l	
tds_mgL_180C		conductivity	
chloride_mgL	10700	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	640
iron_mgL		sulfate_mgL	1130
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	
<b>Remarks</b>			

(Produced water data courtesy of NMT Octane NM WAIDS database.)



## C-108 – Item VIII

### Geologic Information

The Devonian and Silurian consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are believed present within the subject formations in the area. Depth control data was inferred from deep wells to the south and east. If the base of Devonian and top of Silurian rocks come in as expected the well will only be drilled deep enough for adequate logging rathole.

At a proposed depth of 13,800' BGL (Below Ground Level) the well will TD approximately 1,850' below the estimated top of the Devonian. Mud logging through the interval will ensure the target interval remains in Devonian and Silurian. *(Note: If the top of the Devonian comes in deeper than expected, all appropriate adjustments will be made and reported as necessary.)* A Gyro Survey will be run while drilling to ensure the wellbore remains within vertical tolerances\*. Once Devonian is determined, the casing shoe depth will be set at an approximate maximum upper depth of 11,950' BGL. Injection will occur through the resulting openhole interval. Should mud or other logs indicate depth adjustment is required to exploit the desired formation as described; sundries with appropriate data will be filed with the OCD.

The Devonian and Silurian are overlain by the Woodford Shale (>50') and Mississippian Lime and underlain by the Middle and Lower Ordovician; Simpson, McKee and Ellenburger.

Fresh water in the area is generally available from the Salado, some dolomite beds of the Culebra and potentially some Eloian deposits of Quaternary age. State Engineer's records show water wells in the area with a depth of 64 to 440 feet with an average depth to groundwater of 142 feet.

OSE indicates 2 (two) 'pending' water wells (PODs) located within one mile of the proposed SWD; a nearby USGS recorded well was found and sampled. Depth of groundwater is included herein for freshwater wells that are of similar depth and proximity in the area.

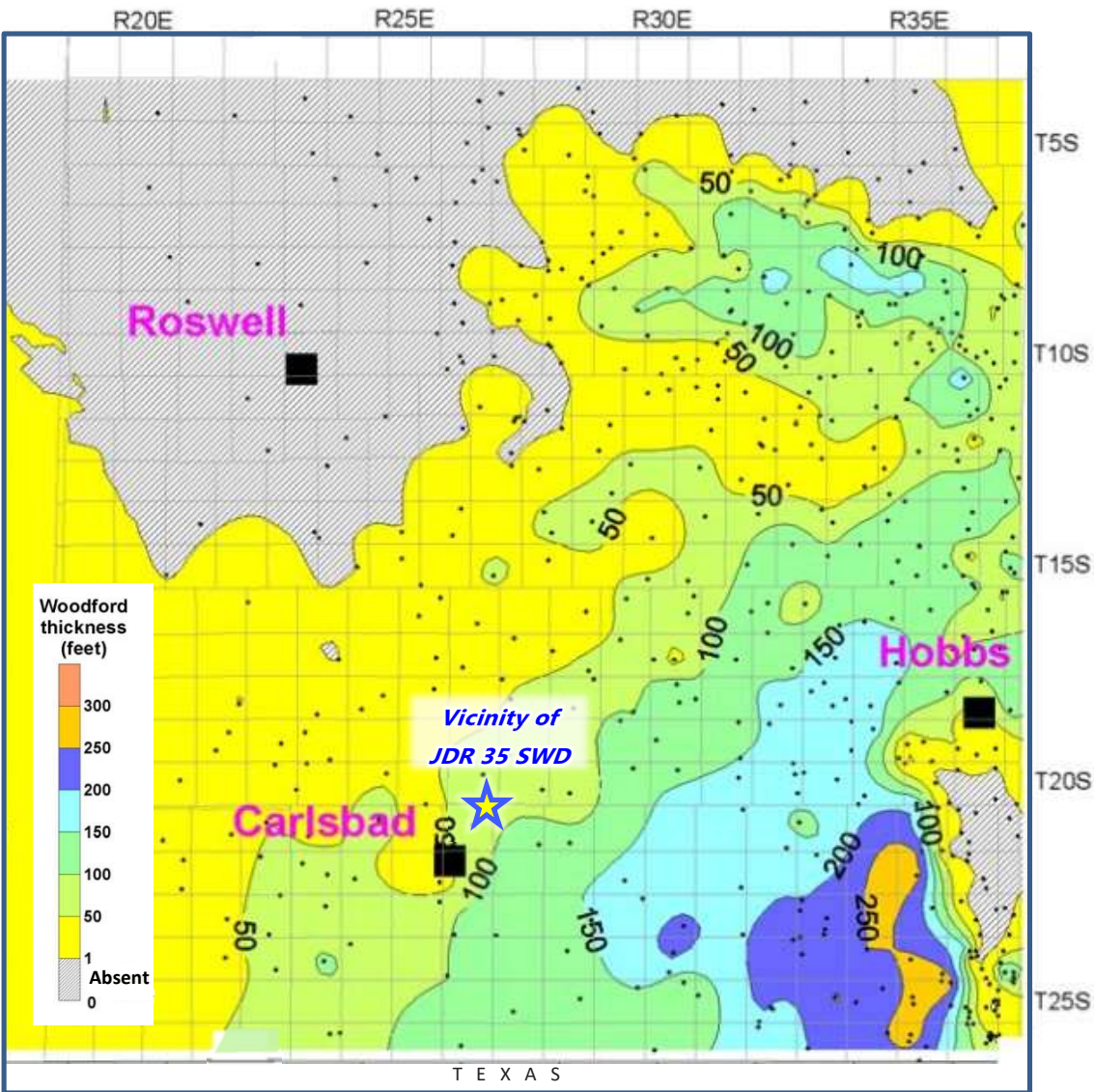
*\*To accommodate offset operators, in addition to Gyro monitoring, LilyStream shall employ a quality drilling contractor that will explicitly design all drilling and casing operations so that variables such as drilling speed, mud and drill stem weight, bit and collar specs align with maintaining vertical tolerance to not allow encroachment on horizontal lateral drilling lanes.*



# Disposal Zone – Confining Strata, Structure, Stratigraphy

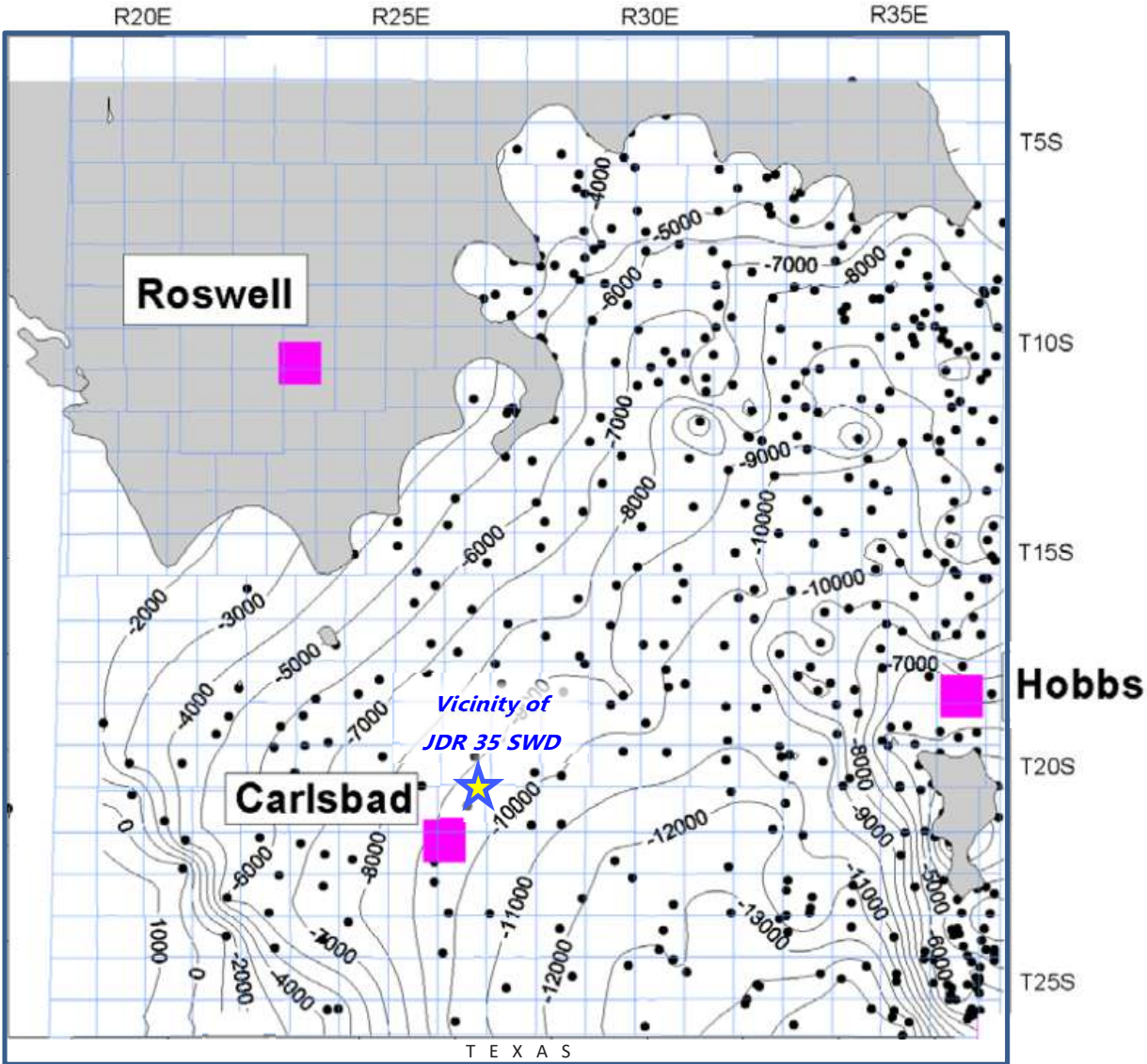
**Note** – The JRD 35 Fed SWD #1 Devonian is overlain by 50+ feet of Woodford Shale followed by lower Mississippian and Barnett Shale. The proposed Silurian portion potentially includes the Upper to Middle Silurian. The zone is underlain by Ordovician formations.

**Woodford Shale Isopach Map**  
Pseudo-corrected thickness



Isopach map of the Woodford Shale constructed by correcting apparent thickness to true thickness in wells with dipmeter logs and by omitting wells with local anomalous and overly thick Woodford.

**Structure on Siluro-Devonian Carbonates**



Structure contours on Siluro-Devonian carbonate strata (Wristen Group and Thirtyone Formation) in southeastern New Mexico. The northerly limit of contours coincides with the northern extent of the Woodford Shale.

**Stratigraphic Column**

Age		Strata
PERMIAN	TRIASSIC	Chinle
		Santa Rosa
		Ochoan
		Dewey Lake
		Rustler
	GUADALUPIDAN	Salado
		Castile
		Bell Canyon
		Cherry Canyon
		Brushy Canyon
PENNSYLVANIAN	LEONARDIAN	Cutoff Fm.
		Bone Spring
	WOLF CAMP	Hueco ("Wolfcamp")
		Virgilian
	MISSOURIAN	Cisco
		Canyon
	DES MOINESAN	Strawn
		Atoka
	MORROWAN	Morrow
		Morrow
MISSISSIPPIAN	MISSISSIPPIAN	Barnett
		Undivided limestones
	DEVONIAN	Woodford
DEVONIAN	Upper	Woodford
	Middle	DEVONIAN/ SILURIAN T A R G E T I N T E R V A L
	Lower	DEVONIAN/ SILURIAN T A R G E T I N T E R V A L
SILURIAN	Upper	DEVONIAN/ SILURIAN T A R G E T I N T E R V A L
	Middle	DEVONIAN/ SILURIAN T A R G E T I N T E R V A L
	Lower	Fusselman
ORDOVICIAN	Upper	Montoya
		Simpson
	Middle	Ellenburger
	Lower	Bliss
CAMBRIAN		
PRECAMBRIAN		Igneous, metamorphics, volcanics

Above Figures from *Regional aspects of the Wristen petroleum system, southeastern New Mexico*; Ronald F. Broadhead, 2005



C-108 ITEM X

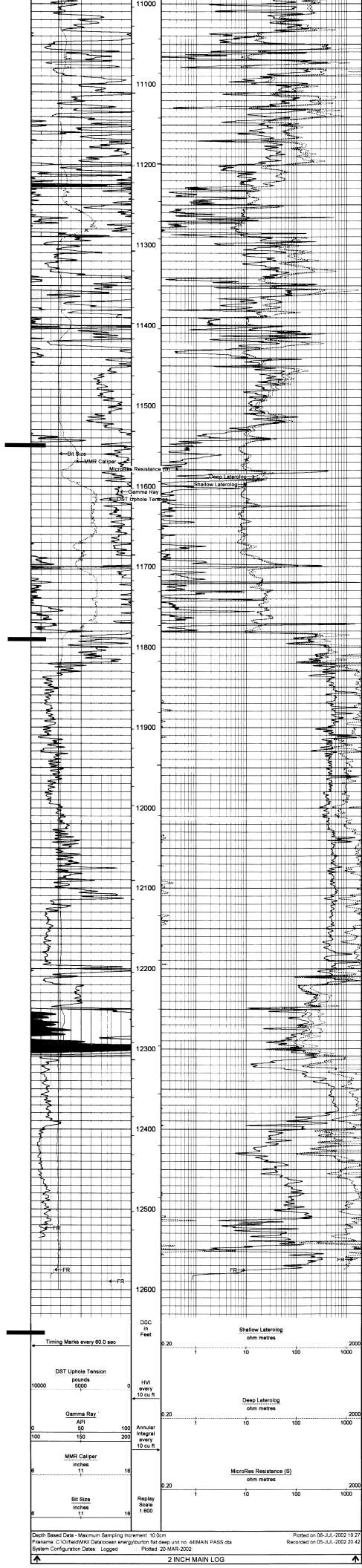
LOG STRIP - OFFSET WELL  
Located ~5.3 miles ESE  
Burton Flat Deep Unit #44  
SWD

The well log shown is downdip  
from the JDR proposed SWD.

New Logs will be run for zone  
determination including mud  
logging to verify formation.

Gyro will be run during drilling  
to ensure vertical parameters.

JDR 35 Fed SWD #1  
Proposed Zone: 11,950' - 13,800'





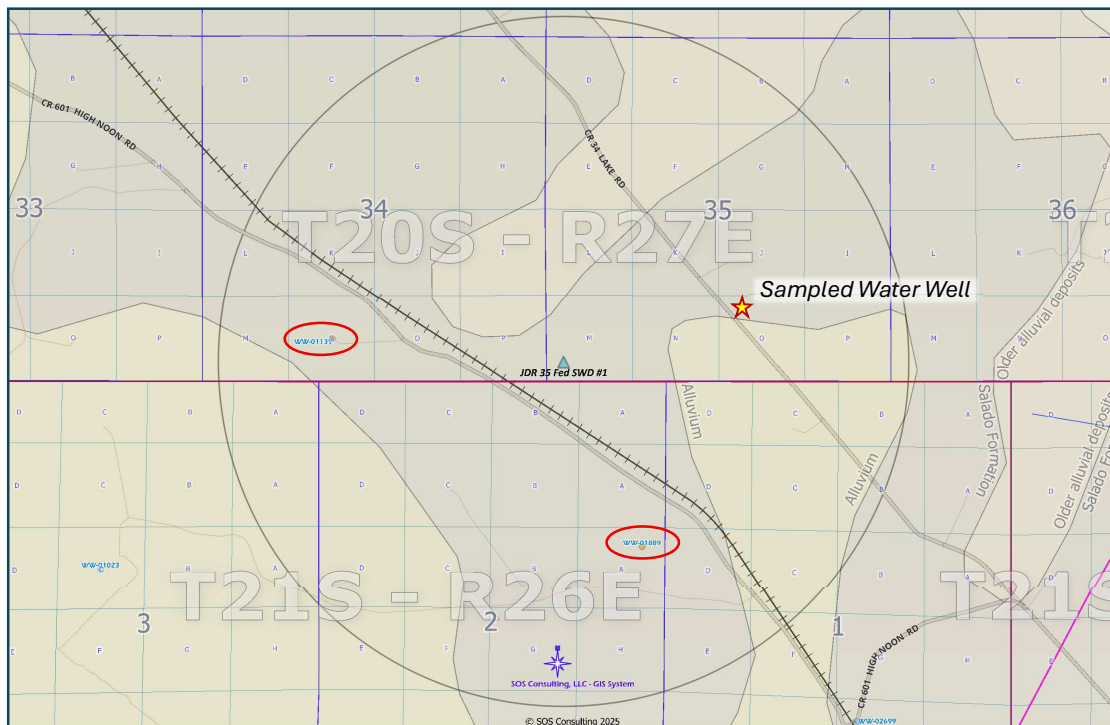
## C-108 Item XI

### Water Wells Within One Mile

#### JDR 35 Fed SWD #1 - Water Well Locator Map

*As displayed in OCD's GIS Map, NM State Engineer's and USGS records indicate 2 Pending Water Wells within one mile of the proposed SWD. A USGS water well was located at 32.325790 latitude and -104.251337 longitude.*

*This well was sampled and the analysis is attached herein.*





PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 11, 2025

JOEL LOWRY

LOWRY ENVIROMENTAL & ASSOCIATES

PO BOX 296

LOVINGTON, NM 88260

RE: LILY STREAM WATER

Enclosed are the results of analyses for samples received by the laboratory on 08/05/25 15:43.

Cardinal Laboratories is accredited through Texas NELAP under certificate number TX-C25-00101. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

**Analytical Results For:**

LOWRY ENVIROMENTAL & ASSOCIATES  
 JOEL LOWRY  
 PO BOX 296  
 LOVINGTON NM, 88260  
 Fax To:

Received: 08/05/2025  
 Reported: 08/11/2025  
 Project Name: LILY STREAM WATER  
 Project Number: LILY STREAM JPR WELLS  
 Project Location: EDDY CO NM

Sampling Date: 08/03/2025  
 Sampling Type: Water  
 Sampling Condition: Cool & Intact  
 Sample Received By: Shalyn Rodriguez

**Sample ID: C - 03958 (H254784-01)**

Chloride, SM4500Cl-B (Water)		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	853	4.00	08/06/2025	ND	100	100	100	0.00	QM-07	
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3150	5.00	08/07/2025	9.00	1520	102	1500	3.12		

**Sample ID: USGS 323136104150101 (H254784-02)**

Chloride, SM4500Cl-B (Water)		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	360	4.00	08/06/2025	ND	100	100	100	0.00		
TDS 160.1		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
TDS*	3540	5.00	08/07/2025	9.00	1520	102	1500	3.12		

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

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### Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

---

Cardinal Laboratories

\*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



**101 East Marland, Hobbs, NM 88240**  
**(575) 393-2326 FAX (575) 393-2476**

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

[illegible]



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

(A CLW#### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are smallest to largest)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Well Depth	Depth Water	Water Column
<a href="#">C 00376</a>	C	CUB	ED		SE	NW	06	21S	27E	572211.0	3597303.0 *	●			
<a href="#">C 00382</a>	C	CUB	ED		SW	SW	06	21S	27E	571841.0	3596482.0 *	●			
<a href="#">C 03163</a>		C	ED	NE	NW	NE	06	21S	27E	572692.9	3598138.1	●	440	175	265
<a href="#">C 03825 POD1</a>		C	ED	SW	NW	NE	06	21S	27E	572607.3	3597676.8	●	392	330	62
<a href="#">C 03834 POD1</a>		C	ED	SE	NE	NW	06	21S	27E	572302.4	3597613.6	●	372	360	12
<a href="#">C 03835 POD1</a>		C	ED	SW	NW	SE	06	21S	27E	572605.0	3596913.7	●	122	68	54
<a href="#">C 03912 POD1</a>		C	ED	SW	NW	NE	06	21S	27E	572581.1	3598046.7	●	85	55	30
<a href="#">C 04213 POD1</a>		C	ED	SE	SW	SE	06	21S	27E	572631.9	3596510.5	●	105	67	38
<a href="#">C 04322 POD1</a>	R	C	ED	SW	SW	NE	06	21S	27E	572609.1	3597785.2	●	220	100	120
<a href="#">C 04322 POD2</a>		C	ED	NE	SW	NW	06	21S	27E	511231.0	3609722.0	●	200	130	70
<a href="#">C 04436 POD1</a>		C	ED	SW	NW	NE	06	21S	27E	572599.1	3596642.6	●	136	124	12
<a href="#">C 04445 POD1</a>	R	C	ED	NE	SW	NE	06	21S	27E	572714.4	3597908.5	●	180		
<a href="#">C 04445 POD2</a>	R	C	ED	NE	SW	NE	06	21S	27E	572714.4	3597908.5	●	64	41	23
<a href="#">C 04445 POD3</a>		C	ED	NW	SW	NE	06	21S	27E	572536.5	3597904.2	●	315	70	245
<a href="#">C 04446 POD1</a>		C	ED	NW	SW	NE	06	21S	27E	572462.7	3597825.1	●	180		
<a href="#">C 04461 POD1</a>		C	ED	NW	NW	SE	06	21S	27E	572548.1	3597339.2	●	180		
<a href="#">C 04462 POD1</a>		C	ED	SW	SW	SE	06	21S	27E	572536.4	3596402.6	●	200		
<a href="#">C 04613 POD1</a>		C	ED	NE	NW	NE	06	21S	27E	572707.4	3598553.0	●	360	130	230
<a href="#">C 04631 POD1</a>		C	ED	NW	NW	SE	06	21S	27E	572514.7	3597014.9	●	140	60	80
<a href="#">C 04639 POD1</a>		C	ED	SW	NW	NE	06	21S	27E	572591.4	3598210.7	●	360	120	240
<a href="#">C 04657</a>		C	ED	NW	SW	NE	06	21S	27E	572580.7	3598032.3	●	357	312	45
<a href="#">C 04840 POD1</a>		C	ED	NW	NW	SE	06	21S	27E	572570.1	3597333.2	●	375	130	245

Average Depth to Water: **142 feet**

Minimum Depth: **41 feet**

Maximum Depth: **360 feet**

**Record Count: 22**

**PLSS Search:**

**Range:** 27E

**Township:** 21S

**Section:** 6

\* UTM location was derived from PLSS - see Help





NM Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

**Re: Geology Statement**  
**Lilystream Water Solutions**  
**JDR 35 SWD #1**  
**Section 35, T. 20S, R. 27E**  
**Eddy County, New Mexico**

To whom it may concern:

Publicly available geologic and engineering data related to the proposed well have been thoroughly reviewed, and no evidence for open faults or any other hydrologic connection between the proposed Silurian/Devonian injection zone and any underground sources of drinking water has been found. Please see the attached seismic risk assessment for additional information.

Sincerely,

A handwritten signature in black ink that reads "Cory Walk". The signature is written in a cursive, flowing style.

Cory Walk  
Geologist

**Seismic Risk Assessment**  
**Lilystream Water Solutions**  
**JDR 35 SWD No. 1**  
**Section 35, Township 20 South, Range 27 East**  
**Eddy County, New Mexico**

**Cory Walk, M.S.**

A handwritten signature in cursive script that reads "Cory Walk".

**Geologist**  
**Permits West Inc.**

**July 28, 2025**



## GENERAL INFORMATION

JDR 35 SWD #1 is located in the SW 1/4, section 35, T.20S, R.27E, about 8 miles north of Carlsbad, NM in the Permian Basin. Lilystream Water Solutions proposes to dispose produced water within the Silurian/Devonian Formation through an open hole from 11,950'-13,800' below ground surface. This report assesses any potential concerns relating to induced seismicity along deep penetrating Precambrian faults or the connection between the injection zone and known underground potable water sources.

## SEISMIC RISK ASSESSMENT

### *Historical Seismicity*

Searching the USGS earthquake catalog resulted in one (1) earthquake above a magnitude 2.5 within 6 miles (9.7 km) of the proposed deep disposal site since 1970 (Fig. 1). The nearest earthquake occurred on August 14, 2024 about 3.9 miles (6.2 km) east of the proposed SWD site and had a magnitude of 3.1.

### *Basement Faults and Subsurface Conditions*

A structure contour map (Fig. 1) of the Precambrian basement shows the JDR 35 SWD #1 is approximately 1.9 miles (3.1 km) from the nearest basement-rooted fault inferred by Horne et al (2021). **Information about known nearby faults based on GIS data from Horne et al. (2021) is listed in Table 1.**

Snee and Zoback (2018) state, "In the western part of Eddy County, New Mexico,  $S_{Hmax}$  is ~north-south (consistent with the state of stress in the Rio Grande Rift; Zoback and Zoback, 1980) but rotates to ~east-northeast-west-southwest in southern Lea County, New Mexico and the northernmost parts of Culberson and Reeves counties, Texas." **Around the JDR 35 SWD #1 site, Snee and Zoback indicate a  $S_{Hmax}$  direction of N010°E and an  $A_p$  of 0.57, indicating an extensional (normal) stress regime.**

### *Fault Slip Potential (FSP) Modeling*

Induced seismicity is a growing concern of deep SWD wells. Software developed by the Stanford Center for Induced and Triggered Seismicity allows for the probabilistic screening of deeply penetrating faults near the proposed injection zone (Walsh et al., 2016; Walsh et al., 2017). This software uses parameters such as stress orientations, fault strike/dip, injection rates, fault friction coefficients, etc. to estimate the potential for fault slip. Using the best available data as input parameters (Table 2) including the subject well injecting at the proposed maximum of 30,000 bbls/day and all other existing SWDs within a 6 mile radius injecting at their individual historical peak annual volume (3 total SWD wells), the Fault Slip Potential (FSP) models suggest a three (0.03) percent chance of slip on a nearby fault, inferred by Horne et al. (2021), through the year 2046 (Fig. 2; Table 1). **This model also suggests a pore pressure increase of 22 psi on the nearest publicly known fault (Fault 16; Fig. 3; Table 1) by the year 2046.** Geomechanical modeling shows that the primary fault of concern (fault 15) would need a pressure increase of 1639 psi to reach a 100% probability of slip on the fault. A 50% probability requires an increase of 336 psi which is 17x greater than the modeled increase of 19 psi (Fig. 3).

## **GROUNDWATER SOURCES**

Quaternary Alluvium acts as the principal aquifer used for potable ground water near the JDR 35 SWD #1 location (Hendrickson and Jones, 1952). Nicholson and Clebsch (1961) state, "Potable ground water is not available below the Permian and Triassic unconformity but, because this boundary is not easily defined, the top of the Rustler anhydrite formation is regarded as the effective lower limit of 'potable' ground water." Around the JDR 35 SWD #1, the top of the Rustler Formation lies at an estimated depth of 100' bgs.

## **VERTICAL MIGRATION OF FLUIDS**

Permeability barriers exist above (Woodford shale; 55 ft thick) and below (Simpson Group; 75 ft thick) the targeted Silurian/Devonian injection zone (Plate 2, Comer et al., 1991; Fig. 8, Frenzel et al., 1988). Summing the estimated thicknesses of underlying formations found in isopach data presented in Ruppel (2009), the calculated top of the Precambrian basement is at a depth of approximately 14,850' in this area. Therefore, the injection zone lies approximately 1,050' above the Precambrian basement and approximately 11,850' below the previously stated lower limit of potable water at the top of the Rustler formation.

## **CONCLUDING STATEMENTS**

After examination of publicly available geologic and engineering data, there is no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

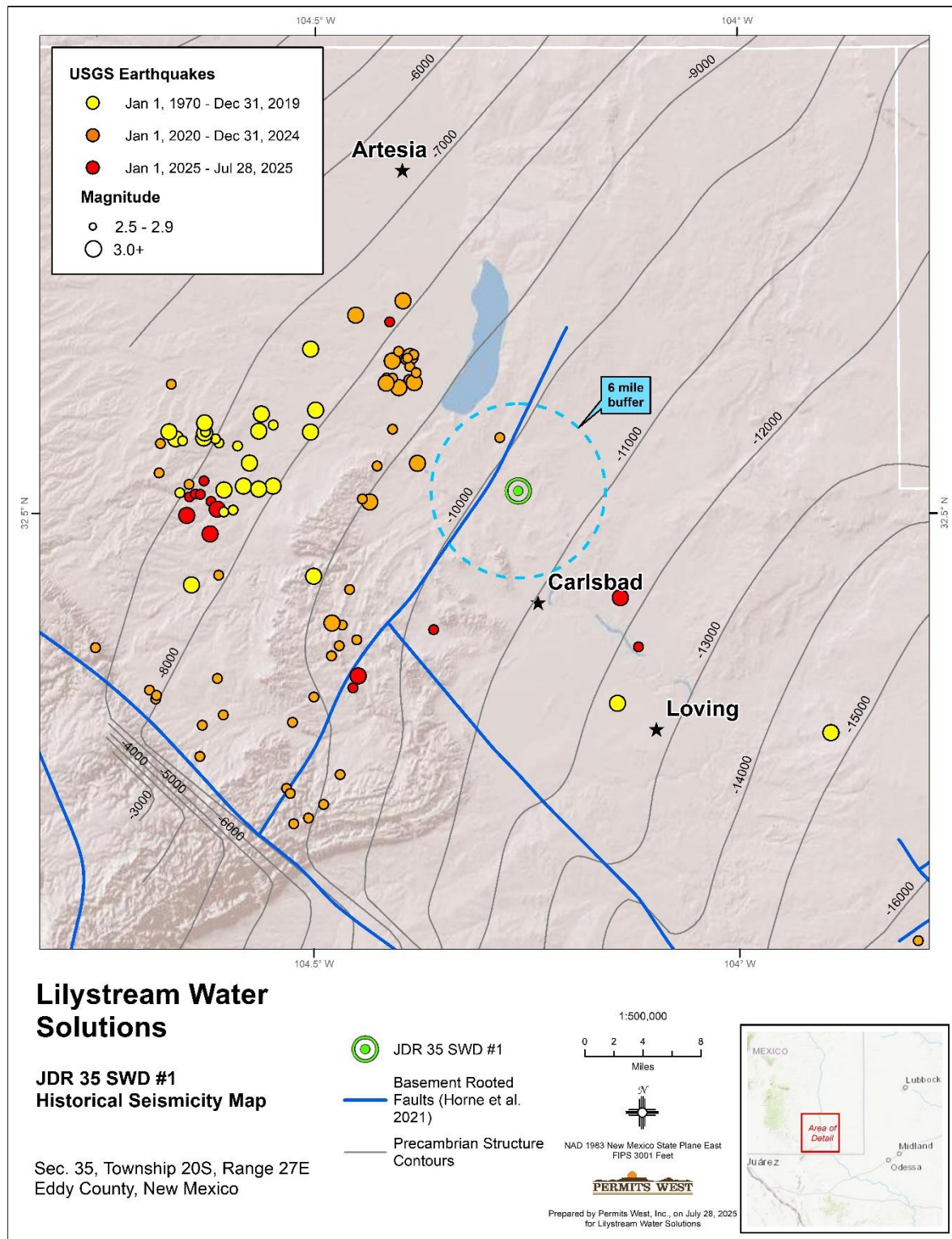


Figure 1. Structural contour map of the Precambrian basement in feet below sea level. Blue lines represent the locations of Precambrian basement-rooted faults (Horne et al., 2021). JDR 35 SWD #1 well lies ~1.9 miles southeast of the closest deeply penetrating fault and 3.9 miles south from the closest historic earthquake.

**Table 1: Nearby Basement Fault Model Results**

<b>Fault Number</b>	<b>Distance to proposed SWD (mi)</b>	<b>Strike (°)</b>	<b>Dip (°)</b>	<b>FSP (2044)</b>	<b>Δ Pore Pressure after 20 years (psi)</b>	<b>Δ Pore Pressure needed for 100% FSP (psi)</b>	<b>Δ Pore Pressure needed for 50% FSP (psi)</b>
Fault 16	1.9	31	70	0.01	22	1497	411
Fault 15	2.5	26	70	0.03	19	1639	336
Fault 1	13.0	131	65	0.00	2	3309	1593

**Table 2: Fault Slip Potential model input parameters**

<b>Faults</b>	<b>Value</b>	<b>Notes</b>
Friction Coefficient	0.58	Ikari et al. (2011)
Dip Angle (deg)	60-72	Horne et al. (2021)
<b>Stress</b>		
Vertical stress gradient (psi/ft)	1.1	Hurd and Zoback (2012)
Max Horizontal Stress Direction (deg)	10	Snee and Zoback (2018)
Depth for calculations (ft)	12000	Proposed injection zone
Initial Reservoir Pressure Gradient (psi/ft)	0.7	calculated from mud wt (ppg) used in drilling at these depths
A Phi Parameter	0.57	Snee and Zoback (2018)
Reference Friction Coefficient	0.58	Ikari et al. (2011)
<b>Hydrology</b>		
Aquifer thickness (ft)	1900	Proposed injection zone
Porosity (%)	6	
Permeability (mD)	150	
Injection Rate (bbl/day)	30000	Maximum proposed injection rate



Figure 2. Precambrian fault map of the JDR 35 SWD #1 area as mapped by Horne et al. (2021). Faults are colored based on probability of fault slip as modeled using Fault Slip Potential software (Walsh and Zoback, 2016). Labeled values represent the calculated fault slip potential using the parameters indicated in Table 2. Contours show the top of the Precambrian basement in feet below sea level.



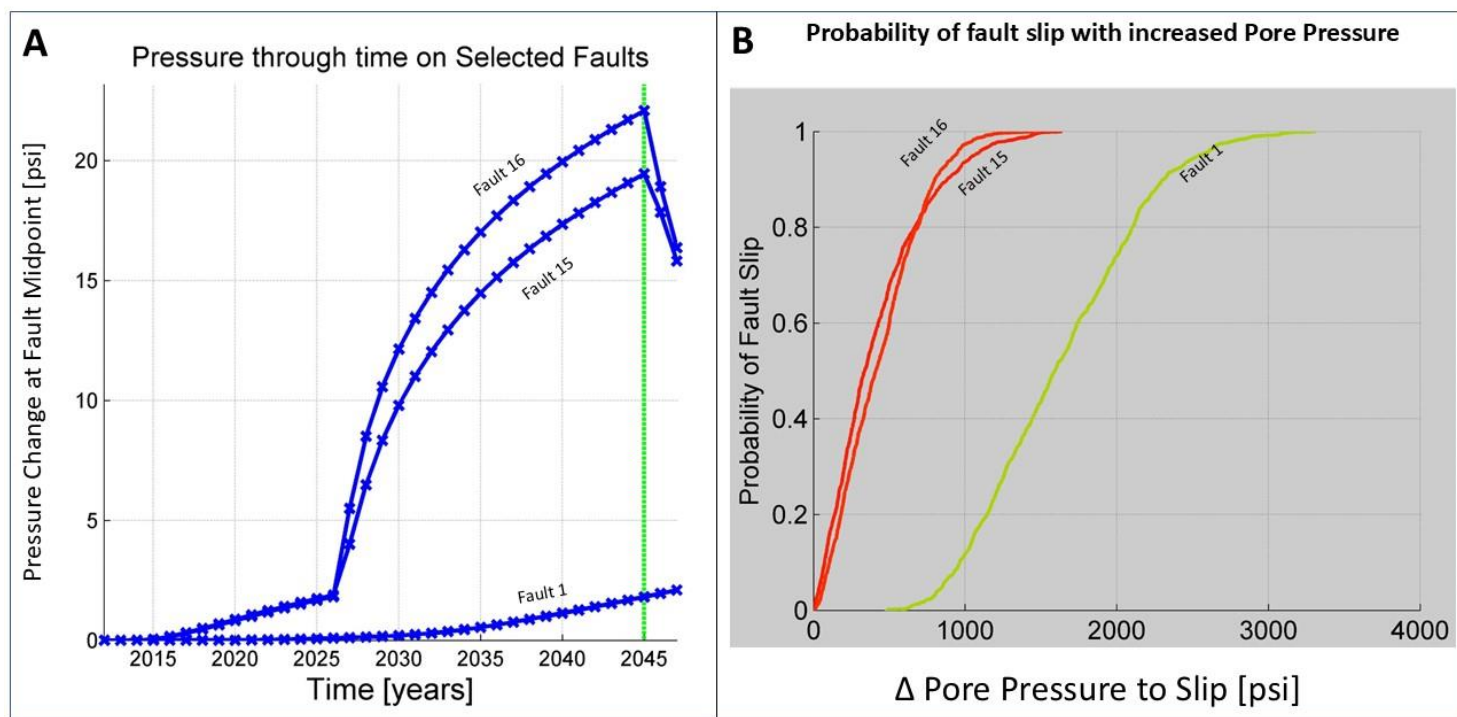


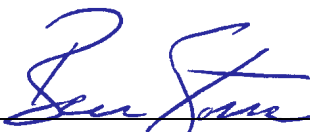
Figure 3. A) Plot showing the modeled change of pore pressure on nearby faults through time as a response to the proposed SWD well. B) Plot showing the required pore pressure increase needed to produce specific probabilities of fault slip on nearby faults.

## References Cited

- Comer, J. B., 1991, Stratigraphic Analysis of the Upper Devonian Woodford Formation, Permian Basin, West Texas and Southeastern New Mexico: The University of Texas at Austin, Bureau of Economic Geology, Report of Investigations No. 201, 63 p.
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- Walsh, F. R., and Zoback, M. D., (2016) Probabilistic assessment of potential fault slip related to injection induced earthquakes: Application to north central Oklahoma, USA, Geology, Data Repository item 2016334, doi:10.1130/G38285.1
- Walsh, F. R., Zoback, M. D., Pais, D., Weingarten, M., and Tyrrell, T. (2017) FSP 1.0: A Program for Probabilistic Estimation of Fault Slip Potential Resulting From Fluid Injection, User Guide from the Stanford Center for Induced and Triggered Seismicity, available at SCITS.Stanford.edu/software
- Zoback, M. L., and M. D. Zoback, 1980, State of stress in the conterminous United States: Journal of Geophysical Research, 85, no. B11, 6113–6156, <https://doi.org/10.1029/JB085iB11p06113>.

## **C-108 ITEM XII – GEOLOGIC AFFIRMATION**

We have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and any underground sources of drinking water.



Ben Stone, Partner  
SOS Consulting, LLC

Project: LilyStream Water Solutions, LLC  
JDR 35 Fed SWD #1

Reviewed 7/21/2025

## **C-108 ITEM XIII – PROOF OF NOTIFICATION**

### IDENTIFICATION AND NOTIFICATION OF AFFECTED PARTIES

#### **Exhibits for Section**

Affected Parties Map

List of Affected Parties

Notification Letter to Affected Parties

Instructions for PDF Document Access

Proof of Certified Mailing

Affidavit Published Legal Notice



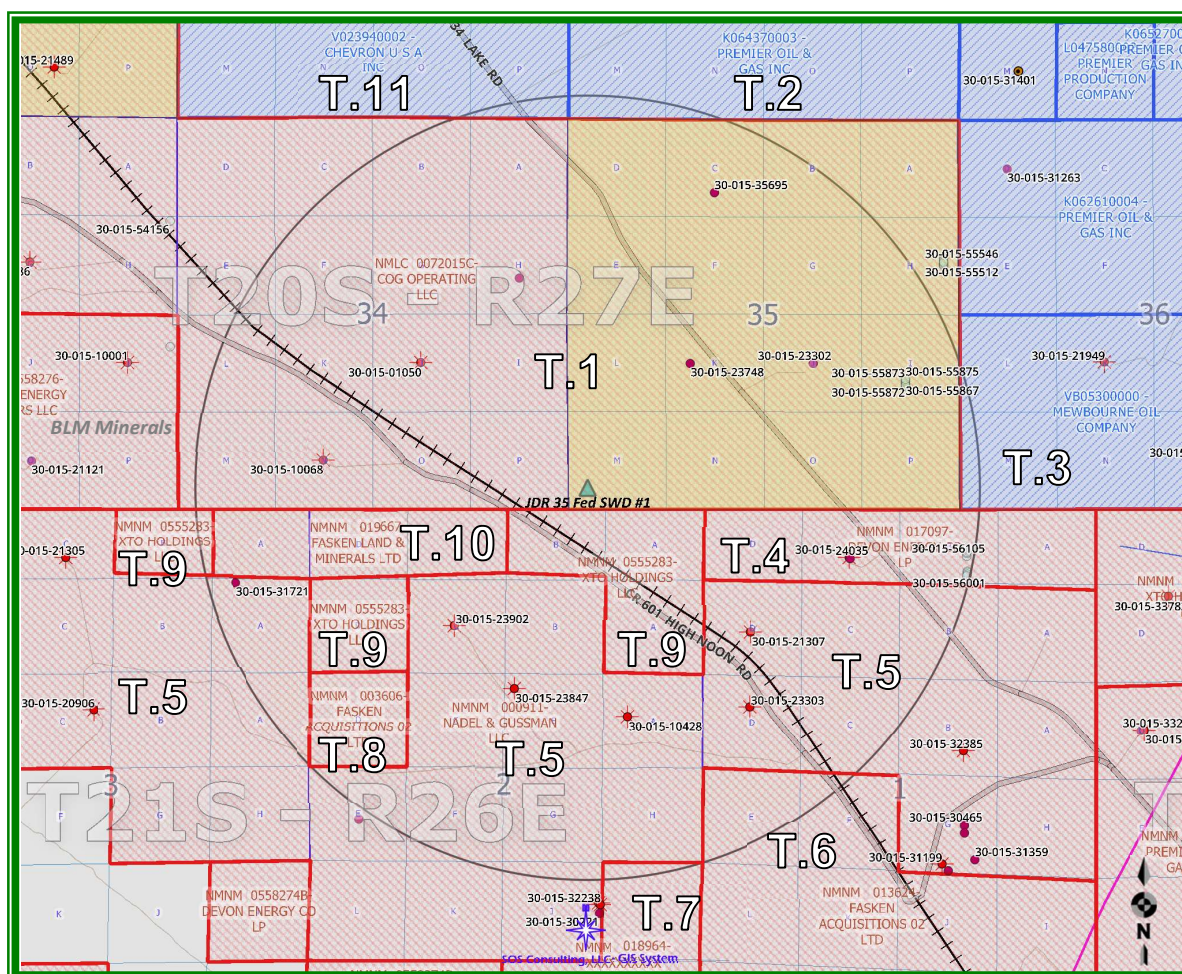
(Attachment to NMOCD Form C-108, Application for Authority to Inject.)





## JDR 35 Fed SWD #1 – One-Mile Affected Parties Plat

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



### LEGEND

(Note: Lessees (L) and active operators (O) as applicable.)

*All Federal Leases except as noted. )*

- |   |   |
|---|---|
| T.1 – BLM – ConocoPhillips (L-COG listed ); Mewbourne (O) | T.7 – BLM – Lease HBP; Mewbourne (O)                |
| T.2 – State –Premier Oil & Gas (L/O)                      | T.8 – BLM – Fasn Acquisitions (L)                   |
| T.3 – State – Mewbourne Oil Co. (L/O)                     | T.9 – BLM – XTO Holdings (L)                        |
| T.4 – BLM – Devon Energy (L); Mewbourne (O)               | T.10 – BLM – Fasken Land & Minerals (L)             |
| T.5 – BLM – Nadel & Gussman (L); Mewbourne (O)            | T.11 – BLM – Chevron USA (L); Permian Resources (O) |
| T.6 – BLM – Fasn Acquisitions (L); Mewbourne (O)          |   |

## C-108 ITEM XIII – PROOF OF NOTIFICATION AFFECTED PARTIES LIST

**ALL AFFECTED PARTIES ARE PROVIDED A NOTICE LETTER VIA US CERTIFIED MAIL CONTAINING UNIQUE 6 CHARACTER DOCUMENT ACCESS CODES FOR SECURE DOWNLOAD OF A PDF COPY OF THE SUBJECT C-108 APPLICATION. AFFECTED PARTIES MAY ALSO REQUEST A PDF COPY VIA SENT EMAIL.**

"AFFECTED PERSON" MEANS THE DIVISION DESIGNATED OPERATOR; IN THE ABSENCE OF AN OPERATOR, A LESSEE WHOSE INTEREST IS EVIDENCED BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILES THE APPLICATION; OR IN THE ABSENCE OF AN OPERATOR OR LESSEE, A MINERAL INTEREST OWNER WHOSE INTEREST IS EVIDENCED BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILED THE APPLICATION FOR PERMIT TO INJECT.; PER OCD RULES NMAC 19.15.26.7, A. AND 19.15.26.8, B.2.

### SURFACE OWNER

NOTICE #	ENTITY	US CERTIFIED TRACKING	SOS DOC ACCESS CODE
1	<b>U.S. DEPARTMENT OF INTERIOR</b> <b>Bureau of Land Management</b> Oil & Gas Division 620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 9392	☒

### OFFSET MINERALS LESSEES and/ or OPERATORS

2	<b>MEWBOURNE OIL COMPANY</b> P.O. Box 5270 Hobbs, NM 88241	7018 2290 0001 2038 9408	☒
3	<b>CONOCOPHILLIPS/ COG OPERATING, LLC</b> 600 W. Illinois Ave. Midland, TX 79701	7018 2290 0001 2038 9415	☒
4	<b>DEVON ENERGY CORP.</b> 333 West Sheridan Avenue OKC, Oklahoma 73102-5015	7018 2290 0001 2038 9422	☒
5	<b>PREMIER OIL &amp; GAS, INC.</b> P.O. Box 837205 Richardson, Texas 75083	7018 2290 0001 2038 9439	☒
6	<b>NADEL &amp; GUSSMAN PERMIAN, LLC</b> 601 N. Marienfeld, Ste. 508 Midland, TX 79701	7018 2290 0001 2038 9446	☒
7	<b>FASKEN OIL &amp; RANCH, LTD</b> 6101 Holiday Hill Rd Midland, TX 79707	7018 2290 0001 2038 9453	☒
8	<b>XTO HOLDINGS, LLC</b> 22777 Springwoods Village Pkwy Spring, Texas 77389	7018 2290 0001 2038 9460	☒
9	<b>CHEVRON USA, INC.</b> 1400 Smith Street Houston, TX 77002	7018 2290 0001 2038 9477	☒
10	<b>PERMIAN RESOURCES, INC.</b> 300 N. Marienfeld St., Ste 1000 Midland, TX 79701	7018 2290 0001 2038 9484	☒

REGULATORY

OIL CONSERVATION DIVISION  
Engineering Bureau – UIC Group  
1220 S. St. Francis Drive  
Santa Fe, NM 87505

Filed via OCD Online

U.S. DEPARTMENT OF INTERIOR  
Bureau of Land Management  
Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220



NOTICE #

ENTITY

US CERTIFIED TRACKING

SOS DOC  
ACCESS  
CODE

11

STATE OF NEW MEXICO  
State Land Office - Commissioner of Public  
Lands, Oil, Gas and Minerals Division  
310 Old Santa Fe Trail  
Santa Fe, NM 87501

7018 2290 0001 2038 9491





July 22, 2025

**NOTIFICATION TO INTERESTED PARTIES**  
**via U.S. Certified Mail – Return Receipt Requested**

To Whom It May Concern:

LilyStream Water Solutions, Lovington, New Mexico, has made application to the New Mexico Oil Conservation Division to permit for salt water disposal the JDR 35 #1 SWD. The SWD operation will be for commercial water disposal from area operators. As indicated in the notice below, the well is located in Section 35, Township 20 South, Range 27 East in Eddy County, New Mexico.

The published notice states that the interval will be from 11,950 feet to 13,800 feet into the Devonian and Silurian formations. Following is the notice published in the Artesia Daily Press, Artesia, New Mexico on or about July 17, 2025.

**LEGAL NOTICE**

LilyStream Water Solutions, LLC, 3219 E. Ave. D, Lovington, NM 88260, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well is the JDR 35 SWD No. 1, located 300' FSL and 250' FWL, Section 35, Township 20 South, Range 27 East, Eddy County, New Mexico; approximately 4.0 miles north/northwest of Carlsbad, NM.

Produced water from area production will be commercially disposed into the Devonian and Silurian formations at a maximum interval depth of 11,950' to 13,800' at a maximum surface pressure of 2390 psi and a maximum rate of 30,000 bwpd and an average rate of 18,500 bwpd.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice or when the application is filed to OCD's e-Permitting system (pursuant to rules and regs) or otherwise, when OCD posts the application to its online system and deemed 'Administratively Complete'. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (936) 967-5950, info@sosconsulting.us.

***You have been identified as a party who may be interested as an offset lessee or operator.***

You are entitled to a full copy of the application. SOS Consulting has deployed a new app for the explicit secure delivery of a full PDF copy of the application. Any user employed with **Affected Party** may log into the system and when prompted for a *Document Access Code*, enter **0000XX** to View or Download the document as desired. Using the *SOS Client and Affected Party Document Access* app takes about one minute, start to finish - instructions are included, and only name, email and company name are needed to access the system.

Thank you for your attention in this matter.

Best regards,

A handwritten signature in blue ink, appearing to read 'Ben Stone', is written over a faint, larger signature.

Ben Stone, SOS Consulting, LLC  
Agent for LilyStream Water Solutions, LLC  
Cc: Application File



## User Information for the SOS Client & Affected Party Portal

Thank you for using the new SOS Document Portal. This system allows for the **secure delivery of all types of applications and any resulting permits**. The system is built in and stored in the cloud using the best available platforms and code for a secure and robust app. We hope you appreciate our efforts to reduce printed paper copies and deliver pertinent documents in a much more efficient way. If you're a client, you may use the portal to view all the applications that SOS Consulting, LLC has generated on behalf of you or your organization.

1

Open the SOS Consulting website at: [www.sosconsulting.us](http://www.sosconsulting.us)

Click the **App Icon** in the upper right corner of the screen...

The secure **SOS Client & Affected Party Portal** site will open...



2

Become a user of the site by entering your email address and basic info for your profile – minimal information is required although we ask that you provide your company name so we may view who and which companies have reviewed a particular document.

(Please note that nothing is done with your information – it is only for access to this portal.)

Each time you log into the SOS Portal, you will be sent a pin code for **2-Step Verification** to your email within 15 seconds. Enter the code for access to the portal.

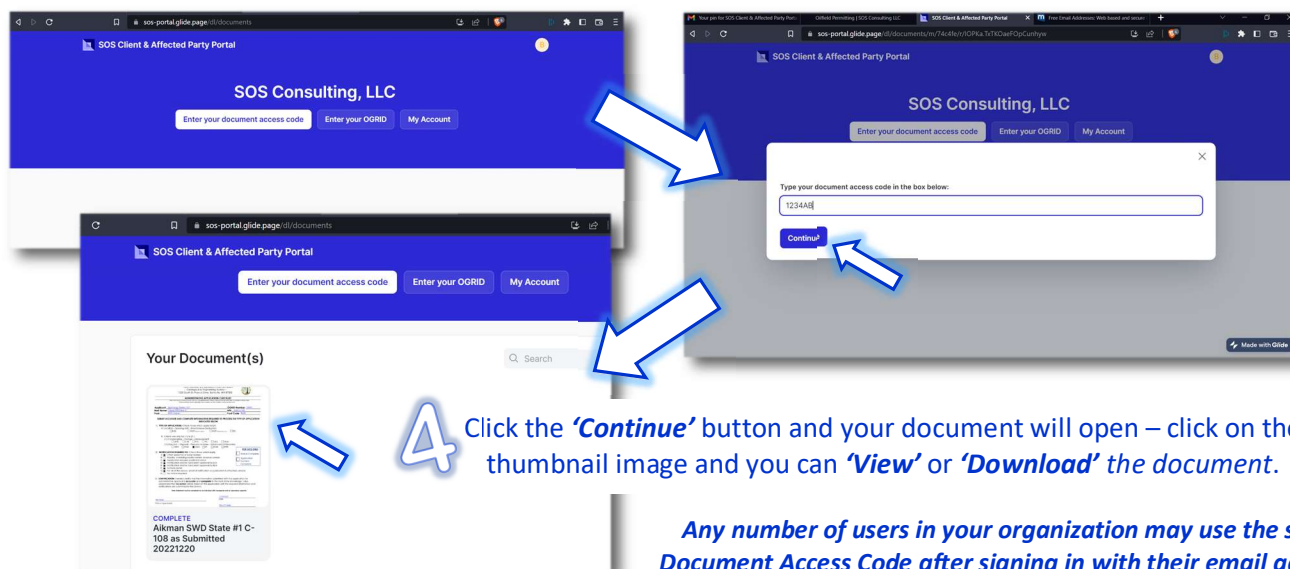


MOBILE ACCESS

3

The SOS portal will open to your user page or the portal home. If you don't see this screen, simply click on the SOS Client & Affected Party title and the home page will open. This page allows you to enter a 'Document Access Code' or if a client, 'Enter your OGRID'. (When entering an OGRID, you will also be prompted for a Client ID for security – SOS Consulting will have already provided this to its clients.)

Note: The unique Document Access Code is provided in your 'Notice Letter to Affected Parties'.



4

Click the 'Continue' button and your document will open – click on the thumbnail image and you can 'View' or 'Download' the document.

**Any number of users in your organization may use the same Document Access Code after signing in with their email address!**

**ben sosconsulting.us**

---

**From:** Tim Harrington <tharrington@mewbourne.com>  
**Sent:** Wednesday, July 16, 2025 1:21 PM  
**To:** ben sosconsulting.us  
**Subject:** RE: [EXT] Devonian SWD prospect in Mewbourne heavy area...

Hi Ben:

I talked to our Midland folks and they did confirm that we plan to drill several more laterals in sections 35 / 34. We will not protest the SWD application as long as the applicant agrees to run a Gyro survey on the well and provide us a copy. We want this fact included somewhere in the application package maybe in the section discussing logs to be performed. Thanks.

**Tim Harrington**  
Reservoir Engineer  
Mewbourne Oil Company  
3620 Old Bullard Road  
PO Box 7698  
Tyler, TX 75701

W -903-534-7647 (Direct)  
C - 832-217-6852  
[tharrington@mewbourne.com](mailto:tharrington@mewbourne.com)

---

**From:** ben sosconsulting.us <ben@sosconsulting.us>  
**Sent:** Tuesday, July 15, 2025 6:57 PM  
**To:** Tim Harrington <tharrington@mewbourne.com>  
**Subject:** RE: [EXT] Devonian SWD prospect in Mewbourne heavy area...

Thanks Tim... this one is surveyed at 300' FSL and 250' FWL. [LilyStream is applicant... will probably end up with Solaris to drill, complete and operate.](#)

Yessir – we're on the seismic – will have the full application ready in the next 10 days or so and I'll get that to you ASAP.

Let me know if you have any other questions.

Thanks,  
Ben





## C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

7018 2290 0001 2038 9392

**U.S. Postal Service™**  
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Postage \$0.78

Total Postage and Fees \$10.48

Sent To Bureau of Land Management  
Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220

PS Form 38

ONALASKA, TX 77360  
JUL 22 2025  
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Extra Services & Fees (check box, add fee as appropriate)

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<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.78

Total Postage and Fees \$10.48

Sent To MEWBOURNE OIL COMPANY  
P.O. Box 5270  
Hobbs, NM 88241

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ONALASKA, TX 77360  
JUL 22 2025  
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Midland, TX 79701

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Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$4.40
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.78

Total Postage and Fees \$10.48

Sent To CONOCOPHILLIPS/ COG OP., LLC  
600 W. Illinois Ave.  
Midland, TX 79701

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Oklahoma City, OK 73102

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Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$4.40
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.78

Total Postage and Fees \$10.48

Sent To DEVON ENERGY OPER. CO.  
333 West Sheridan Avenue  
OKC, Oklahoma 73102-5015

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<input type="checkbox"/> Return Receipt (hardcopy)	\$4.40
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.78

Total Postage and Fees \$10.48

Sent To PREMIER OIL & GAS, INC.  
P.O. Box 837205  
Richardson, Texas 75083

PS Form 38

ONALASKA, TX 77360  
JUL 22 2025  
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7018 2290 0001 2038 9446

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Midland, TX 79701

Certified Mail Fee \$5.30

Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$4.40
<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.78

Total Postage and Fees \$10.48

Sent To NADEL & GUSSMAN PERMIAN, LLC  
601 N. Marienfeld, Ste. 508  
Midland, TX 79701

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ONALASKA, TX 77360  
JUL 22 2025  
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## C-108 - Item XIV

## Proof of Notice (Certified Mail Receipts - cont.)

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For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> . Midland, TX 79707	
Certified Mail Fee \$5.30	Extra Services & Fees (check box, add fee as appropriate)
\$4.40	<input type="checkbox"/> Return Receipt (hardcopy) \$0.00
\$0.00	<input type="checkbox"/> Return Receipt (electronic) \$0.00
\$0.00	<input type="checkbox"/> Certified Mail Restricted Delivery \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Required \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Restricted Delivery \$0.00
Postage \$0.78	
Total Postage and Fees \$10.48	
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Street and Apt.	FASKEN OIL & RANCH, LTD
City, State, ZIP	6101 Holiday Hill Rd Midland, TX 79707
PS Form 380	

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For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> . Spring, TX 77389	
Certified Mail Fee \$5.30	Extra Services & Fees (check box, add fee as appropriate)
\$4.40	<input type="checkbox"/> Return Receipt (hardcopy) \$0.00
\$0.00	<input type="checkbox"/> Return Receipt (electronic) \$0.00
\$0.00	<input type="checkbox"/> Certified Mail Restricted Delivery \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Required \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Restricted Delivery \$0.00
Postage \$0.78	
Total Postage and Fees \$10.48	
Sent To	
Street and Apt.	XTO HOLDINGS, LLC
City, State, ZIP	22777 Springwoods Village Pkwy Spring, Texas 77389
PS Form 380	

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For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> . Houston, TX 77002	
Certified Mail Fee \$5.30	Extra Services & Fees (check box, add fee as appropriate)
\$4.40	<input type="checkbox"/> Return Receipt (hardcopy) \$0.00
\$0.00	<input type="checkbox"/> Return Receipt (electronic) \$0.00
\$0.00	<input type="checkbox"/> Certified Mail Restricted Delivery \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Required \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Restricted Delivery \$0.00
Postage \$0.78	
Total Postage and Fees \$10.48	
Sent To	
Street and Apt.	CHEVRON USA, INC.
City, State, ZIP	1400 Smith Street Houston, TX 77002
PS Form 380	

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For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> . Midland, TX 79701	
Certified Mail Fee \$5.30	Extra Services & Fees (check box, add fee as appropriate)
\$4.40	<input type="checkbox"/> Return Receipt (hardcopy) \$0.00
\$0.00	<input type="checkbox"/> Return Receipt (electronic) \$0.00
\$0.00	<input type="checkbox"/> Certified Mail Restricted Delivery \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Required \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Restricted Delivery \$0.00
Postage \$0.78	
Total Postage and Fees \$10.48	
Sent To	
Street and Apt.	PERMIAN RESOURCES, INC.
City, State, ZIP	300 N. Marienfeld St., Ste 1000 Midland, TX 79701
PS Form 380	

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT Domestic Mail Only	
For delivery information, visit our website at <a href="http://www.usps.com">www.usps.com</a> . Santa Fe, NM 87501	
Certified Mail Fee \$5.30	Extra Services & Fees (check box, add fee as appropriate)
\$4.40	<input type="checkbox"/> Return Receipt (hardcopy) \$0.00
\$0.00	<input type="checkbox"/> Return Receipt (electronic) \$0.00
\$0.00	<input type="checkbox"/> Certified Mail Restricted Delivery \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Required \$0.00
\$0.00	<input type="checkbox"/> Adult Signature Restricted Delivery \$0.00
Postage \$0.78	
Total Postage and Fees \$10.48	
Sent To	
Street and Apt.	NM State Land Office
City, State, ZIP	Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87501
PS Form 380	

**Affidavit of Publication**

No. 55080

State of New Mexico

Publisher

County of Eddy:

**Adrian Hedden**

being duly sworn, says that he is the

**Publisher**

of the Artesia Daily Press, a weekly newspaper of General

circulation, published in English at Artesia,

said county and state, and that the hereto attached

**Display Ad**

was published in a regular and entire issue of the said

Artesia Daily Press, a weekly newspaper duly qualified

for that purpose within the meaning of Chapter 167 of

the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same

day as follows:

First Publication

July 17, 2025

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Eighth Publication

Subscribed and sworn before me this

17th day of July 2025

LATISHA ROMINE  
Notary Public, State of New Mexico  
Commission No. 1076338  
My Commission Expires  
05-12-2027

*Latisha Romine*

Latisha Romine

Notary Public, Eddy County, New Mexico

**Copy of Publication:****LEGAL NOTICE**

LilyStream Water Solutions, LLC, 3219 E. Ave. D, Lovington, NM 88260, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well is the JDR 35 SWD No.1, located 300' FSL and 250 FWL, Section 35, Township 20 South, Range 27 East, Eddy County, New Mexico; approximately 4.0 miles north/northwest of Carlsbad, NM.

Produced water from area production will be commercially disposed into the Devonian and Silurian formations at a maximum interval depth of 11,950' to 13,800' at a maximum surface pressure of 2390 psi and a maximum rate of 30,000 bwpd and an average rate of 18,500 bwpd.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice or when the application is filed to OCDs e-Permitting system (pursuant to rules and regs) or otherwise, when OCD posts the application to its online system and deemed Administratively Complete. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (936) 967-5950, info@sosconsulting.us.  
55080-Published in Artesia Daily Press July 17, 2025.



<b>C-102</b>  Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department <b>OIL CONSERVATION DIVISION</b>	Revised July 9, 2024	
		Submittal Type:	<input type="checkbox"/> Initial Submittal
			<input type="checkbox"/> Amended Report
			<input type="checkbox"/> As Drilled

## WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
Property Code	Property Name <b>JDR 35 SWD</b>	Well Number <b>1</b>
OGRID No.	Operator Name <b>LILYSTREAM WATER SOLUTIONS</b>	Ground Level Elevation <b>3202.6'</b>
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input type="checkbox"/> Federal

## Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>M</b>	<b>35</b>	<b>20-S</b>	<b>27-E</b>		<b>300 FSL</b>	<b>250 FWL</b>	<b>32.523409°N</b>	<b>104.259739°W</b>	<b>EDDY</b>

## Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
<b>M</b>	<b>35</b>	<b>20-S</b>	<b>27-E</b>		<b>300 FSL</b>	<b>250 FWL</b>	<b>32.523409°N</b>	<b>104.259739°W</b>	<b>EDDY</b>

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
Order Numbers.			Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input type="checkbox"/> No	

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
----	---------	----------	-------	-----	--------------	--------------	----------	-----------	--------

## First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
----	---------	----------	-------	-----	--------------	--------------	----------	-----------	--------

## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
----	---------	----------	-------	-----	--------------	--------------	----------	-----------	--------

Unitized Area or Area of Uniform Interest	Spacing Unit Type <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical	Ground Floor Elevation:
---	---	-------------------------

<b>OPERATOR CERTIFICATIONS</b>  <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i>  <i>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</i>		<b>SURVEYOR CERTIFICATIONS</b>  <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i>	
Signature	Date	Signature and Seal of Professional Surveyor	
Printed Name	Certificate Number	Date of Survey	
Email Address	<b>17777</b>	<b>JUNE 11, 2025</b>	
		W.O.#25-424	DRAWN BY: WN
		PAGE 1 OF 2	

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



## WELL SCHEMATIC - PROPOSED JDR 35 SWD Well No. 1

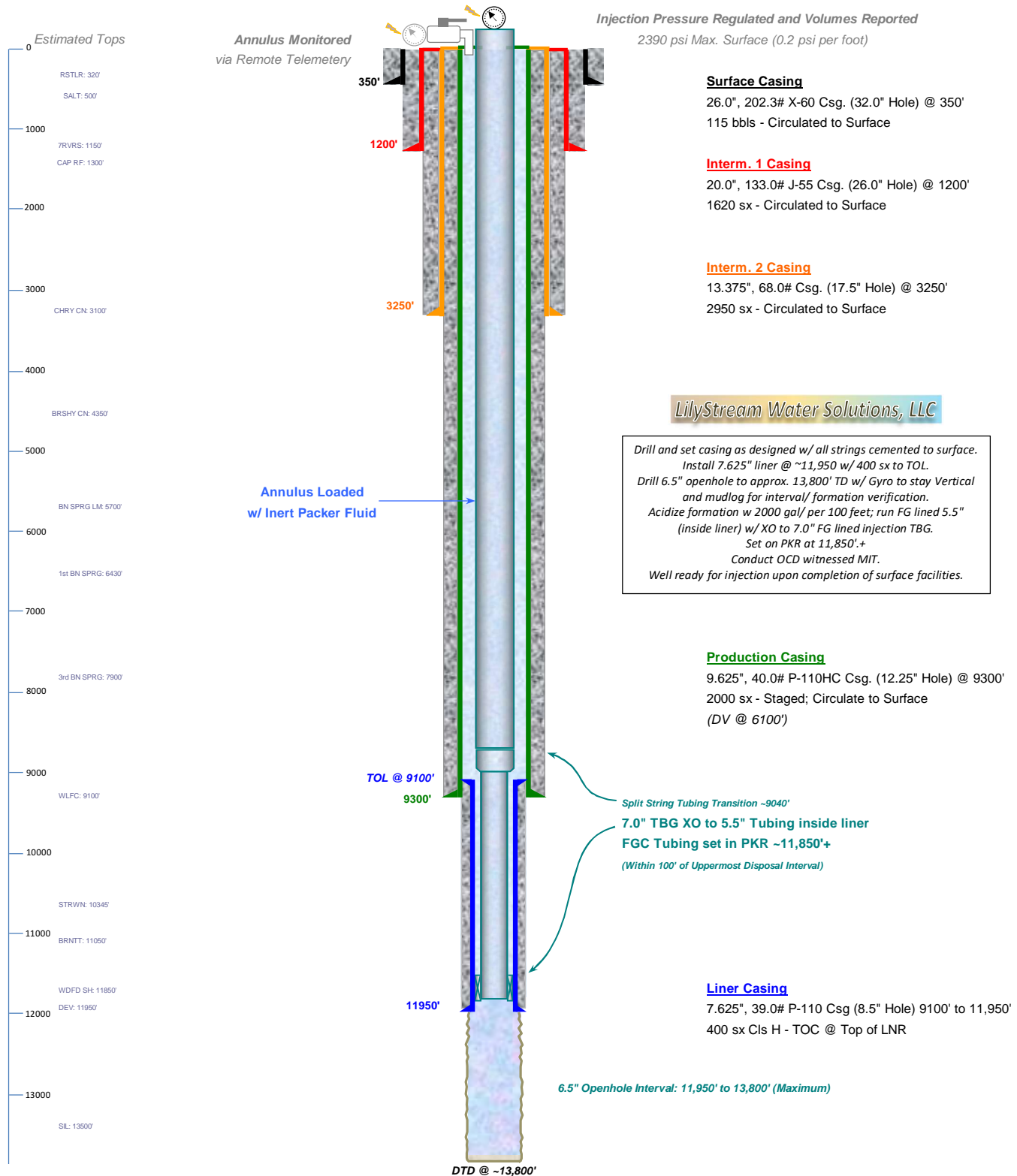
**API 30-025-xxxxx**

300' FSL & 250' FEL, SEC. 35-T20S-R27E  
EDDY COUNTY, NEW MEXICO

SWD; Devonian-Silurian (97869)

Spud Date: 7/20/2026

SWD Config Dt: 8/15/2026



Drawn by: Ben Stone, 7/25/2025



## **C-108 ITEM XIII – PROOF OF NOTIFICATION**

### IDENTIFICATION AND NOTIFICATION OF AFFECTED PARTIES

#### **Exhibits for Section**

Affected Parties Map

List of Affected Parties

Notification Letter to Affected Parties

Instructions for PDF Document Access

Proof of Certified Mailing

Affidavit Published Legal Notice



## **C-108 - Items III, IV, V**

### **Item III - Subject Well Data**

Wellbore Diagram – PROPOSED  
Arrowset Packer Diagram & Datasheet

### **Item IV – Tabulation of AOR Wells**

NO (0) Wells Penetrate the Proposed Injection Interval.

### **Item V – Area of Review Maps**

1. Two Mile AOR Map with One-Mile Fresh Water Well Radius
2. One-Mile AOR Map

All Above Exhibits follow this page.

## Form C-108 Item VI - Tabulation of AOR Wells

Top of Proposed DEVONIAN Interval 11,950'

NO (0) Wells Penetrate Proposed Interval.

API No.	Operator	Well Name & No.	Type	Status	ULSTR	Lease	SPUD Date	Vertical Depth	Plug Date
<u>Sections 1 to 3 Wells</u>									
30-015-21307	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #003	Gas	P&R-R	A-01-21S-26E	Federal	8/1/74	11250'	8/17/22
30-015-55999	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #711H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56000	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #712H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56002	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #714H	Oil	New	B-01-21S-26E	Federal	2/4/25	9200'-9700' v	
30-015-56105	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #854H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56106	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #852H	Oil	New	B-01-21S-26E	Federal	12/30/99	9200'-9700' v	
30-015-56107	MEWBOURNE OIL CO	TOUGH OMBRES 6 4 FEDERAL COM #851H	Oil	New	B-01-21S-26E	Federal	12/30/99	11279'	
30-015-05930	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	P&R-R	C-01-21S-26E	No Data	12/31/1899	11006'	12/30/99
30-015-24035	MEWBOURNE OIL CO	GULF FEDERAL COM #001	Gas	Active	C-01-21S-26E	Federal	1/29/82	9200'-9700' v	
30-015-23303	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #005	Gas	P&R-R	I-01-21S-26E	Federal	8/12/80	11,400'	5/7/23
30-015-10428	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	P&R-R	A-02-21S-26E	Federal	12/31/1899	11191'	12/31/1899
30-015-23902	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #007	Gas	P&R-R	C-02-21S-26E	Federal	8/30/81	11209'	6/12/23
30-015-23847	FASKEN OIL & RANCH LTD	EL PASO FEDERAL #006	Gas	P&R-R	J-02-21S-26E	Federal	12/30/99	11104'	8/24/10
30-015-31721	MEWBOURNE OIL CO	EL PASO FEDERAL #014	Gas	Active	A-03-21S-26E	Federal	6/7/01	11,006'	
<u>Sections 34 to 35 Wells</u>									
30-015-30331	MEWBOURNE OIL CO	MARALO 34 FEDERAL #003	Gas	Active	H-34-20S-27E	Federal	4/11/99	11,104'	
30-015-01050	PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL #001	Oil	P&R-R	J-34-20S-27E	Federal	12/31/1899	150'	12/31/1899
30-015-10068	MARALO LLC	HANSON FEDERAL #001	Gas	P&R-R	N-34-20S-27E	Federal	12/30/99	11,880'	1/23/96
30-015-35695	MEWBOURNE OIL CO	MARALO 35 FEDERAL #005	Gas	Active	C-35-20S-27E	Federal	8/6/07	11,189'	
30-015-23302	MEWBOURNE OIL CO	MARALO FEDERAL #001	Gas	Active	J-35-20S-27E	Federal	6/26/80	11,360'	
30-015-23748	MEWBOURNE OIL CO	MARALO FEDERAL #002	Gas	Active	K-35-20S-27E	Federal	5/10/81	11,250'	
30-015-55866	MEWBOURNE OIL CO	CRIPPLE CREEK 35 34 FEDERAL #618H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55867	MEWBOURNE OIL CO	CRIPPLE CREEK 35 34 FEDERAL #716H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55872	MEWBOURNE OIL CO	OMAHA 36 31 FEDERAL COM #718H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55873	MEWBOURNE OIL CO	OMAHA 36 31 FEDERAL COM #715H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55874	MEWBOURNE OIL CO	OMAHA 36 31 B2MP FEDERAL COM #001H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	
30-015-55875	MEWBOURNE OIL CO	OMAHA 36 31 B2LI FEDERAL COM #001H	Oil	New	I-35-20S-27E	Federal	12/30/99	7900'-9000' v	

**SUMMARY: NO (0) wells penetrate the proposed disposal interval, 0 Active & 0 P&A.**

## **C-108 ITEM VII – PRODUCED WATER ANALYSES**

*Source and Disposal Waters are Reasonably Compatible.*

### **Item VII.4 – Water Analysis of Source Zone Water**

Delaware, Penn, Bone Spring, Wolfcamp

### **Item VII.5 – Water Analysis of Disposal Zone Water**

Devonian

*Water analysis summaries follow this page...*



NM Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

**Re: Geology Statement**  
**Lilystream Water Solutions**  
**JDR 35 SWD #1**  
**Section 35, T. 20S, R. 27E**  
**Eddy County, New Mexico**

To whom it may concern:

Publicly available geologic and engineering data related to the proposed well have been thoroughly reviewed, and no evidence for open faults or any other hydrologic connection between the proposed Silurian/Devonian injection zone and any underground sources of drinking water has been found. Please see the attached seismic risk assessment for additional information.


Sincerely,

A handwritten signature in black ink that reads "Cory Walk". The signature is written in a cursive, flowing style.

Cory Walk  
Geologist

**Seismic Risk Assessment**  
**Lilystream Water Solutions**  
**JDR 35 SWD No. 1**  
**Section 35, Township 20 South, Range 27 East**  
**Eddy County, New Mexico**

**Cory Walk, M.S.**

A handwritten signature in black ink that reads "Cory Walk". The signature is written in a cursive style with a large, stylized "C" and "W".

**Geologist**  
**Permits West Inc.**

**July 28, 2025**

## GENERAL INFORMATION

JDR 35 SWD #1 is located in the SW 1/4, section 35, T.20S, R.27E, about 8 miles north of Carlsbad, NM in the Permian Basin. Lilystream Water Solutions proposes to dispose produced water within the Silurian/Devonian Formation through an open hole from 11,950'-13,800' below ground surface. This report assesses any potential concerns relating to induced seismicity along deep penetrating Precambrian faults or the connection between the injection zone and known underground potable water sources.

## SEISMIC RISK ASSESSMENT

### *Historical Seismicity*

Searching the USGS earthquake catalog resulted in one (1) earthquake above a magnitude 2.5 within 6 miles (9.7 km) of the proposed deep disposal site since 1970 (Fig. 1). The nearest earthquake occurred on August 14, 2024 about 3.9 miles (6.2 km) east of the proposed SWD site and had a magnitude of 3.1.

### *Basement Faults and Subsurface Conditions*

A structure contour map (Fig. 1) of the Precambrian basement shows the JDR 35 SWD #1 is approximately 1.9 miles (3.1 km) from the nearest basement-rooted fault inferred by Horne et al (2021). **Information about known nearby faults based on GIS data from Horne et al. (2021) is listed in Table 1.**

Snee and Zoback (2018) state, "In the western part of Eddy County, New Mexico,  $S_{Hmax}$  is ~north-south (consistent with the state of stress in the Rio Grande Rift; Zoback and Zoback, 1980) but rotates to ~east-northeast-west-southwest in southern Lea County, New Mexico and the northernmost parts of Culberson and Reeves counties, Texas." **Around the JDR 35 SWD #1 site, Snee and Zoback indicate a  $S_{Hmax}$  direction of N010°E and an  $A_p$  of 0.57, indicating an extensional (normal) stress regime.**

### *Fault Slip Potential (FSP) Modeling*

Induced seismicity is a growing concern of deep SWD wells. Software developed by the Stanford Center for Induced and Triggered Seismicity allows for the probabilistic screening of deeply penetrating faults near the proposed injection zone (Walsh et al., 2016; Walsh et al., 2017). This software uses parameters such as stress orientations, fault strike/dip, injection rates, fault friction coefficients, etc. to estimate the potential for fault slip. Using the best available data as input parameters (Table 2) including the subject well injecting at the proposed maximum of 30,000 bbls/day and all other existing SWDs within a 6 mile radius injecting at their individual historical peak annual volume (3 total SWD wells), the Fault Slip Potential (FSP) models suggest a three (0.03) percent chance of slip on a nearby fault, inferred by Horne et al. (2021), through the year 2046 (Fig. 2; Table 1). **This model also suggests a pore pressure increase of 22 psi on the nearest publicly known fault (Fault 16; Fig. 3; Table 1) by the year 2046.** Geomechanical modeling shows that the primary fault of concern (fault 15) would need a pressure increase of 1639 psi to reach a 100% probability of slip on the fault. A 50% probability requires an increase of 336 psi which is 17x greater than the modeled increase of 19 psi (Fig. 3).



## **GROUNDWATER SOURCES**

Quaternary Alluvium acts as the principal aquifer used for potable ground water near the JDR 35 SWD #1 location (Hendrickson and Jones, 1952). Nicholson and Clebsch (1961) state, "Potable ground water is not available below the Permian and Triassic unconformity but, because this boundary is not easily defined, the top of the Rustler anhydrite formation is regarded as the effective lower limit of 'potable' ground water." Around the JDR 35 SWD #1, the top of the Rustler Formation lies at an estimated depth of 100' bgs.

## **VERTICAL MIGRATION OF FLUIDS**

Permeability barriers exist above (Woodford shale; 55 ft thick) and below (Simpson Group; 75 ft thick) the targeted Silurian/Devonian injection zone (Plate 2, Comer et al., 1991; Fig. 8, Frenzel et al., 1988). Summing the estimated thicknesses of underlying formations found in isopach data presented in Ruppel (2009), the calculated top of the Precambrian basement is at a depth of approximately 14,850' in this area. Therefore, the injection zone lies approximately 1,050' above the Precambrian basement and approximately 11,850' below the previously stated lower limit of potable water at the top of the Rustler formation.

## **CONCLUDING STATEMENTS**

After examination of publicly available geologic and engineering data, there is no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

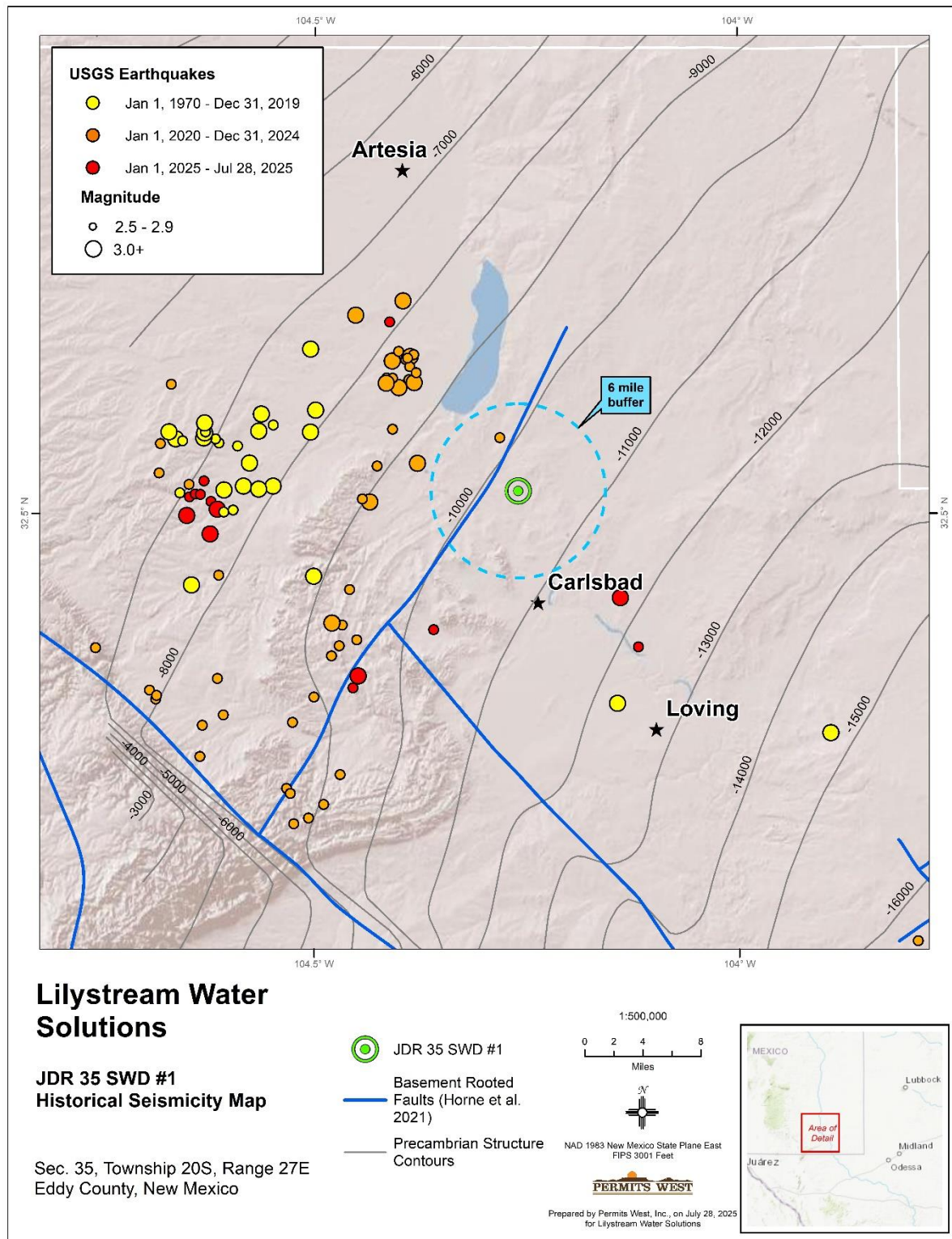


Figure 1. Structural contour map of the Precambrian basement in feet below sea level. Blue lines represent the locations of Precambrian basement-rooted faults (Horne et al., 2021). JDR 35 SWD #1 well lies ~1.9 miles southeast of the closest deeply penetrating fault and 3.9 miles south from the closest historic earthquake.

**Table 1: Nearby Basement Fault Model Results**

<b>Fault Number</b>	<b>Distance to proposed SWD (mi)</b>	<b>Strike (°)</b>	<b>Dip (°)</b>	<b>FSP (2044)</b>	<b>Δ Pore Pressure after 20 years (psi)</b>	<b>Δ Pore Pressure needed for 100% FSP (psi)</b>	<b>Δ Pore Pressure needed for 50% FSP (psi)</b>
Fault 16	1.9	31	70	0.01	22	1497	411
Fault 15	2.5	26	70	0.03	19	1639	336
Fault 1	13.0	131	65	0.00	2	3309	1593

**Table 2: Fault Slip Potential model input parameters**

<b>Faults</b>	<b>Value</b>	<b>Notes</b>
Friction Coefficient	0.58	Ikari et al. (2011)
Dip Angle (deg)	60-72	Horne et al. (2021)
<b>Stress</b>		
Vertical stress gradient (psi/ft)	1.1	Hurd and Zoback (2012)
Max Horizontal Stress Direction (deg)	10	Snee and Zoback (2018)
Depth for calculations (ft)	12000	Proposed injection zone
Initial Reservoir Pressure Gradient (psi/ft)	0.7	calculated from mud wt (ppg) used in drilling at these depths
A Phi Parameter	0.57	Snee and Zoback (2018)
Reference Friction Coefficient	0.58	Ikari et al. (2011)
<b>Hydrology</b>		
Aquifer thickness (ft)	1900	Proposed injection zone
Porosity (%)	6	
Permeability (mD)	150	
Injection Rate (bbl/day)	30000	Maximum proposed injection rate

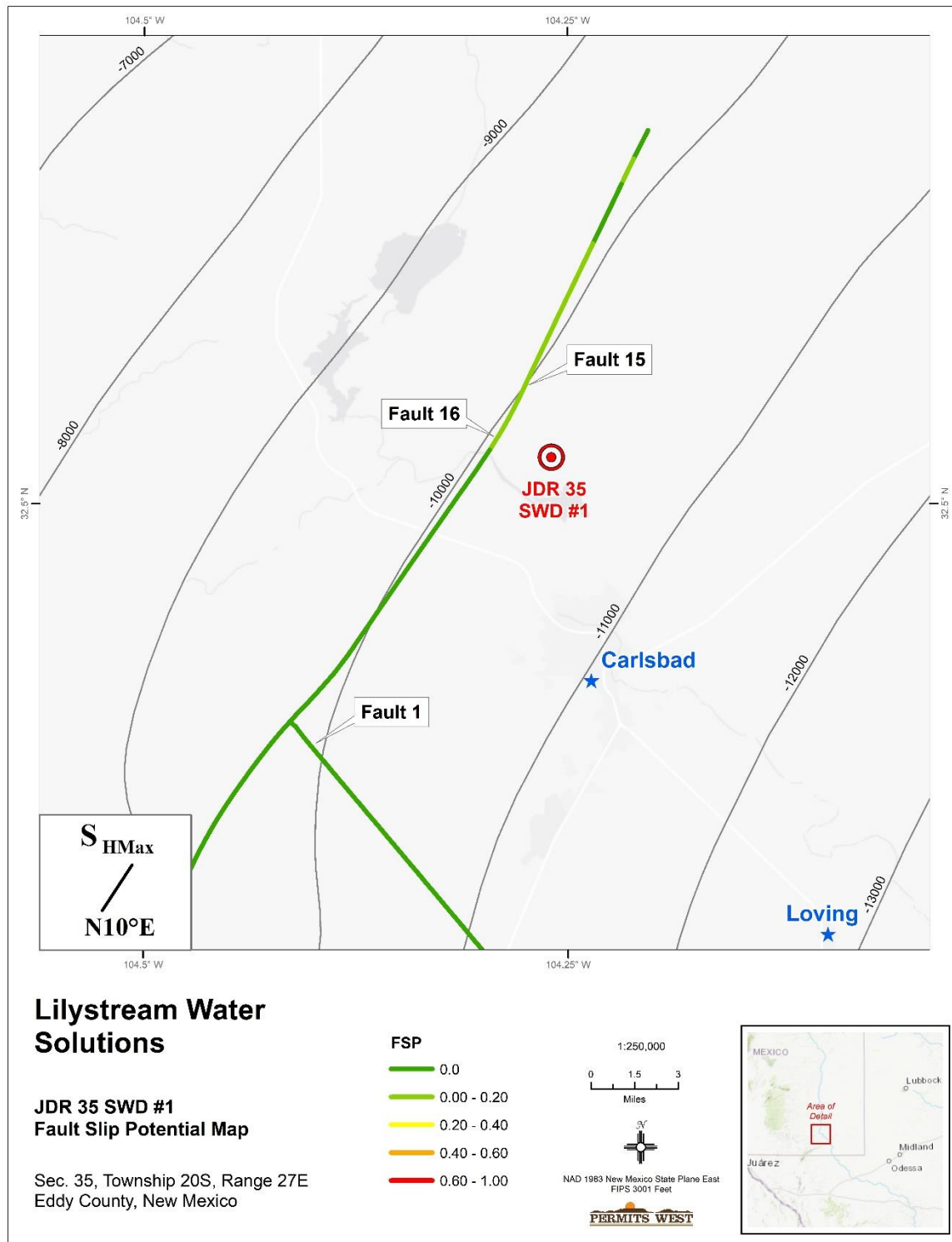


Figure 2. Precambrian fault map of the JDR 35 SWD #1 area as mapped by Horne et al. (2021). Faults are colored based on probability of fault slip as modeled using Fault Slip Potential software (Walsh and Zoback, 2016). Labeled values represent the calculated fault slip potential using the parameters indicated in Table 2. Contours show the top of the Precambrian basement in feet below sea level.

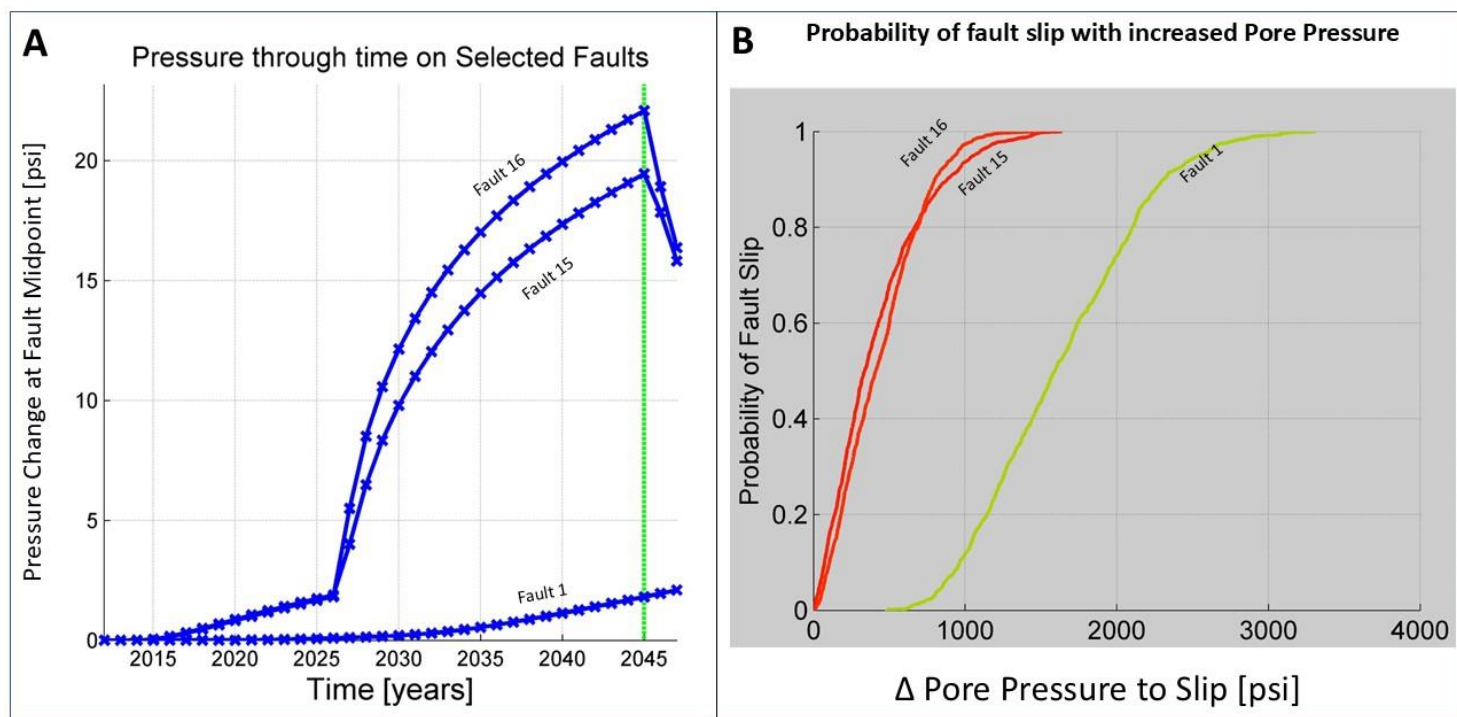


Figure 3. A) Plot showing the modeled change of pore pressure on nearby faults through time as a response to the proposed SWD well. B) Plot showing the required pore pressure increase needed to produce specific probabilities of fault slip on nearby faults.



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## **C-108 ITEM VII – PROPOSED OPERATION**

### **JDR 35 SWD No.1**

#### ***Commercial SWD Well and Facility (BLM Surface and BLM Minerals)***

Upon approval of all permits for SWD including the BLM APD Form 3160-3, planning for drilling and other scheduling operations would begin within 30 days. The prospect is located within the 4-String requirement area with the well designed to meet those requirements. During drilling, a gyro survey will be run to make sure the wellbore stays within vertical tolerance and the data and reports shall be furnished to offset operators that desire to confirm the results.

Subsequent completion of the well will take approximately 6-8 weeks would be followed closely by facility construction. Whatever ancillary operations that could commence during the same interval without access conflicts may also take place. This would include installation of the tank battery, berms, plumbing and other associated equipment. In any event, it is not expected for the construction phase of the project to last more than 90 days, depending on availability of contractors and equipment.

#### ***Configure for Salt Water Disposal***

Prior to commencing any work, an NOI sundry(ies – BLM as applicable) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD and BLM test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.

#### ***Operational Summary***

The SWD facility will not be fenced so that trucks may access for load disposal 24/7.

The well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.

The tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation.

Anticipated daily maximum volume is 30,000 bpd and an average of 18,500 bpd at a maximum surface injection pressure of 2390 psi (.2 psi/ft gradient – maximum pressure will be adjusted if the top of interval is modified after well logs are run).

Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbls. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC; as necessary and appropriate and OCD form C-141 will be submitted promptly.

All required OCD and BLM forms will be filed as appropriate and in a timely manner.

**Affidavit of Publication**

No. 55080

State of New Mexico

Publisher

County of Eddy:

**Adrian Hedden**

being duly sworn, says that he is the

**Publisher**

of the Artesia Daily Press, a weekly newspaper of General

circulation, published in English at Artesia,

said county and state, and that the hereto attached

**Display Ad**

was published in a regular and entire issue of the said

Artesia Daily Press, a weekly newspaper duly qualified

for that purpose within the meaning of Chapter 167 of

the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same

day as follows:

First Publication

July 17, 2025

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Eighth Publication

Subscribed and sworn before me this

17th day of July 2025

LATISHA ROMINE  
Notary Public, State of New Mexico  
Commission No. 1076338  
My Commission Expires  
05-12-2027

*Latisha Romine*

Latisha Romine

Notary Public, Eddy County, New Mexico

**Copy of Publication:****LEGAL NOTICE**

LilyStream Water Solutions, LLC, 3219 E. Ave. D, Lovington, NM 88260, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well is the JDR 35 SWD No.1, located 300' FSL and 250 FWL, Section 35, Township 20 South, Range 27 East, Eddy County, New Mexico; approximately 4.0 miles north/northwest of Carlsbad, NM.

Produced water from area production will be commercially disposed into the Devonian and Silurian formations at a maximum interval depth of 11,950' to 13,800' at a maximum surface pressure of 2390 psi and a maximum rate of 30,000 bwpd and an average rate of 18,500 bwpd.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice or when the application is filed to OCDs e-Permitting system (pursuant to rules and regs) or otherwise, when OCD posts the application to its online system and deemed Administratively Complete. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (936) 967-5950, info@sosconsulting.us.  
55080-Published in Artesia Daily Press July 17, 2025.

Sante Fe Main Office  
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<https://www.emnrd.nm.gov/oed/contact-us>

State of New Mexico  
Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 S. St Francis Dr.  
Santa Fe, NM 87505

CONDITIONS

Action 495631

CONDITIONS

Operator: LilyStream Water Solutions LLC 1308 West Ave. N Lovington, NM 88260	OGRID: 373500
	Action Number: 495631
	Action Type: [C-108] Fluid Injection Well (C-108)

CONDITIONS

Created By	Condition	Condition Date
erica.gordan	None	8/25/2025