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

APPLICATION OF SELECT WATER SOLUTIONS, LLC FOR APPROVAL OF A SALTWATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO.

CASE NO.	

APPLICATION

Pursuant to 19.15.26.8 NMAC, Select Water Solutions, LLC ("Select Water") requests that the New Mexico Oil Conservation Division ("Division") issue an order approving a saltwater disposal well in Lea County, New Mexico. In support of its application, Select Water states the following.

- 1. Select Water (OGRID No. 289068) seeks an order approving its proposed Jackrabbit Fed SWD #1, to be drilled at a location 556' from the south line and 1,968' from the east line (Unit O) of Section 28, Township 26 South, Range 35 East, Lea County, New Mexico, for the purpose of produced water disposal.
- 2. Select Water seeks authorization to inject produced water into the Bell Canyon and Cherry Canyon formations (SWD; Bell Canyon-Cherry Canyon; Code 96802), at a depth of approximately 5,305 feet to 7,750 feet.
- 3. Select Water proposes to inject an average of 15,000 barrels of water per day up to a maximum of 20,000 barrels of water per day.
- 4. Select Water requests that the Division approve a maximum surface injection pressure of 1,061 psi.
- 5. A Division Form C-108, which includes an area of review map, structural cross sections, seismic sections and analysis, no hydrologic connection statement, reservoir characterization, source water analysis, injection formation water analysis, water well map and

data, reservoir performance modeling, list of wells, and list of affected parties, is attached as Exhibit A.

6. The granting of this application will prevent waste and protect correlative rights.

WHEREFORE, Select Water requests that this application be set for hearing on September 11, 2025, and that, after notice and hearing, the Division enter an order approving this application and authorizing Select Water to inject produced water into the Jackrabbit Fed SWD #1.

Respectfully submitted,

HARDY MCLEAN LLC

/s/ Dana S. Hardy

Dana S. Hardy
Jaclyn M. McLean
Jaime R. Kennedy
125 Lincoln Ave, Ste. 223
Santa Fe, NM 87501
Phone: (505) 230-4410
dhardy@hardymclean.com
jmclean@hardymclean.com

Counsel for Select Water Solutions, LLC

RECEIVED:	REVIEWER:	TYPE:	APP NO:	
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N	ote: Statement must be comp	eted by an individual wi	th managerial and/or su	pervisory capacity.
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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:Secondary RecoveryPressure MaintenanceXDisposalStorage Application qualifies for administrative approval?YesXNo
II.	OPERATOR: Select Water Solutions, LLC
	ADDRESS: 1820 N I-35, Gainesville, TX 76240
	CONTACT PARTY: David Cheek PHONE: 405-482-7508
III.	WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project?YesXNo If yes, give the Division order number authorizing the project:
V.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
*VIII.	Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
*X.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
*XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	NAME: Reed Davis TITLE: Geophysicist
	SIGNATURE: DATE: 07/28/25
*	E-MAIL ADDRESS: rdavis@all-llc.com If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

Application for Authorization to Inject Well Name: Jackrabbit Fed SWD #1

III – Well Data (The wellbore diagram is included as **Attachment 1**)

Α.

(1) General Well Information:

Operator: Select Water Solutions, LLC (OGRID No. 289068) Lease Name & Well Number: Jackrabbit Fed SWD #1

Location Footage Calls: 566' FSL & 1,968' FEL

Legal Location: Lot O, S28 T26S R35E

Ground Elevation: 3,161'

Proposed Injection Interval: 5,305' - 7,750'

County: Lea

(2) Casing Information:

Туре	Hole Size			Setting Depth	Sacks of Cement	Estimated TOC	Method Determined	
Conductor	20"	18-5/8"	94.5 lb/ft	120'	35	Surface	Circulation	
Surface	17-1/2"	13-3/8"	54.5 lb/ft	1,040'	650	Surface	Circulation	
Intermediate	12-1/4"	9-5/8"	40.0 lb/ft	5,290'	1,090	Surface	Circulation	
Production	8-3/4"	7-5/8"	29.7 lb/ft	7,780'	3,060	Surface	CBL	
Tubing		5-1/2"	17.0 lb/ft	5,285'				

(3) Tubing Information:

5-1/2" (17.0 lb/ft) fiberglass or equivalent lined tubing with setting depth of 5,285'.

(4) Packer Information: SC-2 or equivalent packer set at 5,285'.

В.

(1) Injection Formation Name: Bell Canyon and Cherry Canyon

Pool Name: SWD; BELL CANYON-CHERRY CANYON

Pool Code: 96802

- (2) Injection Interval: Perforated injection between 5,305′ 7,750′
- (3) Drilling Purpose: New drill for saltwater disposal
- (4) Other Perforated Intervals: No other perforated intervals exist.
- (5) Overlying Oil and Gas Zones: Below are the approximate formation tops for known oil and gas producing zones in the area.
 - None

Underlying Oil and Gas Zones: Below are the approximate formation tops for known oil and gas producing zones in the area.

- Brushy Canyon (7,915')
- Bone Spring (9,340')
- Wolfcamp (12,600')

V – Well and Lease Details

The following maps and documents are included as **Attachment 2**:

- 2-mile Production Review Map
- 1-mile Problem Well Map
- 1-mile AOR Well Table
- 2-Mile Lease Map
- 2-Mile Mineral Ownership Map
- 2-Mile Surface Ownership Map
- Potash Lease Map

VI – AOR Well List

As recommended by the Oil Conservation Division (OCD) in Cases 23686 and 23687 Exhibit 11a 1.d, the proposed Select Delaware Mountain Group SWDs have been planned with uniform spacing and a one-mile radius area of review.

A list of the well(s) within the 1-mile AOR is included in Attachment 2.

Ten wells in the 1-mile AOR penetrate the proposed injection zone. All of these wells have been properly cased and cemented through the proposed injection zone.

VII – Proposed Operation

(1) Proposed Maximum Injection Rate: 20,000 bpd Proposed Average Injection Rate: 15,000 bpd

Step Rate Test: Select intends to conduct a Step Rate Test (SRT) at the proposed Jackrabbit Fed SWD #1 location, prior to commencement of injection, to determine the formation

fracture gradient and maximum allowable surface injection pressure.

- (2) A closed-loop system will be used.
- (3) Proposed Maximum Injection Pressure: 1,061 psi (surface)
 Proposed Average Injection Pressure: Approximately 776 psi (surface)
- (4) Source Water Analysis: The expected injectate will consist of produced water from production wells completed in the Abo, Yeso Group, Avalon Shale, Bone Spring, and Wolfcamp formations. Publicly available water quality analysis from the Go-Tech database is included for these formations as *Attachment 3*.
- (5) Injection Formation Water Analysis: The proposed SWD will be injecting water into the Bell Canyon and Cherry Canyon formations of the Delaware Mountain Group, which are non-productive zones known to be compatible with formation water from the Abo, Yeso Group, Avalon Shale, Bone Spring, and Wolfcamp formations. Water analyses from the Delaware Mountain Group in the area are included as *Attachment 4*.

VIII - Geologic Description

The proposed injection interval includes the Bell Canyon and Cherry Canyon formations of the Delaware Mountain Group from 5,305'-7,750'. The Guadalupian-age Bell Canyon and Cherry Canyon formations consist primarily of sandstones and siltstones with significant primary porosity and permeability, indicating these formations are viable injection targets. Select Water

Solutions, LLC will not perforate or inject into the Lamar Dolomite or Brushy Canyon Formation of the Delaware Mountain Group.

Further reservoir characterization, including discussion of the injection formation, overlying and underlying confinement zones, and historic use of the field is included as **Attachment 5**. In addition, structural and seismic cross sections depicting the area are included as **Appendix A**. Expert evaluation of the 3-D seismic section and structural cross sections are included within the 3-D Seismic Interpretation Statement as **Attachment 8**.

Reservoir performance modeling, over 20 years, is included as Appendix B.

The base of the USDW is the Rustler Formation at a depth of approximately 1,040 feet. There are no water wells within the one-mile radius.

IX – Proposed Stimulation Program

A small cleanup acid job may be used to remove mud and drill cuttings from the formation. However, no other formation stimulation is currently planned.

X - Logging and Test Data

Logs to be run include gamma ray, resistivity, neutron density, and sonic and will be submitted to the Division upon completion of the well.

Every two years, a static bottomhole pressure reading will be obtained, and a report will be generated to summarize performance based on injection volume, injection pressure, and any additional information collected during the period. The evaluation will include a delineation of the injection pressure front and a Hall's plot for each year and every four years an injection survey will be conducted.

XI – Fresh Groundwater Samples

Based on a review of data from the New Mexico Office of the State Engineer, there is one water well located within 1-mile of the proposed SWD location. The well has been plugged and is not able to be sampled.

A water well map is included as **Attachment 6**.

XII – No Hydrologic Connection Statement

No publicly known faulting is present in the area that would provide a hydrologic connection between the injection interval and overlying USDWs. Additionally, the casing program has been designed to ensure there will be no hydrologic connection between the injection interval and overlying USDWs.

A signed No Hydrologic Connection Statement is included as Attachment 7.

XIII – Notice

A list of notice recipients is included as **Attachment 9**.

Attachment 1:

- C-102
- Wellbore Diagram
- Packer Diagram

Attachment 2: Area of Review Information:

- 2-mile Production Review Map
- 1-mile Problem Well Map
- 1-mile AOR Well Table
- 2-mile Lease Map
- 2-mile Mineral Ownership Map
- 2-mile Surface Ownership Map
- Potash Lease Map

Attachment 3: Source Water Analysis

Attachment 4: Injection Formation Water Analysis

Attachment 5: Reservoir Characterization

Attachment 6: Water Well Map and Well Data

Attachment 7: No Hydrologic Connection Statement

Attachment 8: 3-D Seismic Interpretation Statement

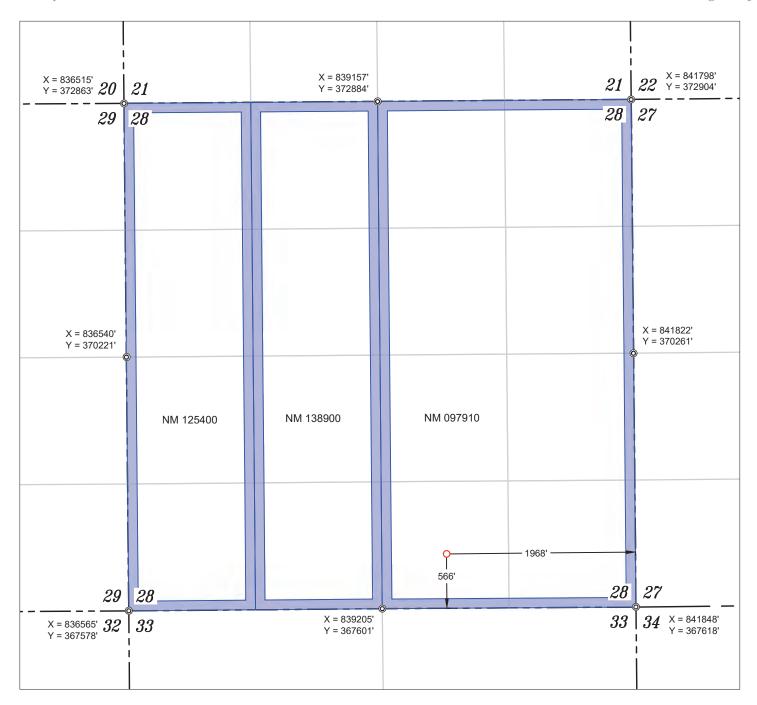
Attachment 9: List of Affected Persons

Appendix A: Seismic and Structural Cross Sections

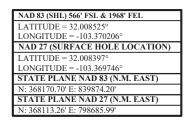
Appendix B: Reservoir Performance Modeling

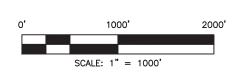
- C-102
- Wellbore Diagram
- Packer Diagram

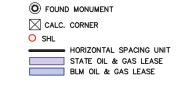
<u>C-10</u>	12		En	C	inerals & Nat	ew Mexico ural Resource		rtment	Revised July 9, 2024			
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API Nu	ımber		Pool Code			Pool Name						
Property	y Code		Property Na	ıme	JACKF	RABBIT FED S	SWD			Well Number	er #1	
OGRID	No.		Operator Na	ame	SELECT WA	TER SOLUTION	ONS, LL	С		Ground Lev	rel Elevation 3161'	
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					Sur	rface Location						
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					Botto	m Hole Locatio	n					
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/	W	Latitude		Longitude	County	
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Order N	Numbers.					Well setbacks are under Common Ownership: □Yes □No						
					Kick	Off Point (KOP))					
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/		Latitude		Longitude	County	
					First '	Take Point (FT)	P)					
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/	W	Latitude		Longitude	County	
				1	Last	Take Point (LT)	P)					
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/	W	Latitude		Longitude	County	
Unitize	d Area or Ar	ea of Uniform I	nterest	Spacing	Unit Type □ Hoi	rizontal 🛭 Vertica	al	Grou	nd Floor E	levation: 3161'		
OPER	ATOR CER	TIEIC A TIONS				GLIDVENCE	CEDTIE	CATIONS				
OPERATOR CERTIFICATIONS 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. 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.						that the well	location shown		t was plotted from fi the same is true and	ONEXICO O		
MAY 27, 2025						O In	4	1. Wa	ui_	PROF	ESSIONALSUI	
Signatur	re		Date	;		Signature and S	Seal of Prof	essional Surve	eyor			
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Printed 1	Name					Certificate Nur	mber	Date of Surv	vey			
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WELL NAME: <u>JACKRABBIT FED SWD #1</u> ELEVATION: <u>3161'</u>

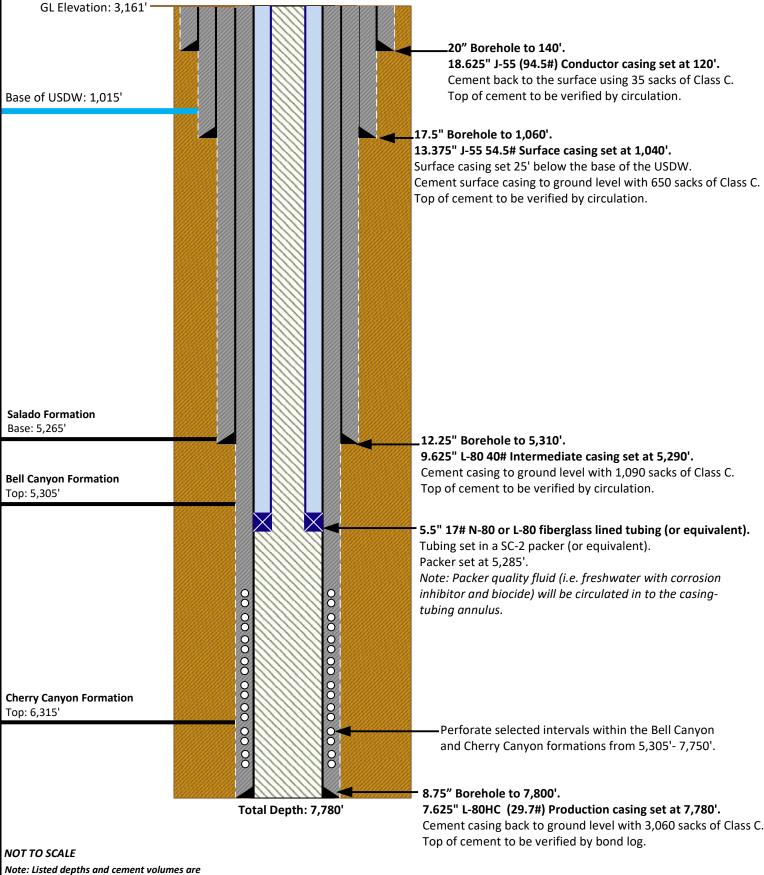






<u>NOTES</u>

- 1. ALL COORDINATES, BEARINGS, AND DISTANCES CONTAINED HEREIN ARE GRID (U.S. SURVEY FEET), BASED UPON THE NEW MEXICO STATE PLANE COORDINATES SYSTEM, NORTH AMERICAN DATUM 83, NEW MEXICO EAST (3001).
- 2. THIS DOCUMENT IS BASED UPON AN ON THE GROUND SURVEY PERFORMED DURING MAY, 2025. CERTIFICATION OF THIS DOCUMENT IS ONLY TO THE LOCATION OF THIS EASEMENT IN RELATION TO RECORDED MONUMENT OF DEEDS PROVIDED BY THE CLIENT.
- 3. ELEVATIONS NAVD88, DERIVED FROM G.N.S.S. OBSERVATION AND DERIVED FROM SAID ON-THE-GROUND SURVEY.



Note: Listed depths and cement volumes are approximates based on available information.



Drawn by: Joshua Ticknor

Project Manager: Reed Davis

Date: 7/23/2025

Jackrabbit Fed SWD #1
Proposed Wellbore Diagram
Operated by Select Water Solutions. LLC
\$14, T26S, R35E
Lea County, New Mexico

SC-2 Retrievable Packer

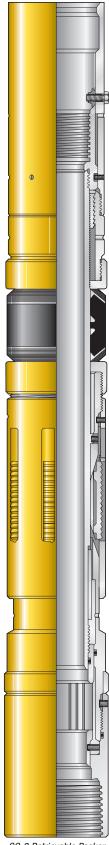
Product Family No. H48807

APPLICATION

The Baker Hughes SC- 2^{TM} retrievable packer is a high-performance, retrievable, sealbore packer. It can be run and set on electric wireline, slick line/tubing with the same setting tools used for the D packer.

Advantages

- Can be set with wireline or hydraulic setting tools
- Can be equipped with a variety of bottom guides (must be ordered separately)
- Packer easily accommodates tubing expansion or contraction
- Tubing and seals can be removed without accidentally unsetting packer
- Easy retrieval due to caged slips and releasing mechanism located in protected area below packing element
- Packer's releasing mechanism is not affected by differential pressure or tailpipe weight
- Case-hardened slips suitable for all grades of casing including V-150
- Compatible with standard Baker Hughes' seal accessories, tubingconveyed perforating and gravel-packing systems



SC-2 Retrievable Packer Product Family No. H48807

SPECIFICATION GUIDE

SC-2[™] Retrievable Packer, Product Family No. H48807

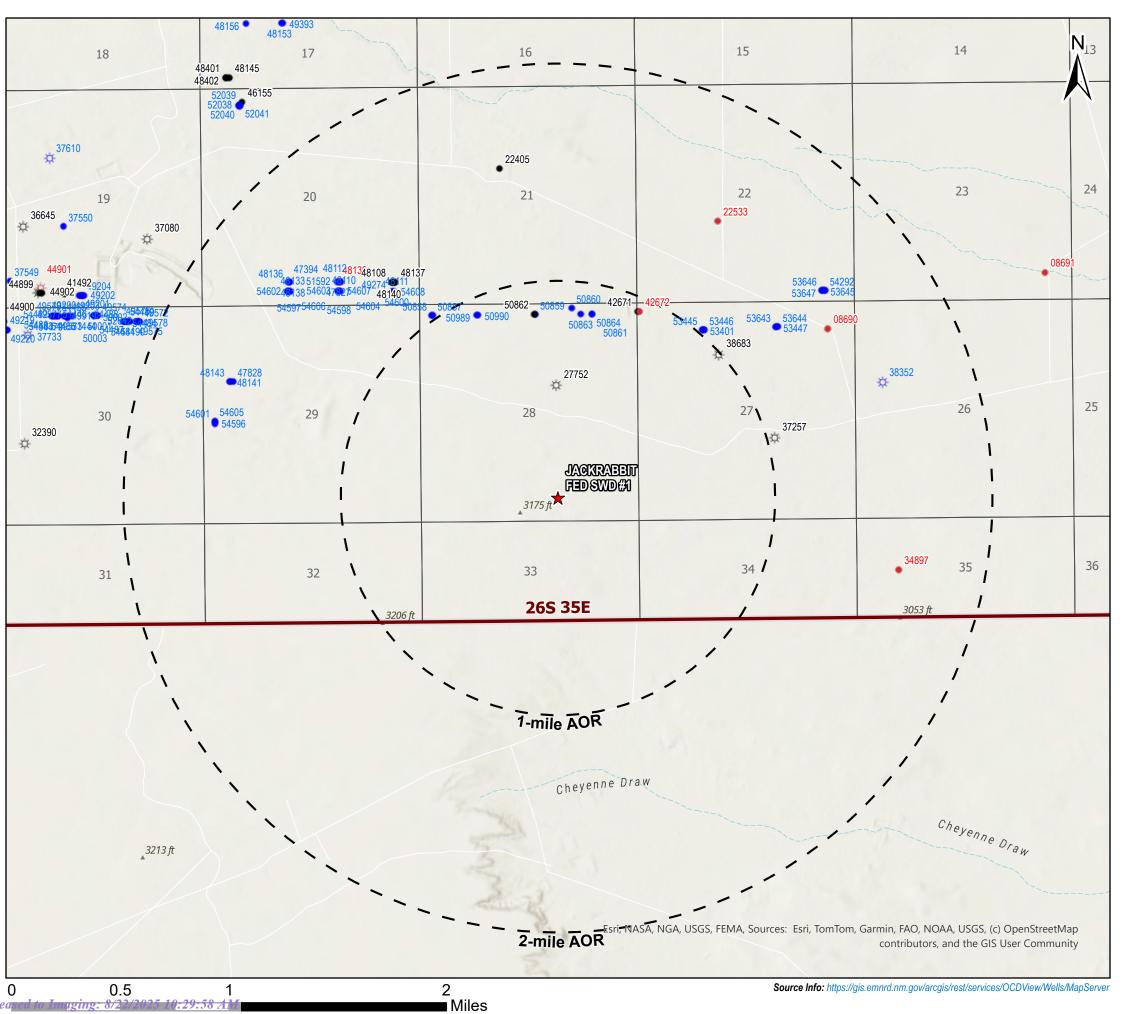
	Casing				Packer	*		
C)D	T & C Weight ▼	Siz	e •	Max Gago	e Ring OD	Max Packi	ng Element
in.	mm	lb/ft			in.	mm	in.	mm
		20-23	55A2-26		4.485	113.9	4.406	111.9
5-1/2	139.7	17–20	55A	1–26	4.593	116.6	4.500	114.3
		13–15.5	55B	-26	4.765	121.0	4.687	119.0
		35–38	70A	2–32	5.735	145.6	5.687	144.4
7	177.0	29–32	70A4–32 70B–32		5.820	147.8	5.750	146.0
7	177.8	23–29			6.000	152.4	5.937	150.8
		17–20	700	-32	6.250	158.7	6.187	157.1
		33.7–39	76A2-32 ◆	76A2-40 ◆	6.440	163.6	6.375	161.9
7-5/8	102.6	29.7–33.7	76A4-32 ◆	76A4-40 ◆	6.580	167.1	6.500	165.1
7-5/6	193.6	24-29.7	76B2-32 ◆	76B2-40 ◆	6.690	169.9	6.625	168.2
		20-24	76B4-32 ◆	76B4-40 ◆	6.784	172.3	6.718	170.6
		53.5-58.4	96A	-47	8.191	208.0	8.125	206.3
0.5/0	244.4	47–53.5	96A2	2–47	8.319	211.3	8.250	209.5
9-5/8	244.4	40–47	96A	1–47	8.465	215.0	8.375	212.7
		36–40	96B	-47	8.619	218.9	8.500	215.9

	Sealbore Dia fo	r Seal Nipples ■	Seal	Min Bore Thru Seal Nipples				
Size	in.	mm	Accessory Size ▲	in.	mm			
55A2-26								
55A4-26	2.688	68.2	40–26	1.968	50.0			
55B-26								
70A2-32								
70A4-32		82.5	80–32 or 81–32					
70B-32	3.250			2.406 or 1.995	61.1 or 50.6			
700-32								
76A2-32								
76A2-40	4.000 101.6		80–40	3.000	72.6			
76A4-32	3.250	82.5	80-32 or 81-32	2.406 or 1.995	61.1 or 50.6			
76A4-40	4.000	101.6	80–40	3.000	72.6			
76B2-32	3.250	82.5	80-32 or 81-32	2.406 or 1.995	61.1 or 50.6			
76B2-40	4.000	101.6	80–40	3.000	72.6			
76B4-32	3.250	82.5	80-32 or 81-32	2.406 or 1.995	61.1 or 50.6			
76B4-40	4.000	101.6	80–40	3.000	72.6			
96A-47								
96A2-47	4.750	120.6	190–47 or 192–47	3.000 or 3.875	72.6 or 98.4			
96A4-47	4.700	120.0	190-47 01 192-47	3.000 01 3.673	72.0 UI 90.4			
96B-47								

- * For information on packer or accessory sizes not found in this specification guide, refer to Baker Hughes' packer systems technical manual or your Baker Hughes representative.
- When proposed for use in other than the casing weight range shown, contact your Baker Hughes representative.
- The maximum OD (including tolerance) of any part run through a production packer should be at least 1/16-in. (1.59mm) smaller than the minimum bore through the packer body. This may occasionally require that the coupling ODs be turned down.
- ▲ Tubing-seal assemblies, tubing seal and spacer nipples.
- ◆ This tool available with 3.250 in. (82.5 mm) or 4.000 in. (101.6 mm) seal bore diameter and uses sizes 80-32/81-32 or 80-40 accessories respectively.
- ▼ When selecting a SC-2 packer for a casing weight common to two size packers choose the packer with the smallest OD to maximize running clearances. Example: In 5-1/2-in. (139.7-mm), 20.0-lb/ft casing, use size 55A2–26.

Area of Review Information:

- 2-mile Production Review Map
- 1-mile Problem Wells Map
- 1-mile AOR Well Table
- 2-mile Lease Map
- 2-mile Mineral Ownership Map
- 2-mile Surface Ownership Map
- Potash Lease Map



Legend

- ★ Proposed SWD (1)
- Gas, Active (7)
- Gas, New (3)
- Gas, Plugged (1)
- Oil, Active (13)
- Oil, New (92)
- Oil, Plugged (6)
- Wells Producing from Target Injection Zone (0)

2-mile Production Review

JACKRABBIT FED SWD #1

LEA COUNTY, NEW MEXICO

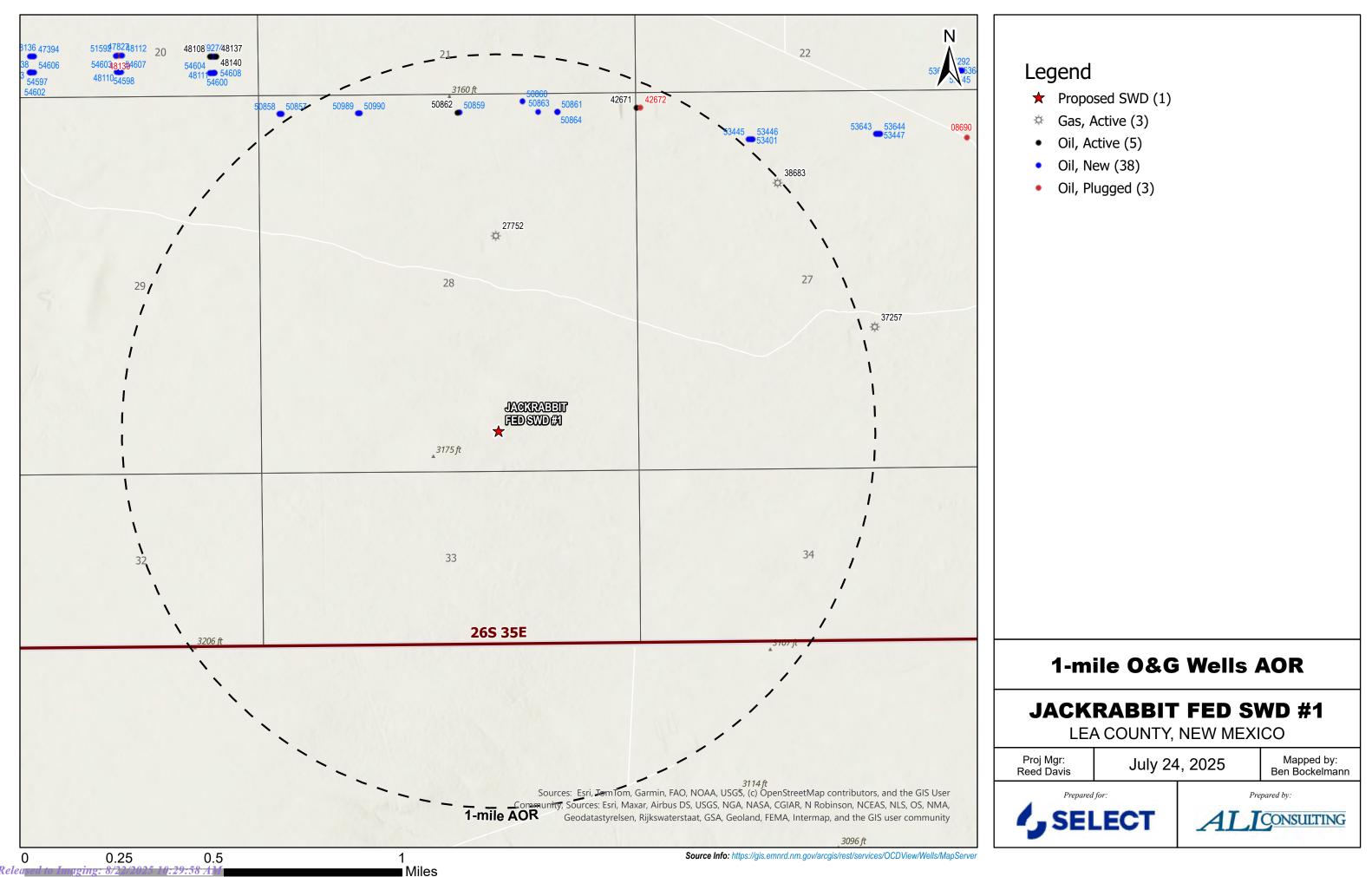
Proj Mgr: Reed Davis

July 24, 2025

Mapped by: Ben Bockelmann



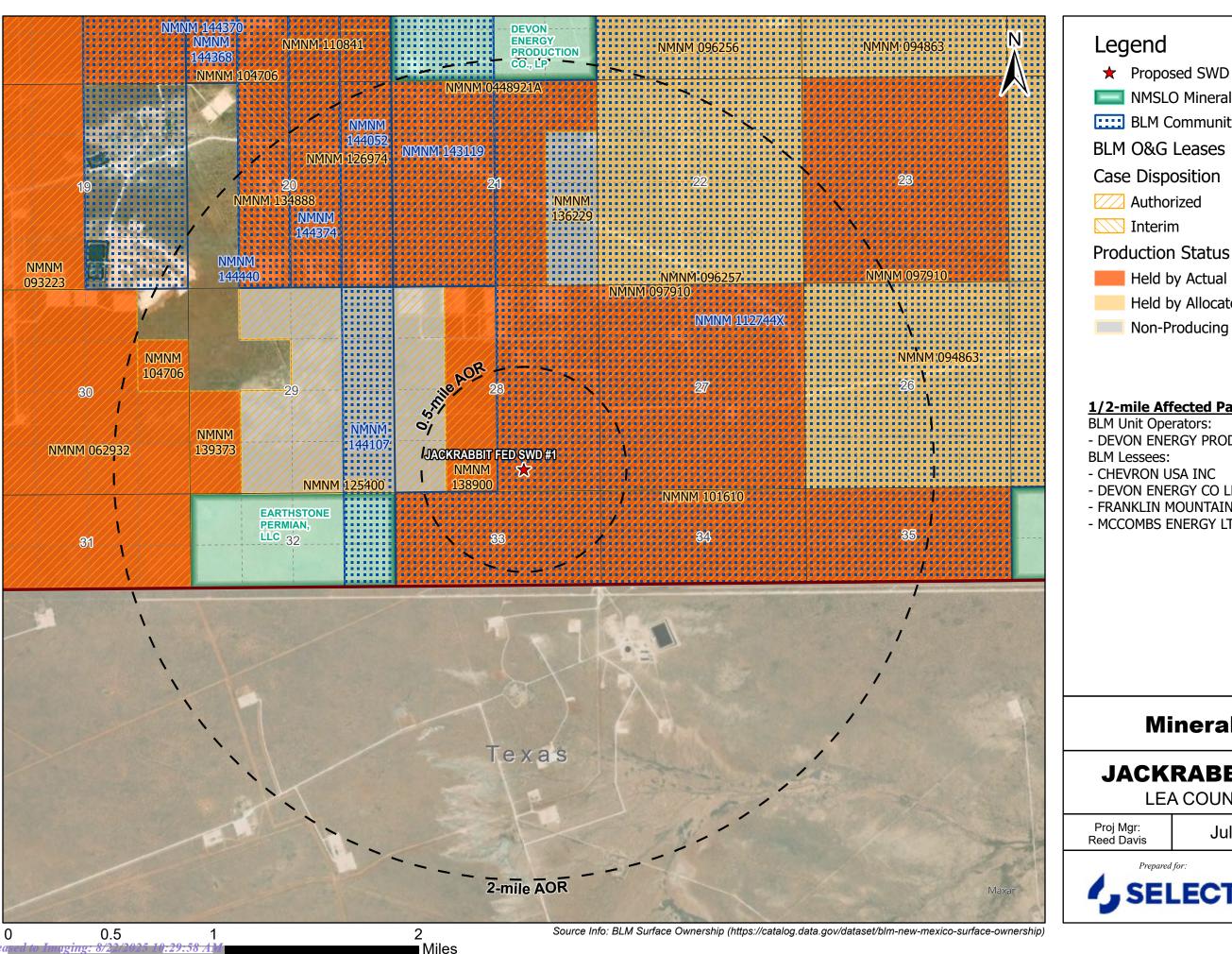




AOR Tabulation for Jackrabbit Fed SWD #1 (Injection Interval: 5,305'-7,750')										
Well Name	API#	Well Type	Operator	Spud Date	Location (Sec., Tn., Rng.)	Total Vertical Depth (feet)	Penetrate Inj. Zone?			
Arena Roja Federal Unit #006	30-025-27752	Gas	Devon Energy Production Company LP	2/24/1982	28-26S-35E	18,535	Yes			
Arena Roja Federal Unit #005	30-025-38683	Gas	Devon Energy Production Company LP	2/21/2008	27-26S-35E	15,187	Yes			
Arena Roja Federal Unit #803H	30-025-50862	Oil	Devon Energy Production Company LP	2/2/2023	28-26S-35E	12,956	Yes			
Arena Roja 28 33 Federal Com #702H	30-025-50989	Drilled	Devon Energy Production Company LP	2/25/2023	28-26S-35E	19,843 (TMD)	Yes			
Arena Roja 28 33 Federal Com #802H	30-025-50990	Drilled	Devon Energy Production Company LP	2/26/2023	28-26S-35E	20,337 (TMD)	Yes			
Arena Roja Federal Unit #703H	30-025-50859	Drilled	Devon Energy Production Company LP	2/5/2023	28-26S-35E	19,952 (TMD)	Yes			
Arena Roja Federal Unit #704H	30-025-50860	Permitted	Devon Energy Production Company LP	NA	28-26S-35E	NA	NA			
Arena Roja Federal Unit #804H	30-025-50863	Permitted	Devon Energy Production Company LP	NA	28-26S-35E	NA	NA			
Arena Roja Federal Unit #705H	30-025-50861	Drilled	Devon Energy Production Company LP	3/22/2023	28-26S-35E	19,930 (TMD)	Yes			
Arena Roja Federal Unit #805H	30-025-50864	Drilled	Devon Energy Production Company LP	3/24/2023	28-26S-35E	20,214 (TMD)	Yes			
Arena Roja Federal Unit #015H	30-025-42671	Oil	Devon Energy Production Company LP	7/21/2015	27-26S-35E	12,746	Yes			
Arena Roja Federal Unit #016H	30-025-42672	Oil	Devon Energy Production Company LP	9/7/2015	27-26S-35E	9,031	Yes			

Casing / Plugging Information for Wells Penetrating the Jackrabbit Fed SWD #1 Injection Zone											
Well Name	Туре	Set Depth	Casing Size	тос	TOC Method Determined	Sks of Cement	Hole Size				
	Surface	1,505'	20"	Surface	Circulation	2500	26"				
	Intermediate	5,200'	13-3/8"	Surface	Circulation	4500	17-1/2"				
ARENA ROJA FEDERAL UNIT #006	Intermediate	13,500'	9-5/8"	7,080'	Estimated	2850	12-1/4"				
	Production	16,460'	7-5/8"	4,800'	Temperature Survey	600	8-3/4"				
	No Issues.										
	Surface	1,125'	10-3/4"	Surface	Circulation	530	13-1/2"				
ADENIA DOLA EEDEDAL LINIT #003LL	Intermediate	12,316'	8-5/8"	Surface	Circulation	637	9-7/8"				
ARENA ROJA FEDERAL UNIT #803H	Production	20,255'	5-1/2"	8,450'	Estimated	1310	7-7/8"				
	No Issues.										
	Surface	1,098'	13-3/8"	Surface	Circulation	1145	17-1/2"				
	Intermediate	5,269'	9-5/8"	Surface	Circulation	1745	12-1/4"				
RENA ROJA FEDERAL UNIT #015H	Intermediate	12,770'	7"	640'	Calculated	1205	8-3/4"				
	Production	19650	4-1/2" liner from 11,830'-19,650'	11,829'	Calculated	705	6-1/2"				
	No Issues.										
	Surface	1,074'	13-3/8"	Surface	Circulation	1135	17-1/2"				
ADENIA DOLA FEDERAL LINIT #04CH	Intermediate	5,256'	9-5/8"	Surface	Circulation	1745	12-1/4"				
ARENA ROJA FEDERAL UNIT #016H	Production	15,864'	5-1/2"	Surface	Circulation	2505	8-3/4"				
	No Issues.										
	Surface	1,003'	13-3/8"	Surface	Circulation	940	17-1/2"				
	Intermediate	5,250'	9-5/8"	Surface	Circulation	1875	12-1/4"				
ARENA ROJA FEDERAL UNIT #005	Intermediate	4,230'	7-5/8" liner from 4,230'-12,300'	4,750'	Estimated	1260	8-3/4"				
	Production	15,187'	5-1/2" liner from 11,982'-15,187'	7,963'	Calculated	450	6-1/2"				
	No Issues.										
	Surface	1,090'	9-5/8"	Surface	Circulation	500	12-1/4"				
A DENIA DOLA 20 22 EEDEDAL COM #702U	Intermediate	12,064'	7-5/8"	Surface	Circulation	540	8-3/4"				
ARENA ROJA 28 33 FEDERAL COM #702H	Production	19,843'	5-1/2"	10,000'	CBL	Unknown	7-7/8"				
	No Issues.										
	Surface	1,094'	9-5/8"	Surface	Circulation	660	12-1/4"				
	Intermediate	12,043'	7-5/8"	Surface	Circulation	540	8-3/4"				
ARENA ROJA 28 33 FEDERAL COM #802H	Production	20,337'	5-1/2"	1,302'	CBL	Unknown	7-7/8"				
	No issues.										
	Surface	1,154'	10-3/4"	Surface	Circulation	530	13-1/2"				
	Intermediate	11,997'	8-5/8"	Surface	Circulation	710	9-7/8"				
ARENA ROJA FEDERAL UNIT #703H	Production	19,952'	5-1/2"	4,800'	CBL	1310	7-7/8"				
	No Issues.	·	-				•				
	Surface	1,133'	10-3/4"	Surface	Circulation	530	13-1/2"				
	Intermediate	12,000'	8-5/8"	Surface	Circulation	730	9-7/8"				
ARENA ROJA FEDERAL UNIT #705H	Production	19,930'	5-1/2"	6,790'	CBL	1367	7-7/8"				
	No Issues.	-,	- /	-,	-		, , ,				
	Surface	1,126'	10-3/4"	Surface	Circulation	530	13-1/2"				
	Intermediate	12,291'	8-5/8"	Surface	Circulation	730	9-7/8"				
ARENA ROJA FEDERAL UNIT #805H	Production	20,214'	5-1/2"	2,924'	CBL	2397	7-7/8"				
	No Issues.		\ \tau_1 \=	2,321	1 001	200.	, ,,,				

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- ★ Proposed SWD
- NMSLO Mineral Leases
- BLM Communitization Units

BLM O&G Leases

Case Disposition

- Held by Actual Production
- Held by Allocated Production
- Non-Producing

1/2-mile Affected Parties AOR

- DEVON ENERGY PROD CO LP
- DEVON ENERGY CO LP
- FRANKLIN MOUNTAIN ENERGY LLC
- MCCOMBS ENERGY LTD

Mineral Lease AOR

JACKRABBIT FED SWD #1

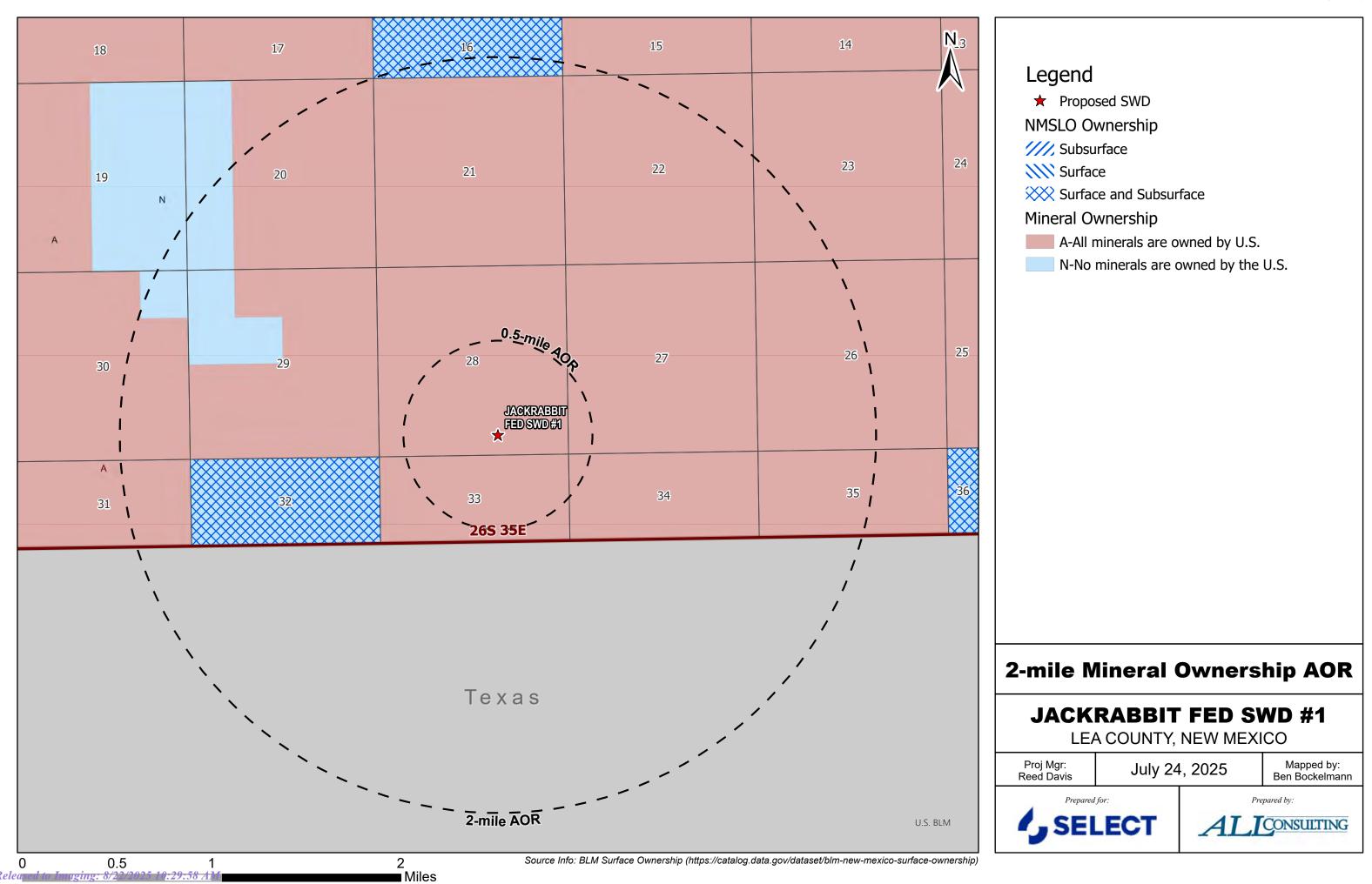
LEA COUNTY, NEW MEXICO

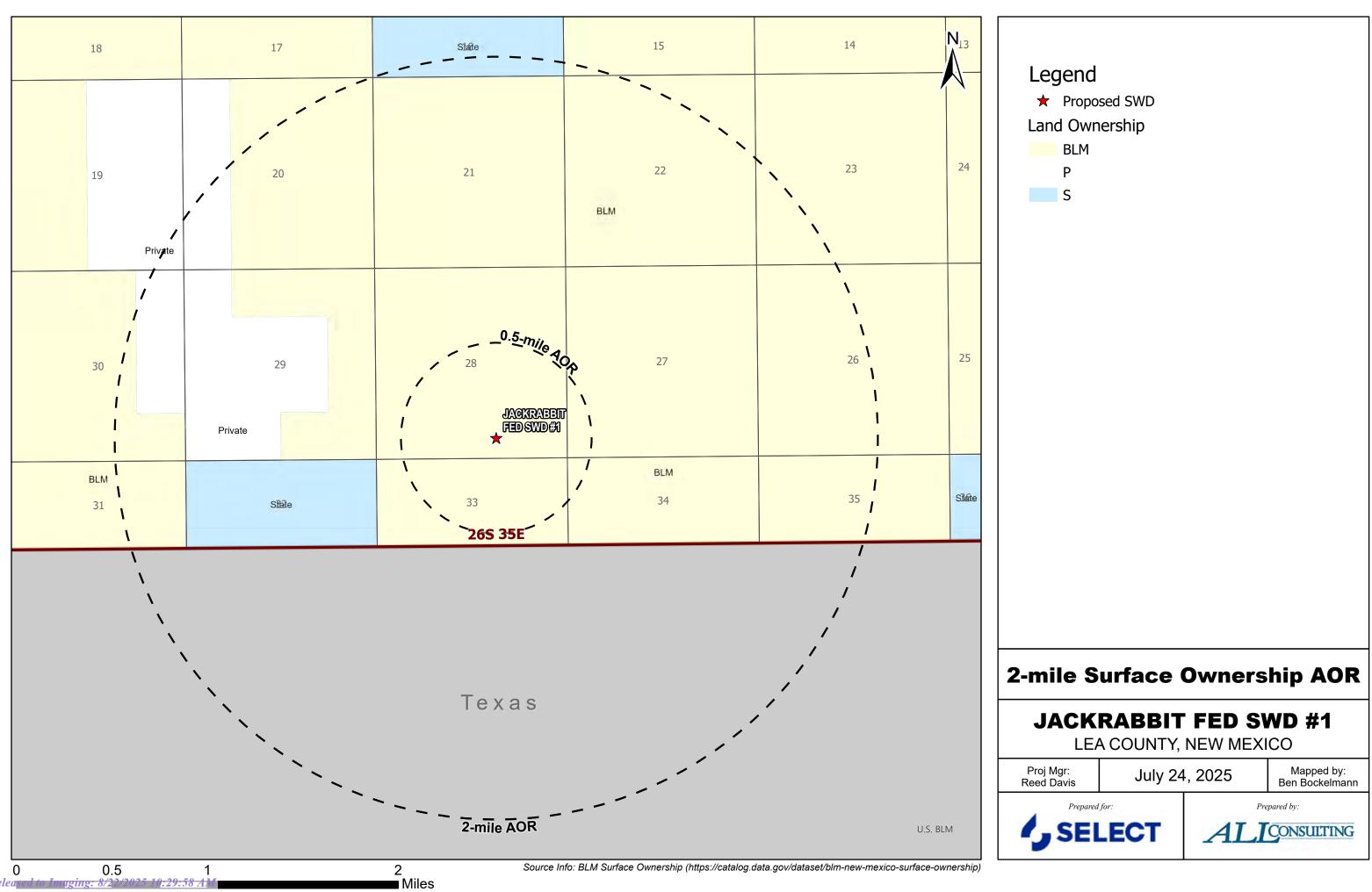
July 24, 2025

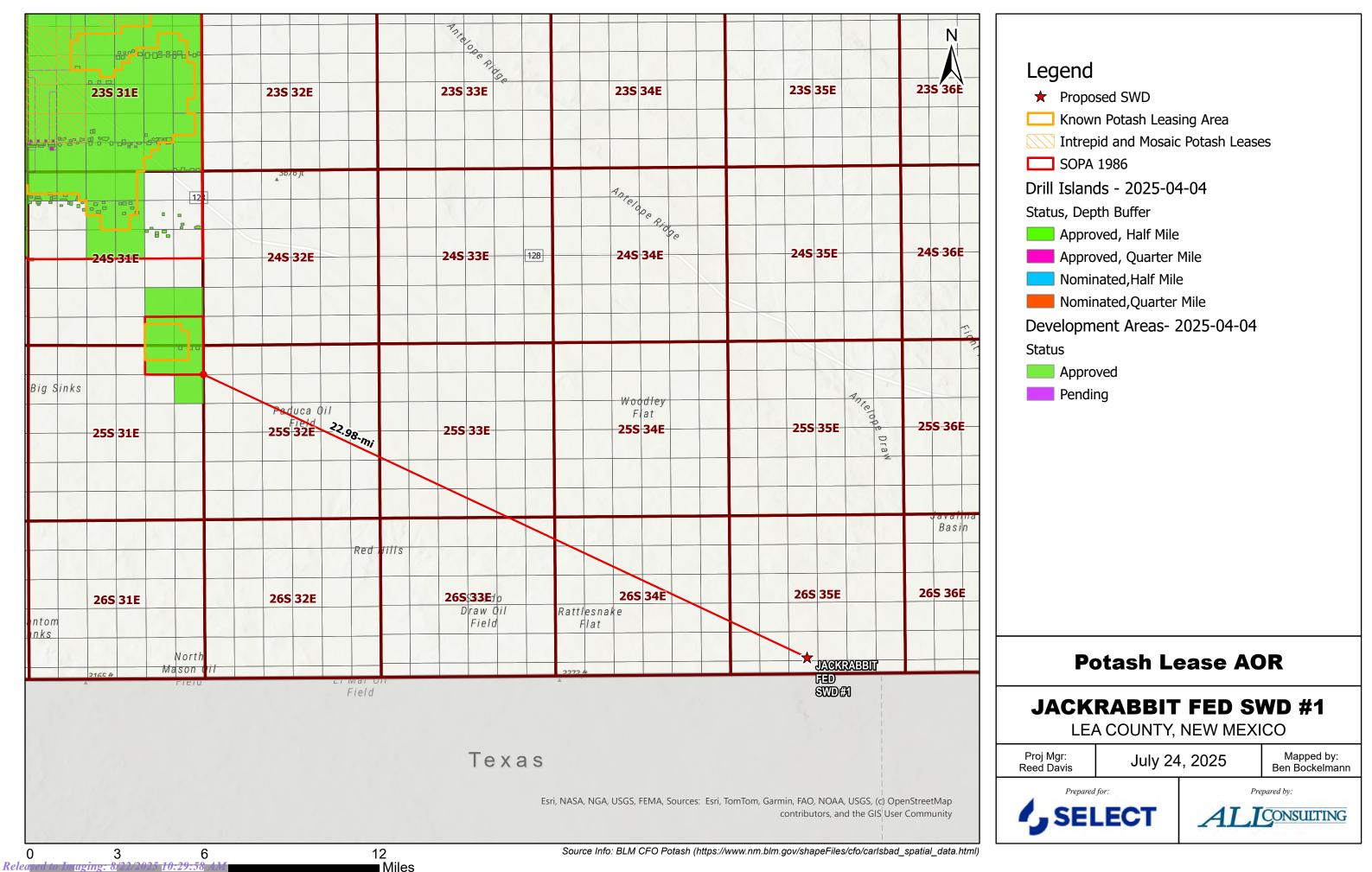
Mapped by: Ben Bockelmann











Source Water Analysis

	Jackrabbit Fed SWD #1 - Source Water Analysis (Avalon, Bone Spring, Delaware [Brushy Canyon], Wolfcamp, Yeso Group formations)																	
Well Name	API Latitude	Latitude	Longitude	Formation	Tds	Sodium	Calcium	Iron	Barium	Magnesium	Potassium	Strontium	Manganese	Chloride	Carbonate	Bicarbonate	Sulfate	H2S
well walle	AFI	Latitude	Longitude	Tormation	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
LEARCY MCBUFFINGTON #014	3002520208	32.1239586	-103.1113434	BLINEBRY/TUBB/DRINKARD	63222	-	2750	1	-	566	-	-	-	5216	-	1061	3156	1254
CARLSON FEDERAL #002	3002511707	32.1103554	-103.1315765	BLINEBRY	122000	-	-	-	-	-	-	-	-	75000	-	488	1740	-
LANGLIE A FEDERAL #001	3002511631	32.1293907	-103.183815	TUBB	307000	-	-	-	-	-	-	-	-	180000	-	244	7380	-
RATTLESNAKE 13 FEDERAL #002H	3002541247	32.050499	-103.4204483	DELAWARE-BRUSHY CANYON	227045.4	64080.1	14521.3	40.3	-	2543.8	-	-	3.57	143469	-	122	0	-
RAGIN CAJUN 13 FEDERAL #001H	3002541259	32.0369835	-103.4278412	DELAWARE-BRUSHY CANYON	165212.8	45382.9	10714.8	38.4	-	1824.7	-	-	3.14	105060	-	244	18	-
RATTLESNAKE 13 12 FEDERAL COM #001H	3002540912	32.0369568	-103.416214	DELAWARE-BRUSHY CANYON	243517.1	73409.8	15800	18.8	-	2869	-	ı	3.12	149966.2	-	48.8	560	-
BELL LAKE 19 STATE #001H	3002541024	32.1964722	-103.6176224	BONE SPRING 2ND SAND	134649.2	44572.9	6215	37.9	-	759.3	-	ı	0.93	81681.6	-	244	765	-
BELL LAKE 19 STATE #004H	3002541517	32.1964722	-103.6087875	BONE SPRING 2ND SAND	133460.5	44483.1	5917	30.5	-	718.2	-	ı	0.83	80981.7	-	244	675	-
SALADO DRAW 6 FEDERAL #001H	3002541293	32.0657196	-103.5146942	BONE SPRING 3RD SAND	99401.9	34493.3	3295	0.4	-	396.8	-	-	0.37	59986.5	-	109.8	710	-
FIGHTING OKRA 18 FEDERAL COM #001H	3002540382	32.0435333	-103.5164566	AVALON UPPER	201455.9	66908.6	9313	10	-	1603	-	-	1.6	121072.7	-	1024.8	940	-
ICHABOD 7 FEDERAL #001H	3002540043	32.0511932	-103.5014954	AVALON UPPER	1508.7	317.4	90.7	0	-	55.4	-	-	0	242.4	-	125	675	-

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Injection Formation Water Analysis

RAGIN CAJUN 13 FEDERAL #001H

NORTH EL MAR UNIT #017

NORTH EL MAR UNIT #057

GOEDEKE #002

RATTLESNAKE 13 12 FEDERAL COM #001H

Jackrabbit Fed SWD #1 - Injection Formation Water Analysis (Delaware, Bell Canyon, and Cherry Canyon formations) Vlanganese Carbonate Formation (mg/L) (mg/L) (mg/L) (mg/L) | (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) (mg/L) -103.4204483 DELAWARE-BRUSHY CANYON 227045.4 64080.1 14521.3 40.3 2543.8 143469 3.57 122 -103.4278412 DELAWARE-BRUSHY CANYON 165212.8 45382.9 10714.8 38.4 1824.7 3.14 105060 244 ---103.416214 DELAWARE-BRUSHY CANYON 243517.1 73409.8 2869 3.12 149966.2 48.8 15800 18.8 --

Note: Select agrees to collect one formation water sample for analysis prior to commencing commercial injection operations, given that no Bell Canyon or Cherry Canyon data addressing H2S, cations, and anions is available within 1/2-mile. Sampling results will be electronically provided to NMOCD within 30-days of analysis.

DELAWARE

DELAWARE

DELAWARE

254756

259554

293925

API

3002541247

3002541259

3002540912

3002508430

3002508440

3002508407

Latitude

32.050499

32.0369835

32.0369568

32.0166054

32.0019455

32.0597992

Longitude

-103.617691

-103.6131134

-103.5579987

(mg/L)

0

18

560

210

253

210

80

61

85

159400

163000

184000

(mg/L)

-

-

Reservoir Characterization

Reservoir Characterization at the Jackrabbit Fed SWD #1

1. Injection Formation and Confinement

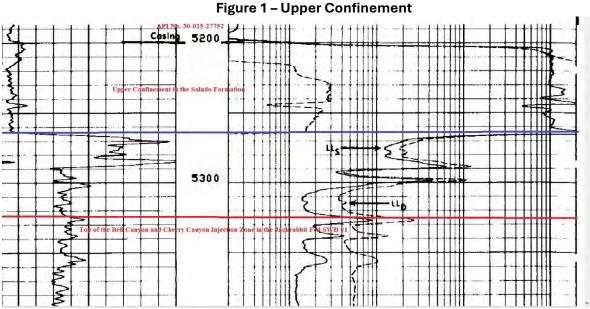
a. Injection Formation

The proposed injection interval includes the Bell Canyon and Cherry Canyon formations of the Delaware Mountain Group from 5,305' – 7,750'. The Guadalupian-age Bell Canyon and Cherry Canyon members consist primarily of sandstones and siltstones with significant primary porosity and permeability, indicating these formations are viable injection targets. Select will not perforate or inject into the Lamar Dolomite or Brushy Canyon Formation of the Delaware Mountain Group. Reservoir performance modeling suggests injection pressure into the Bell Canyon-Cherry Canyon injection interval would be below the fracture pressures of the upper and lower confining layers.

b. Upper Confinement

Nearby open hole geophysical well logs indicate the proposed Bell Canyon-Cherry Canyon injection interval is overlain by thousands of feet of tight evaporites within the Salado Formation, which will prevent the upward migration of fluids and act as the upper confining layer.

Estimated fracture gradient for the upper confinement layer is 0.726 psi/ft, per reservoir performance modeling in Appendix B.

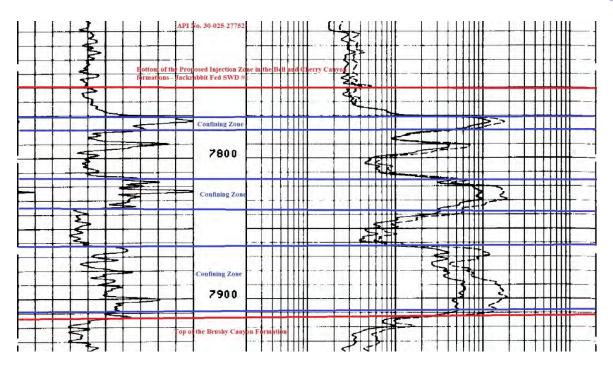


c. Lower Confinement

Nearby open hole geophysical well logs indicate the proposed Bell Canyon-Cherry Canyon injection interval is underlain by approximately 80 feet of low porosity and low permeability rocks within the lower Brushy Canyon Formation of the Delaware Mountain Group, which will prevent the downward migration of fluid and act as the lower confining layer.

Estimated fracture gradient for the lower confinement layer is 0.771 psi/ft, per reservoir performance modeling in Appendix B.

Figure 2 - Lower Confinement



2. Historic Field Usage

a. Offset Production

A review of all wells in the NMOCD database within a 2-mile radius of the Jackrabbit Fed SWD #1 does not show any historic or current hydrocarbon production from the Bell Canyon or Cherry Canyon formations of the Delaware Mountain Group.

b. Commercial Water Sources

A review of all wells in the NMOCD and OSE databases within a 2-mile radius of the Jackrabbit Fed SWD #1 does not show any historic or current commercial water supply sources from the Delaware Mountain Group.

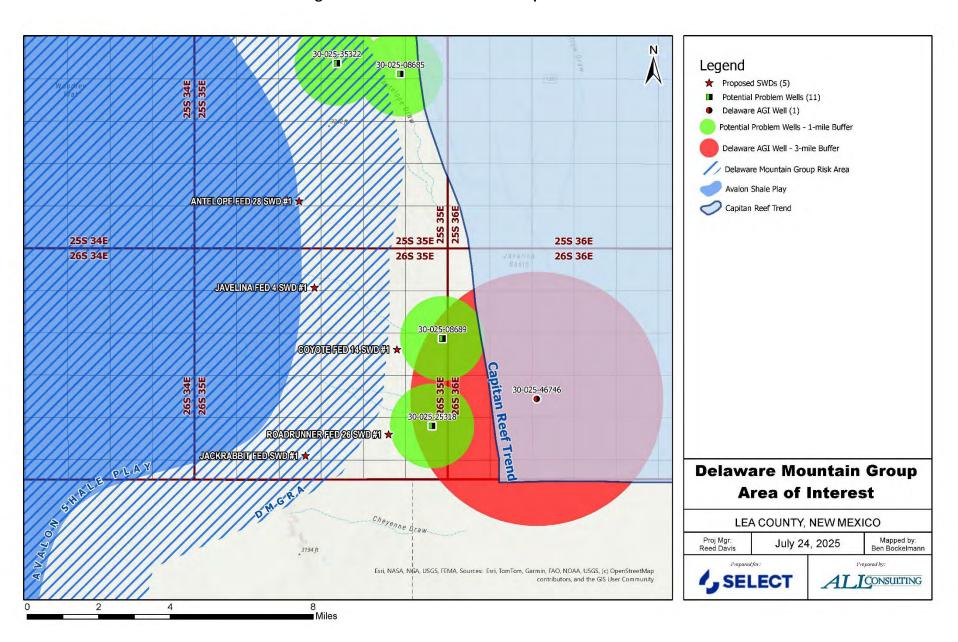
c. Enhanced Oil Recovery

A review of all wells in the NMOCD database within a 2-mile radius of the Jackrabbit Fed SWD #1 does not show any historic or current enhanced oil recovery operations utilizing the overlying Lamar Dolomite, or the underlying Brushy Canyon.

d. Additional OCD Exhibit 11a Requirements

No Delaware Acid Gas Injection wells are located within 3-miles of the proposed Jackrabbit Fed SWD #1. In addition, the proposed SWD is located outside of the Avalon Shale play, the Capitan Reef Trend, and has been positioned more than 1-mile from any identified wells with potential wellbore concerns or lack of data for evaluation (see **Figure 3**).

Figure 3 - Delaware Mountain Group Area of Interest



Water Well Map and Well Data

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Legend

★ Proposed SWD

OSE Water PODs

POD Status

- Active (0)
- Pending (0)
- Changed Location of Well (0)
- Inactive (0)
- Capped (0)
- Plugged (1)
- Unknown (0)

1-mile Water Well AOR

JACKRABBIT FED SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis

May 30, 2025

Mapped by: Ben Bockelmann





Jackrabbit Fed 26 SWD #1 - Water Well Sampling Rationale								
Water Wells	Owner	Available Contact Information	Use	Sampling Required	Notes			
C 04793 POD1	Devon Energy Resources	Address: 205 E Bender Rd. #150 Hobbs, NM 88240 Phone: 405-318-4697	Plugged	No	Well was plugged on 02/10/2024			

No Hydrologic Connection Statement



RE: Select Water Solutions LLC – Jackrabbit Fed SWD #1 application, Lea County, New Mexico

ALL Consulting LLC (ALL) has performed a thorough hydrologic investigation related to the one saltwater disposal well (SWD) listed above. The investigation was conducted to determine if there were any existing or potential connections between the proposed injection zones in the Bell Canyon and Cherry Canyon formations and the deepest underground source of drinking water (USDW).

ALL performed an assessment and analysis of the subsurface geophysical log data along with published documents on the groundwater in this vicinity of Lea County, New Mexico. The area is within the South Plain and the surficial geology is Quaternary alluvial deposits consisting predominantly of sand and silt deposits. In this area the depths to potable water for stock and domestic supplies are less than 175 feet below the surface. The USDW is the Rustler Formation and the base of the USDW plus 25 feet into the anhydrite unit is approximately 1,040 feet below the surface.

Based on ALL's assessment and analysis there is containment through multiple confining zones above the proposed Bell Canyon and Cherry Canyon injection zones and the USDW and over 4,265 feet of vertical separation between the base of the USDW and the top of the injection interval. Additionally, there is no evidence of faults that would allow for communication between the USDW and Bell Canyon and Cherry Canyon injection zones.

Tom Tomastik	June 13, 2025	
Tom Tomastik	Date	
Chief Geologist and Regulatory Specialist		
ALL Consulting LLC		

Attachment 8

3-D Seismic Interpretation Statement

HENORRAH RESOURCES, LLC 503 STOUT STREET BRIDGEPORT, WV 26330

As a consulting geophysicist/geologist and third-party contractor for ALL Consulting, I, Joseph Smith, have performed a complete seismic interpretation of the 3-D seismic reflection survey that covered the area of the proposed of the Jackrabbit_Federal SWD #1, including the Bell Canyon and Cherry Canyon formations that will be utilized as injection zone. Additionally, I have created seismic sections and geologic cross sections that clearly demonstrate there are no obvious faults cutting across the proposed Bell Canyon and Cherry Canyon injection zones and no obvious faults that would breach the upper confining zones with the Salado Formation or the lower confining zones within the top of the Brushy Canyon Formation.

Joseph Smith, Consulting Geophysicist/Geologist

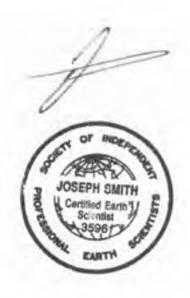
Date

Joseph P. Smith II

Owner - Geologist

Hennora Resources, LLC

937.621.0558 (c)



Attachment 9

List of Affected Persons

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Jackrabbit Fed SWD #1 - Notice of Application Recipients							
Affected Party Classification	Entity - Proof of Notice	Entity - As Mapped/Exhibited	Address	City	State	Zip Code	
Surface and Mineral Owner	New Mexico Bureau of Land Management	BLM	620 E Greene St.	Carlsbad	NM	88220	
NMOCD District Office	New Mexico Oil Conservation District 1	N/A	1625 N. French Drive	Hobbs	NM	88240	
BLM - Lessee and Unit Operator	Devon Energy Production Company, LP	DEVON ENERGY PROD CO LP	333 West Sheridan Ave.	Oklahoma City	ОК	73102	
BLM - Lessee	CHEVRON U S A INC	CHEVRON USA INC	6301 Deauville	Midland	TX	79706-2964	
BLM - Lessee	MCCOMBS ENERGY LTD	MCCOMBS ENERGY LTD	5599 SAN FELIPE ST #1220	HOUSTON	TX	77056-2724	
BLM - Lessee	FRANKLIN MOUNTAIN ENERGY LLC	FRANKLIN MOUNTAIN ENERGY LLC	44 Cook St Ste 1000	Denver	СО	80206	

Note: The affected parties above received notification of this C-108 application.

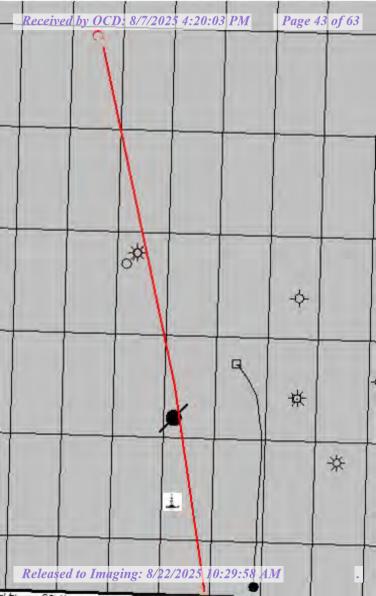
BLM Unit Operators and Lessee information was retrieved from BLM MLRS (https://mlrs.blm.gov/s/).

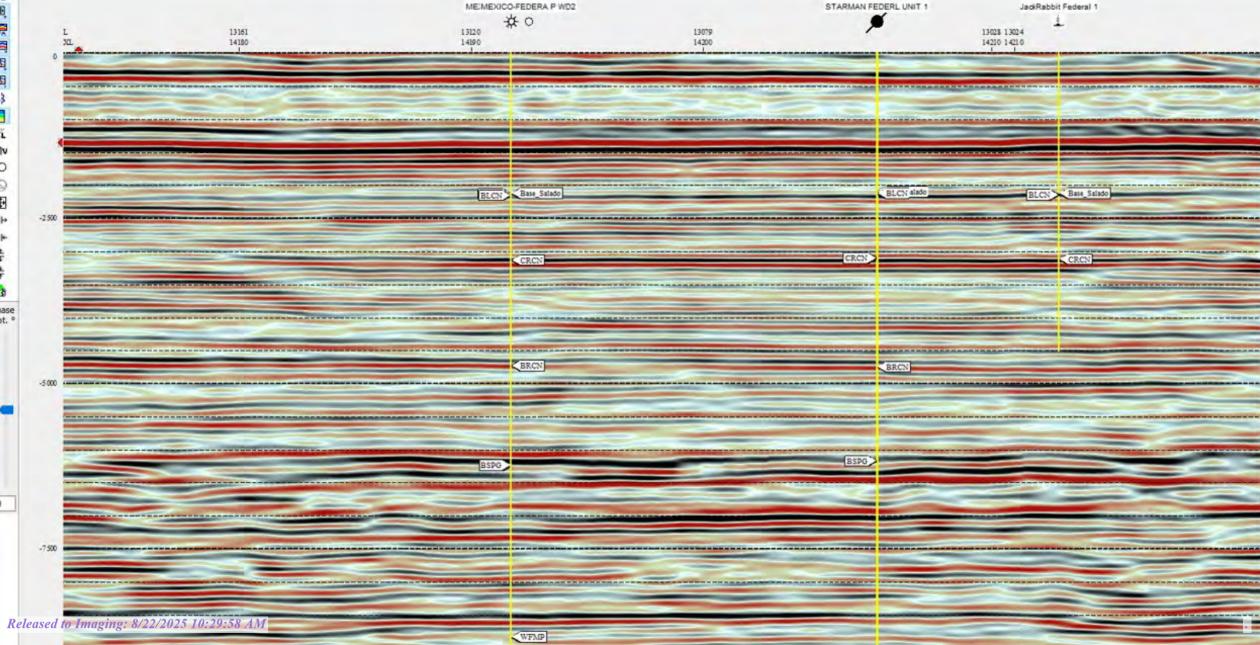
NMSLO Lessee information retreived from NMOCD Operator Search (https://www.apps.emnrd.nm.gov/OCD/OCDPermitting/Operators/Search/OperatorSearch.aspx).

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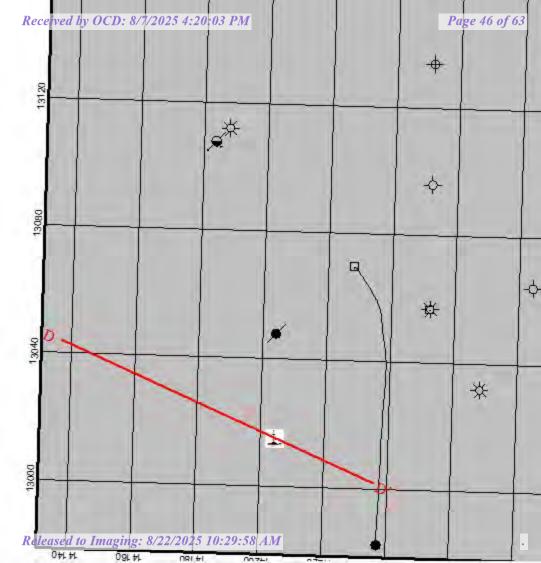
Seismic and Structural Cross Sections

Seismic C-C'



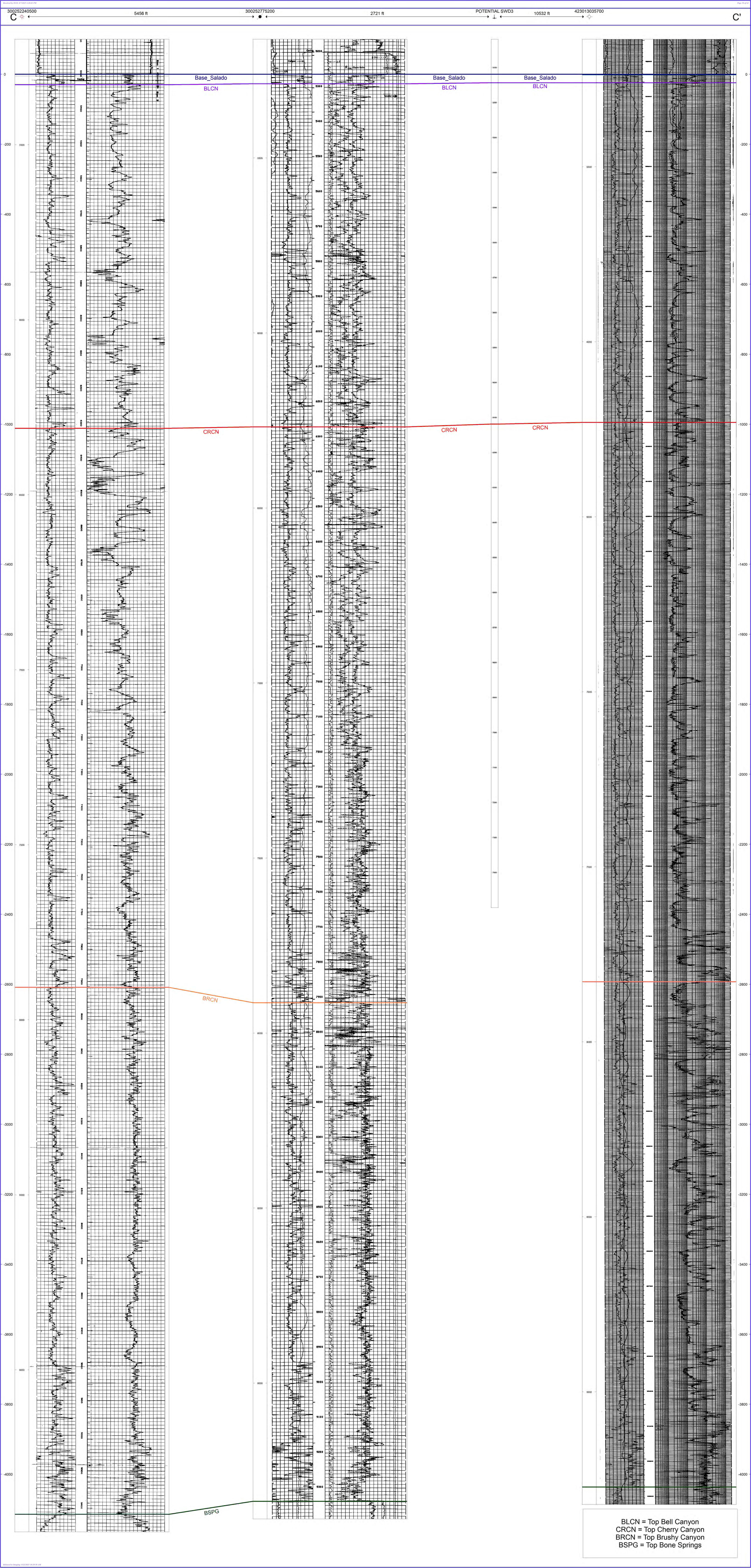


Seismic D-D'



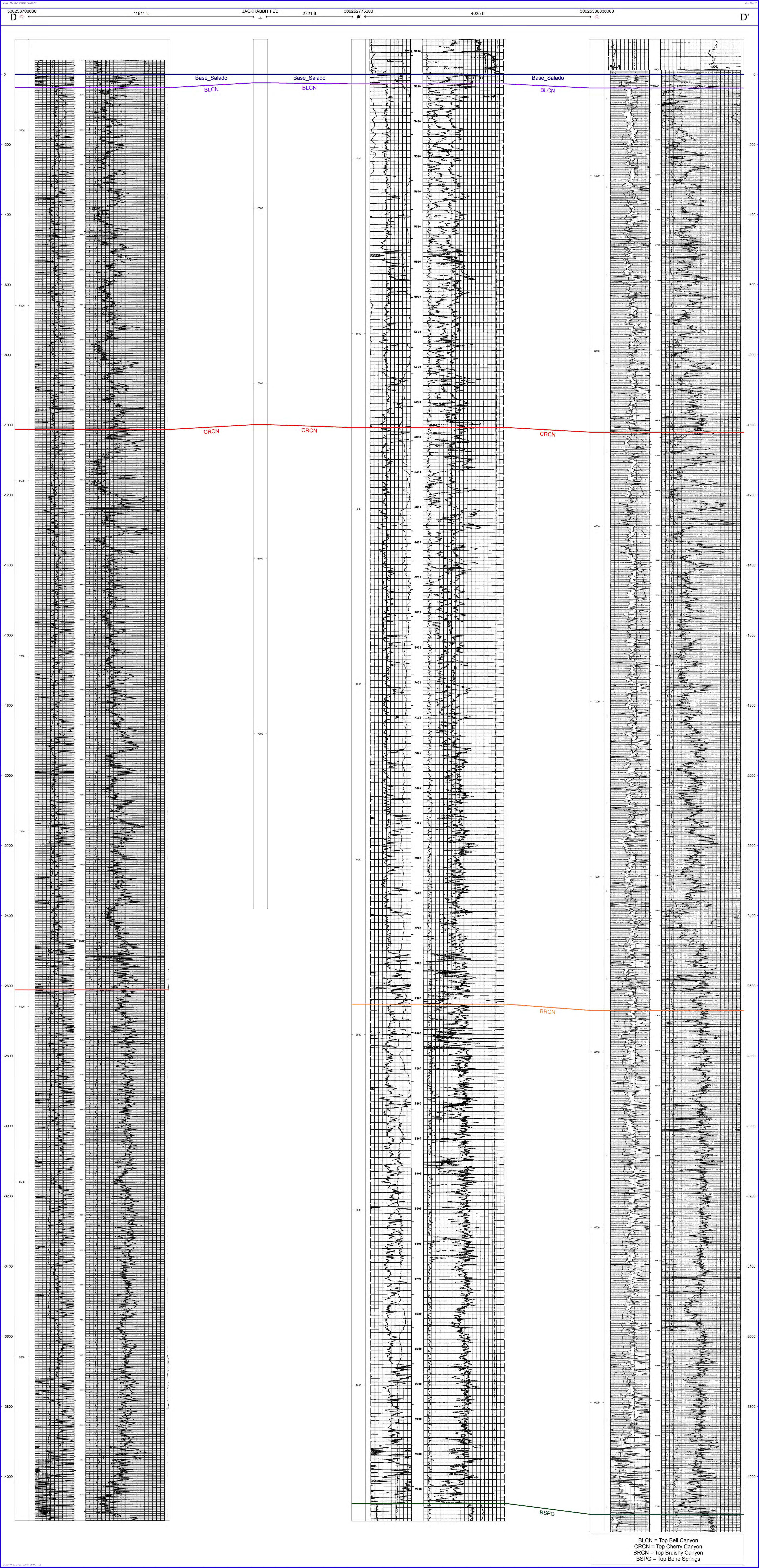
Structural C-C'





Structural D-D'





Appendix B

Reservoir Performance Modeling

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Southeast Lea County 5 DMG SWDs east of Jal New Mexico

TASP Group, June 9, 2025

Dave Childers, Sr. Reservoir Engineer



Scope of Work

• Determine:

- Reservoir and geomechanical properties to approximate reservoir and wellbore hydraulics.
- Analyze confining layers and estimate fracture gradients.
- Estimate operational pressure gradients based on maximum injection rates and SWD life.

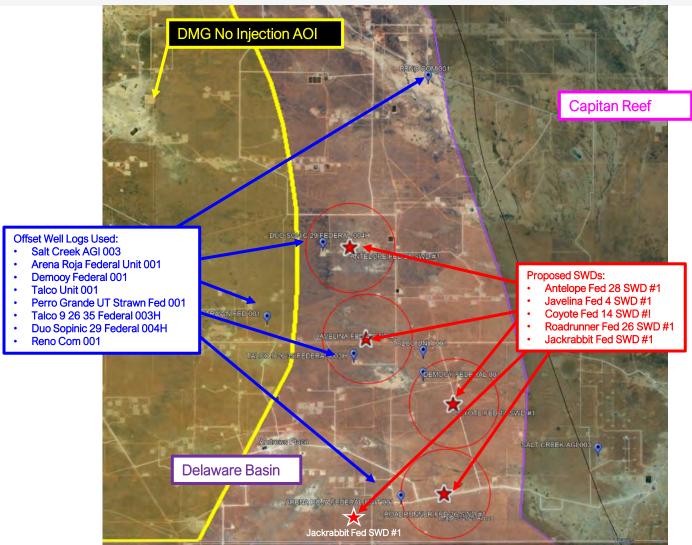
Proposed SWDs:

- Antelope Fed 28 SWD #1
- Javelina Fed 4 SWD #1
- Coyote 14 SWD #1
- Roadrunner Fed 26 SWD #1
- Jackrabbit Fed SWD #1



Locations & Offset Logs

- Review viability of SWD operations based on disposal injection rates.
- DMG Formation Injection Targets
 - Bell Canyon
 - Cherry Canyon
- Confining Layers
 - Lamar (upper interval)
 - Brushy Canyon (lower interval)





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Injection Interval

Well Name Target Interval		Top of Interval Approximated (ft)	Gross Injection Zone Thickness (ft)		
	Bell Canyon	5,250'			
Antelope Fed 28 SWD #1	Cherry Canyon	6,200'	2,500'		
	Brushy Canyon				
	Bell Canyon 5,350'				
Javelina Fed 4 SWD #1	Cherry Canyon	2,430'			
	Brushy Canyon	7,780'			
	Bell Canyon	5,200'			
Coyote Fed 14 SWD #1	Cherry Canyon	6,250'	2,350'		
	Brushy Canyon				
	Bell Canyon 5,275' Cherry Canyon 6,300' Brushy Canyon 7,750'				
Roadrunner Fed 26 SWD #1			2,475'		
	Bell Canyon	5,250'			
Jackrabbit Fed SWD #1	Cherry Canyon	6,350'	2,450'		
	Brushy Canyon	7,700'			

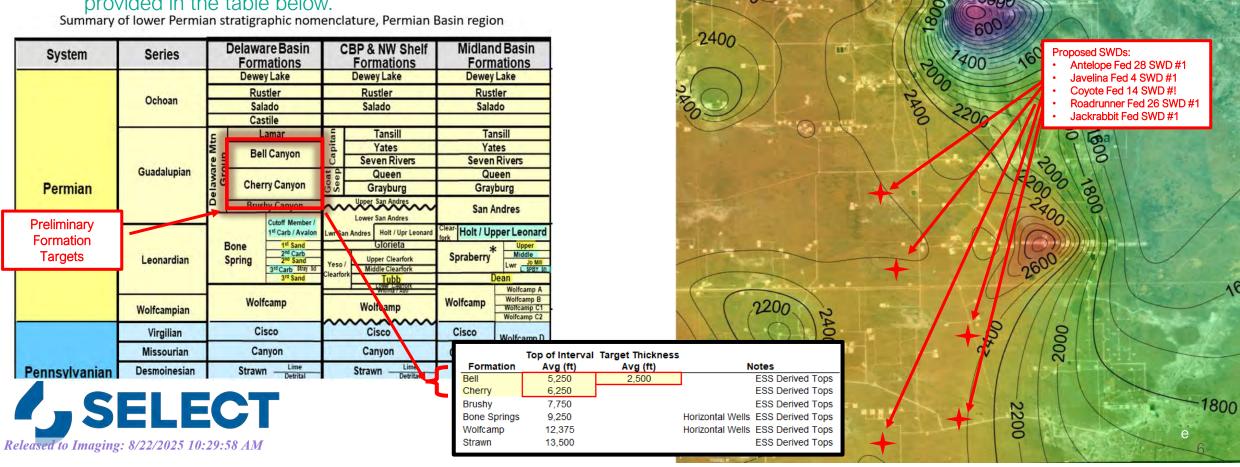
Offset Wells used to Estimate Reservoir/Geomechanical Properties

API Well Name Lat. Long. Interval of Interval (Feet Thickness Neutron Density Resistivity Photoelectric Gamma Ray Sonic DT 790 (Sp. 24) 2						Logs Used to Ascertain Reservoir and Geomechanical Properties					roperties
3002557186500 Salt Creek AGI 003 32° 140 67°N 103°1639 73°W Saldo 1900 Yes Y							Rock	Water or Hydrocarbon bearing Layers	Lithology	Lithology	Geomechanical Properties
Bell Canyon 6200 Brushy Canyon (Approximation) 7200 Brushy Canyon (Approximatio					Thickness						
Cherry Canyon (Approximation) 7200	300255186500 Salt Creek AGI 003	32° 1'40.67"N 103°16'39.73"W				Yes	Yes	Yes	Yes	Yes	Yes
Brushy Carryon (Approximation) 7200 72					1900						
300253725700 Arena Roja Federal Unit 001 32° 0'44.66"N 103°20'11.39"W Salt 4876 No Yes No Yes No No No No No No No N											
Bell Canyon 5156 2494											
Cherry Canyon (Approximation 7650	300253725700 Arena Roja Federal Unit 001	32° 0'44.66"N 103°21'11.39"W				No	Yes	No	Yes	No	No
Brushy Canyon (Approximation) 7650					2494						
300252674700 Demooy Federal 001 32° 3'8.46"N 103°20'40.96"W Salado Bell Canyon 5250 2375 Cherry Canyon (Approximation 6250 Brushy Canyon (Approximation) 7625											
Bell Caryon (Approximation 6250 Cherry Canyon (Approximation) 7625											
Cherry Canyon (Approximation) 7625	300252253100 Demooy Federal 001	32° 3'8.46"N 103°20'40.96"W				No	No	No	No	Yes	Yes
Brushy Canyon (Approximation) T625 T62			Bell Canyon		23/5						
300252674700 Talco Unit 001 32° 3'34.62"N 103°20'41.02"W Saldo 1900 No No Yes No Yes Yes Sell Canyon 6250 2400 Cherry Canyon 6250 Brushy Canyon (Approximation) 7650 Saldo 1900 No No Yes No Yes No Yes No Sell Canyon 5350 2525 Cherry Canyon 6550 Srushy Canyon (Approximation) 7875 Saldo 1900 Sopric 29 Federal 003H 32° 3'30.11"N 103°22'16.54"W Lamar 5332 Yes Yes Yes Yes Yes No Sell Canyon 6300 Srushy Canyon (Approximation) 7770 Saldo Sopric 29 Federal 004H 32° 5'40.23"N 103°22'59.30"W Lamar 5239 No											
Bell Canyon 5250 2400 Cherry Canyon 6250 Brushy Canyon (Approximation) 7650 Shushy Canyon (Approximation) 7875 Shushy Canyon (Approximation) 7876 Shushy Canyon (Approximation) 7770 Shushy Canyon (Approximation) 7827 Shus	000050074700 T. J. J. J. S. 004	000 0104 001114 400000144 0011144									
Cherry Canyon G250 Brushy Canyon (Approximation) 7650	300252674700 Talco Unit 001	32° 3'34.62"N 103°20'41.02"VV			0.400	No	No	Yes	No	Yes	Yes
Brushy Canyon (Approximation) 7650					2400						
300252735900 Perro Grande UT Strawn Fed 001 32° 4′13.84″N 103°24′15.85″W Saldo 1900 No No Yes No Yes No Saldo 1900 No No Yes No Yes No Saldo 1900											
Bell Canyon	200252725000 D	200 4142 04111 402004145 0511141				. NI		V	N	V	N.
Cherry Canyon Brushy Canyon (Approximation) 7875	300232733900 Perro Grande UT Strawn Fed 001	32° 4 13.84 N 103°24 15.85 W			2525	1/10	INO	res	INO	res	INO
Brushy Canyon (Approximation) 7875 300254345800 Talco 9 26 35 Federal 003H 32° 3′30.11″N 103°22′16.54″W Lamar 5332 Yes Yes Yes Yes Yes No Bell Canyon 5360 2410					2323						
300254345800 Talco 9 26 35 Federal 003H 32° 3′30.11″N 103°22′16.54″W Lamar 5332 Yes Yes Yes Yes Yes No											
Bell Canyon	300354345800 Tales 9 26 35 Federal 002H	30° 3'30 11"N 103°30'16 E4"N				Voc	Voc	Vac	Voc	Voc	No
Cherry Canyon G300 Brushy Canyon (Approximation) 7770	18100 9 20 35 Federal 003F	32 330.11 N 103 22 10.54 W			2410	res	res	res	res	res	INO
Brushy Canyon (Approximation) 7770 300254309000 Duo Sopnic 29 Federal 004H 32° 5′40.23″N 103°22′59.30″W Lamar 5239 No					2410						
300254309000 Duo Sopnic 29 Federal 004H 32° 5'40.23"N 103°22'59.30"W Lamar 5239 No											
Bell Canyon 5269 2558 Cherry Canyon 6329 Brushy Canyon (Approximation) 7827 300252686700 Reno Com 001 32° 8′55.60″N 103°20′34.62″W Saldo 1900 Yes Yes Yes Yes No Yes Bell Canyon 5300 2025 Cherry Canyon 6180	300254309000 Duo Soppic 29 Federal 004H	32° 5'AN 23"N 103°22'EQ 30"\A/				No	No	No	No	No	No
Cherry Canyon 6329 Brushy Canyon (Approximation) 7827	50025-505000 Duo Oopinic 25 i edelai 00411	32 340.23 N 103 22 33.30 W			2558	140	INO	140	140	140	140
Brushy Canyon (Approximation) 7827 300252686700 Reno Com 001 32° 8′55.60″N 103°20′34.62″W Saldo 1900 Yes Yes Yes Yes No Yes Bell Canyon 5300 2025 Cherry Canyon 6180					2330						
300252686700 Reno Com 001 32° 8'55.60"N 103°20'34.62"W Saldo 1900 Yes Yes Yes Yes No Yes Bell Canyon 5300 2025 Cherry Canyon 6180											
Bell Canyon 5300 2025 Cherry Canyon 6180	300252686700 Reno Com 001	32° 8'55 60"N 103°20'34 62"W				Yes	Yes	Yes	Yes	No	Yes
Cherry Canyon 6180	Total Community	12 130.00 IT 100 2004.02 W			2025	, , ,					
			Brushy Canyon (Approximation)	7325							

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Isopach Thickness: Top of Bell Canyon - Bottom of Cherry Canyon

- Zones of interest (ZOI) are Bell Canyon and Cherry Canyon formations.
 - Average depth, thickness, and injection interval is provided in the table below.

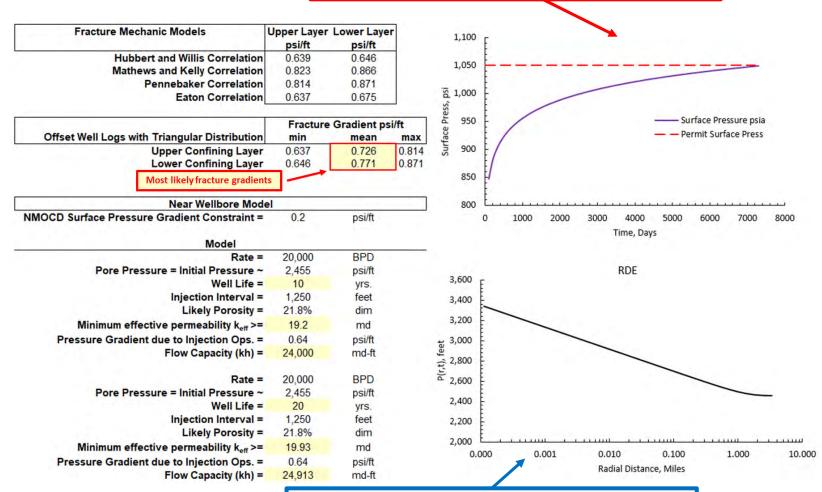


Findings

- Fracture Gradients:
 - Fracture Models used to estimate fracture limits (Bourgoyne, 1986).
 - Triangular distribution with cumulative distribution function was used to estimate the most probable fracture gradient.
 - Deviation from the most likely facture gradient will result in lower probable fracture gradient outcomes.
 - Pressure gradients from injection operations are less than upper and lower confining layer fracture gradients indicating injectate confinement.

Near Wellbore Hydraulic Model:

• Coupling of reservoir and wellbore hydraulic models to estimate the pressure response as a function of injection rate (*Spivey et.al, 2013, and Lee et.al, 2003*).



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Radial Diffusion Model:

• Estimate of pressure diffusion with respect to SWD well life (Spivey et.al, 2013, and Lee et.al, 2003).

Conclusions

- Injection pressure into the Bell/Cherry Canyon is below the fracture pressures of the upper and lower confining zones (Injectate Confinement).
- Radial Diffusion Model shows that initial pressure of 2,455 psi will be approached at approximately two-miles away from the wellbore with an injection rate of 20k bwpd for 20years.
- Pressure Gradient (PG) near wellbore is approximately 0.64 psi/ft or 12.3 ppg EMW
 - Near Wellbore PG levels are around 0.64 psi/ft for 10 or 20-year time period.
- Simulations presented are for the least amount of flow capacity (kh) needed for disposal. We expect that the kh could be significantly higher due to additional height available and having higher reservoir porosity and permeability contrasts.
 - Step rate test will quantify the actual fracture gradient of the injection zone followed by a pressure fall off test to determine the actual reservoir properties.



References

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