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. 25547**

EXHIBIT INDEX

Exhibit A	**Self-Affirmed Statement of Reed Davis**
A-1	Application & Proposed Notice of Hearing
A-2	Amended Form C-108
Exhibit B	**Self-Affirmed Statement of RJ Metzler**
Exhibit C	**Self-Affirmed Statement of Thomas E. Tomastik**
C-1	Katarzyna Charzynski, et al., "Delaware Basin Horizontal Wolfcamp Study: Mitigating H2S and Excessive Water Production through Isolating Densely Fractured Intervals Correlative to Seismically Mapped Shallow Graben Features in the Delaware Mountain Group"
Exhibit D	**Self-Affirmed Statement of Joseph P. Smith, II**
D-1	Resume of Joseph P. Smith, II
Exhibit E	**Self-Affirmed Statement of David Childers**
E-1	Resume of David Childers
Exhibit F	**Self-Affirmed Statement of Dana S. Hardy**
F-1	Notice Letter to All Interested Parties Sent August 14, 2025
F-2	Postal Delivery Report
F-3	Electronic Return Receipts
F-4	Affidavit of Publication for August 22, 2025

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. 25547**

SELF-AFFIRMED STATEMENT OF REED DAVIS

1. I am employed by ALL Consulting, LLC as a geophysicist. All Consulting has been retained by Select Water Solutions, LLC ("Select Water" or "Applicant") (OGRID No. 289068) to prepare this application. I am over 18 years of age, have personal knowledge of the matters addressed herein, and am competent to provide this Self-Affirmed Statement.

2. I have previously testified before the New Mexico Oil Conservation Division ("Division") as an expert witness in geophysics. My credentials as an expert have been accepted by the Division and made a matter of record.

3. I am familiar with Select Water's application in this case.

4. Select Water seeks authorization to inject produced water into the Bell Canyon and Cherry Canyon formations (SWD; Bell Canyon-Cherry Canyon; Code 96802) for the purposes of disposal through the Javelina Fed 4 SWD #1 well ("Well"). The Well will be drilled at a location 408' from the south line and 831' from the east line (Unit P) of Section 4, Township 26 South, Range 35 East, Lea County, New Mexico.

5. Although Select Water's application sought authorization to inject at a depth of approximately 5,360 feet to 7,550 feet, Select Water has agreed to narrow the injection interval to resolve concerns raised by certain parties. As a result, Select Water now seeks authorization to inject at a depth of approximately 5,360 feet to 6,500 feet.

Select Water Solutions, LLC
Case No. 25547
Exhibit A

6. Select Water proposes to inject an average of 15,000 barrels of water per day and a maximum of 20,000 barrels of water per day.

7. Select Water requests that the Division approve a maximum injection pressure of 1,072 psi.

8. A copy of Select Water's hearing application and proposed notice are attached as **Exhibit A-1**.

9. Select Water is providing an Amended Form C-108, which reflects the narrowed injection interval and is attached as **Exhibit A-2**.[1] The Amended Form C-108 includes the following revisions:

a. Revised dates on Administrative Checklist and Application for Authorization to Inject, pages 1-2;

b. Revised base of injection interval, pages 3-4;

c. Signature added to C-102, page 8;

d. Revised Wellbore Diagram, page 10;

e. Revised base of injection interval on Area of Review Tabulation for Jackrabbit Fed SWD #1, page 16;

f. Revised base of injection interval and lower confinement description, pages 28-29; and

g. Updates to reservoir modeling to account for reduced injection interval, pages 55-63.

10. The C-102 is provided at page 8 of the C-108.

[1] All references to the C-108 in witnesses' testimony refer to the amended C-108 attached as Exhibit A-2.

11. Area of review maps and corresponding tables are provided on pages 14 through 22 of the C-108 and include: wells located within two miles; wells located within one mile; operators and lessees within one mile; mineral lessees and owners within two miles; and surface ownership.

12. The United States Bureau of Land Management owns the surface at the location of the Well. Select Water will obtain all necessary permits and authorizations from the Bureau of Land Management prior to disposing of produced water.

13. Select Water provided notice of its hearing application to the affected parties, as discussed in its notice affidavit.

14. Select Water will operate the Well as a commercial SWD.

15. Select Water has conducted a diligent search of all county public records, including phone directories and computer databases, as well as internet searches, to locate the interest owners and offset operators.

16. It is my opinion that Select Water undertook a good faith effort to locate and identify the correct parties and valid addresses required for notice within the well's area of review. There were no unlocatable parties.

17. A significant amount of new drilling activity is in progress or planned in this area and there is minimal saltwater disposal infrastructure available. Select Water has communicated with other operators in the area and they agree that additional SWD infrastructure would be beneficial.

18. Select Water chose this particular location for this Well because of customer disposal needs offsetting the Well, geologic conditions at this wellsite, lack of surface use conflicts, and accessibility of the surface location.

19. Select Water's proposed location is also consistent with OCD's SWD spacing requirements, and as discussed in Mr. Smith's testimony, this location presents no induced seismicity concerns based on Select Water's induced seismicity study.

20. Select Water has the technical, operations, and other experience and qualifications to comply with the OCD's regulatory requirements for SWDs.

21. Select Water has evaluated other potential disposal formations in the area, but the Bell Canyon and Cherry Canyon formations are the most appropriate for injection.

22. The attached exhibits were either prepared by me or under my supervision, or were compiled from company business records.

23. In my opinion, the granting of Select Water's application would serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

24. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

Reed Davis

January 6, 2025
Date

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. 25547**

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 Javelina Fed 4 SWD #1, to be drilled at a location 408' from the south line and 831' from the east line (Unit P) of Section 4, 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 5,360 feet to 7,550 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 1,072 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

Select Water Solutions, LLC
Case No. 25547
Exhibit A-1

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 Javelina Fed 4 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

Application of Select Water Solutions, LLC for Approval of a Saltwater Disposal Well, Lea County, New Mexico. Select Water Solutions, LLC ("Select Water") (OGRID No. 289068) applies for an order approving its proposed Javelina Fed 4 SWD #1, to be drilled at a location 408' from the south line and 831' from the east line (Unit P) of Section 4, Township 26 South, Range 35 East, Lea County, New Mexico, for the purpose of produced water disposal. 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 5,360 feet to 7,550 feet. 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, and requests that the Division approve a maximum surface injection pressure of 1,072 psi. The well is located approximately 10.95 miles SW of Jal, New Mexico.

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

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:_____ **OGRID Number:** _____
Well Name: _____ **API:**_____
Pool: _____ **Pool Code:** _____

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

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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.

_____ Date

_____ Print or Type Name

_____ Phone Number

_____ Signature

_____ e-mail Address

Select Water Solutions, LLC
Case No. 25547
Exhibit A-2

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 Recovery _____Pressure Maintenance ___x___Disposal _____Storage
Application qualifies for administrative approval? _____Yes ___x___No

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? _____Yes ___x___No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Reed Davis TITLE: Geophysicist

SIGNATURE: _____ DATE: 01/05/2026

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: _____

DISTRIBUTION: File Electronically Via OCD Permitting

Application for Authorization to Inject
Well Name: Javelina Fed 4 SWD #1

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

A.

(1) General Well Information:

Operator: Select Water Solutions, LLC (OGRID No. 289068)
Lease Name & Well Number: Javelina Fed 4 SWD #1
Location Footage Calls: 408' FSL & 831' FEL
Legal Location: Lot P, S4 T26S R35E
Ground Elevation: 3,179'
Proposed Injection Interval: 5,360' – 6,500'
County: Lea

(2) Casing Information:

Type	Hole Size	Casing Size	Casing Weight	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	1,090'	700	Surface	Circulation
Intermediate	12-1/4"	9-5/8"	40.0 lb/ft	5,305'	1,410	Surface	Circulation
Production	8-3/4"	7-5/8"	29.7 lb/ft	6,520'	2,350	Surface	CBL
Tubing		5-1/2"	17.0 lb/ft	5,340'			

(3) Tubing Information:

5-1/2" (17.0 lb/ft) fiberglass or equivalent lined tubing with setting depth of 5,340'.

(4) Packer Information: SC-2 or equivalent packer set at 5,340'.

B.

(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 5,360' – 6,500'

(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 (7,750')
- Bone Spring (9,200')
- Wolfcamp (12,275')

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***.

Three wells penetrate the injection zone in the 1-mile AOR. All of these wells have been properly cased and cemented through the proposed injection zone or plugged properly to isolate 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 Javelina Fed 4 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**: 1,072 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 5,360' – 6,500'. 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 1,090 feet. Depth of the nearest water well in the area is approximately 105 feet below ground surface.

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 are no groundwater wells located within 1-mile of the proposed SWD location.

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***.

Attachments

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: List of Affected Persons

Appendix A: Seismic and Structural Cross Sections

Appendix B: Reservoir Performance Modeling

Attachment 1

- C-102
- Wellbore Diagram
- Packer Diagram

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name	
Property Code	Property Name: JAVELINA FED 4 SWD		Well Number: #1
OGRID No.: 289068	Operator Name: SELECT WATER SOLUTIONS, LLC		Ground Level Elevation: 3179'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal	

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
P	4	26 S	35 E		408' FSL	831' FEL	32.066185°	-103.366590°	LEA

Bottom Hole Location

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

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code

Order 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/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 ☐ Horizontal ☐ Vertical	Ground Floor Elevation: 3179'

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.

Josh Ticknor — JANUARY 27, 2025

Signature — Date

Joshua Ticknor

Printed Name

jticknor@all-llc.com

Email Address

SURVEYOR CERTIFICATIONS

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.

TIM C. PAPPAS — NEW MEXICO — 21209 — PROFESSIONAL SURVEYOR

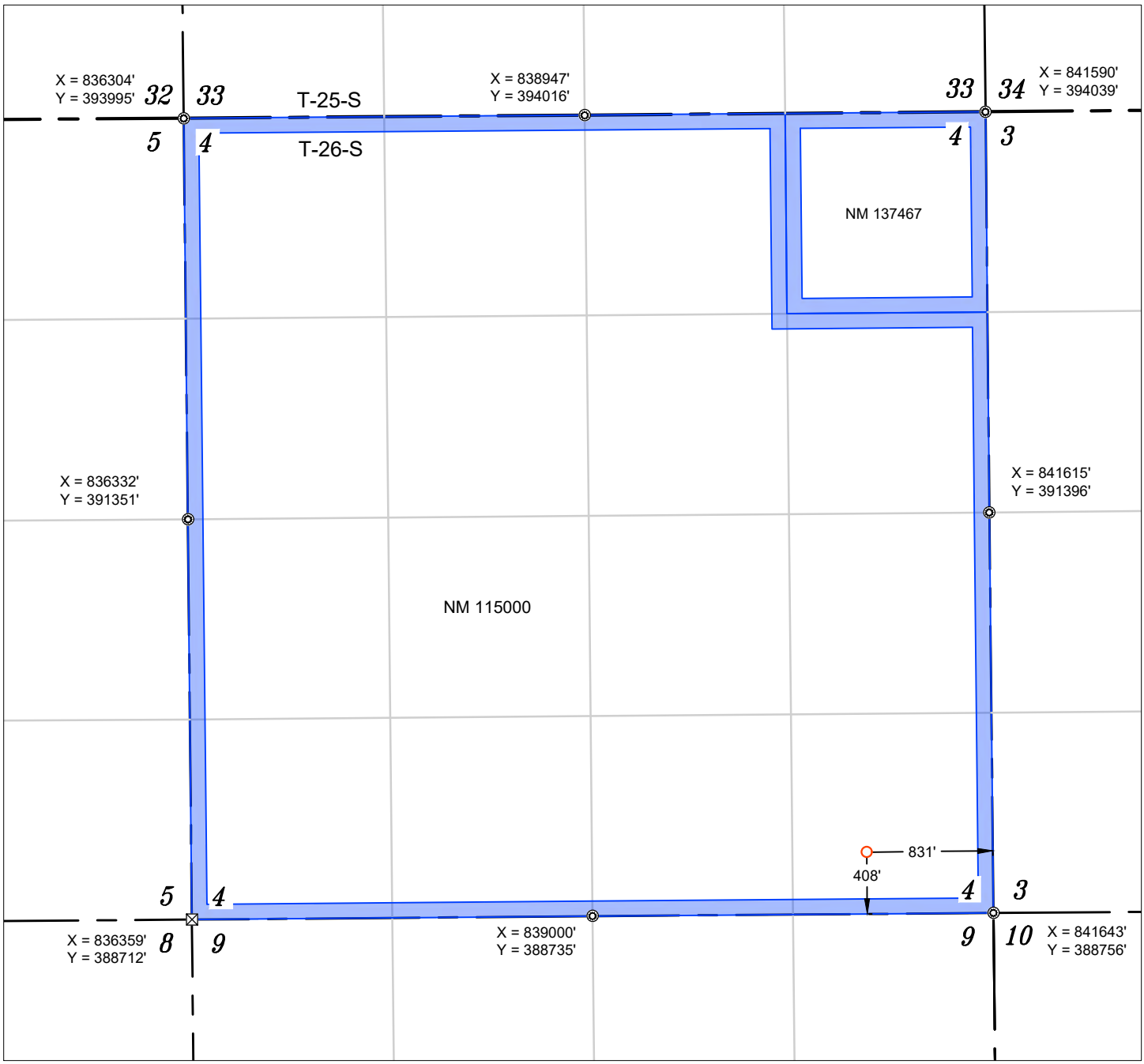
28 Jan 2025

Signature and Seal of Professional Surveyor

21209 — JANUARY 27, 2025

Certificate Number — Date of Survey

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 NAME: JAVELINA FED 4 SWD #1
ELEVATION: 3179'

NAD 83 (SHL) 408' FSL & 831' FEL
LATITUDE = 32.066185° LONGITUDE = -103.366590°
NAD 27 (SURFACE HOLE LOCATION)
LATITUDE = 32.066058° LONGITUDE = -103.366129°
STATE PLANE NAD 83 (N.M. EAST)
N: 389157.02' E: 840807.18'
STATE PLANE NAD 27 (N.M. EAST)
N: 389099.39' E: 799619.44'

0' 1000' 2000'

SCALE: 1" = 1000'

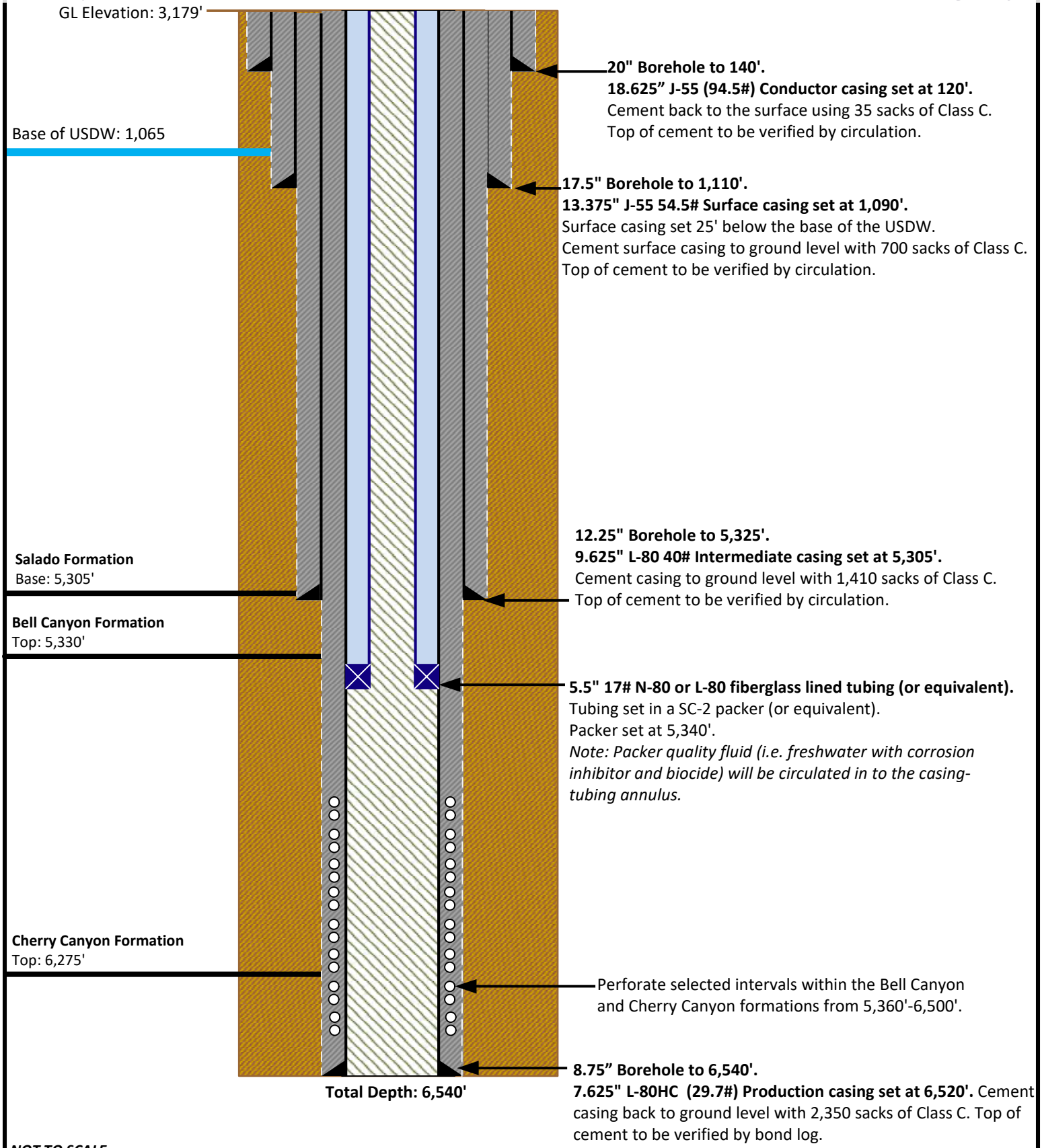
FOUND MONUMENT
CALC. CORNER
SHL
HORIZONTAL SPACING UNIT
STATE OIL & GAS LEASE
BLM OIL & GAS LEASE

NOTES

1. ALL COORDINATES, BEARINGS, AND DISTANCES CONTAINED HEREIN ARE GRID, 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 JANUARY, 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 MSL, DERIVED FROM G.N.S.S. OBSERVATION AND DERIVED FROM SAID ON-THE-GROUND SURVEY.



NOT TO SCALE

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

Prepared by: ALL CONSULTING *Prepared for:* SELECT	Drawn by: Joshua Ticknor Project Manager: Reed Davis Date: 06/10/2025	**Javelina Fed 4 SWD #1** **Proposed Wellbore Diagram** **Operated by Select Water Solutions. LLC** **S4, T26S, R35E** **Lea County, New Mexico**

Received by OCD: 2/25/2026 1:54:09 PM

SC-2 Retrievable Packer

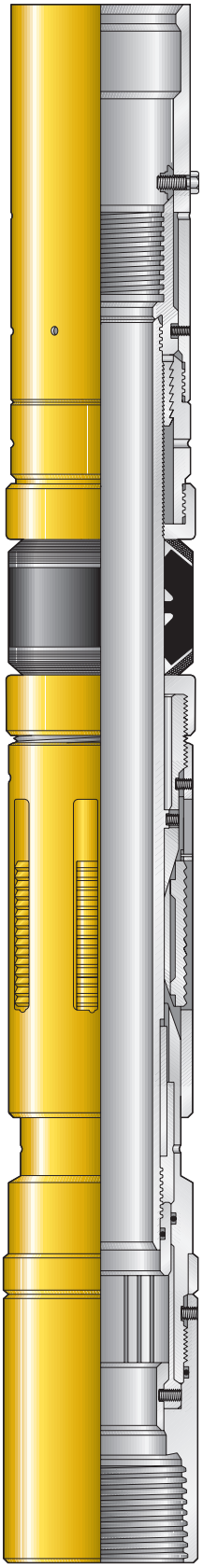
Product Family No. H48807

APPLICATION

The Baker Hughes SC-2™ 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, tubing-conveyed perforating and gravel-packing systems



SC-2 Retrievable Packer
Product Family No. H48807

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

SPECIFICATION GUIDE

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

Casing			Packer ✷					
OD		T & C Weight ▼	Size ●		Max Gage Ring OD		Max Packing Element	
in.	*mm*	lb/ft			in.	*mm*	in.	*mm*
5-1/2	*139.7*	20–23	55A2–26		4.485	*113.9*	4.406	*111.9*
		17–20	55A4–26		4.593	*116.6*	4.500	*114.3*
		13–15.5	55B–26		4.765	*121.0*	4.687	*119.0*
7	*177.8*	35–38	70A2–32		5.735	*145.6*	5.687	*144.4*
		29–32	70A4–32		5.820	*147.8*	5.750	*146.0*
		23–29	70B–32		6.000	*152.4*	5.937	*150.8*
		17–20	70C–32		6.250	*158.7*	6.187	*157.1*
7-5/8	*193.6*	33.7–39	76A2–32 ◆	76A2–40 ◆	6.440	*163.6*	6.375	*161.9*
		29.7–33.7	76A4–32 ◆	76A4–40 ◆	6.580	*167.1*	6.500	*165.1*
		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*
9-5/8	*244.4*	53.5–58.4	96A–47		8.191	*208.0*	8.125	*206.3*
		47–53.5	96A2–47		8.319	*211.3*	8.250	*209.5*
		40–47	96A4–47		8.465	*215.0*	8.375	*212.7*
		36–40	96B–47		8.619	*218.9*	8.500	*215.9*

Size	Sealbore Dia for Seal Nipples ■		Seal Accessory Size ▲	Min Bore Thru Seal Nipples	
	in.	*mm*		in.	*mm*
55A2–26	2.688	*68.2*	40–26	1.968	*50.0*
55A4–26					
55B–26					
70A2–32	3.250	*82.5*	80–32 or 81–32	2.406 or 1.995	*61.1 or 50.6*
70A4–32					
70B–32					
70C–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	4.750	*120.6*	190–47 or 192–47	3.000 or 3.875	*72.6 or 98.4*
96A2–47					
96A4–47					
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.*

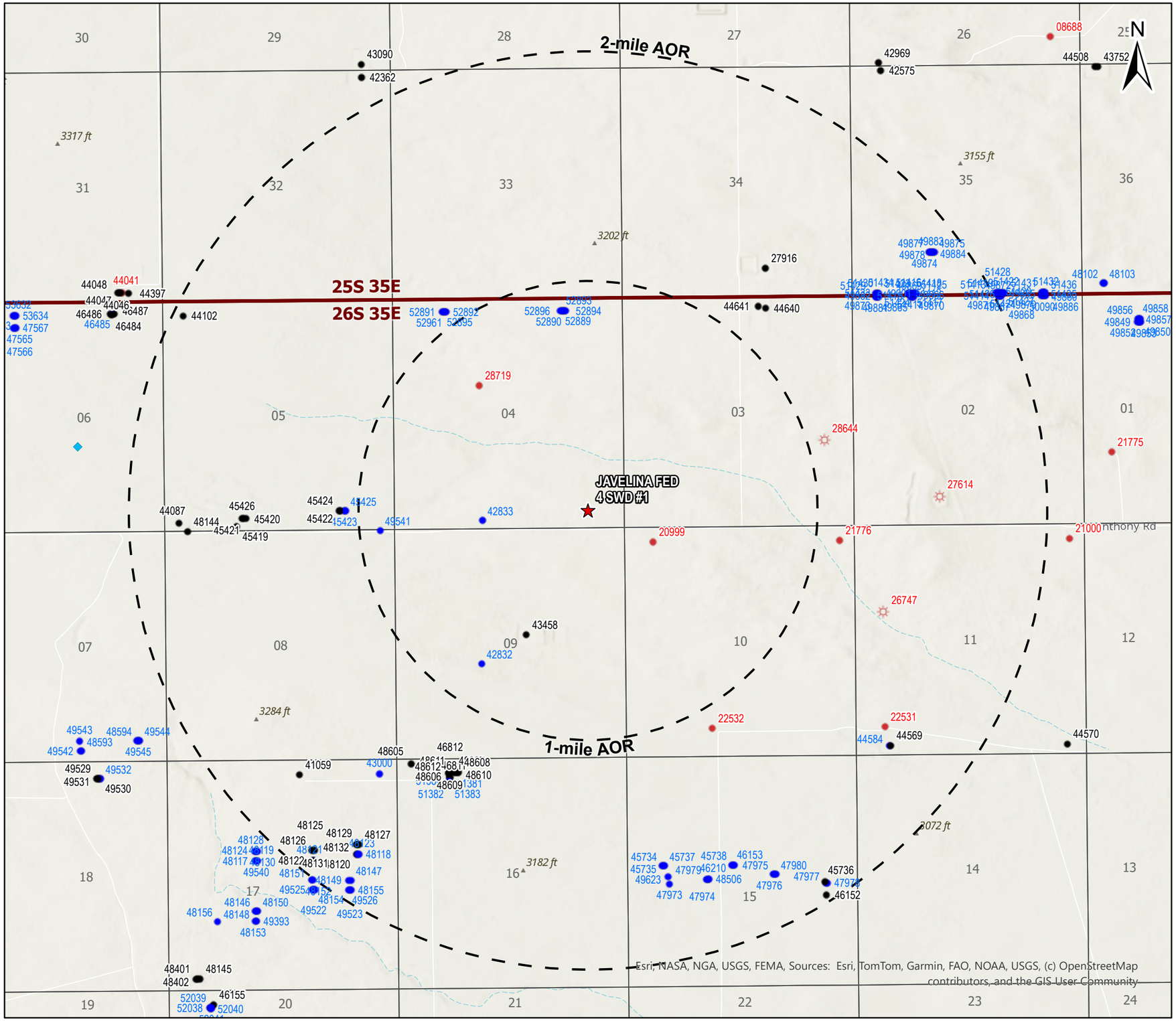
▼ *When selecting a SC-2 packer for a casing weight common to two size packers choose the packer with the smallest OD to maximize running clearances. Example: In 5-1/2-in. (139.7-mm), 20.0-lb/ft casing, use size 55A2–26.*

Released to Imaging: 2/25/2026 2:09:55 PM

Attachment 2

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



Source Info: https://gis.emnrd.nm.gov/arcgis/rest/services/OCDView/Wells/MapServer

Legend

- Proposed SWD (1)
- Gas, Plugged (3)
- Oil, Active (56)
- Oil, New (137)
- Oil, Plugged (9)
- Reclamation Fund (1)
- Wells Producing from Target Injection Zone (0)

2-mile Production Review

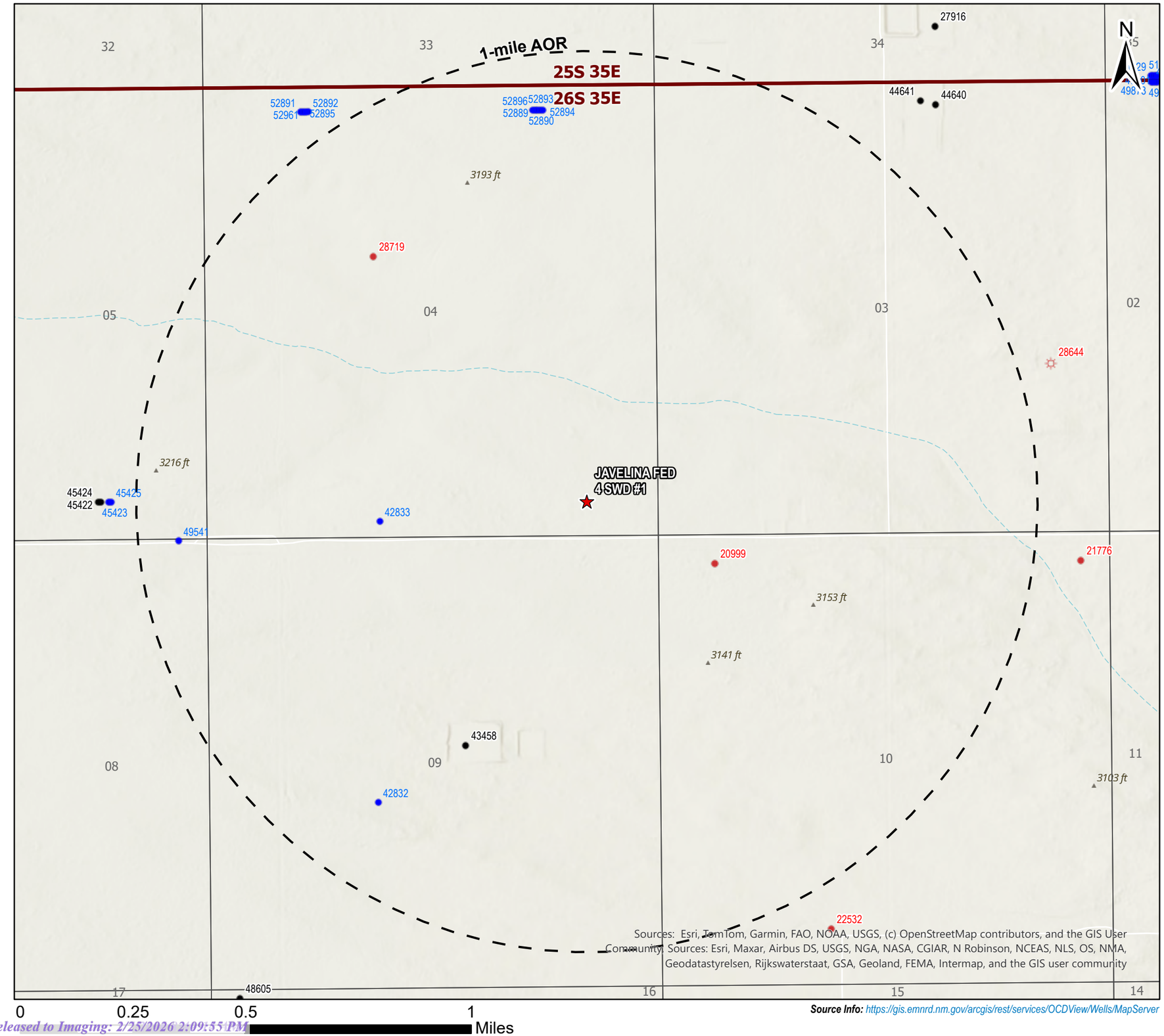
JAVELINA FED 4 SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis	May 12, 2025	Mapped by: Ben Bockelmann

Prepared for: SELECT

Prepared by: ALL CONSULTING



Source Info: https://gis.emnrd.nm.gov/arcgis/rest/services/OCDView/Wells/MapServer

Legend

- Proposed SWD (1)
- Gas, Plugged (2)
- Oil, Active (7)
- Oil, New (22)
- Oil, Plugged (4)

1-mile O&G Wells AOR

JAVELINA FED 4 SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis	May 12, 2025	Mapped by: Ben Bockelmann

Prepared for: SELECT

Prepared by: ALL CONSULTING

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

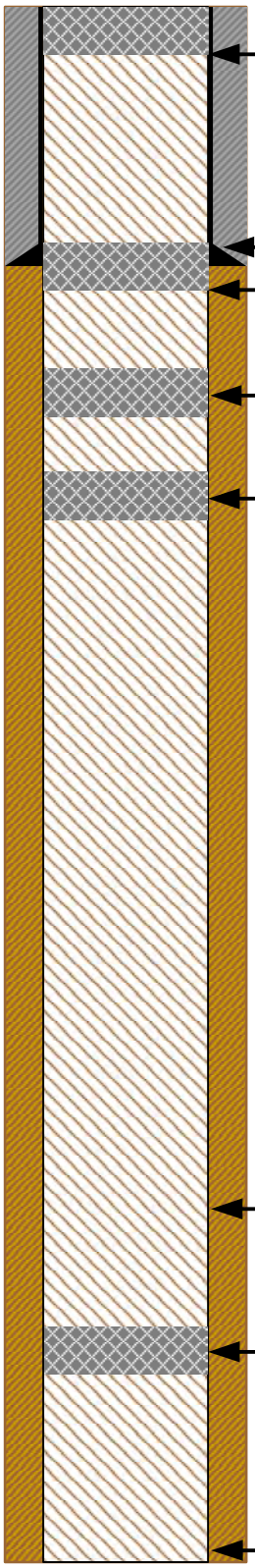
AOR Tabulation for Javelina Fed 4 SWD #1 (Bell Canyon and Cherry Canyon - Injection Interval: 5,360' - 6,500'), Lea County							
Well Name	**API#**	**Well Type**	**Operator**	**Spud Date**	**Location (Sec., Tn., Rng.)**	**Total Vertical Depth (feet)**	**Penetrate Inj. Zone?**
Sinclair et al Federal #1	30-025-20999	Oil	Max M. Wilson	4/30/1964	10-26S-35E	5,446'	Yes
Talco 9 26 35 Federal #003H	30-025-43458	Oil	COG Operating LLC	10/27/2016	09-26S-35E	12,669'	Yes
Harvey "4" Federal #1	30-025-28719	Oil	M.J. Harvey Jr.	5/31/1984	04-26S-35E	168' - Lost Hole - Plugged	No
Akubra Federal Com #802H	30-025-52896	Oil	COG Operating LLC	Permitted	04-26S-35E	NA	NA
AKubra Federal Com #602H	30-025-52889	Oil	COG Operating LLC	Drilled	04-26S-35E	11,765'	Yes
Akubra Federal Com #703H	30-025-52893	Oil	COG Operating LLC	Permitted	04-26S-35E	NA	NA
Akubra Federal Com #704H	30-025-52894	Oil	COG Operating LLC	Permitted	04-26S-35E	NA	NA
Akubra Federal Com #603H	30-025-52890	Oil	COG Operating LLC	7/16/2024	04-26S-35E	1,142' Suspended Operations	No
Big Jay 4 Federal #002H	30-025-42833	Oil	Devon Energy	Cancelled	04-26S-35E	NA	NA
Big Jay 4 Federal #001H	30-025-42832	Oil	Devon Energy	Cancelled	04-26S-35E	NA	NA
Arena Roja Federal Unit #013	30-025-39596	Gas	Devon Energy	Cancelled	10-26S-35E	NA	NA

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Casing / Plugging Information for Wells Penetrating the Javelina Fed 4 SWD #1 Injection Zone

Well Name	Type	Set Depth	Casing Size	TOC	TOC Method Determined	Sks of Cement	Hole Size
SINCLAIR ET AL A FEDERAL #1	Surface	341'	8-5/8"	Surface	Circulation	150	12-1/4"
	Intermediate	NA	NA	NA	NA	NA	NA
	Production	NA	NA	NA	NA	NA	NA
	Well was plugged as a dry hole. A 100-foot cement plug set from 5,200' - 5,300'. Proposed injection zone is isolated.						
TALCO 9 26 35 FEDERAL #003H	Surface	1,155'	10-3/4"	Surface	Circulation	800	14-3/4"
	Intermediate	11,585''	7-5/8"	Surface	Calculated TOC = 1,000'	1487	9-7/8"
	Production	19,722'	5"	Surface	Circulation	1125	6-3/4"
	No Issues.						
AKUBRA FEDERAL COM #602H	Surface	1,157'	10-3/4"	Surface	Circulation	925	14-3/4"
	Intermediate	11,751'	7-5/8"	Surface	Circulation	1120	8-3/4"
	Production	23,091'	5-1/2"	Surface	Circulation	1900	6-3/4"
	No Issues.						



10 sack cement surface plug.

11" Borehole.
8.625" J-55 24# Surface casing set at 341'.
Cemented surface casing to ground level with 50 sacks.
Top of cement verified by circulation.

100 foot cement plug placed across the surface casing shoe.

100 foot cement plug placed above salt from 1,050' to 1,150'.

100 foot cement plug placed above salt from 1,400' to 1,500'.

Uncased borehole filled with mud laden fluid during abandonment.

100 foot cement plug placed across the top of the Delaware Sands from 5,200' to 5,300'.

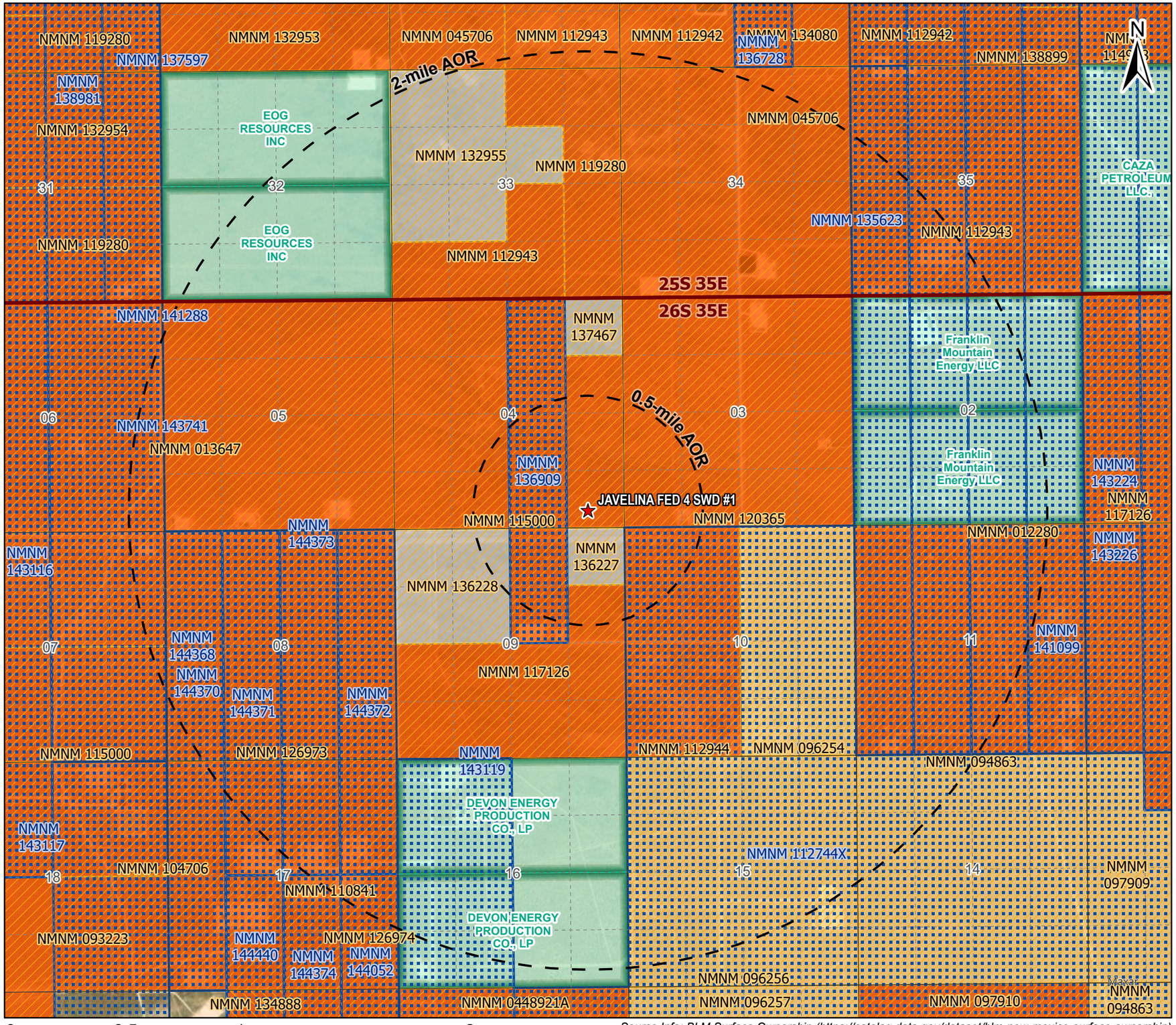
7.875" Borehole to 5,446'.
No show of oil or gas. No production casing set.

Total Depth: 5,446'

NOT TO SCALE

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

Prepared by: ALL CONSULTING *Prepared for:* SELECT	**Drawn by: Joshua Ticknor**	**Sinclair et al "A" API: 30-025-20999**
	Project Manager: Reed Davis	**Plugged Wellbore Diagram**
	Date: 07/18/2025	**Drilled by Max M Willson (Operator)**
		Spud: 4/30/1964 P&A: 5/25/1964
		S10, T26S, R35E
		Lea County, New Mexico



0 0.5 1 2 Miles

Source Info: BLM Surface Ownership (https://catalog.data.gov/dataset/blm-new-mexico-surface-ownership)

Legend

- Proposed SWD
- NMSLO Mineral Leases
- BLM Communitization Units

BLM Oil & Gas Leases

Case Disposition

- Authorized
- Interim

Production Status

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

1/2-mi Affected Parties

BLM Unit Operators:
- COG OPERATING LLC
- DEVON ENERGY CO LP BLM

Lessees:
- CHEVRON USA INC
- COG OPERATING LLC
- DEVON ENERGY PROD CO LP

Mineral Lease AOR

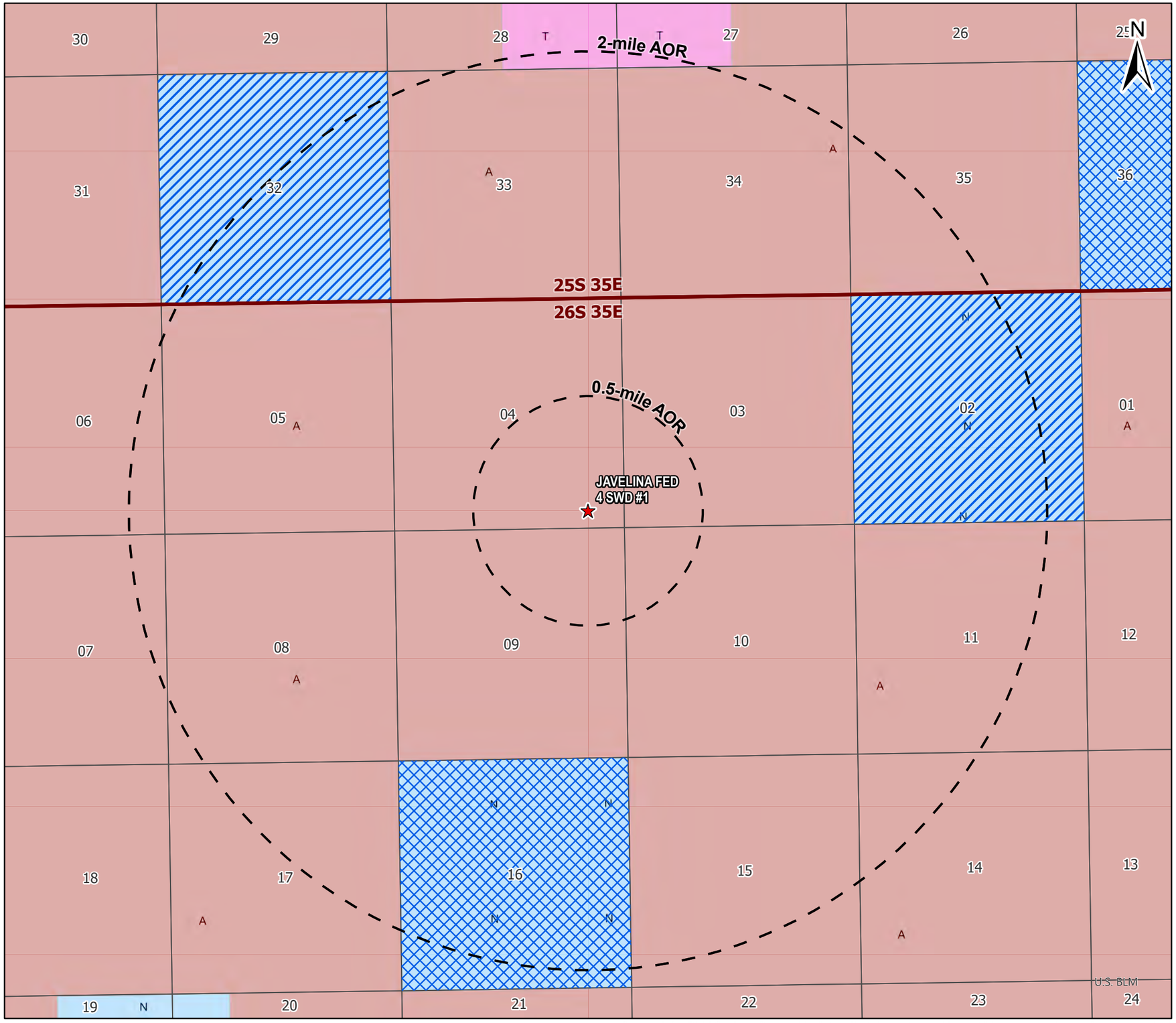
JAVELINA FED 4 SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis	June 06, 2025	Mapped by: Ben Bockelmann

Prepared for: SELECT

Prepared by: ALL CONSULTING



Source Info: BLM Surface Ownership (https://catalog.data.gov/dataset/blm-new-mexico-surface-ownership)

Legend

- Proposed SWD

NMSLO Ownership

- Subsurface
- Surface
- Surface and Subsurface

Mineral Ownership

- A-All minerals are owned by U.S.
- N-No minerals are owned by the U.S.
- T-Other minerals are owned by the U.S.

2-mile Mineral Ownership AOR

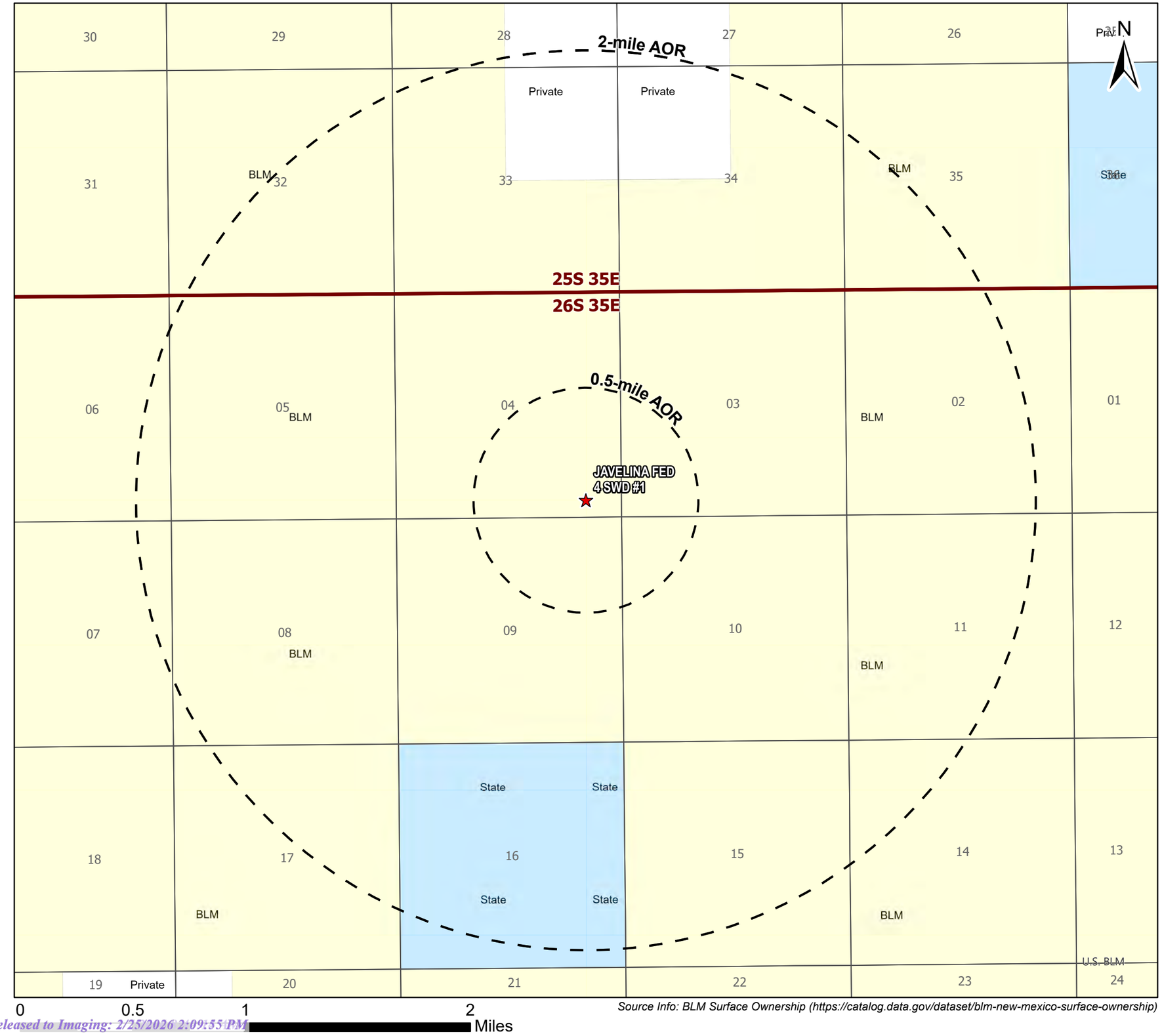
JAVELINA FED 4 SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis	April 18, 2025	Mapped by: Ben Bockelmann

Prepared for: SELECT

Prepared by: ALL CONSULTING



Source Info: BLM Surface Ownership (https://catalog.data.gov/dataset/blm-new-mexico-surface-ownership)

Legend

- Proposed SWD

Land Ownership

- BLM
- P
- S

2-mile Surface Ownership AOR

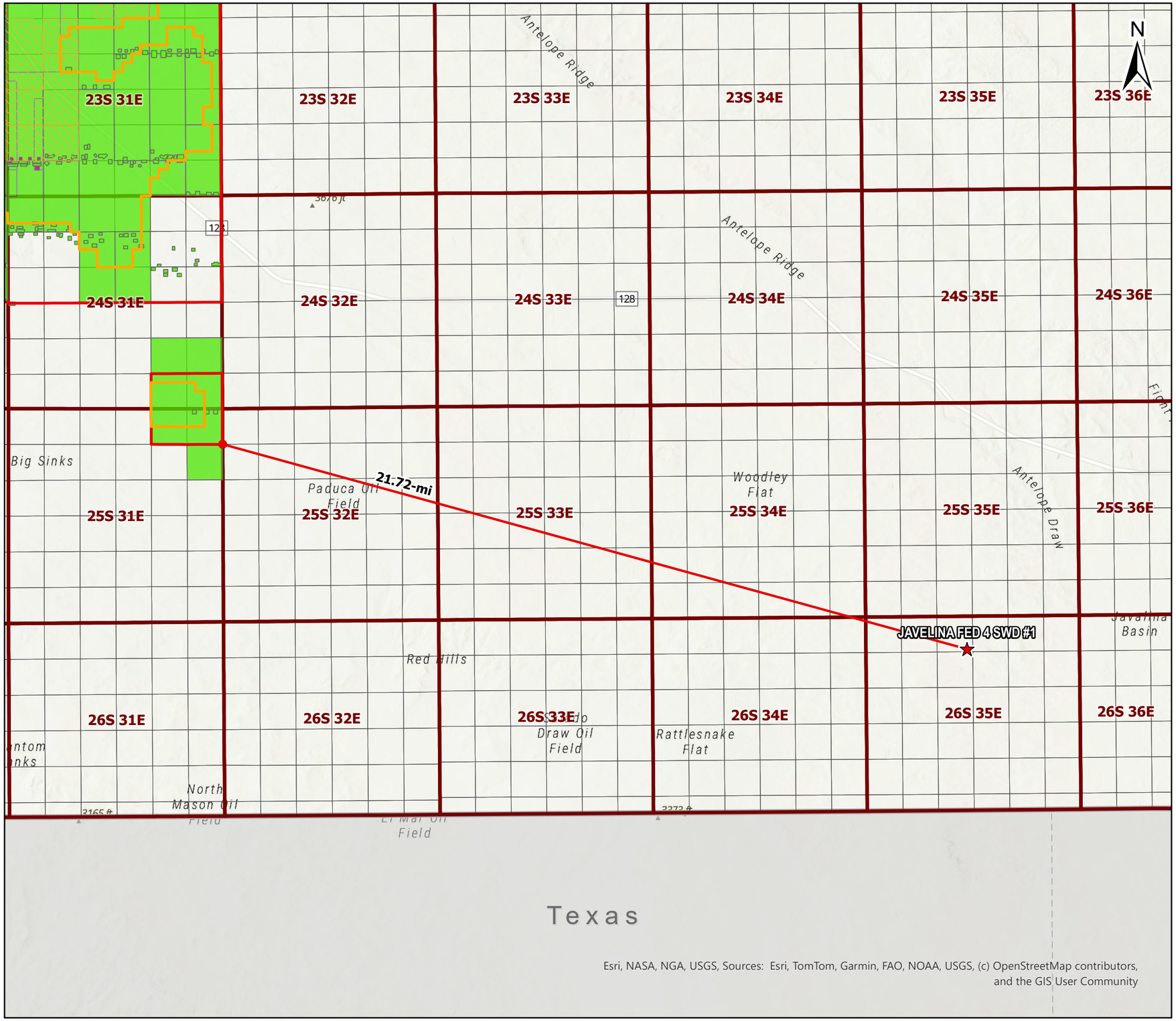
JAVELINA FED 4 SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis	April 18, 2025	Mapped by: Ben Bockelmann

Prepared for: SELECT

Prepared by: ALL CONSULTING



0 3.25 6.5 13 Miles

Source Info: BLM CFO Potash (https://www.nm.blm.gov/shapeFiles/cfo/carlsbad_spatial_data.html)

Legend

- Proposed SWD
- Known Potash Leasing Area
- Intrepid and Mosaic Potash Leases
- SOPA 1986

Drill Islands - 2025-04-04

Status, Depth Buffer

- Approved, Half Mile
- Approved, Quarter Mile
- Nominated,Half Mile
- Nominated,Quarter Mile

Development Areas- 2025-04-04

Status

- Approved
- Pending

Potash Lease AOR

JAVELINA FED 4 SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis	April 18, 2025	Mapped by: Ben Bockelmann

Prepared for: SELECT

Prepared by: ALL CONSULTING

Attachment 3

Source Water Analysis

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Javelina Fed 4 SWD #1 - Source Water Analysis (Avalon, Bone Spring, Delaware [Brushy Canyon], Wolfcamp, Yeso Group formations)

Well Name	API	Latitude	Longitude	Formation	Tds (mg/L)	Sodium (mg/L)	Calcium (mg/L)	Iron (mg/L)	Barium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Strontium (mg/L)	Manganese (mg/L)	Chloride (mg/L)	Carbonate (mg/L)	Bicarbonate (mg/L)	Sulfate (mg/L)	H2S (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	-	-	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	-	-	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	-	-	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	-

Attachment 4

Injection Formation Water Analysis

Javelina Fed 4 SWD #1 - Injection Formation Water Analysis (Delaware, Bell Canyon, and Cherry Canyon formations)

Well Name	API	Latitude	Longitude	Formation	Tds (mg/L)	Sodium (mg/L)	Calcium (mg/L)	Iron (mg/L)	Barium (mg/L)	Magnesium (mg/L)	Potassium (mg/L)	Strontium (mg/L)	Manganese (mg/L)	Chloride (mg/L)	Carbonate (mg/L)	Bicarbonate (mg/L)	Sulfate (mg/L)	H2S (mg/L)
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	-	-	3.12	149966.2	-	48.8	560	-
NORTH EL MAR UNIT #017	3002508430	32.0166054	-103.617691	DELAWARE	254756	-	-	-	-	-	-	-	-	159400	-	80	210	-
NORTH EL MAR UNIT #057	3002508440	32.0019455	-103.6131134	DELAWARE	259554	-	-	-	-	-	-	-	-	163000	-	61	253	-
GOEDEKE #002	3002508407	32.0597992	-103.5579987	DELAWARE	293925	-	-	-	-	-	-	-	-	184000	-	85	210	-

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.

Attachment 5

Reservoir Characterization

Reservoir Characterization at the Javelina Fed 4 SWD #1

1. **Injection Formation and Confinement**

a. Injection Formation

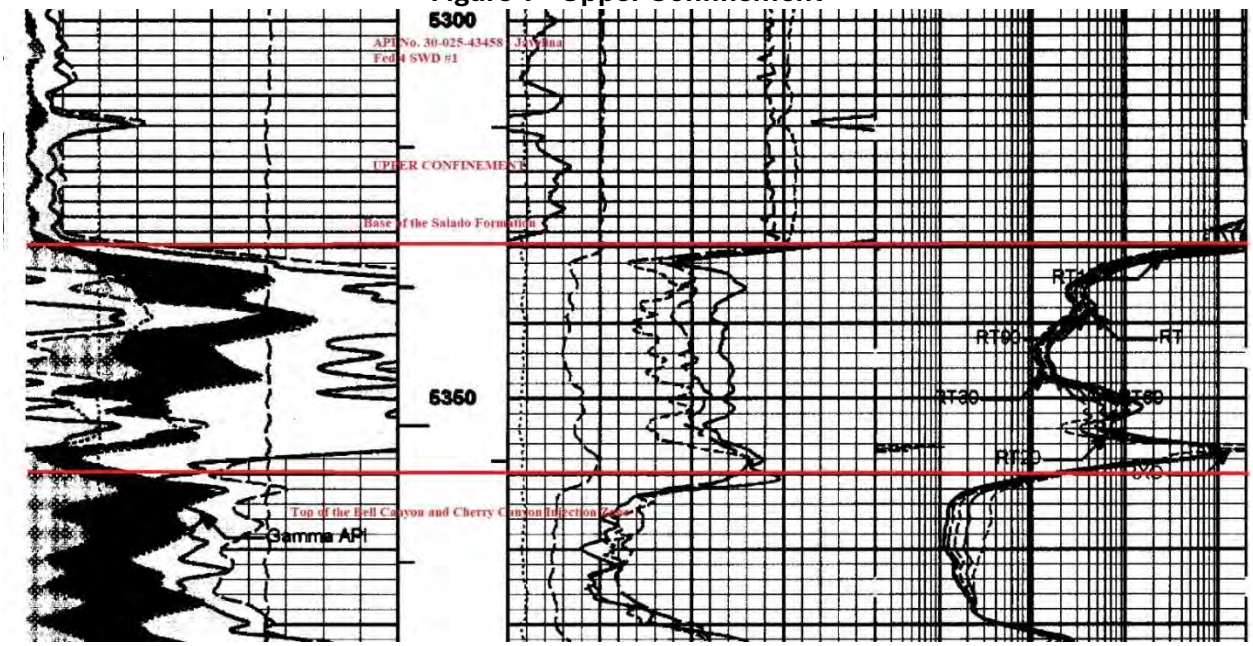
The proposed injection interval includes the Bell Canyon and Cherry Canyon formations of the Delaware Mountain Group from 5,360' – 6,500'. The Guadalupian-age Bell Canyon and Cherry Canyon members consist primarily of sandstones and siltstones with significant primary porosity and permeability, indicating 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.***

Figure 1 – Upper Confinement

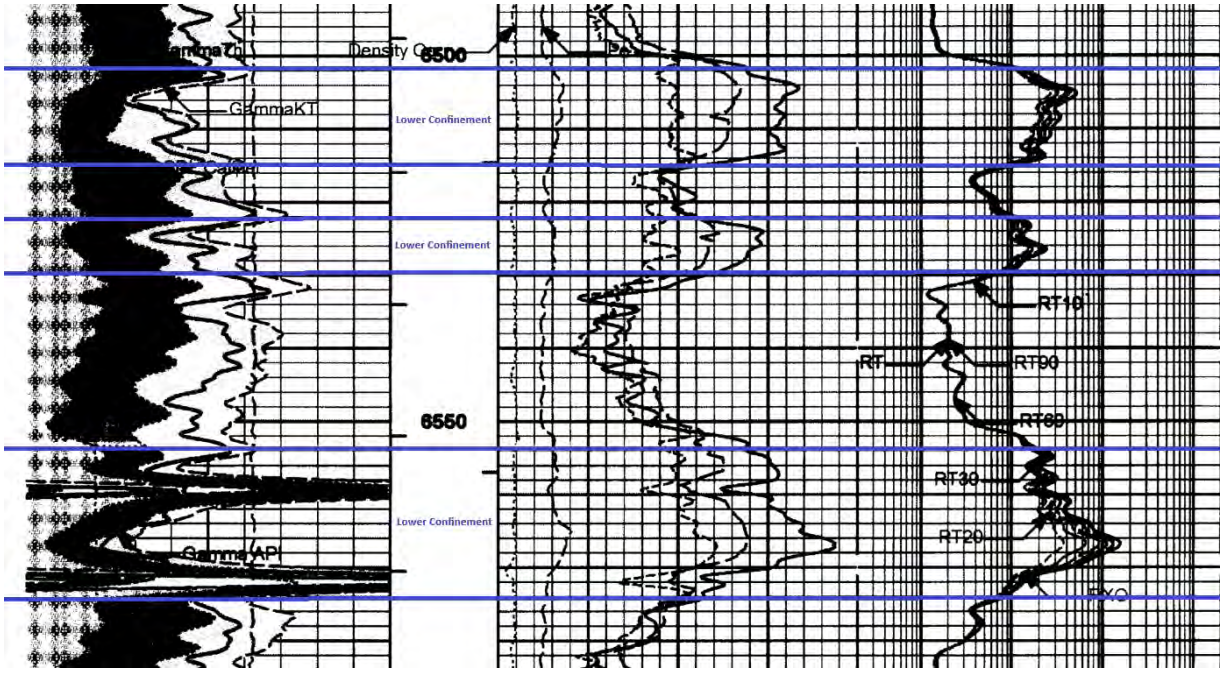


c. Lower Confinement

Nearby open hole geophysical well logs indicate the proposed Bell Canyon-Cherry Canyon injection interval is underlain by approximately 40 feet of low porosity and low permeability rocks within the Cherry 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 Javelina Fed 4 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 Javelina Fed 4 SWD #1 does not show any historic or current commercial water supply sources from the Delaware Mountain Group.

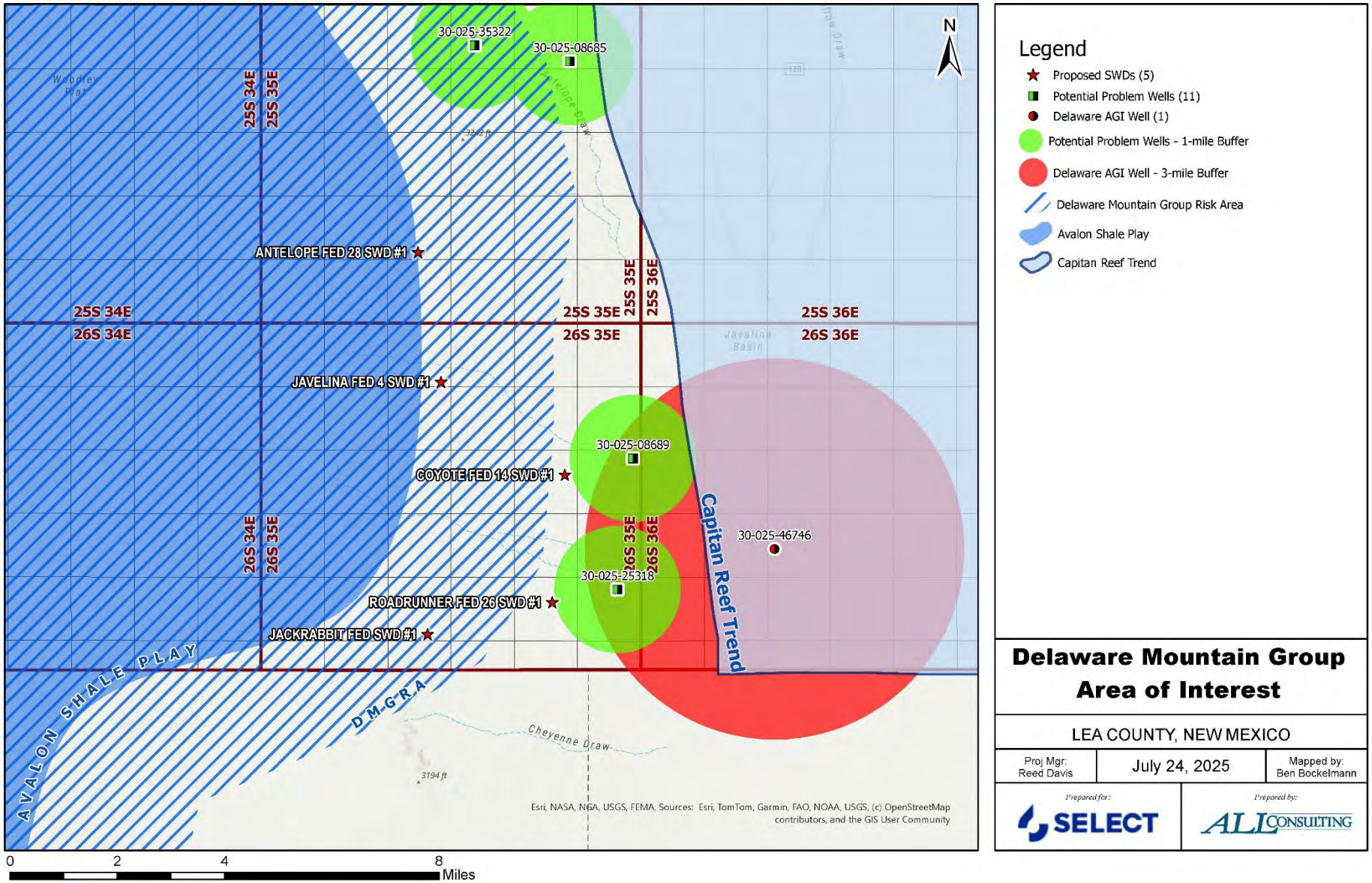
c. Enhanced Oil Recovery

A review of all wells in the NMOCD database within a 2-mile radius of the Javelina Fed 4 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

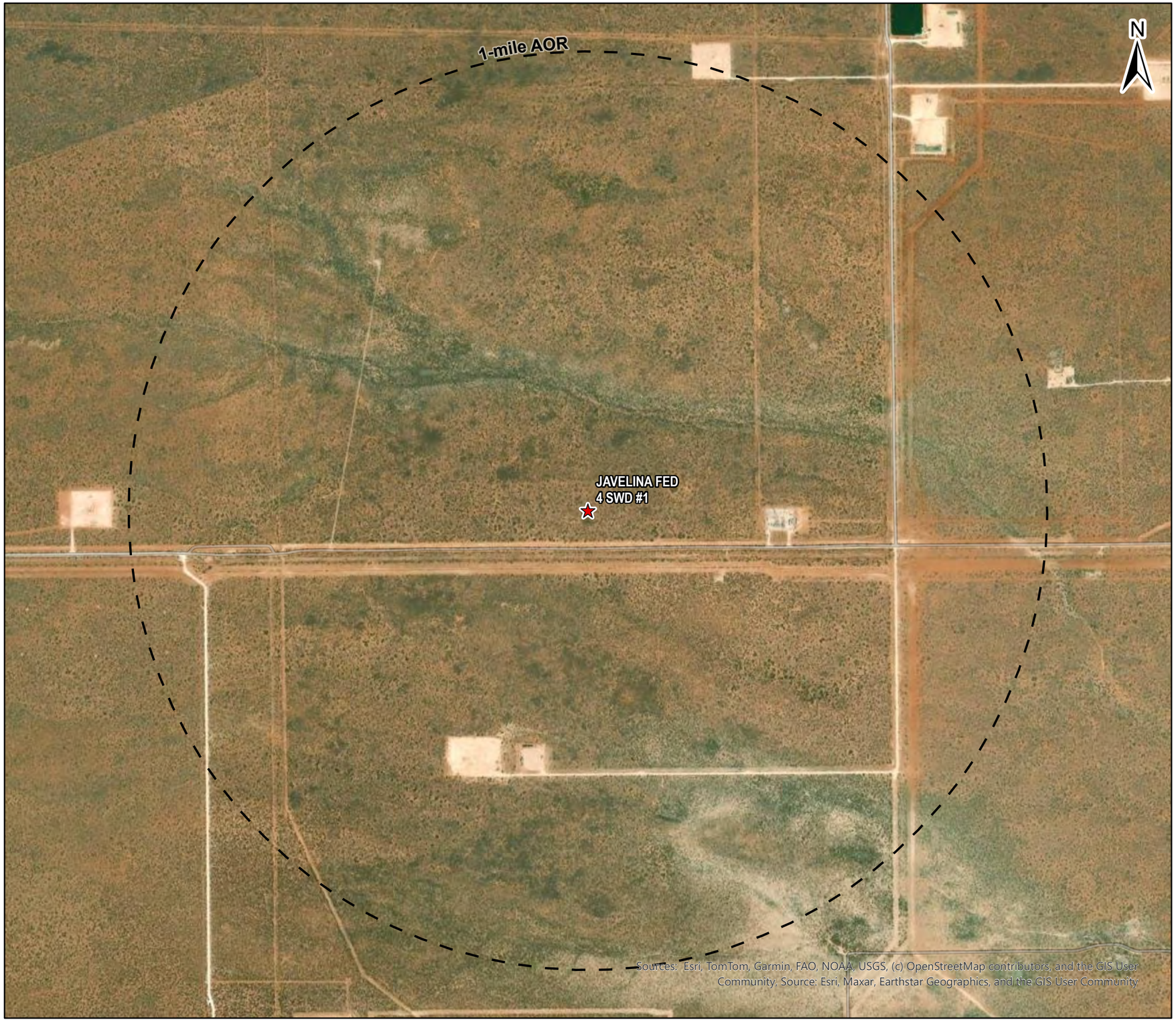
No Delaware Acid Gas Injection wells are located within 3-miles of the proposed Javelina Fed 4 SWD #1. In addition, the proposed SWD is located outside of the Avalon Shale play, the Capitan Reef Trend, and has been positioned more than 1-mile from any identified wells with potential wellbore concerns or lack of data for evaluation (see **Figure 3**).

Figure 3 – Delaware Mountain Group Area of Interest



Attachment 6

Water Well Map and Well Data



0 0.25 0.5 1 Miles

SourceInfo: ttps://gis.ose.state.nm.us/arcgis/rest/services/WatersPod/OSE_PODs/MapServer/0

Legend

- Proposed SWD

OSE Water PODs

POD Status

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

1-mile Water Well AOR

JAVELINA FED 4 SWD #1

LEA COUNTY, NEW MEXICO

Proj Mgr: Reed Davis	April 18, 2025	Mapped by: Ben Bockelmann

Prepared for: SELECT

Prepared by: ALL CONSULTING

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Javelina Fed 4 SWD #1 - Water Well Sampling Rationale					
Water Wells	**Owner**	**Available Contact Information**	**Use**	**Sampling Required**	**Notes**
Note: There are no water wells within 1-mile of the proposed Javelina Fed 4 SWD #1.					

Attachment 7

No Hydrologic Connection Statement

RE: Select Water Solutions LLC – Javelina Fed 4 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 1,090 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 4,270 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 11, 2025

Tom Tomastik Date

Chief Geologist and Regulatory Specialist

ALL Consulting LLC

Attachment 8

List of Affected Persons

Javelina Fed 4 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
Well Operator	Pre-Ongard Well Operator	Max M. Wilson	NA	NA	NA	NA
Well Operator	Pre-Ongard Well Operator	M. J. Harvey Jr.	NA	NA	NA	NA
BLM - Lessee and Unit Operator	Devon Energy Production Company, LP	DEVON ENERGY PROD CO LP	333 West Sheridan Ave.	Oklahoma City	OK	73102
BLM - Lessee	CHEVRON U S A INC	CHEVRON USA INC	6301 Deauville	Midland	TX	79706-2964
BLM - Unit Operator	COG OPERATING LLC	COG OPERATING LLC	600 W Illinois Ave	Midland	TX	79701

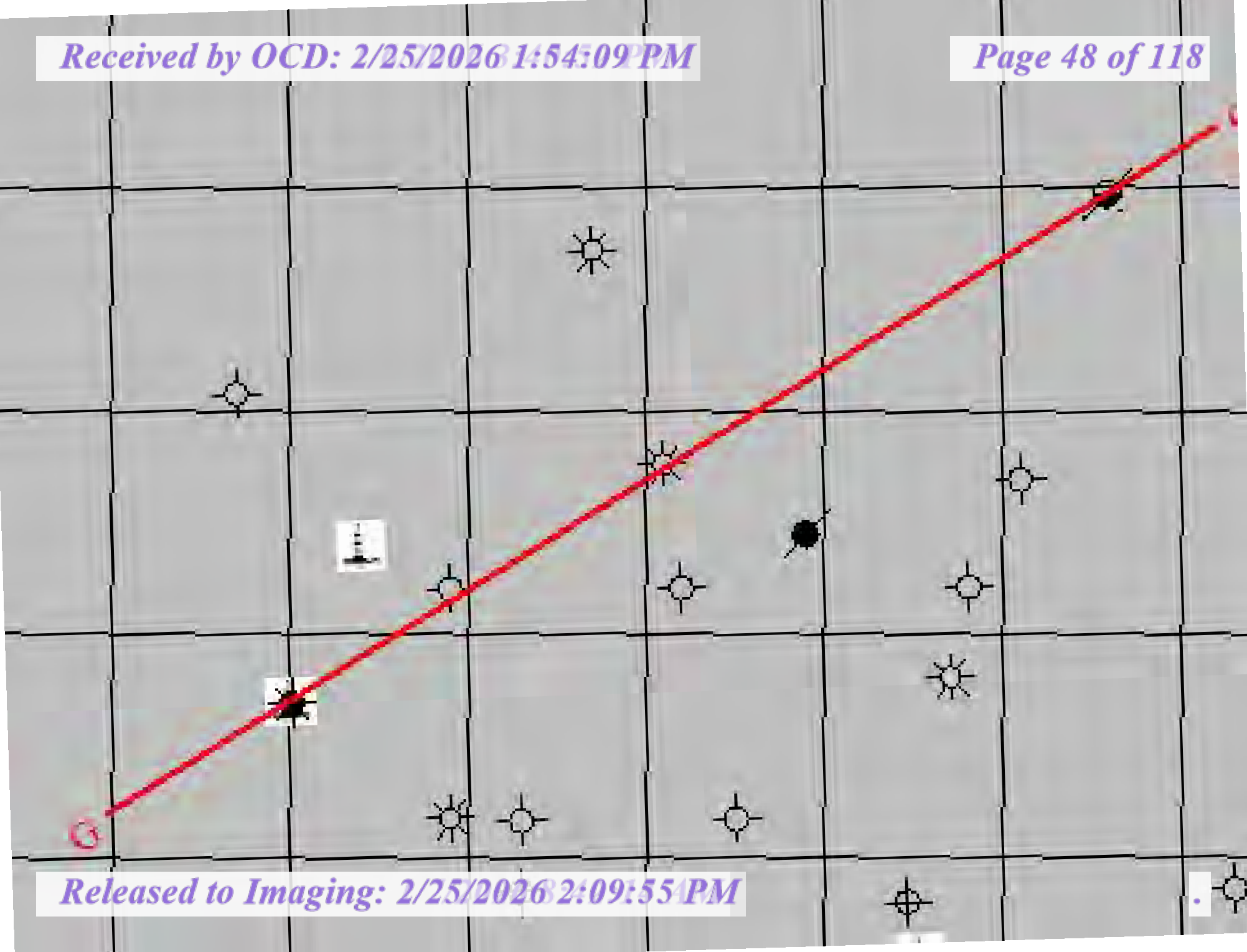
Note: The affected parties above received notification of this C-108 application.
BLM Unit Operators and Lessee information was retrieved from BLM MLRS (https://mlrs.blm.gov/s/).
NMSLO Lessee information retreived from NMOCD Operator Search (https://wwwapps.emnrd.nm.gov/OCD/OCDPermitting/Operators/Search/OperatorSearch.aspx).

Appendix A

Seismic and Structural Cross Sections

Appendix A-1

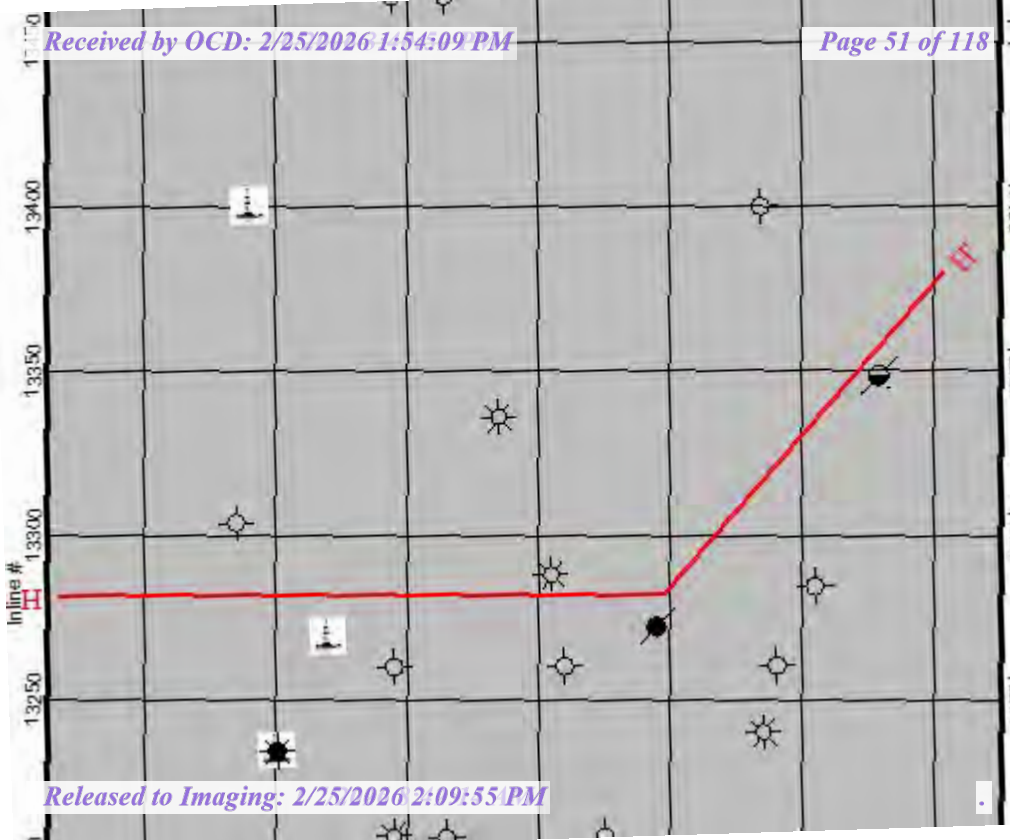
Seismic G-G'

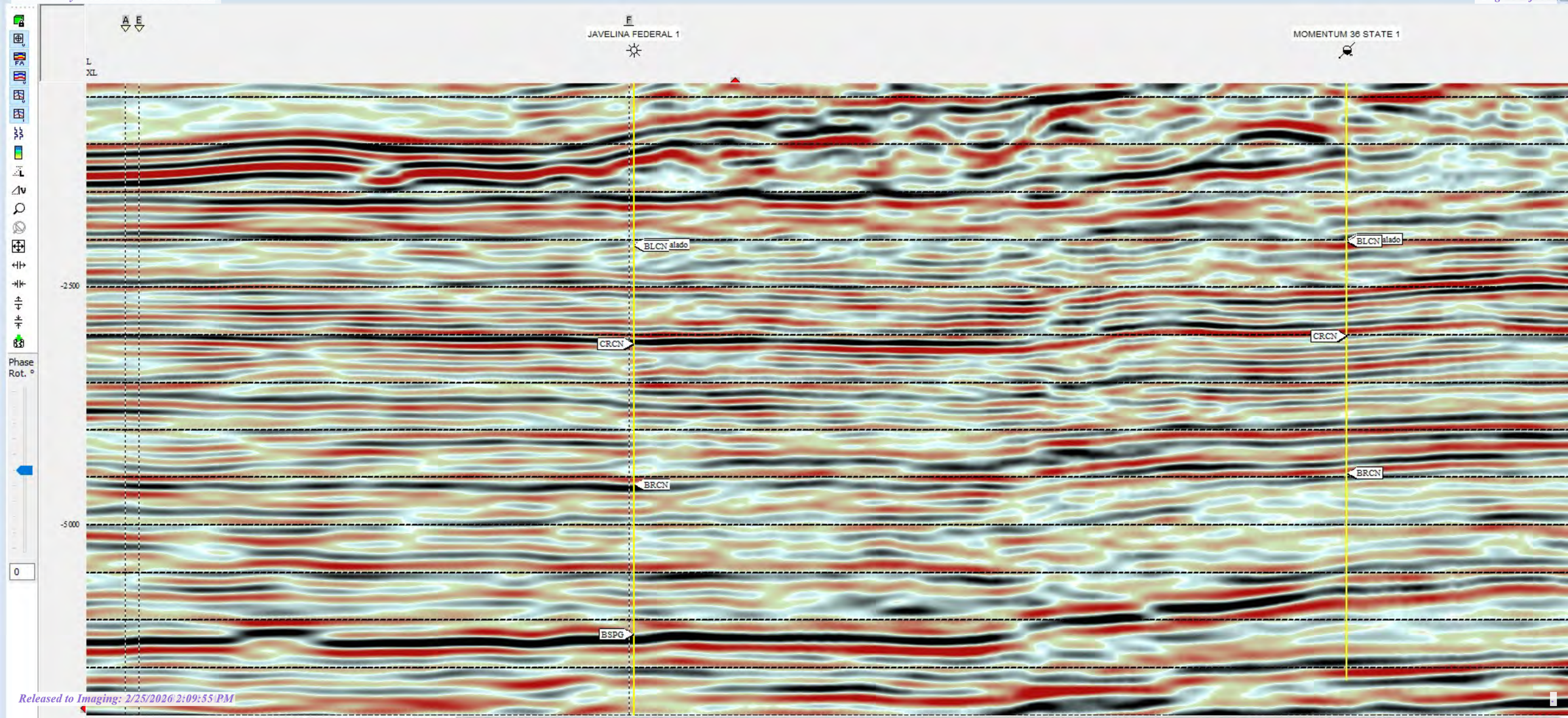


TALCO 9 26 35 FED 3H
SINCLAIR ETAL A 1
JAVELINA FEDERAL 1
L
XL
BLCN alado
DLWR
LAMR
BLCN alado
-2500
CRCN
CRCN
BRCN
BRCN
-5000
BSPG
BSPG
-7500

Appendix A-2

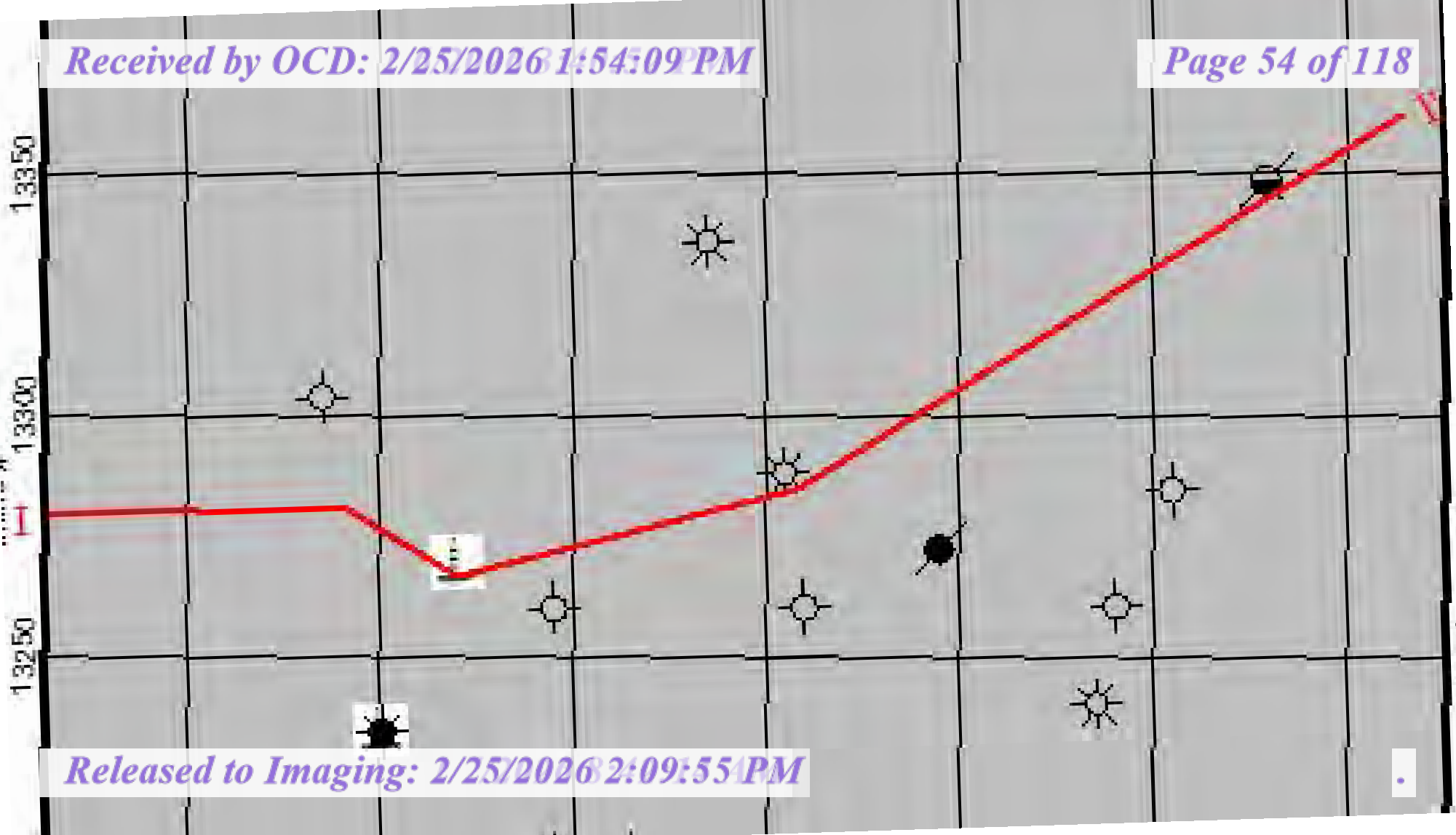
Seismic H-H'

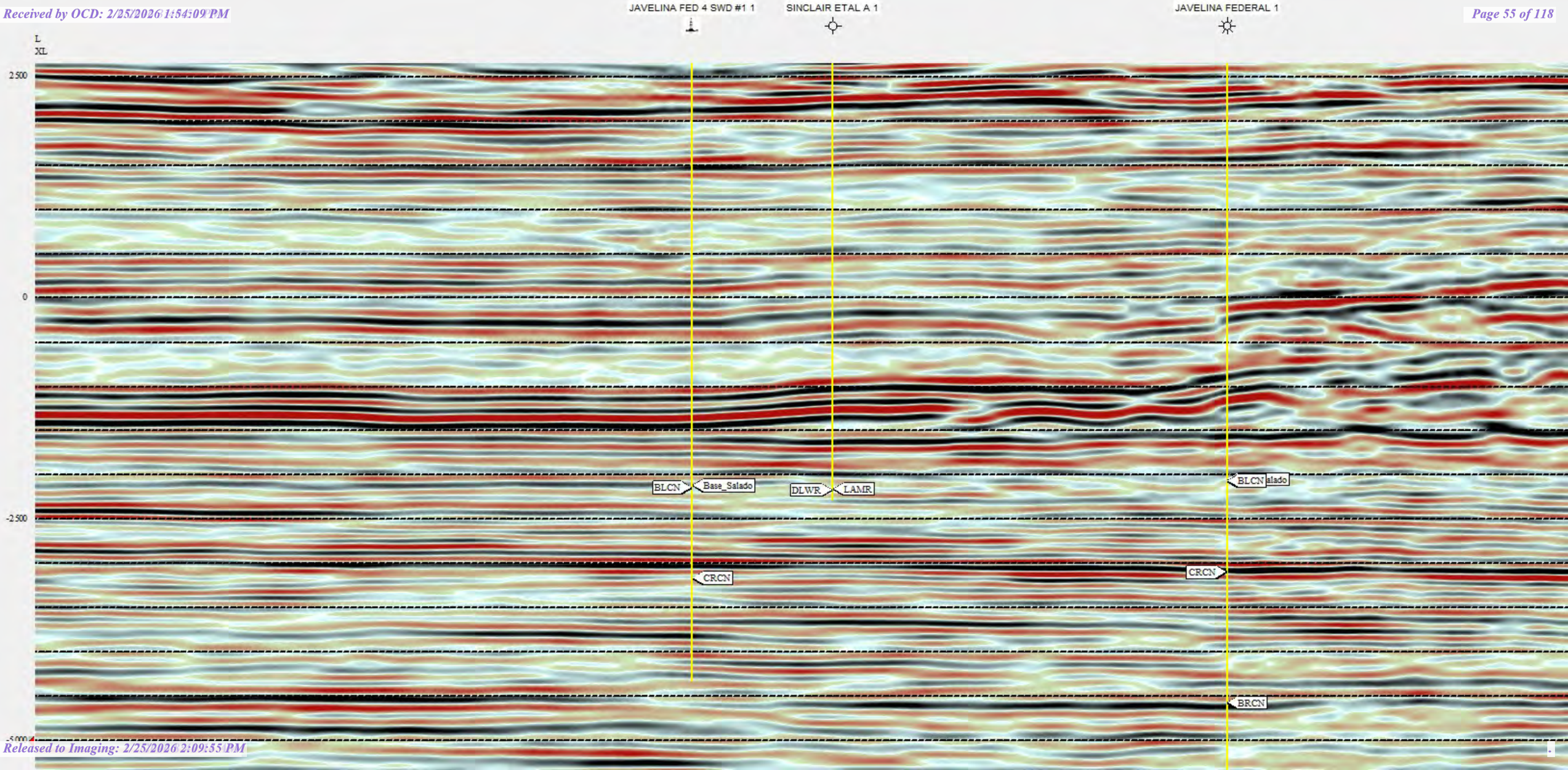

Inline #
13400
13350
13300
13250
H
H


A E
F
JAVELINA FEDERAL 1
MOMENTUM 36 STATE 1
L
XL
BLCN alado
BLCN alado
-2 500
CRCN
CRCN
BRCN
BRCN
-5 000
BSPG
Phase
Rot. °
0

Appendix A-3

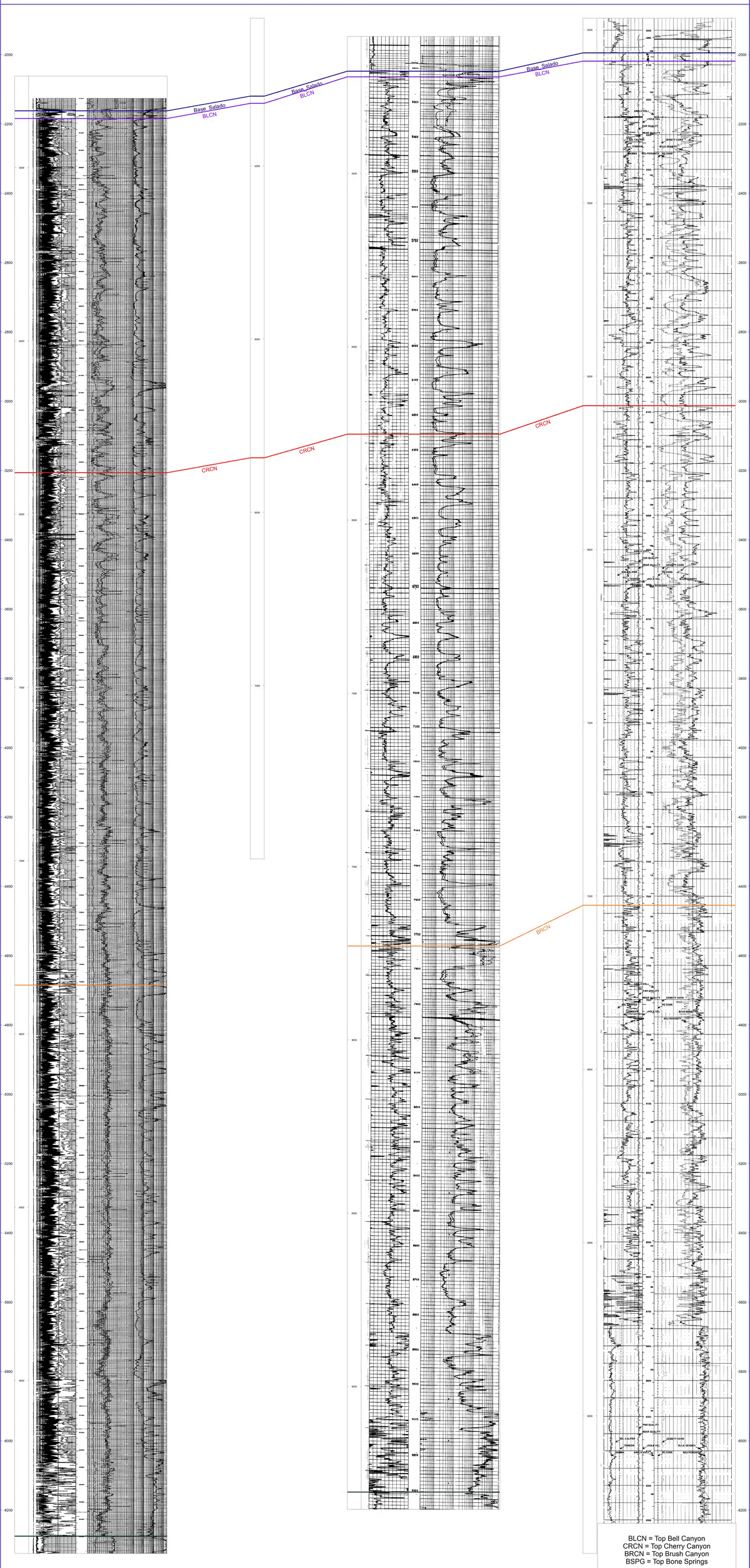
Seismic I-I'


13350
13300
13250


JAVELINA FED 4 SWD #1 1
SINCLAIR ETAL A 1
JAVELINA FEDERAL 1
L
XL
2500
0
-2500
BLCN
Base_Salado
DLWR
LAMR
BLCN
alado
CRCN
CRCN
BRCN

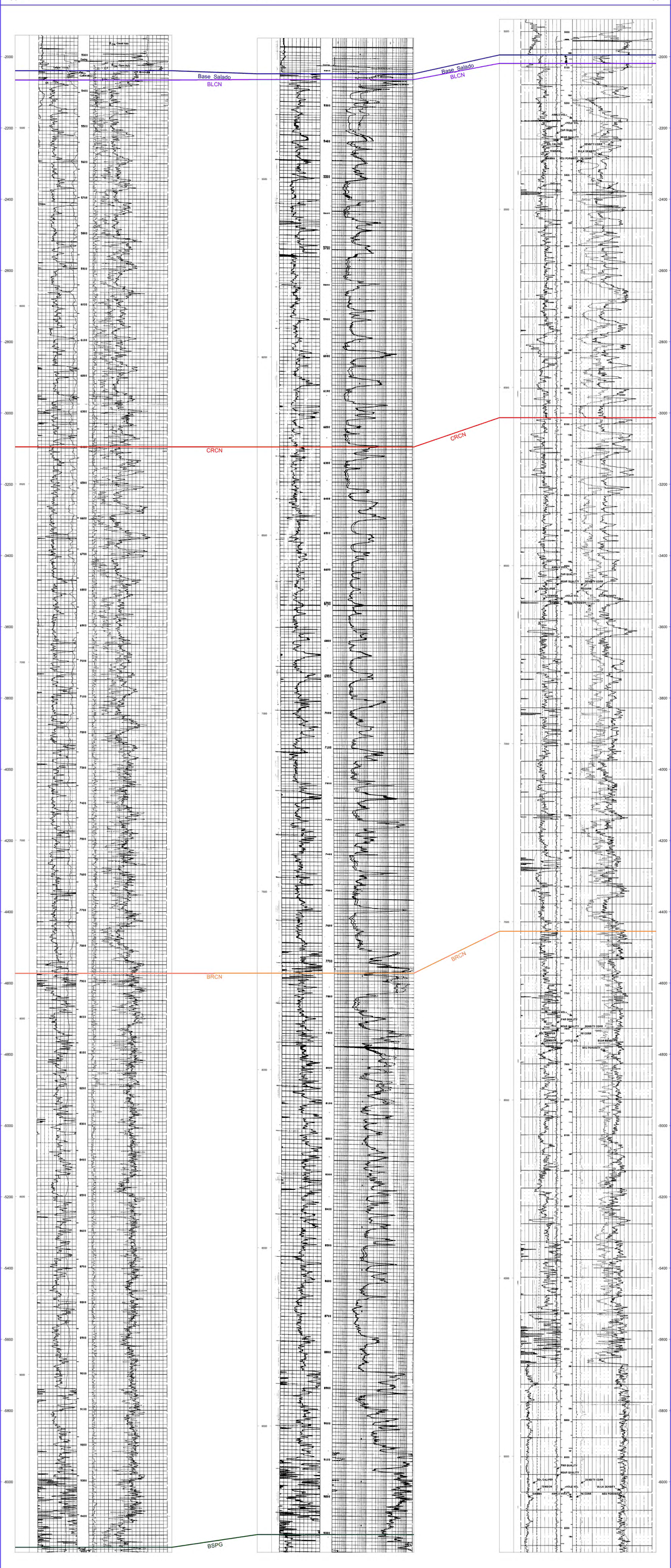
Appendix A-4

Structural G-G'


G
G'
30025434580 0
3173 ft
JAVELINA FED 4 SWD #1
5798 ft
30025286440000
9611 ft
30025375170000
Base Salado
BLCN
CRCN
BRCN
BLCN = Top Bell Canyon
CRCN = Top Cherry Canyon
BRCN = Top Brush Canyon
BSPG = Top Bone Springs

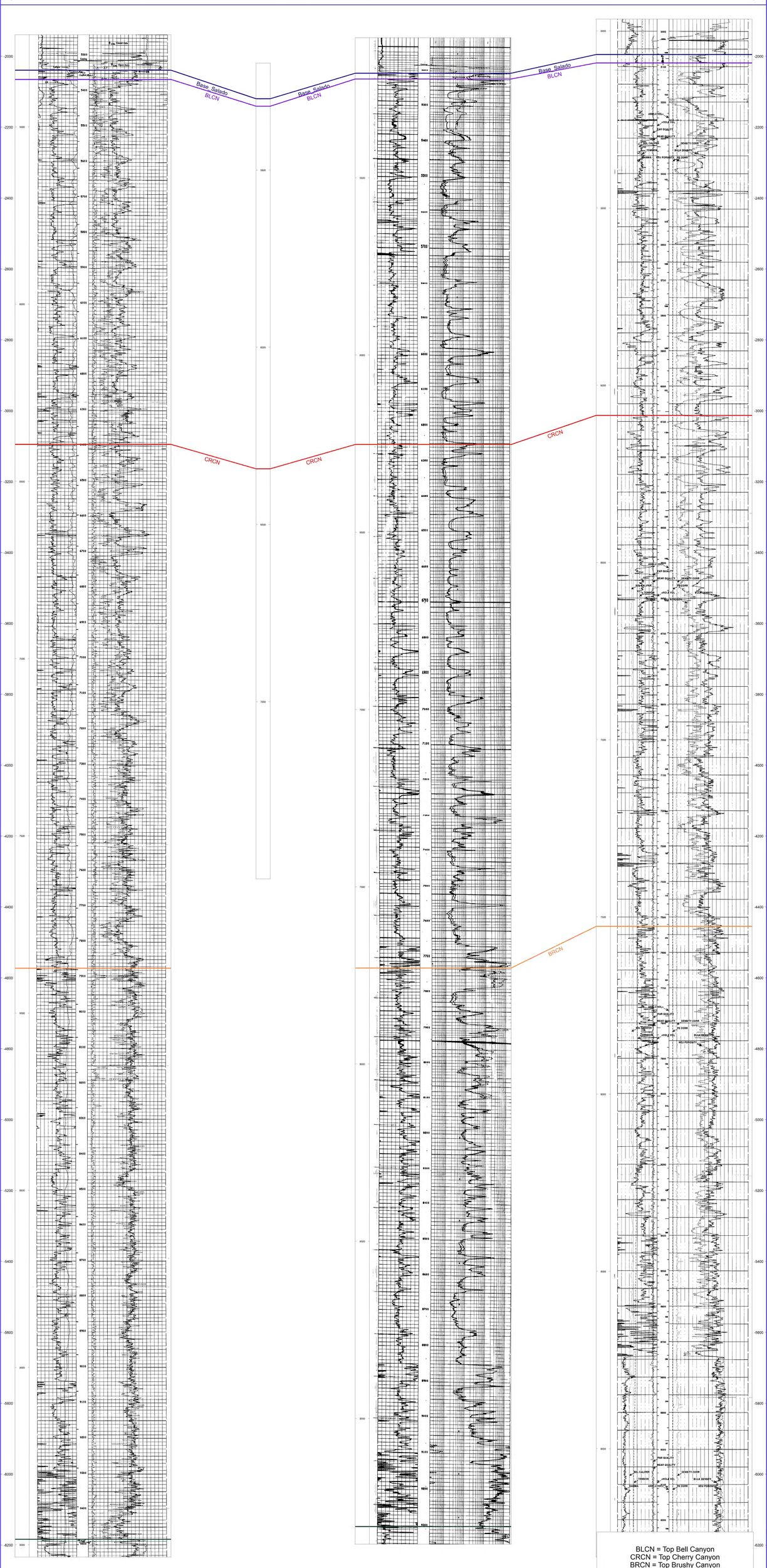
Appendix A-5

Structural H-H'


H
H'
30025273590 0
17144 ft
30025286440000
9611 ft
30025375170000
Base Salado
BLCN
CRCN
BRCN
BSPG
Base Salado
BLCN
CRCN
BRCN
CALIPER
TENSION
GAMMA
AMIN RES
FAR QUALITY
NEAR QUALITY
DENSITY CORR
PE CORR
HOLE VOL
BULK DENSITY
NEU POROSITY

Appendix A-6

Structural I-I'


3002527359 00
11651 ft
JAVELINA FED 4 SWD #1
5798 ft
3002528644 0000
9611 ft
3002537517 0000
Base Salado
BLCN
CRCN
BRCN
BLCN = Top Bell Canyon
CRCN = Top Cherry Canyon
BRCN = Top Brushy Canyon
BSPG = Top Bone Springs

Appendix B

Reservoir Performance Modeling

SELECT

Southeast Lea County Four DMG SWDs east of Jal New Mexico

TASP Group, January 5, 2026

Dave Childers, Sr. Reservoir Engineer

5 YEARS WTTR LISTED NYSE

Received by OCD: 2/25/2026 1:54:09 PM

Scope of Work

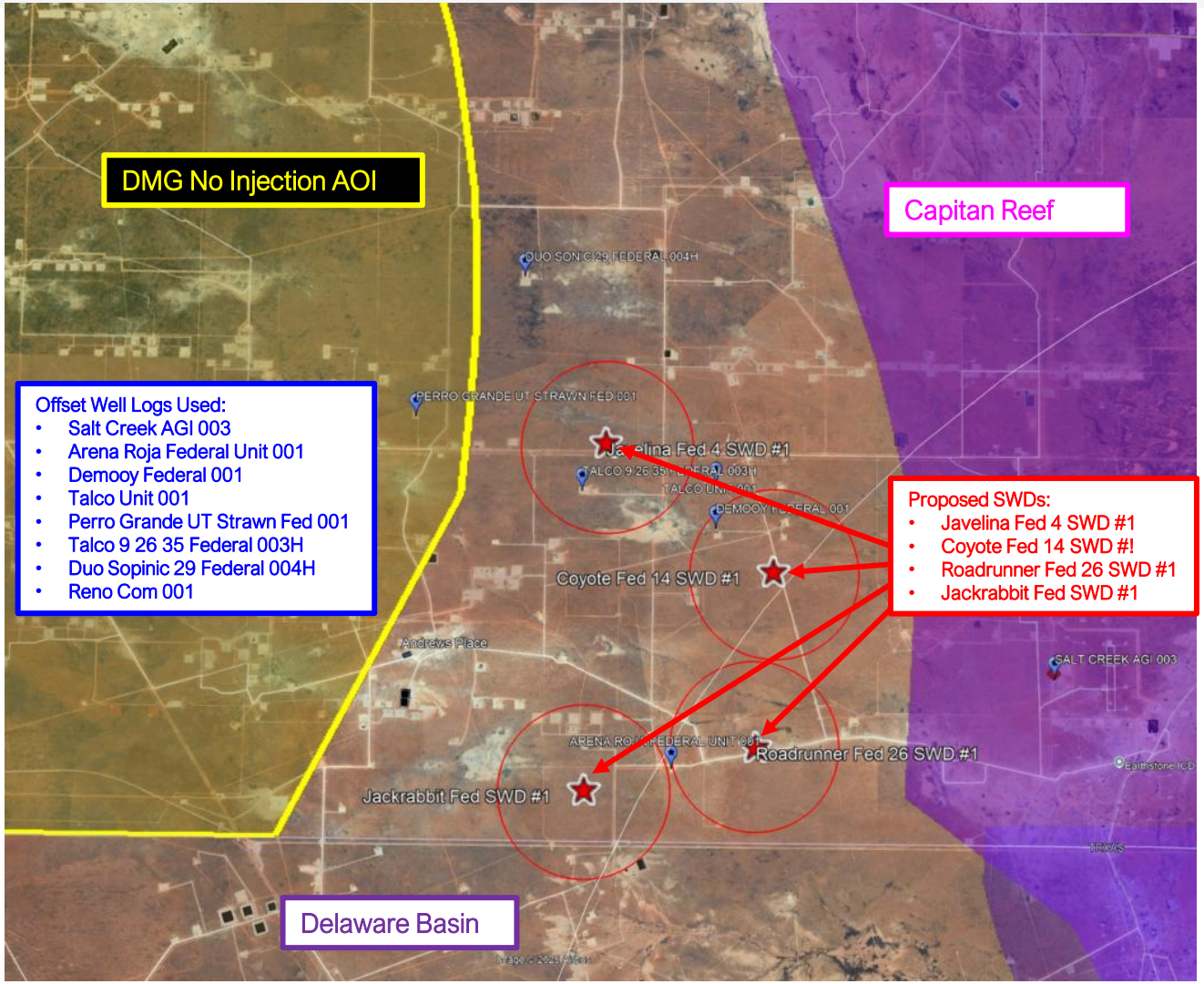
- Determine:
  - Reservoir and geomechanical properties to approximate reservoir and wellbore hydraulics.
  - Analyze confining layers and estimate fracture gradients.
  - Estimate operational pressure gradients based on maximum injection rates and SWD life.
- Proposed SWDs:
  - Javelina Fed 4 SWD #1
  - Coyote 14 SWD #1
  - Roadrunner Fed 26 SWD #1
  - Jackrabbit Fed SWD #1

SELECT

Released to Imaging: 2/25/2026 2:09:55 PM

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)



SELECT

Injection Interval

Well Name	Target Interval	Top of Interval Approximated (ft)	Gross Injection Zone Thickness (ft)
Javelina Fed 4 SWD #1	Bell Canyon	5,360’	1,140’
	Cherry Canyon	6,275’	
	Base of Injection Zone	6,500’	
	Brushy Canyon	7,780’	
Coyote Fed 14 SWD #1	Bell Canyon	5,175’	1,245’
	Cherry Canyon	6,180’	
	Base of Injection Zone	6,420’	
	Brushy Canyon	7,550’	
Roadrunner Fed 26 SWD #1	Bell Canyon	5,400’	1,010’
	Cherry Canyon	6,205’	
	Base of Injection Zone	6,410’	
	Brushy Canyon	7,750’	
Jackrabbit Fed SWD #1	Bell Canyon	5,305'	1,195’
	Cherry Canyon	6,275'	
	Base of Injection Zone	6,500’	
	Brushy Canyon	7,700'	

SELECT

Offset Wells used to Estimate Reservoir/Geomechanical Properties

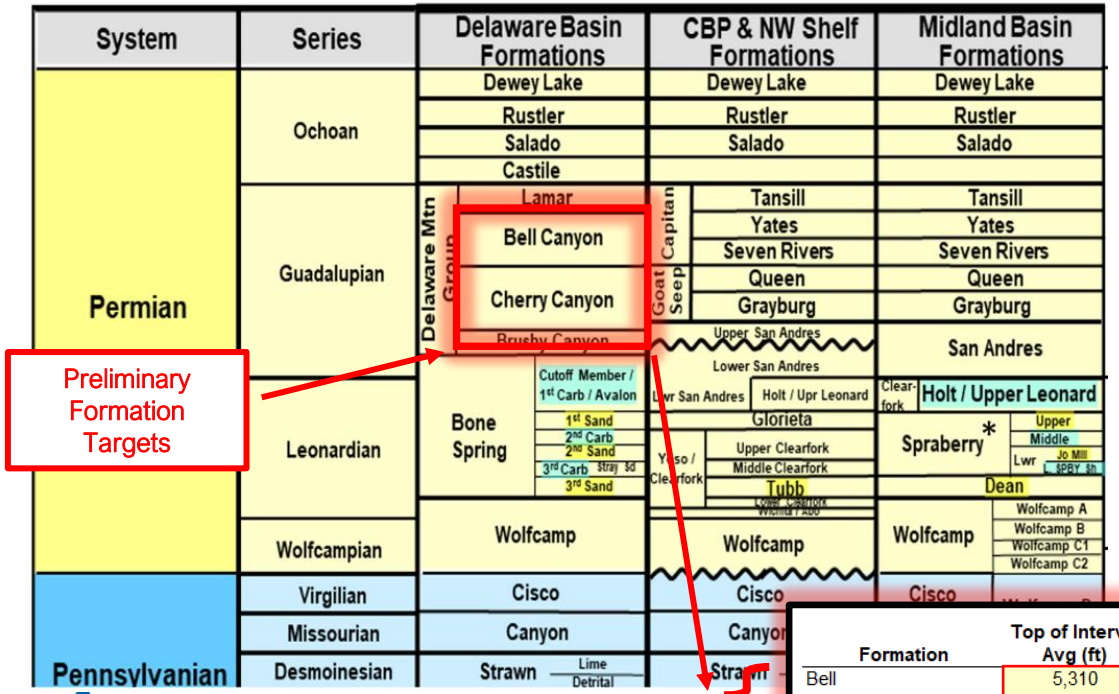
							Logs Used to Ascertain Reservoir and Geomechanical Properties					
							Porosity	Rock Density	Water or Hydrocarbon bearing Layers	Lithology	Lithology	Geomechanical Properties
API	Well Name	Lat.	Long.	Interval of Interest	Top of Interval (feet	Thickness	Neutron	Density	Resistivity	Photoelectric	Gamma Ray	Sonic DT
300255186500	Salt Creek AGI 003	32° 1'40.67"N	103°16'39.73"W	Saldo	1900		Yes	Yes	Yes	Yes	Yes	Yes
				Bell Canyon	5300	1900						
				Cherry Canyon	6200							
				Brushy Canyon (Approximation)	7200							
300253725700	Arena Roja Federal Unit 001	32° 0'44.66"N	103°21'11.39"W	Salt	4876		No	Yes	No	Yes	No	No
				Bell Canyon	5156	2494						
				Cherry Canyon (Approximation	6350							
				Brushy Canyon (Approximation)	7650							
300252253100	Demooy Federal 001	32° 3'8.46"N	103°20'40.96"W	Salado	1900		No	No	No	No	Yes	Yes
				Bell Canyon	5250	2375						
				Cherry Canyon (Approximation	6250							
				Brushy Canyon (Approximation)	7625							
300252674700	Talco Unit 001	32° 3'34.62"N	103°20'41.02"W	Saldo	1900		No	No	Yes	No	Yes	Yes
				Bell Canyon	5250	2400						
				Cherry Canyon	6250							
				Brushy Canyon (Approximation)	7650							
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
				Bell Canyon	5350	2525						
				Cherry Canyon	6550							
				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						
				Cherry Canyon	6300							
				Brushy Canyon (Approximation)	7770							
300254309000	Duo Sopnic 29 Federal 004H	32° 5'40.23"N	103°22'59.30"W	Lamar	5239		No	No	No	No	No	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							
				Brushy Canyon (Approximation)	7325							

SELECT

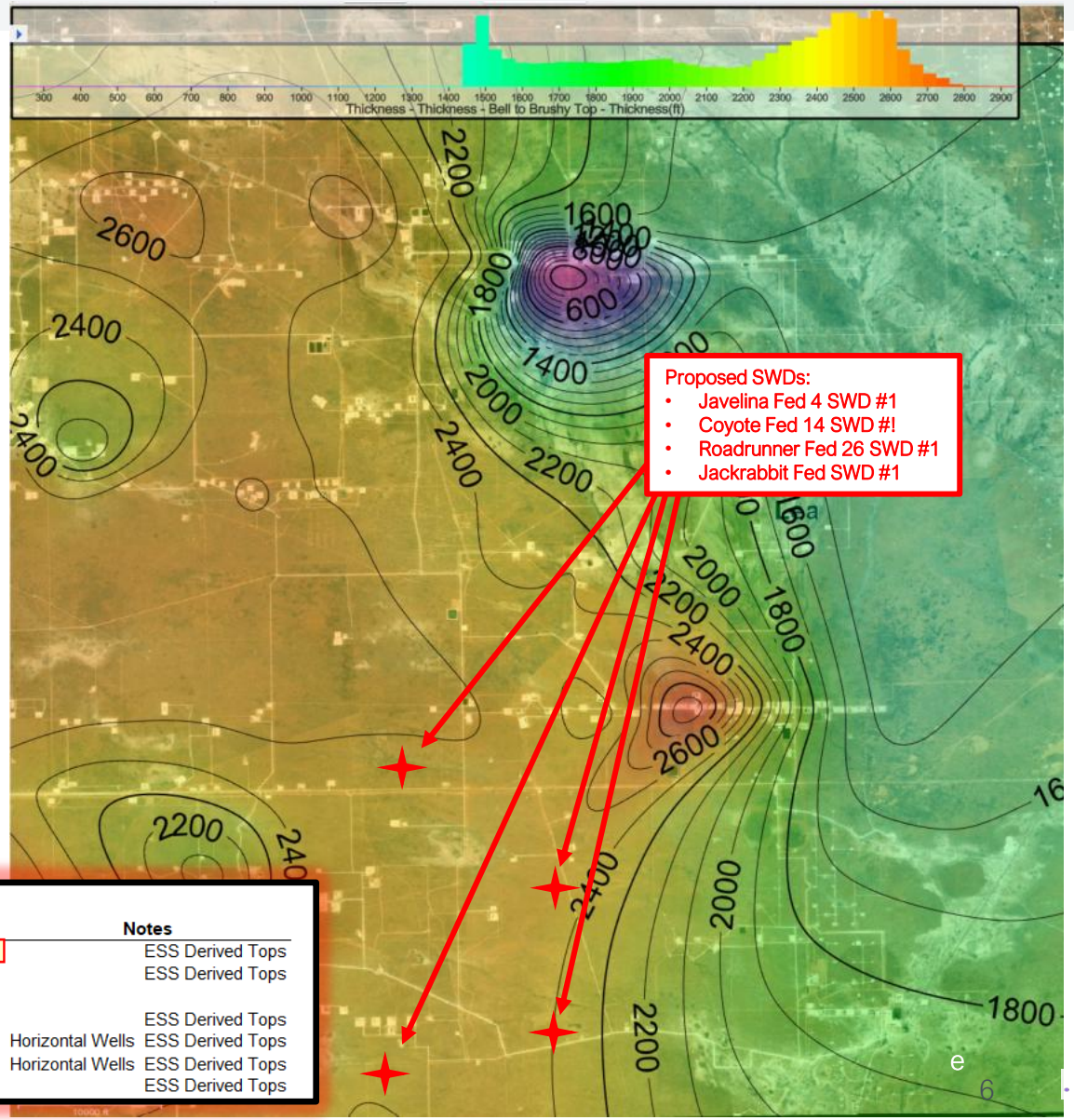
Isopach Thickness: Top of Bell Canyon - Bottom of Cherry Canyon

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

Summary of lower Permian stratigraphic nomenclature, Permian Basin region



Formation	Top of Interval Avg (ft)	Gross Target Interval Avg (ft)	Notes
Bell	5,310	1,148	ESS Derived Tops
Cherry	6,234		ESS Derived Tops
Base of Injection Interal	6,458		
Brushy	7,695		ESS Derived Tops
Bone Springs	9,250		Horizontal Wells ESS Derived Tops
Wolfcamp	12,375		Horizontal Wells ESS Derived Tops
Strawn	13,500		ESS Derived Tops



SELECT

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.

Fracture Mechanic Models	Upper Layer psi/ft	Lower Layer psi/ft
Hubbert and Willis Correlation	0.639	0.646
Mathews and Kelly Correlation	0.823	0.866
Pennebaker Correlation	0.814	0.871
Eaton Correlation	0.637	0.675

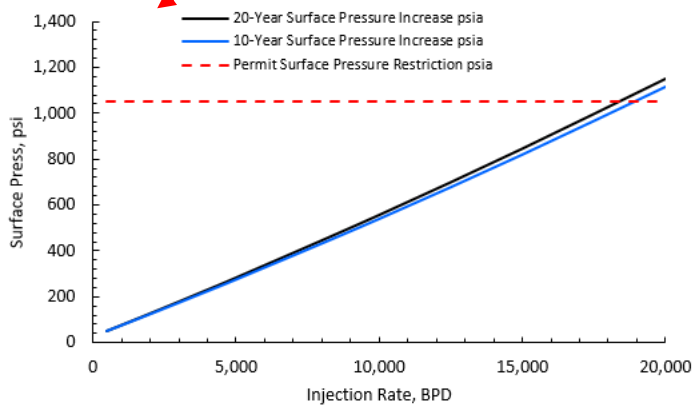
Offset Well Logs with Triangular Distribution	Fracture Gradient psi/ft min	mean	max
Upper Confining Layer	0.637	0.726	0.814
Lower Confining Layer	0.646	0.771	0.871

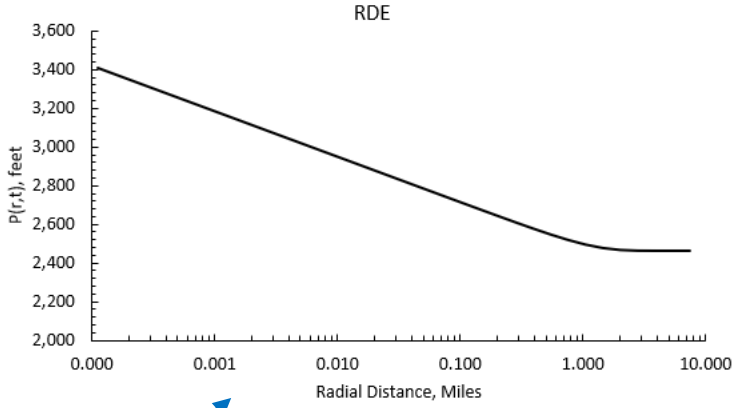
Most likely Fracture Gradients

Near Wellbore Model		
NMOCD Surface Pressure Gradient Constraint =	0.2	psi/ft

Model		
Rate =	20,000	BPD
Pore Pressure = Initial Pressure ~	2,455	psi/ft
Well Life =	10	yrs.
Injection Interval =	1,125	feet
Likely Porosity =	21.8%	dim
Minimum effective permeability k_{eff} >=	19.2	md
Pressure Gradient due to Injection Ops. =	0.64	psi/ft
Flow Capacity (kh) =	21,600	md-ft
Rate =	20,000	BPD
Pore Pressure = Initial Pressure ~	2,455	psi/ft
Well Life =	20	yrs.
Injection Interval =	1,125	feet
Likely Porosity =	21.8%	dim
Minimum effective permeability k_{eff} >=	19.93	md
Pressure Gradient due to Injection Ops. =	0.64	psi/ft
Flow Capacity (kh) =	22,421	md-ft

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)*.





Radial Diffusion Model:
- Estimate of pressure diffusion with respect to SWD well life *(Spivey et.al, 2013, and Lee et.al, 2003)*.

SELECT

Received by OCD: 2/25/2026 1:54:09 PM

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 20-years.
- 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.

SELECT

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

References

- Applied Drilling Engineering by Bourgoyne:
  - Bourgoyne, A. T., Millheim, K. K., Chenevert, M. E., & Young, F. S. (1986). Applied drilling engineering. Society of Petroleum Engineers.
- Applied Well Test Interpretation by Spivey and Lee
  - Spivey, J. P., & Lee, W. J. (2013). Applied well test interpretation. Society of Petroleum Engineers.
- Pressure Transient Analysis by Lee, Rollins, and Spivey (SPE Textbook Volume 9)
  - Lee, W. J., Rollins, J. B., & Spivey, J. P. (2003). Pressure transient testing (Vol. 9). Society of Petroleum Engineers.

SELECT

Released to Imaging: 2/25/2026 2:09:55 PM

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. 25547**

SELF-AFFIRMED STATEMENT OF RJ METZLER

1. I am employed by Select Water Solutions, LLC ("Select Water" or "Applicant") (OGRID No. 289068) as the Vice President of Operations & Engineering. I am over 18 years of age, have personal knowledge of the matters addressed herein, and am competent to provide this Self-Affirmed Statement.

2. I have previously testified before the New Mexico Oil Conservation Division ("Division") as an expert witness in petroleum engineering. My credentials as an expert have been accepted by the Division and made a matter of record.

3. I am familiar with Select Water's application in this case.

4. Select Water seeks authorization to inject produced water into the Bell Canyon and Cherry Canyon formations (SWD; Bell Canyon-Cherry Canyon; Code 96802) for the purposes of disposal through its the Javelina Fed 4 SWD #1 well ("Well").

5. Select Water proposes to inject an average of 15,000 barrels of water per day and a maximum of 20,000 barrels of water per day.

6. Select Water requests that the Division approve a maximum injection pressure of 1,072 psi.

7. Well data and operational information for the Well is provided in the C-108 at pages 3-4.

Select Water Solutions, LLC
Case No. 25547
Exhibit B

8. A wellbore schematic is provided in the C-108 at page 10.

9. Select Water proposes to acidize the injectors with 50,000 gallons of 15% HCl for each set of perforations. Based on my professional training and experience, it is my professional opinion that acidizing each set of well perforations will break down well perforations and cause injection at lower pressures to maximize injection rates.

10. Select Water is proposing a three-string casing design for the Well with the surface, intermediate, and production strings being cemented to surface. The surface string should isolate any known freshwater zones. The first intermediate string will isolate the Artesia Group reservoirs above the Delaware Mountain Group. The production string will be set at 6,520' in the upper Cherry Canyon Formation and will isolate injection from the lower pressure reservoirs of the Bone Springs Formation. The third string is referred to as the production string in the wellbore diagram.

11. The casing proposed by Select Water for each depth is consistent with industry standards and is consistent with casings that Select Water has used in other Bell Canyon and Cherry Canyon disposal wells. It is also consistent with what I understand other operators to be proposing for similar high volume SWDs, with similar tubing sizes. In my opinion, the casing and corresponding cement layer is designed to and will protect freshwater resources.

12. Select Water intends to use a 5 ½ inch tubing with premium gas tight connections and an insert a duoline fiberglass liner or equivalent internally lined option. Select Water will run cement bond longs on each cemented section of casing to ensure cement integrity and bonding.

13. Select Water will also install a SC-2 permanent-set packer that will ensure the isolation of the injectate source into to the injection interval and away from hydrocarbons and fresh water.

14. The disposal interval will be a perforated completion at approximately 5,360 feet to 6,500 feet.

15. Select Water will run gamma ray, resistivity, neutron density, and sonic logs from the 9 5/8" intermediate casing shoe to TD upon well completion and Select Water will submit the logs to the Division.

16. Select Water intends to conduct a Step Rate Test prior to commencement of injection, to determine the formation fracture gradient and maximum allowable surface injection pressure.

17. The Well will be adequately equipped for injection, and the construction of the Well will protect fresh water and other hydrocarbon-bearing zones.

18. In this area, the depths to potable water for stock and domestic supplies are less than 105 feet below the surface. The underground sources of drinking water ("USDW") is the Rustler Formation and the base of the USDW plus 25 feet into the anhydrite unit is approximately 1,090 feet below the surface. There is containment through multiple confining zones above the proposed Bell Canyon and Cherry Canyon injection zones and the USDW and over 4,270 feet of vertical separation between the base of the USDW and the top of the injection interval.

19. Based on the above, it is my opinion that the Bell Canyon and Cherry Canyon formations are appropriate for injection in this area, that the Well will provide needed SWD infrastructure, and that the granting of Select Water's application would best serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

20. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony above is true and correct and is made under penalty of perjury

under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

Raymond Metzler
RJ Metzler

1/6/2026
Date

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. 25547**

SELF-AFFIRMED STATEMENT OF TOM TOMASTIK

1. I am employed by ALL Consulting, LLC as the Chief Geologist and Regulatory Specialist. ALL Consulting has been retained by Select Water Solutions, LLC ("Select Water" or "Applicant") to prepare this C-108 application. I am over 18 years of age, have personal knowledge of the matters addressed herein, and am competent to provide this Self-Affirmed Statement.

2. I have previously testified before the New Mexico Oil Conservation Division ("Division") as an expert witness in hydrogeology, injection wells, and petroleum geology.

3. I am familiar with Select Water's application in this case.

4. Select Water seeks authorization to inject produced water into the Bell Canyon and Cherry Canyon formations (SWD; Bell Canyon-Cherry Canyon; Code 96802) for the purposes of disposal through its the Javelina Fed 4 SWD #1 well ("Well").

5. Select Water proposes to inject an average of 15,000 barrels of water per day and a maximum of 20,000 barrels of water per day.

6. Select Water requests that the Division approve a maximum injection pressure of 1,072 psi.

7. Reservoir characterization information is provided as Attachment 5 to the C-108 at pages 27-30.

Select Water Solutions, LLC
Case No. 25547
Exhibit C

8. The proposed injection interval includes the Bell Canyon and Cherry Canyon formations of the Delaware Mountain Group ("DMG") from 5,360' – 6,500'. 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 DMG. 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

9. Attached as **Exhibit C-1** is a published paper by Katarzyna Charzynski, et al., titled "Delaware Basin Horizontal Wolfcamp Case Study: Mitigating H2S and Excessive Water Production through Isolating Densely Fractured Intervals Correlative to Seismically Mapped Shallow Graben Features in the Delaware Mountain Group." This paper demonstrates that elevated H_2S and excessive water production in Wolfcamp wells are naturally occurring and are associated with shallow DMG graben-related vertical fracture corridors rather than DMG injection operations. Through seismic interpretation, frac gradient analysis, and production data, the study shows this natural low-pressure fracture zones act as conduits for H_2S and high chloride produced water. Identification and isolation of these zones successfully eliminated H_2S and water without recurrence, confirming the source is geologic and pre-existing rather than injection related. This paper supports a determination that Select Water's proposal to inject into the DMG will not impair production in the surrounding zones.

10. 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.

11. The proposed Bell Canyon-Cherry Canyon injection interval is underlain by approximately 60 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.

12. A review of all wells in the Division database within a two-mile radius of the Javelina Fed 4 SWD #1 does not show any historic or current hydrocarbon production from the Bell Canyon or Cherry Canyon formations of the DMG. Three wells penetrate the injection zone in the one-mile Area of Review (AOR). All of these wells have been properly cased and cemented through the proposed injection zone or plugged properly to isolate the proposed injection zone.

13. Based on a review of data from the New Mexico Office of the State Engineer, there are no groundwater wells located within one mile of the proposed SWD location.

14. A review of all wells in the Division database within a two-mile radius of the Javelina Fed 4 SWD #1 does not show any historic or current enhanced oil recovery operations utilizing the overlying Lamar Dolomite, or the underlying Brushy Canyon.

15. No acid gas injection wells are located within three miles of the proposed Javelina Fed 4 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 one mile from any identified wells with potential wellbore concerns or lack of data for evaluation.

16. Water chemistry analyses of representative samples of produced water are provided on page 26 of the C-108. Based on this water chemistry analysis and prior experience, it is my opinion that there will not be a compatibility issue between the injection fluids and the fluids within the injection interval.

17. 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 underground sources of drinking water (USDW") is the Rustler Formation and the base of the USDW plus 25 feet into the anhydrite unit is approximately 1,090 feet below the surface.

18. 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 4,270 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.

19. It is my opinion there is no hydrogeologic connection between the injection zone and any USDW.

20. Injection will not impair correlative rights and will not adversely affect the production of hydrocarbons because the proposed injection fluids will remain within the target injection zone. The proposed injection interval is not prospective for hydrocarbons within the area of the proposed injection well.

21. Based on the above, it is my opinion that the Bell Canyon and Cherry Canyon formations are appropriate for injection in this area, that the Well will provide needed SWD infrastructure, and that the granting of Select Water's application would best serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

22. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

Tom Tomastik

Tom Tomastik

Date 01/05/2026

UNCONVENTIONAL RESOURCES TECHNOLOGY CONFERENCE
FUELED BY SPE • AAPG • SEG

URTeC: 1037

Delaware Basin Horizontal Wolfcamp Case Study: Mitigating H_2S and Excessive Water Production through Isolating Densely Fractured Intervals Correlative to Seismically Mapped Shallow Graben Features in the Delaware Mountain Group

Katarzyna Charzynski*[1], Kristi Faith[1], Zachary Fenton*[1], Ahmed Shedeed[1], Michael McKee*[2], Sid Bjorlie[2], Michael Richardson[2]; 1. UpCurve Energy LLC, 2. Jetta Permian LP.

Copyright 2019, Unconventional Resources Technology Conference (URTeC) DOI 10.15530/urtec-2019-1037

This paper was prepared for presentation at the Unconventional Resources Technology Conference held in Denver, Colorado, USA, 22-24 July 2019.

The URTeC Technical Program Committee accepted this presentation on the basis of information contained in an abstract submitted by the author(s). The contents of this paper have not been reviewed by URTeC and URTeC does not warrant the accuracy, reliability, or timeliness of any information herein. All information is the responsibility of, and, is subject to corrections by the author(s). Any person or entity that relies on any information obtained from this paper does so at their own risk. The information herein does not necessarily reflect any position of URTeC. Any reproduction, distribution, or storage of any part of this paper by anyone other than the author without the written consent of URTeC is prohibited.

Abstract

Numerous horizontal Wolfcamp completions have encountered H_2S and excessive water in Reeves County, Texas. Anecdotal theories have attributed the source to deep Paleozoic faulting, fluids in Bone Spring sands or untreated frac fluids. The objective of this project is to identify the source of these issues and enhance oil productivity by eliminating or greatly reducing excessive water and H_2S in horizontal Wolfcamp wells.

Narrow parallel Delaware Mountain Group (DMG) (Figure 1) grabens are seismically mapped and extend across the area of interest 44 square mile (AOI). The orientations rotate from N104E in the northern mapped area to N136E in the southern mapped area. Some wells drilled beneath these shallow lineaments produce high levels of H_2S and have anomalously high water oil ratios (WOR). Frac gradient (FG) departures of greater than -0.1 psi/ft were observed to align beneath the shallow mapped features of numerous Wolfcamp horizontals with elevated levels of H_2S and high chloride produced water. It is hypothesized that these mapped graben features are the shallow expression of vertical fractures. These low-pressure fracture zones are a conduit for H_2S and high chloride water production in the Wolfcamp. The features can be interpreted seismically on the DMG level, but there is a great deal of uncertainty in determining the extent of the vertical fracturing. Pre-stack HTI Velocity Variation with Azimuth (VVAZ) analysis of long offset modern 3D seismic data is utilized to locate these fracture corridors at the Wolfcamp horizons.

Initial recognition of the low frac gradient correlation to the shallow seismic lineament prompted analysis of DFITs, frac treating pressure data, and fluid tracers to improve the understanding of this relationship in order to better manage the impact on production from Wolfcamp wells. In existing wells with impaired production, bridge plugs were set on the heel side to isolate the zones of low frac gradients and successfully eliminated H_2S and excessive water. The durability of this isolation within the wellbore has up to 2 years of production history without the return of H_2S or excessive water.

Select Water Solutions, LLC
Case No. 25547
Exhibit C-1

Received by OCD: 2/25/2026 1:54:09 PM

Precise pre-drill identification of these shallow graben features at the horizontally targeted horizons benefits production, development planning, and completion strategies by reducing or eliminating frac connections to H_2S and excessive water. Limiting the connection to the vertical fracture zones reduces associated lease operating expense via less water and H_2S, allowing operators to maximize acreage that can be economically developed. Interpretation of the shallow features creates development plans that minimize negative impact of low-pressure zones and produce highly economic wells across these features by selectively skipping the completion around them.

Introduction

The Delaware Basin, across Texas and New Mexico, has witnessed substantial development activity over the last several years. The Delaware Basin is at a less mature development stage in comparison to other shale oil basins. Appraisal and delineation development continue today across the geologically complex Delaware Basin, testing its boundaries both areally and vertically. Most operators are still working to best understand the appropriate full field development strategy, i.e. lateral spacing between wells and co-development of various Wolfcamp and Bone Spring benches.

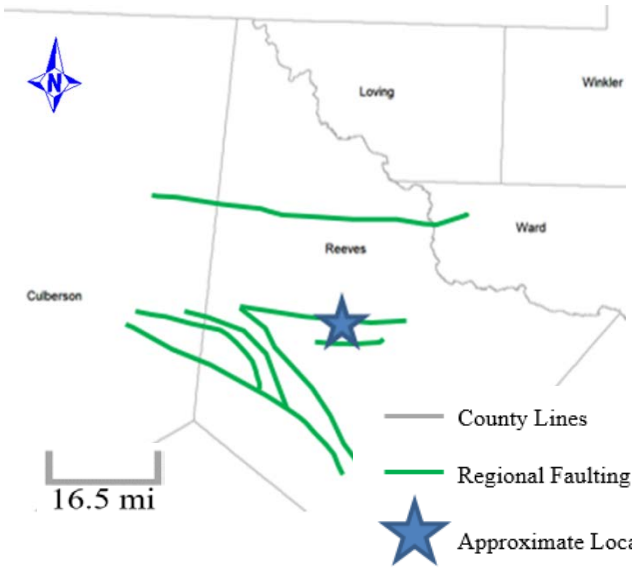
The structural and stratigraphic complexity present in the Delaware Basin often materializes with differing well performance outcomes within short distances. Depending on the location, landing zones and completion design on one pad may not be relevant to a neighboring pad. It is not uncommon for a Wolfcamp well to produce well over 1,000 bopd for several months with normal water-oil ratio (WOR) in the range of 2:1 to 6:1 and manageable amounts of H_2S, while a nearby well completed in the same Wolfcamp interval produces several hundred bopd and yields WOR in excess of 10:1 and H_2S levels prohibitive to economic production.

Some wells drilled through the Wolfcamp or Bone Spring exhibit partial to full mud losses at various intervals. H_2S is often present while drilling. Initial shut-in pressures (ISIP) after the completion of each stage and the associated frac gradients (FG) can vary across a wellbore. Produced water salinity and total dissolved solids (TDS) vary.

The area of interest (AOI) is near the western flank of the Delaware Basin in Central Reeves county (Figure 1). To the west, faulting delineates the edge of the basin and the start of the uplifted western margin. Basin and Range extensional tectonics uplifted the western Delaware Basin beginning in the middle to latest Miocene (Crawford and Wallace, 1993). Modern day stress appears to be aligned with this regionally extensional tectonic episode. Snee and Zoback (2018) map the maximum present-day stress orientation as NW-SE and the orientation is corroborated by image log data within the AOI (Figure 2). The structural character of the area is defined by Paleozoic normal and strike slip faults, which have been reactivated through time. The upper 4,000 feet of the stratigraphic section is comprised of Ochoan aged salts and anhydrites. underlain by 3,000 feet of siliciclastic deposits of the Delaware Mountain Group (DMG). Below the DMG the carbonates and sands of the Bone Spring Formation are conformably underlined by the Wolfcampian. The Wolfcampian and Pennsylvanian sections are overpressured in the basin.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM



SYSTEM	SERIES/STAGES	DELAWARE BASIN
PERMIAN	OCHOAN	RUSTLER
		SALADO
		CASTILE
	GUADALUPIAN	DELAWARE MTN GROUP
		BELL CANYON
		CHERRY CANYON
		BRUSHY CANYON
	LEONARDIAN	BONE SPRING
	WOLFCAMPIAN	WOLFCAMP

Figure 1. Location map and stratigraphic column of the basin

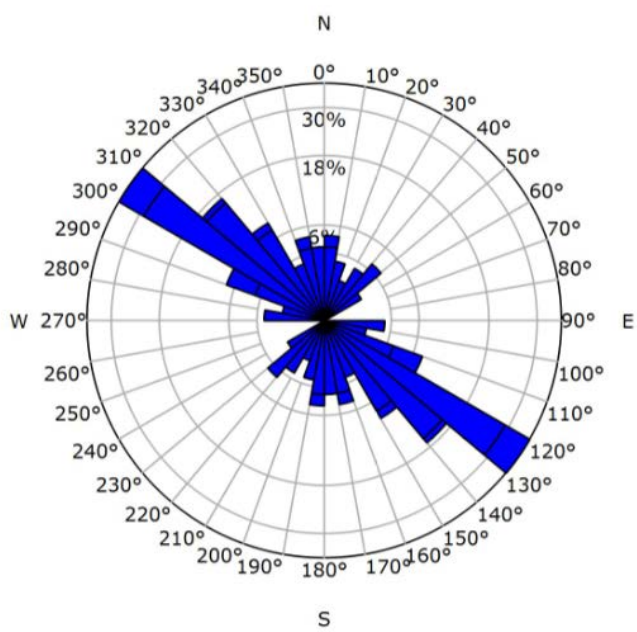


Figure 2. Strike rosette of conductive fractures indicating maximum stress orientation in the AOI.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Discussion

Shallow DMG level graben features have been observed on amplitude data in the AOI (Figure 3). Vertical offset is noted in the seismic reflectors in the DMG and in some instances offset is mapped into the shallow Bone Spring (Figure 4). The deeper Bone Spring and Wolfcamp formations do not appear to have broken or offset seismic reflectors beneath these linear grabens. This appears to indicate that these shallow features are not connecting to the deep target formations.

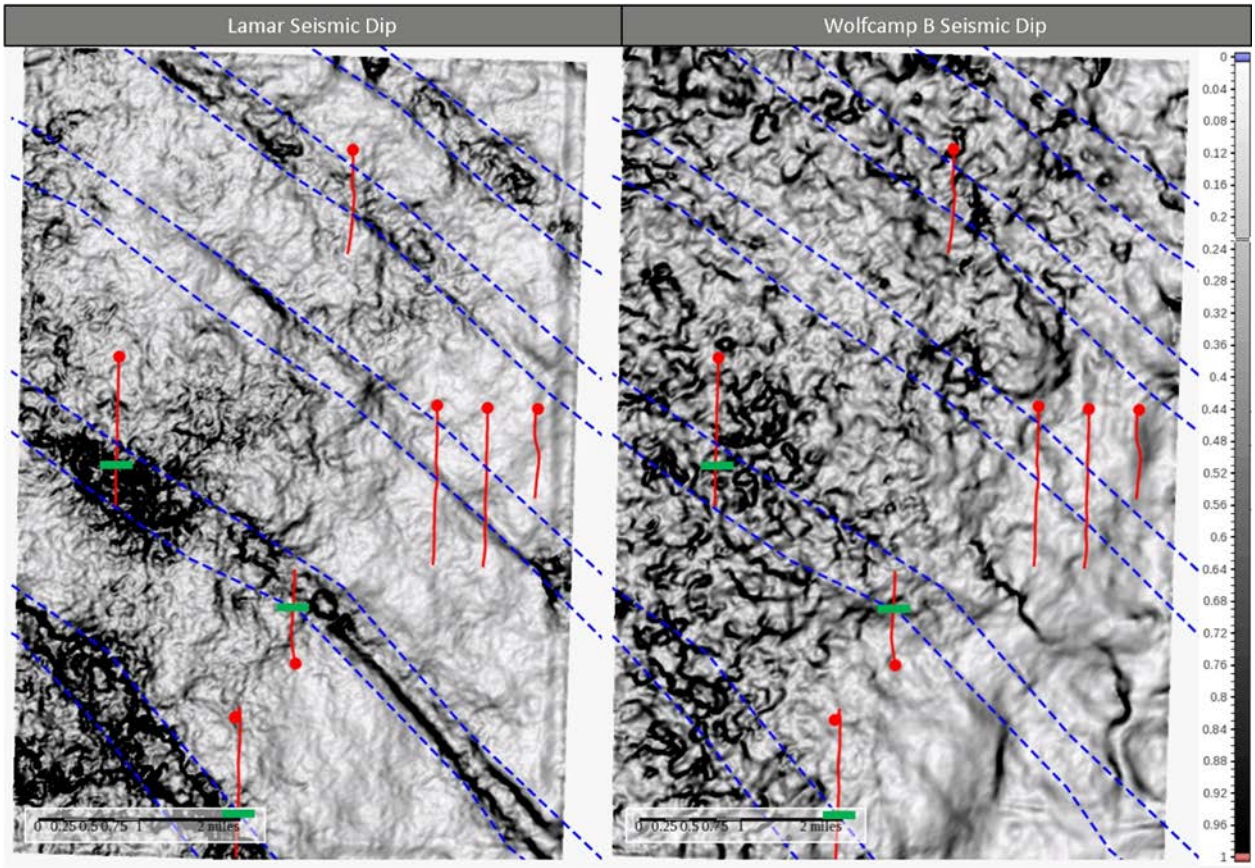


Figure 3. Lamar dip (left) shows very clear NW to SE linear features (blue dashes), Wolfcamp dip (right) does not clearly show continuation of these features down to the reservoir level. AOI is 44 square miles.

These linear features rotate from N104E to N136E across the area and are concurrent with the present day maximum stress direction (Figure 3). They are about a mile and a half to two miles apart and vary in width as mapped at the top of the DMG. Most are approximately 1,000 to 2,500 feet wide.

Theories have attributed the source of H_2S and high WOR found in Wolfcamp production to deep Paleozoic faulting, fracture stimulation connecting to the overlying Bone Spring sands or untreated frac fluids. It has been observed, that some lateral wells crossing beneath mapped lineaments produce high levels of H_2S and have anomalously high WOR. In some cases, these wells also encounter drilling fluid losses.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

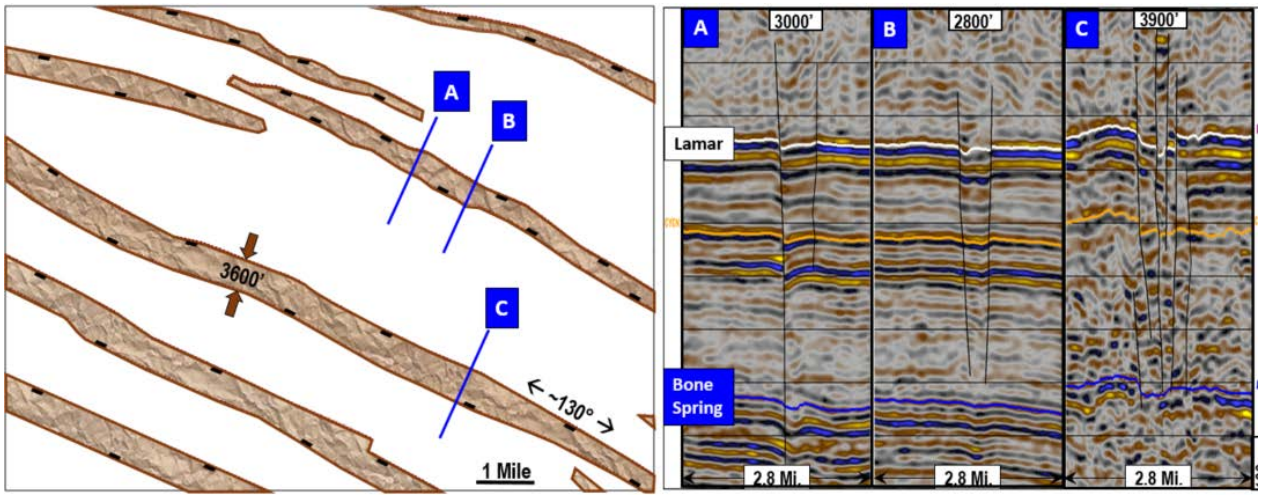


Figure 4. Map view and vertical seismic profiles of the shallow graben.

It is hypothesized that these mapped graben features, while seemingly disconnected, are the shallow expression of vertical fractures. These vertical fracture zones impact Wolfcamp production by acting as conduits for H_2S and water. Based on DFIT data, these linear features appear to be fractured and depleted of pressure.

It is suggested that the linear grabens are karst features that form due to dissolution of carbonate and evaporites along zones of conductive vertical fractures. It has been widely documented that hypogenic karsting occurs in the western Delaware Basin and many develop along fracture planes (Stafford et. al, 2008; Stafford, 2013). The H_2S originates from the interaction of fluids with the Ochoan evaporites. The water produced from the Wolfcamp wells that encounter these linear features is high in chlorides, which it is believed is due to the dissolution of the shallow salt section (Anderson, 1981).

The linear karsts are the mappable expressions of densely fractured zones that are present, in most cases, from the top of the Permian to the shallow Wolfcamp and may extend further vertically. Post-stack seismic horizon slices clearly identify the location and linear nature of these features when mapped at the top of the DMG. The depth of these graben features is not as clear, most likely because vertical displacement is too small to show a significant change in dip at the Wolfcamp horizon (Figure 3, Figure 4).

The shallow structural features exhibit no apparent association with older Paleozoic faulting as evidenced by cross cutting relationships mapped in several areas of the 3D dataset. The shallow graben features are extensional features created in response to early-middle Tertiary tectonics that uplifted the western Delaware Basin. Various seismic attributes used to map these features on deeper horizons show that there are similarly oriented linear features that do not extend up into the DMG section and do not exhibit karst features at the base of the salt section. Wells that cross lineaments constrained to the Bone Spring and Wolfcamp do not appear to exhibit low pressure, H_2S, or extraneous water. Additionally, some horizontal wells drilled beneath these shallow features did not record low frac gradients and did not produce high levels of H_2S and excessive water (Figure).

There is a great deal of uncertainty in determining the degree, extent and severity of vertical fracturing effects at the reservoir level. It is critical to well planning in the AOI to find ways to accurately predict and map the zones of low pressure associated with the vertical fractures.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

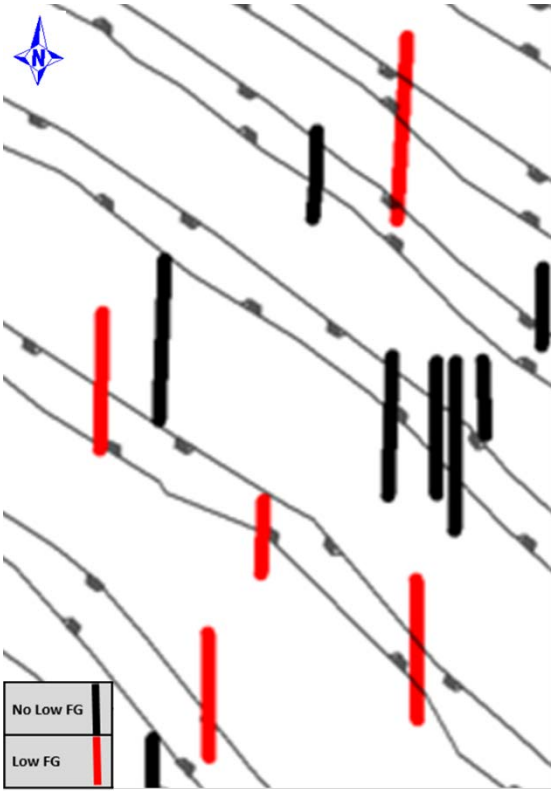


Figure 5. Mapped Lamar grabens over a portion of the AOI. Wells (red) with low frac gradients crossing the shallow graben feature produce high levels of H_2S and excessive water. Wells (black) crossing the shallow graben features with no observed low frac gradients did not produce high levels of H_2S and excessive water.

Pre-stack velocity-based horizontal transverse isotropy (HTI) analysis was employed for a 44 square mile subset of the wide azimuth 3D dataset in an attempt to understand the anisotropic properties, such as fracture orientation and intensity, within the Wolfcamp intervals. Velocity variations with azimuth (VVAZ) and amplitude variations from azimuth (AVAZ) were utilized. The HTI analysis is a complex seismic processing workflow that can take up to 6 months to complete and several weeks to interpret.

Initial results indicate strong fast azimuth change and strong Simple AVAZ amplitude change are indicative of open fractures at the Wolfcamp that are in communication with the overlying shallow graben features. In areas with very good seismic quality, a weak fast azimuth and weak Simple AVAZ amplitude change are indicative of no open fractures connected to the overlying shallow graben feature (Figure).

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

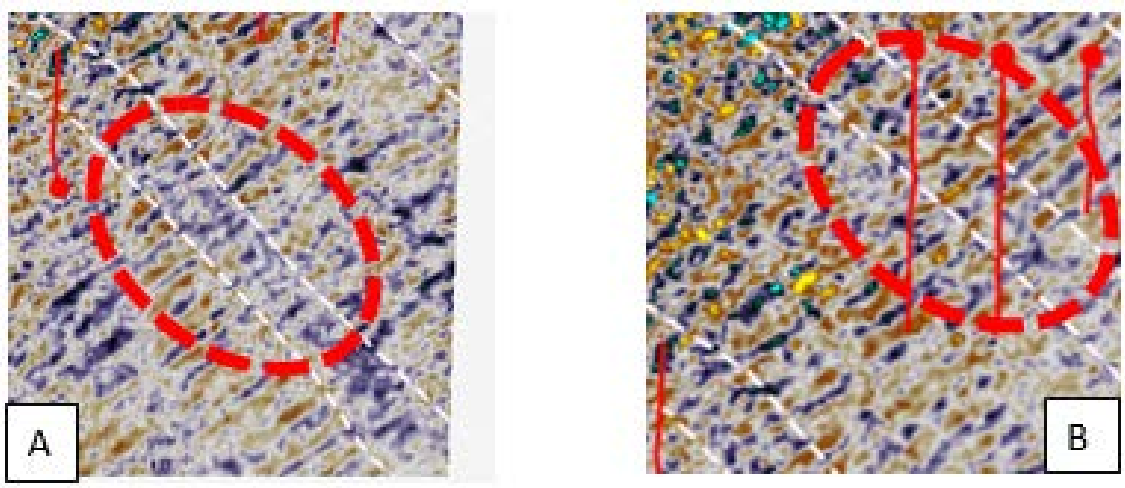


Figure 6. Simple AVAZ change indicative of open fractures at the Wolfcamp aligned beneath the shallow graben features. (A) Strong simple AVAZ change indicates open fractures beneath the shallow graben feature, (B) weak Simple AVAZ change does not indicate open fractures connected to the shallow graben feature, confirmed by wells that do not exhibit low frac gradient stages.

Results

Subject Well A was drilled beneath a shallow graben feature in the middle of the lateral. While drilling the lateral, partial to full mud losses coincided with the boundaries of the shallow linear graben. The wellbore was treated with lost circulation materials (LCM). Once the losses were cured, the well drilled to TD. Drilling costs significantly exceeded the AFE given the loss of several thousand barrels of oil-based mud into the formation.

Due to concern that the mud loss intervals could be associated with sub-seismic fracturing, 700 feet of the lateral was not completed around these two zones. This 700 foot skipped zone fell within the broader 1500 foot width of the shallow graben feature. During the completion the well experienced frac gradients at the toe and heel consistent with wells in the AOI. However, the frac gradients directly within the 1500 foot feature were abnormally low. The frac gradient within the low pressure fractured interval was approximately 0.15 psi/ft lower compared to the rest of the stages (Figure). Produced water chemistry indicated an extraneous source when compared to other Wolfcamp produced water samples. Chlorides quickly climbed from 20,000 ppm at the start of flowback and ultimately surpassed 100,000 ppm (Figure 8). H_2S was present at a concentration of 60 ppm early in flowback. This concentration climbed rapidly and most recently was recorded at 4,000 ppm.

During flowback the initial WOR bottomed out at 5:1 and began increasing from there, ultimately surpassing 10:1 (Figure 9). In addition, the water production profile of the well exhibited little to no decline over the first 18 months of production. After evaluating multiple wells in the area, a correlation was observed between these shallow graben features, low frac treating pressures, and excessive water and H_2S production.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

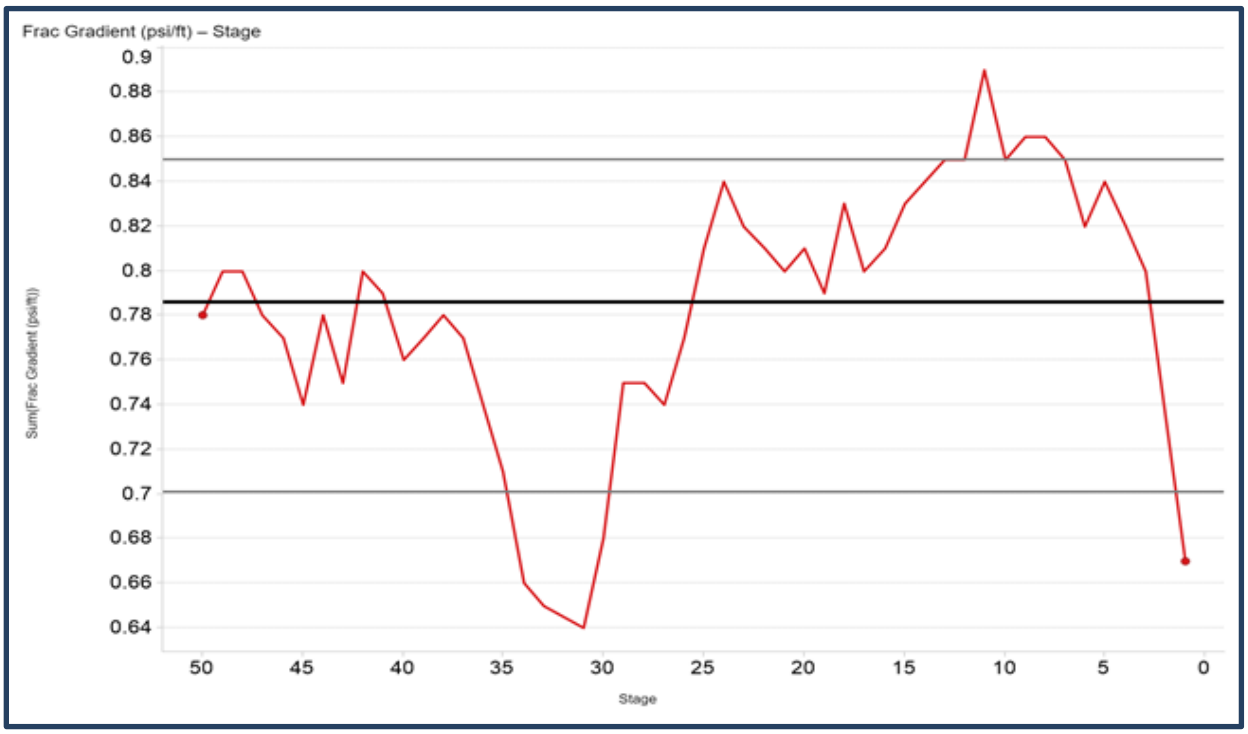


Figure 7. Frac gradient vs. stage for Well A. The significant decrease in frac gradients seen in stages 28 to 36 correlates to the section of the well located within the densely fractured zone.

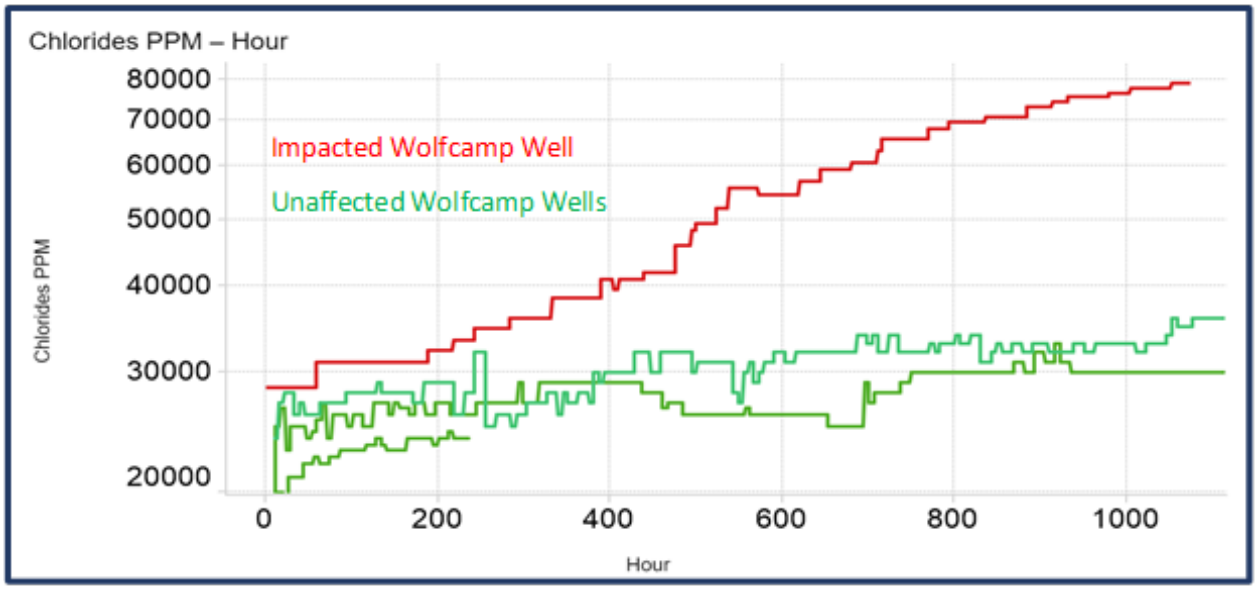


Figure 8. Chloride concentration vs time during flowback. Wells that were unaffected by the low pressure vertically fractured zones (green) produced significantly lower chloride water, more consistent with other Wolfcamp produced water samples taken from the area.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

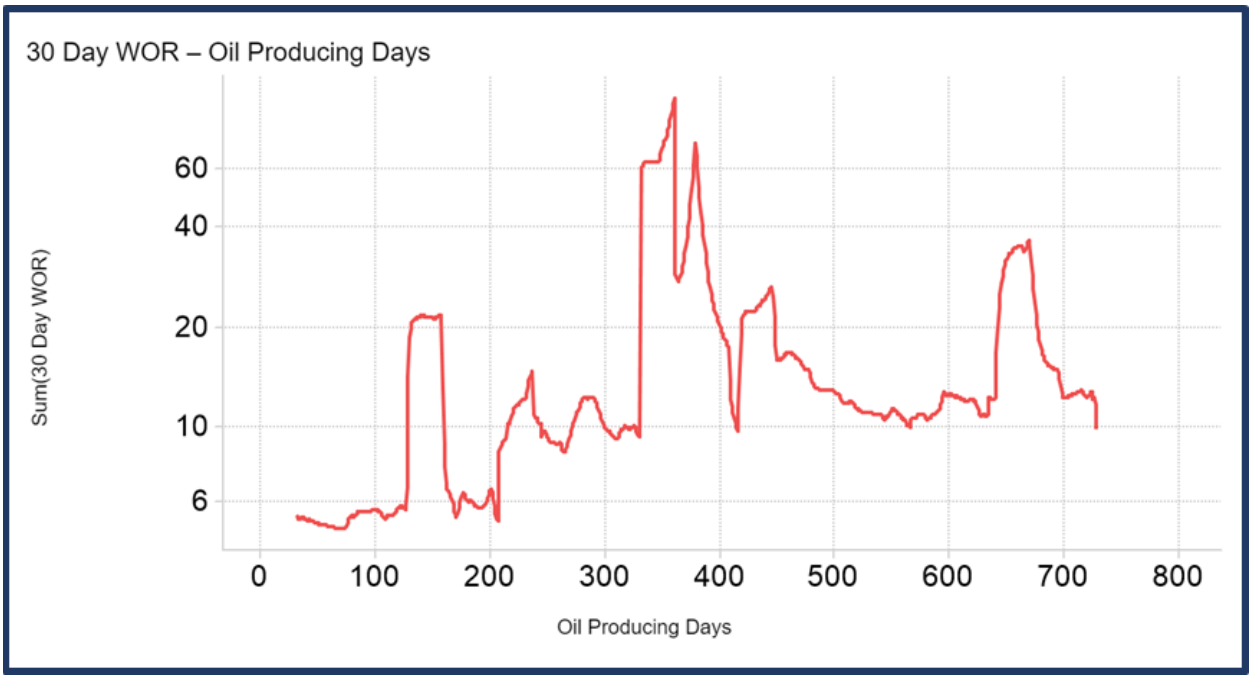


Figure 9. WOR vs. time for Well A. WOR of well completed through the impacted zone increases significantly over time to a long run average of 10:1, well above the Delaware Basin average.

Mitigation

While it is possible to plan development wells to navigate these fractured zones, it may not be possible to avoid them entirely in an infill program within the AOI. Enhanced economics is driving most operators to prefer longer laterals. The 1.5-2-mile frequency of these shallow features makes it likely that a well will intersect one in the lateral. Finding ways to mitigate the impact of these features materially enhances the economics of development.

Planning wells to intersect these features at the toe is optimal, in comparison to encountering the feature towards the heel. If necessary, there is an opportunity to isolate the toe stages via expandable liner or plug while not impacting the productivity from the other stages of the well. See Case Study #1 below.

Drilling of the low-pressure features without mud losses has been successfully navigated by dropping the yield point and plastic viscosity of the mud while managing low gravity solids to reduce equivalent circulating densities. These changes improved pump rate capabilities and increased the hydraulic horsepower at the bit resulting in faster rate of penetration (ROP). Dropping the mud weight and safely drilling through the choke with gas management at surface has also been helpful.

Usage of 20 ppb preventative LCM sweeps prior to approaching and within these features is another mitigating drilling tactic. MWD technology capable of handling higher LCM concentrations has reduced the number of tool failures and allowed for more flexibility to pump higher concentrations of LCM without having to make a dedicated trip. In addition, prior to running casing and cementing of the well, high rate and rotary clean-up cycles are recommended prior to tripping. Adopting these best practices has allowed multiple wells to be drilled through low pressure fractured zones at a cost competitive with the best well performance in the area.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Completion perforation and plug design can be modified to stay away from the mapped zones on both toe and heel sides. This approach of selectively perforating the lateral to navigate these features has been highly successful in mitigating the excessive water and H_2S production as presented below in Case Study #2.

In AOI wells that have completed these low-pressure fracture zones, artificial lift strategies have been utilized to improve production by moving high volumes of fluid, including excessive water and H_2S. An artificial lift method, such as larger electric submersible pumps (ESP), allowing for production of several thousand barrels a day of total fluid is ideal. Designing the wellbore up front to allow for the flexibility of running a larger ESP downhole to move the fluid should be considered.

The following case studies highlight two different approaches to mitigating the impact of these densely fractured low-pressure zones.

Case Study #1

Subject Well B was drilled beneath a shallow graben feature. Using seismic amplitude data, the faulted feature was mapped to extend 2000 feet below the Lamar limestone and terminate within the Cherry Canyon sands (Figure 10).

While drilling the lateral, two significant losses were encountered that align beneath the shallow graben feature. There was concern that the lost return intervals could be associated with sub-seismic fracturing associated with the shallow graben feature. A pre-frac pump protocol was established for each stage to help diagnose a potential connection to the overlying shallow graben feature, however, none of the stages recorded a frac gradient below the expected range. Additionally, oil and water tracers as well as radioactive tracer was utilized for select stages.

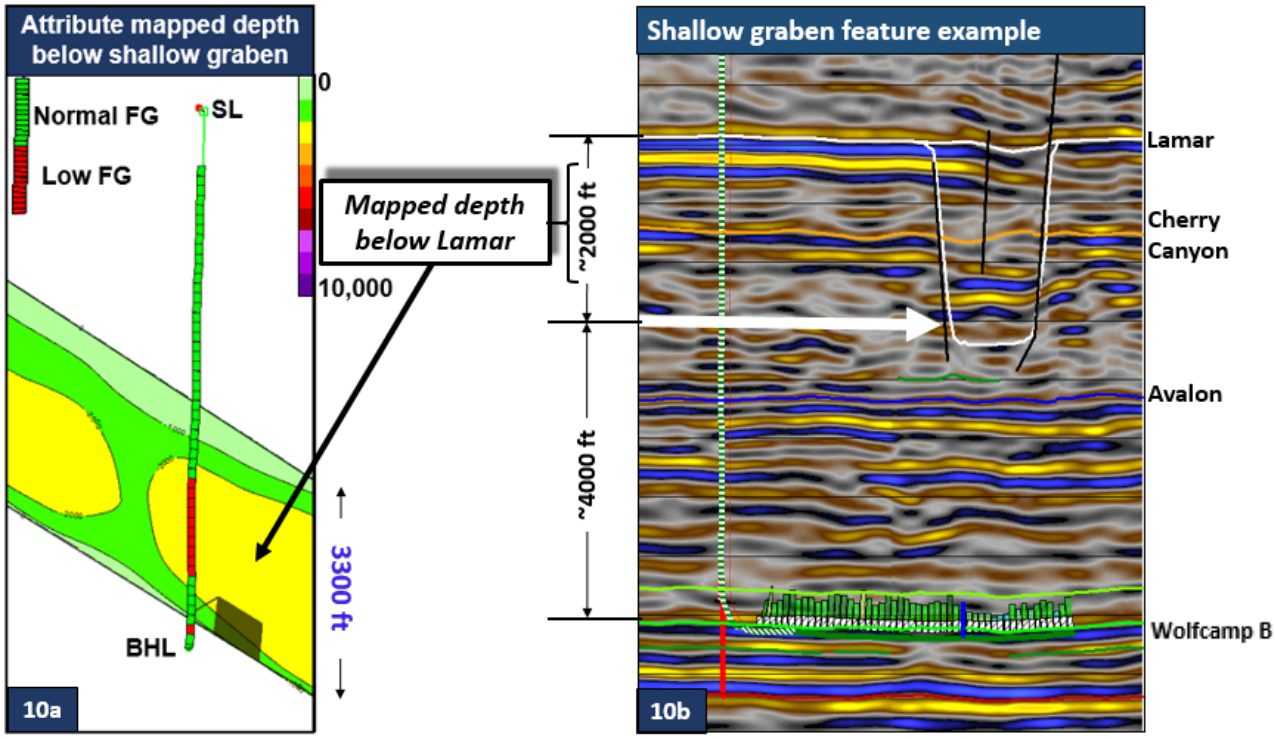


Figure 10. A) Map view of horizontal Well B that crosses beneath shallow graben feature with indication of low and normal frac gradient stages. B) Vertical seismic profile along the horizontal Well B illustrating the deepest mapped extent of the shallow faults

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Frequent produced fluid sample analyses indicated higher than expected chlorides, total dissolved solids and SO_4 during the flow back and early production of the well. After more than 3 months from initial flow back, H_2S began to appear and increased to 300 ppm over the course of days. A water sample was collected and the well was shut in.

Water chemistry indicated an extraneous source when compared to other Wolfcamp produced water samples. Chlorides were over 100,000 ppm, SO_4 was approaching 2000 ppm and total dissolved solids were approaching 175,000 ppm and rising. A low frac gradient interval for 10 continuous stages that exhibited greater than 0.1 psi/ft departure from the frac gradient trend aligned directly beneath the shallow graben feature was suspected as the interval contributing extraneous water and H_2S. Additionally, chemical tracer from these low frac gradient stages was greatly reduced.

A bridge plug was set directly adjacent to and on the heel side of the low frac gradient interval. The well was returned to production. Oil production increased while total water volume was reduced 35%. H_2S was reduced to 1 ppm and the water chemistry returned to typical Wolfcamp with chlorides at 59,000 ppm and SO_4 reduced to 500 ppm (Figure 11). Additionally, chemical tracers on the toe side of the bridge plug were absent confirming successful isolation (Figure 12).

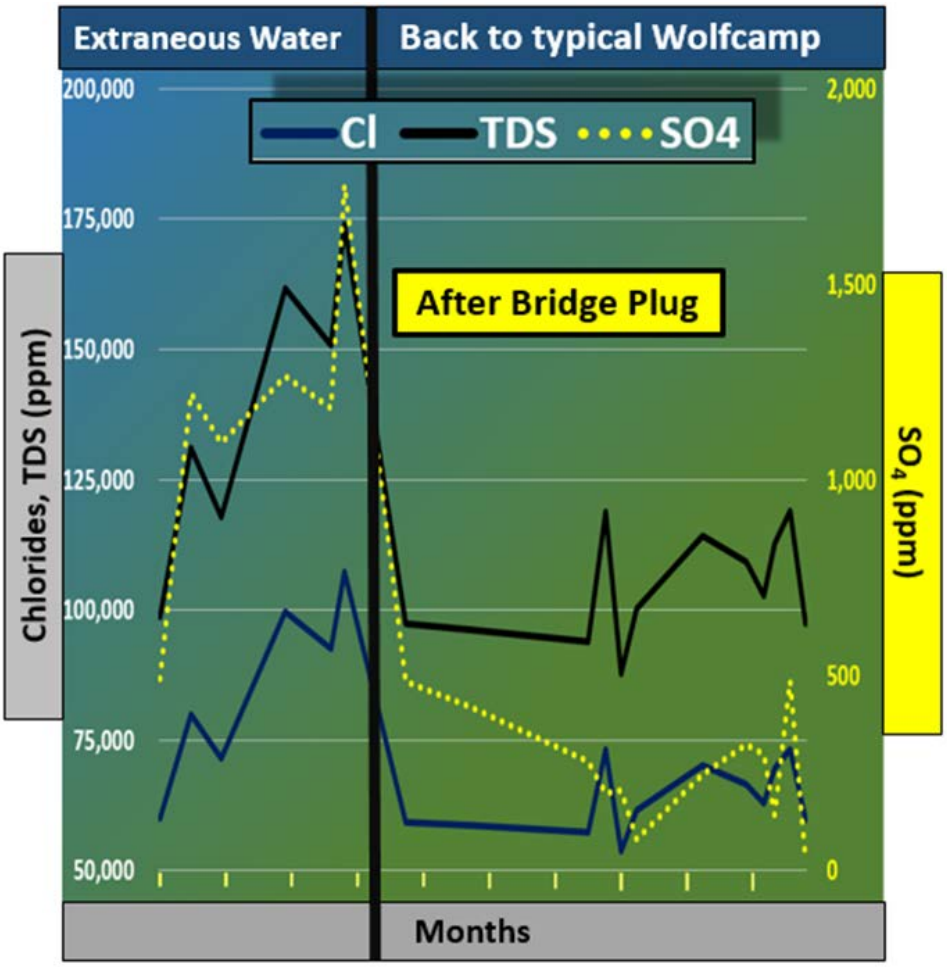


Figure 11. Chlorides/TDS concentration in Well B over time both pre and post-bridge plug setting.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

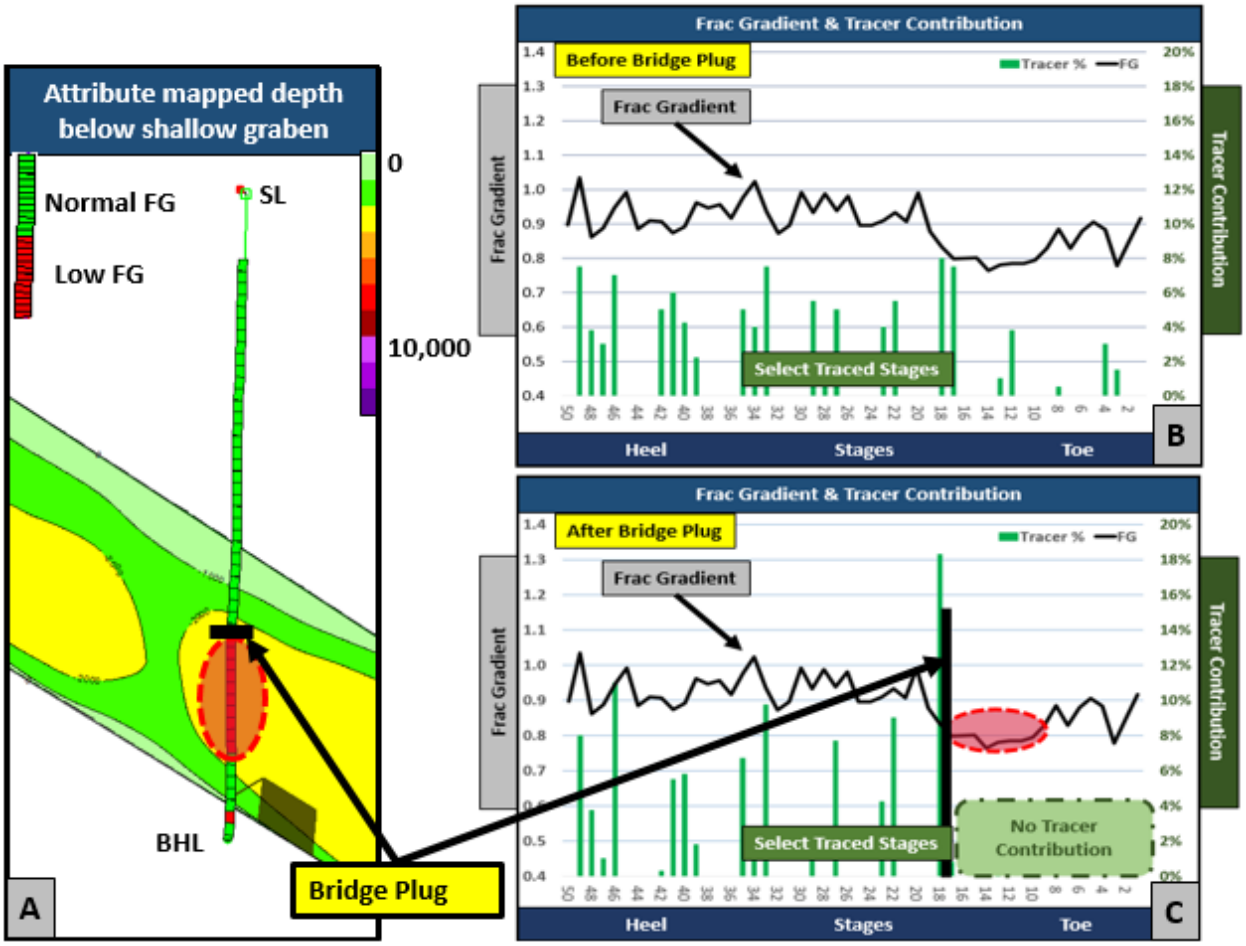


Figure 12. (A) Shallow graben using attributes to map vertical extents below the Lamar limestone; horizontal Well B with red low frac gradient frac stages. (B&C) Before and after bridge plug isolation per stage frac gradient (left axis) and tracer data contribution (right axis); shaded area illustrating width of the graben as mapped at the Lamar. (B) Reduced chemical tracer contribution from low frac gradient to toe stages. (C) Chemical tracer confirmation of bridge plug isolation.

Case Study #2

Subject Well C was drilled through a linear feature at the toe of the lateral. While drilling the lateral, two significant losses were encountered that align with the feature. Well C was treated with LCM but did not stop the fluid losses. The well TD'd within the low-pressure feature after losing several thousand barrels of oil based mud into the formation.

Prior to the completions operation, the toe valve was opened and a DFIT was performed. The goal of the DFIT was to evaluate key reservoir parameters such as closure and reservoir pressure. The DFIT was performed through the toe sleeve, which was located within the linear fractured zone. This DFIT showed lower closure pressure, faster fracture closure occurrence and higher permeability than what was commonly seen in the AOI. This confirmed that the toe of the well was in the low pressure impacted zone.

A plug was set 1500 feet uphole, at the northern mapped edge of the feature. A second DFIT was conducted through new perforations uphole of this plug (Figure 13). The significantly improved second DFIT provided confidence that enough lateral was skipped and the deepest open perfs were outside the pressure impacted zone. Well C was then completed up to this plug.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

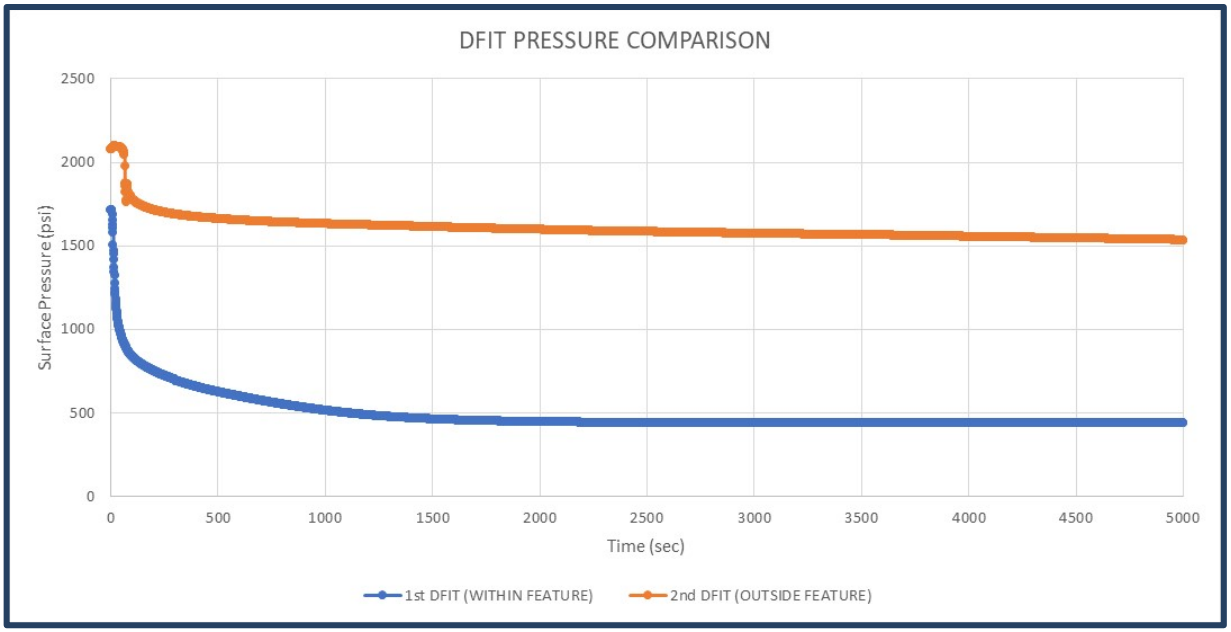


Figure 13. Well C surface pressure data vs time comparing 1st DFIT within the feature and 2nd DFIT outside of it. Post-DFIT pressure completed within the effected zone (blue) is materially lower than the DFIT preformed outside of the zone (orange).

During flowback the chlorides did not increase as fast as Well A, which was completed through the feature, and ultimately leveled off around 60,000ppm. In addition, H_2S only reached 400ppm, an order of magnitude less than Well A. The WOR of the well bottomed out at 4:1 and did not increase as Well A (Figure 14). Well B was judged as an economic success because of the materially lower lease operating expense driven by lower H_2S treating costs and lower water disposal costs.

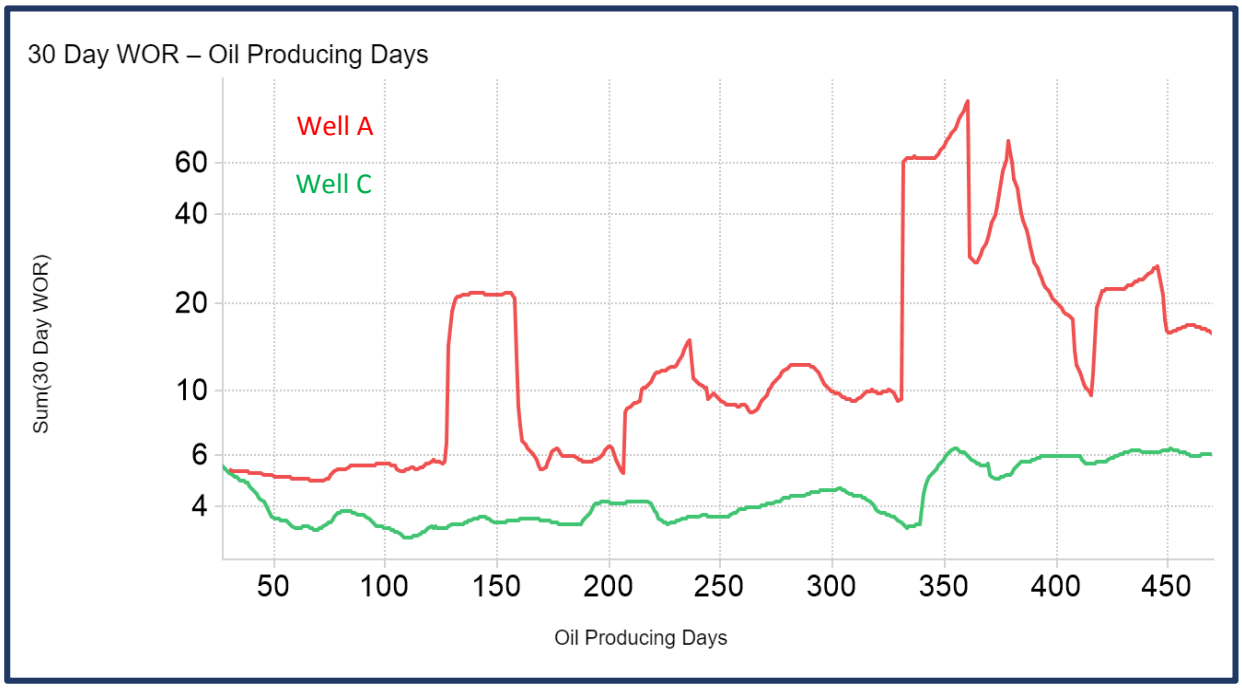


Figure 14. 30 Day WOR vs producing days of Well A in comparison to Well C. Well C avoided completing the lateral in the vertically fractured low-pressure feature, exhibits a significantly lower WOR than Well A, which was completed within a feature.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Conclusions

In central Reeves County in the Delaware Basin production of H_2S and extraneous water has been previously attributed to deep Paleozoic faulting, fracture stimulation connections to the overlying Bone Spring sands or untreated frac fluids. However, linear features seismically mapped in the DMG that are believed to be zones of enhanced natural fractures that extend to the reservoir level and act as conduits for fluid movement are proposed as a more likely source for the H_2S and excessive water production.

Not all shallow graben features are equally extensive vertically and laterally. Severity of impact on production varies based on the connectivity of the fractures. Linear features that do not extend to the DMG have no apparent adverse impact on production. Understanding the vertical and lateral extent of these features is critical to spatial wellbore planning that avoids the intervals at risk for H_2S and extraneous water and for predicting the production impact of wells that demonstrate post frac connection to these highly fractured features.

Initial work indicates open fractures in the Wolfcamp formation can be interpreted from strong fast azimuth change and strong Simple AVAZ amplitude change. While in areas with very good seismic quality, a weak fast azimuth and weak Simple AVAZ amplitude change are indicative of no open fractures connected to the overlying shallow graben feature. Continued technical work is needed to understand how various targeted formations might be affected.

In some areas, it is impossible to avoid the linear features completely while planning and operators will be forced to drill through affected zones to efficiently develop leases. Based on this study, it has been illustrated that despite negative impact of the linear fractured zones, drilling performance and production can be improved through well placement, mud properties, and completion planning. If wells have already been completed through the low-pressure zones, bridge plugs or casing patches can be utilized to isolate the low frac gradient zones and successfully eliminated H_2S and excessive water. How well these mitigation approaches apply to wells located outside of the AOI in central Reeves county remains to be determined.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

Acknowledgements

A special thanks to Chesapeake Energy Corporation and Tricon Geophysics for granting permission to publish the seismic illustrations.

Released to Imaging: 2/25/2026 2:09:55 PM

Received by OCD: 2/25/2026 1:54:09 PM

References

Anderson, R. Y., 1981, Deep-seated salt dissolution in the Delaware Basin, Texas and New Mexico: New Mexico Geological Society, Special Publication No. 10, p. 133-145

Crawford, J. E. and C. S. Wallace, 1993, Geology and mineralization of the Culberson sulfur deposit: New Mexico Geological Society Guidebook, 44th Field Conference, Carlsbad Region, New Mexico and west Texas, p. 301-316.

Snee, J. E. L., Zoback, M. D., 2018, State of stress in the Permian Basin, Texas and New Mexico: Implications for induced seismicity: SEG, The Leading Edge, Volume 37, Issue 2, p. 82-160

Stafford, K. W., Rosales-Lagarde, L., Boston, P., 2008, Castile evaporite karst potential map of the gypsum plain, Eddy County, New Mexico and Culberson County, Texas: A GIS methodological comparison: Journal of Cave and Karst Studies, v. 70, No.1, p. 35-46

Stafford, K. W., 2013, Evaporite Karst and Hydrogeology of the Castile Formation: Culberson County, Texas and Eddy County, New Mexico. Faculty Publications. *3*. https://scholarworks.sfasu.edu/geology/3

Released to Imaging: 2/25/2026 2:09:55 PM

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. 25547**

SELF-AFFIRMED STATEMENT OF JOSEPH P. SMITH II

1. I am the owner of Henorrah Resources, LLC and have been retained by ALL Consulting, LLC as a consulting geophysicist/geologist. ALL Consulting has been retained by Select Water Solutions, LLC ("Select Water" or "Applicant") to prepare this application. I am over 18 years of age, have personal knowledge of the matters addressed herein, and am competent to provide this Self-Affirmed Statement.

2. I have previously testified before the Texas Railroad Commission, Oklahoma Corporation Commission, and the Ohio Oil and Gas Technical Advisory Council as an expert witness in geophysics and geology, but I have not previously testified before the New Mexico Oil Conservation Division ("Division"). A copy of my resume is attached as **Exhibit D-1**.

3. I am familiar with Select Water's application in this case.

4. Select Water seeks authorization to inject produced water into the Bell Canyon and Cherry Canyon formations (SWD; Bell Canyon-Cherry Canyon; Code 96802) for the purposes of disposal through its the Javelina Fed 4 SWD #1 well ("Well").

5. Select Water proposes to inject an average of 15,000 barrels of water per day and a maximum of 20,000 barrels of water per day.

6. Select Water requests that the Division approve a maximum injection pressure of 1,072 psi.

Select Water Solutions, LLC
Case No. 25547
Exhibit D

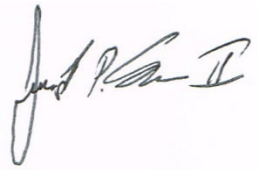
7. I performed a complete interpretation of the 3-D seismic reflection survey that covered the area of the proposed Well, including the Bell Canyon and Cherry Canyon formations that will be utilized as the injection zone. I have created seismic sections and geologic cross sections that clearly demonstrate that there are no obvious faults cutting across the proposed injection zones and no obvious faults that would breach the upper confining zones with the Salado Formation or lower confining zones within the top of the Brushy Canyon Formation.

8. The seismic and structural cross sections are provided as Appendix A to the C-108.

9. Based upon my interpretation of the 3-D seismic data, it is my opinion that injection into the Well will not result in an increased risk of induced seismicity; due to the proposed well location not being in proximity to any obvious faulting.

9. It is my opinion that the Bell Canyon and Cherry Canyon formations are appropriate for injection in this area and that the granting of Select Water's application would best serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

10. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.



_____ ____1/5/2026_____

Joseph P. Smith II Date

JOSEPH P. SMITH

503 Stout Street
Bridgeport, West Virginia (USA) 26330
(937)-621-0558
henorrahresources@gmail.com

CREDENTIALS:

Geologist with twenty-five years of experience developing, and managing, subsurface Oil and Gas projects. Strong Petrophysical training in both open and cased hole applications. Experienced utilizing 2-D and 3-D seismic data to select drilling locations, validate regional geologic models, and identify subsurface structural features/geohazards. Experience in the following Basins: Appalachian, Anadarko, East Texas, Permian, Illinois, Green River, Wind River, and San Joaquin.

EMPLOYMENT:

Owner – Geologist. Hennora Resources, LLC. 2016 to present. Resigned to start consulting business and prospect generating shop. Presently, consulting for Permian, Rockies, and Appalachian Basin operators. Actively utilizing modern spec seismic surveys to prospect, market, and develop conventional opportunities in the Appalachian and Illinois Basin's. Experience permitting and ensuring regulatory requirements for Class 1 & 2 UIC wells are followed.

Senior Geologist. PDC Energy April 2008 through October 2016. Part of a small team that conducted detailed evaluation on 300 plus outside project submittals for purchase or participation across multiple basins. Convinced executive team to grass roots lease 100K acres in the Appalachian Basin for exploration effort in the Utica Shale. Mapped over 100 mi^2 of 3-D seismic in Utica. Provided expert witness testimony before the Ohio Technical Advisory Council (TAC). Oversight of acquisition and development program in the Utica Shale, and evaluating conventional Appalachian Basin reservoirs for horizontal development.

Geologist. EnCana Oil and Gas (USA), Dallas Texas, September 2006 through March 2008. Evaluation of XRD and geochemical data for West Texas Barnett-Wolfcamp-Woodford shale gas plays to better assess the productivity of a 600,000 net acre position. Oversight of a three rig ($25MM/yr) East Texas "develocat" drilling program targeting deep, tight gas (Bossier, Cotton Valley Sand and Lime). Mapping on and off existing acreage to plan future development, acquire leases, etc.

Geologist. Merit Energy Company, Dallas, Texas. April 2005 through September 2006. Duties Included evaluating existing and acquisition acreage for infill and exploration drilling opportunities, farm out evaluation, waterflood scoping and implementation. Testified as expert witness numerous times before the Oklahoma Corporation Commission and Texas Railroad Commission.

Geologist. Occidental Petroleum Corporation (Oxy), Bakersfield, California. October 2001 through April 2005. Duties Included: image log processing and interpretation in horizontal Monterey Shale wells, generation of infill drilling locations in a highly faulted shallow marine/estuarine reservoir, fluid contact mapping in support of major Nitrogen injection EOR (direct air capture) project, and reservoir volumetrics.

EDUCATION:

Select Water Solutions, LLC
Case No. 25547
Exhibit D-1

Ohio University, Master of Science Degree, Geology.

Ohio University, Bachelor of Science Degree, Geology.

PROJECT EXPERIENCE:

Identified strategically located, multi county, grass roots, brine disposal fairway for Class 2 UIC well development in the Appalachian Basin. Fairway will support hundreds of Class 2 UIC wells capable of disposing 5000+ MBWD/well. Presently negotiating with numerous Class 2 operators, investors, etc., for sale of prospect.

Provided consulting geological services for 22 potential Class 2 UIC projects in the Appalachian Basin during calendar year 2019-2022.

Served as Expert Witness before the Oklahoma Corporation Commission, The Texas Railroad Commission, and The Ohio Oil and Gas Technical Advisory Council multiple times.

Responsible for operators 300 million dollar entry into the Utica Shale; fairway identification, geochemical evaluation, acreage selection, negotiating with local operators with HBP acreage, etc.

Recommended company monetize large (100k acre plus) undeveloped Green River Basin acreage position resulting in ~ $50 MM capital infusion to support development activity in established Basin.

Identified and matured significant (0.5 Tcf) CBM opportunity in Appalachia that will not require dewatering.

Championed and revived a sub economic infill and step out drilling program (conventional) in East Texas that resulted in over 150 Bcf of booked reserve ads.

Evaluated multi-state Mid-continent acquisition for new drill opportunities (conventional). Generated 10 vertical and 6 horizontal grass roots “seed” well locations in 4 months.

SOFTWARE PROFICIENCIES:

LMKR Geographix, ArcGIS Pro, Petra, Kingdom, Terra Station, Recon, Enerus, IHS.

REFERENCES/PUBLICATIONS:

Available upon request.

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. 25547**

SELF-AFFIRMED STATEMENT OF DAVID CHILDERS

1. I am employed by Select Water Solutions, LLC ("Select Water" or "Applicant") (OGRID No. 289068) as a Senior Reservoir Engineer. I am over 18 years of age, have personal knowledge of the matters addressed herein, and am competent to provide this Self-Affirmed Statement.

2. 2. I have not previously testified before the New Mexico Oil Conservation Division ("Division"). A copy of my resume is attached as **Exhibit E-1**.

3. I am familiar with the application filed by Select Water in this case.

4. Select Water seeks authorization to inject produced water into the Bell Canyon and Cherry Canyon formations (SWD; Bell Canyon-Cherry Canyon; Code 96802) for the purposes of disposal through its the Javelina Fed 4 SWD #1 well ("Well").

5. I performed the reservoir performance modeling included in Appendix B of the C-108. I analyzed the reservoir and geomechanical properties to approximate reservoir and wellbore hydraulics; analyzed confining layers and estimated fracture gradients; and estimated operational pressure gradients based on maximum injection rates over the life of the Well.

6. As shown in Appendix B, I used offset wells to estimate reservoir and geomechanical properties within the injection zone and confining layers.

7. Appendix B includes an isopach map that shows the average depth and thickness of the injection interval.

8. I calculated the fracture gradients for the upper and lower confining layers as shown on page 61 of the C-108. My calculations demonstrate that the average fracture gradients for the upper and lower confining layers are 0.726 and 0.771 psi/ft, respectively. The pressure gradients from injection operations are less than the upper and lower confining layer fracture gradients, which demonstrates that injectate will be contained within the injection zone.

9. The 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 20,000 bwpd for 20 years.

10. The pressure gradient near the wellbore is approximately 0.64 psi/ft or 12.3 ppg EMW.

11. My analysis demonstrates high porosity and permeability within the injection zone, which renders it an appropriate interval for injection at the proposed rates and pressure.

12. The simulations presented are for the least amount of flow capacity needed for disposal. I expect that the flow capacity could be significantly higher due to additional height available and higher reservoir porosity and permeability contrasts.

13. A 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.

14. Based on my review and analysis, pressure gradients from injection operations are less than upper and lower confining layer fracture gradients indicating injectate confinement.

15. Based on the above, it is my opinion that the Bell Canyon and Cherry Canyon formations are appropriate for injection in this area and that the granting of Select Water's

application would best serve the interests of conservation, the prevention of waste, and the protection of correlative rights.

16. I understand that this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

David R. Childers

David Childers

08/26/2025

Date

DAVID R. CHILDERS, Ph.D. P.E.

Oklahoma City, OK | 405-388-2121 | David.r.childers-1@ou.edu

SENIOR RESERVOIR ENGINEER

Experienced petroleum engineer specializing in the Exploration and Production (E&P) sector, with a focus on reservoir and production engineering. Recognized for adept leadership and team management in demanding environments. Known for meticulous collaboration and strong organizational skills. Proficient in classical reservoir engineering techniques and skilled in developing innovative approaches to enhance production and injection operations. Demonstrated ability to manage multiple projects simultaneously with precision and efficiency. Highly skilled in research and development and reservoir engineering to optimize production and injection operations and innovate novel approaches to drive advancements and contribute to company objectives.

Areas of expertise:

- Computer-Aided Design (CAD)
- Engineering Design
- Natural Gas Engineering
- Pipeline Construction
- Team Leadership
- Coaching & Mentoring
- Gas Pipeline Operations
- People Management
- Problem-Solving
- System Operations
- Design / Design Development
- Hydrocarbons
- Petroleum Engineering
- Production Engineering
- Produced Water Transport

PROFESSIONAL EXPERIENCE

SELECT WATER SOLUTIONS | Edmond, Ok **2024 – Present**

Senior Reservoir Engineer

- Lead technical groups to determine remaining oil and gas well locations ("inventory") within designated areas.
- Utilize classical reservoir techniques leveraging reservoir, production, and well test theory to evaluate the production and injection potential of various reservoir in multiple basins in the lower forty-eight.
- Conduct comprehensive economic evaluations to estimate the viability of remaining well locations.
- Developed oil, gas, and water type curves with a focus on producing accurate water volume forecasts by well and field, using data analytics and ML/AI algorithms.
- Manage and coordinate external technical resources, including geologists, reservoir engineers, and consultants.
- Engage with customers and State regulatory agencies to understand challenges and operational constraints.
- Collaborate with internal teams to enhance communication and alignment on project objectives and deliverables.

Achievements:

- Co-developed Superposition Pore Pressure Model (SPPM) pressure visualization and injection capacity estimation tool through Python code and the utilization of Enverus Prism data.
  - SPPM Capabilities:
    - Estimate the average reservoir pressure for a specified time.
    - Estimate the volumetric capacity for saltwater disposal per geomechanical properties and State regulatory constraints.
    - Visualize the pressure distribution by time.

UNIVERSITY OF OKLAHOMA | Norman, OK **2019 – Present**

Adjunct Professor – Reservoir Engineering and Midstream Operations

- Provide collegiate instruction for courses in Petroleum Engineering, covering topics such as Natural Gas Engineering & Management and Natural Gas Transportation and Storage.
- Supervise group projects on CO2 re-injection for Enhanced Oil Recovery (EOR) and sequestration into saline water reservoirs in Oklahoma.
- Researched Carbon Capture, Utilization, and Storage (CCUS) techno-economics for applications in Oklahoma.

Accomplishments:

- Create curriculum standards, lesson plans, and syllabi to ensure educational objectives.
- Foster student relationships, offering mentorship on personal, professional, and academic goals, and coaching on effective study techniques.

Select Water Solutions, LLC
Case No. 25547
Exhibit E-1

LAGOON WATER MIDSTREAM | Oklahoma City, OK **2019 – 2024**

Reservoir Engineer

- Directed the pipeline department, including CAPEX project budgets and construction schedules, ensuring adherence to timelines and financial objectives.
- Developed project scopes, cost estimates, and proposals for new projects, equipment sizing, and modifications, fostering effective project planning while nurturing client relationships with internal and external stakeholders.
- Led reservoir engineering functions, optimizing SWD injection wells for operational efficiency, employing multi-scale subsurface flow modeling and Pressure Transient and Rate Transient Analysis (PTA & RTA) to characterize reservoir boundaries and subsurface features.
- Implemented well diagnosis and optimization strategies using classical reservoir and production engineering techniques, enhancing well performance.
- Coordinated the development of engineering designs and diagrams (P&IDs and PFDs) for pipeline construction and operation, ensuring compliance with industry standards.
- Leveraged data analytics to evaluate integrity assessments, repair strategies, and mitigative action effectiveness, driving continuous improvement initiatives.
- Integrated surveillance technologies to streamline asset management, including conducting hydrocarbon phase behavior studies and developing equations of state for fluid characterization.

Achievements:

- Increased operational capacity and revenue retention by defending Lagoon from SWD operation restrictions imposed by the Oklahoma Corporation Commission (OCC) during a regulatory dispute.
- Ensured reservoir integrity and regulatory compliance by developing a novel probabilistic technique for evaluating fracture parting pressure (FPP) to optimize surface pressure and injection operations.
- Illustrated a successful defense strategy to industry judges and lawyers by effectively presenting methodology to the Kuntz conference organized by OU Law.

ENABLE MIDSTREAM PARTNERS | Oklahoma City, OK **2008 – 2019**

Lead Hydraulic Engineer

- Spearheaded the design and development of midstream natural gas pipeline gathering systems, crude pipeline gathering systems, and produced water gathering systems.
- Successfully executed the implementation of new gathering systems, overseeing pipe design, LACT unit, and gas compressor station design.
- Conducted comprehensive training sessions for personnel on gathering system hydraulic flow paths and operational procedures.
- Orchestrated transmission system operations, managing daily gas flow nominations for pipeline customers and conducting pipeline pigging optimization analysis using black-oil and condensate model analysis.
- Innovated a tool utilizing equations-of-state (EOS) to analyze gas composition and water content across pipeline locations, mitigating integrity issues associated with CO2 and H2S transport.

Achievements:

- Demonstrated expertise in reservoir and hydraulic engineering research spanning fifteen years within the oil and gas sector.
- Accomplished multiple projects involving reservoir and hydraulic engineering analysis across diverse basins including Anadarko, Bakken, Delaware, Fayetteville, Permian, Arkoma, Barnett, Eagle Ford, Haynesville, and Powder River.

HVAC Design Engineer | CLIMATE MASTER | Oklahoma City, OK
Design Engineer | Choctaw Manufacturing & Development Company | Oklahoma City, OK
Hydraulic Engineer | Fairbanks Morse, Pentair Water | Kansas City, KS

EDUCATION

Ph.D. – Petroleum Engineering | UNIVERSITY OF OKLAHOMA | Norman, OK
Master of Science – Petroleum Engineering | UNIVERSITY OF OKLAHOMA | Norman, OK
Master of Science – Geological Engineering | UNIVERSITY OF OKLAHOMA | Norman, OK
Bachelor of Science – Mechanical Engineering | UNIVERSITY OF OKLAHOMA | Norman, OK

TECHNICAL SKILLS

- Decline Curve Analysis (DCA) ARIES economic forecasting model
- Petra (Working Knowledge)
- CMG – Reservoir Simulation Software Suite
- SynerGi Hydraulic Software
- Pro-E, Solid Works 3D simulation software
- Modeling with Petroleum Experts suite (Prosper, GAP, MBAL)
- Kappa – Well Testing Software Suite
- Spotfire and Power BI
- Hysis
- Programming: VBA, Matlab, and Python

PROFESSIONAL LICENSES / CERTIFICATIONS

Professional Engineering License – Oklahoma | 2011 – Present

PROFESSIONAL AFFILIATIONS

New Mexico Oil and Gas Association
Texas Oil and Gas Association
Texas Seismicity & Water Partnership
National Society of Professional Engineers
Oklahoma Society of Professional Engineers
Society of Petroleum Engineers

MILITARY SERVICE

United States Navy | Veteran | 2002 – 2005

INVITED PRESENTATIONS & PUBLICATIONS

Lnu, S., Childers, D., Wu, X., Chen, A., 2025. An analytical model to determine a reservoir capacity for wastewater disposal with consideration of geomechanics and extractions, Paper ARMA 25-0736MS presented at the 2025 American Rock Mechanics Association held in Santa Fe, New Mexico, 8-11 June 2025.

Childers, D., Wu, X., Dai, L., Shaffer, K. 2023. Determining the Storage Capacity of a Saltwater Disposal Reservoir in Practice, Paper SPE-213029-MS presented at the 2023 SPE Western Regional Meeting held in Anchorage, Alaska, 22-25 May 2023.

Childers, D. and Wu, X., 2023. Recommended Practice for Determining the Maximum Surface Injection Pressure for Saltwater Disposal Wells, Paper SPE-213093-MS presented at the 2023 SPE Oklahoma City Oil and Gas Symposium held in Oklahoma City, Oklahoma, 17-19 April 2023.

Childers, D. and Wu, X., 2022. Integrated Approach for Overcoming Uncertainties in Measuring Injection Rate & Pressure Limits for Multi-Layered SWD Wells, Presentation presented at 2022 Eugene Kuntz Conference held in Oklahoma City, Oklahoma, 11 November 2022

Childers, D. and Wu, X., 2021. Review of Fracture Diagnostic Technologies with Process Workflow for Implementation Journal of Petroleum Science and Engineering

Childers, D. and Wu, X., 2021. Mitigating Fault Activation from Injection Activity through the Application of the Connected Reservoir Storage Model Paper ARMA 21-1428-MS 55th US Rock Mechanics/Geomechanics Symposium held in Houston, Texas, USA, 20-23 June 2021

Childers, D. and Wu, X., 2020. Forecasting Shale Gas Performance Using the Connected Reservoir Storage Model Journal of Natural Gas Science and Engineering

Childers, D. and Wu, X., 2020. Forecasting Oil Well Performance in Tight Formation Using the Connected Reservoir Storage Model Journal of Petroleum Science and Engineering

Childers, D, and Wu, X., 2020; Characterize Hydraulic Fracturing Treatment Directly from Production Data using Connected Reservoir Storage Model, Paper ARMA 20-1376-MS 54th US Rock Mechanics/Geomechanics Symposium held in Golden, Colorado, USA, 28 June-1 July 2020

Childers, D, and Wu, X., 2017; Analyzing Gas Well Production Data through the Application of the Connected Reservoir Storage Model, Paper SPE-1187334-MS presented at the SPE Annual Technical Conference and Exhibition held in San Antonio, Texas, 9-11 October 2017

Childers, D, and Callard, J., 2015; Forecasting Reserves in the Bakken Reservoir Incorporating Flow Regime Changes, Paper SPE 173622 MS presented at the SPE Production Operations Symposium held in Oklahoma City, Oklahoma, USA, 1–5 March 2015

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. 25547**

SELF-AFFIRMED STATEMENT
OF DANA S. HARDY

1. I am attorney in fact and authorized representative of Select Water Solutions LLC, the Applicant herein.

2. I am familiar with the Notice Letter attached as **Exhibit F-1,** and caused the Notice Letter, along with the Application in this case, to be sent to the parties listed in the Postal Delivery Report attached as **Exhibit F-2**.

3. Exhibit F-2 also provides the date the Notice Letter was sent, along with the delivery status of each.

4. Electronic return receipts are attached as **Exhibit F-3** as supporting documentation for proof of mailing and the information provided on Exhibit F-2.

5. On August 22, 2025, I caused a notice to be published in the Hobbs News-Sun. An Affidavit of Publication from the legal clerk of the Hobbs News-Sun along with a copy of the Notice Publication, is attached as **Exhibit F-4.**

6. I understand this Self-Affirmed Statement will be used as written testimony in the subject case. I affirm that my testimony above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

/s/ Dana S. Hardy January 5, 2026
Dana S. Hardy Date

Select Water Solutions, LLC
Case No. 25547
Exhibit F

Hardy | McLean LLC
ENERGY AND NATURAL RESOURCES ATTORNEYS

August 14, 2025

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

TO: ALL PARTIES ENTITLED TO NOTICE

Re: Case No. 25547 – Application of Select Water Solutions, LLC for Approval of a Saltwater Disposal Well, Lea County, New Mexico.

To whom it may concern:

This letter is to advise you that the enclosed application was filed with the New Mexico Oil Conservation Division. The hearing will be conducted on **September 11, 2025**, beginning at 9:00 a.m.

The hearing will be conducted in a hybrid fashion, both virtually and in-person at the Energy, Minerals, Natural Resources Department, Wendell Chino Building, Pecos Hall, 1220 South St. Francis Drive, 1st Floor, Santa Fe, NM 87505. The hearing may be held only virtually at the discretion of the Division. To confirm the manner in which the hearing will be held, and to participate virtually, please visit the OCD Hearings website at the following link: https://www.emnrd.nm.gov/ocd/hearing-info/. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Pursuant to Division Rule 19.15.4.13.B, a party who intends to present evidence at the hearing shall file a pre-hearing statement and serve copies on other parties, or the attorneys of parties who are represented by counsel, at least four business days prior to the scheduled hearing, but in no event later than 5:00 p.m. Mountain Time, on the Thursday preceding the scheduled hearing date. If you are not registered with the OCD's E-Permitting system, you must submit the statement via e-mail to ocd.hearings@emnrd.nm.gov and should include: the names of the parties; whether or not the parties are represented by counsel; a concise statement of the case; the names of witnesses anticipated to be called to testify at the hearing; the approximate amount of time needed to present the case; and an identification of any procedural matters that are to be resolved prior to the hearing.

If you have any questions about this application, please contact Reed Davis, Geophysicist with ALL Consulting, LLC, rdavis@all-llc.com, 918-8375.

Sincerely,
/s/ Jaclyn M. McLean
Jaclyn M. McLean

125 Lincoln Avenue, Suite 223
Santa Fe, NM 87501
505-230-4410

HardyMclean.com

Writer:
Jaclyn M. McLean
Managing Partner
jmclean@hardymclean.com

Select Water Solutions, LLC
Case No. 25547
Exhibit F-1

Postal Delivery Report

Select Water Solutions Javelina - Case No. 25547

Recipient	Date Mailed	USPS Tracking Number	Date Received	Status
New Mexico Bureau of Land Managment	8/14/2025	9414836208551286225566	8/21/2025	Delivered to Agent, Front Desk/Reception/Mail Room
New Mexico Oil Conservation	8/14/2025	9414836208551286225580	8/18/2025	Delivered, Front Desk/Reception/Mail Room HOBBS, NM 88240
Devon Energy Co LP	8/14/2025	9414836208551286225603	8/18/2025	Delivered, Individual Picked Up at Post Office OKLAHOMA CITY, OK 73102

Select Water Solutions, LLC
Case No. 25547
Exhibit F-2

COG Operating LLC	8/14/2025	9414836208551286225634	8/19/2025	Delivered, Individual Picked Up at Postal Facility MIDLAND, TX 79701
Chevron USA Inc	8/14/2025	9414836208551286225665	8/18/2025	Delivered, Left with Individual MIDLAND, TX 79706

UNITED STATES POSTAL SERVICE

August 21, 2025

Dear Simple Certified:

The following is in response to your request for proof of delivery on your item with the tracking number: **9414 8362 0855 1286 2255 66.**

Item Details

Status:	Delivered to Agent, Front Desk/Reception/Mail Room
Status Date / Time:	August 21, 2025, 10:57 am
Location:	CARLSBAD, NM 88220
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™
	Return Receipt Electronic
Recipient Name:	NEW MEXICO BUREAU OF LAND MANAGMENT

Recipient Signature

Signature of Recipient: (Authorized Agent)	
Address of Recipient:	620 E GREENE ST, CARLSBAD, NM 88220

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely,
United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004

New Mexico Bureau of Land Managment
620 E Greene St
Carlsbad, NM 88220
Reference #: SW Javelina 25547
Item ID: SW Antelope 25549

Select Water Solutions, LLC
Case No. 25547
Exhibit F-3

UNITED STATES POSTAL SERVICE

August 18, 2025

Dear Simple Certified:

The following is in response to your request for proof of delivery on your item with the tracking number: **9414 8362 0855 1286 2255 80.**

Item Details

Status:	Delivered, Front Desk/Reception/Mail Room
Status Date / Time:	August 18, 2025, 8:30 am
Location:	HOBBS, NM 88240
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™
	Return Receipt Electronic
Recipient Name:	NEW MEXICO OIL CONSERVATION

Recipient Signature

Signature of Recipient:	
Address of Recipient:	1625 N FRENCH DR, HOBBS, NM 88240

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely,
United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004

New Mexico Oil Conservation
District 1
1625 N. French Dr
Hobbs , NM 88240
Reference #: SW Javelina 25547
Item ID: SW Javelina 25547

UNITED STATES POSTAL SERVICE

August 18, 2025

Dear Simple Certified:

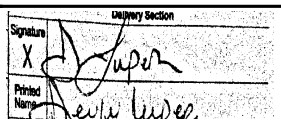
The following is in response to your request for proof of delivery on your item with the tracking number: **9414 8362 0855 1286 2256 03.**

Item Details

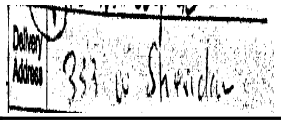
Status:	Delivered, Individual Picked Up at Post Office
Status Date / Time:	August 18, 2025, 11:17 am
Location:	OKLAHOMA CITY, OK 73102
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™
	Return Receipt Electronic
Recipient Name:	DEVON ENERGY CO LP

Recipient Signature

Signature of Recipient:



Address of Recipient:



Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely,
United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004

Devon Energy Co LP
333 W Sheridan Ave
Oklahoma City , OK 73102
Reference #: SW Javelina 25547
Item ID: SW Javelina 25547

UNITED STATES POSTAL SERVICE

August 19, 2025

Dear Simple Certified:

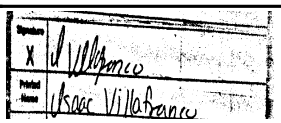
The following is in response to your request for proof of delivery on your item with the tracking number: **9414 8362 0855 1286 2256 34.**

Item Details

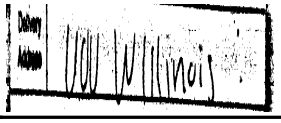
Status:	Delivered, Individual Picked Up at Postal Facility
Status Date / Time:	August 19, 2025, 7:48 am
Location:	MIDLAND, TX 79701
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™
	Return Receipt Electronic
Recipient Name:	COG OPERATING LLC

Recipient Signature

Signature of Recipient:



Address of Recipient:



Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely,
United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004

COG Operating LLC
W 600 Illinois Ave
Midland , TX 79701
Reference #: SW Javelina 25547
Item ID: SW Javelina 25547

UNITED STATES POSTAL SERVICE

August 18, 2025

Dear Simple Certified:

The following is in response to your request for proof of delivery on your item with the tracking number: **9414 8362 0855 1286 2256 65.**

Item Details

Status:	Delivered, Left with Individual
Status Date / Time:	August 18, 2025, 3:49 pm
Location:	MIDLAND, TX 79706
Postal Product:	First-Class Mail®
Extra Services:	Certified Mail™
	Return Receipt Electronic
Recipient Name:	CHEVRON USA INC

Recipient Signature

Signature of Recipient:	
Address of Recipient:	6301 DEAUVILLE, MIDLAND, TX 79706

Note: Scanned image may reflect a different destination address due to Intended Recipient's delivery instructions on file.

Thank you for selecting the United States Postal Service® for your mailing needs. If you require additional assistance, please contact your local Post Office™ or a Postal representative at 1-800-222-1811.

Sincerely,
United States Postal Service®
475 L'Enfant Plaza SW
Washington, D.C. 20260-0004

Chevron USA Inc
6301 Deauville
Midland , TX 79706
Reference #: SW Javelina 25547
Item ID: SW Javelina 25547

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
August 22, 2025
and ending with the issue dated
August 22, 2025.

Publisher

Sworn and subscribed to before me this 22nd day of August 2025.

Notary

My commission expires
August 09, 2029
(Seal)

PAULA GUELL-RISING
Notary Public
State of New Mexico
Comm. # 1135156
My Comm. Exp. Aug 9, 2029

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said publication has been made.

LEGAL LEGAL

LEGAL NOTICE
August 22, 2025

This is to notify all interested parties, including; New Mexico Bureau of Land Management; New Mexico Oil Conservation Division; Devon Energy Production Company, LP; Chevron U S A Inc; COG Operating LLC; Max M. Wilson; M.J. Harvey Jr.; and their successors and assigns; that the New Mexico Oil Conservation Division will conduct a hearing on the application submitted by Select Water Solutions, LLC ("Applicant") for Case No. 25547. The hearing will be conducted on September 11, 2025, in a hybrid fashion, both virtually and in person at the Energy, Minerals, Natural Resources Department, 1st Floor, Santa Fe, NM 87505. To participate virtually, see the instructions posted on the OCD website: https://www.emnrd.nm.gov/ocd/hearing-info/. In **Case No. 25547**, Select Water Solutions, LLC ("Select Water") (OGRID No. 289068) applies for an order approving its proposed Javelina Fed 4 SWD #1, to be drilled at a location 408' from the south line and 831' from the east line (Unit P) of Section 4, Township 26 South, Range 35 East, Lea County, New Mexico, for the purpose of produced water disposal. 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 5,360 feet to 7,550 feet. 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, and requests that the Division approve a maximum surface injection pressure of 1,072 psi. The well is located approximately 10.95 miles SW of Jal, New Mexico.
#00303716

67118479 00303716

HARDY MCLEAN LLC
125 LINCOLN AVE, STE. 223
SANTA FE, NM 87501

Select Water Solutions, LLC
Case No. 25547
Exhibit F-4

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
https://www.emnrd.nm.gov/ocd/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 557922

CONDITIONS

Operator: NEW MEXICO ENERGY MINERALS & NATURAL RESOURCE 1220 S St Francis Dr Santa Fe , NM 87504	OGRID: 264235
	Action Number: 557922
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
stacy.sandoval	None	2/25/2026