Chevron

human energy®

Chevron DMG SWD Pilot Project
Case Nos. 23686, 23687

Chevron Water Strategy Team
November 8-9, 2023

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

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN LEA COUNTY, NEW MEXICO.

CASE NO. 23686

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN EDDY COUNTY, NEW MEXICO.

CASE NO. 23687

CONSOLIDATED EXHIBITS TABLE OF CONTENTS

Tab A: Application Case No. 23686 (includes C-108)

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

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN LEA COUNTY, NEW MEXICO.

CASE NO. 23686

APPLICATION

Chevron USA Inc. ("Chevron"), OGRID No. 4323, through its undersigned attorneys, hereby applies to the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12, for an order approving drilling of a salt water disposal well in Lea County, New Mexico. In support of this application, Chevron states as follows:

(1) Chevron proposes to drill the Papa Squirrel State SWD #1 well at a surface location 1,928' from the South line and 870' from the West line, Unit L, Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.

(2) Chevron seeks authority to inject salt water into the Bell Canyon/Cherry Canyon/Brushy Canyon from 4,625' to 8,939'.

(3) The tubing packer will be set at 4,525' feet, and production casing and cement will be set at 8,500'.

(4) Chevron requests that the Division approve a maximum daily injection rate for the well of 20,000 BWPD.

(5) Chevron requests that a maximum pressure of 925 psi be approved for the well.

(6) A proposed C-108 for the subject well is attached hereto in Attachment A.

(7) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, Chevron requests that this application be set for hearing before an Examiner of the Oil Conservation Division on August 3, 2023; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

By: Deana M. Bennett

Deana Bennett
Earl E. DeBrine, JR.
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. 23686: Application of Chevron USA Inc. for approval of salt water disposal well in Lea County, New Mexico. Applicant seeks an order approving the Papa Squirrel State SWD #1 well at a surface location 1,928' from the South line and 870' from the West line, Unit L, Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 4625 feet to 8939 feet. The tubing packer will be set at 4525 feet, and production casing and cement will be set at 8500 feet. The maximum anticipated injection rate will be 20,000 BWPD and maximum surface injection pressure will be 925 psi. Said area is located approximately 26 miles west of Jal, New Mexico.

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? _X_ Yes ___ No

II. OPERATOR: Chevron USA Inc.

ADDRESS: 6301 Deauville Blvd, Midland, TX 79706

CONTACT PARTY: Tom Merrifield PHONE: 661-448-7489

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. **ATTACHMENT 1**

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. **ATTACHMENT 2**

VII. Attach data on the proposed operation, including: **ATTACHMENT 3**

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. **ATTACHMENT 4**

IX. Describe the proposed stimulation program, if any. **ATTACHMENT 5**

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **ATTACHMENT 6**

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. **ATTACHMENT 7**

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. **ATTACHMENT 8**

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **ATTACHMENT 9**

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: ___ TITLE: ___

SIGNATURE: ___ DATE: ___

E-MAIL ADDRESS: ___

XV. 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 circu[illegible]tal: ___

DISTRIBUTION: Original and one c[illegible] to the appropriate District Office

EXHIBIT A tabbies

Side 2

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	96100	SWD; DELAWARE

[4] Property Code	[5] Property Name	[6] Well Number
	PAPA SQUIRREL SWD	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3204'

[10] Surface Location

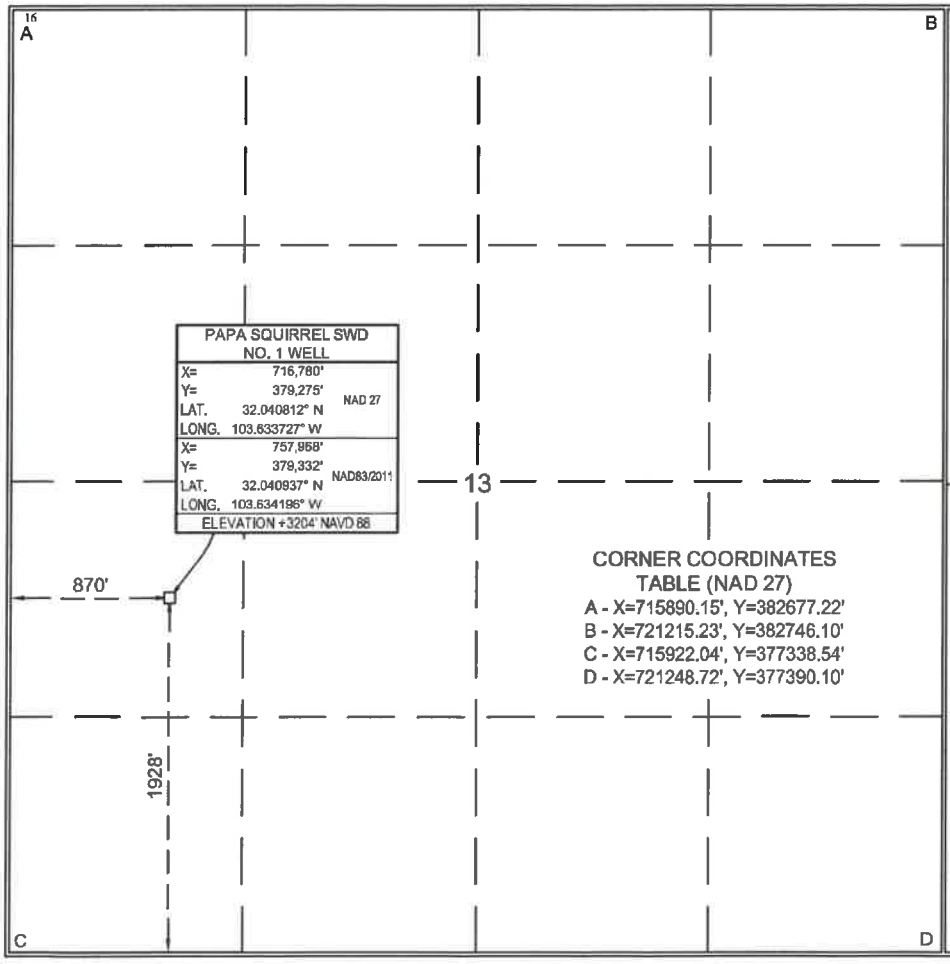
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	26 SOUTH	32 EAST, N.M.P.M.		1928'	SOUTH	870'	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	26 SOUTH	32 EAST, N.M.P.M.		1928'	SOUTH	870'	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

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.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

E-mail Address

[18] SURVEYOR CERTIFICATION

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.

01/25/2022
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT L. LASTRAPES
NEW MEXICO
23006
PROFESSIONAL SURVEYOR
04/06/2022

Certificate Number

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Inc.

WELL NAME & NUMBER: Papa Squirrel SWD 1

WELL LOCATION: 1928' from South, 870' from West, L 13, 26 South, 32 East, N.M.P.M.

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See next page

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 380 sx. *or* 497 ft³

Top of Cement: Surface Method Determined: Volumetric

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 10-3/4"

Cemented with: 320 sx. *or* 758 ft³

Top of Cement: Surface Method Determined: Volumetric

Production Casing

Hole Size: 9-7/8" Casing Size: 7-5/8"

Cemented with: 650 sx. *or* 1529 ft³

Top of Cement: Surface Method Determined: Volumetric

Total Depth: 8500'

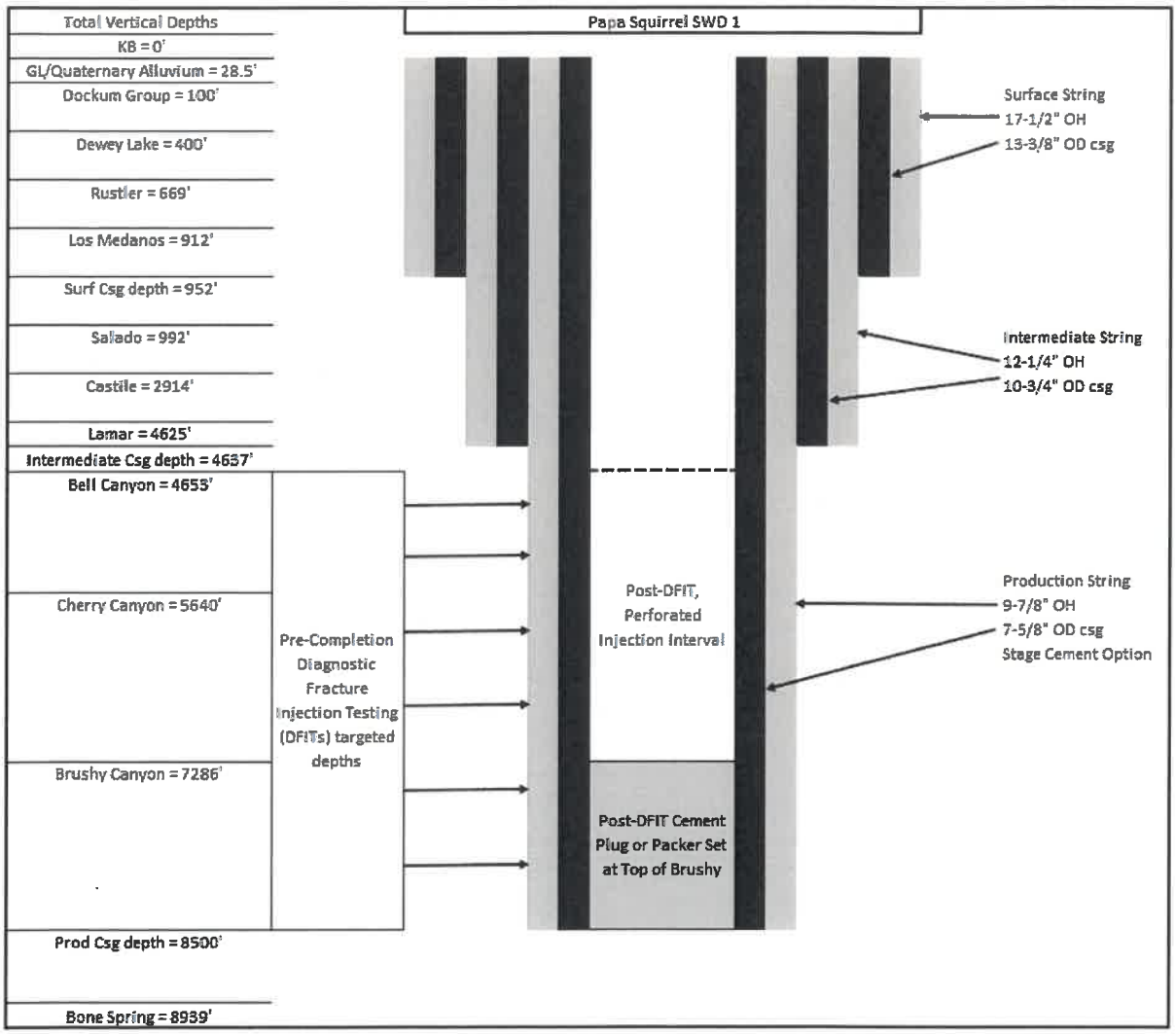
Injection Interval

4625' feet to 8939' *

(Perforated or Open Hole; indicate which)

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.

Page 4


Total Vertical Depths
KB = 0'
GL/Quaternary Alluvium = 28.5'
Dockum Group = 100'
Dewey Lake = 400'
Rustler = 669'
Los Medanos = 912'
Surf Csg depth = 952'
Salado = 992'
Castile = 2914'
Lamar = 4625'
Intermediate Csg depth = 4637'
Bell Canyon = 4655'
Cherry Canyon = 5640'
Brushy Canyon = 7286'
Prod Csg depth = 8500'
Bone Spring = 8939'
Papa Squirrel SWD 1
Surface String
17-1/2" OH
13-3/8" OD csg
Intermediate String
12-1/4" OH
10-3/4" OD csg
Production String
9-7/8" OH
7-5/8" OD csg
Stage Cement Option
Post-DFIT, Perforated Injection Interval
Post-DFIT Cement Plug or Packer Set at Top of Brushy
Pre-Completion Diagnostic Fracture Injection Testing (DFITs) targeted depths

Page 5

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 5-1/2" Lining Material: _____

Type of Packer: Hydraulically set packer

Packer Setting Depth: 4525'

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

Additional Data

1. Is this a new well drilled for injection? X Yes _____ No

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

2. Name of the Injection Formation: Bell Canyon, Cherry Canyon, and Brushy Canyon *

3. Name of Field or Pool (if applicable): SWD; Delaware Mountain Group

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No, this is a proposed new SWD well.

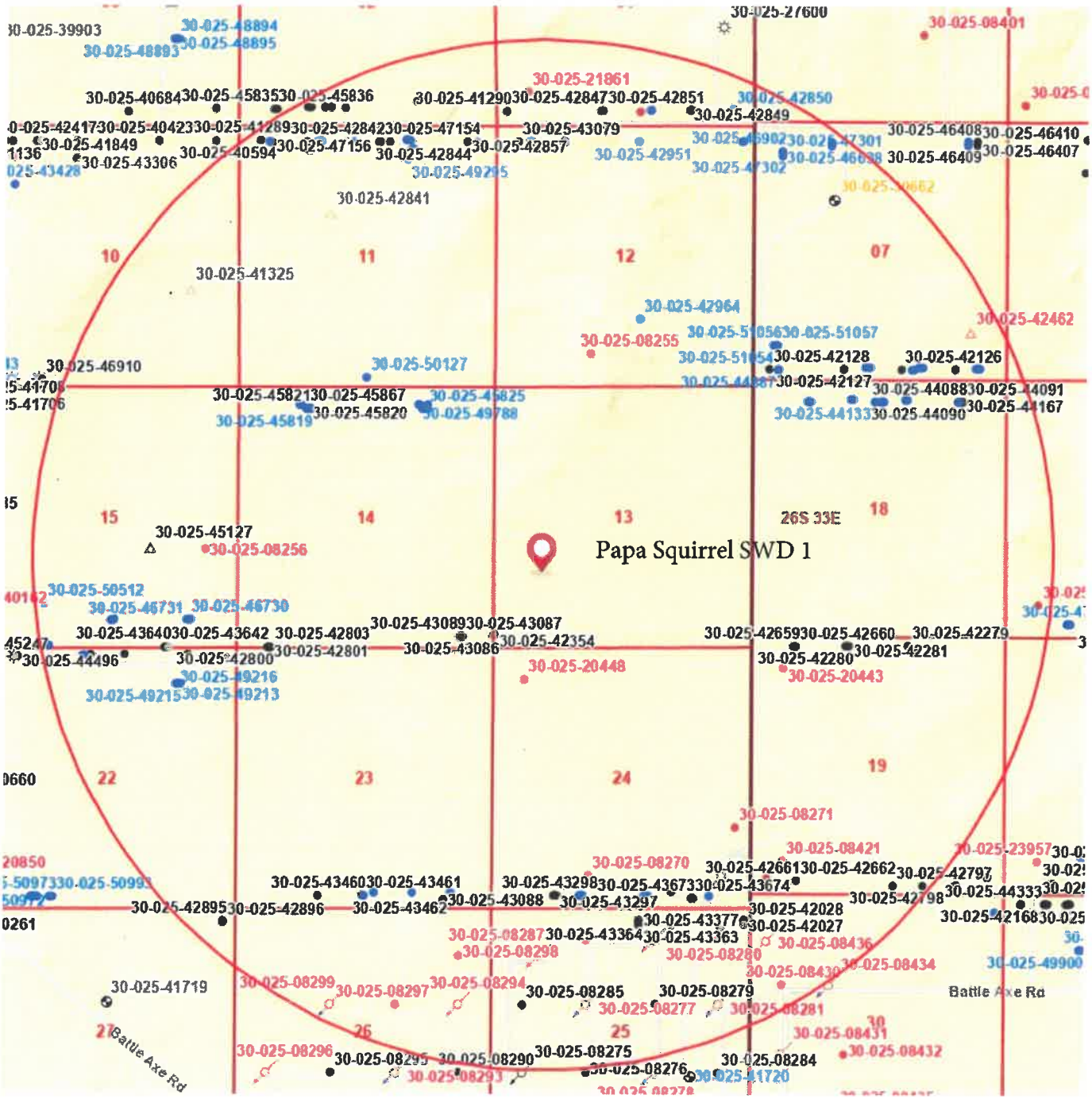
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Depths are within a 3 mile area. Atoka (14,418-14,545 ft MD), Avalon (8,819-9,749 ft TVD), Bone Spring (8,706-12,028 ft TVD), Devonian (17,468-17,567 ft MD), Morrow (15,999-16,050 ft MD), Pennsylvanian (14,370-14,826 ft MD), Silurian (17,464-17,512 ft MD), and Wolfcamp (9,065-13,145 ft TVD).

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.

Page 6

ATTACHMENT 1

Item V

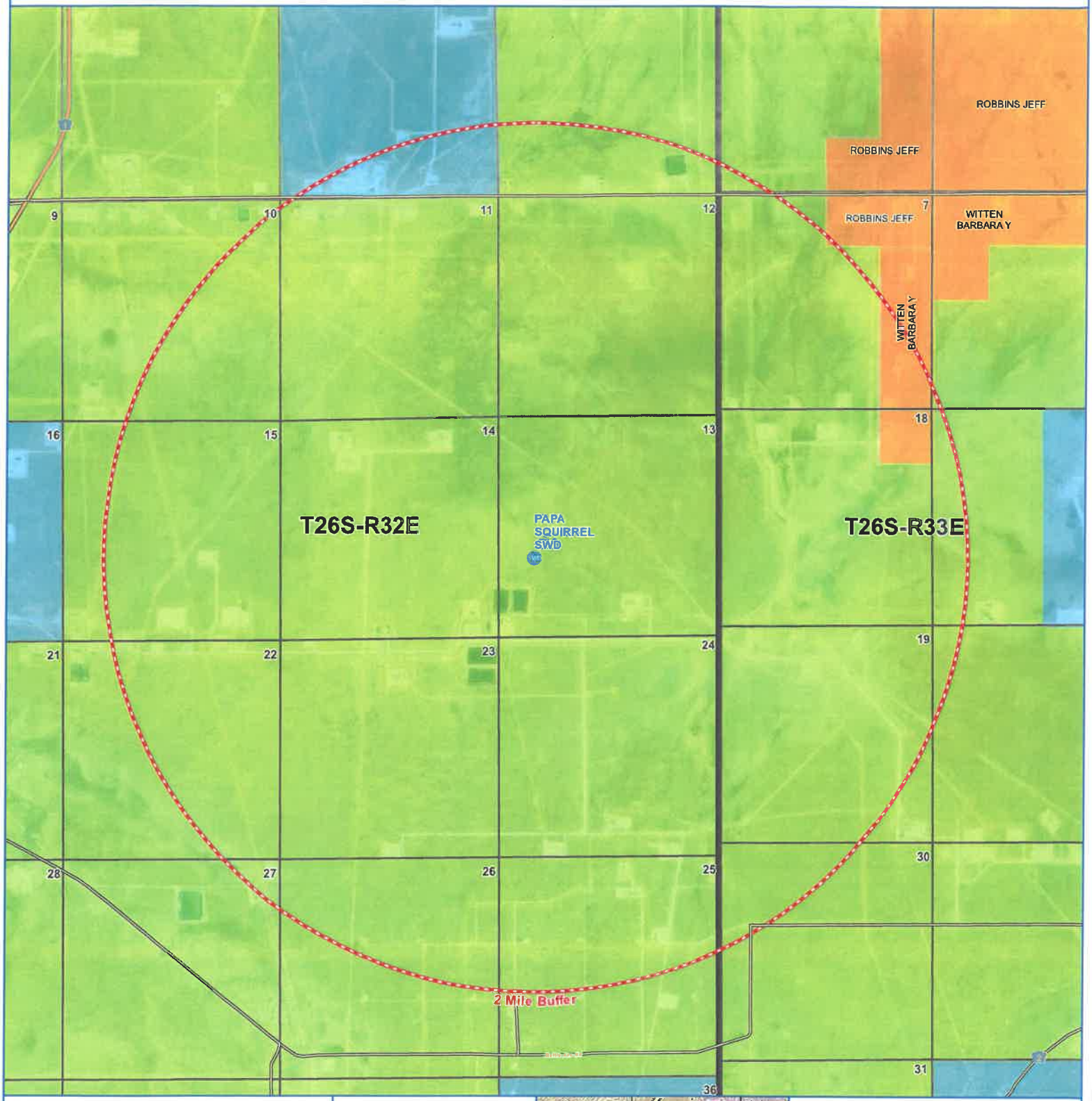


Papa Squirrel SWD 1: 2.0 mile radius circle map showing all wells within the radius.

SURFACE OWNERSHIP MAP

PAPA SQUIRREL SWD

Section 13, Township 26 South, Range 32 East, Lea County, New Mexico



Miles
0.2 0.1 0 0.2 0.4 0.6 0.8

Feet
1,000 500 0 1,000 2,000 3,000 4,000

Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

TGS TRANSFORM

PO BOX 1001, Fort Worth Texas 76101

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal
- State
- Private

Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Linear Units: US Survey Feet

N W E S

PAPA SQUIRREL SWD

SHL Location & Penetration Point:
1928' FSL & 870' FWL
Section 13, Township 26 South,
Range 32 East of P.M.
Lea County, New Mexico

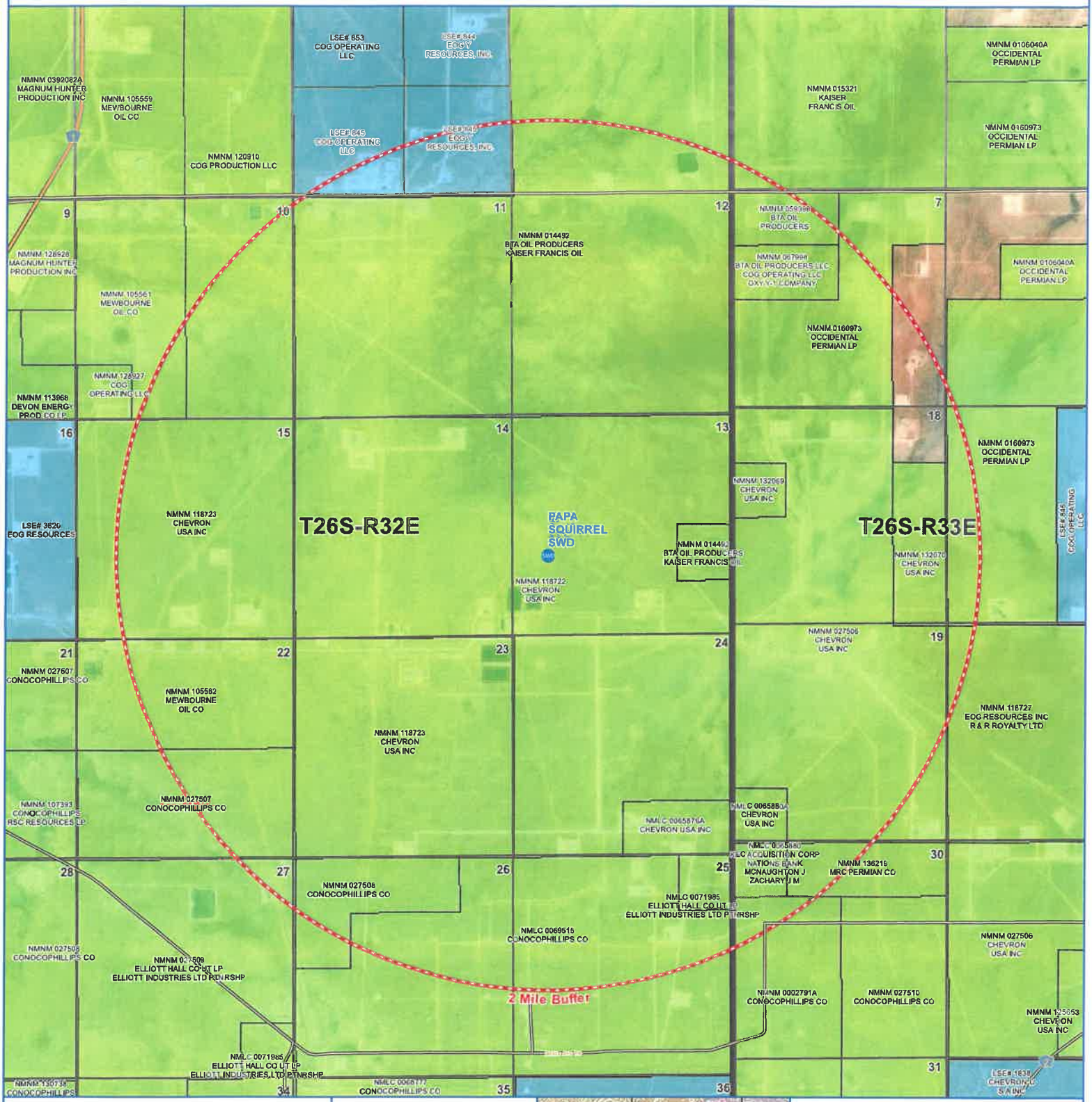
OPERATOR:
CHEVRON U.S.A. INC.

Chevron

FEDERAL & STATE LEASES MAP

PAPA SQUIRREL SWD

Section 13, Township 26 South, Range 32 East, Lea County, New Mexico



Miles 0.2 0.1 0 0.2 0.4 0.6 0.8

Feet 1,000 500 0 1,000 2,000 3,000 4,000

Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

TGS TRANSFORM

PO BOX 1001 Fort Worth Texas 76101

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal Lease
- State Lease

Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US

N W E S

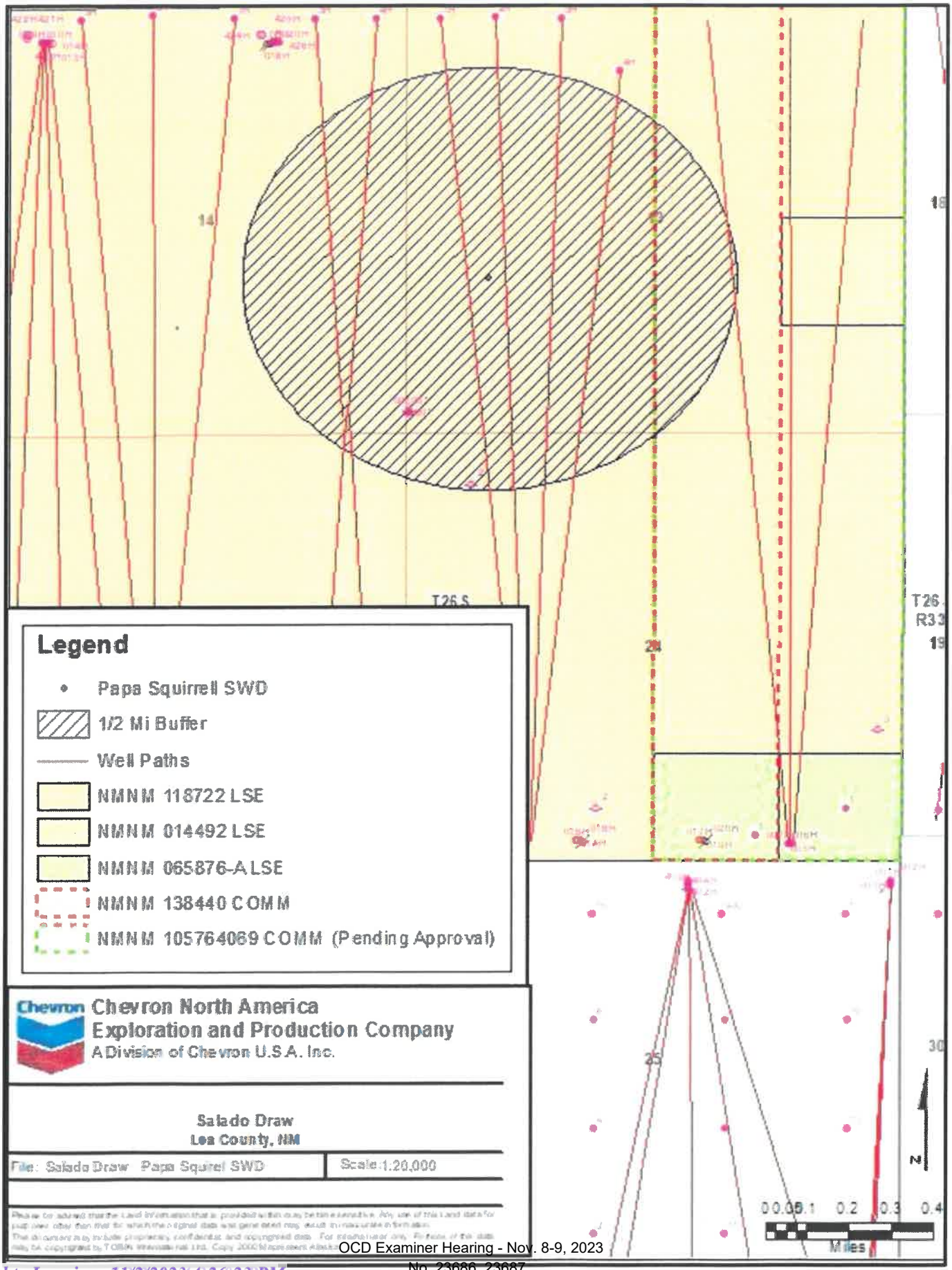
PAPA SQUIRREL SWD

SHL Location & Penetration Point:
1928' FSL & 870' FWL
Section 13, Township 26 South,
Range 32 East of P.M.
Lea County, New Mexico

OPERATOR:
CHEVRON U.S.A. INC.

Chevron

Federal and State Lease Map (1/2 Mi Radius)



ATTACHMENT 2

Item VI

API	Well Name	Well Type	Well Status	OGRID Name	Section	Township	Range	Latitude 83	Longitude 83	Measured Depth	Vertical Depth	Associated Pools	Plug Date	Miles from SWD
30-025-43086	SD WE 14 FEDERAL P7 #003H	Oil	Active	CHEVRON U S A INC	14	26S	32E	32.0362	-103.6393	13,816	9,074	[97838] JENNINGS, UPPER BONE SPRING SHALE		0.4
30-025-43087	SD WE 14 FEDERAL P7 #004H	Oil	Active	CHEVRON U S A INC	14	26S	32E	32.0362	-103.6391	13,816	9,074	[97838] JENNINGS, UPPER BONE SPRING SHALE		0.4
30-025-43089	SD WE 23 FEDERAL P7 #004H	Oil	Active	CHEVRON U S A INC	14	26S	32E	32.0362	-103.639	14,002	9,030	[97838] JENNINGS, UPPER BONE SPRING SHALE		0.4
30-025-42354	SALADO DRAW SWD 13 #001	SWD	Active	NGL WATER SOLUTIONS PERMIAN, LLC	13	26S	32E	32.0364	-103.637	18,675	18,675	[97869] SWD, DEVONIAN-SILURIAN		0.3
30-025-20448	PRE-ONGARD WELL #002	Oil	Plugged (site released)	PRE-ONGARD WELL OPERATOR	24	26S	32E	32.0338	-103.6349	0	4,645	No Data	8/20/1963	0.4

Data tabulation of wells in Area of Review of the Papa Squirrel SWD 1.

APPROVED

AUG 21 1963

J. L. GORDON
ACTING DISTRICT ENGINEER

Form 9-331a
(Feb. 1951)

Budget Bureau No. 42-R358.4.
Form Approved.

Land Office

Lease No. LC - 065876 - A

Unit

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL	X		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

FEDERAL LITTLEFIELD "DR" August 20, 1963

Well No. 2 is located 660 ft. from {N/S} line and 660 ft. from {E/W} line of sec. 24

NW/4 Section 24 (¼ Sec. and Sec. No.) | 26-S (Twp.) | 32-E (Range) | NMPM (Meridian)

Wildcat (Field) | Lea (County or Subdivision) | New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 3182.8 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Well was completed dry at a total depth of 4645' on 8-19-63.

It is proposed to run drill pipe to 4645'. Spot cement plug from 4645 to 4545'; mud to 800'; cement to 750'; mud to 425'; cement to 375'; mud to 50'; and cement to surface leaving 38' of 8-5/8" casing in hole. Set marker and abandon.

Location will be cleaned up and pits filled.

Verbal approval received from Mr. J. L. Gordon, by phone 8-20-61.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Gulf Oil Corporation

Address P. O. Box 980

Kermit, Texas

ORIGINAL SIGNED
BY
W. W. WHITAKER

By

Title Area Engineer

GPO 914974

Budget Bureau No. 42-R358.4.
Form Approved.

Form 9-881a
(Feb. 1951)

(SUBMIT IN TRIPLICATE)

Land Office .....

Lease No. LC-065876-A

Unit .....

APPROVED
FEB 3 1964
E. G. HUBBLE
ACTING DISTRICT ENGINEER

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	X
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 20, 1964

Federal Littlefield "BB"

Well No. 2 is located 660 ft. from {N/S} line and 660 ft. from {E/W} line of sec. 24

NW/4 (¼ Sec. and Sec. No.) Sec. 24 | 26-S (Twp.) | 32-E (Range) | NMPM (Meridian)

Wildcat (Field) | Lea (County or Subdivision) | New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 3188.3 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Well was completed dry at 4645' on 8-19-63.

Ran drill pipe open ended to 4645' and spotted 35 sacks cement 4645' to 4545'; mud 4545' to 800'; 20 sacks cement to 750'; mud to 425'; 20 sacks cement to 375'; mud to 50'; 20 sacks cement to surface leaving 384' of 8 5/8" casing in hole. Set marker & abandoned.

Location is cleaned up and ready for inspection.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Gulf Oil Corporation

Address P. O. Box 980

Kermit, Texas

ORIGINAL SIGNED
BY
By W. W. WHITAKER

Title Area Engineer

GPO 914974

WC

COUNTY Lea FIELD Wildcat STATE N.M. NO.

OPR. Gulf Oil Corporation MAP

NO. 2 LSE. Littlefield "DR" Federal

SEC. 24 T. 26S BLK. R 32E SUR. CO-ORD.

LOC. 660' fr N & W Lines of Sec.

MI. FROM P&A CLASS. EL.

SPUD 8-13-63 COMP. 8-20-63	FORMATION	DATUM	FORMATION	DATUM
TRT.	LOG:			
	Rust 675			
CSG. & SX.	B/Salt 4335			
8 5/8" 399' 250	Del ls 4561			
	Del sd 4595			
TBG. DEPTH SIZE				
LOGS EL GR RA IND HC A				
	TD 4645'		PB	

PROD INT. IP (DAILY RATE) BS&W GH GOR GTY C. P. T. P. HRS. TEST

PLUGGED & ABANDONED

CONT. Johnn Drlg. Co. PROP DEPTH 4950' TYPE

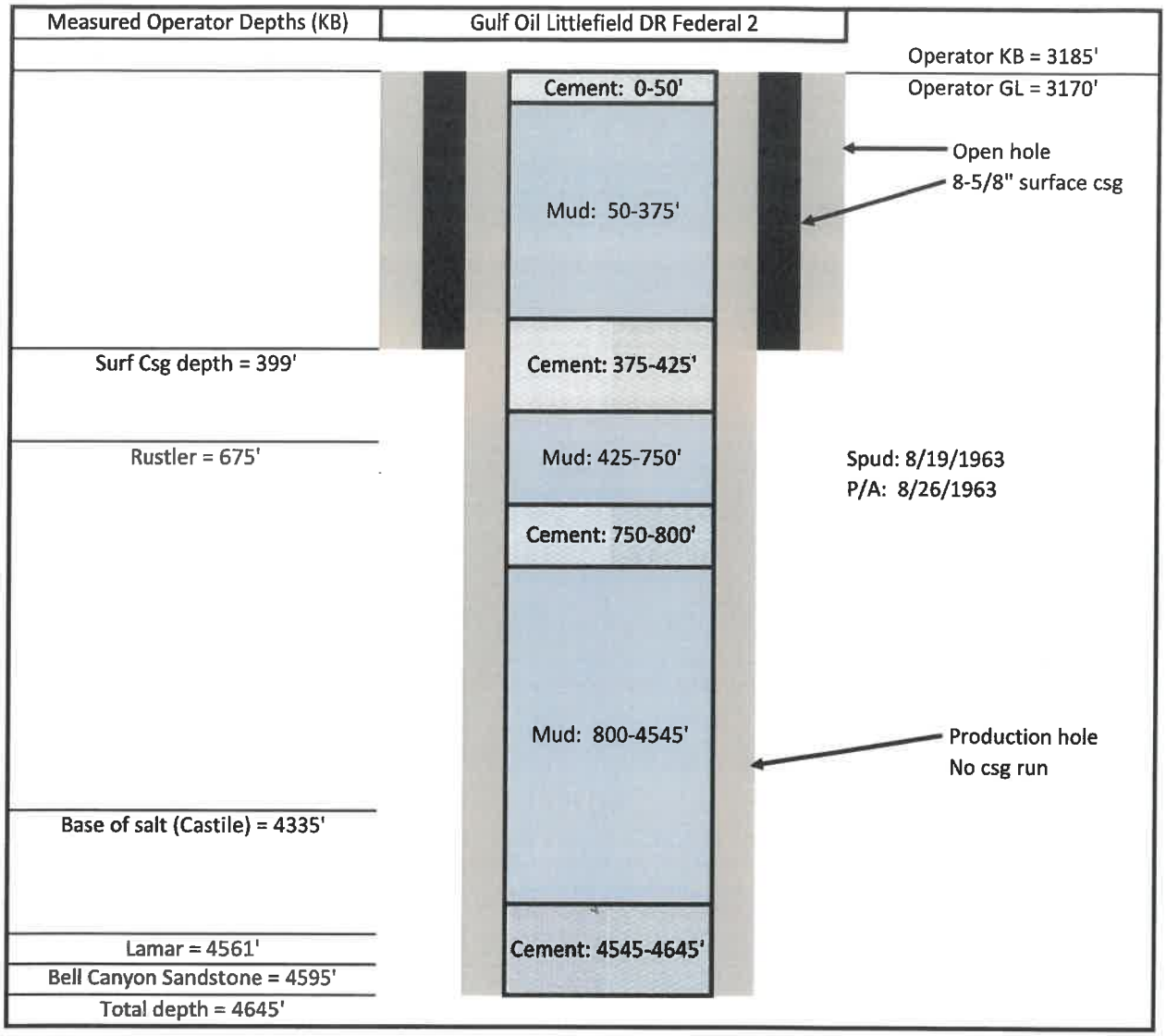
DATE

F.R. 8-15-63, Delaware PD 4950'-Johnn Drlg. Co.

8-19-63 Drlg. 4435'. Oper's Elev. 3185' KB.

8-26-63 TD 4645', PLUGGED & ABANDONED.

No tests or cores.



Schematic of plugging detail of Gulf Littlefield DR Federal 2 (API 30-025-20445).

ATTACHMENT 3

Item VII

Item	Well 5.5" tubing	Papa Squirrel SWD #1
1)	Permit Max Rate (bwpd)	20,000
1)	Permit Avg Daily Rate (bwpd)	15,000
2)	System	closed
3)	Permit Max Pressure (psig)	925
3)	Permit Avg Pressure (psig)	750

Item	Water Requirements	
4)	Injected fluid is produced water.	Source WQ of injectate and receiving formation is not required per application.
5)	Disposal Zone Water Quality	for non-productive in 1 mile
	SD24 13 FED P416 17H (API 3002547303)	
	Results on next page	

Sample Name / Well			SD24 13 FED P416 17H
Date Received			Tuesday, June 21, 2022
Lab Sample #			**25168**
Address of Testing Laboratory			Northpark Geotechnical Center 100 Northpark Blvd., Covington, LA 70433
Date sampled			**6/16/2022**
Time Sampled			12:00
Area & Block			Salado Draw
Depth			6504.00ft MD
Reservoir			Cherry Canyon
Analyte	**Method**	**Symbol**	**mg/L**
Chloride	IC	Cl^-	159942
Bromide	IC	Br^-	1135.2
Iodide	IC	I^-	35.68
Sulfate	IC	SO_4^{2-}	564.12
Nitrate	IC	NO_3^-	10.63
Phosphate	IC	as PO_4^{3-}	BDL
Total Alkalinity	Titration	as HCO_3^-	1127
Organic Acids	Titration	NVWA	ND
Weak Bases	Titration	as NH_4^+	ND
Bicarbonate	*Titration (calc.)*	as HCO_3^-	NA
Acetate	IC	CH_3COO^-	BDL
Propionate	IC	$(C_2H_5)COO^-$	BDL
Formate	IC	$HCOO^-$	BDL
Butyrate	IC	$(C_3H_7)COO^-$	BDL
Sodium	ICP-AES	Na	64989
Potassium	ICP-AES	K	1808.07
Calcium	ICP-AES	Ca	33684.88
Magnesium	ICP-AES	Mg	2305.32
Strontium	ICP-AES	Sr	1361.01
Barium	ICP-AES	Ba	<0.1
Iron	ICP-AES	Fe	<0.05
Manganese	ICP-AES	Mn	<0.05
Lithium	ICP-AES	Li	15.32
Aluminum	ICP-AES	Al	0.72
Silicon	ICP-AES	Si	1.60
Boron	ICP-AES	B	24.19
Phosphorus	ICP-AES	P	0.39

Zinc	ICP-AES	Zn	2.44
Lead	ICP-AES	Pb	<0.25
Nickel	ICP-AES	Ni	<0.1
Chromium	ICP-AES	Cr	<0.05
Copper	ICP-AES	Cu	<0.1
Molybdenum	ICP-AES	Mo	<0.05
Sulfur ***(total)***	ICP-AES	S	449.50
Properties	**Method**	**Units**	
Field pH	colorimetric	(-log(H^+))	8.12
Lab pH (25°C)	potentiometric	(-log(H^+))	8.77
TDS	*calculated*	mg/L	266525
Density (60°F, 1 bar)	Anton Parr meter	g/cm^3	1.190
Conductivity @ 25°C	measured	µmhos/cm	226610
Resistivity @ 25°C	measured	ohm-m	0.044
Charge Balance Error	***calculated***	**%**	**2.36**

Abbreviations:

ICP-AES: *Inductively Coupled Plasma Atomic Emission Spectroscopy*
IC: *Ion Chromatography*
BDL: Below Detection Limit
< * : Below Reporting Limit (*)
NT: Not Tested
ND: Not Detected
NA: Not Available / Not Applicable

ATTACHMENT 4

Item VIII

Formation/Geologic Feature Tops & Datum	Lithology	TVD (from Datum)	Z (SSTVD)
KB (Kelly Bushing)	Datum	0.0	3,232.5
GL (ground surface)	Ground Surface	28.5	3,204.0
01 - Dockum Group	Sandstone	100.0	3,132.5
02 - Dewey Lake	Sandstone	400.0	2,832.5
03 - Rustler	Carbonates	669.0	2,563.5
04 - Los Medanos	Siltstone	912.0	2,320.5
05 - Saldo	Halite	992.2	2,240.3
06 - Castile	Anhydrite	2914.4	318.1
07 - Lamar	Carbonates	4625.3	-1,392.8
08 - Bell Canyon	Sandstone	4652.9	-1,420.4
09 - Cherry Canyon	Sandstone	5640.1	-2,407.6
10 - Brushy Canyon	Sandstone	7285.5	-4,053.0
11 - Bone Spring Limestone	Carbonate	8939.0	-5,706.5

Geologic prognosis tops of all formations to be encountered in the Papa Squirrel SWD 1.

ATTACHMENT 5

Item IX

Proposed acid stimulation as part of the completion for the Papa Squirrel SWD 1.

1. MI/RU Petroplex Acid and Gladiator N2 Unit
2. Perform pressure pumping checklist and record in wellview.
3. Rig up Petroplex acid lines and tie in to 4-1/16" wing valve on tree. Test all lines against wing valve to 2,100 psi for 5 min
   - Install tee in Petroplex lines to allow N2 line to be rigged up. Test all N2 lines against wing valve to 2,100 psi for 5 min
4. Pump Acid job per Petroplex Pump Schedule diverting with N2 as required.
   - Max pressure for job will be 925 psi
   - Discuss with WOE for operational pressure limits during job.
   - Diversion will be treated with 1,250 scf/bbl of N2
5. Once acid is complete R/D Petroplex and Gladiator
6. Secure and shut in well.

ATTACHMENT 6

Item X

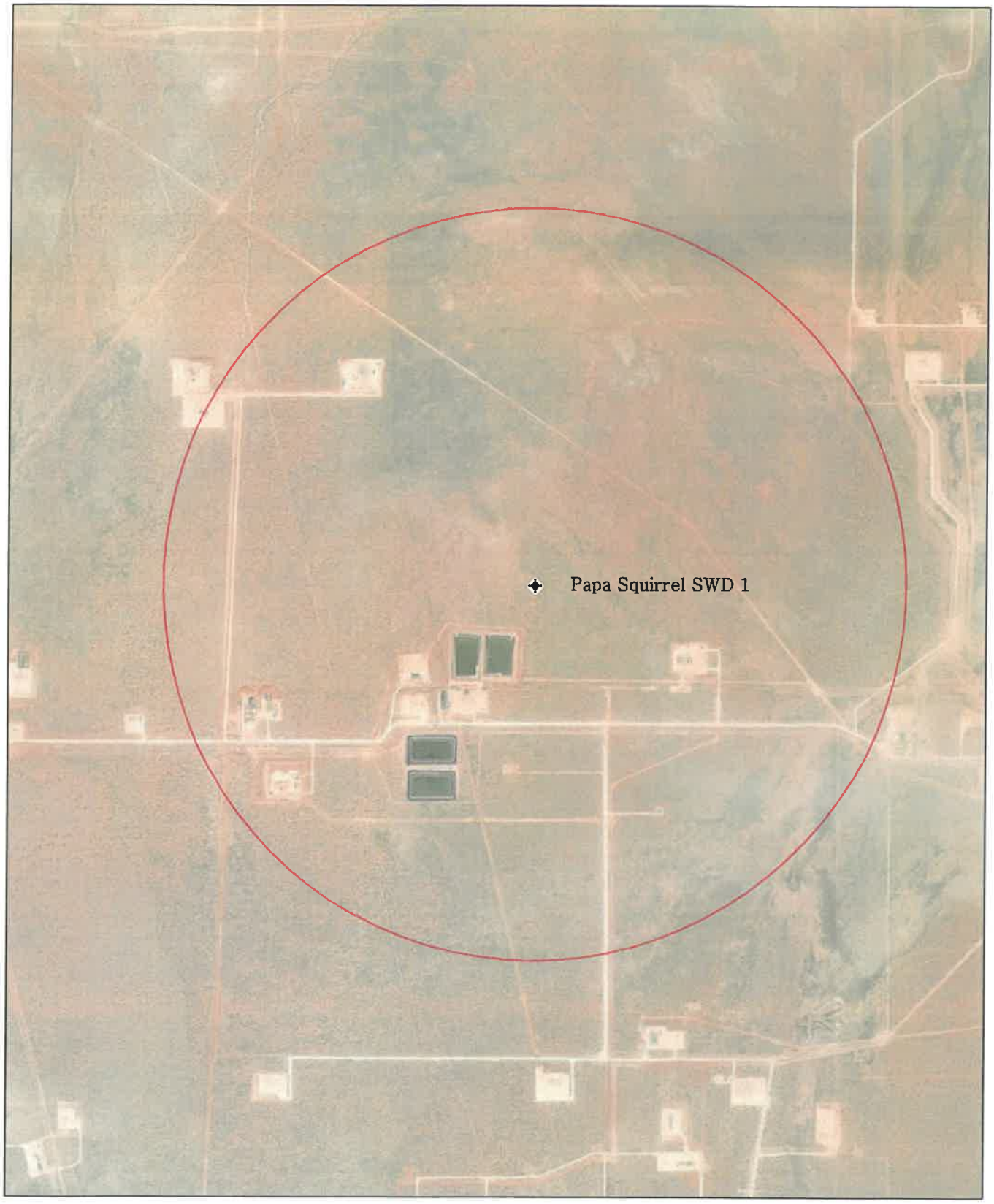
No logs have been run on the Papa Squirrel SWD 1. This is a planned well.

The following open hole logs are planned to be run if hole conditions allow: gamma-ray, resistivity, neutron-density, sonic, and image logs.

Production casing will be installed from surface to near the base of the Brushy Canyon Formation. A total of approximately six Diagnostic Fracture Injection Tests (DFITs) are planned for the Bell Canyon, Cherry Canyon and Brushy Canyon Formations. After the DFITs are run, the Brushy Canyon will be plugged. The Cherry Canyon and Bell Canyon will be perforated to the base of the Lamar Limestone. A step rate test will be run on the Bell Canyon and Cherry Canyon Formation permitted injection interval.

ATTACHMENT 7

Item XI



No fresh water wells within one mile of the Papa Squirrel SWD 1.

ATTACHMENT 8

Item XII

George T. (Tom) Merrifield, Jr., PG
SWD DRP Geologist
Chevron U.S.A. Inc.
6301 Deauville Blvd
Midland, TX 79706
Phone +1 661-448-7489
tommerrifield@chevron.com

April 10, 2023

Dylan Fuge, Acting Director
Oil Conservation Division
1220 South St. Francis Dr.
Sante Fe, New Mexico 87505

Re: Affirmation Statement C-108 Applications
Papa Squirrel SWD 1 and Severitas 2 State SWD 1

Dear Mr. Fuge:

With the increase of induced seismicity due to deep produced water injection, in 2021 Chevron decided to evaluate the potential for shallow injection in both Texas and New Mexico with exhaustive manpower and technical effort.

This effort led to the following technical evaluations of the DMG: (1) the location of high confident shallow faults in our active development areas using available seismic reflection data (2) assessment of seismic risk of any such shallow faults, (3) other geologic and reservoir engineering assessments addressing storage capabilities, potential impacts, and mitigation, and (4) collaboration and joint efforts with other operators.

Both the Papa Squirrel SWD 1 and Severitas 2 State SWD 1 are locations which we find no indication of open faults at the surface or in the subsurface and no indication of hydraulic connection between the proposed injection zone (Bell Canyon and Cherry Canyon) and an underground source of drinking water (USDW). Both locations have low potential for fault slip and induced seismicity.

Respectively yours,

G. T. Merrifield, Jr., PG
TX (#10838) and CA (#9274)

ATTACHMENT 9

Item XIII

Notice to Surface Owners, Leasehold Operators, and Affected Persons within ½ Mi Radius

Surface Owner:

United States of America (Bureau of Land Management)	Section 13: N/2, SW/4, W/2 of SE/4 and SE/4 of SE/4
	Section 14: All
	Section 15: All
	Section 23: All

Note: All part of T-26-S, R-33-E, NMPM, Lea County, NM

Leasehold Operator within ½ radius:

Operator	Well Name	API
Chevron U.S.A. Inc.	SD WE 24 FEDERAL P23 001H	30-025-43318
	SD WE 24 FEDERAL P23 002H	30-025-43296
	SD WE 24 FEDERAL P23 003H	30-025-43297
	SD WE 24 FEDERAL P23 004H	30-025-43298
	SD WE 14 FEDERAL P7 003H	30-025-43086
	SD WE 14 FEDERAL P7 004H	30-025-43087
	SD WE 23 FEDERAL P7 003H	30-025-43088
	SD WE 23 FEDERAL P7 004H	30-025-43089
	SD WE 24 FEDERAL P24 005H	30-025-43674
	SD WE 24 FEDERAL P24 006H	30-025-43673
	SD WE 24 FEDERAL P24 007H	30-025-43675
	SD 24 13 FEDERAL P415 013H	30-025-49072
	SD 24 13 FEDERAL P415 014H	30-025-49073
	SD 24 13 FEDERAL P415 015H	30-025-49074
	SD 24 13 FEDERAL P416 017H	30-025-47303
	SD 24 13 FEDERAL P416 018H	30-025-47311
	SD 24 13 FEDERAL P416 019H	30-025-47312
NGL Water Solutions Permian LLC	SALADO DRAW SWD 13-1	30-025-42354

Working Interest Owners within ½ mile radius:

Lease	Lands	Depths	WI Owner (%)	WI (%)
NMNM 118722	Section 13: N/2, SW/4, W/2 of SE/4 and SE/4 of SE/4 Section 14: All Section 15: All Section 23: All Section 24: N/2, N/2 of S/2, S/2 of SW/4	All	Chevron U.S.A. Inc.	100.000000%
SD WE P24 5H Comm Agreement (Pending Approval)	Section 13: W/2 of E/2 Section 24: W/2 of E/2	Bone Spring	Chevron U.S.A. Inc.	100.000000%
SD 24 13 Fed P416 Comm Agreement (Pending Approval)	Section 13: E/2 Section 24: E/2	Wolfcamp	Chevron U.S.A. Inc.	99.453125%
			Royalty Clearinghouse 2003 LLC	0.078125%
			Atlas OBO Energy LP	0.468750%

Note: All part of T-26-S, R-33-E, NMPM, Lea County, NM

Mineral Interest Owner within ½ mile radius:

Lease	Lands	Depths	Federal /State Mineral Interest (MI) Owner	MI (%)
NMNM 118722	Section 13: N/2, SW/4, W/2 of SE/4 and SE/4 of SE/4 Section 14: All Section 15: All Section 23: All Section 24: N/2, N/2 of S/2, S/2 of SW/4	All	United States of America	100.000000%
SD WE P24 5H Comm Agreement (Pending Approval)	Section 13: W/2 of E/2 Section 24: W/2 of E/2	Bone Spring	United States of America	100.000000%
SD 24 13 Fed P416 Comm Agreement (Pending Approval)	Section 13: E/2 Section 24: E/2	Wolfcamp	United States of America	100.000000%

Note: All part of T-26-S, R-33-E, NMPM, Lea County, NM

Tab B: Application Case No. 23687 (includes C-108)

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

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN EDDY COUNTY, NEW MEXICO.

CASE NO. 23687

APPLICATION

Chevron USA Inc. ("Chevron"), OGRID No. 4323, through its undersigned attorneys, hereby applies to the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12, for an order approving drilling of a salt water disposal well in Eddy County, New Mexico. In support of this application, Chevron states as follows:

(1) Chevron proposes to drill the Severitas 2 State SWD #1 well at a surface location 185' from the North line and 1,082' from the East line, Unit A, Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well.

(2) Chevron seeks authority to inject into the Bell Canyon/Cherry Canyon/Brushy Canyon from 2,343' to 6,012'.

(3) The tubing packer will be set at 2,243'and production casing and cement will be set at 5,500'.

(4) Chevron requests that the Division approve a maximum daily injection rate for the well of 15,000 BWPD.

(5) Chevron requests that a maximum pressure of 468 psi be approved for the well.

(6) A proposed C-108 for the subject well is attached hereto in Attachment A.

(7) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, Chevron requests that this application be set for hearing before an Examiner of the Oil Conservation Division on August 3, 2023; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

By: Deana M. Bennett

Deana Bennett
Earl E. DeBrine, JR.
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. 23687**: Application of Chevron USA Inc. for approval of salt water disposal well in Eddy County, New Mexico.** Applicant seeks an order approving the Severitas 2 State SWD #1 well at a surface location 185' from the North line and 1,082' from the East line, Unit A, Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 2343 feet to 6012 feet. The tubing packer will be set at 2243 feet, and production casing and cement will be set at 5500 feet. The maximum anticipated injection rate will be 15,000 bwpd and maximum surface injection pressure will be 468 psi. Said location is approximately 13 miles southwest of Malaga, New Mexico.

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? __X__ Yes _____ No

II. OPERATOR: Chevron USA Inc.

ADDRESS: 6301 Deauville Blvd, Midland, TX 79706

CONTACT PARTY: Tom Merrifield PHONE: 661-448-7489

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. **ATTACHMENT 1**

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. **ATTACHMENT 2**

VII. Attach data on the proposed operation, including: **ATTACHMENT 3**

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. 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. **ATTACHMENT 4**

IX. Describe the proposed stimulation program, if any. **ATTACHMENT 5**

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **ATTACHMENT 6**

*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. **ATTACHMENT 7**

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. **ATTACHMENT 8**

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **ATTACHMENT 9**

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: _____ TITLE: _____

SIGNATURE: _____ DATE: _____

E-MAIL ADDRESS: _____

XV. 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 su[illegible]

DISTRIBUTION: Original and one copy to Santa Fe with one [illegible] ct Office

EXHIBIT A
Hobbs

Side 2

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	96100	SWD; DELAWARE

[4] Property Code	[5] Property Name	[6] Well Number
	SEVERITAS 2 STATE SWD	001

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3172'

[10] Surface Location

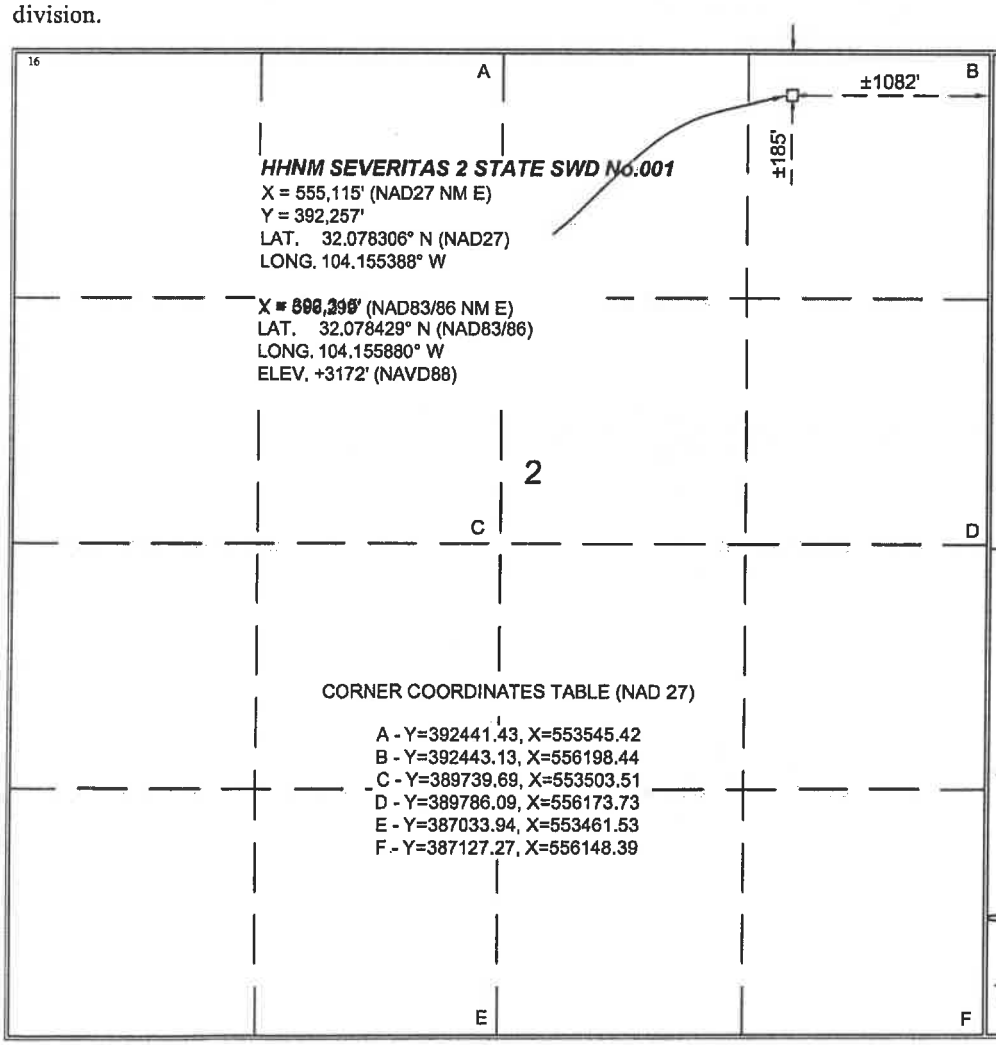
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	26 SOUTH	27 EAST, N.M.P.M.		185'	NORTH	1082'	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	26 SOUTH	27 EAST, N.M.P.M.		185'	NORTH	1082'	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

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.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

E-mail Address

[18] SURVEYOR CERTIFICATION

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.

04/27/2022
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT L. LASTRAPES
NEW MEXICO
23006
05/02/2022
PROFESSIONAL SURVEYOR

Certificate Number

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Inc.

WELL NAME & NUMBER: Severitas 2 State SWD 1

WELL LOCATION: 185' from North, 1082' from East, A 2, 26 South, 27 East, N.M.P.M.

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See next page

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 253 sx. *or* 337 ft³

Top of Cement: Surface Method Determined: Volumetric

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 10-3/4"

Cemented with: _____ sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Volumetric

Production Casing

Hole Size: 9-7/8" Casing Size: 7-5/8"

Cemented with: 377 sx. *or* 901 ft³

Top of Cement: Surface Method Determined: Volumetric

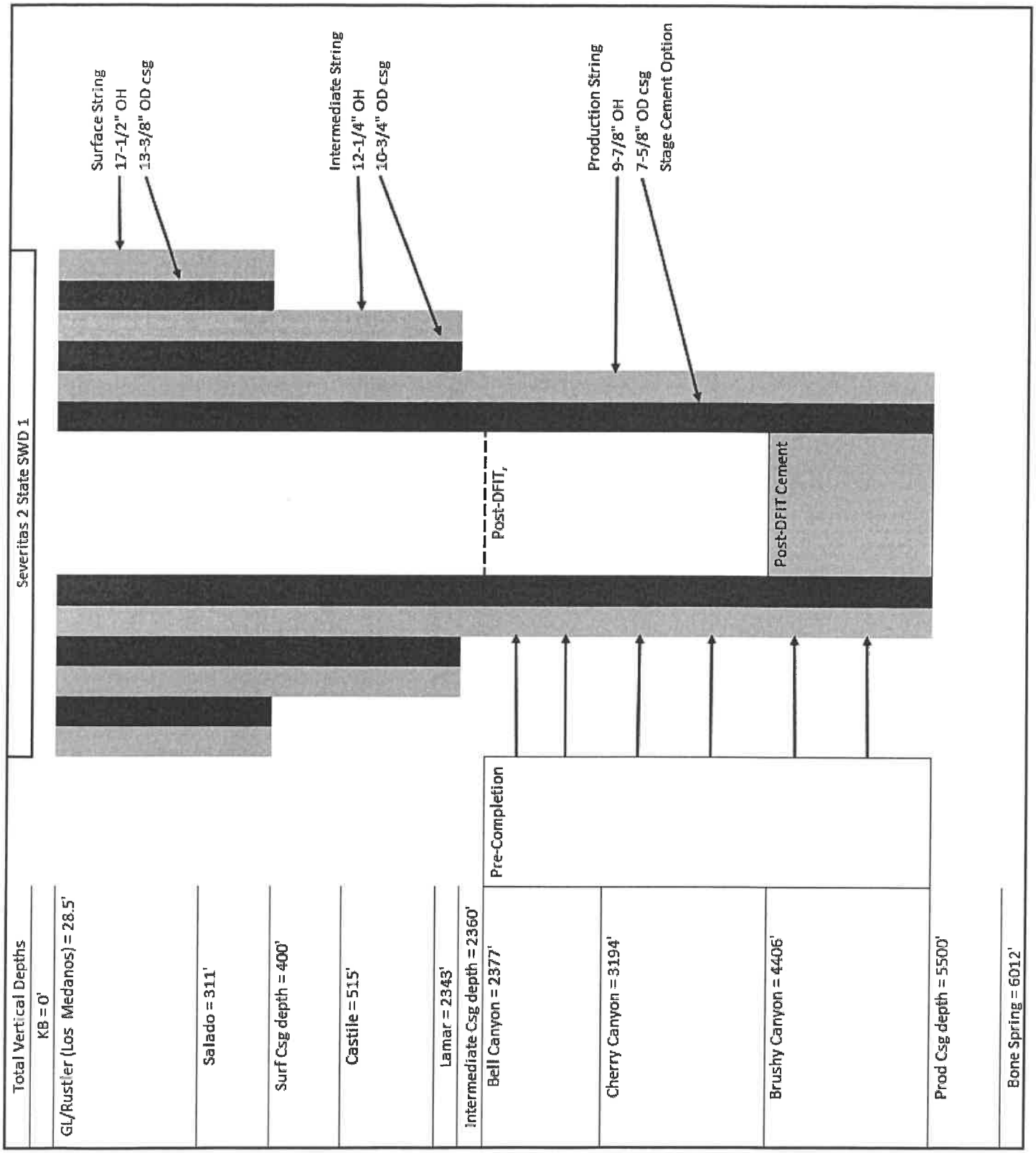
Total Depth: 5500'

Injection Interval

2343 feet to 6012' *

(Perforated or Open Hole; indicate which)

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.


Severitas 2 State SWD 1
Surface String
17-1/2" OH
13-3/8" OD csg
Intermediate String
12-1/4" OH
10-3/4" OD csg
Production String
9-7/8" OH
7-5/8" OD csg
Stage Cement Option
Post-DFIT,
Post-DFIT Cement
Pre-Completion
Total Vertical Depths
KB = 0'
GL/Rustler (Los Medanos) = 28.5'
Salado = 311'
Surf Csg depth = 400'
Castile = 515'
Lamar = 2343'
Intermediate Csg depth = 2360'
Bell Canyon = 2377'
Cherry Canyon = 3194'
Brushy Canyon = 4406'
Prod Csg depth = 5500'
Bone Spring = 6012'

INJECTION WELL DATA SHEET

Tubing Size: 5-1/2" Lining Material: _____

Type of Packer: Hydraulically set packer

Packer Setting Depth: 2243'

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

Additional Data

1. Is this a new well drilled for injection? X Yes _____ No

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

2. Name of the Injection Formation: Bell Canyon, Cherry Canyon, and Brushy Canyon *

3. Name of Field or Pool (if applicable): SWD; Delaware

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

   No, this is a proposed new SWD well.

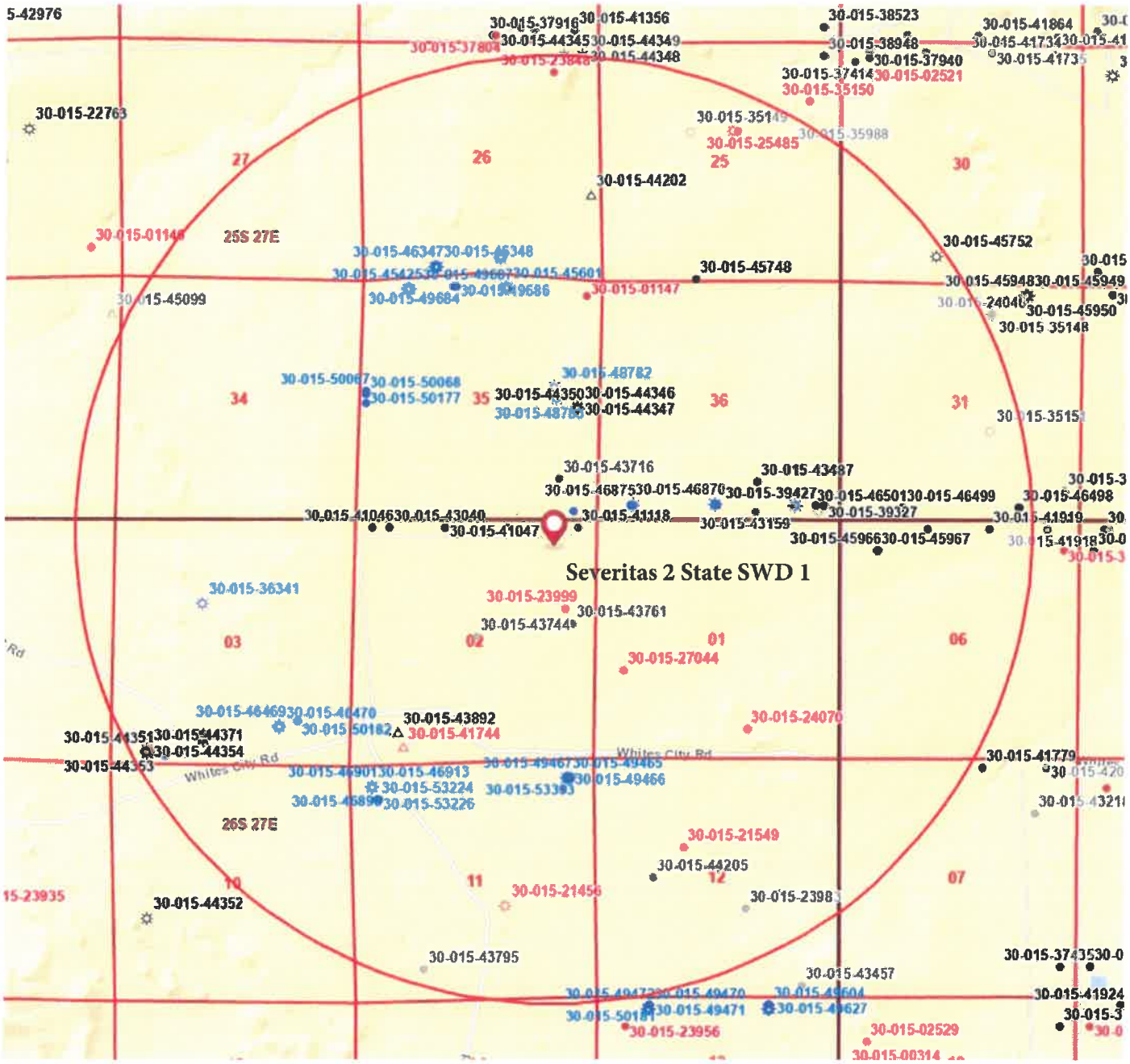
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Depths are within a 3 mile area.

   Atoka (11,643-11,794), Bone Spring (5840-18,860), Morrow (11,966-12,697), Pennsylvanian (11,154-12,522), and Strawn (11,694-11,719), and Wolfcamp (9299-21,655)

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.

ATTACHMENT 1

Item V

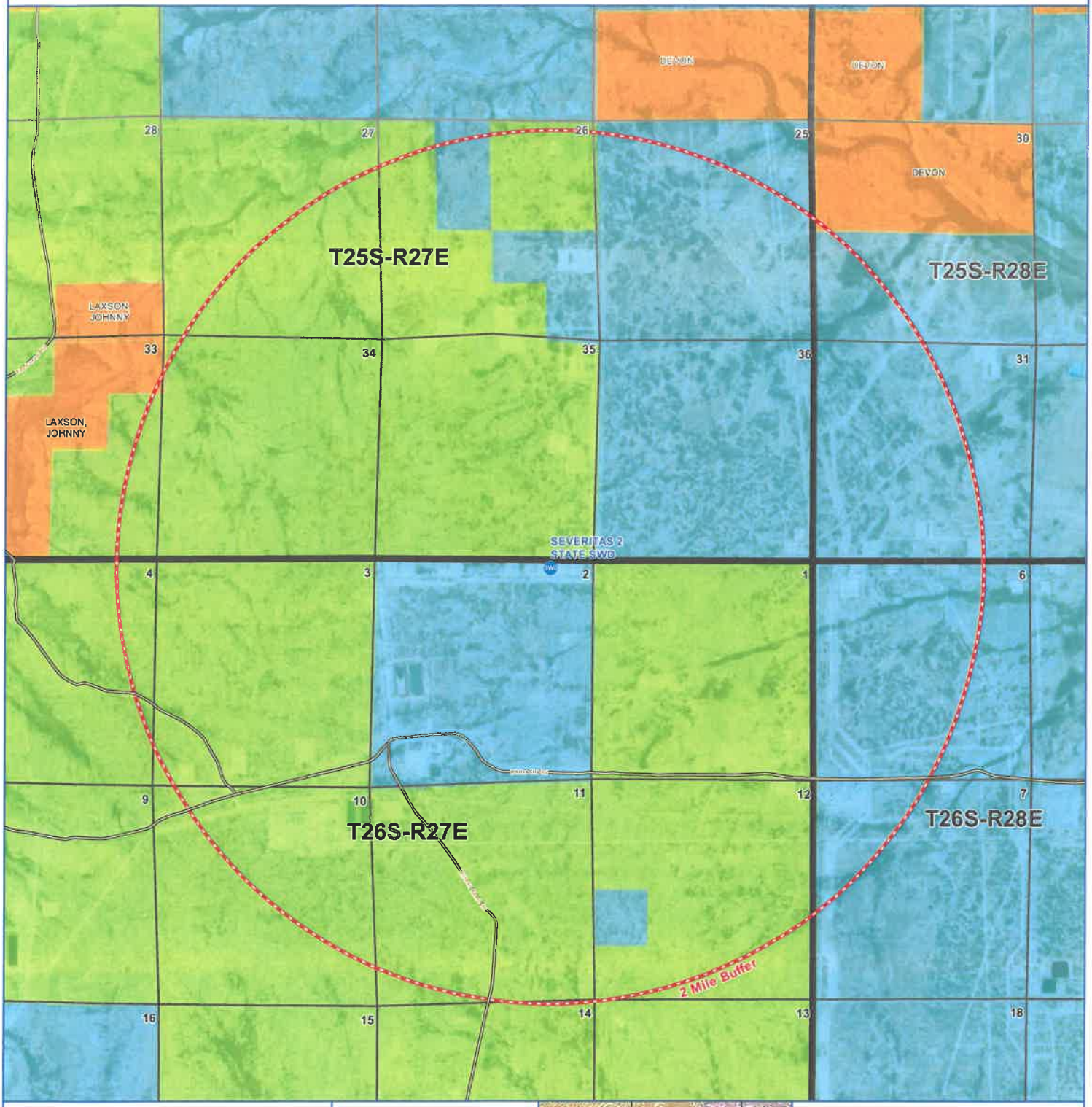


Severitas 2 State SWD 1: 2.0 mile radius circle map showing all wells within the radius.

SURFACE OWNERSHIP MAP

SEVERITAS 2 STATE SWD

Section 2, Township 26 South, Range 27 East, Eddy County, New Mexico



Miles
0.2 0.1 0 0.2 0.4 0.6 0.8
Feet
1,000 500 0 1,000 2,000 3,000 4,000

Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

TGS TRANSFORM
PO BOX 1001, Fort Worth, Texas 76101

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal
- State
- Private

Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US

N W E S

SEVERITAS 2 STATE SWD

SHL Location & Penetration Point:
185' FNL & 1082' FEL
Section 2, Township 26 South,
Range 27 East of P.M.
Eddy County, New Mexico

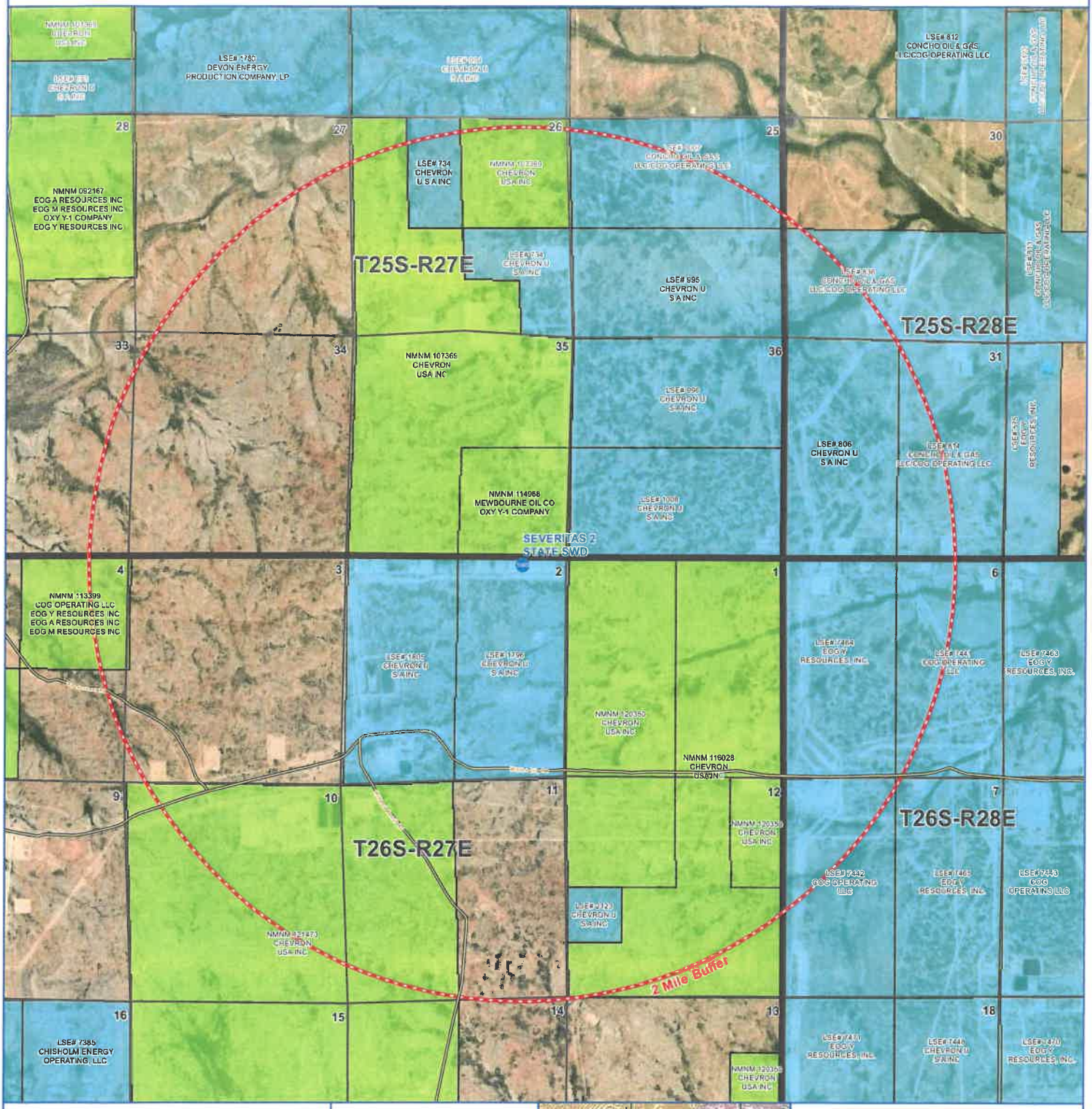
OPERATOR:
CHEVRON U.S.A. INC.

Chevron

FEDERAL & STATE LEASES MAP

SEVERITAS 2 STATE SWD

Section 2, Township 26 South, Range 27 East, Eddy County, New Mexico



Miles
0.2 0.1 0 0.2 0.4 0.6 0.8
Feet
1,000 500 0 1,000 2,000 3,000 4,000

Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

TGS TRANSFORM
PO BOX 1001, Fort Worth,Texas 76101

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal Lease
- State Lease

Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US

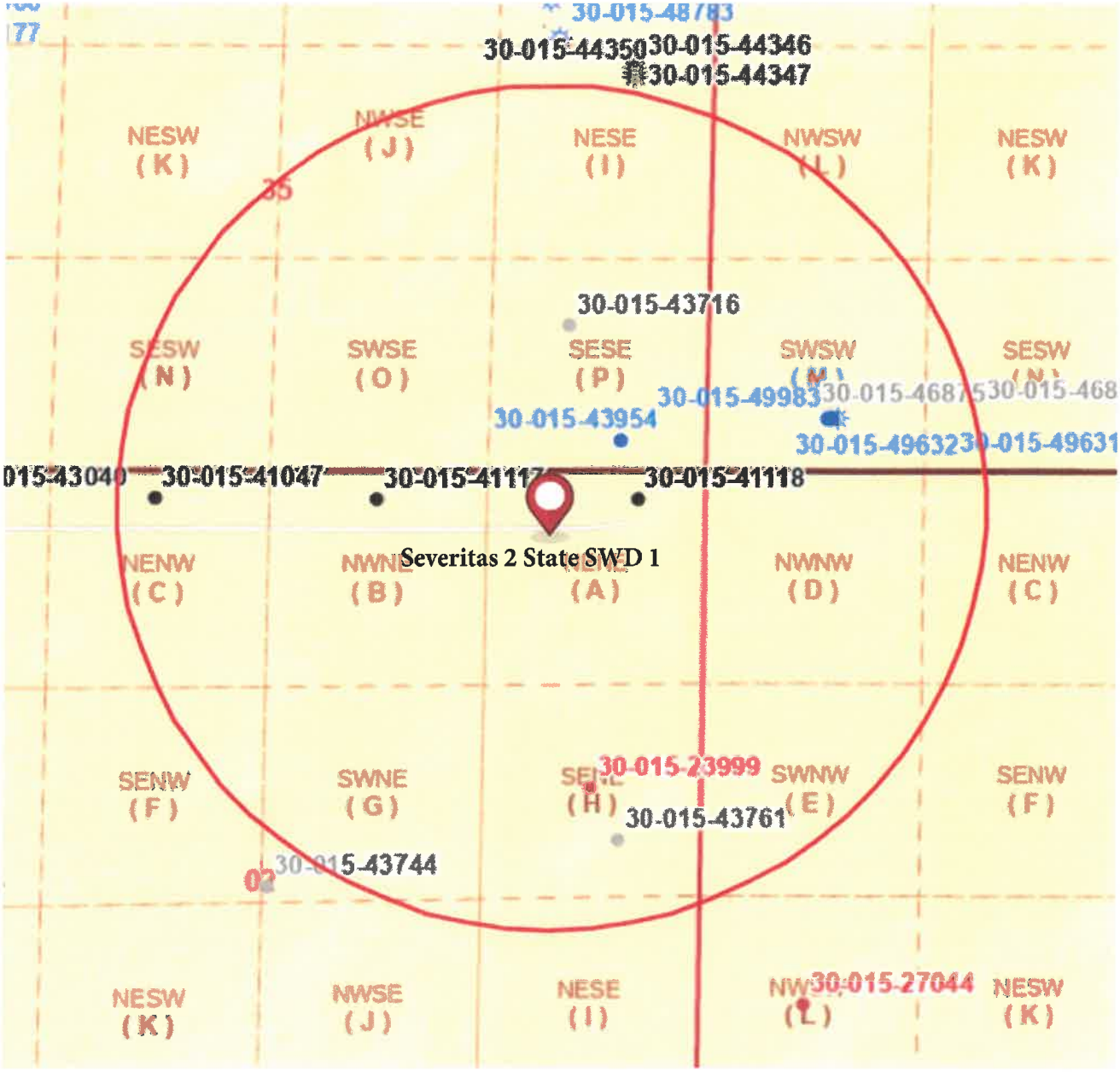
N W E S

SEVERITAS 2 STATE SWD

SHL Location & Penetration Point:
185' FNL & 1082' FEL
Section 2, Township 26 South,
Range 27 East of P.M.
Eddy County, New Mexico

OPERATOR:
CHEVRON U.S.A. INC.

Chevron



Severitas 2 State SWD 1: 0.5 mile radius circle map showing wells in Area of Review (AOR).

ATTACHMENT 2

Item VI

	Section	Township	Range	Latitude 83	Longitude 83	Measured Depth	Vertical Depth	Associated Pools	Plug Date	Miles from SWD
LC	36	25S	27E	32.0798	-104.1499	0	0	[98220] PURPLE SAGE, WOLFCAMP (GAS)		0.3
IC	2	26S	27E	32.0785	-104.1632	12,619	7,792	[16800] DELAWARE RIVER, BONE SPRING		0.4
IC	2	26S	27E	32.0785	-104.1588	12,556	7,768	[16800] DELAWARE RIVER, BONE SPRING		0.2
RGY	14	25S	26E	32.0814	-104.155	0	0	[97494] COTTONWOOD DRAW, BONE SPRING (O)		0.2
VELL	2	26S	27E	32.0735	-104.1546	0	0	[16800] DELAWARE RIVER, BONE SPRING	5/15/1987	0.3
	35	25S	27E	32.0795	-104.154	0	0	[16800] DELAWARE RIVER, BONE SPRING		0.2
RGY	24	25S	26E	32.0726	-104.154	0	0	[97494] COTTONWOOD DRAW, BONE SPRING (O)		0.4
ING	2	26S	27E	32.0785	-104.1537	12,759	7,789	[16800] DELAWARE RIVER, BONE SPRING		0.1
G LLC	36	25S	27E	32.0798	-104.1498	0	0	[98220] PURPLE SAGE, WOLFCAMP (GAS)		0.3
G LLC	36	25S	27E	32.0798	-104.1499	0	0	[98220] PURPLE SAGE, WOLFCAMP (GAS)		0.3
G LLC	36	25S	27E	32.0798	-104.1499	0	0	[16800] DELAWARE RIVER, BONE SPRING; [30216] HAY HOLLOW, BONE SPRING, NORTH		0.3

Data tabulation of wells in Area of Review of the Severitas 2 State SWD 1.

WAYNE MOORE
403 N. MARIENFELD
MIDLAND, TEXAS 79701

April 18, 1983

Mr. Leslie A. Clements
Supervisor District II
Energy and Mineral Department
P.O. Drawer DD
Artesia, New Mexico 88210

WAYNE MOORE - AZTEC STATE #1, SEC 2-T26S-R27E, LEASE #L-6791,
EDDY COUNTY, NEW MEXICO

Mr. Clements,

This is in reference to your letter of April 11, 1983, concerning the above listed lease.

The well was perforated in the Bone Springs Section (perfs. 6125-6727, 37 perforations) and put on pump for testing. Down hole and surface equipment problems plagued the operation as testing continued, thus the testing took much longer than anticipated.

The well, although operating at a small profit, is not sufficiently productive so as to warrent the drilling of additional Bone Springs wells on this lease. With that in mind a completion in the Delaware Section is now in the final planning stage.

(See attached letter). We plan to:

A. Set a cast iron bridge plug at the top of the Bone Springs.

B. Spot 50' of cement on top of this bridge plug.

C. Perforate below the zones of interest and circulate cement 200' into the 8-5/8" casing set at 2330'.

D. Perforate and test zones of interest in the Delaware Section.

WAYNE MOORE
403 N. MARIENFELD
MIDLAND, TEXAS 79701

Mr. Clements, sorry for the delay in reporting, but we've until recently, been at a loss as to what to do with the well. We will file reports as this work progresses. Please let me know if you require additional information.

Thank you for your help with this problem.

Sincerely,

Tom E. Moore

TEM/mp

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED
MAY 31 1983
O. C. D.
ARTESIA, OFFICE

Form C-101
Revised 10-1-78

5a. Indicate Type of Lease: State [X] Fee [ ]
5. State Oil & Gas Lease No.: L-6791

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name: -

2. Name of Operator: Wayne Moore

8. Farm or Lease Name: Aztec State

3. Address of Operator: 403 N. Marienfeld, Midland

9. Well No.: #1

4. Location of Well: UNIT LETTER H 1980 FEET FROM THE N LINE AND 660 FEET FROM

10. Field and Pool, or Wildcat: Wildcat-Bone Spring

THE E LINE, SECTION 2 TOWNSHIP 26S RANGE 27E NMPM

15. Elevation (Show whether DF, RT, GR, etc.): 3174' GR

12. County: Eddy

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[X]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]			COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
PULL OR ALTER CASING	[ ]	CHANGE PLANS	[ ]	CASING TEST AND CEMENT JOB	[ ]		
OTHER	[ ]			OTHER			

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work, SEE RULE 1103.

A. Set cast iron bridge plug at 5700' (top of Bone Springs) and spot cement from 5645' to 5700'. (4-27-83)
B. Perforate two holes at 4890. (4-27-83)
C. Pump 1300 sacks class "C" cement, 2% Gel, 5 lbs Salt/sk, .3cfe2, ¼ lb cello flake, wt. 13.7 yld = 1.38 (4-28-83)
D. Ran temperature survey - top of cement 700' from surface.
E. Perforate 4752 - 4798 with 13 holes. (5-12-83)
F. Acidize and Frac (5-15-83)
G. Swab test with oil & gas show (5-17-83)
H. Put on pump for additional testing (5-25-83)

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE - DATE 5

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

DISTRIBUTION		
SANTA FE	✓	✓
FILE	✓	✓
U.S.G.S.		
LAND OFFICE		
OPERATOR	✓	

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DEC 03 1984
O. C. D.
ARTESIA, OFFICE

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [X] Fee [ ]
5. State Oil & Gas Lease No.: L-6791

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL [X] GAS WELL [ ] OTHER- 30-015-23999

7. Unit Agreement Name:

Name of Operator: WAYNE MOORE ✓
8. Farm or Lease Name: Aztec State

Address of Operator: 403 N. Marienfeld, Midland, Texas 79701
9. Well No.: #1

Location of Well: UNIT LETTER H, 1980 FEET FROM THE N LINE AND 660 FEET FROM THE E LINE, SECTION 2, TOWNSHIP 26S, RANGE 27E, NMPM.
10. Field and Pool, or Wildcat: Wildcat-Bone Springs

15. Elevation (Show whether DF, RT, GR, etc.): 3174' GL
12. County: Eddy

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[ ]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[ ]
PULL OR ALTER CASING	[ ]		
OTHER	[ ]		

SUBSEQUENT REPORT OF:

REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[X]
CASING TEST AND CEMENT JOB	[ ]		
OTHER	[ ]		

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Oct. 2, 1984

Spot 25SX Plug @ 4750'

Oct 3, 1984
TAG Plug - Plug in Place
Set Bridge Plug at 2370'
Spot 50 Sx Plug on Top of Bridge Plug
Spot 25 Sx Plug @ 750'
Spot 50 Sx Plug @ 400'
Spot Plug 30' to Surface

Oct 4, 1984
Put up Regulation Surface Marker

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE Partner DATE November 5, 1984

APPROVED BY Daniel Manzanares TITLE Geologist DATE May 22, 1987

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED BY
MAR 12 1984
O. C. D.
ARTESIA, OFFICE

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

NO. OF COPIES RECEIVED	
DISTRIBUTION	✓
SANTA FE	✓
FILE	✓ ✓
U.S.G.S.	
LAND OFFICE	✓
OPERATOR	✓

5a. Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.: L-6791

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL [X] GAS WELL [ ] OTHER: DRY HOLE

7. Unit Agreement Name:

2. Name of Operator: WAYNE MOORE ✓

8. Farm or Lease Name: AZTEC STATE

3. Address of Operator: 403 N Marienfeld Midland Texas 79701

9. Well No.: #1

4. Location of Well: UNIT LETTER H, 1980 FEET FROM THE N LINE AND 660' FEET FROM THE E LINE, SECTION 2 TOWNSHIP 26S RANGE 27E NMPM.

10. Field and Pool, or Wildcat: WILDCAT-Rio Springs

15. Elevation (Show whether DF, RT, GR, etc.): 3174' GL

12. County: EDDY

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [✓]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

A. Set Bridge Plug @ ~~2320~~ 2370' in 4 1/2" Casing
B. Spot 50' cement plug on top of Bridge Plug
C. Spot 50' cement plug at ~~354~~ 400' in 4 1/2" casing
D. Run 1 joint and spot plug to surface in 4 1/2" casing
E. Put up regulation marker at surface

WELL HISTORY 13 3/8" set at 354' - cement cir.
8 5/8" set at 2320' - cement cir.
4 1/2" set at 6333' cement to 700'

Perf. 6125 - 6478
BP at 5700' 50' cement on top BP
Perf 4752' - 4798'
Perf 2840' - 2920'
Perf 2694 - 2712'

* ADDITIONAL PLUGS
SPOT 25 SX @ 4750' & TAG
SPOT 25 SX @ 750' - (Top Cmt)
NOTIFY OCD 24 hrs Prior
To Setting 1st plug.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE PARTNER DATE 3-8-84

APPROVED BY Original Signed By Leslie A. Clements Supervisor District II

AUG 21 1984

OCD Examiner Hearing - Nov. 8-9, 2023
No. 23686, 23687
60

NEW MEXICO OIL CONSERVATION COMMISSION
P. O. DRAWER DD
ARTESIA, NEW MEXICO 88210

DATE 1-22-85

Wayne Moore
403 N Marienfield
Midland, Tx. 79701

Gentlemen:

Re: Plugging Reports

Form C-103, Report of Plugging for your Aztec St. 1 H 2-26-27
Lease Well # Unit S-T-R

cannot be approved until a Division representative has made an inspection of the location and found it to be cleared to comply with Division Rules and Regulations. Please check each item in the space provided to indicate that the work has been done.

( ) 1. All pits have been filled and leveled.

( ) 2. Rat hole and cellar have been filled and leveled.

( ) 3. A steel marker 4" in diameter and approximately 4' above mean ground level has been set in concrete. It must show the quarter-quarter section or unit designation, section, township and range numbers which have been permanently stenciled or welded on the marker.

( ) 4. The location has been leveled as nearly as possible to original top ground contour and has been cleared of all junk and equipment.

( ) 5. The dead men and tie downs have been cut and removed.

( ) 6. If a one well lease or last remaining well on lease, the battery and burn pit locations have been leveled and cleared of all junk and equipment.

The above are minimum requirements and no plugging bond will be cancelled until all locations for plugged and abandoned wells have been inspected and Form C-103 approved.

When all of the work outlined above has been done, please notify this office by filling in the blank form below and returning this letter to us so that our representative will not have to make more than one trip to the location.

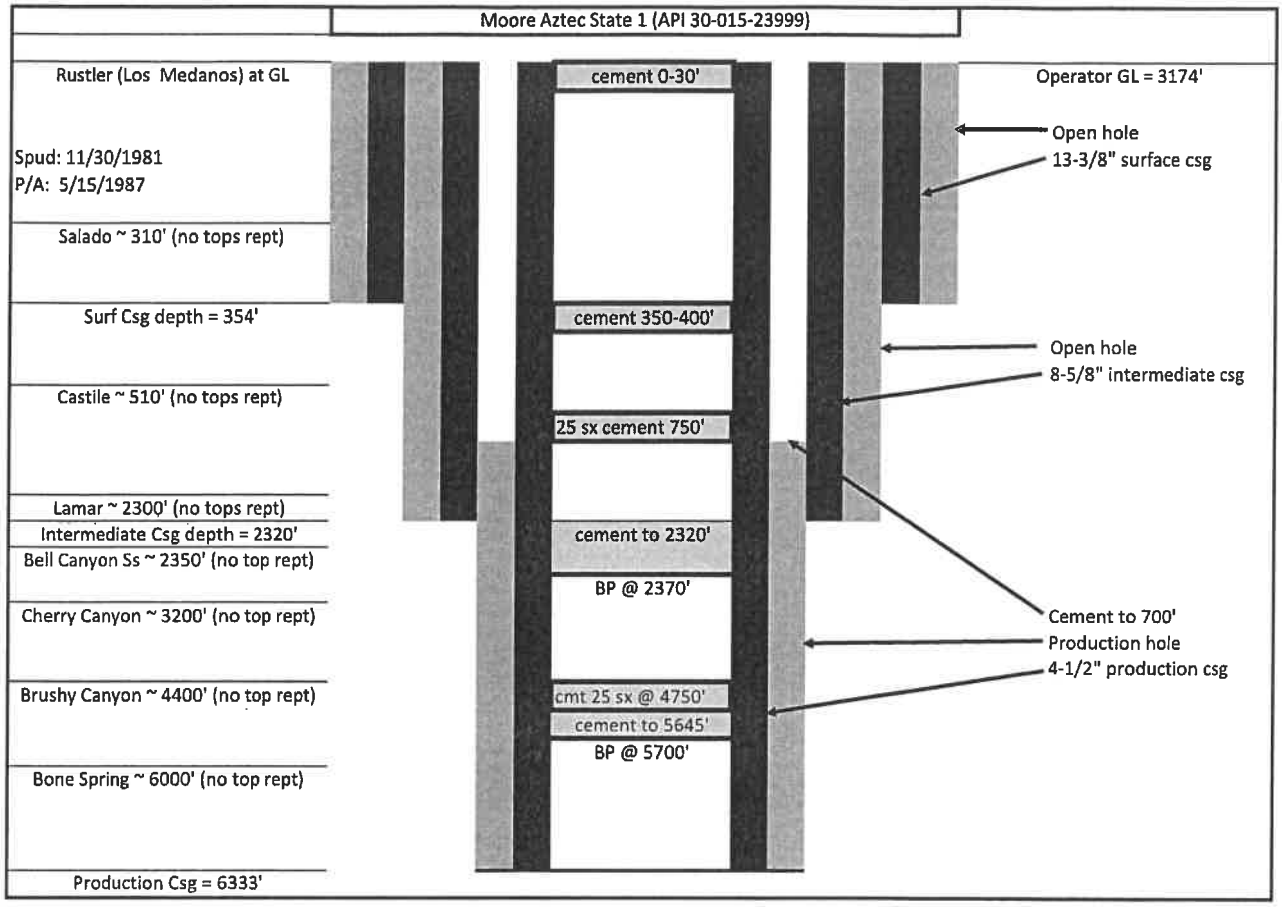
OIL CONSERVATION DIVISION

Larry Brooks
DISTRICT GEOLOGIST

FILL IN BELOW AND RETURN

I certify that the above work has been done and the _____ is ready for your inspection and approval.
Lease

Unit Ltr. Sec. Twp. Rge.



Schematic of plugging detail of Moore Aztec State 1 (API 30-015-23999).

ATTACHMENT 3

Item VII

Item	Well 5.5" tubing	Severitas 2 State SWD #1
1)	Permit Max Rate (bwpd)	15,000
1)	Permit Avg Daily Rate	12,500
2)	System	closed
3)	Permit Max Pressure (psig)	468
3)	Permit Avg Pressure (psig)	400

Item	Water Requirements	
4)	Reinjected produced water	source WQ of injectate and receiving formation is not required per application
5)	Disposal Zone Water	for non-productive in 1 mile
	Chicken Hawk State 1 (API 3001533682)	
	Results on next page	

WATER SAMPLES REPRESENTATIVE OF WATER BEING INJECTED INTO THE PROPOSED SWD WELL

Bone Spring												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2011128832	Craig St. Com	1H	William D Polk	9/30/2011	9/21/2011	1.13	3.15	194940.50	6.80		2390.00	664.00

Delaware												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2011128361	Chicken Hawk State	1	William D Polk	9/28/2011	9/13/2011	1.12	3.17	189454.89	6.90		4133.30	725.18

Water Sample Representative of Receiving Formation Water

TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
9171.56	55296.00	815.00		0.32	2.00	403.00	0.18		1220.00	0.00		150.00	134000.00	540.00	0.00
TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
13854.58	69462.63	1056.00	37.48	2.25	0.00	468.07	0.00		1220.00	0.00		950.00	111400.00	500.00	17.00

ATTACHMENT 4

Item VIII

Formation/Geologic Feature Tops & Datum	Lithology	TVD (from Datum)	Z (SSTVD)
KB (Kelly Bushing)	Datum	0.0	3200.5
GL (ground surface)	Ground Surface	28.5	3172.0
01 - Rustler (Los Medanos at surface)	Mudstone, Salt & Anhydrite	28.5	3172.0
02 - Salado	Gypsum & Anhydrite	310.5	2890.0
03 - Castile	Anhydrite & Salt	514.8	2685.7
04 - Lamar	Carbonate	2343.3	857.2
05 - Bell Canyon	Sandstone	2376.9	823.6
06 - Cherry Canyon	Sandstone, Siltstone & Carbonate	3193.6	6.9
07 - Brushy Canyon	Sandstone, Mudstone & Carbonate	4405.8	-1205.3
08 - Bone Spring	Carbonate	6011.7	-2811.2

Geologic prognosis tops of all formations to be encountered in the Severitas 2 State SWD 1.

ATTACHMENT 5

Item IX

Proposed acid stimulation as part of the completion for the Severitas 2 State SWD 1.

1. MI/RU Petroplex Acid and Gladiator N2 Unit
2. Perform pressure pumping checklist and record in wellview.
3. Rig up Petroplex acid lines and tie in to 4-1/16" wing valve on tree. Test all lines against wing valve to 2,100 psi for 5 min
   - Install tee in Petroplex lines to allow N2 line to be rigged up. Test all N2 lines against wing valve to 2,100 psi for 5 min
4. Pump Acid job per Petroplex Pump Schedule diverting with N2 as required.
   - Max pressure for job will be 468 psi
   - Discuss with WOE for operational pressure limits during job.
   - Diversion will be treated with 1,250 scf/bbl of N2
5. Once acid is complete R/D Petroplex and Gladiator
6. Secure and shut in well.

ATTACHMENT 6

Item X

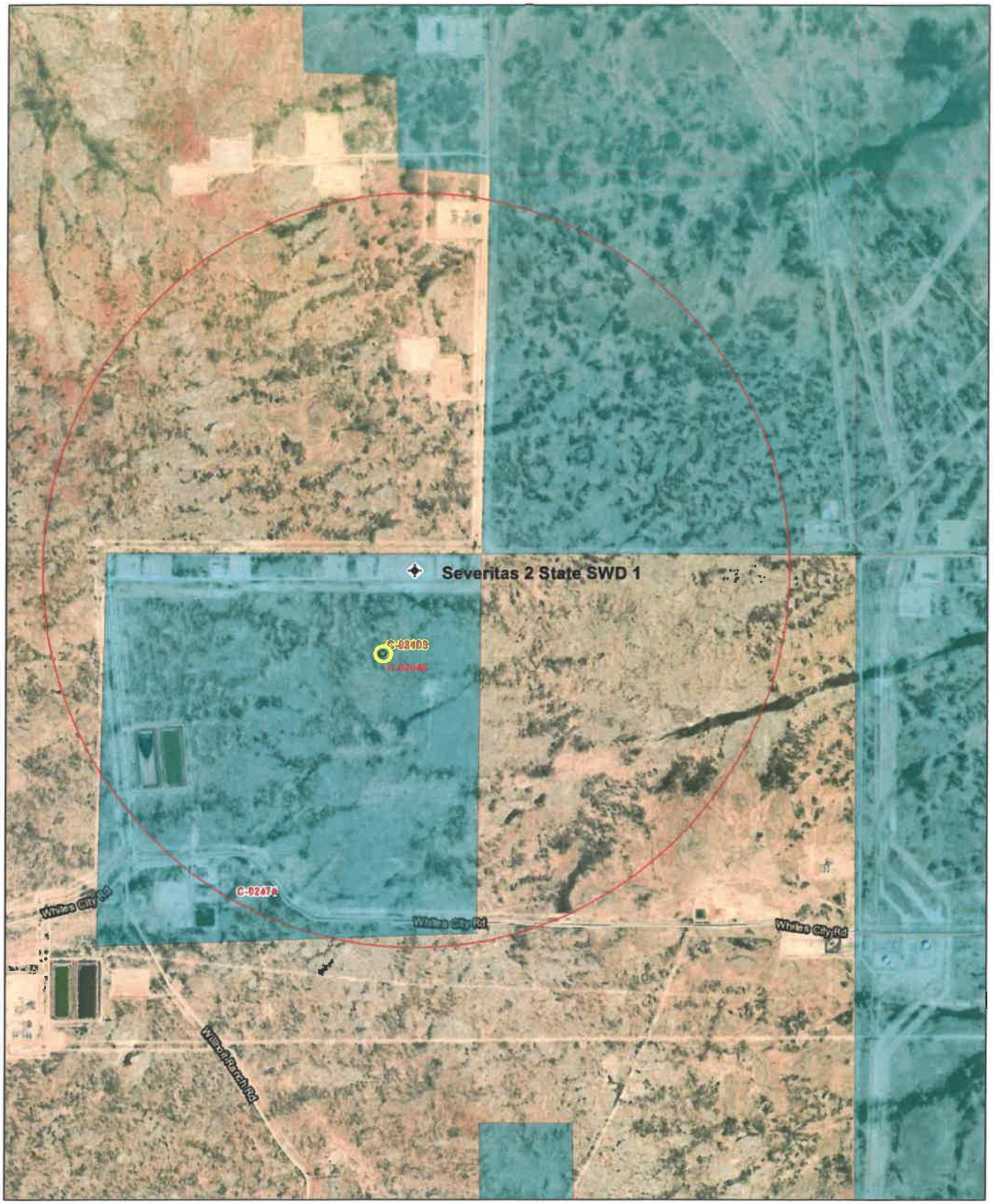
No logs have been run on the Severitas 2 State SWD 1. This is a planned well.

The following open hole logs are planned to be run if hole conditions allow: gamma-ray, resistivity, neutron-density, sonic, and image logs.

Production casing will be installed from surface to near the base of the Brushy Canyon Formation. A total of approximately six Diagnostic Fracture Injection Tests (DFITs) are planned for the Bell Canyon, Cherry Canyon and Brushy Canyon Formations. After the DFITs are run, the Brushy Canyon will be plugged. The Cherry Canyon and Bell Canyon will be perforated to the base of the Lamar Limestone. A step rate test will be run on the Bell Canyon and Cherry Canyon Formation permitted injection interval.

ATTACHMENT 7

Item XI



Both the C−02103 and the C−02048 permits have expired with no evidence wells were drilled. The C−02474 was drilled in 1913 and may have not been used past 1918. No lab reports available. The well is confined to the first 100 ft in the Alluvium. No Rustler Aquifer exists in the immediate area.

m

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 02048 Subbasin: C Cross Reference: -
Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
Primary Status: EXP EXPIRED
Total Acres: Subfile: - Header: -
Total Diversion: 0 Cause/Case: -
Owner: DELAWARE RANCH INC

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	465436	72121	1983-02-02	EXP	EXP	C 02048	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02048					2	02	26S	27E	579582	3549072*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 465436 **Transaction Desc:** C 02048 **File Date:** 01/31/1983

Primary Status: EXP Expired Permit
Secondary Status: EXP Expired
Person Assigned: *******
Applicant: DELAWARE RANCH INC

Events

	Date	Type	Description	Comment	Processed By
get images	01/31/1983	APP	Application Received	*	*******
	02/02/1983	FIN	Final Action on application		*******
	02/02/1983	WAP	General Approval Letter		*******
	03/01/1984	EXP	Expired Permit (well log late)		*******
	05/20/2011	ARV	Rec & Arch - file location	C 02048 Box: 1870	*******

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 02048		3		STK 72-12-1 LIVESTOCK WATERING

****Point of Diversion**

C 02048		579582	3549072*

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

Remarks

LOCATION: DELEWARE RANCH PROPERTIES

ABSTRACTOR'S NOTE: PER LETTER DATED 03/01/1984, THIS PERMIT IS EXPIRED. NO WELL RECORD ON FILE WITH THE OFFICE OF THE STATE ENGINEER.

Conditions

1A Depth of the well shall not exceed the thickness of the valley fill.

4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

Action of the State Engineer

**** See Image For Any Additional Conditions of Approval ****

Approval Code: A - Approved
Action Date: 02/02/1983
Log Due Date: 02/29/1984
State Engineer:

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 02103 **Subbasin:** C **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: EXP EXPIRED

Total Acres: **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: DELAWARE RANCH INC

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	468575	72121	1984-05-14	EXP	EXP	C 02103	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02103					2	02	26S	27E	579582	3549072*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

9/6/22 9:12 AM WATER RIGHT SUMMARY

New Mexico Office of the State Engineer
Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 468575 **Transaction Desc:** C 02103 **File Date:** 05/14/1984

Primary Status: EXP Expired Permit
Secondary Status: EXP Expired
Person Assigned: *******
Applicant: DELAWARE RANCH INC

Events

	Date	Type	Description	Comment	Processed By
get images	05/14/1984	APP	Application Received	*	*******
	05/14/1984	FIN	Final Action on application		*******
	05/14/1984	WAP	General Approval Letter		*******
	06/03/1985	EXP	Expired Permit (well log late)		*******
	05/23/2011	ARV	Rec & Arch - file location	C 02103 Box: 1871	*******

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 02103		3		STK 72-12-1 LIVESTOCK WATERING

****Point of Diversion**

C 02103		579582	3549072*

***An (*) after northing value indicates UTM location was derived from PLSS - see Help**

Remarks

LOCATION: DELAWARE RANCH PROPERTIES.

ABSTRACTOR'S NOTE: PER LETTER DATED 06/03/1985, THIS PERMIT IS EXPIRED. NO WELL RECORD ON FILE WITH THE OFFICE OF THE STATE ENGINEER.

Conditions

1A Depth of the well shall not exceed the thickness of the valley fill.

4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

Action of the State Engineer

**** See Image For Any Additional Conditions of Approval ****

Approval Code: A - Approved
Action Date: 05/14/1984
Log Due Date: 05/31/1985
State Engineer:

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 02474 **Subbasin:** CUB **Cross Reference:** -
Primary Purpose: PLS NON 72-12-1 LIVESTOCK WATERING
Primary Status: DCL DECLARATION
Total Acres: 0 **Subfile:** - **Header:** -
Total Diversion: 3 **Cause/Case:** -
Owner: MARTHA SKEEN

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images 198101	DCL	1995-12-12	DCL	PRC	C-02474	T	0	3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
C 02474			4	3		02	26S	27E	578964	3548029*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1913	DCL	0	3	C 02474

Place of Use

Q 256	Q 64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0	3		PLS	12/31/1913	DCL	NO PLACE OF USE GIVEN

9/6/22 9:18 AM WATER RIGHT SUMMARY

(W-twell) Kelly Polk Well
Revised December 1975
2-03119
24.00

IMPORTANT — READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM.

Declaration of Owner of Underground Water Right

198101

Carlsbad
BASIN NAME

Declaration No. C-2474 Date received December 12, 1995

STATEMENT

1. Name of Declarant Martha Skeen
Mailing Address 321 South Canyon, Carlsbad
County of Eddy, State of N. Mex
2. Source of water supply Shallow (artesian or shallow water aquifer)
3. Describe well location under one of the following subheadings:
a. SE ¼ SW ¼ ¼ of Sec. 2 Twp. 26S. Rge. 27E. N.M.P.M., in Eddy County.
b. Tract No. ____ of Map No. ____ of the ____
c. X = ____ feet, Y = ____ feet, N. M. Coordinate System ____ Zone in the ____ Grant.
On land owned by State of N. Mex
4. Description of well: date drilled 1913 driller Hepler Bros depth 100 feet.
outside diameter of casing 6 inches; original capacity 5 gal. per min.; present capacity 5 gal. per min.; pumping lift ____ feet; static water level ____ feet (above) (below) land surface;
make and type of pump Windmill
make, type, horsepower, etc., of power plant ____
Fractional or percentage interest claimed in well 100%
5. Quantity of water appropriated and beneficially used 3 acre ft. (acre feet per acre) (acre feet per annum) for Livestock purposes.
6. Acreage actually irrigated ____ acres, located and described as follows (describe only lands actually irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner

(Note: location of well and acreage actually irrigated must be shown on plat on reverse side.)

95 DEC 12 AM 9 30

7. Water was first applied to beneficial use ____ (month) ____ (day) 1913 (year) and since that time has been used fully and continuously on all of the above described lands or for the above described purposes except as follows: ____

8. Additional statements or explanations These wells and tanks were put into use between 1912 and 1918 by the Hepler Bros. Since then the Ranch has changed ownerships from time: Purdue Guitar, Fowlkes Bros, Delaware Ranch Inc. and Martha Skeen.

I, ____ being first duly sworn upon my oath, depose and say that the above is a full and complete statement prepared in accordance with the instructions on the reverse side of this form and submitted in evidence of ownership of a valid underground water right, that I have carefully read each and all of the items contained therein and that the same are true to the best of my knowledge and belief.

Martha W. Skeen, declarant.

by: ____

Subscribed and sworn to before me this 1 day of DECEMBER, A.D. 19 95

My commission expires 02/22/99

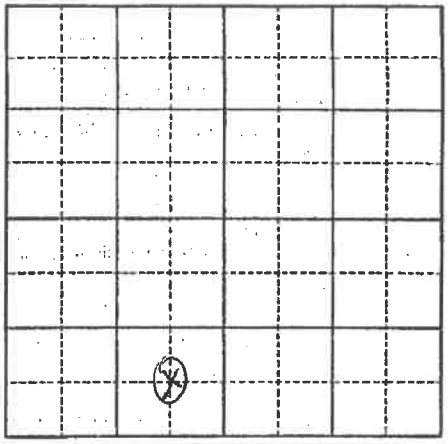
Virginia Lopez, Notary Public

FILED
UNDER NEW MEXICO LAW A DECLARATION IS ONLY A STATEMENT OF THE DECLARANT'S CLAIM. ACCEPTANCE FOR FILING DOES NOT CONSTITUTE APPROVAL OR REJECTION OF THE CLAIM.

T-198101

Locate well and areas actually irrigated as accurately as possible on following plat:

Section (s) _____, Township _____, Range _____, N. M. P. M.



INSTRUCTIONS

Declaration shall be executed (preferably typewritten) in triplicate and must be accompanied by a $1.00 filing fee. Each of triplicate copies must be properly signed and attested.

A separate declaration must be filed for each well in use.

All blanks shall be filled out fully. Required information which cannot be sworn to by declarant shall be supplied by affidavit of person or persons familiar with the facts and shall be submitted herewith.

Secs. 1-3. Complete all blanks.

Sec. 4. Fill out all blanks applicable as fully as possible.

Sec. 5. Irrigation use shall be stated in acre feet of water per acre per year applied on the land. If used for domestic, municipal, or other purposes, state total quantity in acre feet used annually.

Sec. 6. Describe only the acreage actually irrigated. When necessary to clearly define irrigated acreages, describe to nearest 2½ acre subdivision. If located on unsurveyed lands, describe by legal supdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily-located natural object.

Sec. 7. Explain and give dates as nearly as possible of any years when all or part of acreage claimed was not irrigated.

Sec. 8. If well irrigates or supplies supplemental water to any other land than that described above, or if land is also irrigated from any other source, explain under this section. Give any other data necessary to fully describe water right.

If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

SF

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

THOMAS C. TURNEY
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
(505) 622-6521

December 12, 1995

FILES: ~~C-2473~~ C-2474 thru C-2481;
LWD-C-64 thru LWD-C-70

'95 DEC 15 AM 10 51
STATE ENGINEER OFFICE
SANTA FE, NEW MEXICO

Martha Skeen
321 South Canyon
Carlsbad, NM 88220

Dear Ms. Skeen:

Enclosed are your copies of Declaration of Owner of Underground Water Right, and Declaration of Ownership of Livestock Water Dam or Tank, as numbered above, which have been accepted for filing in the office of the State Engineer.

Please refer to these numbers in all future correspondence concerning these declarations.

The acceptance for filing of these declarations by this office does not indicate affirmation or rejection of the statements contained therein.

Sincerely,

Richard C. Cibak
Area Supervisor

tg
Enclosures
cc: Santa Fe
Hydro Section

ATTACHMENT 8

Item XII

George T. (Tom) Merrifield, Jr., PG
SWD DRP Geologist
Chevron U.S.A. Inc.
6301 Deauville Blvd
Midland, TX 79706
Phone +1 661-448-7489
tommerrifield@chevron.com

April 10, 2023

Dylan Fuge, Acting Director
Oil Conservation Division
1220 South St. Francis Dr.
Sante Fe, New Mexico 87505

Re: Affirmation Statement C-108 Applications
Papa Squirrel SWD 1 and Severitas 2 State SWD 1

Dear Mr. Fuge:

With the increase of induced seismicity due to deep produced water injection, in 2021 Chevron decided to evaluate the potential for shallow injection in both Texas and New Mexico with exhaustive manpower and technical effort.

This effort led to the following technical evaluations of the DMG: (1) the location of high confident shallow faults in our active development areas using available seismic reflection data (2) assessment of seismic risk of any such shallow faults, (3) other geologic and reservoir engineering assessments addressing storage capabilities, potential impacts, and mitigation, and (4) collaboration and joint efforts with other operators.

Both the Papa Squirrel SWD 1 and Severitas 2 State SWD 1 are locations which we find no indication of open faults at the surface or in the subsurface and no indication of hydraulic connection between the proposed injection zone (Bell Canyon and Cherry Canyon) and an underground source of drinking water (USDW). Both locations have low potential for fault slip and induced seismicity.

Respectively yours,

G. T. Merrifield, Jr., PG
TX (#10838) and CA (#9274)

ATTACHMENT 9

Item XIII

Notices will be sent to the following surface owners, leasehold operators, mineral interest owners, etc., within ½ mile radius.

- Bureau of Land Management
- State Land Office
- COG Operating, LLC

Note: Chevron is the operator of the wells within the 0.5 mile area of review shown in Attachment 1.

Tab C: Support Letters

Stefan Hussenoeder
22777 Springwoods Village Parkway
Spring, TX 77389
(364) 502-0163 (o)
(713) 208-7967 (m)
hussenoeder@exxonmobil.com

November 2, 2023

New Mexico Oil Conservation Division
Via e-filing in Case No. 23686 and via email to OCD.Engineer@emnrd.nm.gov

Re: Support for Chevron USA Inc.'s Papa Squirrel State SWD #1 well, proposed to be located in Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico.

Dear New Mexico Oil Conservation Division:

XTO respectfully submits this letter in support of Chevron USA Inc.'s ("Chevron") Papa Squirrel State SWD #1 well, proposed to be located in Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico, and proposed to inject into the Bell Canyon/Cherry Canyon formations. XTO has had discussions with Chevron regarding the location of the proposed injection well and the target injection zone, and understands it is a pilot project with a primary purpose of information gathering rather than large scale disposal.

XTO supports Chevron's proposed Papa Squirrel State SWD #1 well, and supports approval of Chevron's application in Case No. 23686.

Sincerely,

Stefan Hussenoeder
Geoscience Technology Advisor
XTO, An ExxonMobil Subsidiary

Stefan Hussenoeder
22777 Springwoods Village Parkway
Spring, TX 77389
(364) 502-0163 (o)
(713) 208-7967 (m)
hussenoeder@exxonmobil.com

November 2, 2023

New Mexico Oil Conservation Division
Via e-filing in Case No. 23686 and via email to OCD.Engineer@emnrd.nm.gov

Re: Support for Chevron USA Inc.'s Severitas 2 State SWD #1 proposed to be located in Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico

Dear New Mexico Oil Conservation Division:

XTO respectfully submits this letter in support of Chevron USA Inc.'s ("Chevron") Severitas 2 State SWD #1 well, proposed to be located in Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico, and proposed to inject into the Bell Canyon/Cherry Canyon formations. XTO has had discussions with Chevron regarding the location of the proposed injection well and the target injection zone, and understands it is a pilot project with a primary purpose of information gathering rather than large scale disposal.

XTO supports Chevron's proposed Severitas 2 State SWD #1 well, and supports approval of Chevron's application in Case No. 23687.

Sincerely,

_____
Stefan Hussenoeder
Geoscience Technology Advisor
XTO, An ExxonMobil Subsidiary

COTERRA

Coterra Energy Inc.
Permian Business Unit
6001 Deauville Blvd
Suite 300N
Midland, TX 79706

T 432-571-7800
F 432-571-7832
coterra.com

October 23, 2023

New Mexico Oil Conservation Division

Via e-filing in Case No. 23686 and via email to OCD.Engineer@emnrd.nm.gov

Re: Support for Chevron USA Inc.'s Papa Squirrel State SWD #1 well, proposed to be located in Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico.

Dear New Mexico Oil Conservation Division:

[Insert entity name] respectfully submits this letter in support of Chevron USA Inc.'s ("Chevron") Papa Squirrel State SWD #1 well, proposed to be located in Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico, and proposed to inject into the Bell Canyon/Cherry Canyon formations. [Entity name] has had discussions with Chevron regarding the location of the proposed injection well and the target injection zone and supports Chevron's proposal.

Granting the proposed application is in the interest of conservation, will prevent waste and will protect correlative rights. Additionally, the consideration of and granting the application based upon evidence adduced at the hearing will demonstrate that the Division has in place regulations and procedure for the management and disposal of produced water in a manner that allows for the development of the State's oil and gas resources for the benefit of the people while protecting the environment. Chevron has evaluated the potential impacts of the proposed well and its analysis has demonstrated that it will not interfere with existing or future oil and gas production within the Bell Canyon and Cherry Canyon formations and will reduce the potential for induced seismicity associated with deeper injection wells. The information generated by this pilot project will provide the Division and other operators with valuable information for the disposition of produced water.

In sum, Coterra Energy supports Chevron's proposed Papa Squirrel State SWD #1 well, and supports approval of Chevron's application in Case No. 23686.

Sincerely,

Phillip G. Levasseur
Manager, Regulatory Compliance
Coterra Energy

COTERRA

Coterra Energy Inc.
Permian Business Unit
6001 Deauville Blvd
Suite 300N
Midland, TX 79706

T 432-571-7800
F 432-571-7832
coterra.com

October 23, 2023

New Mexico Oil Conservation Division

Via e-filing in Case No. 23687 and via email to OCD.Engineer@emnrd.nm.gov

Re: Support for Chevron USA Inc.'s Severitas 2 State SWD #1 proposed to be located in Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico

Dear New Mexico Oil Conservation Division:

[Insert entity name] respectfully submits this letter in support of Chevron USA Inc.'s ("Chevron") Severitas 2 State SWD #1 proposed to be located in Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico, and proposed to inject into the Bell Canyon/Cherry Canyon formations. [Entity name] has had discussions with Chevron regarding the location of the proposed injection well and the target injection zone and supports Chevron's proposal.

Granting the proposed application is in the interest of conservation, will prevent waste and will protect correlative rights. Additionally, the consideration of and granting the application based upon evidence adduced at the hearing will demonstrate that the Division has in place regulations and procedure for the management and disposal of produced water in a manner that allows for the development of the State's oil and gas resources for the benefit of the people while protecting the environment. Chevron has evaluated the potential impacts of the proposed well and its analysis has demonstrated that it will not interfere with existing or future oil and gas production within the Bell Canyon and Cherry Canyon formations and will reduce the potential for induced seismicity associated with deeper injection wells. The information generated by this pilot project will provide the Division and other operators with valuable information for the disposition of produced water.

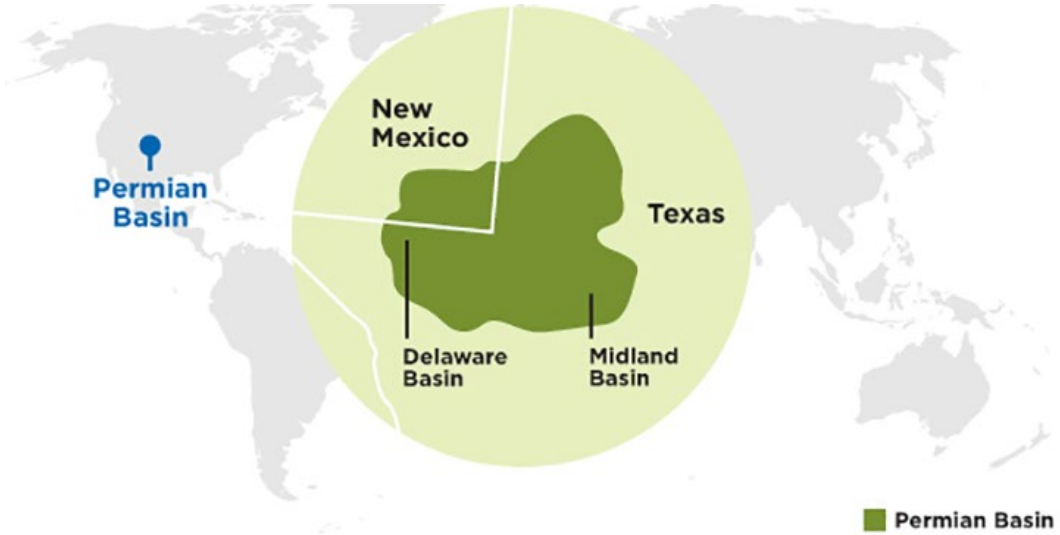
In sum, Coterra Energy supports Chevron's proposed Severitas 2 State SWD #1 well, and supports approval of Chevron's application in Case No. 23687.

Sincerely,

Phillip G. Levasseur
Manager, Regulatory Compliance
Coterra Energy

Tab D: Consolidated Hearing Presentation

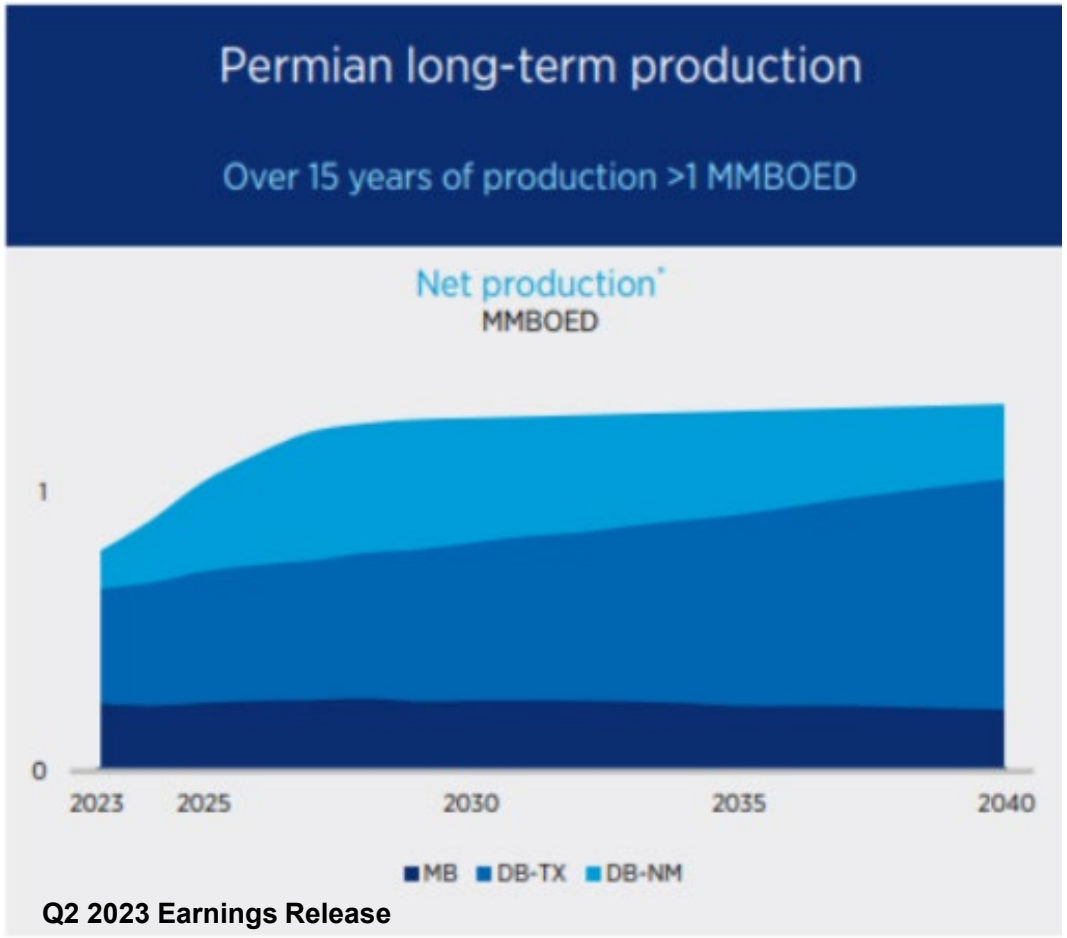
Chevron Permian Operations and Long-Term Focus



Chevron currently operates a total of 68 active SWD wells within the Permian Basin with six in New Mexico.

	Name	Land area
	District of Columbia	39,000 acres
	Rhode Island	660,000 acres
	Delaware	1,200,000 acres
	MCBU	**2,200,000 acres**
	Connecticut	3,100,000 acres

2021 CID



Q2 2023 Earnings Release

Chevron is committed to New Mexico and plans to increase production into the next decade.

Chevron SWD Pilot Project: Opportunities and Benefits

•Since 2021 Chevron has undertaken manpower-intensive, regional, sub-regional, and local investigations of Delaware Mountain Group (DMG) SWD reservoir potential, risks, and correlative rights and waste issues in the Permian Basin.

•This investigation driven by:
- •Need for additional water disposal options to address high volumes of produced water from Bone Spring and Wolfcamp formations.
- •Need for disposal options that do not impair correlative rights and that prevent waste. Certain DMG areas are depleted or geology indicates low likelihood of unknown oil in the area, and therefore good option for disposal.
- •Low potential for induced seismicity.
- •Need to have disposal options that are protective of underground sources of drinking water.

•Chevron developed a proposal for a 2-well SWD pilot project that are theoretically sound in application, but also contain a surveillance, analysis, and mitigation plan to address correlative rights, waste, and protection of underground sources of drinking water.

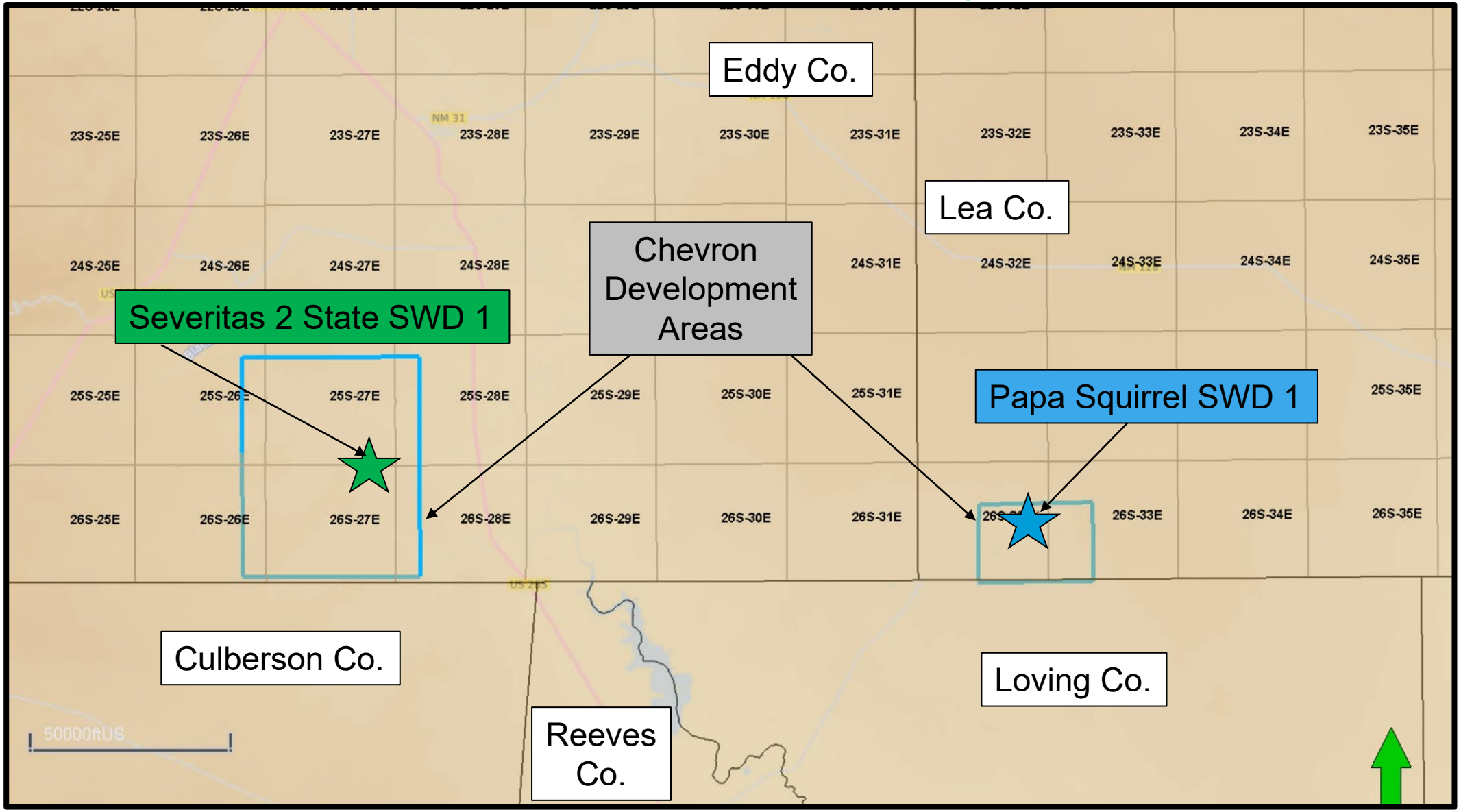
•Chevron presented this plan to an operator working group, met numerous times, solicited and incorporated feedback into the plan, and secured their support for the proposal presented herein.

•Chevron also met with the NMOCD and the NMSLO.

SWD Pilot Project: Opportunities and Benefits

- Chevron selected the Papa Squirrel and Severitas SWDs as pilot SWDs due to variation in injection thickness, containment zones, and the low potential for adverse impacts to offset production.
- Well bore design (3-string casing) will protect the aquifer.
- Targeted operational injection is the Bell Canyon and Cherry Canyon formations. No nearby DMG production.
- Chevron is proposing data gathering and reporting programs, which will create greater data sets regarding the potential to use DMG for injection.
- Chevron is also proposing monitoring programs, to address impacts to correlative rights and waste if such issues arise during the course of operation.
- Chevron has conducted a thorough review of technical field, subsurface and literature data to plan for and propose locations to mitigate seismicity.
- Chevron supports open data collection and dissemination to support broad learnings and collaboration.

Location Map of Chevron Pilot Project SWD Wells



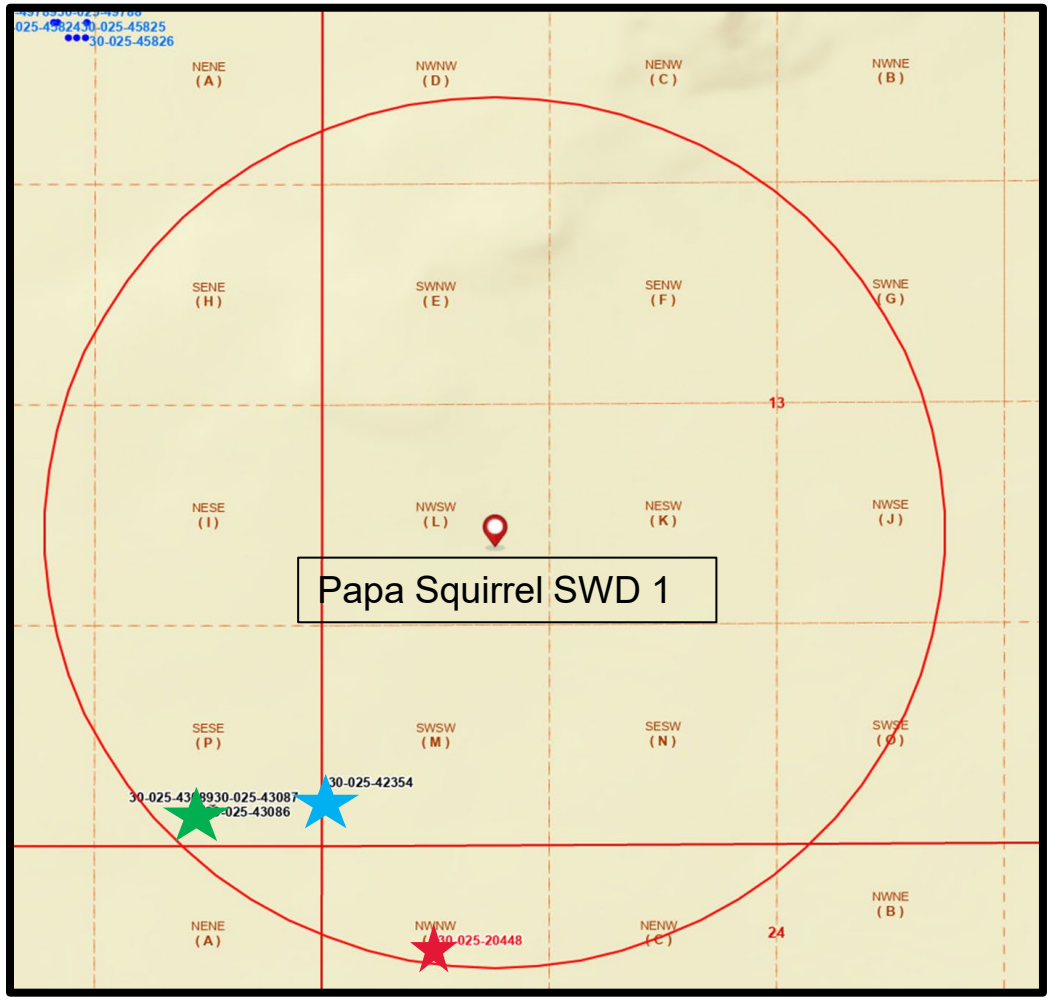
Papa Squirrel SWD: Wells Penetrate DMG in 1/2-Mile Radius

AOR wells

- Three active Bone Spring horizontal producers
  - All Chevron operated ★
- No DMG production within ½ - 2 miles
- NGL Devonian-Silurian SWD ★
- The closest Delaware Mountain Group (DMG) producers lie 1.5-2.0 miles to the southeast; all three wells produce less than 1 barrel per day (B/D).

API	Well Name	Well Type	Well Status	OGRID Name	Production Target	Plug Date	Miles from SWD
30-025-43086	SD WE 14 FEDERAL P7 #003H	Oil	Active ★	CHEVRON U S A INC	Bone Spring		0.4
30-025-43087	SD WE 14 FEDERAL P7 #004H	Oil	Active ★	CHEVRON U S A INC	Bone Spring		0.4
30-025-43089	SD WE 23 FEDERAL P7 #004H	Oil	Active ★	CHEVRON U S A INC	Bone Spring		0.4
30-025-42354	SALADO DRAW SWD 13 #001	SWD	Active ★	NGL WATER SOLUTIONS PERMIAN, LLC	Devonian-Silurian		0.3
30-025-20448	PRE-ONGARD WELL #002	Oil	Plugged (site released) ★	PRE-ONGARD WELL OPERATOR		8/20/1963	0.4

Abandonment report provided ★

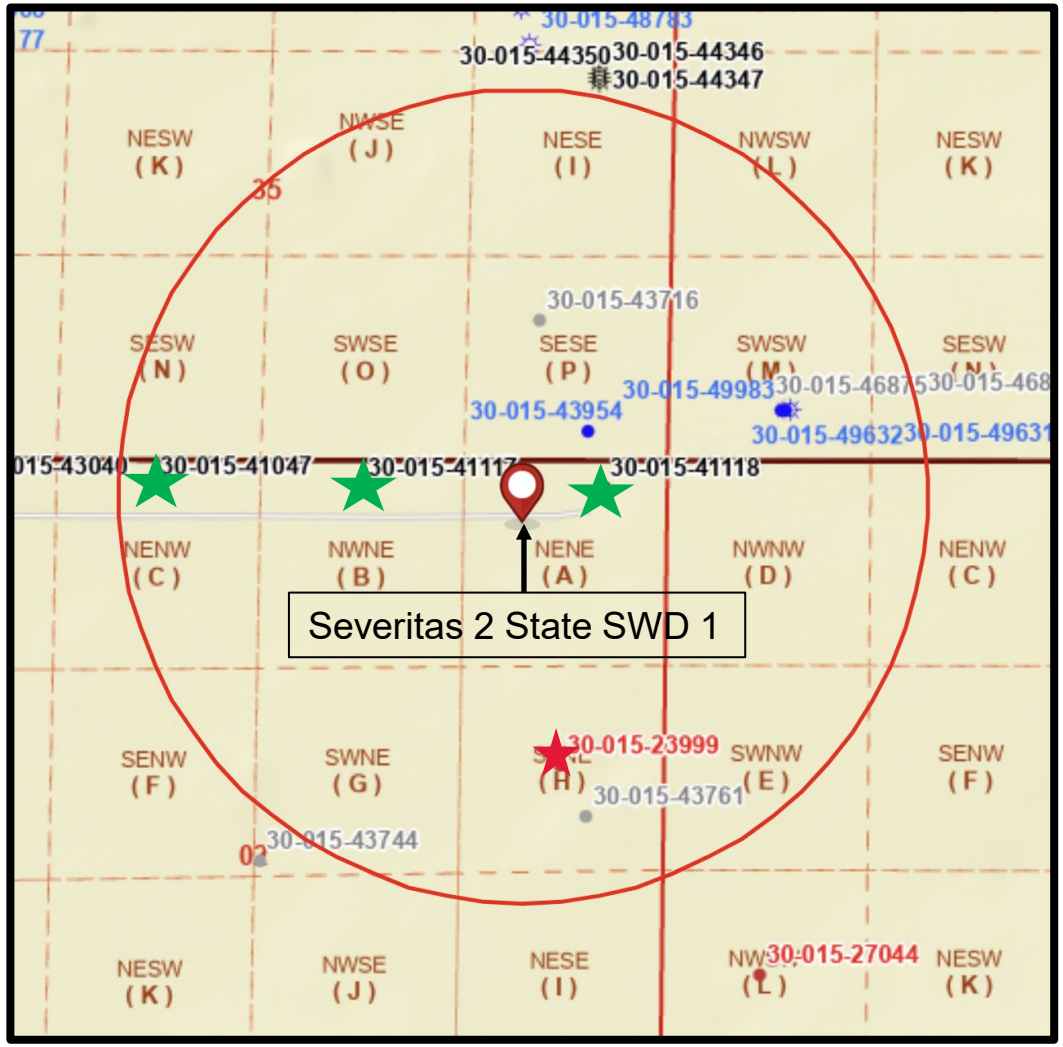


Severitas SWD: Wells Penetrate DMG in 1/2-Mile Radius

AOR wells

- Three active Bone Spring horizontal producers
  - All Chevron operated ★
- No DMG production within 2 miles
- No DMG SWD or EOR injection

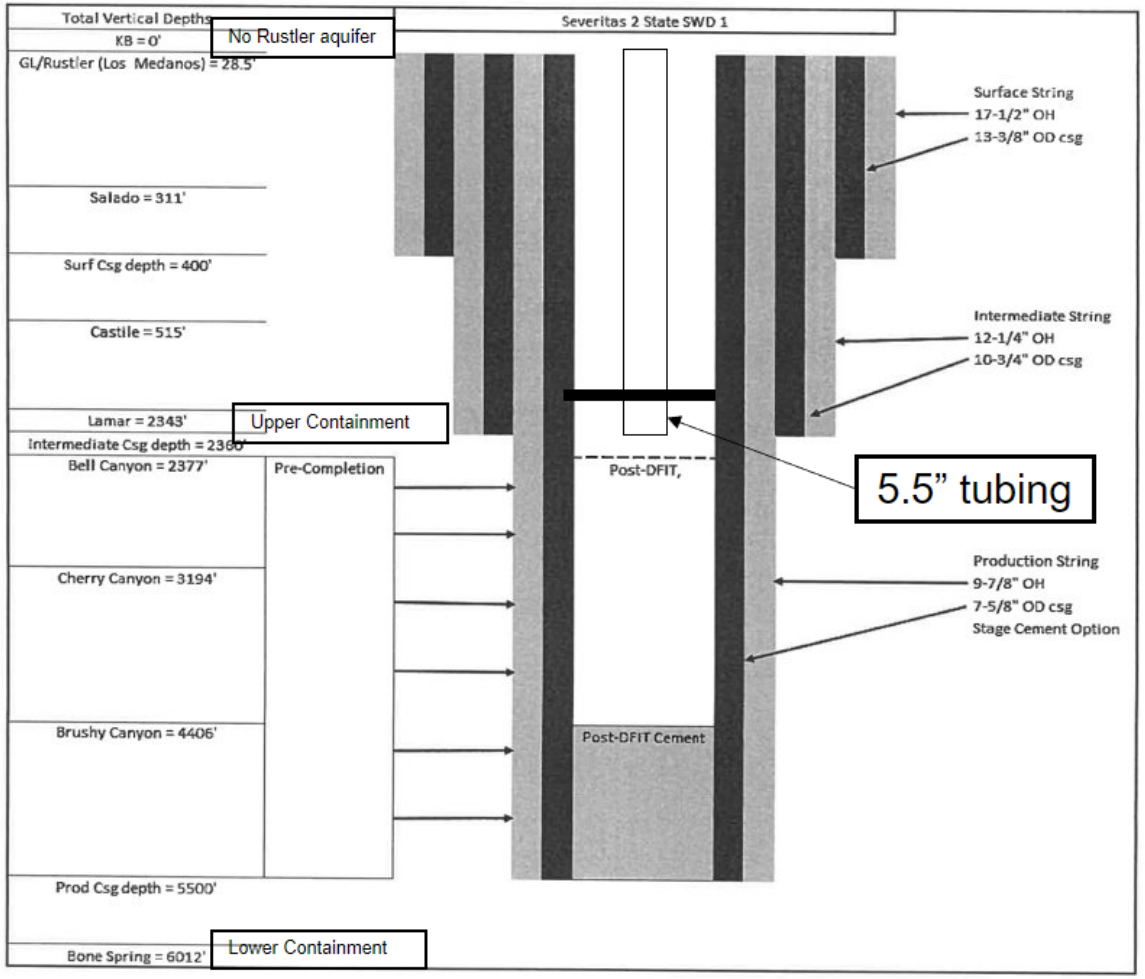
API	Well Name	Well Type	Well Status	OGRID Name	Production Target	Plug Date	Miles from SWD
30-015-46875	ATTICUS STATE COM #706C	Gas	Cancelled	COG OPERATING LLC	Wolfcamp		0.3
30-015-41047	SKEEN 2 26 27 STATE #002H	Oil ★	Active	CHEVRON U S A INC	Bone Spring		0.4
30-015-41117	SKEEN 2 26 27 STATE #003H	Oil ★	Active	CHEVRON U S A INC	Bone Spring		0.2
30-015-43716	GRYNBERG 11 FEDERAL COM #006C	Oil	Cancelled	CIMAREX ENERGY CO.	Bone Spring		0.2
30-015-23999	PRE-ONGARD WELL #001	Oil ★	Plugged (site released)	PRE-ONGARD WELL OPERATOR	Bone Spring	5/15/1987	0.3
30-015-43954	SAGE 35 B2PA FEDERAL COM #001H	Oil	New (abandoned location)	CHEVRON U S A INC	Bone Spring		0.2
30-015-43761	WHITE CITY 14 FEDERAL #016C	Oil	Cancelled	CIMAREX ENERGY CO.	Bone Spring		0.4
30-015-41118	SKEEN 2 26 27 STATE #004H	Oil ★	Active	CHEVRON U S A INC	Bone Spring		0.1
30-015-49632	ATTICUS STATE COM #705H	Gas	New (abandoned location)	COG OPERATING LLC	Wolfcamp		0.3
30-015-49633	ATTICUS STATE COM #706H	Oil	New (abandoned location)	COG OPERATING LLC	Wolfcamp		0.3
30-015-49983	ATTICUS STATE COM #522H	Oil	New	COG OPERATING LLC	Bone Spring		0.3



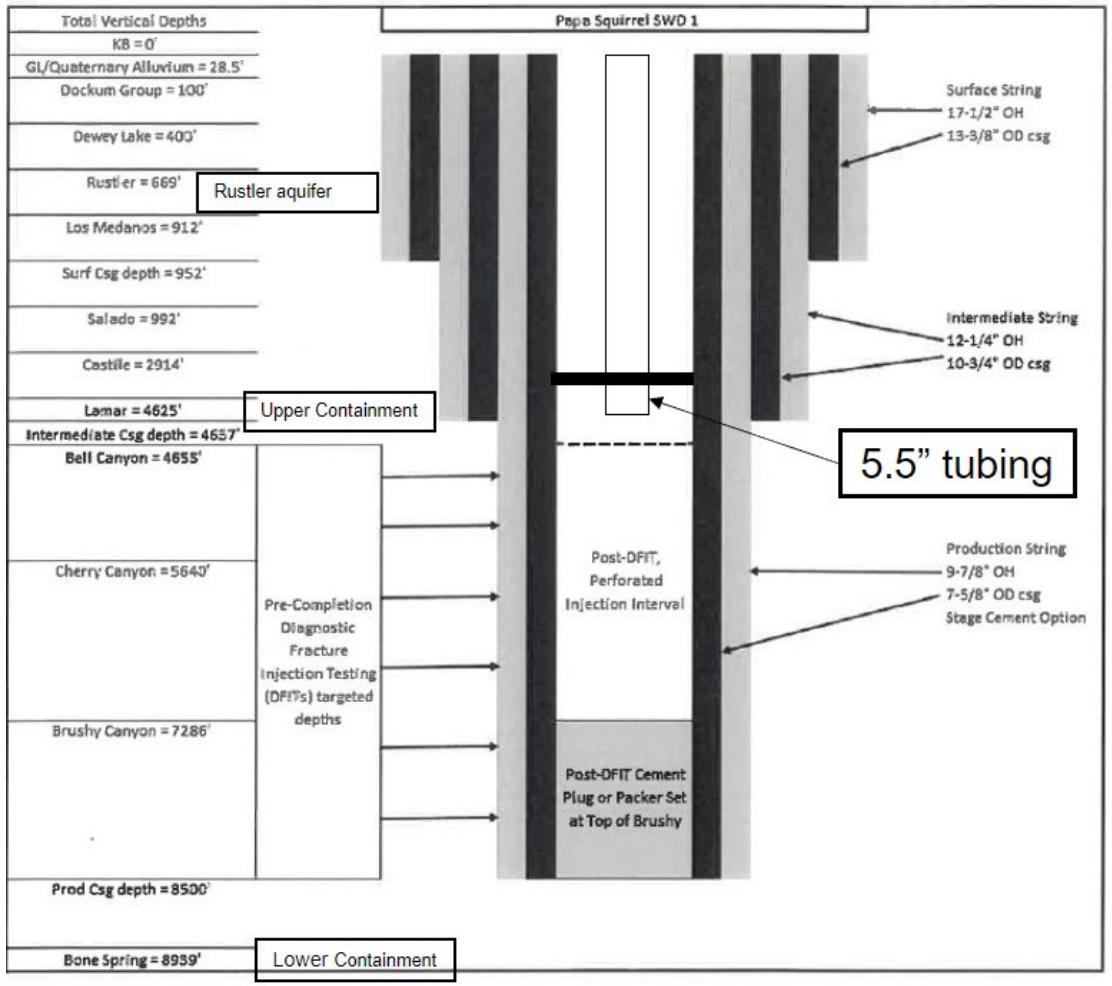
Abandonment report provided ★

Casing Design Protects Aquifer

Severitas 2 State SWD 1



Papa Squirrel SWD 1



Notifications

Severitas 2 State SWD 1

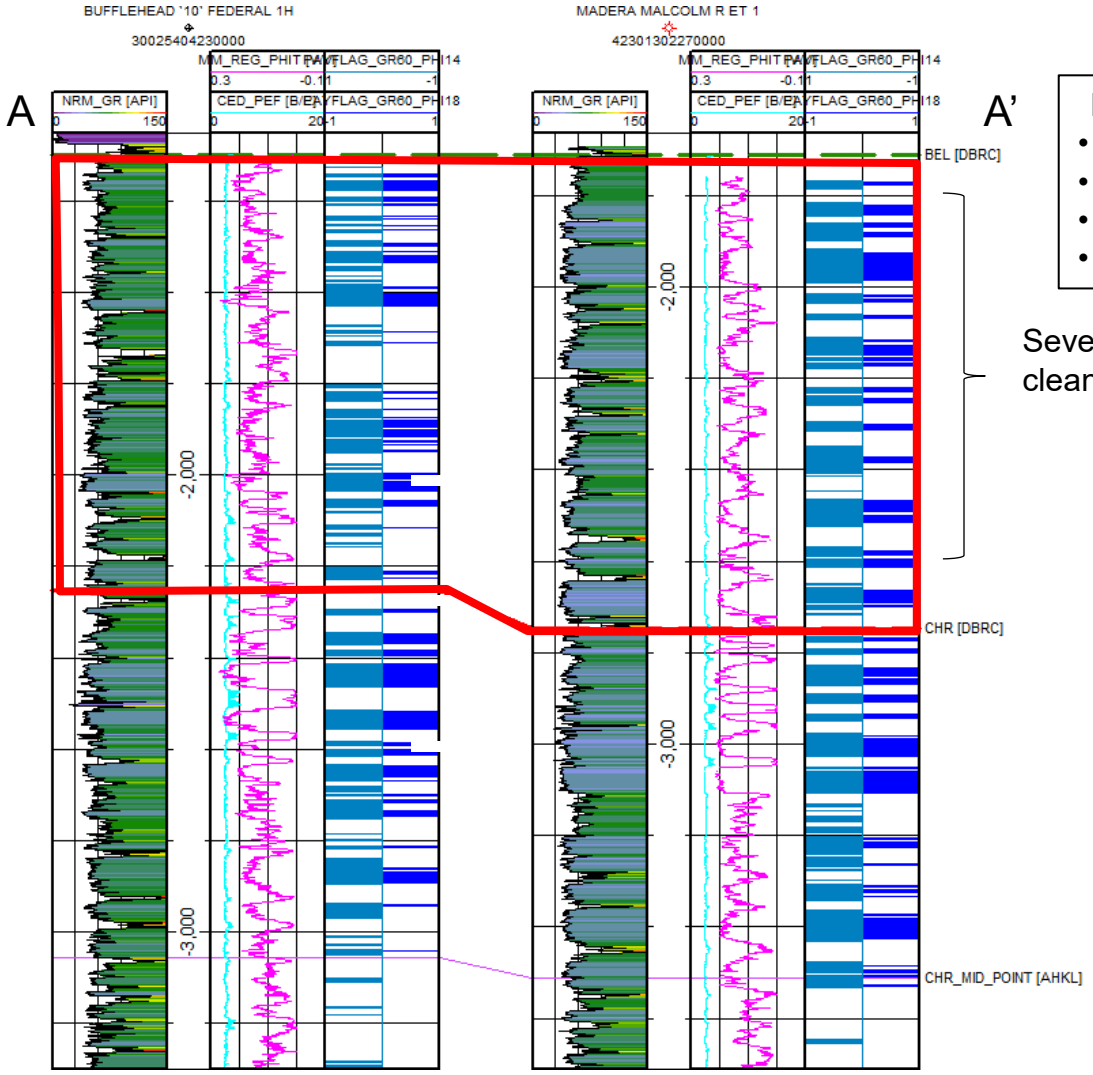
- Proof of Notice:
  - –New Mexico State Land Office
  - –Bureau of Land Management
  - –COG Operating LLC

Papa Squirrel SWD 1

- Proof of Notice:
  - –Bureau of Land Management
  - –NGL
  - –Royalty Clearinghouse 2003 LLC
  - –Atlas OBO Energy LP

Geological Analysis of DMG Productive Zones

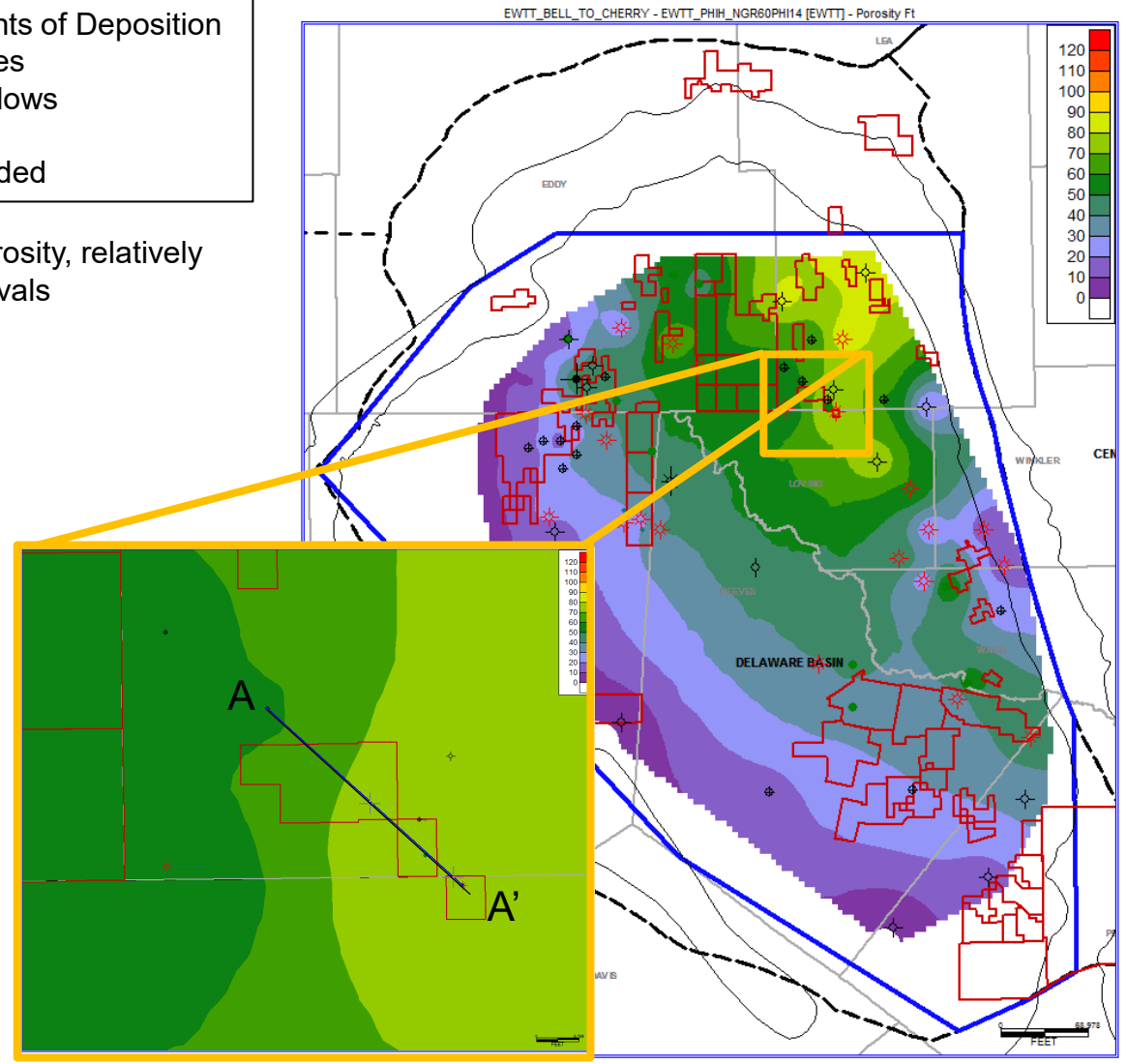
Bell Canyon High Porosity Clean Sand: Papa Squirrel



Environments of Deposition
- Turbidites
- Debris flows
- Hybrid
- Suspended

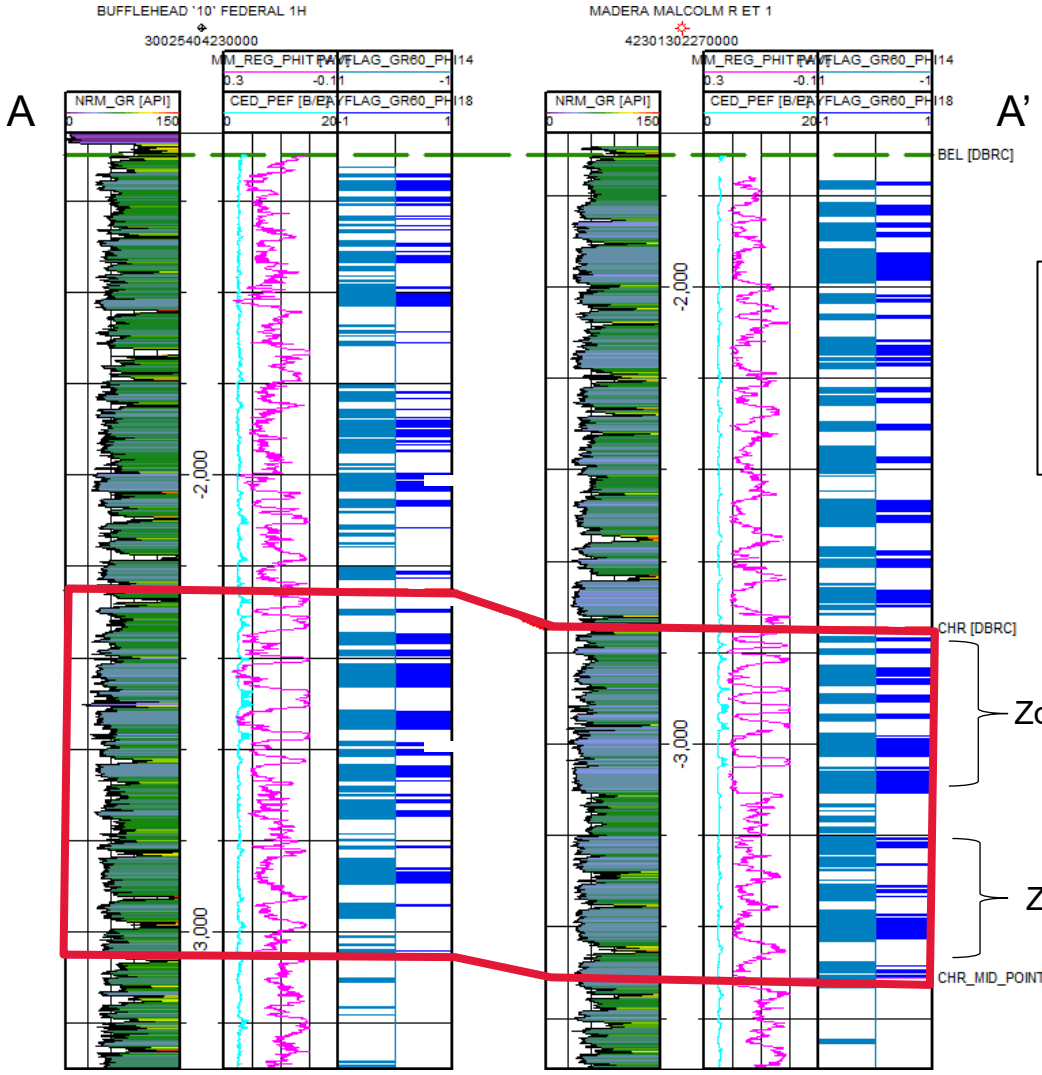
Several high porosity, relatively clean sand intervals

Net feet > 14% porosity map



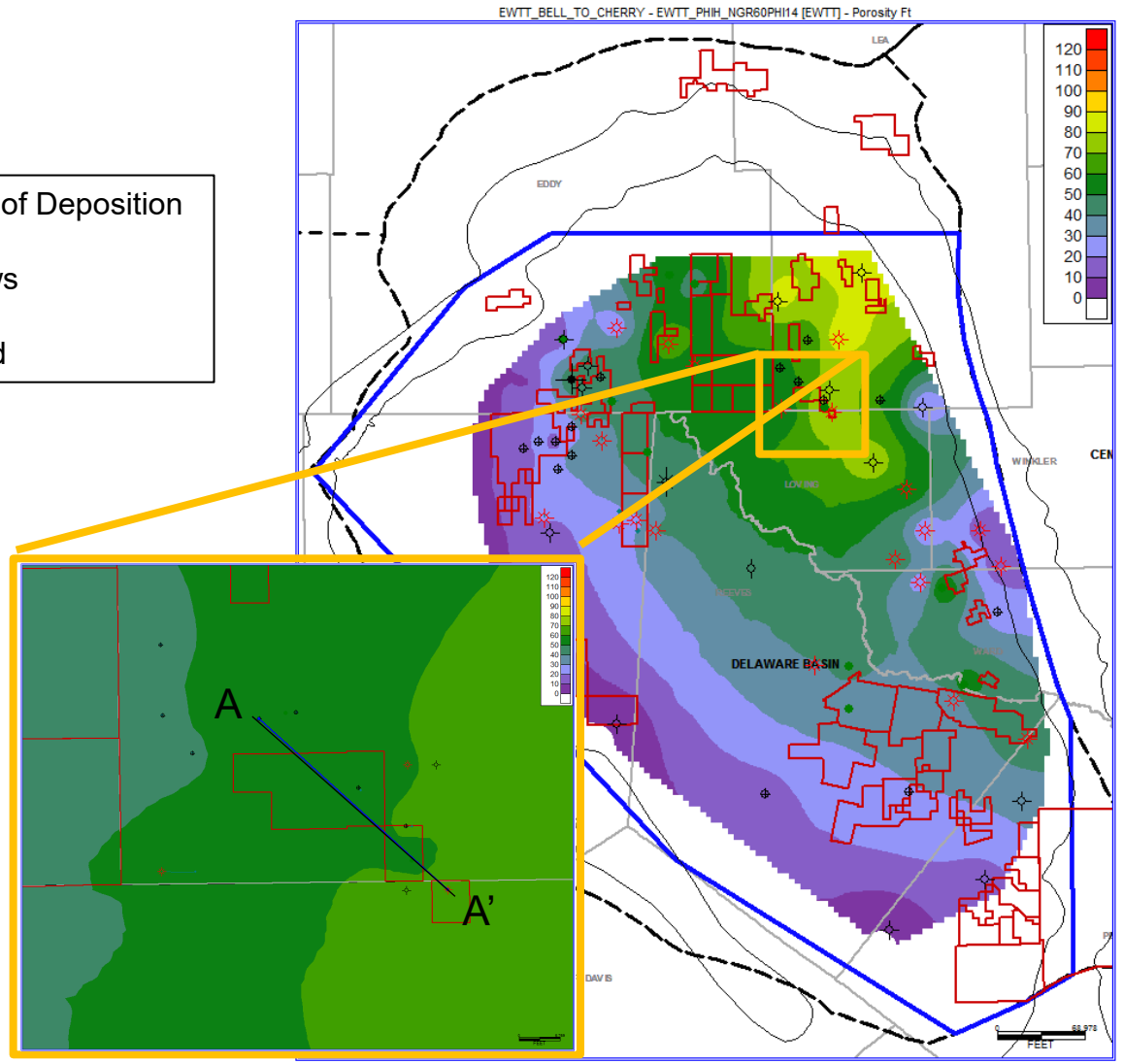
10-11 possible injection zones (sands) within the Bell Canyon
Porosity range ~14%-23%
Permeability 0.4-3.0 md

Upper Cherry Canyon High Porosity Clean Sand: Papa Squirrel



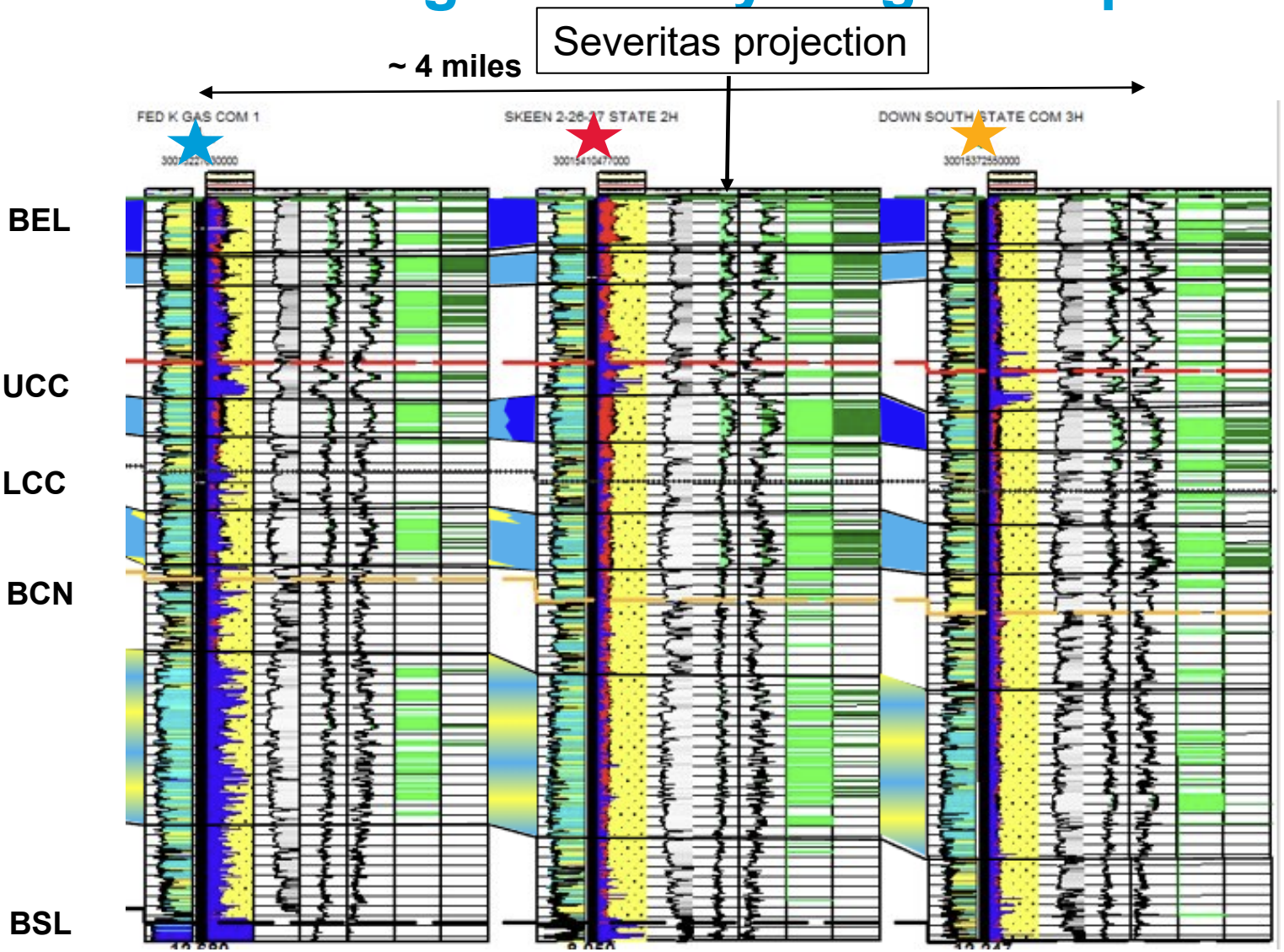
Environments of Deposition
- Turbidites
- Debris flows
- Hybrid
- Suspended

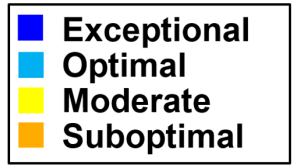
Net feet > 14% porosity map

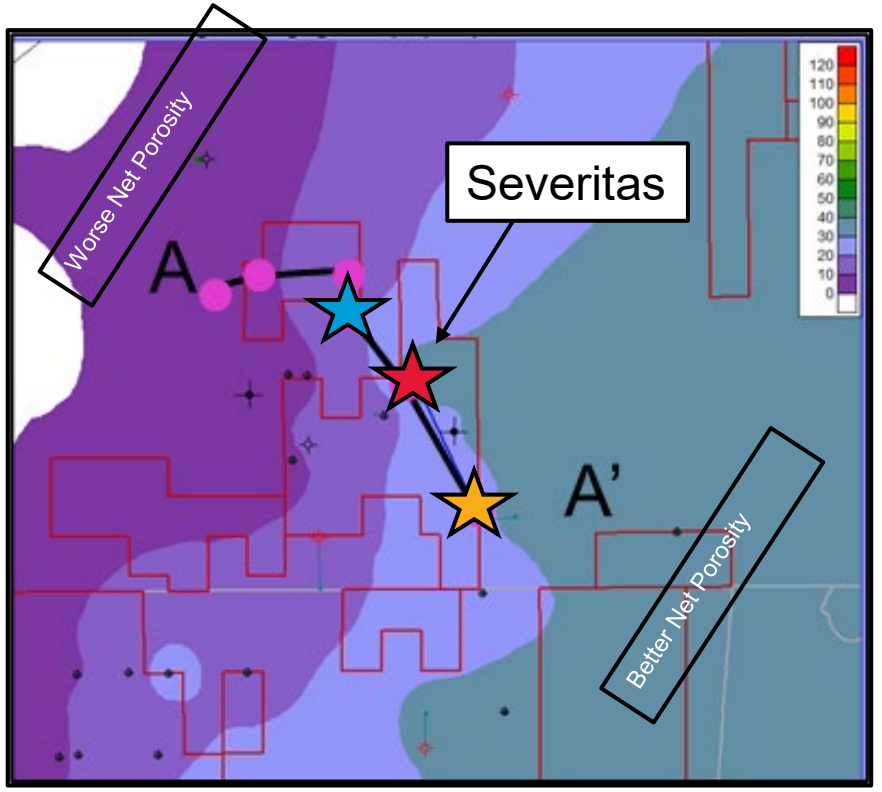


Two main zones in Upper Cherry that have high porosity sands: 14%-23%
Permeability ranges between 0.4-3.0 md
Zone 1 has 4 low porosity carbonates interbedded between the sands.
Zone 2 has no carbonates.

High Porosity Targets Improve to SE: Severitas







100 ft

- Reservoir quality across the area of the Severitas is relatively consistent with slight degradation towards NW
- Best reservoir is in Bell Canyon, followed by Upper Cherry Canyon

Drill Stem Tests Confirm Low DMG Productivity

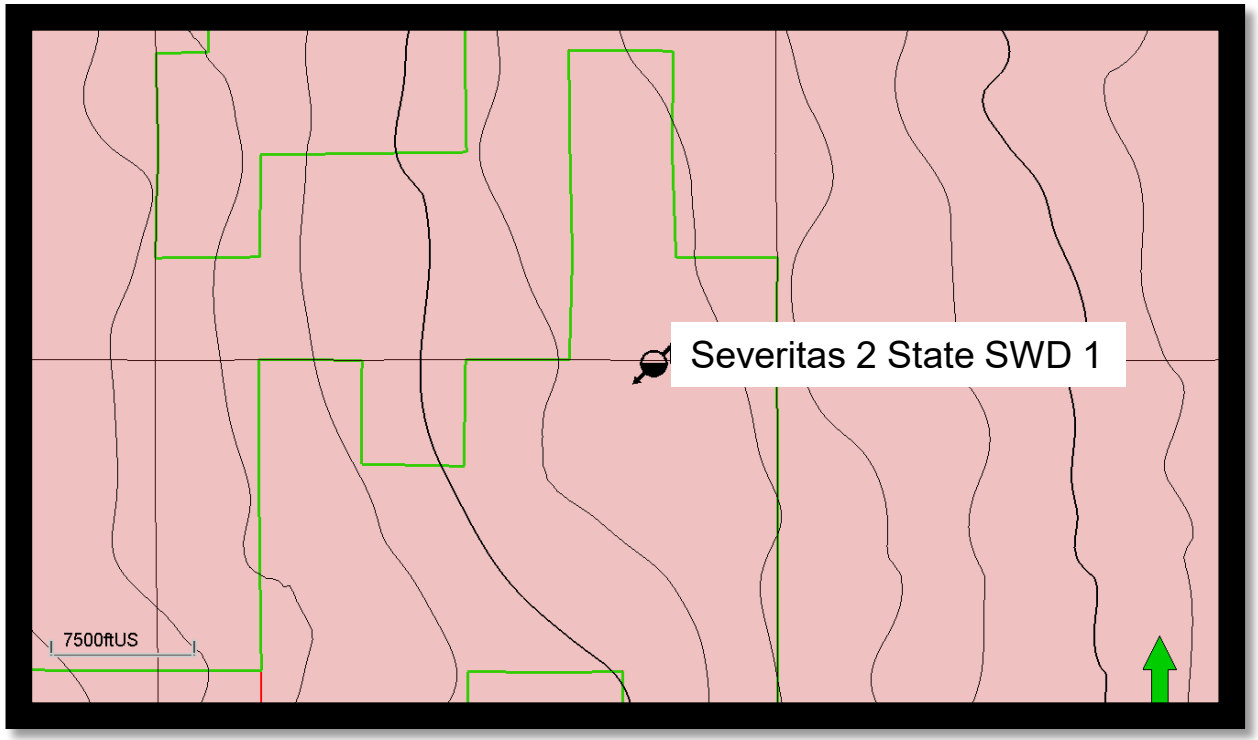
Severitas 2 State SWD 1

- No DSTs were taken in the DMG within 2 miles from the Severitas 2 State SWD 1.
- Two DSTs were taken within three miles
  - The State “23” 1 (30015277900) was drilled and P&A in 1994.
  - The East Apple Unit 1 (3001526105) was P&A in 2017 after:
    - Producing from parent and 2 SS:
      - 14k barrels oil
      - 31k Mcf gas
      - 41k barrels water
- Risks of impact to DMG hydrocarbons appear very low.

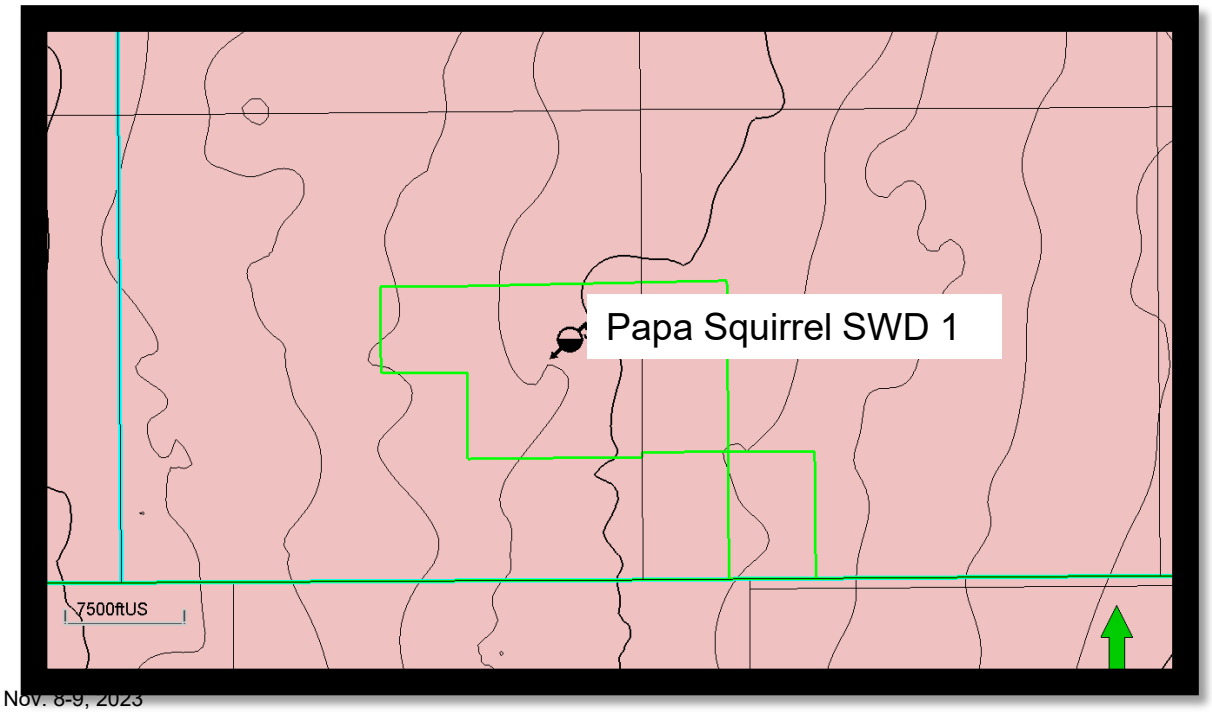
Papa Squirrel SWD 1

- No DSTs have been taken in the DMG within 2 or 3 miles from the Papa Squirrel SWD 1.

Geologic Structure Maps Suggest Low Likelihood of Hydrocarbons in DMG



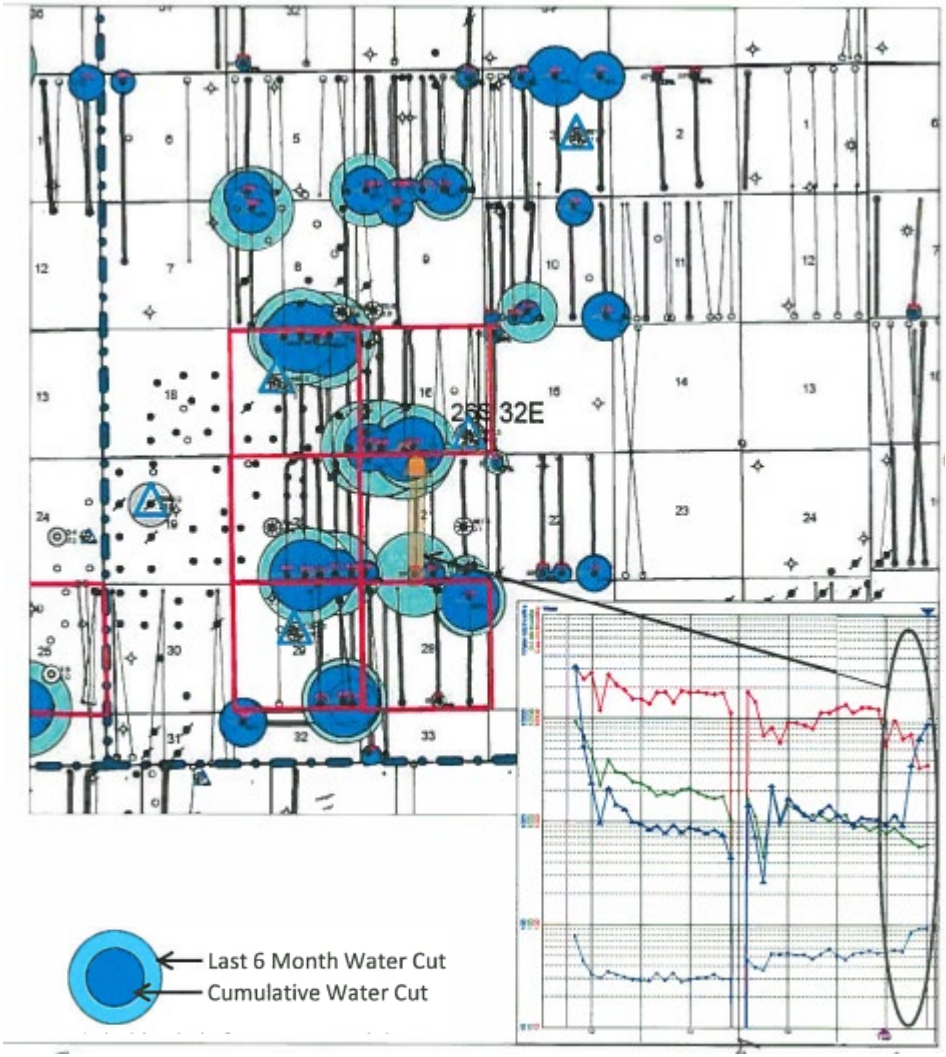
- No faults are interpreted from seismic data in the lower containment layer, Bone Spring Limestone, within 2 miles of either well.
- No faults are interpreted across the upper containment horizon, Lamar Limestone, within 2 miles of either well.
- Large density differences in the Castile result in significant velocity variations and seismic interpretation uncertainties which cannot be resolved.



- The continuity of the sands in the Bell and Cherry Canyon, coupled with the lack of structural closure, suggest little chance of hydrocarbon trapping in the area.
- Chevron is not targeting the Brushy Canyon, as it is a known unconventional target, but not productive in the immediate areas.
- However, the same surveillance data program implemented for the deeper production, will be implemented for any offset DMG unconventional wells, if encountered in the future.

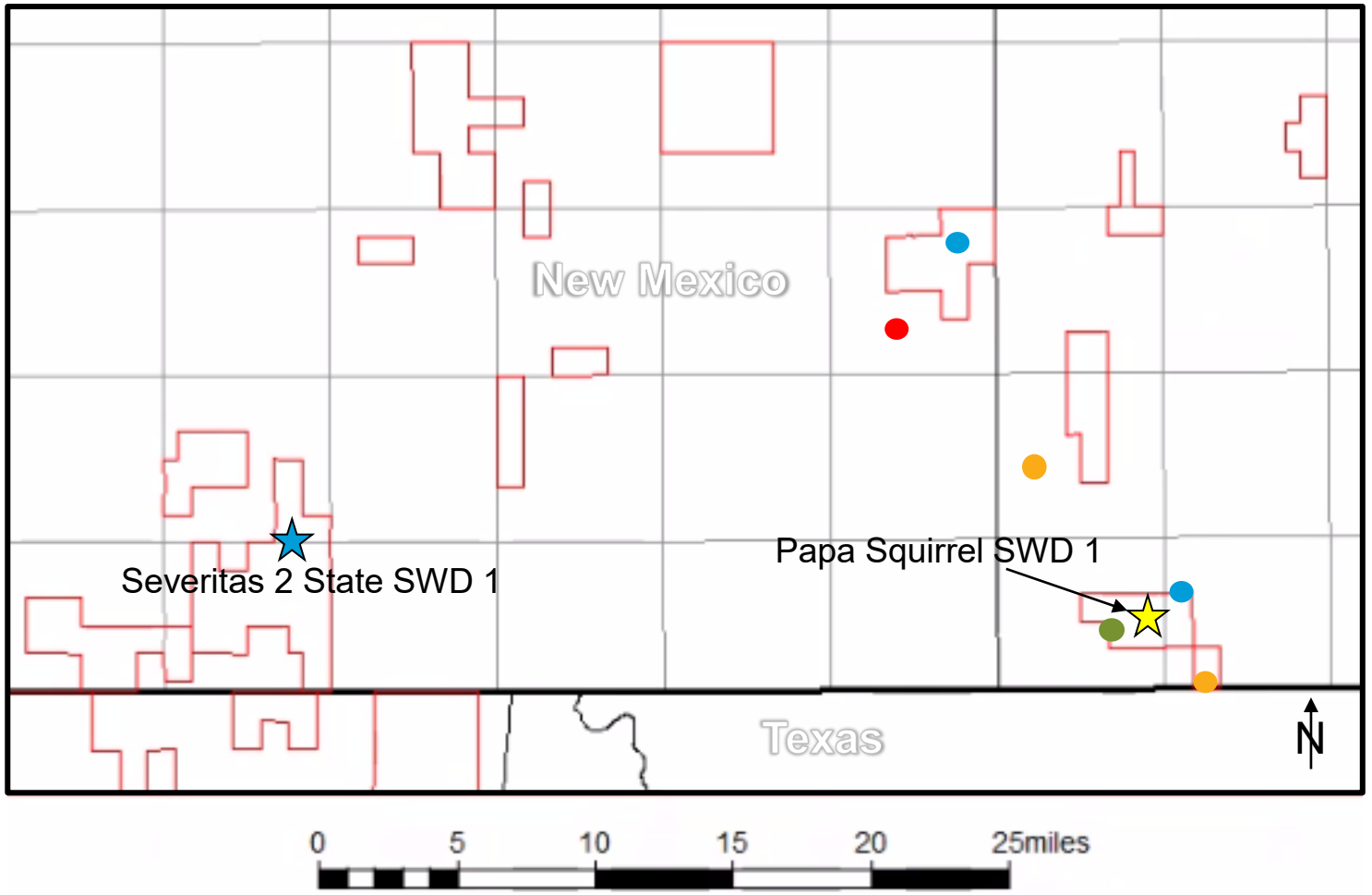
Watercut is not a definitive test of SWD interference

- In 2016, an operator workgroup shared observations with the OCD regarding Avalon and DMG production changes potentially being caused by DMG injection
- Potentially affected wells were identified when the last 6-month water cuts were higher than the cumulative water cuts.
- **Hypothesis was that watercut increases were due to shallow SWD in the area.**
- **Other potential causes were typically not investigated**



Case Study Locator Map

Several case studies indicate alternative hypotheses can explain the observed increases in water cut.



- WCA completions affected Avalon
- Avalon not affected by SWD
- Geologic features between DMG producer & SWD
- Geologic features between Avalon producer & SWD

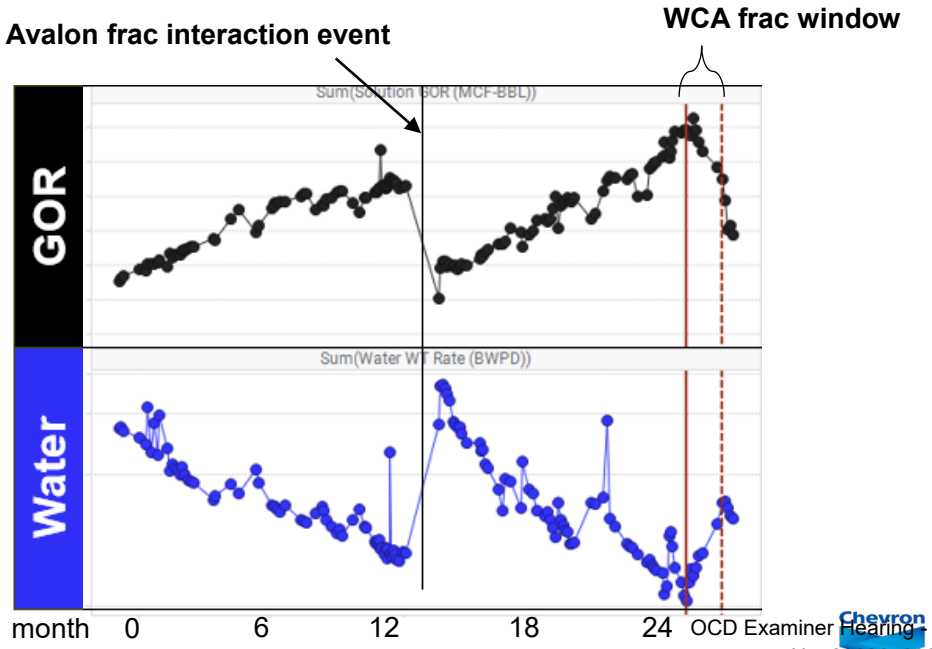
Wolfcamp Completions Affect Avalon Production

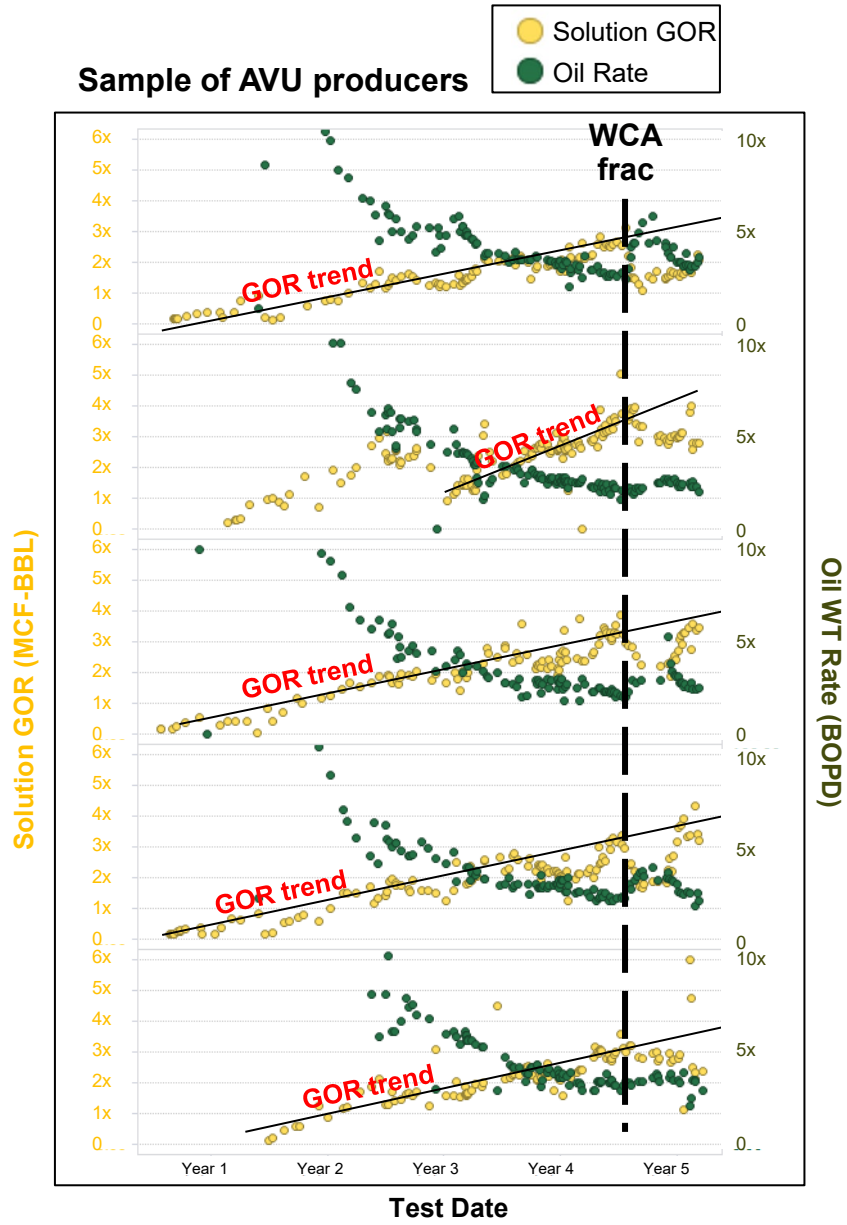
Wolfcamp Completions Result in Avalon Production Interaction

- 2019-2020: Observed significant production changes in Avalon wells overlying WCA fracs.
  - increases in liquids production (oil and water)
  - Order of magnitude decrease in producing gas-oil ratio (GOR)
- Assessment indicated WCA completions correlated with these changes

- In 2020, subsurface team confirmed the interactions with targeted surveillance

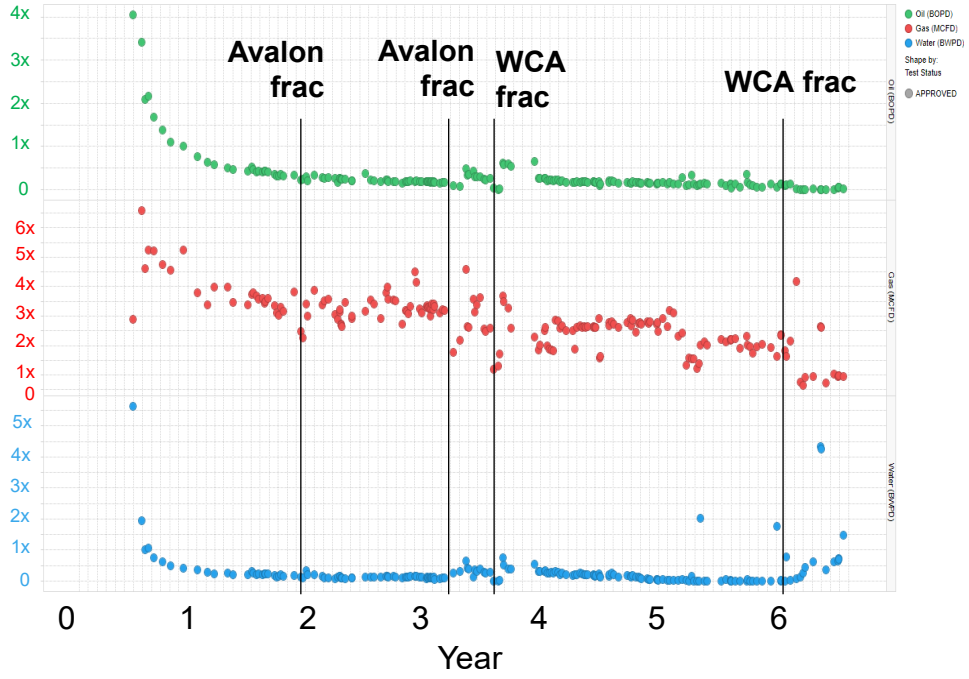
- **Each pad of WCA wells has since predictably resulted in an Avalon watercut and GOR changes**

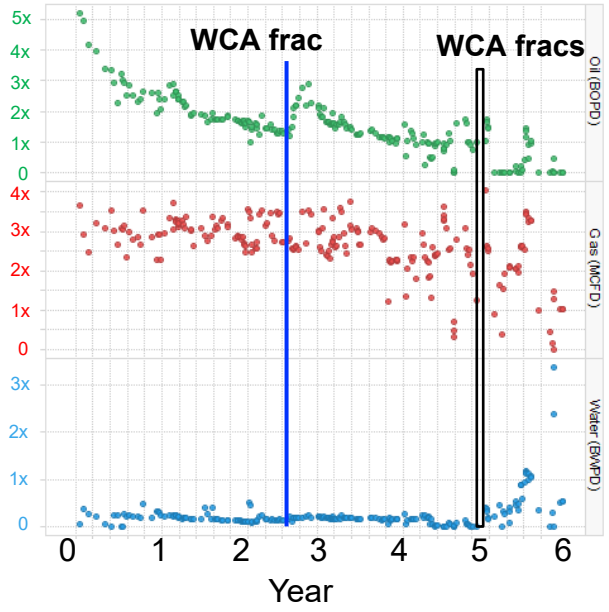


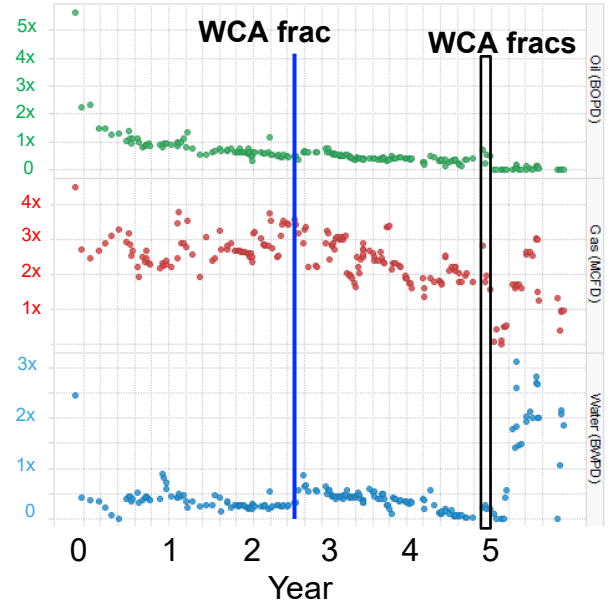


Wolfcamp Completions Have Initiated Extended Periods Of Water Influx in Nearby Avalon Wells

7 unique pads of WCA completions have interacted with ~40 Avalon producers

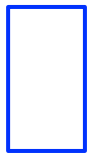




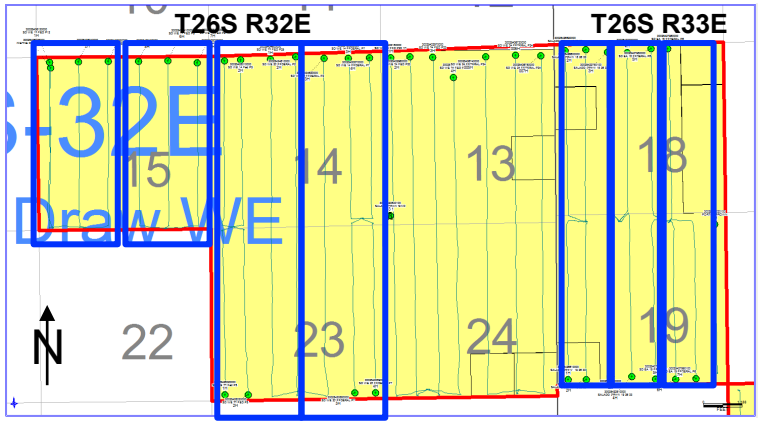


- **Many Wolfcamp fracture interactions were long-lasting which is not typical of the general industry view of fracture interaction duration**

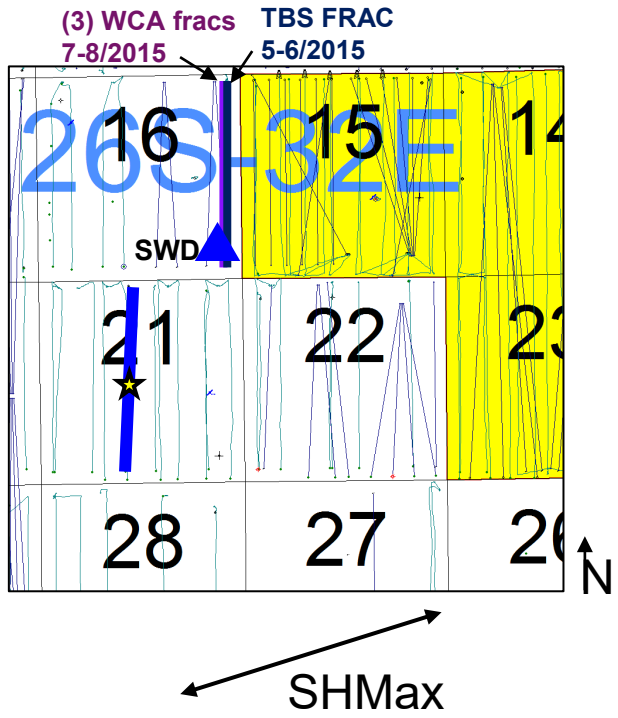
- **This long-lasting increase in water production following Wolfcamp completions is consistent with observations shared by industry in 2016 thought to be potential SWD interactions**

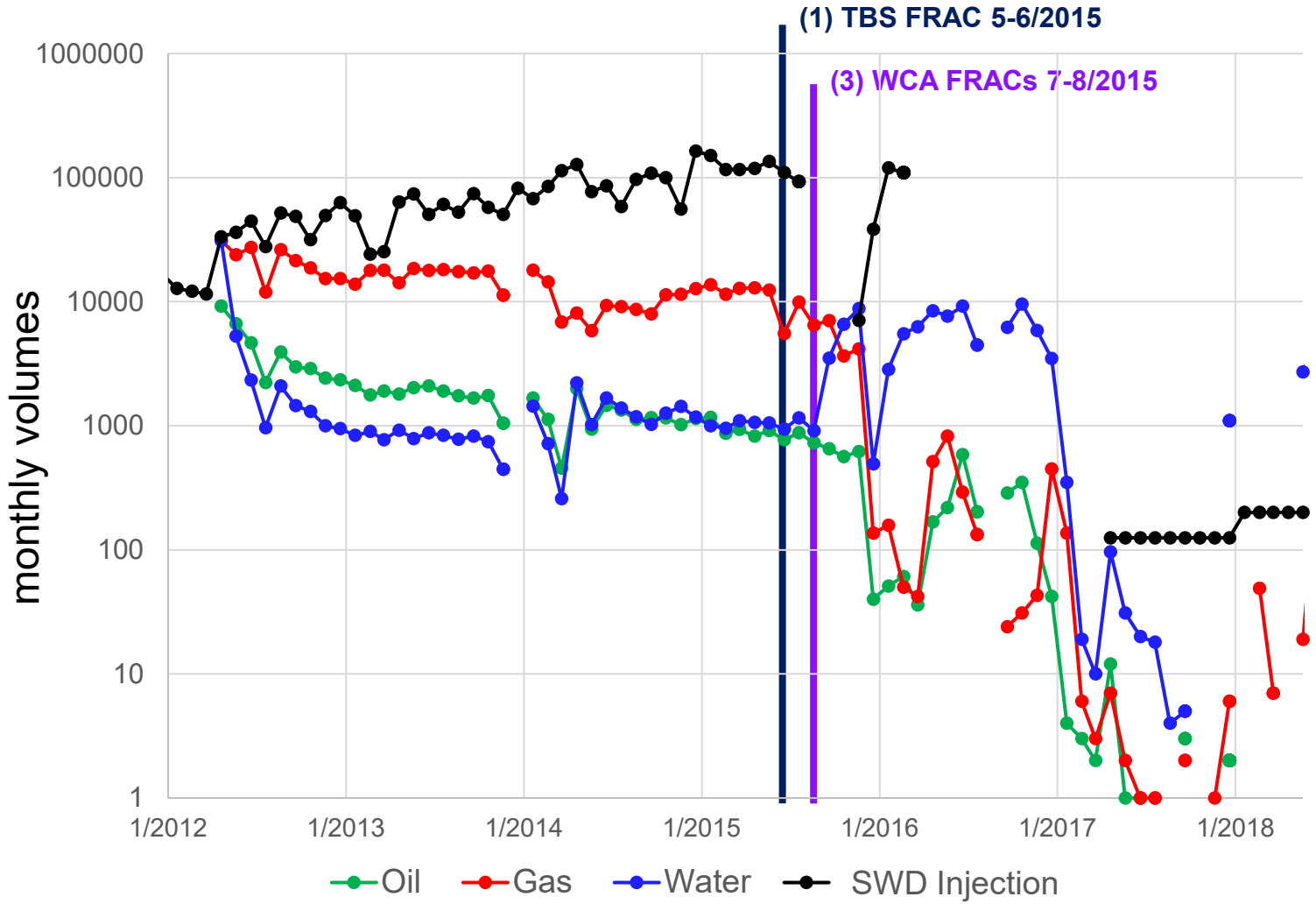


WCA pad



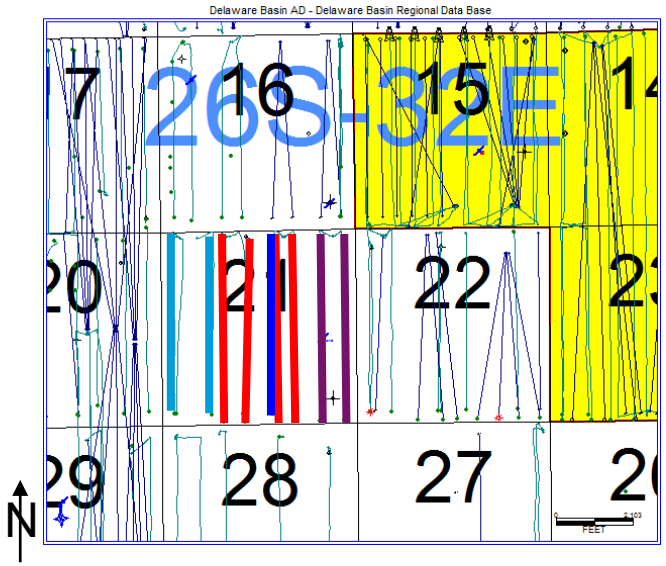
Wolfcamp completions correlate with production changes in the Avalon previously interpreted as SWD communication

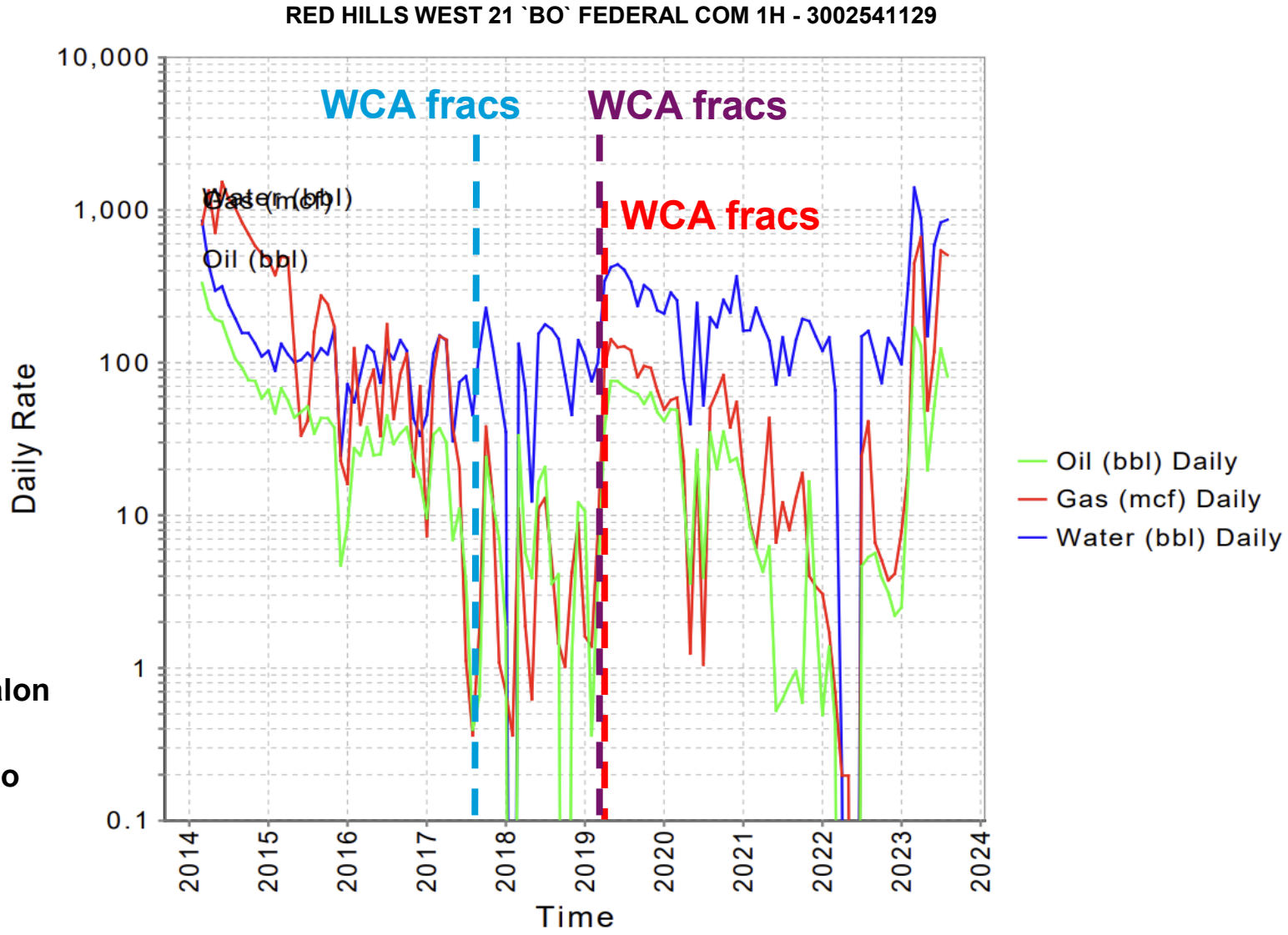




The initiation of the watering out event correlates with the Wolfcamp completion dates in well files

Wolfcamp completions impact Avalon production



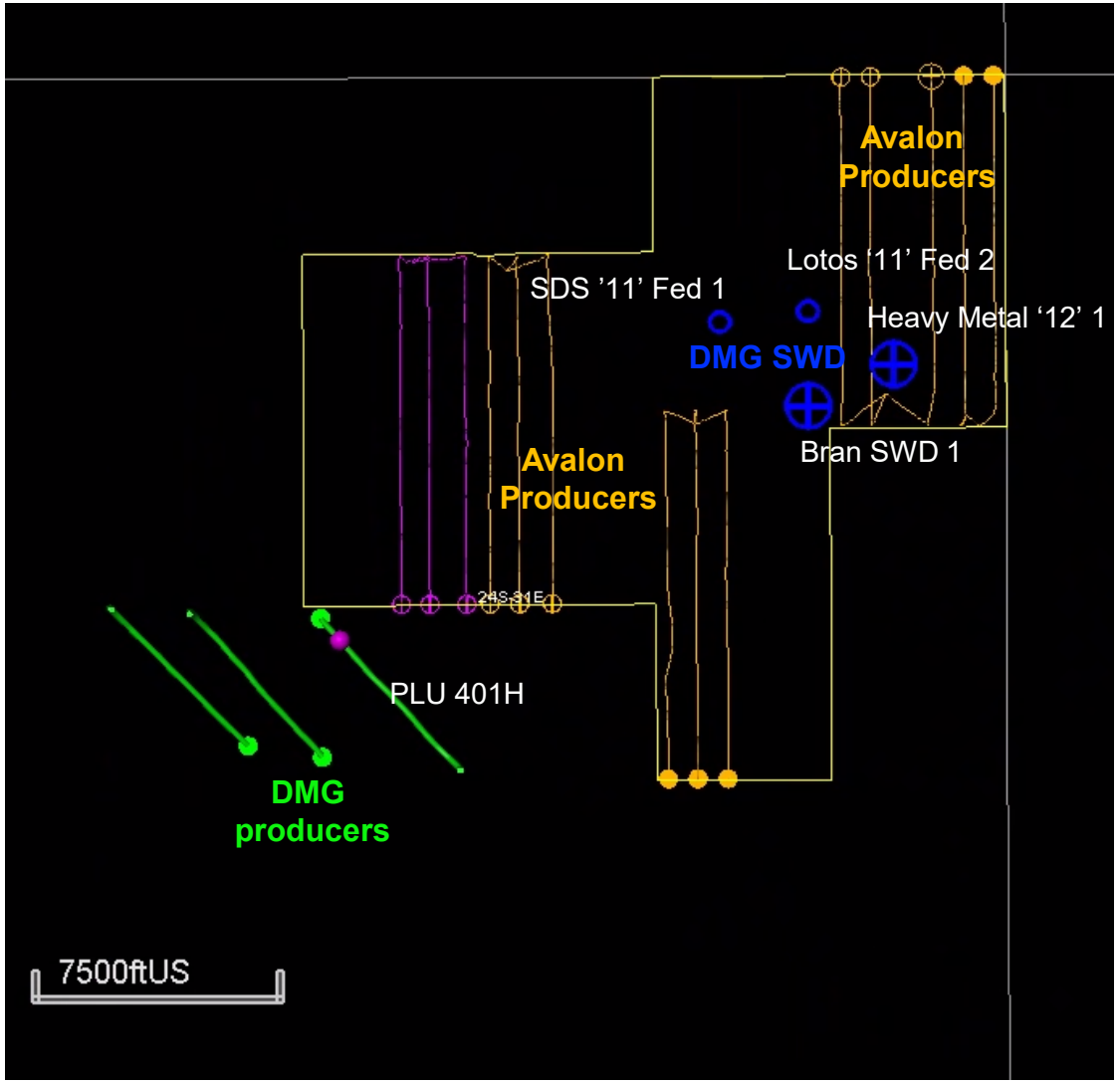


- **Following underlying WCA completions, oil and water production jumped significantly in this Avalon well.**
- **Consistent with observations in Chevron's Salado Draw**

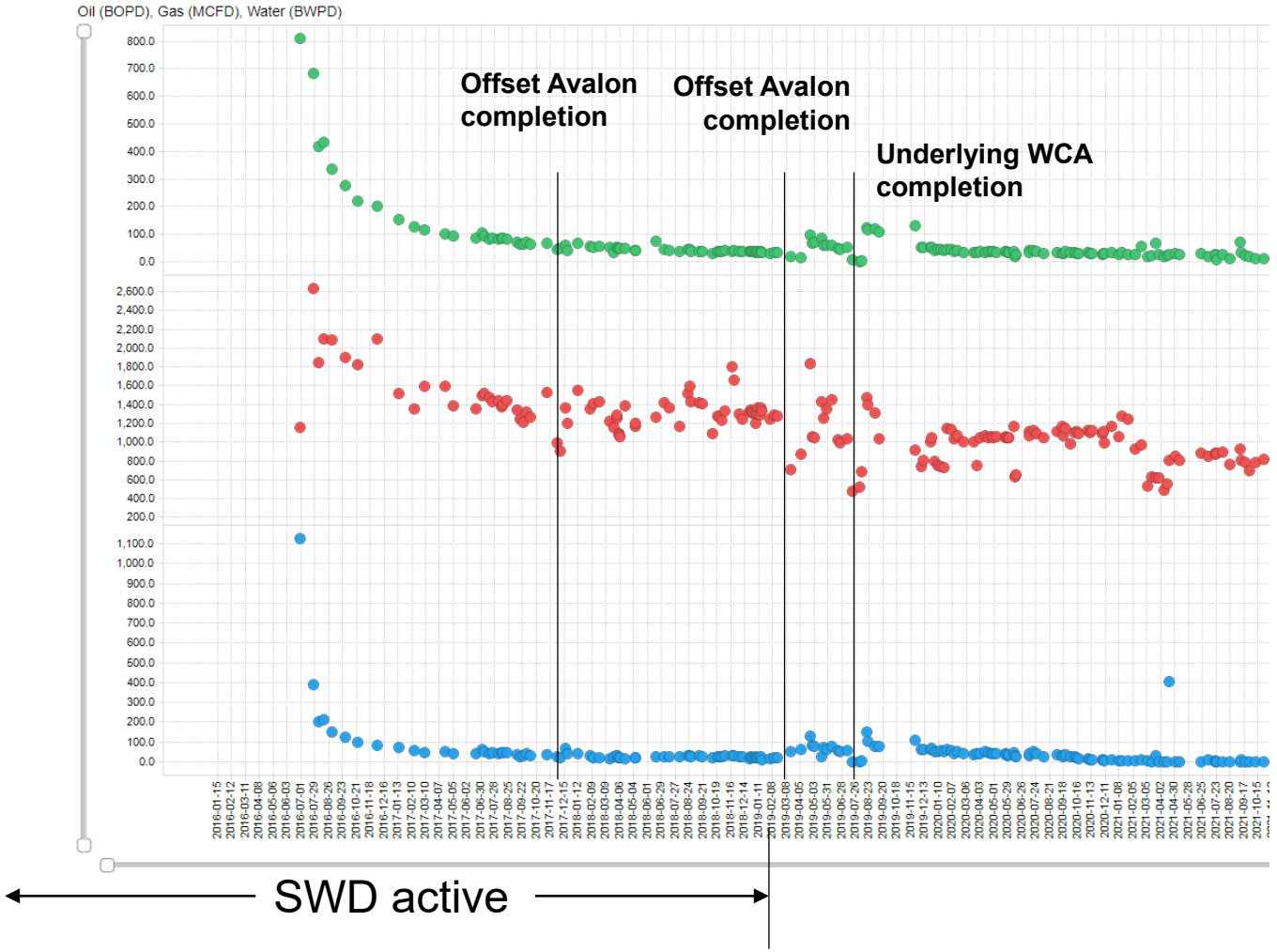
Avalon wells not affected by DMG disposal

Chevron Avalon wells not affected by overlying DMG disposal

- Chevron Lower Avalon wells located between DMG SWD and DMG producers were not affected by injection
- The DMG producers experienced high water production and pressure increases that correlated with DMG injection
- Chevron's Avalon wells produced at stable rates and water cuts with no indication of interaction with the DMG disposal wells



Chevron Avalon wells not affected by DMG injection across lease line

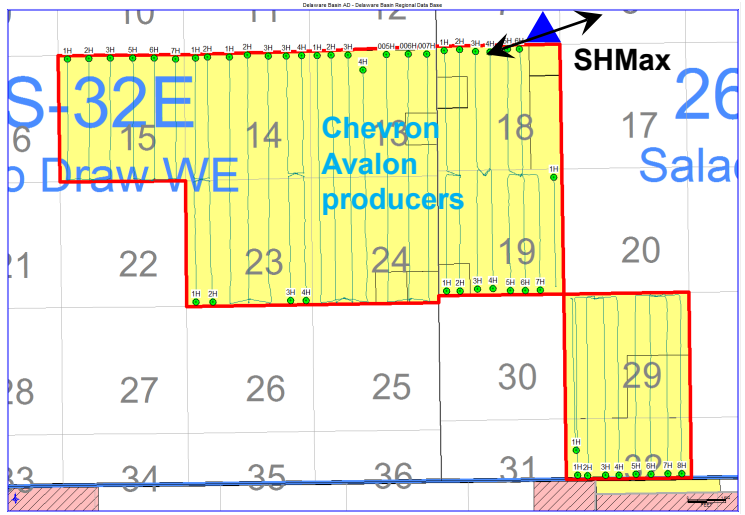


Near the end of SWD injection period:

- Avalon static bottom hole pressures 500 – 800 psig
- 40-60 bbl/day total fluid at a 50% water cut
- Stable decline rates

Mesa B: 3002542462 (P&A)

- Typical inj. rate = 2-4 Mbpd
- Last injection Feb 2019
- 1.8MM bbl. cumulative

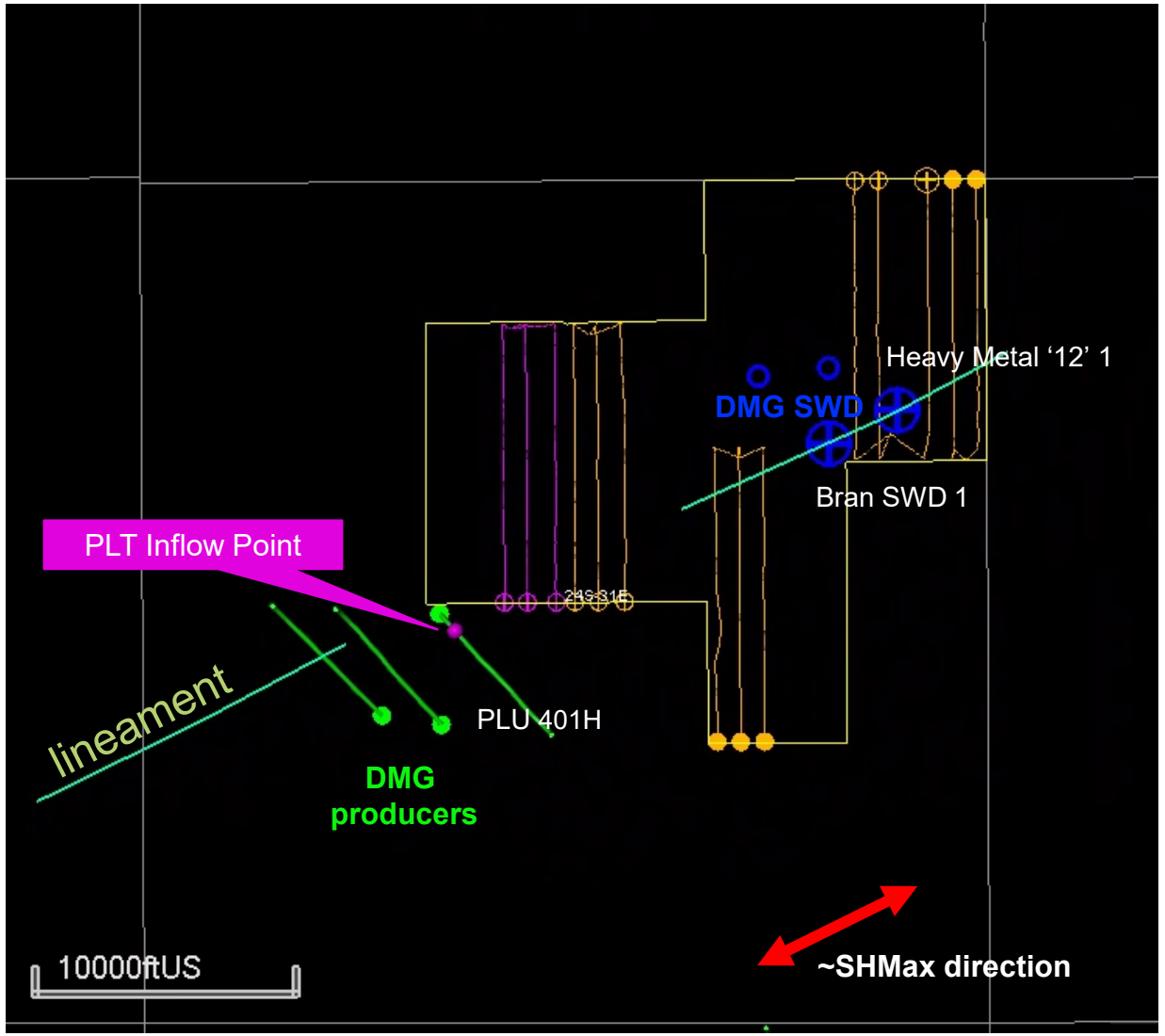


In cases where DMG SWD is a possible cause of DMG or Avalon water production, faulting or lineaments were identified

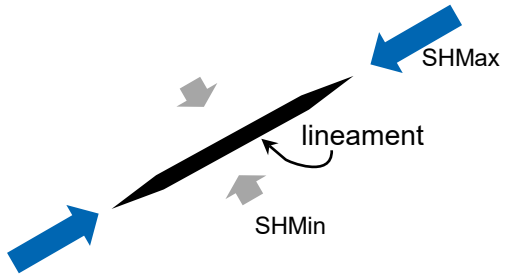
Lineaments parallel to SHmax identified between injectors and DMG producers

- 2 potential lineaments mapped on vertically exaggerated 3-D seismic horizons may provide insights into the communication within the DMG between Mesquite SWD's and the PLU 401H (Brushy Canyon well)

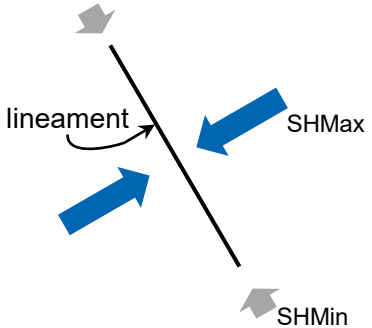
- **When SHmax aligns with a lineament or fault, the effect is an opening force on the lineament allowing for fluid migration**



Fractures striking parallel to SHMax open, enabling fluid migration

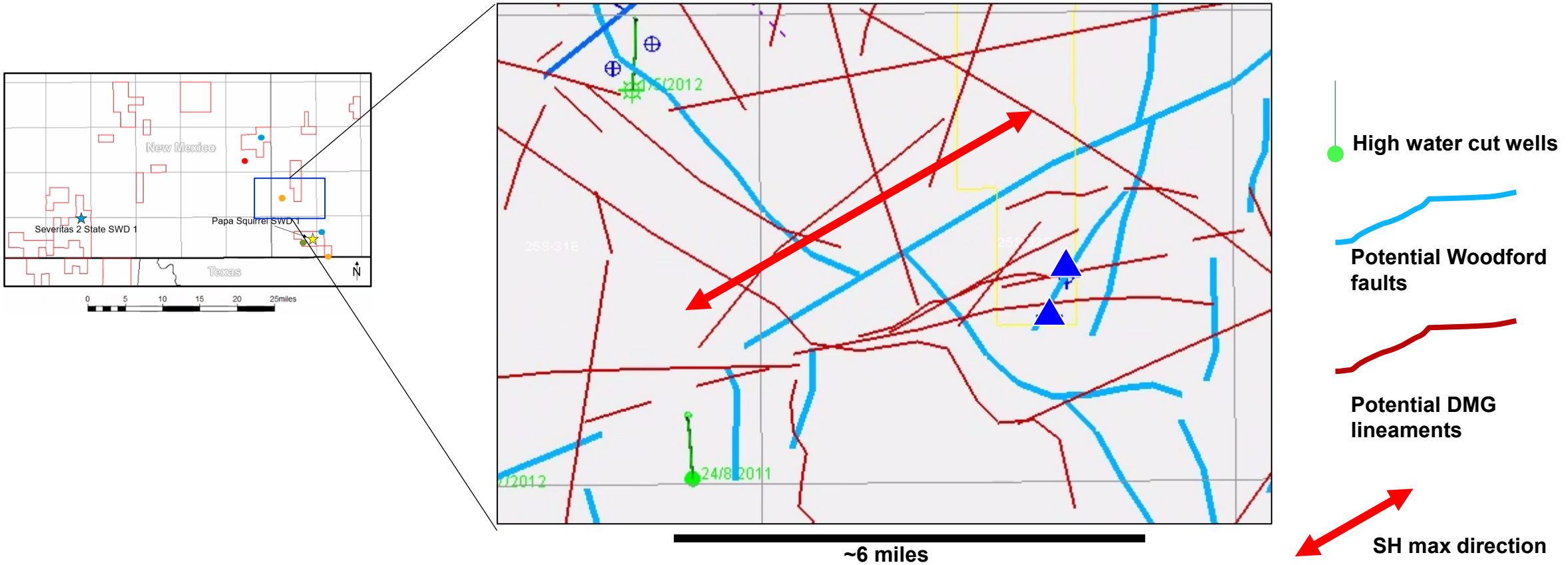


Lineaments striking perpendicular to SHMax close, restricting fluid migration



Lineaments Parallel to SHmax Potentially Contribute to Water Influx

- Basement strike slip fault system is co-parallel with overlying network of DMG lineaments
  - Producer and SWDs are ~4.5 miles apart
  - Woodford features coincident with possible DMG lineament networks are not widely observed
  - Correlation between SHmax direction and lineaments look to be a potential contributor in this case

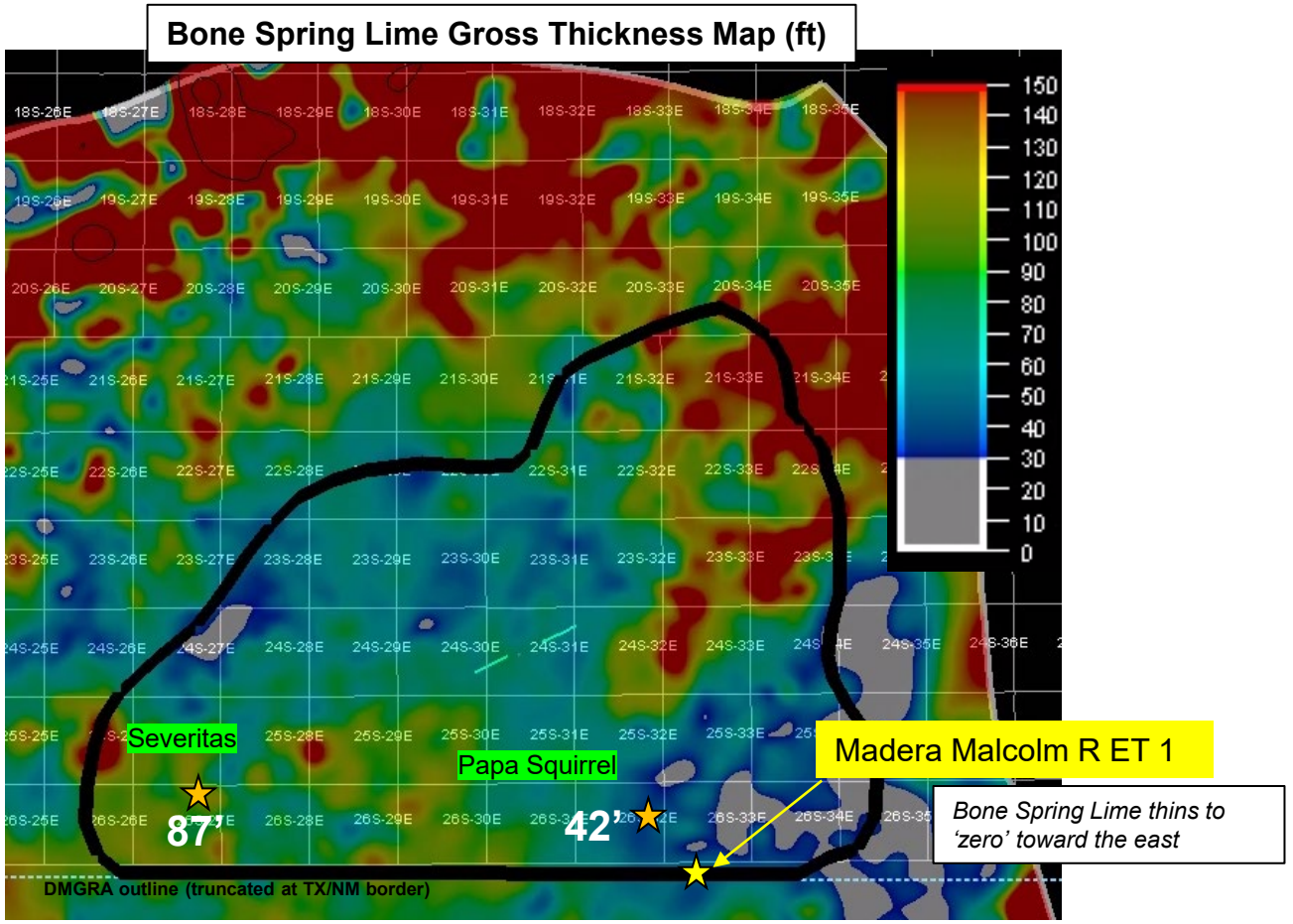


Bone Spring Limestone (BSL)
Lower Containment

Bone Spring Lime thickness varies across the basin

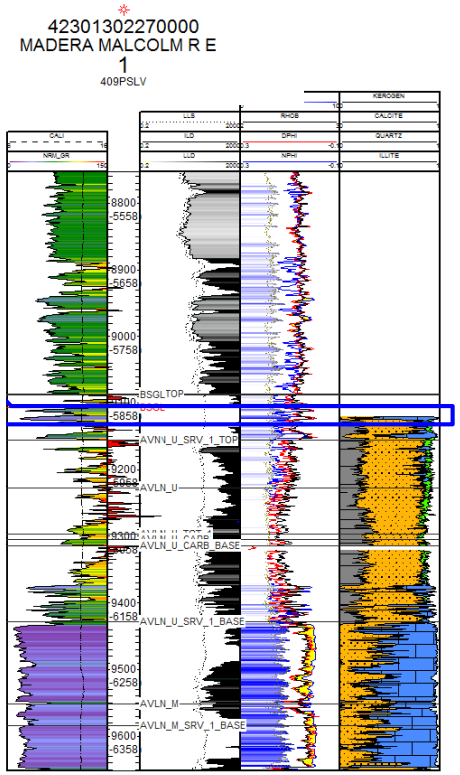
Modeling Overview:

- To determine the amount of Avalon completion gal/cluster that would require to breach an 8’ foot thick Bone Spring Lime formation
- A breach in the Bone Spring Lime may lead to watering out underlying Avalon development wells



BSL isochore is 87 and 42 feet, respectively, in the Severitas and Papa Squirrel.

Bone Spring Lime



~8’ thick
2 thin beds

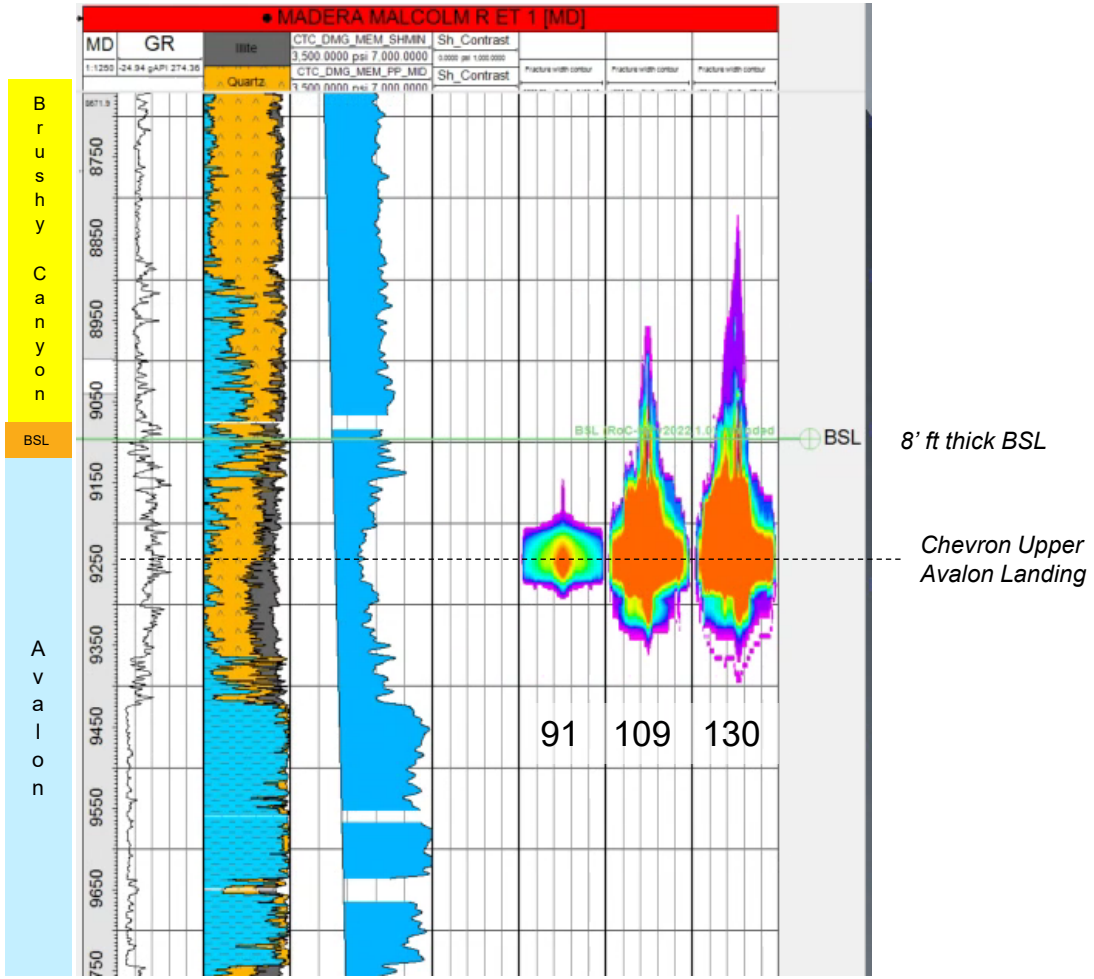
Models Indicate an 8’ Thick Bone Spring Lime is not Breached by Typical-sized Avalon Completions

Methodology

- Planar 3D in Kinetix was used to assess the chance of fracture growth into the DMG for each sensitivity.
  - Base pump schedule: 1500 #/ft 1500 gal/ft at 6 clusters on 45’ spacing
  - SVC sensitivities: 69, 79, 91 Kgal/cluster [1500, 1750, 2000 intensities]
  - Pump Rate sensitivities: 70 & 100 bbl/min
- SVC sensitivities to find the point at which the rock breach through the Bone Spring Lime [91, 109, 130K gal/cluster]

Results:

- Simulation shows low chance of breaching through the BSL. At volumes higher than 109 Kgal/cluster, the chances of breaching through the Bone Spring Lime increases.
- **BSL isochore is 87 and 42 feet, respectively, in the Severitas and Papa Squirrel. There is a much less likely chance of breaching in subject SWDs**.
- **The Bone Spring Lime is not breached during intentional Avalon hydraulic fracture operations. SWD operating at lower pressure gradients and greater vertical offset are unlikely to breach the Bone Spring Lime.**

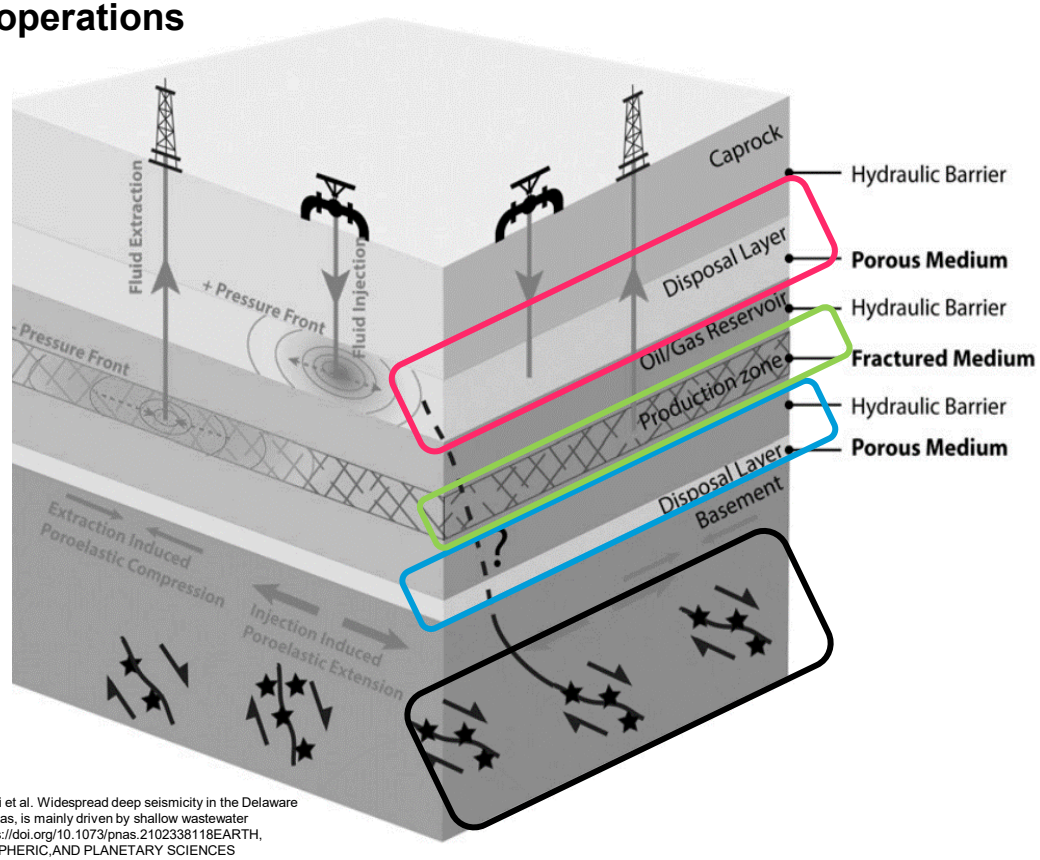


Summary

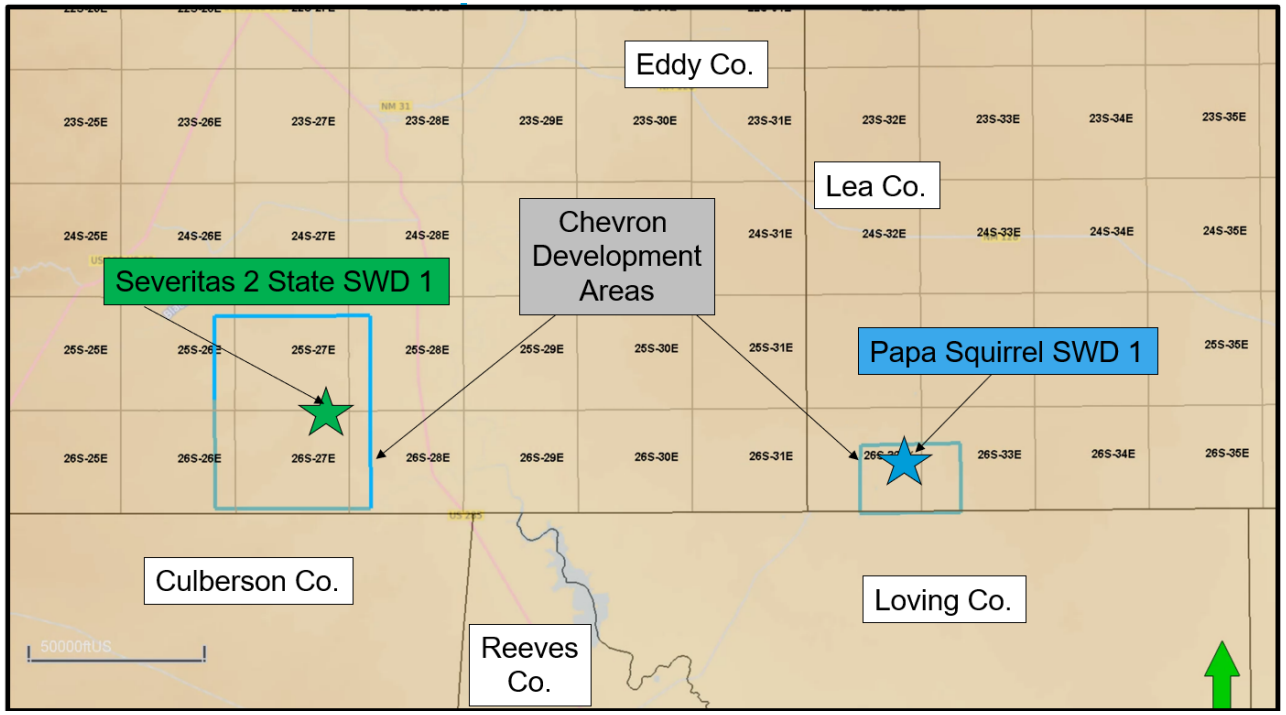
- **Watercut is not a definitive test of SWD interference**
- **Wolfcamp completions have consistently resulted in Avalon watercut and gas-oil-ratio changes in Chevron's Salado Draw area**
- **Avalon producers are operated offsetting and underlying DMG injection without indications of communication**
- **When SHMax aligns with a lineament, the effect is an opening force on the lineament enabling fluid migration**
- **The Bone Spring Lime is not breached during Avalon completions. SWD operations at lower pressure gradients and greater vertical offset are unlikely to breach the Bone Spring Lime**

Seismicity Review

Geological theoretical layer model for Permian Basin operations



Modified From Zhai et al. Widespread deep seismicity in the Delaware Basin, Texas, is mainly driven by shallow wastewater injectionhttps://doi.org/10.1073/pnas.2102338118EARTH, ATMOSPHERIC,AND PLANETARY SCIENCES



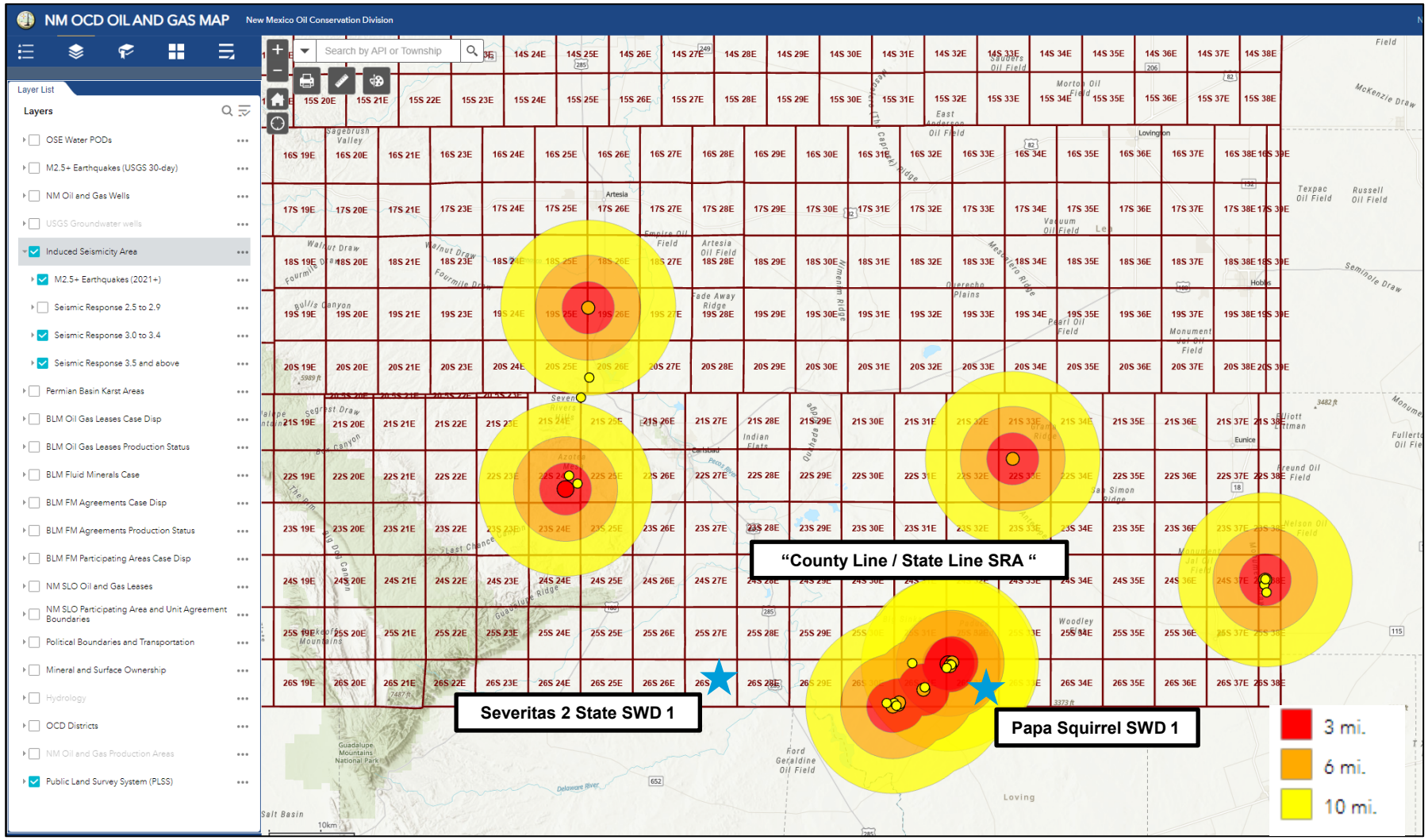
Shallow injection: in SE. New Mexico ~ 5,000 – 7,000'

Production: in SE. New Mexico ~ 6,500-12,500

Deep injection: in SE. New Mexico ~ 17,000-20,000'

Seismicity ~ 20,000'+

New Mexico Seismic Review Areas “SRA”

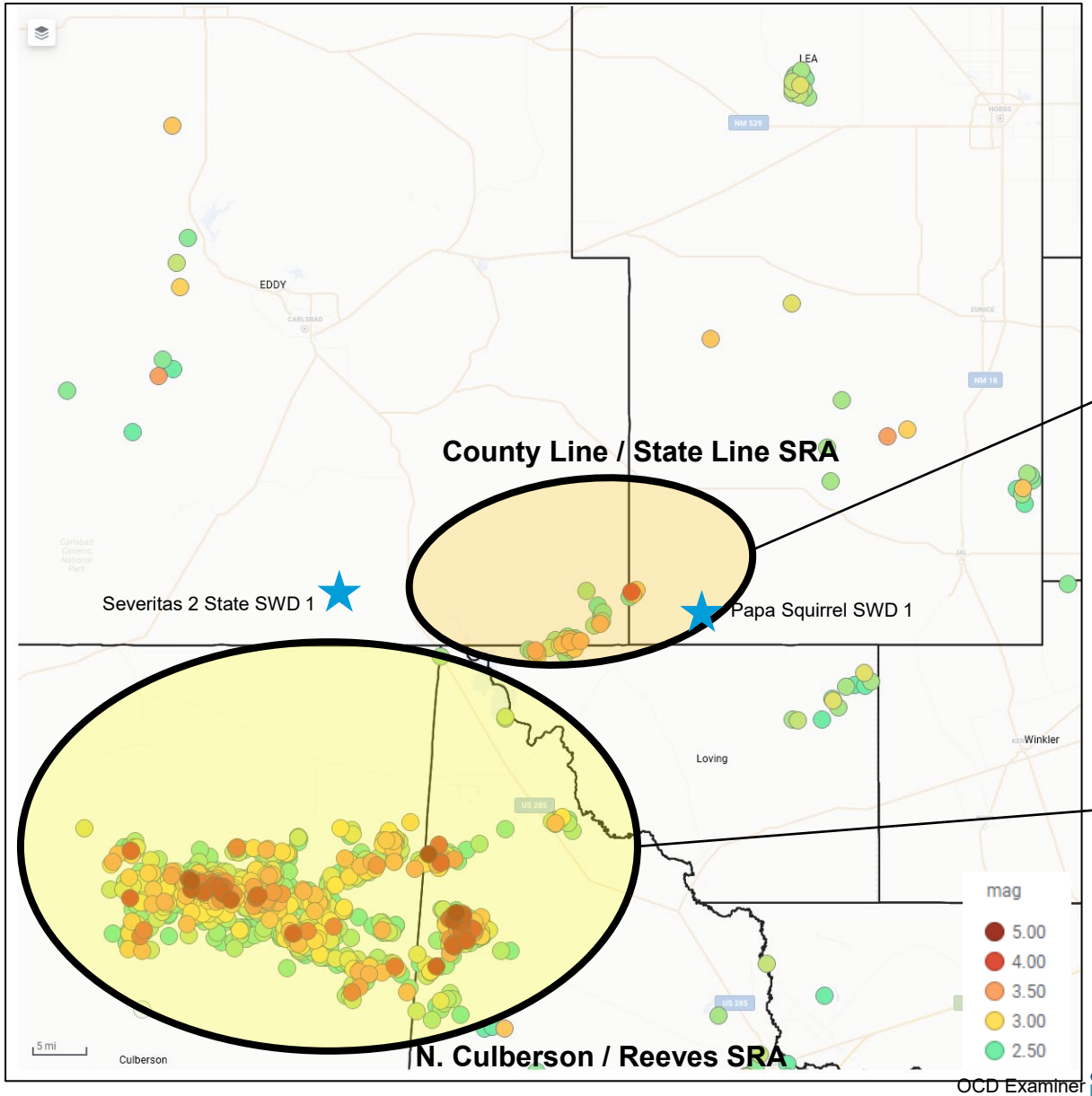


Map depicts current NMOCD SRA area (as of 9/29/23)

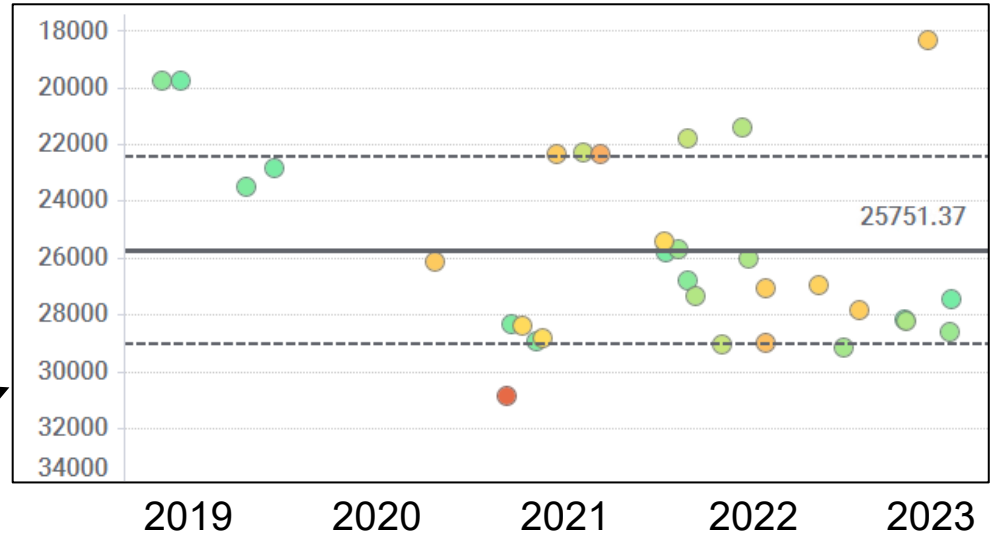
Papa Squirrel SWD 1 lies within the “County Line / State Line” SRA

Severitas 2 State SWD 1 is outside of any SRA

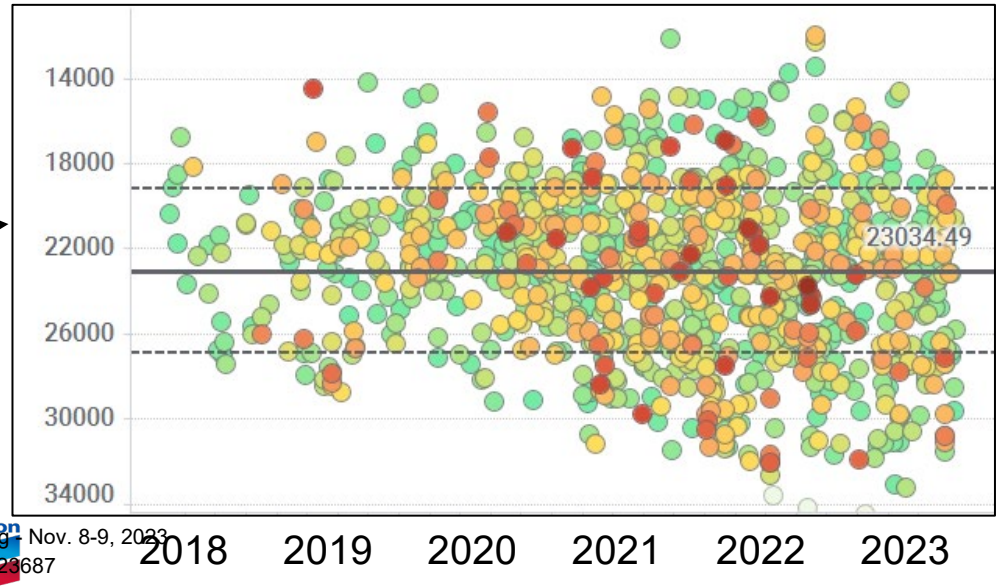
Deep Seismicity within N. Delaware Basin



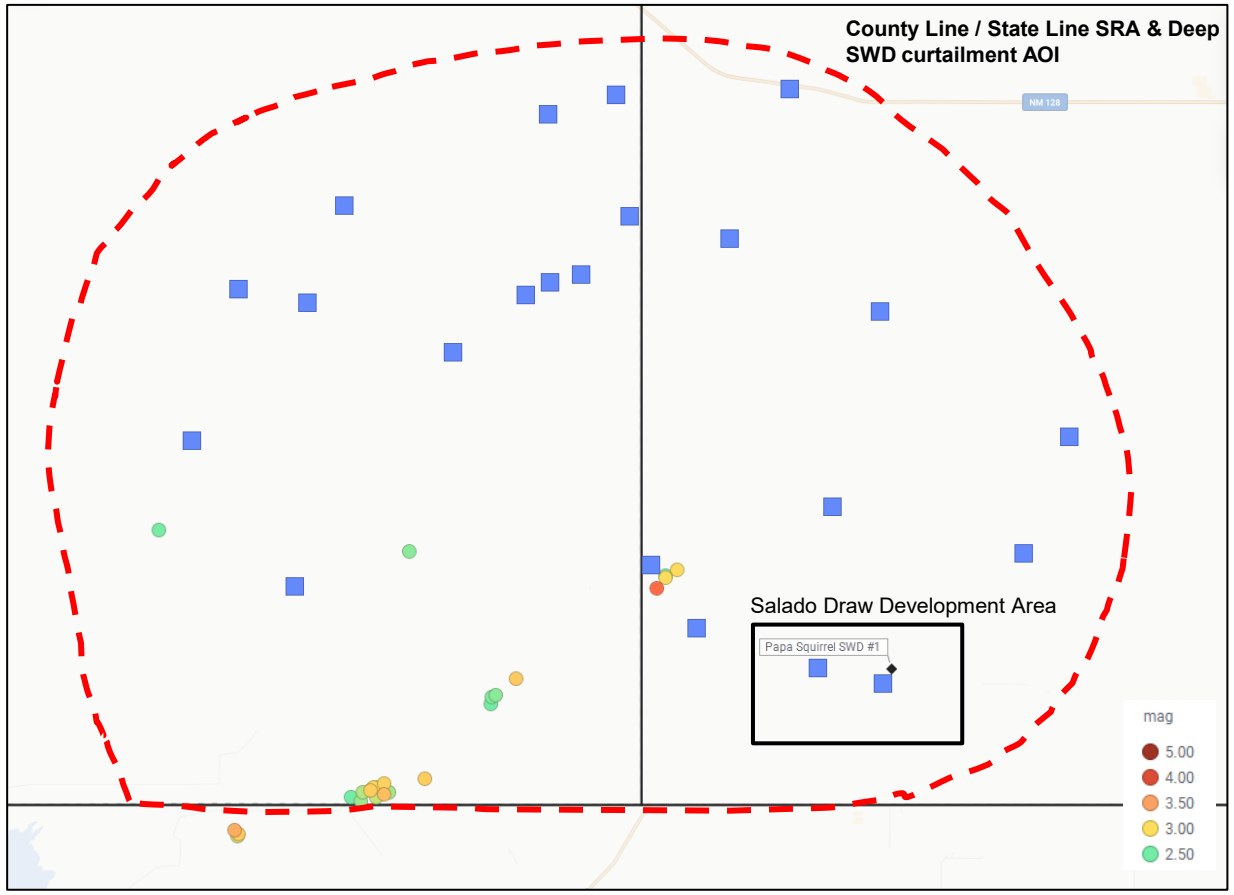
Depth (feet) of events within SE. New Mexico over time



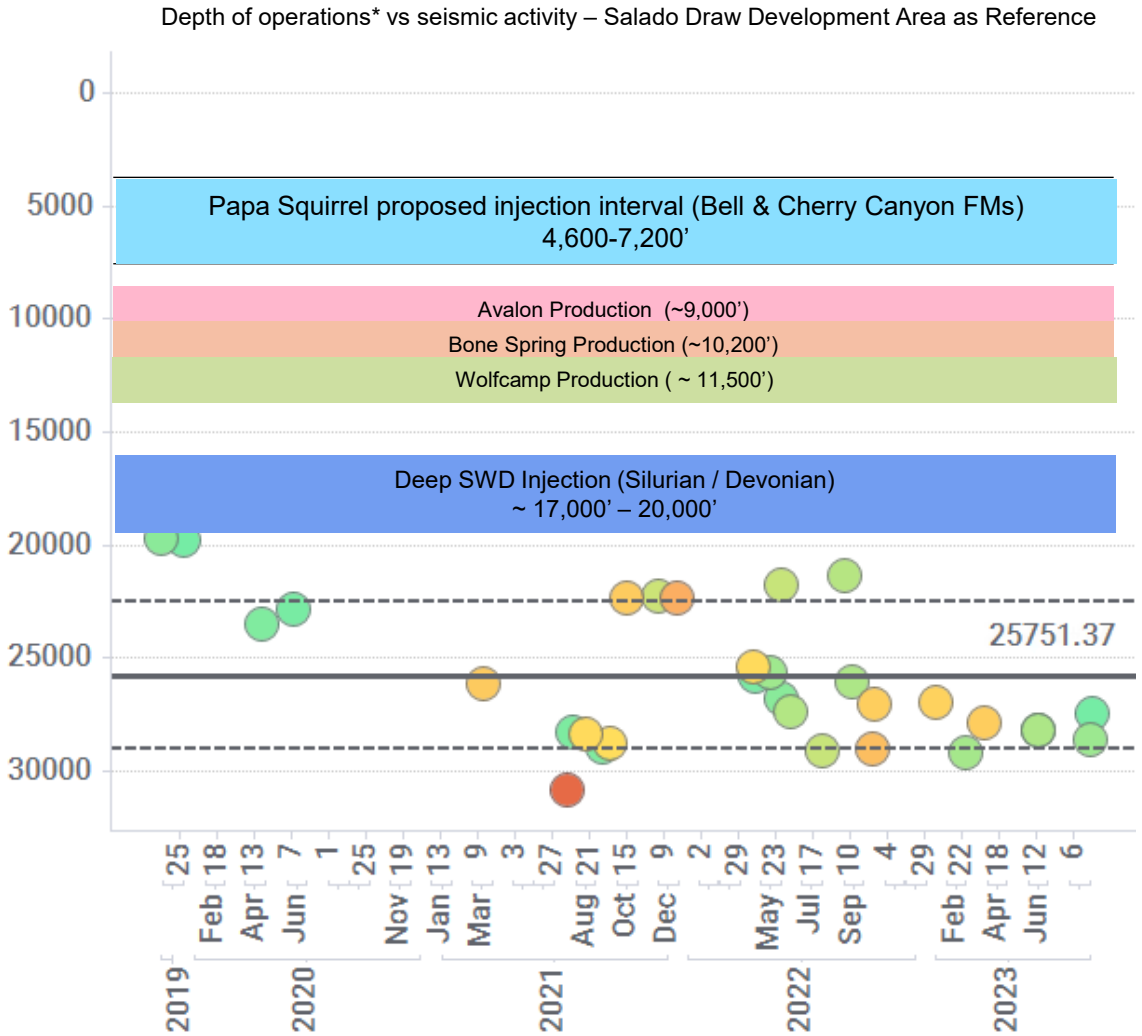
Depth (feet) of events within N. Culberson / Reeves SRA over time



Seismicity Confined within Silurian / Devonian

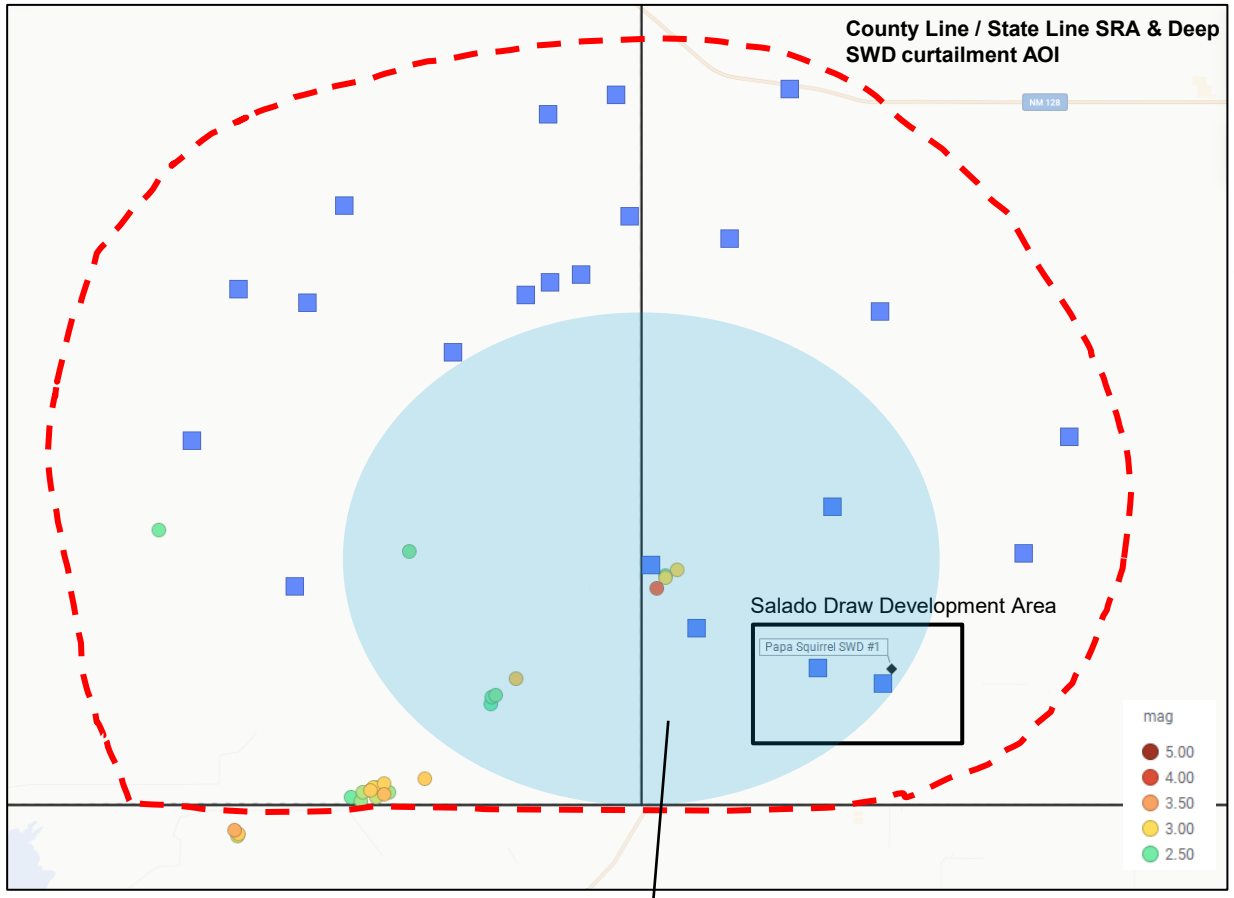


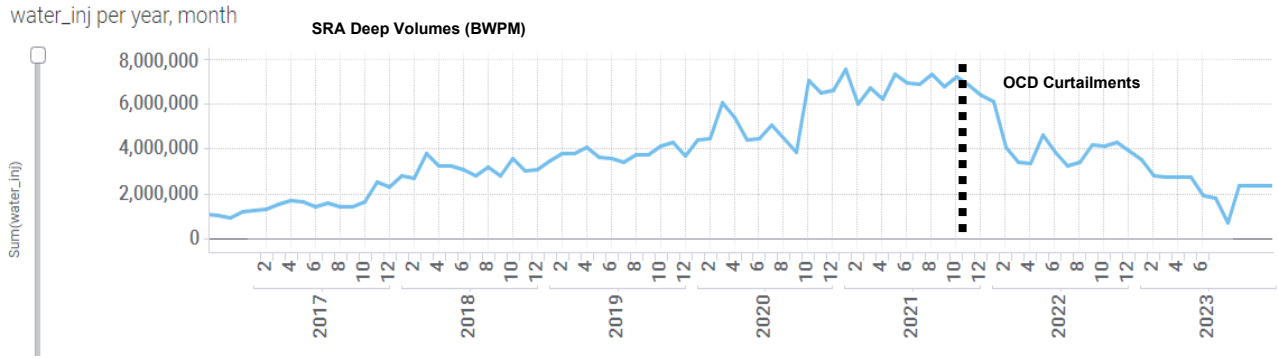
Blue wells note deep SWD wells within the SRA boundary. Only deep SWD wells are curtailed or impacted by SRA protocol.

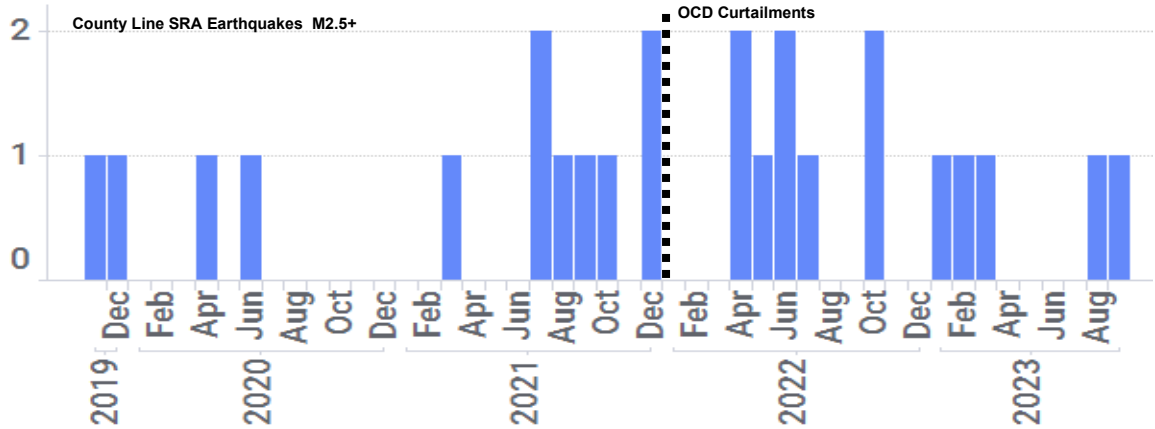


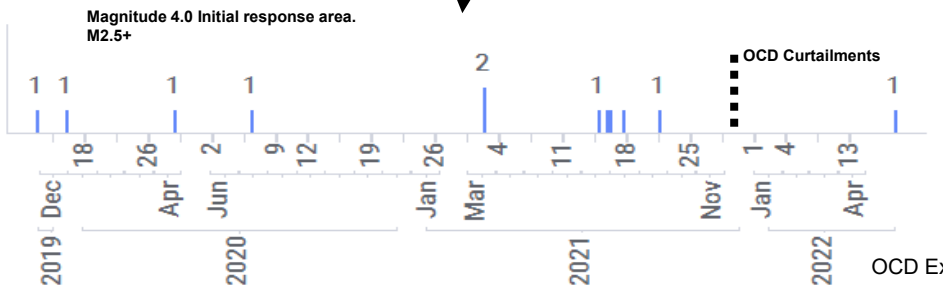
* Source of depths from well tops

SRA Volume Curtailments Correlate with Reduced Seismic Activity



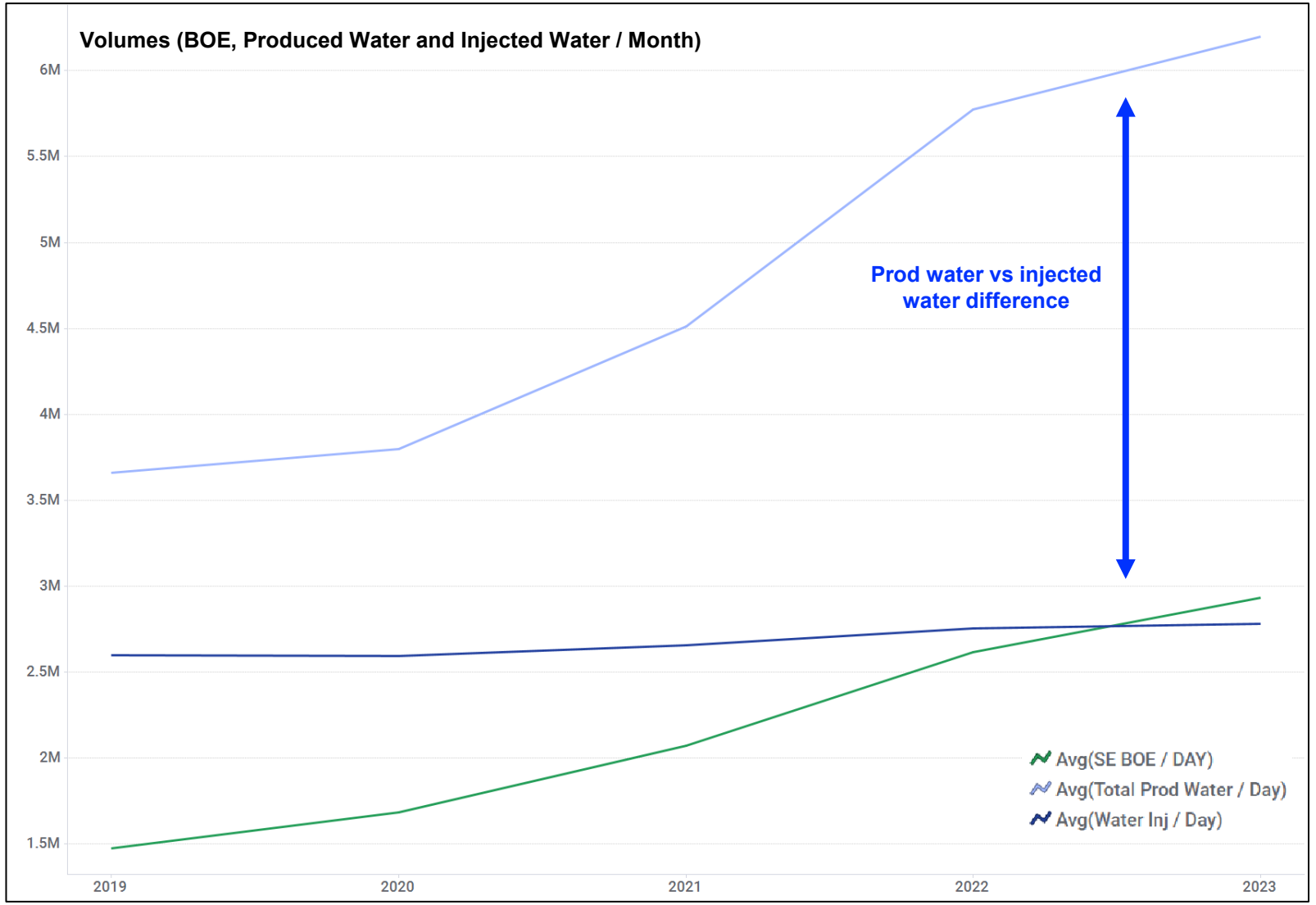






Above note deep SWD volumes curtailed within SRA. Curtailments took daily average deep volumes from ~235KBPD to ~ 100KBPWD. Within the immediate M4.0 area, seismicity has fallen off (bottom left plot) with only one M2.5+ event within 6.0 miles of M4.0 event. Most of the recent events right along the NM / TX border.

SE New Mexico (Permian Basin) Production

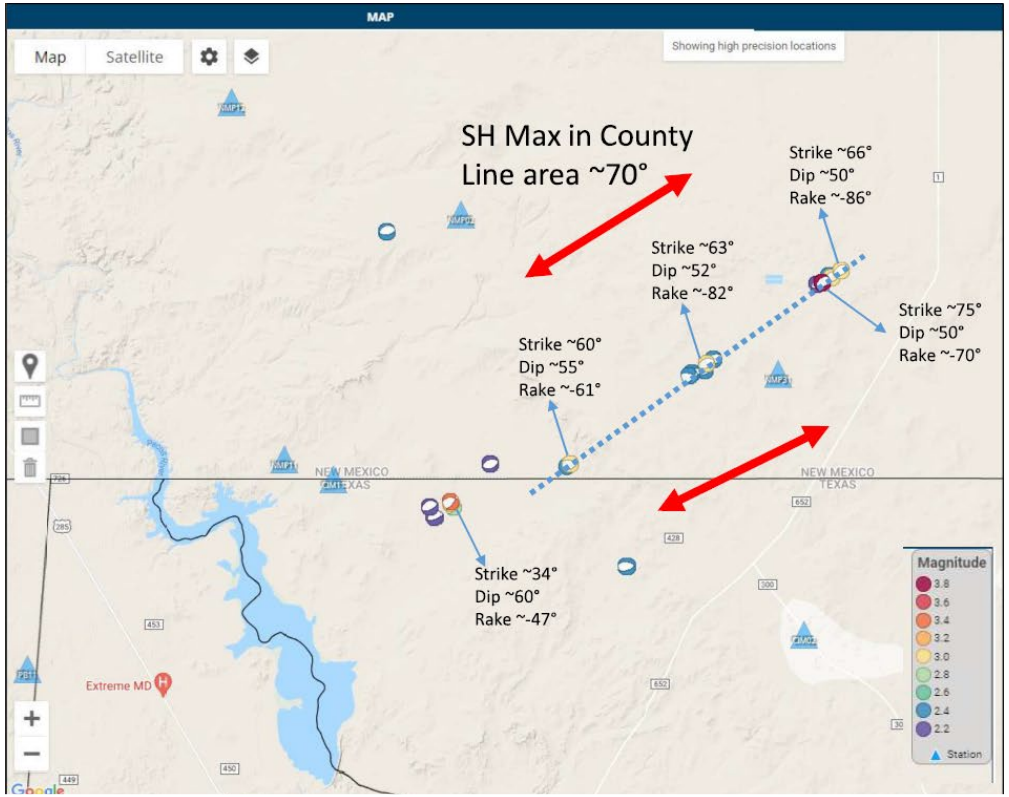


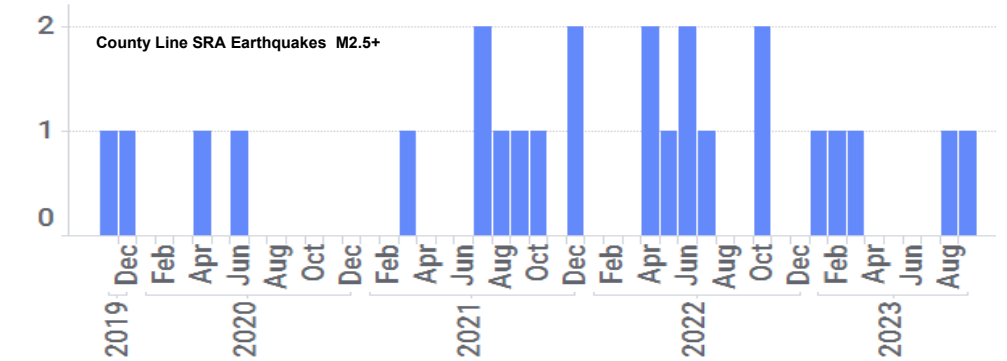
Plot for SE New Mexico (Eddy and Lea CO)

~ 3MM BWPD difference vs total water production and injection

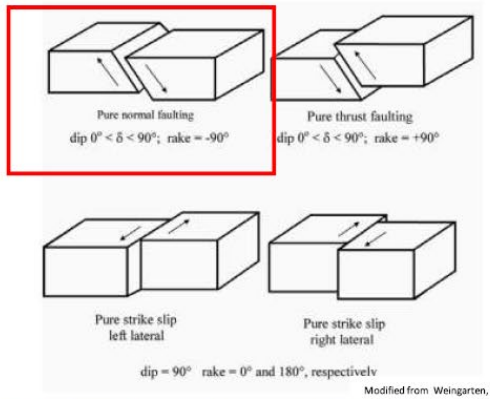
Data from NMOCD Statistics (https://www.emnrd.nm.gov/ocd/ocd-data/statistics/)- S. New Mexico Only.

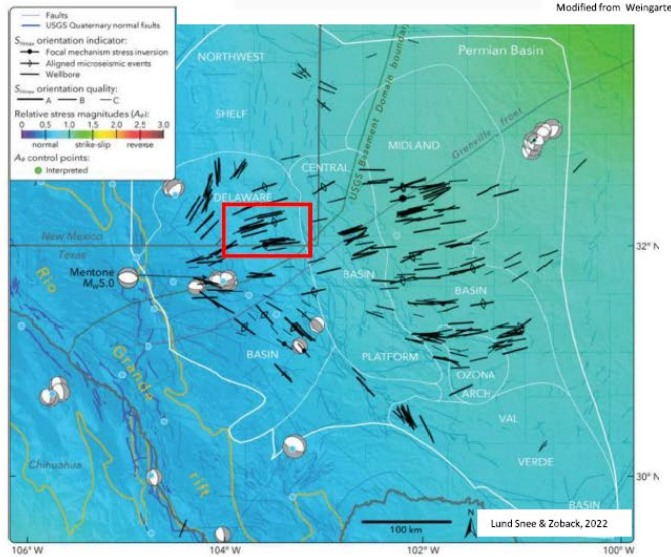
Chevron Undertook In-DepthTechnical Review



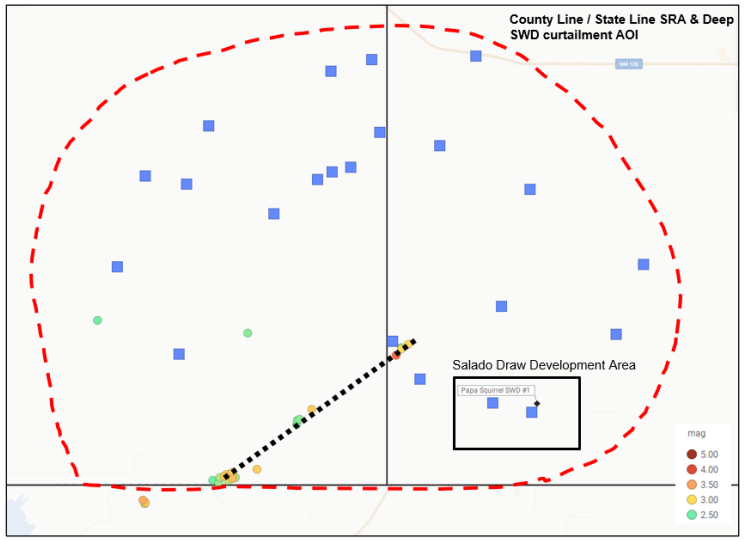


Fault properties
~ Dip of 52°
~ Strike of 65°
~ Rake of -70°





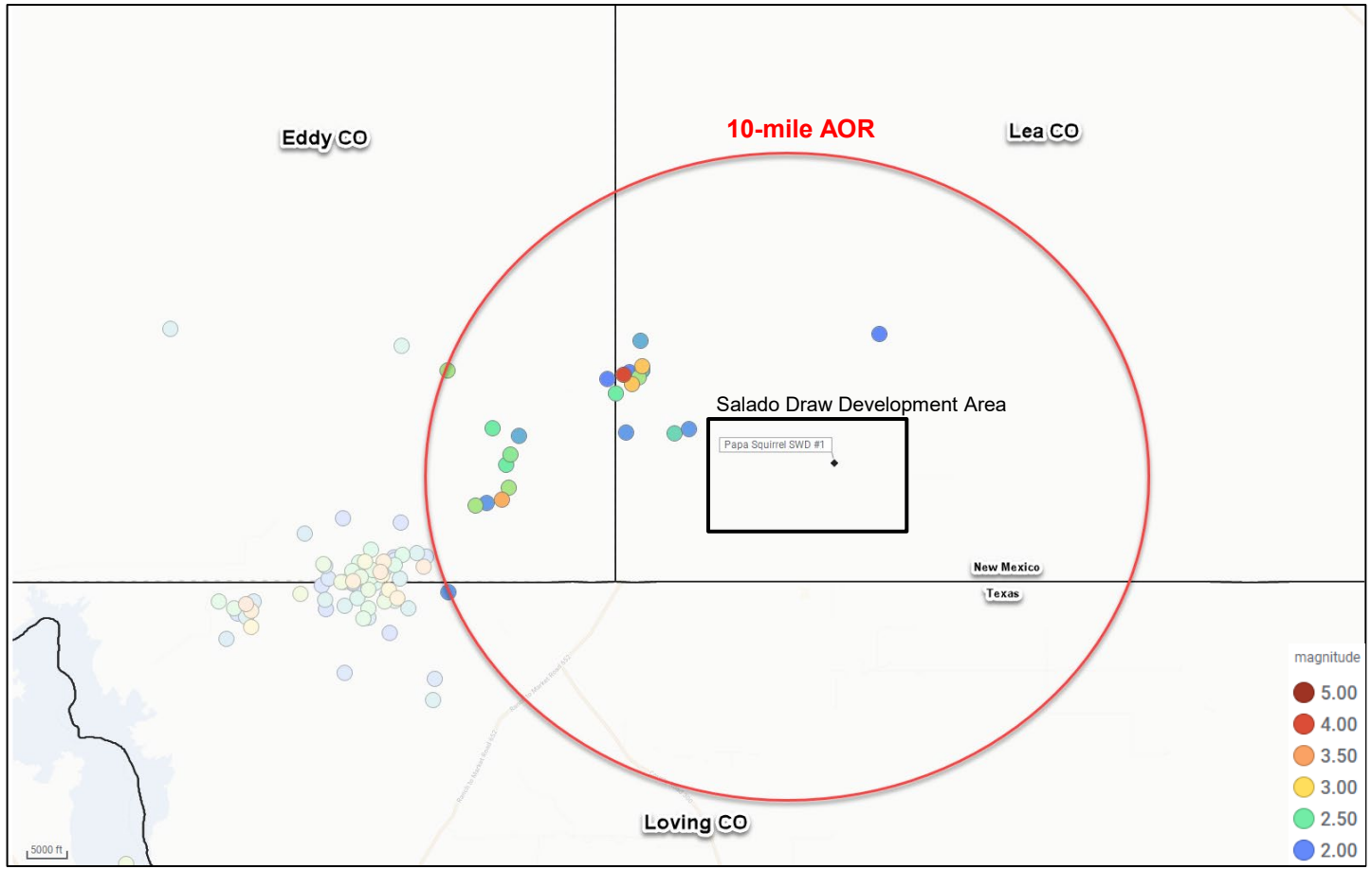
Lundstern,J.-E.,and M.D.Zoback(2016),StateofstressinTexas:Implications for induced seismiciy,Geophys.Res.Lett.,43,10,208–10,214,doi:10.1002/2016GL070974.

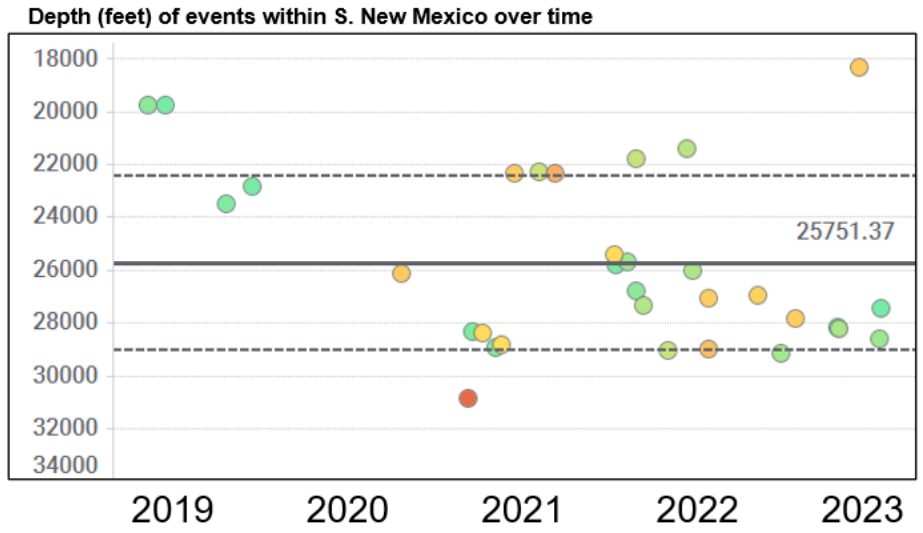


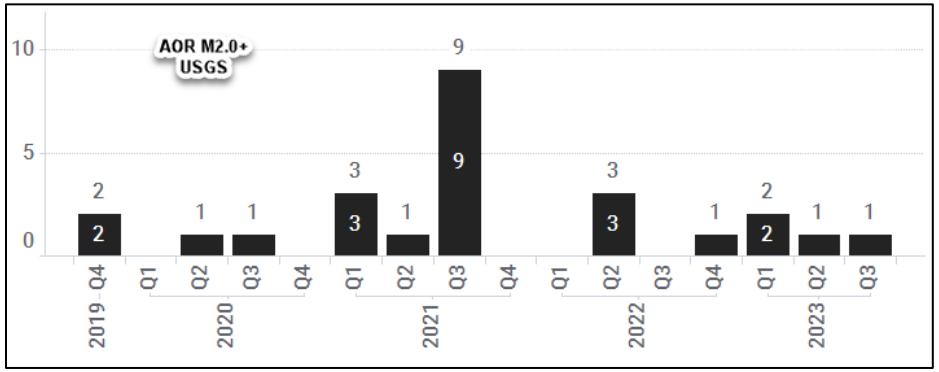
Based off stress data, SE New Mexico is in a dominantly normal faulting stress environment. Thus, faults oriented roughly parallel to this direction are more geologically prone to movement.

The Moment Tensors (MT) from Earthquake catalogs provide robust agreement with faults movement and regional stress.

Papa Squirrel SWD 1 Seismicity Review

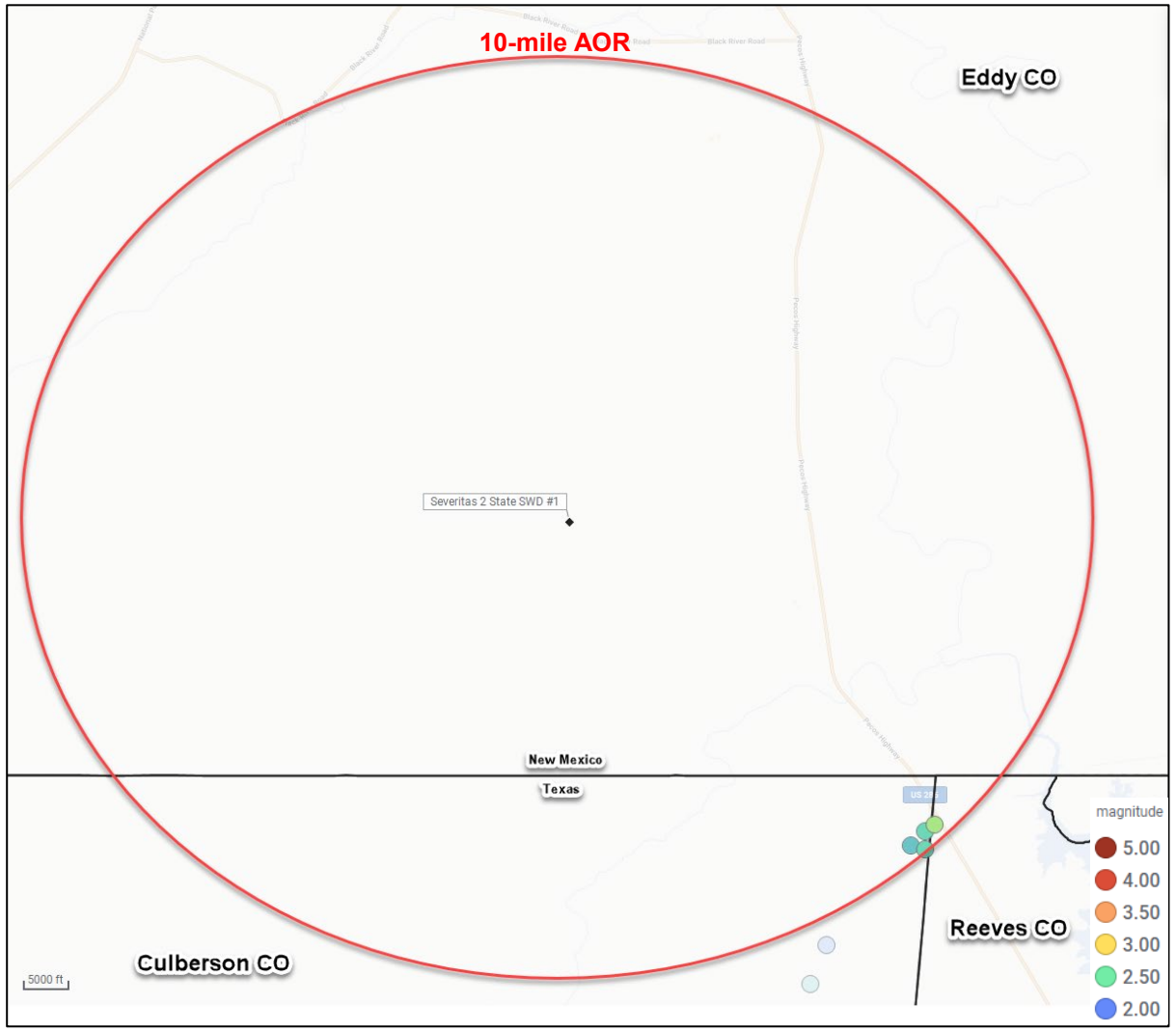


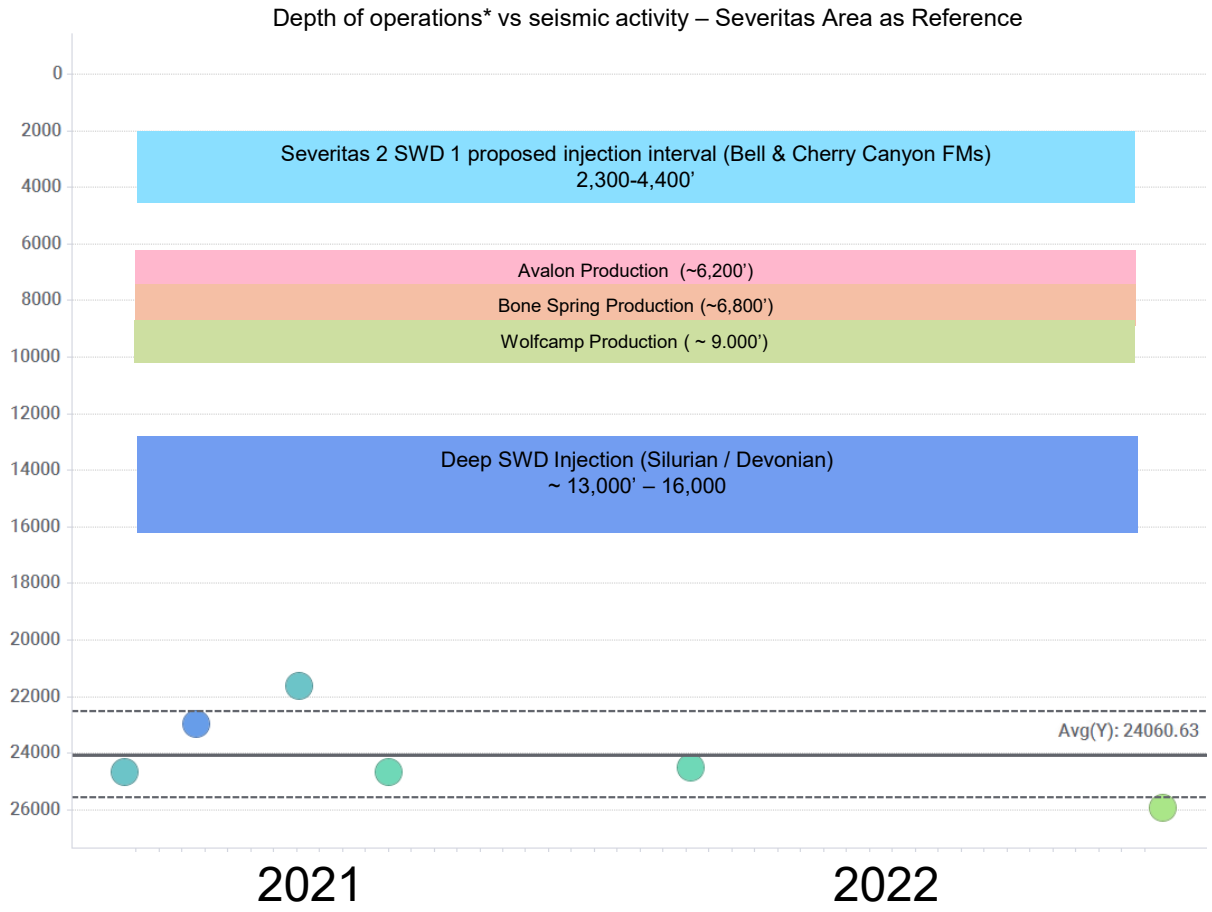




Events within 10 miles of Papa Squirrel SWD 1 location are within County Line / State Line SRA. Depth of events over 15,000' deep vs injection formation of Papa Squirrel.
Closest M2.5+ event ~ 5.7 miles from Papa Squirrel location

Severitas 2 State SWD 1 Seismicity Review





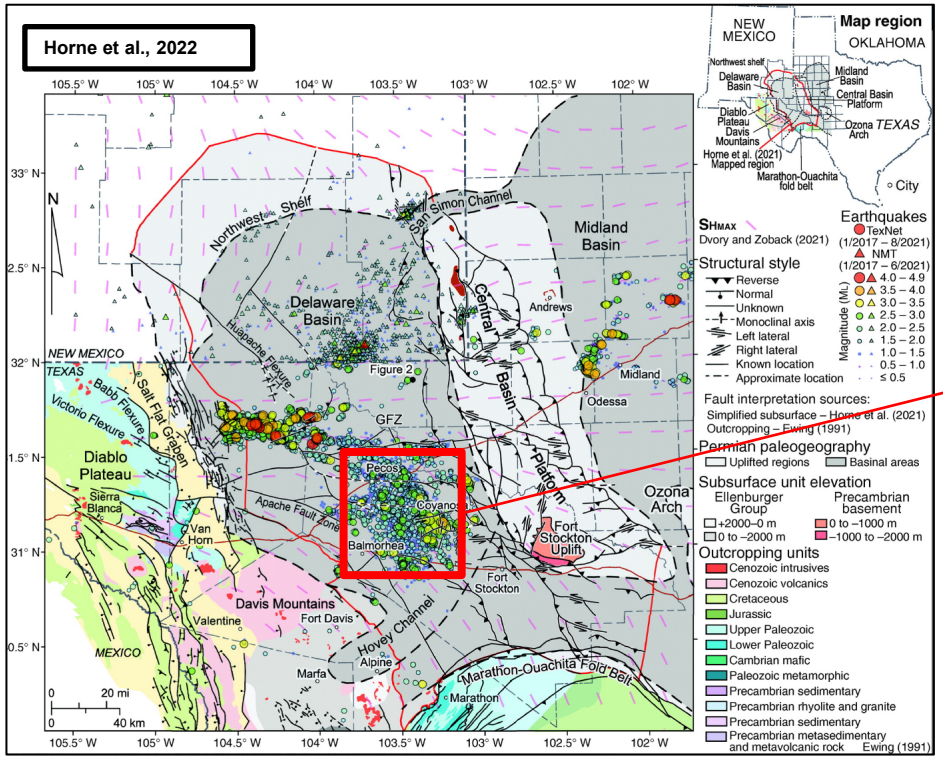
Only five events (largest magnitude 2.3) within 10 miles of proposed Severitas 2 State SWD 1 location (all events within Texas). Depth of events over 20,000' TVD.

Last event within AOR almost 1.5 years ago.

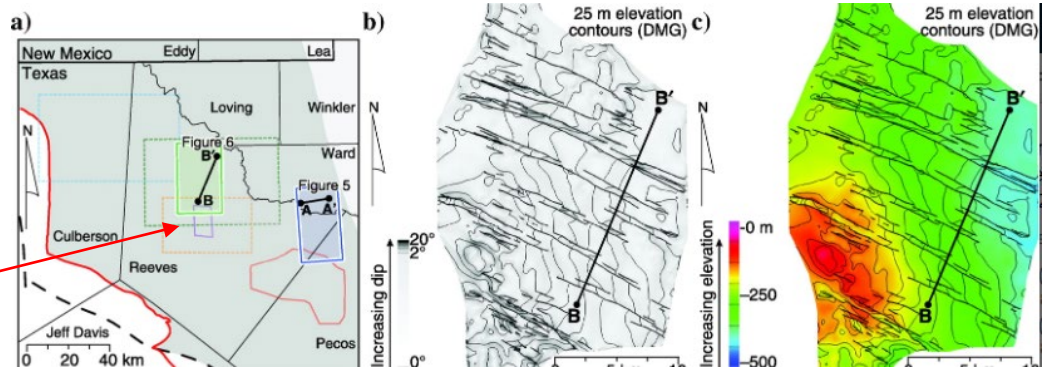
* Source of depths from well tops

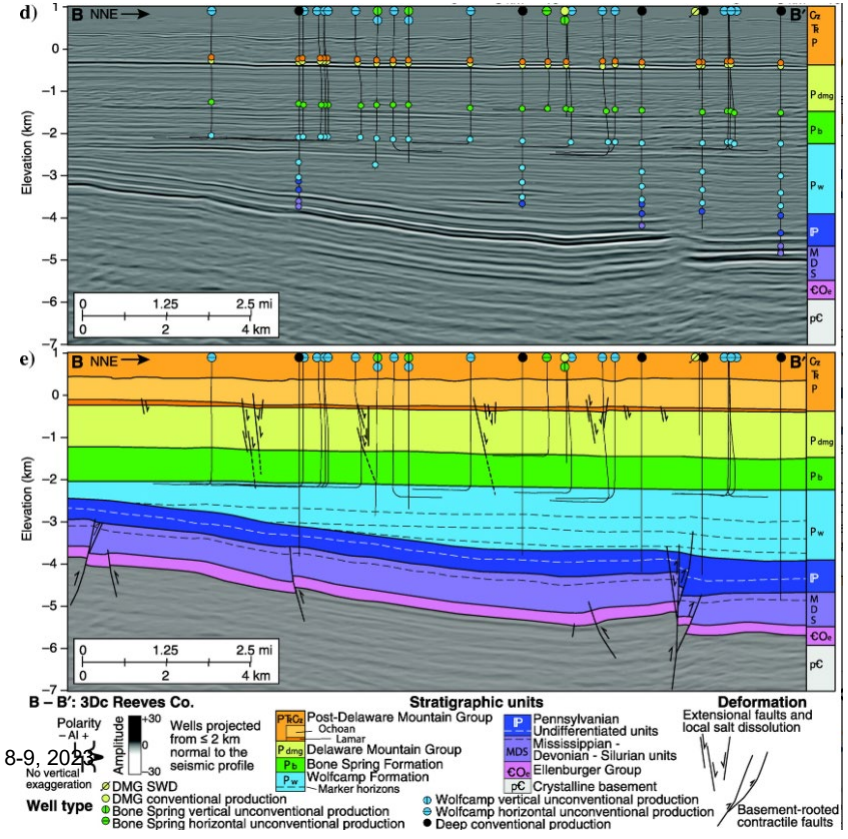
Shallow (DMG Related) Seismicity – Southern Delaware Basin

S. Reeves and Pecos



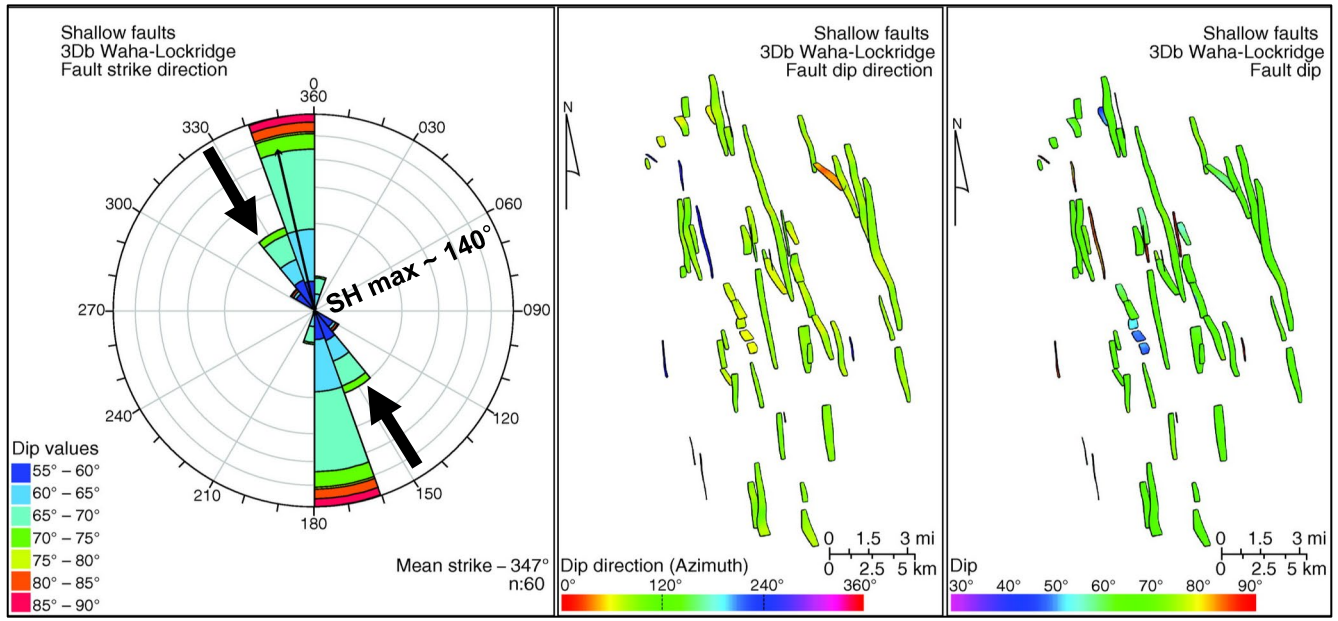
Elizabeth A. Horne, Peter H. Hennings, Katie M. Smye, Scott Staniewicz, Jingyi Chen, and Alexandros Savvaidis, (2022), "Structural characteristics of shallow faults in the Delaware Basin," *Interpretation* 10: T807-T835.https://doi.org/10.1190/INT-2022-0005.1

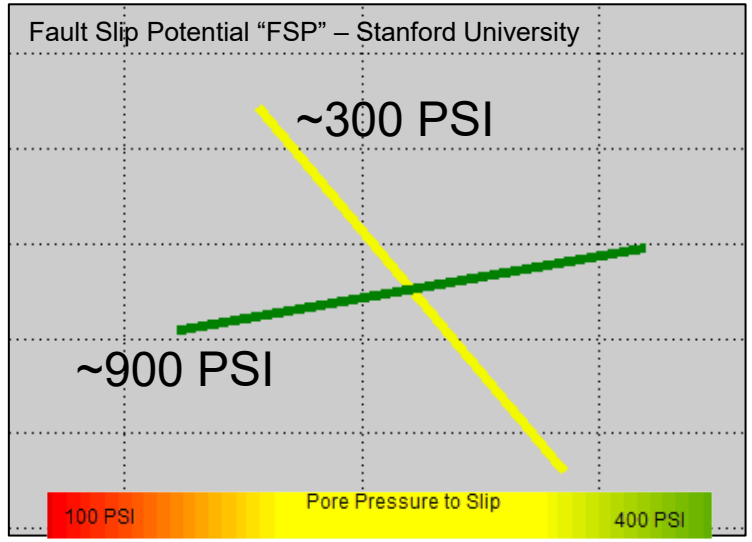




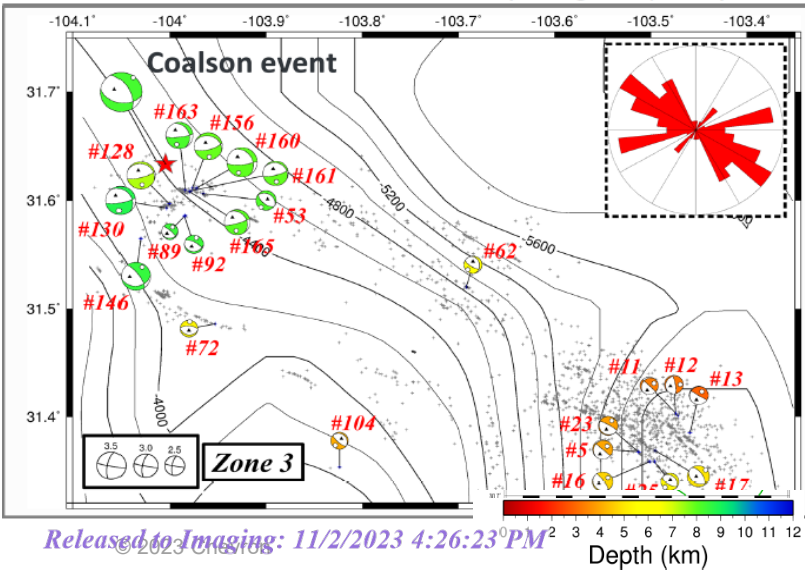
Shallow (DMG Related) Seismicity – Southern Delaware Basin

S. Reeves and Pecos



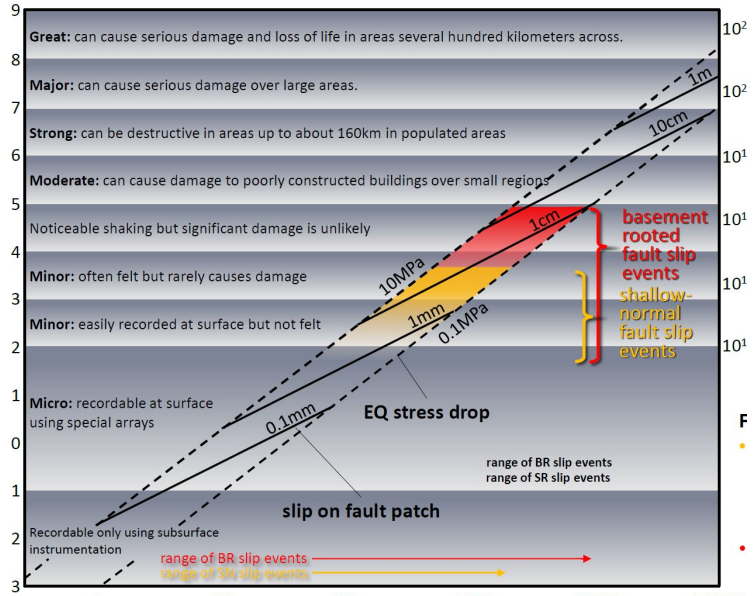


(Huang et al., 2022)



Above Left: shallow fault orientations roughly parallel with SH max direction.
Above Right: Fault Slip Potential output for S. Reeves, noting importance of fault orientation w/ SH max.

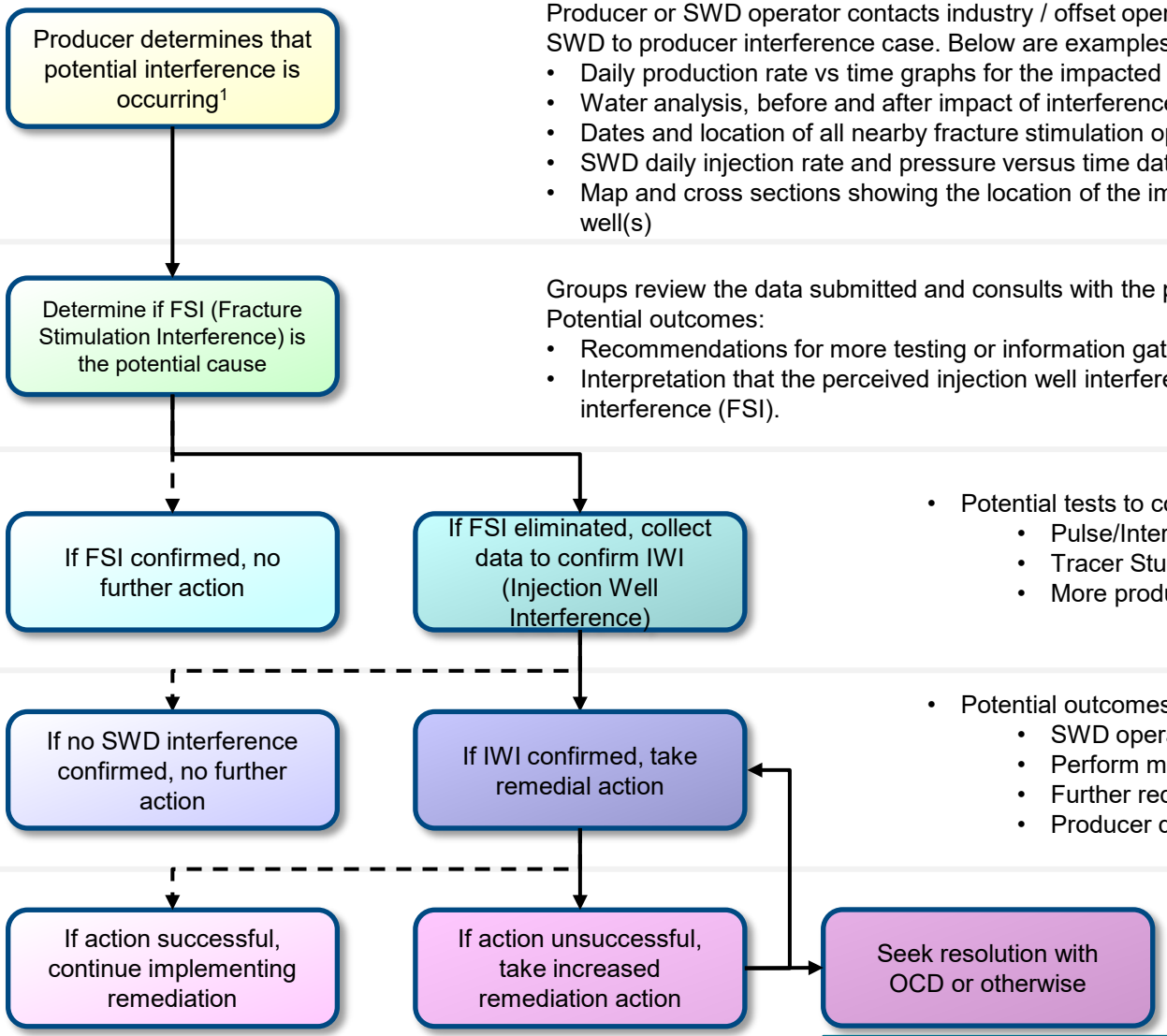
Below Left: moment tensor (MT) solutions nothing depth of EQ's within S. Reeves and associated w/ shallow faulting.
Below Right: relation to fault size, stress and potential EQ magnitude.



Elizabeth A. Horne, Peter H. Hennings, Katie M. Smye, Scott Staniewicz, Jingyi Chen, and Dionysios Savvaidis, (2022), "Structural characteristics of shallow faults in the Delaware Basin," *Interpretation* 10: T807-T835.https://doi.org/10.1190/INT-2022-0005.1

Mark D. Zoback and Steven M. Gorelick, (2012) "Earthquake triggering and large-scale geologic storage of carbon dioxide" *PNAS Vol 109, no. 26.*

Notional SWD Interference and Communication & Resolution Framework Created in Collaboration with other Industry Operators



[1]Chevron plans to monitor its own producers within two miles of an injector for a monthly average water cut increase of two standard deviations over the previous 3-month average to flag water influx

Chevron's Proposed SWD Data Collection & Surveillance Program

Surveillance	Purpose
Quad Combo Logs *(Gamma Ray, Resistivity, Neutron / Density and Sonic)*	• Injection interval depths & thicknesses • Fill spatial gaps in key modeling logs (i.e., sonic logs for DMG) • FE properties for injectivity validation through rate transient analysis (RTA) work • Stress properties from Sonic • Inputs to mechanical earth model (MEM)
XRMI Log *(X-tended Range Micro Imager [formation image log])*	• Natural Fractures & stress orientation identification • Inputs to MEM model
Downhole Pressure Gauge	• Pore pressure and frac gradient models and 1D MEM updates • Injector performance evaluation and forecasting
Spinner Surveys	• Identify high permeability zones; compare with log data
Water Chemistry	• Water chemistry profiles for bench-to-bench communication analysis • Water source identification and allocation
DFIT	• Identify fracture closure stress in DMG (Bell, Cherry, and Brushy) • Support geomechanics modeling
Step Rate Tests	• Identify rate and pressure at which the reservoir as an aggregate fractures • Understand operating limits of SWD
Tracers	• Identify if injected wastewater is being produced by offset unconventional wells
Downhole Gauges in offset Producers	• Measure influence/communication of injectors on offset producers
Production Monitoring	• Monitor water cut trends to identify communication between injectors and producers

Chevron's Proposed SWD Data Collection & Surveillance Program Timeline

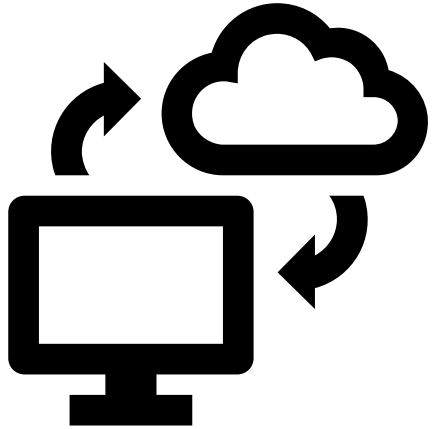
SWD SPUD

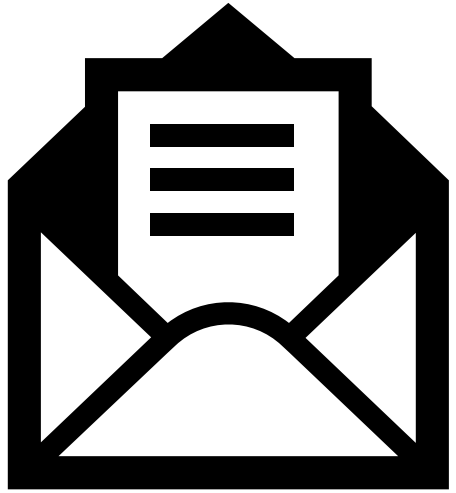
Category	Pre SWD-Spud	Execution	Injection Start Up	3 – 6 months	> 6 months
Injectivity/Injection rates	Reservoir pressure measured from reservoir formation tester (RFT) in development wells → improved max rate calculation	***Well logs to determine porosity, thickness and fracture presence***	Step Rate Test established max injection rate and injectivity without fracturing reservoir.	*Spinner surveys to identify high perm zones*	Hall plot monitored injectivity change through time.
			Image logs to identify high perm zones from fractures / faults		
			Reservoir and bottom hole pressure from DHPG for pressure and injector performance monitoring		
Injection capacity fill-up volume/timing	Reservoir pressure measured from RFT in development wells	***Well logs to determine porosity, thickness and fracture presence***	SRT established frac gradient and fracture pressure limit.	Rate transient analysis derived initial reservoir pressure, reservoir boundary size, and forecasted fill-up time.	
			Reservoir and bottom hole pressure from DHPG for pressure and injector performance monitoring		
Reservoir pressure monitoring	Reservoir pressure measured from RFT in development wells		Reservoir pressure at SWD measured prior to SRT		
			Reservoir pressure from DHPG to monitor change in reservoir pressure with time		
Fracturing pressure		Conduct DFIT, analyze pressure gradient from logs, calibrate with DFIT.		Forecasted BHP increase from RTA derived reservoir model and how to compares with SRT established frac gradient and fracture pressure limit.	
			Reservoir pressure from DHPG to monitor change in reservoir pressure with time		
Injection zone conformance	Downhole water sampling of DMG from RFT on development wells		Analyze SRT to determine injection rate limits	Monitor offset producing wells for unexplained increase in water cut, acquire water samples, and run downhole memory gauges	
			Image logs to identify high perm zones from fractures / faults	*Spinner surveys to identify high perm zones*	
			Run tracer in injector, sample offset producers		
				Forecasted fill up time from RTA	
			Routine water sampling to monitor and compare injected water with baseline aquifer chemistry		
			INSAR ground level monitoring		

*Italics = SWD Data Collection & Surveillance Program

Pilot Project Data Reporting

- Chevron's proposed plan for data submittals to NMOCD will be in the same format as those to other operators.
- Transfer of data and interpretations to operators is straight forward.
- Chevron is committed to engaging with NMOCD on data submissions





Seismicity Section & Data Collection Conclusions

- Current working hypothesis, supported by modern day research and observations, note that recent increases in deep disposal volumes is attributed to the increase in seismicity across the northern Delaware Basin of Texas and SE NM

- Seismic events within the AORs of the Papa Squirrel and Severitas locations are well over 15,000’ deeper than the injection intervals and to date, do not suggest that shallow SWD operations are, in this area, contributing to seismicity

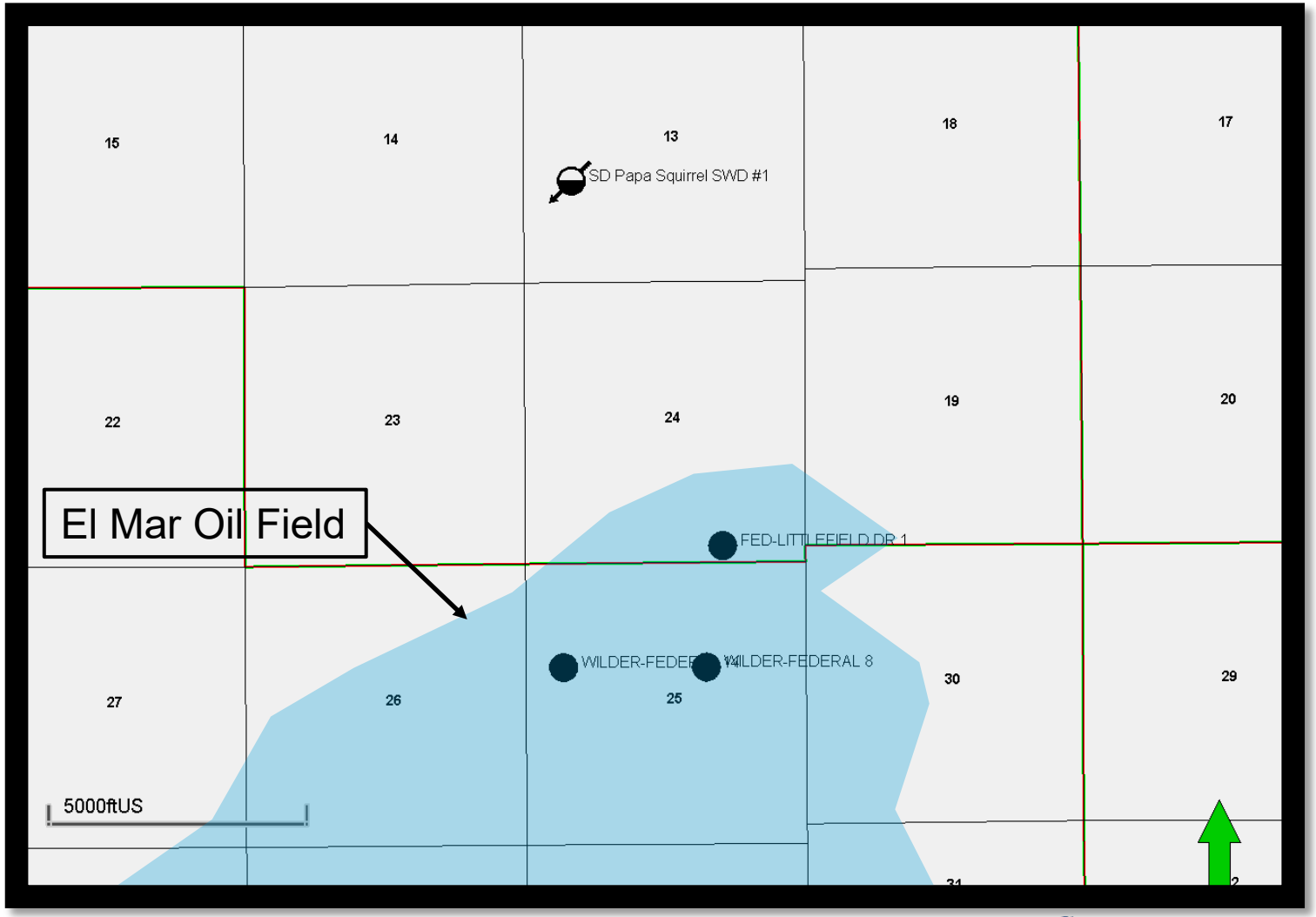
- Chevron has conducted a thorough review of technical field, subsurface and literature data to plan for and propose locations to mitigate seismicity

- Proposed SWD pilots will collect an industry leading dataset to understand subsurface issues and opportunities w/r/t injection operations

- Chevron supports open data collection and dissemination to support broad learnings and collaboration

DMG Production Assessment

DMG Production within a Two-Mile Radius
Papa Squirrel SWD 1 and Severitas 2 State SWD 1

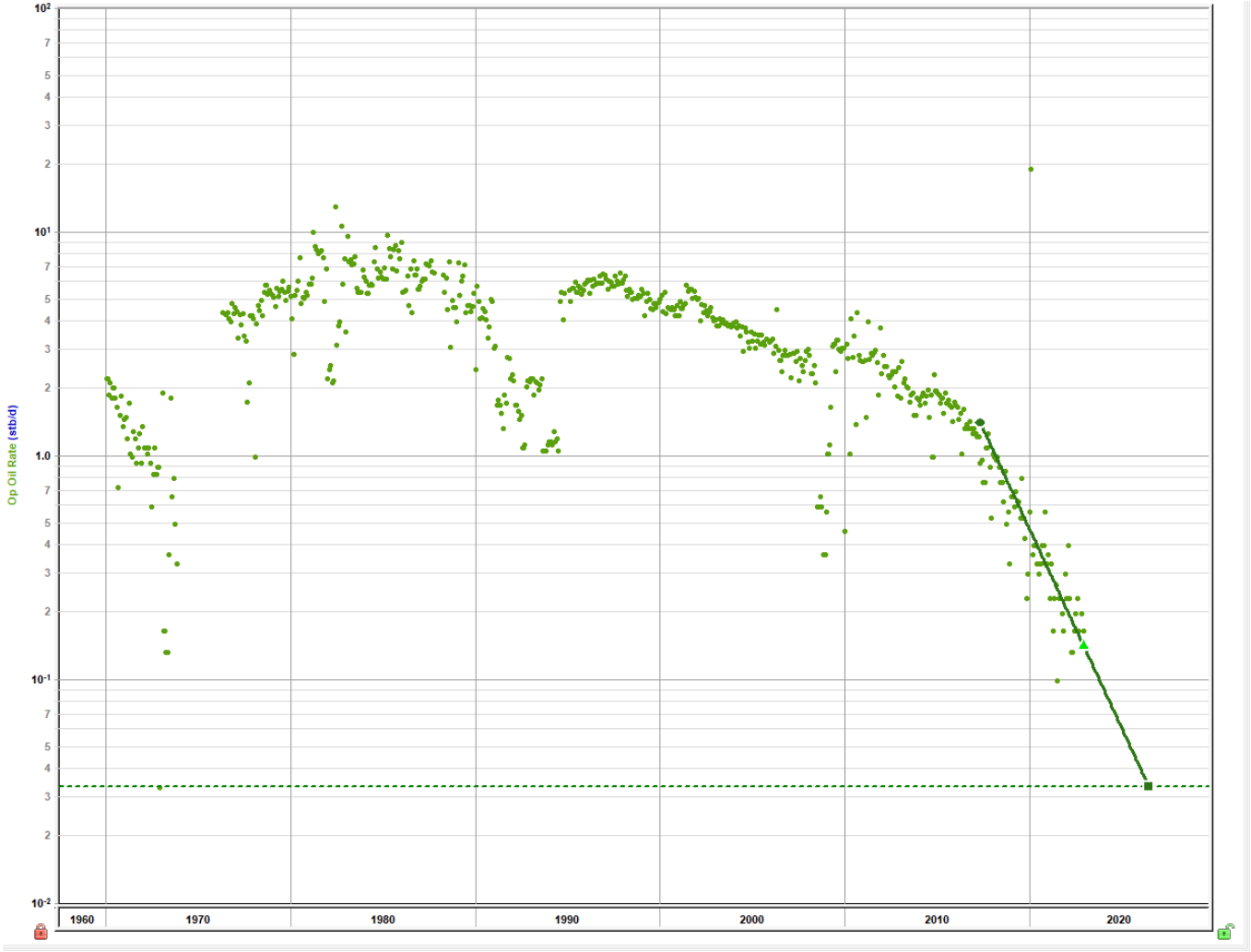


- The only active DMG producers within 2-mile radius of the Papa Squirrel SWD 1 proposed well lie within the El Mar Field:
  - Sahara Fed-Littlefield DR 1
  - Sahara Wilder-Federal 8
  - Sahara Wilder-Federal 14
- There are no active DMG producers within 2-mile radius of the Severitas 2 State SWD 1 proposed well.

Sahara Fed-Littlefield DR 1*
Decline Analysis

Decline Type	Exponential
Annual Decline, %/year	33.67
Cutoff Rate, BO/Month	1.0
End Date	June 2026
Remaining Oil, MSTB	0.096

Most current production is less than 1 B/D.



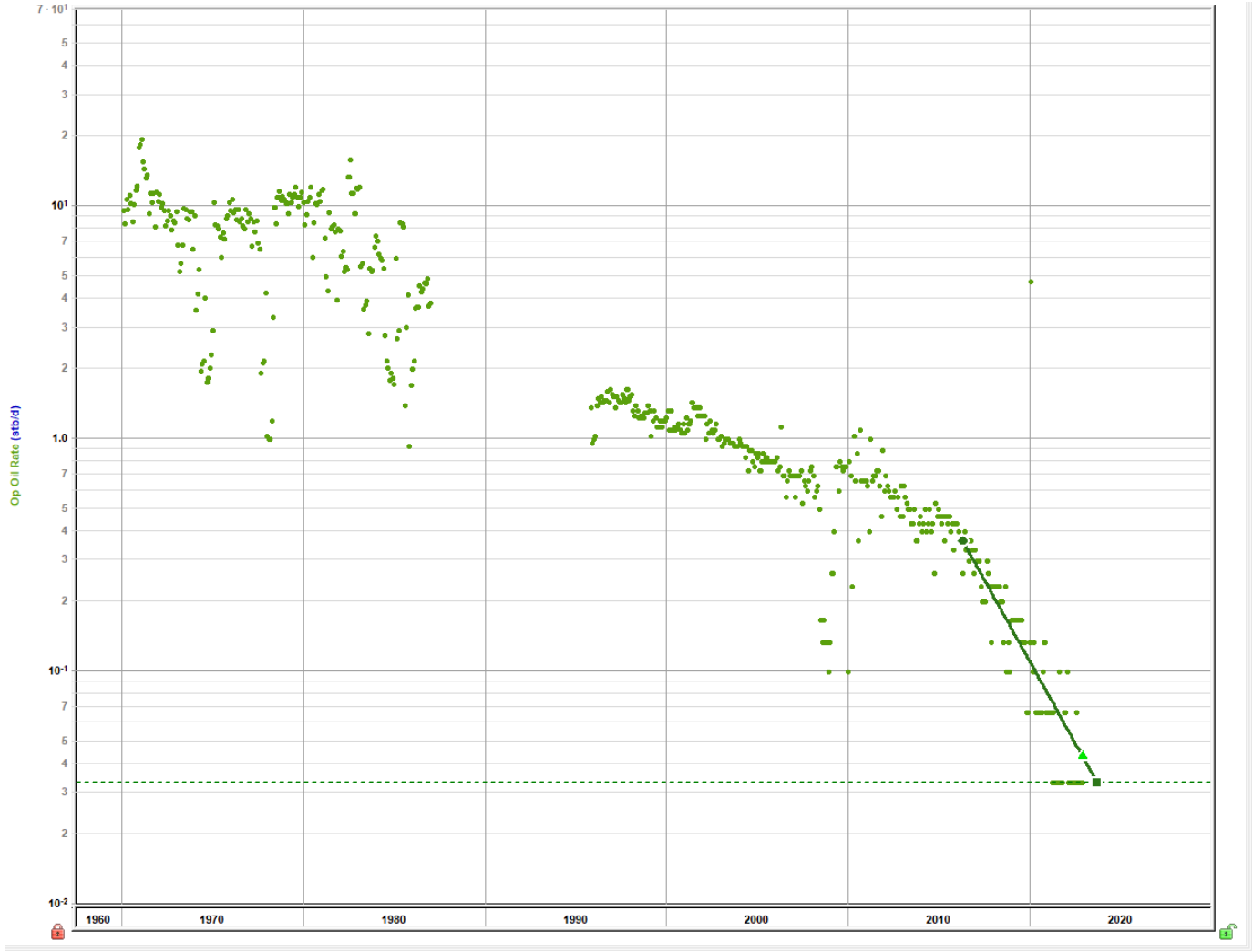
Gas excluded from analysis due to data missing post 1994

*API #: 30-025-08268

Sahara Wilder-Federal 8*
Decline Analysis

Decline Type	Exponential
Annual Decline, %/year	27.62
Cutoff Rate, BO/Month	1.0
End Date	Sep 2023
Remaining Oil, MSTB	0.011

Most current production is less than 1 B/D.



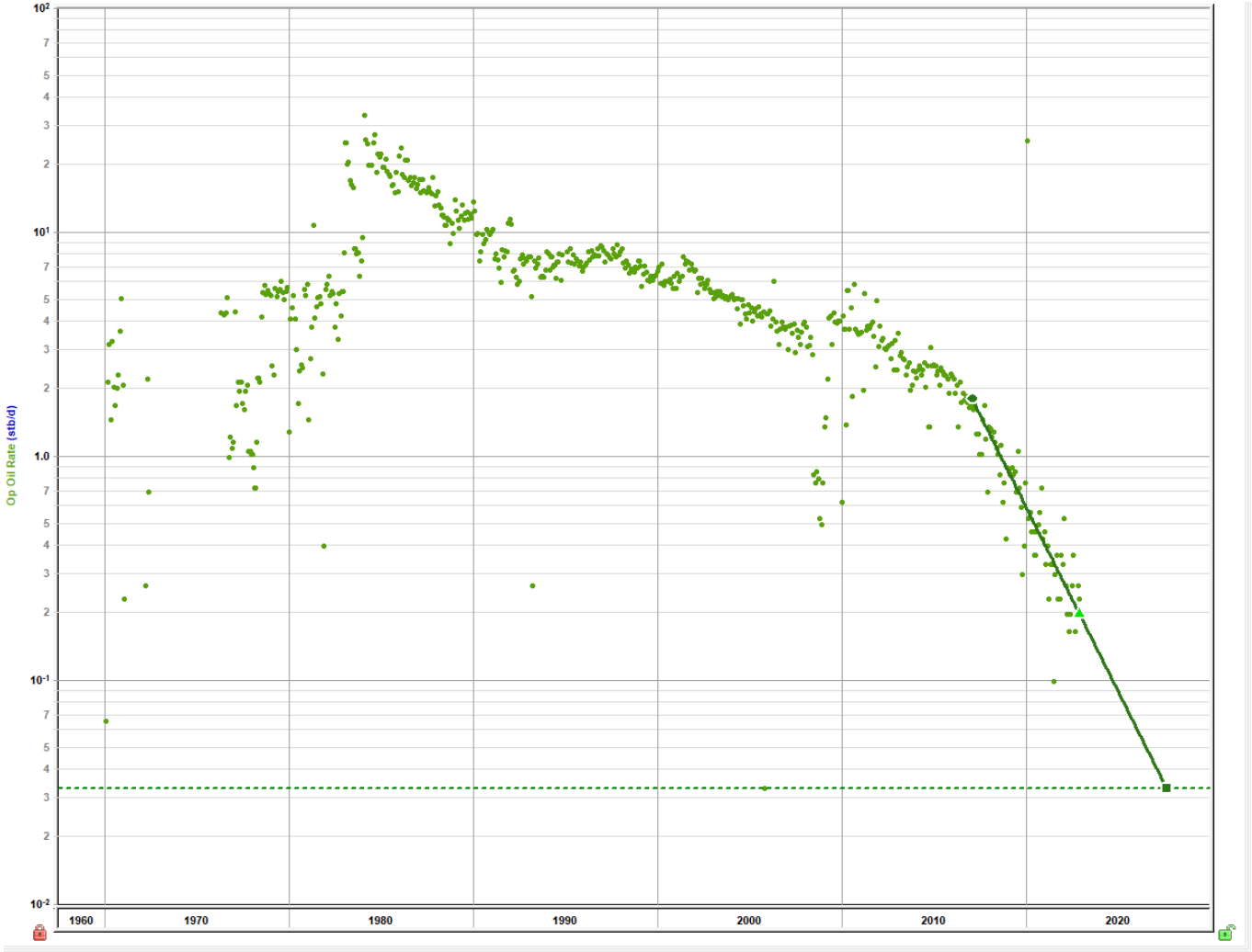
Gas excluded from analysis due to data missing post 1986

*API #: 30-025-08279

Sahara Wilder-Federal 14*
Decline Analysis

Decline Type	Exponential
Annual Decline, %/year	31.58
Cutoff Rate, BO/Month	1.0
End Date	Aug 2027
Remaining Oil, MSTB	0.158

Most current production is less than 1 B/D.



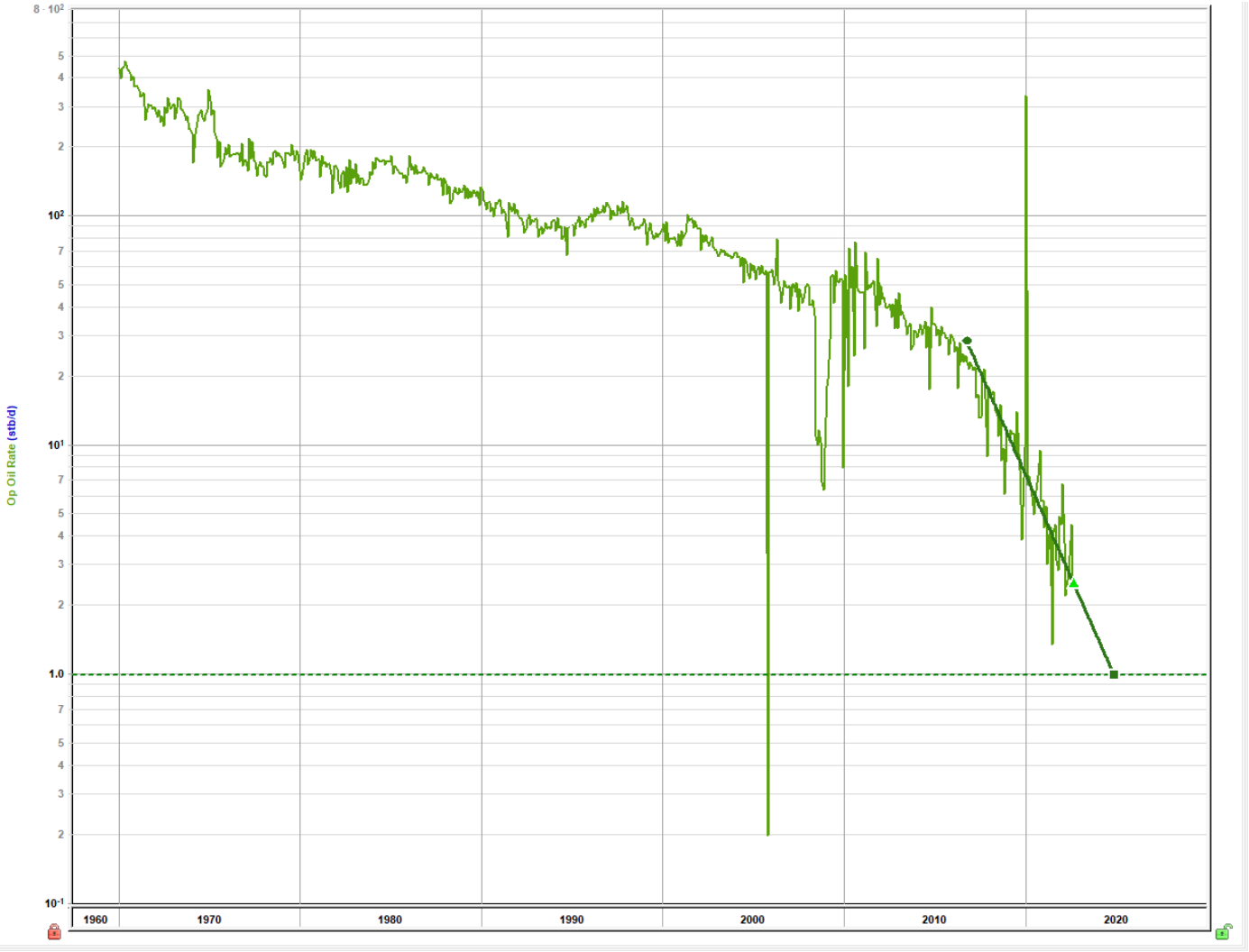
Gas excluded from analysis due to data missing post 1997

*API #: 30-025-08285

El Mar Field Decline Analysis
Demonstrates Limited Remaining Reserves in Entire Field

Decline Type	Exponential
Annual Decline, %/year	33.82
Cutoff Rate, BO/Month	30.0
End Date	Nov 2024
Remaining Oil, MSTB	1.313

El Mar Field Well Count: 20 in 2022
Most recent well drilled:



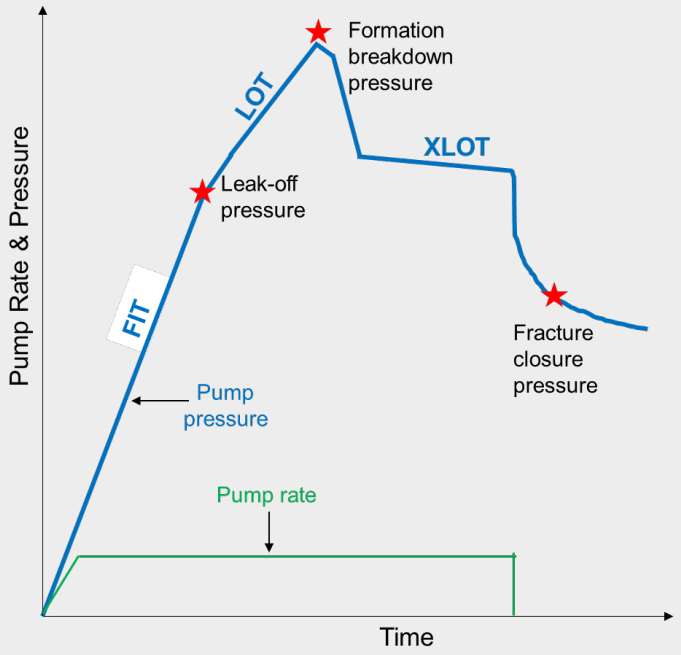
Gas excluded from analysis due to data missing post 1997

Lamar Limestone
Upper Containment

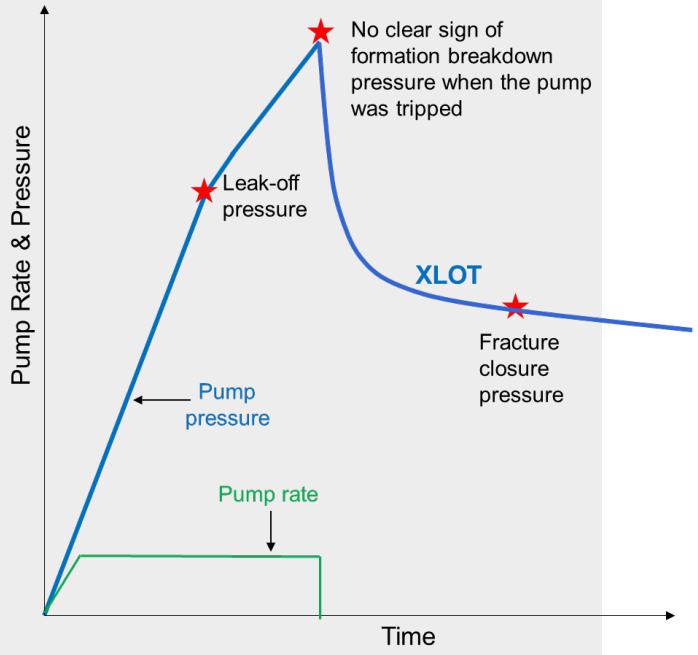
Extended Leak-off Test – Lamar Limestone Seal
No Signs of Seal Breakdown at High Pressure

- Formation Integrity Test (FIT)
  - A test to evaluate the strength and integrity of a new formation and it is the first step after drilling a casing shoe.
- Leak-Off Test (LOT)
  - A test to determine the fracture pressure of the open formation, usually conducted immediately after drilling below a new casing shoe.
- Extended Leak-Off Test (XLOT)
  - With minor modifications, LOT becomes XLOT to provide fracture closure pressure (FCP).
  - Chevron Conducted XLOT on well 174WA in Oct 2022

Typical FIT, LOT and XLOT Test Behavior



174 WA XLOT Test Behavior



- Due to pump tripping at max pressure of 2200 psi, no clear sign of formation breakdown pressure was observed during any of the three 174WA XLOT tests.
- Max pressure during the XLOT is significantly higher than pressures encountered during injection operation.

Lamar XLOT Test Data Summary

Test	Cycle 1	Cycle 2	Cycle 3
Test date	10/29/2022	10/29/2022	10/29/2022
Pumping start time	1:24:45 AM	2:08:28 AM	2:40:58 AM
Pumping duration (mm:ss)	2:17	1:41	1:38
Total injection volume (bbl)	0.59	0.73	1.18
Average injection rate (bpm)	0.26	0.43	0.72
Shut-in time (min)	23.5	23.0	32.0
Flowback volume (bbl)	-	0.25	0.20
Surface ISIP (psi)	1,744	1,713	1,701
ISIP at csg shoe (1583.94ft TVD) (psi	2,499	2,468	2,456
Leak off pressure (psi)	2,380	2,411	2,426
Leak off pressure (ppg)	28.90	29.27	29.45
Fracture closure time (min)	10.8	14.6	18.0
Minimum stress at casing shoe (psi	1930	1821	1,799 - 1,729
Minimum stress gradient (psi/ft)	1.22	1.15	1.14 - 1.10
Minimum stress gradient (ppg)	23.43	22.11	21.84

- Casing Shoe Depth ~1584 ft.
- The XLOT results clearly show that the Lamar has higher closure stress (1.1–1.22 psi/ft) and ultralow perm.
- Higher values in tensile strength, Young's Modulus and fracture toughness make the Lamar difficult to break down. LOP: 1.5–1.53 psi/ft
- Above properties and testing pressure behavior suggest that Lamar can act as a seal during disposal in the DMG

No sign of clear formation breakdown observed up to 2,200psi surface pressure (36.4ppg EMW)

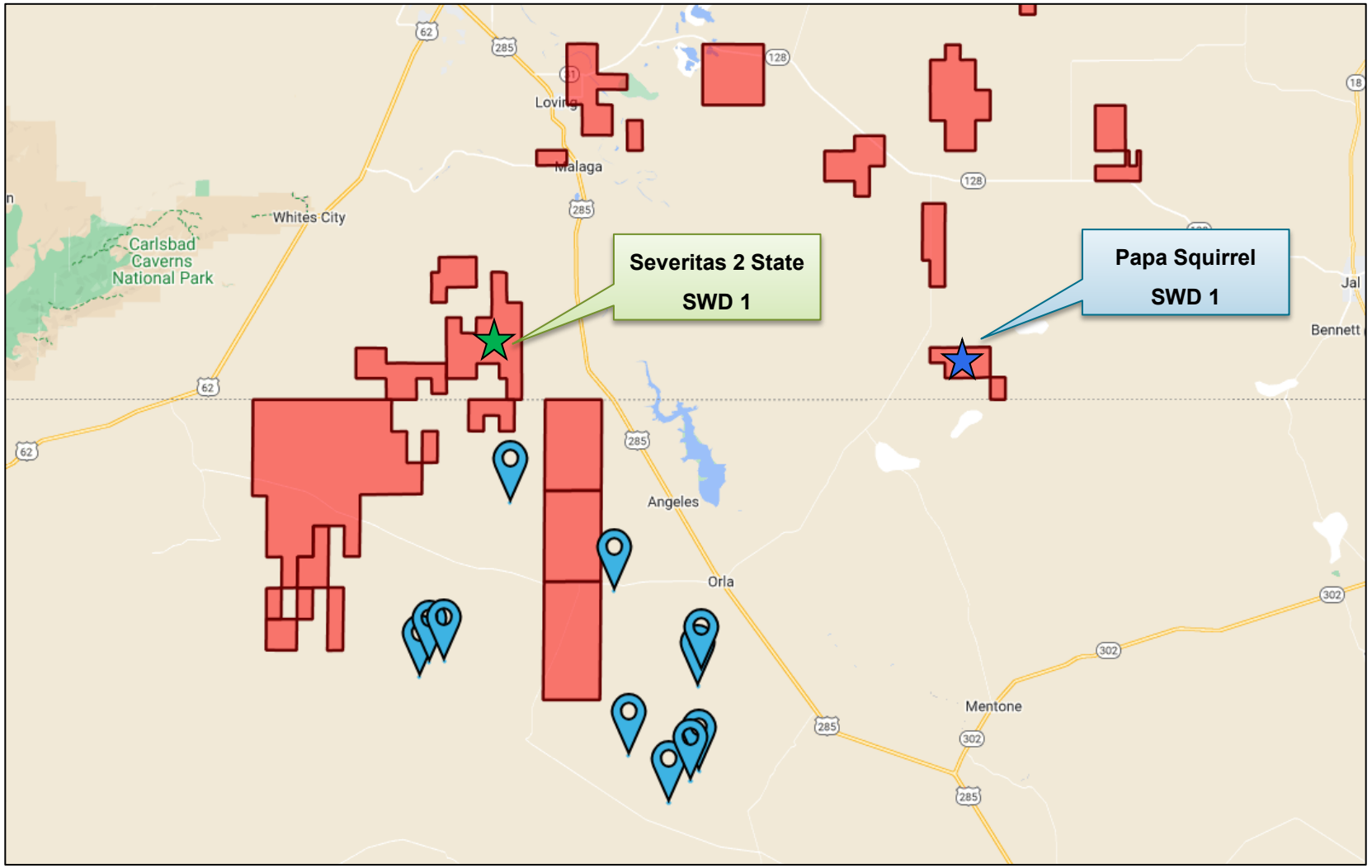
* Minimum stress from the G·dP/dG Plot is used as the value is more evident.
** Fracture closure from Cycle 1 may not occur.
*** No density log data available to calculate overburden stress, but it is estimated to be around 1.2 psi/ft.

- Reduction in ISIP from Cycles 1 to 3 indicates the rock was weakened and fracture complexity was reduced.
- Reduction in closure stress suggests that the impact of multiple fractures diminished after each injection.
- The fracture closure time was longer than the model predicted, which indicates that Lamar is tighter than 1md.

Max BHP gradient during injection operations will be ~ 0.7 psi/ft giving a safety factor on the Lamar fracture closure pressure of 1.57 – 1.74

Injection Modeling and Reservoir Pressure Impacts

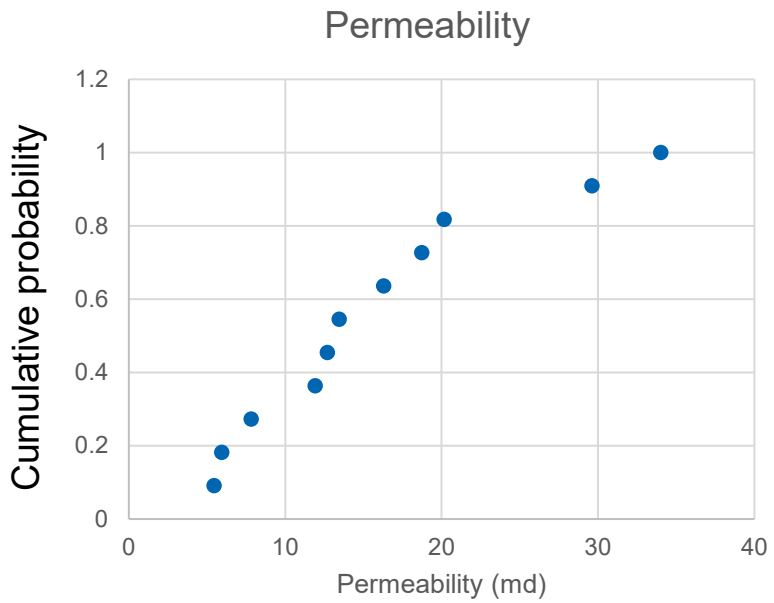
Location of Wells with Sufficient Data for Rate Transient Analysis

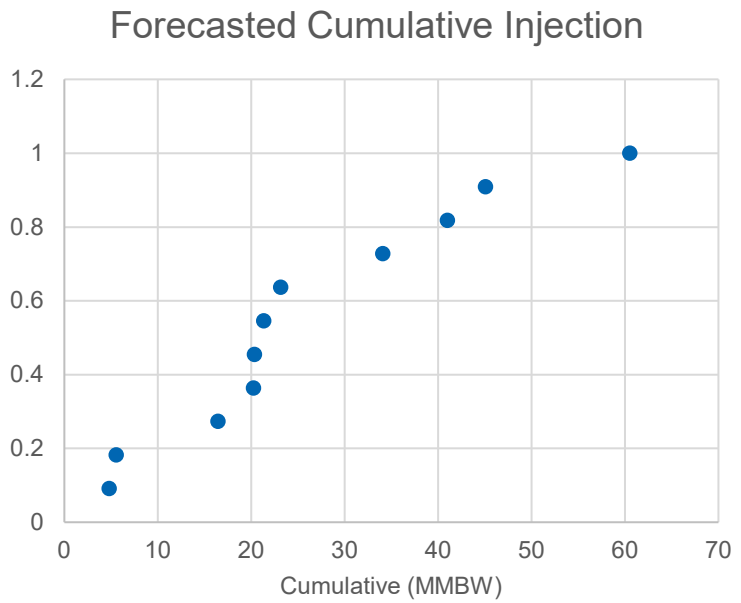


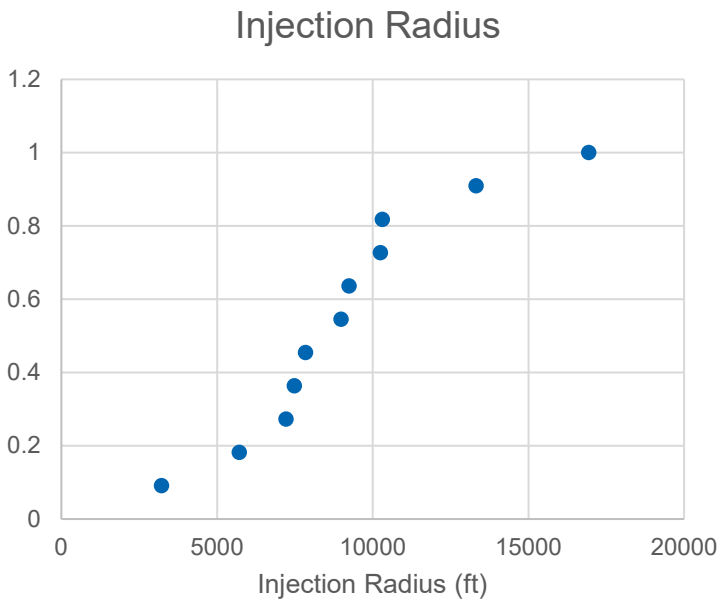
Rate Transient Analysis Summary on DMG Injectors

- Rate Transient Analysis (RTA) is the primary method used to understand the part of the reservoir the injector accesses (permeability, boundary type/distance), measure near wellbore effects (skin), and forecast (rate, cumulative injection, reservoir pressure)
- Well data taken from 11 wells with publicly reported daily rates and pressures and analyzed through RTA to infer properties below
  - Cumulative injection dependent on injection radius and interval thickness; injection rates dependent on permeability
  - Forecasted cumulative volumes based on a 0.2 psi/ft surface pressure limitation

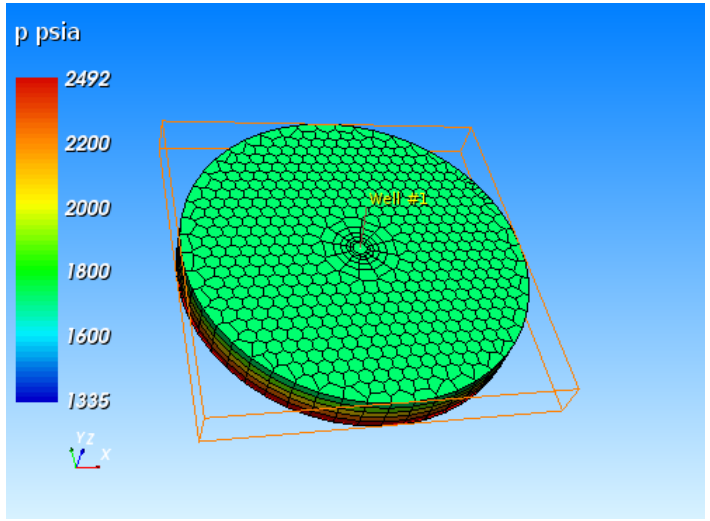
Parameter	P10 Value	P50 Value	P90 Value
Permeability (md)	6 md	13 md	30 md
Injection Radius (ft)	5,717 ft	8,979 ft	13,314 ft
Cumulative Injection (MMBW)	5.54 MMBW	21.34 MMBW	45.08 MMBW



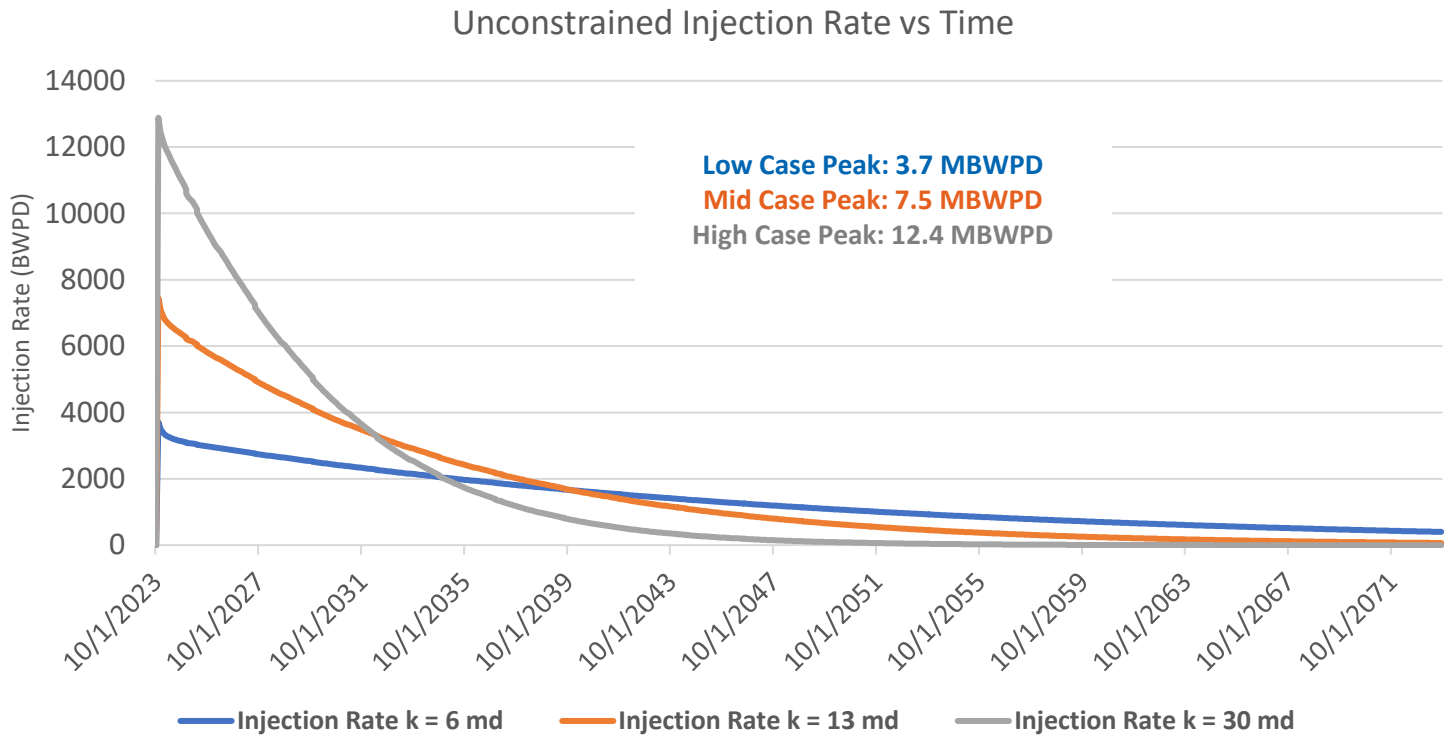




Severitas 2 State SWD 1 Modeling Results
Cumulative storage 28.8 MMBW

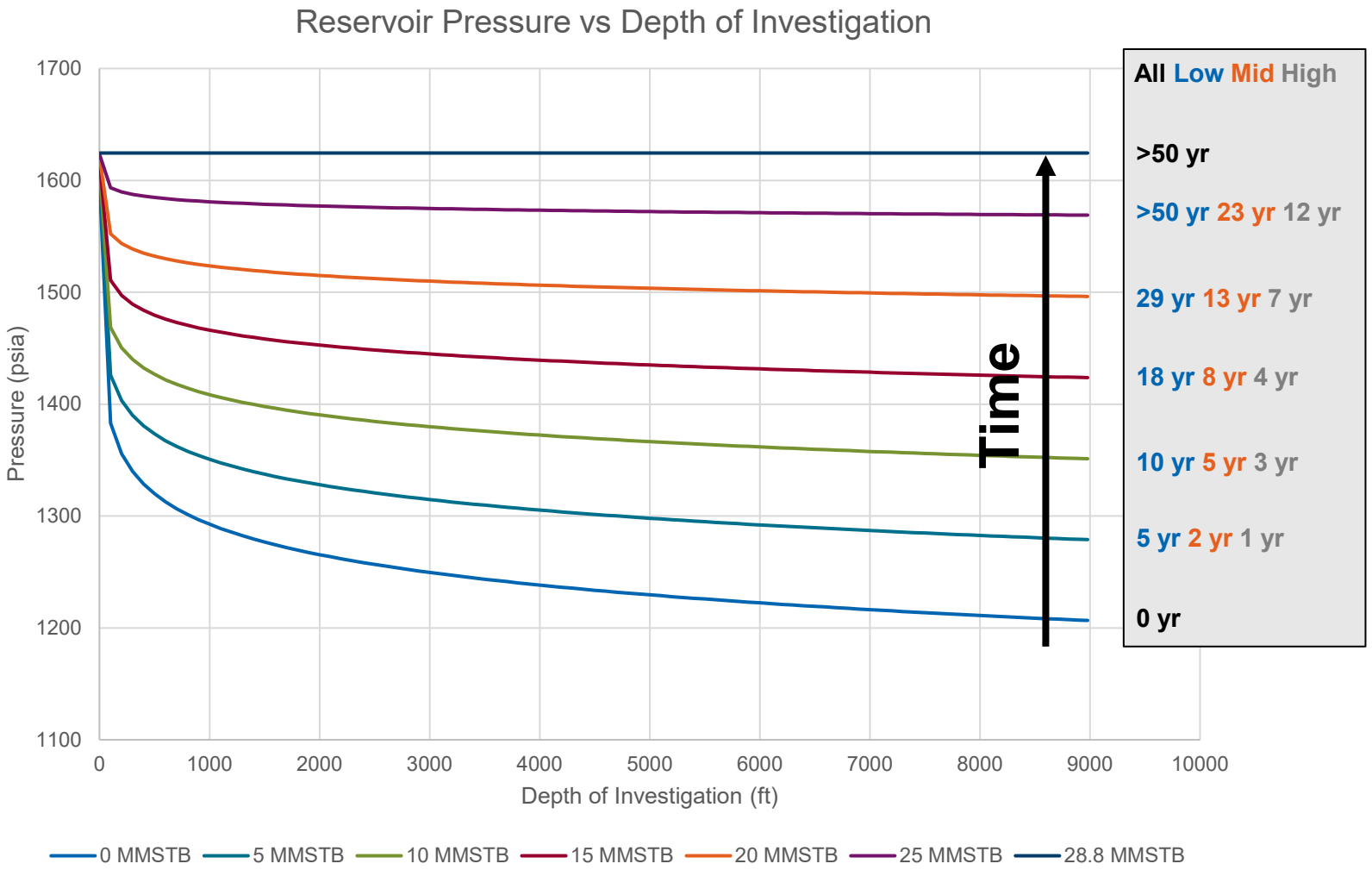


Pi	1236.0 psi
T	98 F
Water TDS	160000 ppm
Bell Top	2376.9 ft
Bell Thickness	816.7 ft
Bell Porosity	17.0%
Cherry Thickness	1212.2 ft
Cherry Porosity	15.5%
THP	475 psi
Boundary Radius	8979 ft
Cumulative Storage	28.8 MMBW



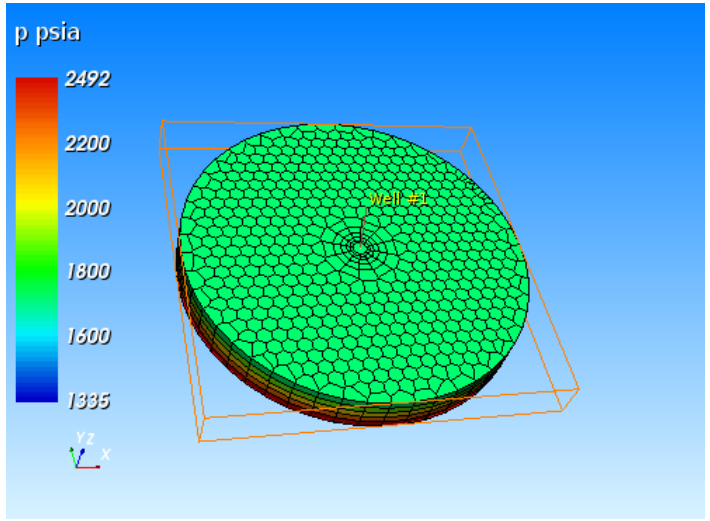
- Homogenous flow model created to simulate injection rates through time
- Inputs were taken from geological log correlations and general RTA statistics
- Injection profiles shown are unconstrained on rate but subject to maximum permitted surface pressure (0.2 psi/ft)

Severitas 2 State SWD 1 Modeling Results
Reservoir Pressure Increases Slowly Over Time

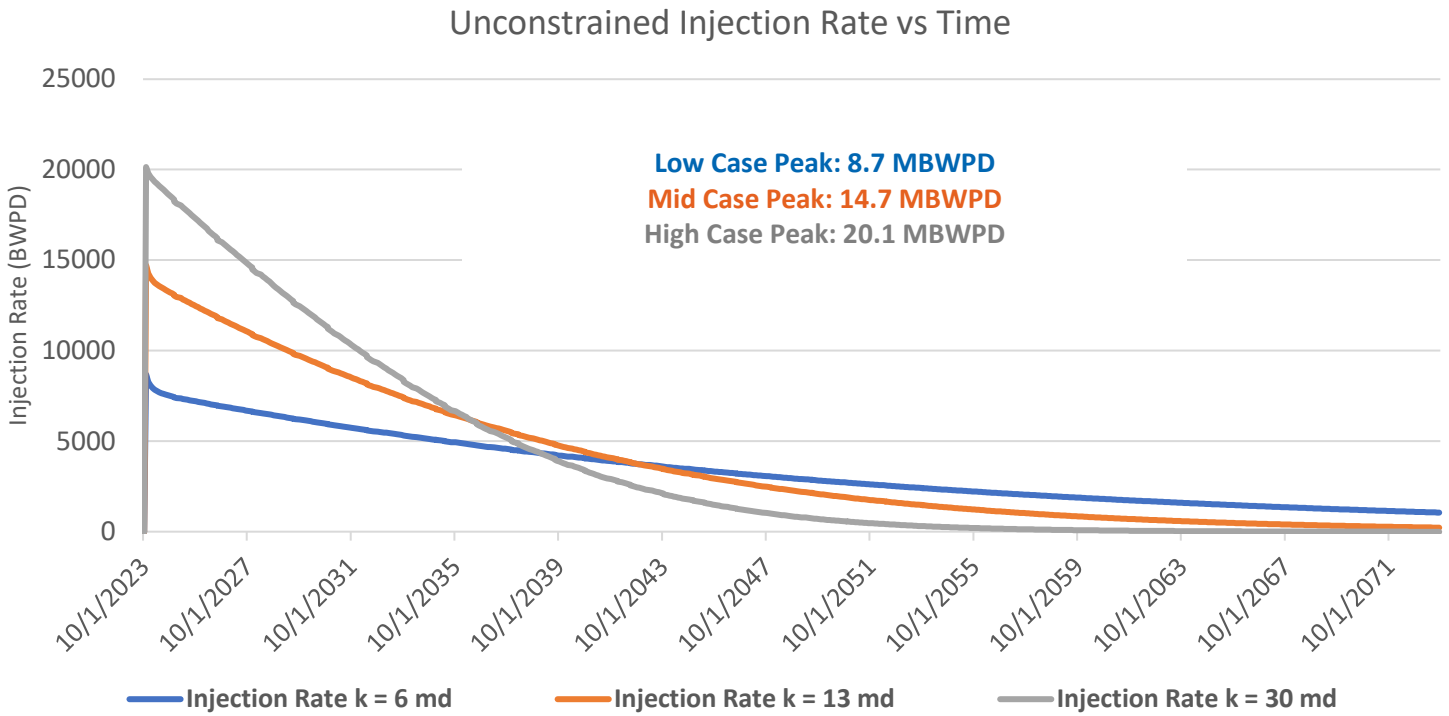


- Reservoir pressure plot shows pressure at different depths of investigation at different times in the well's life (based on P50 permeability of 13 md)
  - Reflects the BHP which would be recorded in a theoretical observation well placed at a given distance away from the injector
- Reservoir pressure increase is relatively slow, with a 300-psi increase taking more than a decade

Papa Squirrel SWD 1 Modeling Results
Cumulative storage 72.9 MMBW

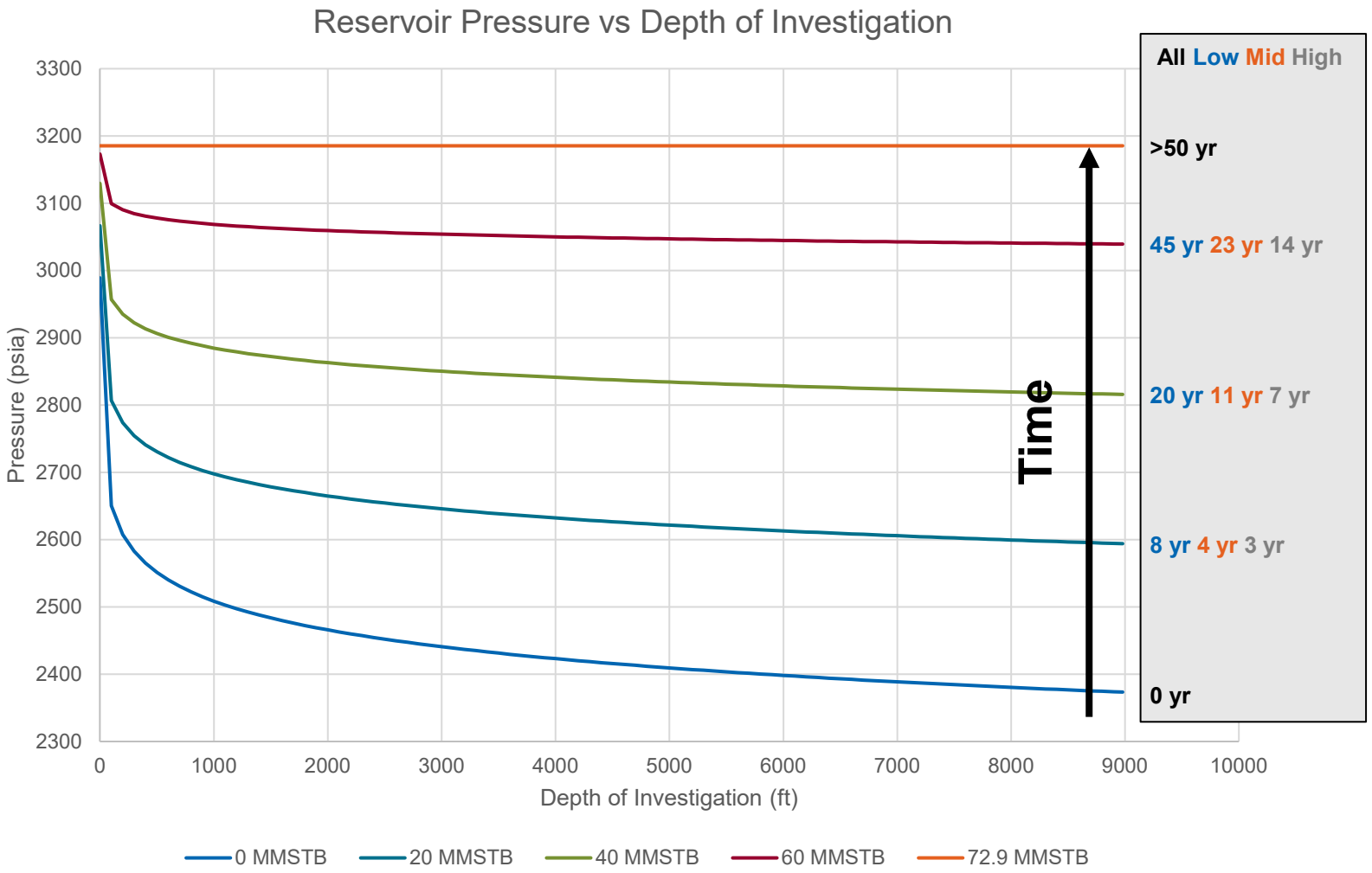


Pi	2419.2 psi
T	98 F
Water TDS	160000 ppm
Bell Top	4652.9 ft
Bell Thickness	987.2 ft
Bell Porosity	17.5%
Cherry Thickness	1645.4 ft
Cherry Porosity	15.0%
THP	931 psi
Boundary Radius	8979 ft
Cumulative Storage	72.9 MMBW



- Homogenous flow model created to simulate injection rates through time
- Inputs were taken from geological log correlations and general RTA statistics
- Injection profiles shown are unconstrained on rate but subject to maximum permitted surface pressure (0.2 psi/ft)

Papa Squirrel SWD 1 Modeling Results
Reservoir Pressure Increases Slowly Over Time



- Reservoir pressure plot shows pressure at different depths of investigation at different times in the well's life (based on P50 permeability of 13 md)
  - Reflects the BHP which would be recorded in a theoretical observation well placed at a given distance away from the injector
- Reservoir pressure increase is relatively slow, with a 450-psi increase taking more than a decade

Surface Systems

SWD Control Logic
Active Monitoring to Ensure Safe Operations

- High-pressure flowlines carry fluids from facility H-pumps to wells for disposal. Flowrate and pressure are controlled with 1-2 chokes by a local PLC at the wellsite.

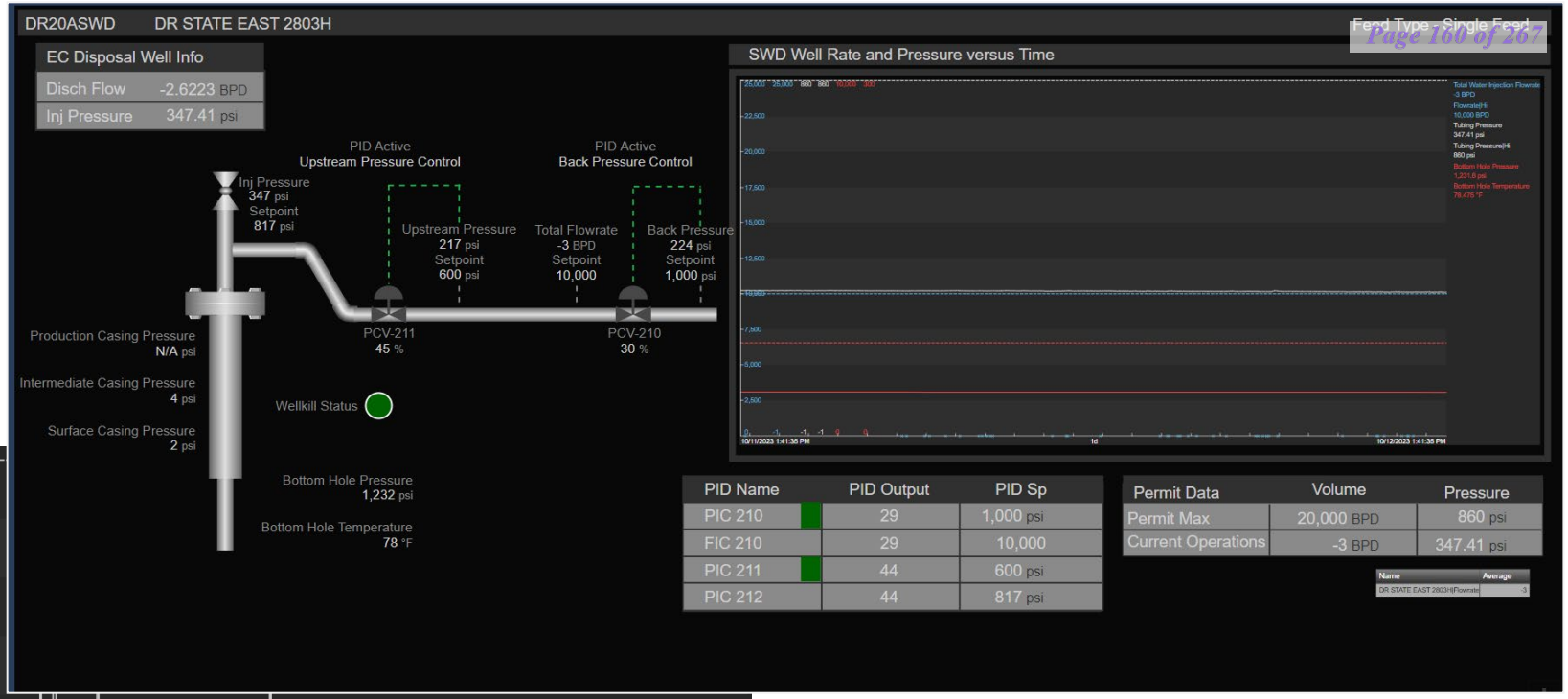
- Well flowrate is constantly monitored by an on-site flowmeter.

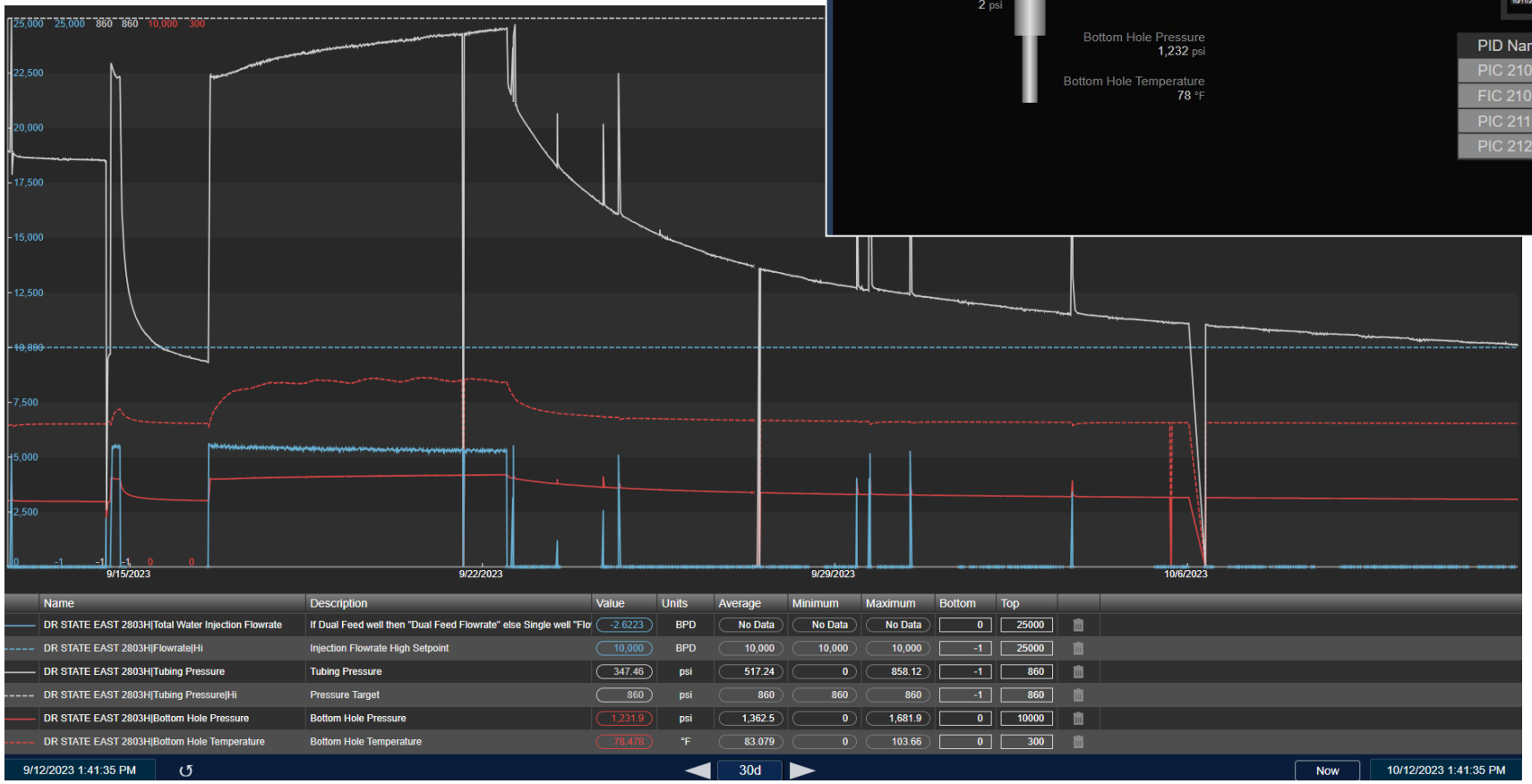
- Chokes ensure tubing pressure remains at target ~25 psig below permit.
  - Operator callout issued if pressure increases to or above permit for 30 second. Automatic well shut-in occurs if pressure is not lowered within 30 min.
  - Automatic well shut-in will also occur if pressure is greater than 110% of permit pressure for more than 30 seconds.

- Wellhead controls target minimum required backpressure on the high-pressure water transfer line. The transfer line is allowed to pressure up if the additional pressure is required to reach tubing pressure setpoint. If line pressure increases above normal operating pressures, protections on the facility side will shut down H-pumps.

- The controls have been designed to work for standalone shallow disposal wells or for a network of wells. Networked wells may be all shallow or a combination of shallow and deep.

SCADA Continuous Data Monitoring





Name	Description	Value	Units	Average	Minimum	Maximum	Bottom	Top
DR STATE EAST 2803H|Total Water Injection Flowrate	If Dual Feed well then "Dual Feed Flowrate" else Single well "Flo	-2.6223	BPD	No Data	No Data	No Data	0	25000
DR STATE EAST 2803H|Flowrate|Hi	Injection Flowrate High Setpoint	10,000	BPD	10,000	10,000	10,000	-1	25000
DR STATE EAST 2803H|Tubing Pressure	Tubing Pressure	347.46	psi	517.24	0	858.12	-1	860
DR STATE EAST 2803H|Tubing Pressure|Hi	Pressure Target	860	psi	860	860	860	-1	860
DR STATE EAST 2803H|Bottom Hole Pressure	Bottom Hole Pressure	1,231.9	psi	1,362.5	0	1,681.9	0	10000
DR STATE EAST 2803H|Bottom Hole Temperature	Bottom Hole Temperature	78.478	°F	83.079	0	103.66	0	300

9/12/2023 1:41:35 PM ↺ ◄ 30d ► Now 10/12/2023 1:41:35 PM

- Data collected by SCADA: flowrate, injection pressure, bottom hole pressure, control valve pressures, casing pressures, temperatures, etc.
- Chevron has integrated operations control center where data from all facilities and wells are actively monitored
- Examples from TX SWD

Solids Handling

SWD facilities fitted with filtration system to improve injected water quality

- Flush tank (API 12F 750 BBL) collects solids from filter
  - Water and solids from the filter flush enter the tank
  - Solids settle in the cone bottom
  - High level switch for the solids alerts operations when tank cleaning is needed
  - Truck connection is provided for solids removal to solid waste facility (similar to drilling tailings and recovered frac sand)
  - Water from flush tank is routed back to charge pumps

Engineering Key Takeaways

- SWD wells proposed by Chevron are in the best interests of conservation, prevention of waste, and will not impair correlative rights.
- The nearest DMG producers/field to our proposed injectors are depleted.
- The Lamar Limestone is a very competent seal above the DMG; downhole pressures associated with SWD operations do not come close to the fracture closure, leak-off, or breakdown pressures of the Lamar.
- DMG SWD well analogs tend to influence the reservoir out to ~1.7 miles, reservoir pressure within that radius expected to increase slowly.
  - Severitas peak rates estimated between 3.7-12.4 MBWPD and 29 MMBW total storage capacity.
  - Papa Squirrel peak rates estimated between 8.7-20.1 MBWPD and 73 MMBW total storage capacity.
- Chevron standard operations feature active monitoring and control logic to ensure safe operations, with real time continuous data collection: flowrate, tubing pressure, bhp, temperature, etc.
- SWD facilities fitted with filtration system to improve injected water quality; solids removed to solid waste facilities.

Chevron

human energy®

Concluding Remarks

Concluding Remarks

- Industry needs produced water (PW) optionality to support continued development in New Mexico
- Deep saltwater disposal (SWD) is contributing to the increase of seismicity in areas of the Permian Basin
- Evidence indicates DMG disposal can be done within the Avalon exclusion zone in a manner that protects correlative right and prevents waste.
- DMG disposal can also be done in a manner that is protective of underground sources of drinking water.
- Goals of Chevron's DMG SWD pilot program:
  - Evaluate injection conformance of the Delaware Mountain Group
  - Monitor injected fluids and identify mitigations to keep water in zone
  - Provide open and clear dissemination of data to key stakeholders

Tab E: Witness Resumes

George T. (Tom) Merrifield, Jr., PG

Chevron USA, 6301 Deauville Blvd, Midland, TX 79706
Cell: (661) 448-7489; Email: tommerrifield@chevron.com

EDUCATION:

Texas A&M University, College Station, TX — May 1976
- BS in Geology

Southern Illinois University, Carbondale, IL — Aug. 1979
- MS in Geology:

Texas A&M University, College Station, TX
- PhD candidate in Geology — No degree

LICENSES:

- Registered Geologist, Texas, #10838, 2010 (active)
- Professional Geologist, California, #9274, 2015 (active)
- Registered Geologist, Arizona, #33752, 1999 (inactive)

PROFESSIONAL EXPERIENCE BRIEF:

Chevron, Midcontinent Business Unit, Midland, TX — Mar 22-present
- SWD DRP Geologist: Permitting, planning and executing all SWD wells in Permian Basin.

Chevron, San Joaquin Business Unit, Bakersfield, CA — Jul 20-Mar 22
- Senior Environmental & Permitting Specialist, Hydrogeology: Addressed UIC regulatory issues both water and steam.

Chevron, San Joaquin Business Unit, Bakersfield, CA — Jun 13-Jul 20
- Asset Development Geologist: Lost Hills Oil Field and addressed CA regulations on frac and UIC permitting.

Chevron, San Joaquin Business Unit, Bakersfield, CA — Oct 12-Jun 13
- Execution Geologist: Lost Hills/Coalinga Oil Fields water- and steam-flood, 3-yr, 2-rig. 70 well oversight.

Balmorhea Geoscience Services, Gilbert, AZ — Aug. 08-Jun 13
- Owner, Principal Geologist: water well design/installation/testing; permitting; groundwater flow modeling.

Fluid Solutions, Phoenix, AZ — Dec. 99-Aug 08
- Member, Principal Geologist: water well design/install; G&G interpretations; groundwater flow modeling; permitting.

Arizona Department of Environmental Quality, Phoenix, AZ — May 97-Dec. 99
- Hydrologist III, Aquifer Protection Permitting: G&G review, monitor well designs and state regulations.

Delta Environmental, Phoenix, AZ — Feb 97-May 97
- Environmental Geophysicist: seismic reflection, refraction, gravity, magnetics, and resistivity

Ocean Drilling Program, College Station, TX — Aug 90-Jun 96
- Research Assistant: G&G well and core database management; technical writing

Texas A&M University, College Station, TX — Aug 86-Aug 90
- Graduate Student: rock fracture, fault, fluid-flow mechanics, surface and subsurface geology

Exxon Company USA, Midland, TX — May 80-Aug 86
- Senior Geologist: West Texas Exploration, Operations Geology, Frontier, well log/geophysics interpretations

Atlantic Richfield Co, Midland, TX and Denver, CO — Summer 76, 77, and 78
- Summer internships geologist oil and gas exploration

SKILL EXPERIENCE (some years overlapping):

- 25 years: water regulations of oil and gas, environmental, and water resource.
- 10 years: Underground Injection Control (UIC) permitting in CA, NM, and TX.
- 15 years: oil and gas exploration and asset development with 8 years in Permian Basin.
- 19 years: hydrogeology.
- Academic background in rock mechanics and structural geology.

Jason R. Parizek

Sr. Earth Scientist, Chevron

+1 (432) 208-3521
JRParizek@chevron.com
Midland, Texas

RELAVENT EXPERIENCE

2023 - Present

Sr. Earth Scientist, New Mexico Asset Development
Chevron, Midland, Tx

Plan and oversee execution of horizontal well programs. Plan, oversee, and conduct technical studies and technology assessments. Mentor and provide technical assurance for early career colleagues.

2021 - 2023

Regional Earth Scientist, Permian Basin
Chevron, Midland, Tx

Planned horizontal drilling programs on a cross-functional team. Coordinated geosteering operations and teams, selected and called casing points, planned and oversaw execution of data collection programs.

2018 - 2021

Sr. Operations Earth Scientist, Delaware Basin Operations
Chevron, Midland, Tx

Assessed and planned refrac program, up hole recompletions, fracture driven interaction mitigation pilots, and production diagnostics and optimization programs with production engineers.

2016 - 2018

Operations Earth Scientist, San Joaquin Valley, California
Chevron, McKittrick, Ca

Planned and executed vertical and horizontal well sidetrack drilling programs. Managed the reservoir management and data collection program for water and sour gas disposal operations.

2013 - 2016

Development Geologist, San Joaquin Valley, California
Chevron, Bakersfield, Ca

Planned and executed vertical and horizontal well drilling programs in heavy oil steam-flooded reservoirs. Executed at wellsite, drilling and wireline logging operations as G&G representative.

EDUCATION

December 2013

MSc. Earth Sciences
San Diego State University, San Diego, California

May 2012

BSc. Earth Sciences
San Diego State University, San Diego, California

Resume of Bryce Taylor

Senior PE Advisor
MCBU AD Water Strategy Team
MCBU – Permian Basin Development

Overall Experience: 11.5 years in Chevron/industry

Work Experience

Water Strategy Petroleum Engineering Advisor for Permian – 2 years
Reservoir Engineer for Unconventionals in Midland Basin in Permian – 4.5 years
Production Engineer for Heavy Oil in California – 2.5 years
Reservoir Engineer for Heavy Oil assets in California – 2.5 years

Education

Master's Degree Petroleum Engineering University of Southern California 2020
Bachelor's Degree Mechanical Engineering Brigham Young University 2012

Resume of Cody Comiskey

Current Title: Subsurface Advisor: Chevron MCBU

Education

Texas Tech University, B.S. Geophysics *cum laude,* 2011
Baylor University, M.S. Geophysics, Earthquake Seismology, 2013

Experience

Anadarko Petroleum Corp 2013-November 2019

- Onshore development, Marcellus business unit (2013-2016)
- Global Technical Center, West Africa exploration and development (2016-2017)
- Analytics and modeling – onshore development (2017-2018)
- Onshore analytics subsurface supervisor (2019)

Chevron November 2019-current

- MCBU subsurface advisor focused on seismicity and produced water management

Tab F: Hearing Notices

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

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN LEA COUNTY, NEW MEXICO. **CASE NO. 23686**

SELF-AFFIRMED DECLARATION OF DEANA M. BENNETT

Deana M. Bennett, attorney in fact and authorized representative of Chevron USA, Inc., the Applicant herein, declares as follows:

1) The above-referenced Application was provided under notice letter, dated July 13, 2023, and attached hereto, as Exhibit A.

2) Exhibit B is the mailing list, which show the notice letters were delivered to the USPS for mailing on July 13, 2023.

3) Exhibit C is the certified mailing tracking information, which is automatically complied by CertifiedPro, the software Modrall uses to track the mailings. This spreadsheet shows the names and addresses of the parties to whom notice was sent and the status of the mailing.

4) Exhibit D is the Affidavit of Publication from the Hobbs News-Sun, confirming that notice of the August 3, 2023 hearing was published on July 16, 2023.

5) I attest under penalty of perjury under the laws of the State of New Mexico that the information provided herein is correct and complete to the best of my knowledge and belief.

Dated: November 1, 2023

Deana M. Bennett

MODRALL SPERLING

LAWYERS

July 13, 2023

Deana M. Bennett
505.848.1834
dmb@modrall.com

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: APPLICATION OF CHEVRON U.S.A. INC. TO APPROVE SALT WATER DISPOSAL WELL IN LEA COUNTY, NEW MEXICO.

CASE NO. 23686

TO: AFFECTED PARTIES

This letter is to advise you that Chevron U.S.A. Inc. ("Chevron") has filed the enclosed application.

In Case No. 23686, Chevron seeks an order approving the Papa Squirrel State SWD #1 well at a surface location 1,928' from the South line and 870' from the West line, Unit L, Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 4625 feet to 8939 feet. The tubing packer will be set at 4525 feet, and production casing and cement will be set at 8500 feet. The maximum anticipated injection rate will be 20,000 BWPD and maximum surface injection pressure will be 925 psi. Said area is located approximately 26 miles west of Jal, New Mexico.

The hearing will be conducted remotely on August 3, 2023 beginning at 8:15 a.m. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: https://www.emnrd.nm.gov/ocd/hearing-info/. This hearing is subject to continuance by the Division to a subsequent docket date.

As a party who may be affected by this application, we are notifying you of your right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application. Failure to appear at the hearing may preclude you from any involvement in this case at a later date.

EXHIBIT A

Modrall Sperling
Roehl Harris & Sisk P.A.

500 Fourth Street NW
Suite 1000
Albuquerque,
New Mexico 87102

PO Box 2168
Albuquerque,
New Mexico 87103-2168

Tel: 505.848.1800
www.modrall.com

You are further notified that if you desire to appear in this case, then you are requested to file a Pre-Hearing Statement with the Division at least four business days in advance of a scheduled hearing before the Division or the Commission, but in no event later than 5:00 p.m. mountain time, on the Thursday preceding the scheduled hearing date, with a copy delivered to the undersigned.

Sincerely,

Deana M. Bennett

Deana M. Bennett
Attorney for Applicant

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

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN LEA COUNTY, NEW MEXICO.

CASE NO. 23686

APPLICATION

Chevron USA Inc. ("Chevron"), OGRID No. 4323, through its undersigned attorneys, hereby applies to the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12, for an order approving drilling of a salt water disposal well in Lea County, New Mexico. In support of this application, Chevron states as follows:

(1) Chevron proposes to drill the Papa Squirrel State SWD #1 well at a surface location 1,928' from the South line and 870' from the West line, Unit L, Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well.

(2) Chevron seeks authority to inject salt water into the Bell Canyon/Cherry Canyon/Brushy Canyon from 4,625' to 8,939'.

(3) The tubing packer will be set at 4,525' feet, and production casing and cement will be set at 8,500'.

(4) Chevron requests that the Division approve a maximum daily injection rate for the well of 20,000 BWPD.

(5) Chevron requests that a maximum pressure of 925 psi be approved for the well.

(6) A proposed C-108 for the subject well is attached hereto in Attachment A.

(7) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, Chevron requests that this application be set for hearing before an Examiner of the Oil Conservation Division on August 3, 2023; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

By: Deana M. Bennett

Deana Bennett
Earl E. DeBrine, JR.
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. 23686: Application of Chevron USA Inc. for approval of salt water disposal well in Lea County, New Mexico. Applicant seeks an order approving the Papa Squirrel State SWD #1 well at a surface location 1,928' from the South line and 870' from the West line, Unit L, Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 4625 feet to 8939 feet. The tubing packer will be set at 4525 feet, and production casing and cement will be set at 8500 feet. The maximum anticipated injection rate will be 20,000 BWPD and maximum surface injection pressure will be 925 psi. Said area is located approximately 26 miles west of Jal, New Mexico.

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? X Yes ___ No

II. OPERATOR: Chevron USA Inc.

ADDRESS: 6301 Deauville Blvd, Midland, TX 79706

CONTACT PARTY: Tom Merrifield PHONE: 661-448-7489

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. **ATTACHMENT 1**

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. **ATTACHMENT 2**

VII. Attach data on the proposed operation, including: **ATTACHMENT 3**

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. 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. **ATTACHMENT 4**

IX. Describe the proposed stimulation program, if any. **ATTACHMENT 5**

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **ATTACHMENT 6**

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. **ATTACHMENT 7**

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. **ATTACHMENT 8**

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **ATTACHMENT 9**

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: ___ TITLE: ___

SIGNATURE: ___ DATE: ___

E-MAIL ADDRESS: ___

XV. 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 circu al: ___

DISTRIBUTION: Original and one c to the appropriate District Office

EXHIBIT A

Side 2

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

Page 2

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	96100	SWD; DELAWARE

[4] Property Code	[5] Property Name	[6] Well Number
	PAPA SQUIRREL SWD	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3204'

[10] Surface Location

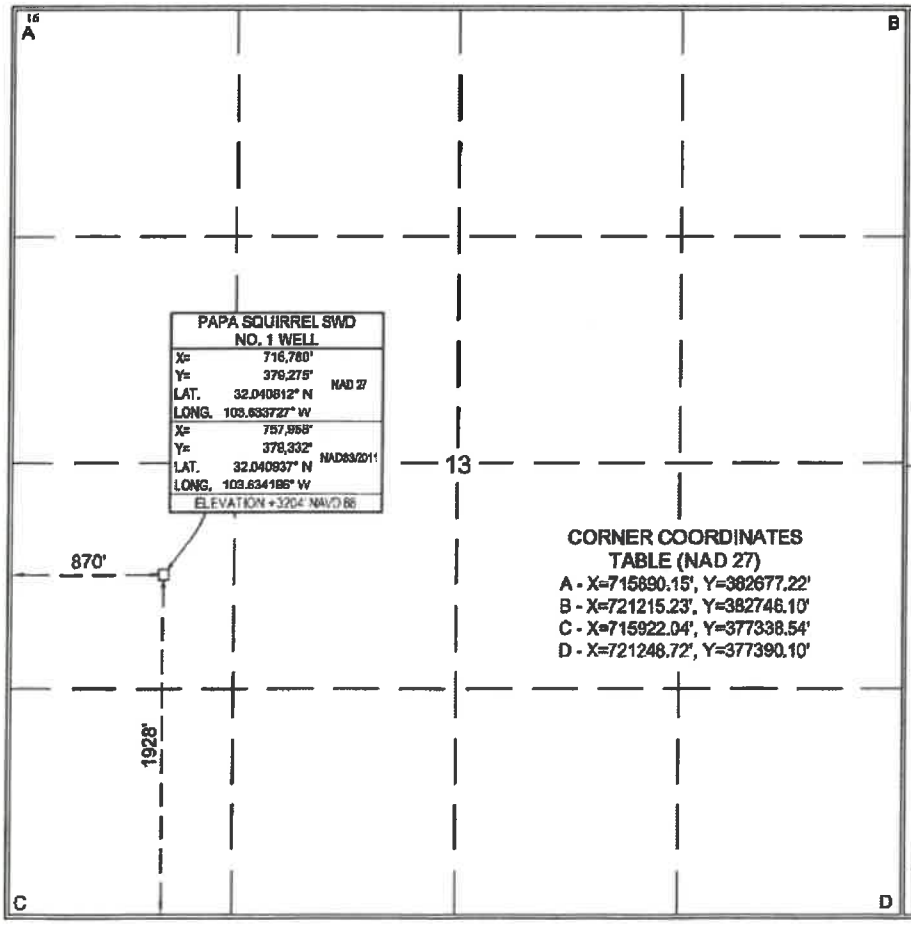
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	26 SOUTH	32 EAST, N.M.P.M.		1928'	SOUTH	870'	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	26 SOUTH	32 EAST, N.M.P.M.		1928'	SOUTH	870'	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

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.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

E-mail Address

[18] SURVEYOR CERTIFICATION

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.

01/25/2022
Date of Survey

Signature and Seal of Professional Surveyor

ROBERT L. LASTRAPES
NEW MEXICO
23006
04/06/2022
PROFESSIONAL SURVEYOR

Certificate Number

Page 3

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Inc.

WELL NAME & NUMBER: Papa Squirrel SWD 1

WELL LOCATION: 1928' from South, 870' from West, L 13, 26 South, 32 East, N.M.P.M.

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See next page

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 380 sx. *or* 497 ft³

Top of Cement: Surface Method Determined: Volumetric

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 10-3/4"

Cemented with: 320 sx. *or* 758 ft³

Top of Cement: Surface Method Determined: Volumetric

Production Casing

Hole Size: 9-7/8" Casing Size: 7-5/8"

Cemented with: 650 sx. *or* 1529 ft³

Top of Cement: Surface Method Determined: Volumetric

Total Depth: 8500'

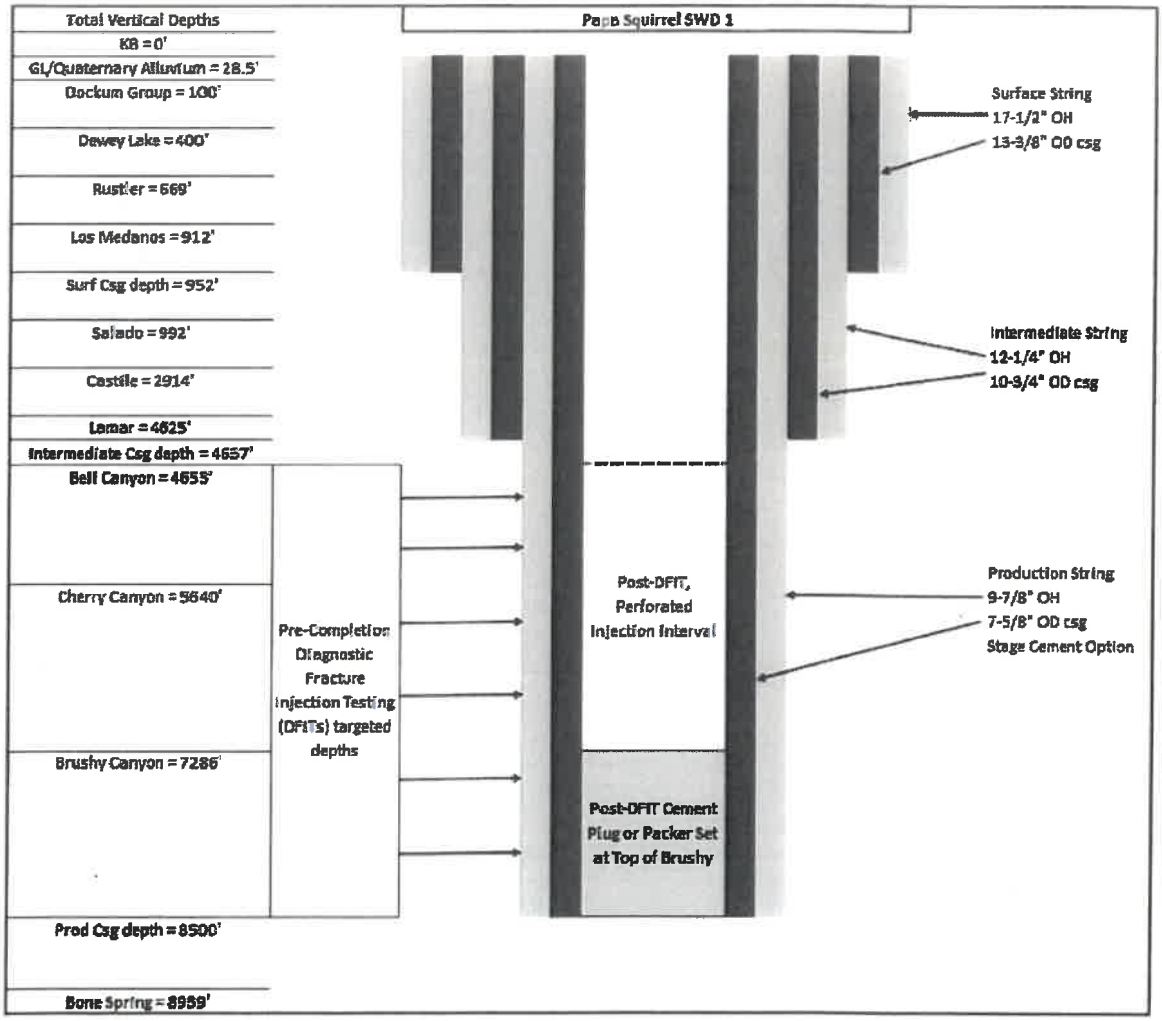
Injection Interval

4625' feet to 8939' *

(Perforated or Open Hole; indicate which)

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.

Page 4


Total Vertical Depths
Papa Squirrel SWD 1
KB = 0'
GL/Quaternary Alluvium = 28.5'
Dockum Group = 100'
Dewey Lake = 400'
Rustler = 669'
Los Medanos = 912'
Surf Csg depth = 952'
Salado = 992'
Castile = 2914'
Lamar = 4625'
Intermediate Csg depth = 4657'
Bell Canyon = 4655'
Cherry Canyon = 5640'
Brushy Canyon = 7286'
Prod Csg depth = 8500'
Bone Spring = 8959'
Pre-Completion Diagnostic Fracture Injection Testing (DFITs) targeted depths
Post-DFIT, Perforated Injection Interval
Post-DFIT Cement Plug or Packer Set at Top of Brushy
Surface String
17-1/2" OH
13-3/8" OD csg
Intermediate String
12-1/4" OH
10-3/4" OD csg
Production String
9-7/8" OH
7-5/8" OD csg
Stage Cement Option

Page 5

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 5-1/2" Lining Material: _____

Type of Packer: Hydraulically set packer

Packer Setting Depth: 4525'

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

Additional Data

1. Is this a new well drilled for injection? X Yes _____ No

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

2. Name of the Injection Formation: Bell Canyon, Cherry Canyon, and Brushy Canyon *

3. Name of Field or Pool (if applicable): SWD; Delaware Mountain Group

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

   No, this is a proposed new SWD well.

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Depths are within a 3 mile area.

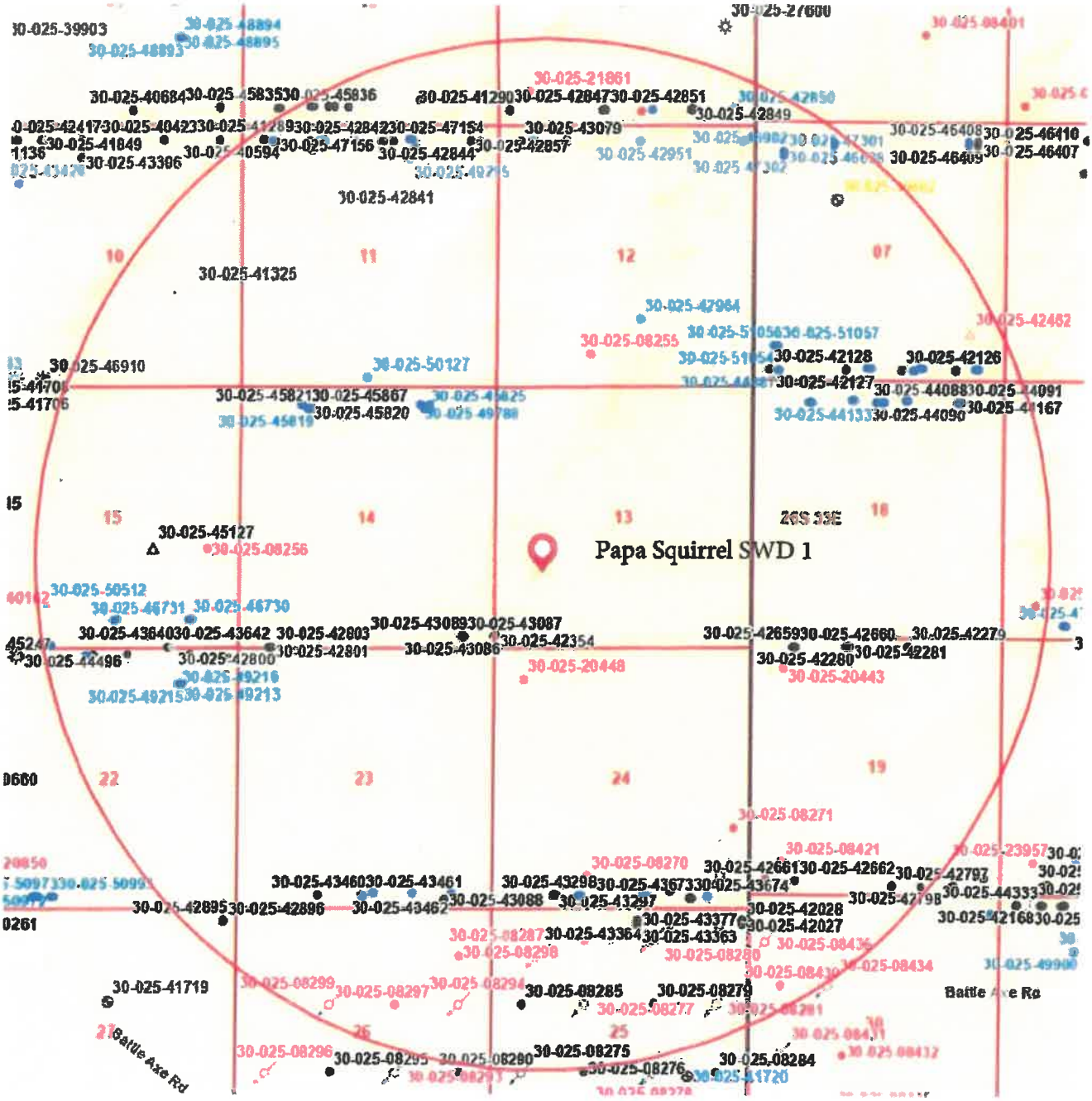
   Atoka (14,418-14,545 ft MD), Avalon (8,819-9,749 ft TVD), Bone Spring (8,706-12,028 ft TVD), Devonian (17,468-17,567 ft MD), Morrow (15,999-16,050 ft MD), Pennsylvanian (14,370-14,826 ft MD), Silurian (17,464-17,512 ft MD), and Wolfcamp (9,065-13,145 ft TVD).

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.

Page 6

ATTACHMENT 1

Item V

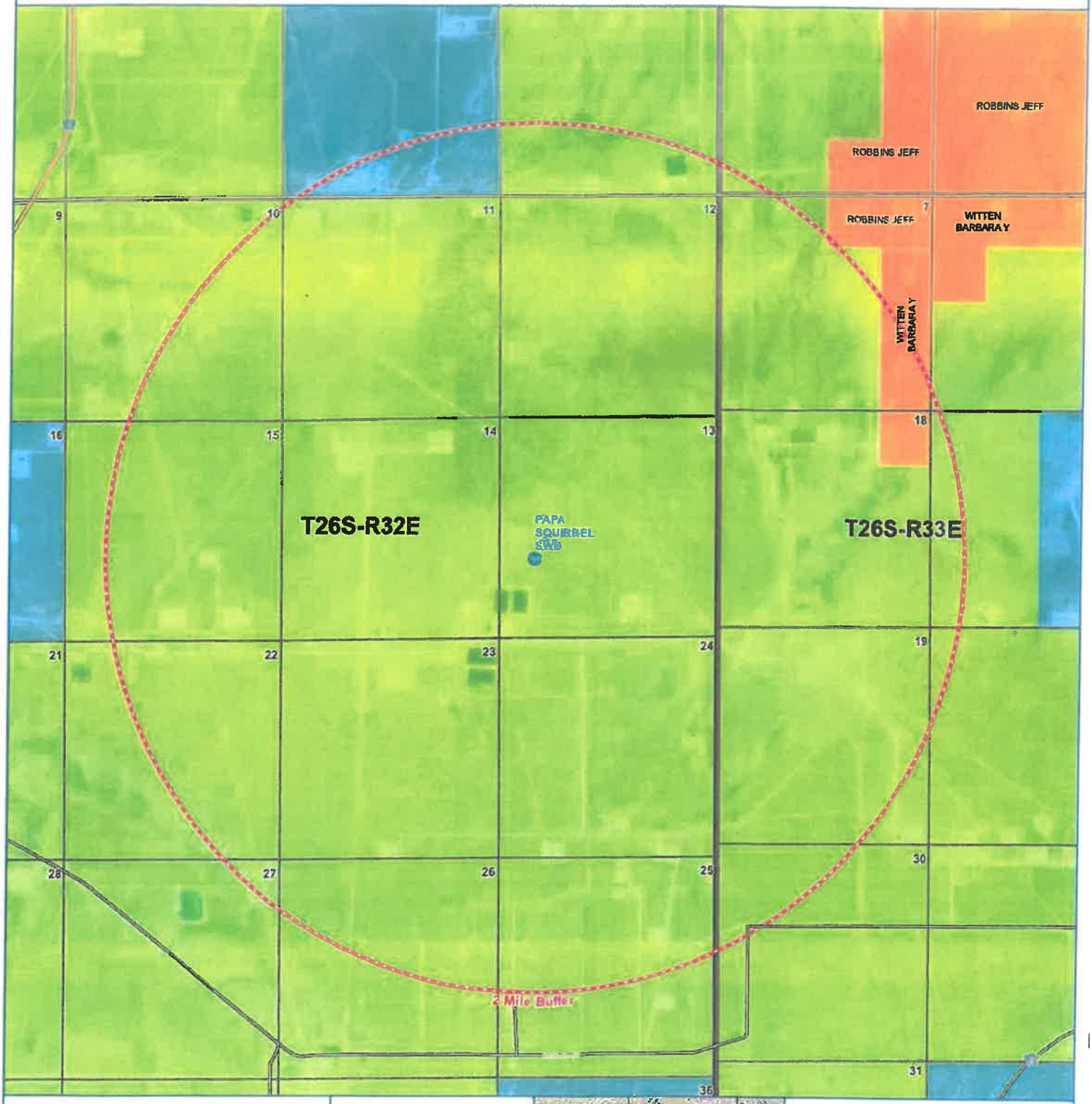


Papa Squirrel SWD 1: 2.0 mile radius circle map showing all wells within the radius.

SURFACE OWNERSHIP MAP

PAPA SQUIRREL SWD

Section 13, Township 26 South, Range 32 East, Lea County, New Mexico



Miles 0.2 0.1 0 0.2 0.4 0.6 0.8

Feet 1,000 500 0 1,000 2,000 3,000 4,000

Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

TGS TRANSFORM

PO BOX 1001, Fort Worth Texas 76101

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal
- State
- Private

Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US

N W E S

PAPA SQUIRREL SWD

SHL Location & Penetration Point:
1928' FSL & 870' FWL
Section 13, Township 26 South,
Range 32 East of P.M.
Lea County, New Mexico

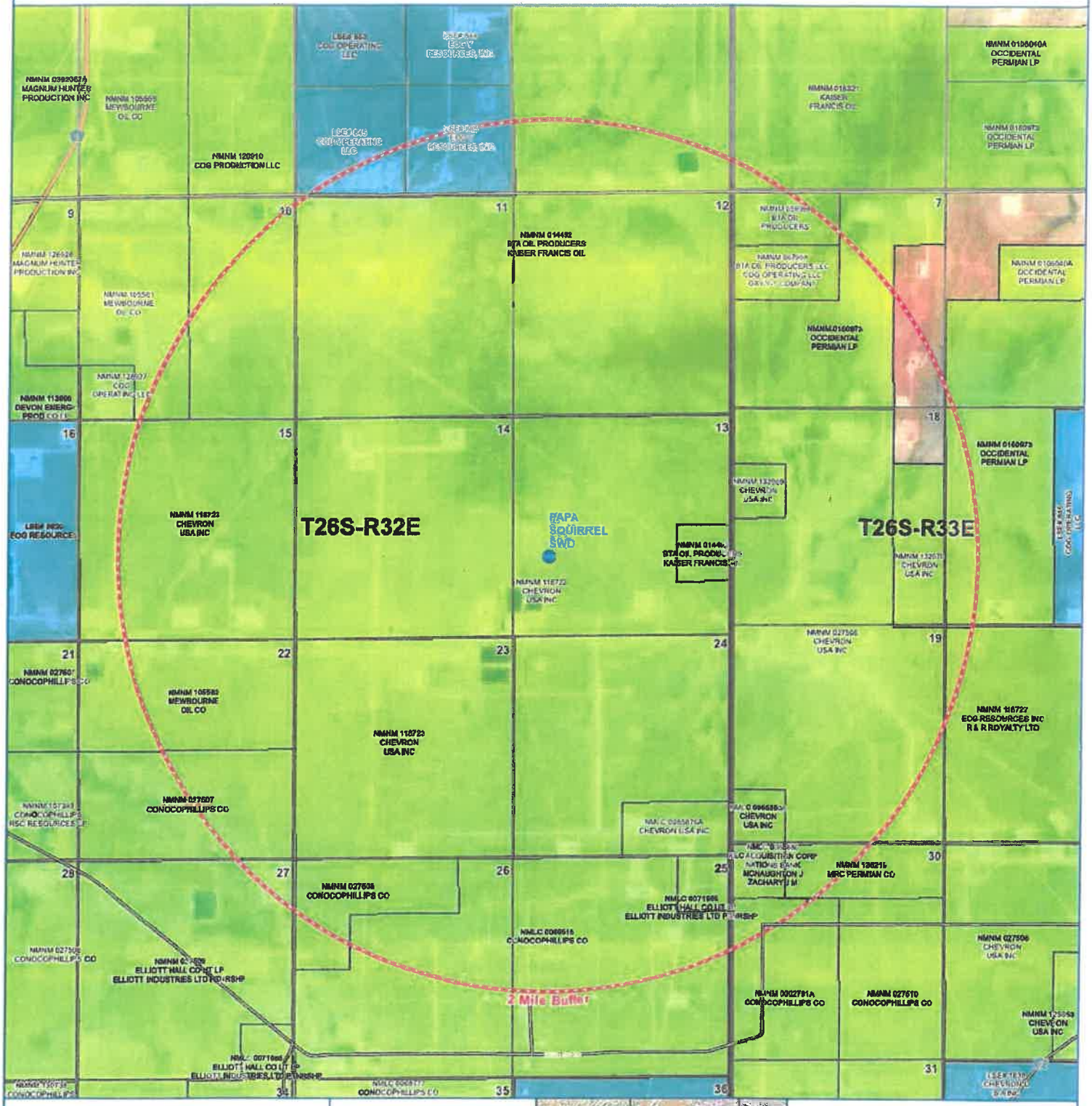
OPERATOR:
CHEVRON U.S.A. INC

Chevron

FEDERAL & STATE LEASES MAP

PAPA SQUIRREL SWD

Section 13, Township 26 South, Range 32 East, Lea County, New Mexico



Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

0.2 0.1 0 0.2 0.4 0.6 0.8 Miles

1,000 500 0 1,000 2,000 3,000 4,000 Feet

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal Lease
- State Lease

Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Feet US

PAPA SQUIRREL SWD

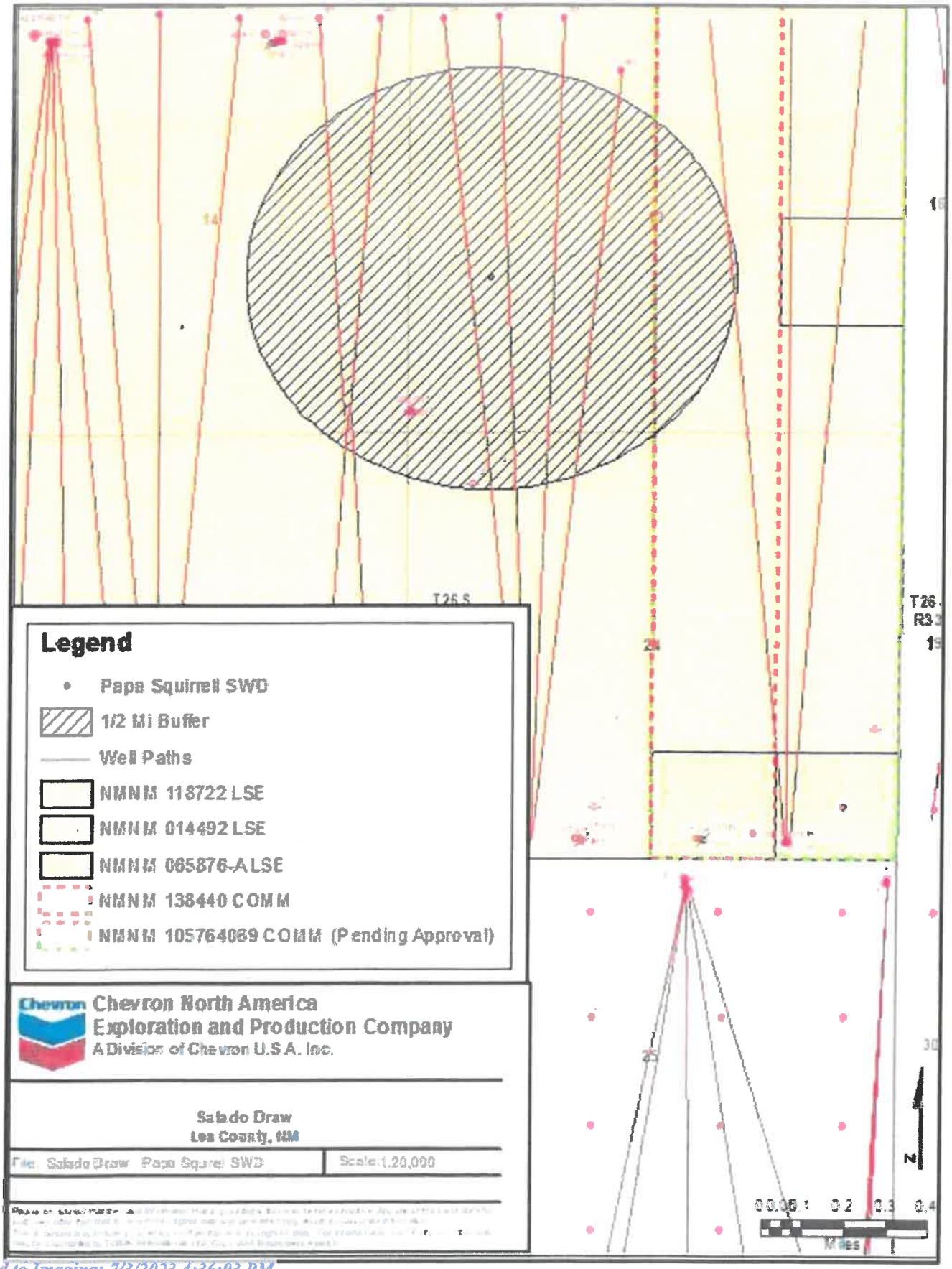
SHL Location & Penetration Point:
1928' FSL & 870' FWL
Section 13, Township 26 South,
Range 32 East of P.M.
Lea County, New Mexico

OPERATOR:
CHEVRON U.S.A. INC.

TGS TRANSFORM

PO BOX 1001, Fort Worth Texas 76101

Federal and State Lease Map (1/2 Mi Radius)



ATTACHMENT 2

Item VI

Data tabulation of wells in Area of Review of the Papa Squirrel SWD 1.

API	Well Name	Well Type	Well Status	OGRID Name	Section	Township	Range	Latitude 83	Longitude 83	Measured Depth	Vertical Depth	Associated Pools	Plug Date	Miles from SWD
30-025-43086	SD WE 14 FEDERAL P7 #003H	Oil	Active	CHEVRON U S A INC	14	26S	32E	32.0362	-103.6393	13,816	9,074	[97838] JENNINGS, UPPER BONE SPRING SHALE	-	0.4
30-025-43087	SD WE 14 FEDERAL P7 #004H	Oil	Active	CHEVRON U S A INC	14	26S	32E	32.0362	-103.6391	13,816	9,074	[97838] JENNINGS, UPPER BONE SPRING SHALE	-	0.4
30-025-43089	SD WE 23 FEDERAL P7 #004H	Oil	Active	CHEVRON U S A INC	14	26S	32E	32.0362	-103.639	14,002	9,030	[97838] JENNINGS, UPPER BONE SPRING SHALE	-	0.4
30-025-42354	SALADO DRAW SWD 13 #001	SWD	Active	NGL WATER SOLUTIONS PERMIAN, LLC	13	26S	32E	32.0364	-103.637	18,675	18,675	[97869] SWD, DEVONIAN-SILURIAN	-	0.3
30-025-20448	PRE-ONGARD WELL #002	Oil	Plugged (site released)	PRE-ONGARD WELL OPERATOR	24	26S	32E	32.0338	-103.6349	0	4,645	No Data	8/20/1963	0.4

APPROVED
AUG 21 1963
J. L. GORDON
ACTING DISTRICT ENGINEER

Form 9-331 a
(Feb. 1951)

(SUBMIT IN TRIPLICATE)

Budget Bureau No. 42-R358.4.
Form Approved.

Land Office
Lease No. LC - 065876 - A
Unit

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL	X		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

FEDERAL LITTLEFIELD "DR" August 20, 1963

Well No. 2 is located 660 ft. from {N/S} line and 660 ft. from {E/W} line of sec. 24

NW/4 Section 24 (¼ Sec. and Sec. No.) | 26-S (Twp.) | 32-E (Range) | NMPM (Meridian)

Wildcat (Field) | Lea (County or Subdivision) | New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 3182.8 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Well was completed dry at a total depth of 4645' on 8-19-63.

It is proposed to run drill pipe to 4645'. Spot cement plug from 4645 to 4545'; mud to 800'; cement to 750'; mud to 425'; cement to 375'; mud to 50'; and cement to surface leaving 38' of 8-5/8" casing in hole. Set marker and abandon.

Location will be cleaned up and pits filled.

Verbal approval received from Mr. J. L. Gordon, by phone 8-20-61.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Gulf Oil Corporation

Address P. O. Box 980

Hobbs, New Mexico

ORIGINAL SIGNED
BY
W. W. WHITAKER

By

Title Area Engineer

GPO 914974

Budget Bureau No. 42-R358.4.
Form Approved.

Form 9-331a
(Feb. 1951)

(SUBMIT IN TRIPLICATE)

APPROVED
FEB 3 1964
E. G. HUBBLE
ACTING DISTRICT ENGINEER

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office .....
Lease No. LC-065876-A
Unit .....

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

January 20, 1964

Federal Littlefield "B"

Well No. 2 is located 660 ft. from {N/S} line and 660 ft. from {E/W} line of sec. 24

NW/4 (¼ Sec. and Sec. No.) Sec. 24 | 26-S (Twp.) | 32-E (Range) | NMPM (Meridian)

Wildcat (Field) | Lea (County or Subdivision) | New Mexico (State or Territory)

The elevation of the derrick floor above sea level is 3188.8 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Well was completed dry at 4645' on 8-19-63.

Ran drill pipe open ended to 4645' and spotted 35 sacks cement 4645' to 4545'; mud 4545' to 800'; 20 sacks cement to 750'; mud to 425'; 20 sacks cement to 375'; mud to 50'; 20 sacks cement to surface leaving 384' of 8 5/8" casing in hole. Set marker & abandoned.

Location is cleaned up and ready for inspection.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Gulf Oil Corporation

Address P. O. Box 980

Kermit, Texas

ORIGINAL SIGNED BY
By W. W. WHITAKER

Title Area Engineer

GPO 914974

COUNTY Lea FIELD Wildcat STATE N.M. NO.

WC OPR. Gulf Oil Corporation MAP

NO. 2 LSE. Littlefield "DR" Federal

SEC. 24 T. 26S BLK. R 32E SUR. CO-ORD.

LOC. 660' fr N & W Lines of Sec.

MI. FROM P&A CLASS. EL.

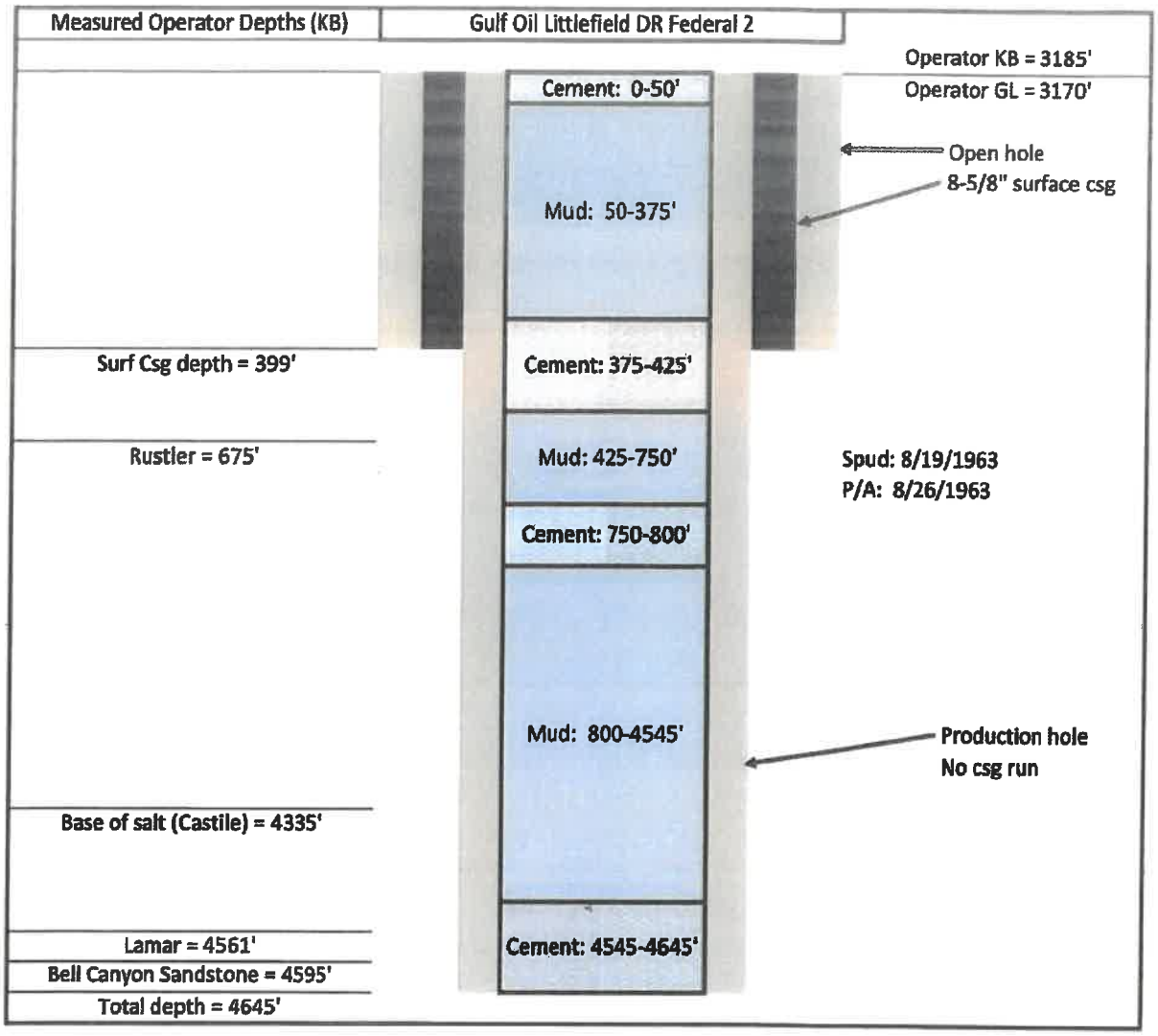
SPUD. 8-13-63 COMP. 8-20-63	FORMATION	DATUM	FORMATION	DATUM
TRT.	LOG:			
	Rust 675			
CSG. & SX.	B/Salt 4335			
8 5/8" 399' 250	Del ls 4561			
	Del sd 4595			
TBG. DEPTH SIZE				
LOGS EL GR RA IND HC A				
	TD 4645'		PB	

PROD INT. TP (DAILY RATE) BS&W GH GOR GTY C. P. T. P. HRS. TEST

PLUGGED & ABANDONED

CONT. DATE Johnn Drlg. Co. PROP DEPTH 4950' TYPE

F.R. 8-15-63, Delaware PD 4950'-Johnn Drlg. Co.
8-19-63 Drlg. 4435'. Oper's Elev. 3185' KB.
8-26-63 TD 4645', PLUGGED & ABANDONED.
No tests or cores.



Schematic of plugging detail of Gulf Littlefield DR Federal 2 (API 30-025-20445).

ATTACHMENT 3

Item VII

Item	Well 5.5" tubing	Papa Squirrel SWD #1
1)	Permit Max Rate (bwpd)	20,000
1)	Permit Avg Daily Rate (bwpd)	15,000
2)	System	closed
3)	Permit Max Pressure (psig)	925
3)	Permit Avg Pressure (psig)	750

Item	Water Requirements	
4)	Injected fluid is produced water.	Source WQ of injectate and receiving formation is not required per application.
5)	Disposal Zone Water Quality	for non-productive in 1 mile
	SD24 13 FED P416 17H (API 3002547303)	
	Results on next page	

Sample Name / Well			SD24 13 FED P416 17H
Date Received			Tuesday, June 21, 2022
Lab Sample #			**25168**
Address of Testing Laboratory			Northpark Geotechnical Center 100 Northpark Blvd., Covington, LA 70433
Date sampled			**6/16/2022**
Time Sampled			12:00
Area & Block			Salado Draw
Depth			6504.00ft MD
Reservoir			Cherry Canyon
Analyte	**Method**	**Symbol**	**mg/L**
Chloride	IC	Cl^-	159942
Bromide	IC	Br^-	1135.2
Iodide	IC	I^-	35.68
Sulfate	IC	SO_4^{2-}	564.12
Nitrate	IC	NO_3^-	10.63
Phosphate	IC	as PO_4^{3-}	BDL
Total Alkalinity	Titration	as HCO_3^-	1127
Organic Acids	Titration	NVWA	ND
Weak Bases	Titration	as NH_4^+	ND
Bicarbonate	*Titration (calc.)*	as HCO_3^-	NA
Acetate	IC	CH_3COO^-	BDL
Propionate	IC	$(C_2H_5)COO^-$	BDL
Formate	IC	$HCOO^-$	BDL
Butyrate	IC	$(C_3H_7)COO^-$	BDL
Sodium	ICP-AES	Na	64989
Potassium	ICP-AES	K	1808.07
Calcium	ICP-AES	Ca	33684.88
Magnesium	ICP-AES	Mg	2305.32
Strontium	ICP-AES	Sr	1361.01
Barium	ICP-AES	Ba	<0.1
Iron	ICP-AES	Fe	<0.05
Manganese	ICP-AES	Mn	<0.05
Lithium	ICP-AES	Li	15.32
Aluminum	ICP-AES	Al	0.72
Silicon	ICP-AES	Si	1.60
Boron	ICP-AES	B	24.19
Phosphorus	ICP-AES	P	0.39

Zinc	ICP-AES	Zn	2.44
Lead	ICP-AES	Pb	<0.25
Nickel	ICP-AES	Ni	<0.1
Chromium	ICP-AES	Cr	<0.05
Copper	ICP-AES	Cu	<0.1
Molybdenum	ICP-AES	Mo	<0.05
Sulfur *(total)*	ICP-AES	S	449.50
Properties	**Method**	**Units**	
Field pH	colorimetric	(-log(H⁺))	8.12
Lab pH (25°C)	potentiometric	(-log(H⁺))	8.77
TDS	*calculated*	mg/L	266525
Density (60°F, 1 bar)	Anton Parr meter	g/cm³	1.190
Conductivity @ 25°C	measured	µmhos/cm	226610
Resistivity @ 25°C	measured	ohm-m	0.044
Charge Balance Error	***calculated***	**%**	**2.36**

Abbreviations:

ICP-AES: *Inductively Coupled Plasma Atomic Emission Spectroscopy*
IC: *Ion Chromatography*
BDL: Below Detection Limit
< * : Below Reporting Limit (*)
NT: Not Tested
ND: Not Detected
NA: Not Available / Not Applicable

ATTACHMENT 4

Item VIII

Formation/Geologic Feature Tops & Datum	Lithology	TVD (from Datum)	Z (SSTVD)
KB (Kelly Bushing)	Datum	0.0	3,232.5
GL (ground surface)	Ground Surface	28.5	3,204.0
01 - Dockum Group	Sandstone	100.0	3,132.5
02 - Dewey Lake	Sandstone	400.0	2,832.5
03 - Rustler	Carbonates	669.0	2,563.5
04 - Los Medanos	Siltstone	912.0	2,320.5
05 - Saldo	Halite	992.2	2,240.3
06 - Castile	Anhydrite	2914.4	318.1
07 - Lamar	Carbonates	4625.3	-1,392.8
08 - Bell Canyon	Sandstone	4652.9	-1,420.4
09 - Cherry Canyon	Sandstone	5640.1	-2,407.6
10 - Brushy Canyon	Sandstone	7285.5	-4,053.0
11 - Bone Spring Limestone	Carbonate	8939.0	-5,706.5

Geologic prognosis tops of all formations to be encountered in the Papa Squirrel SWD 1.

ATTACHMENT 5

Item IX

Proposed acid stimulation as part of the completion for the Papa Squirrel SWD 1.

1. MI/RU Petroplex Acid and Gladiator N2 Unit
2. Perform pressure pumping checklist and record in wellview.
3. Rig up Petroplex acid lines and tie in to 4-1/16" wing valve on tree. Test all lines against wing valve to 2,100 psi for 5 min
   - Install tee in Petroplex lines to allow N2 line to be rigged up. Test all N2 lines against wing valve to 2,100 psi for 5 min
4. Pump Acid job per Petroplex Pump Schedule diverting with N2 as required.
   - Max pressure for job will be 925 psi
   - Discuss with WOE for operational pressure limits during job.
   - Diversion will be treated with 1,250 scf/bbl of N2
5. Once acid is complete R/D Petroplex and Gladiator
6. Secure and shut in well.

ATTACHMENT 6

Item X

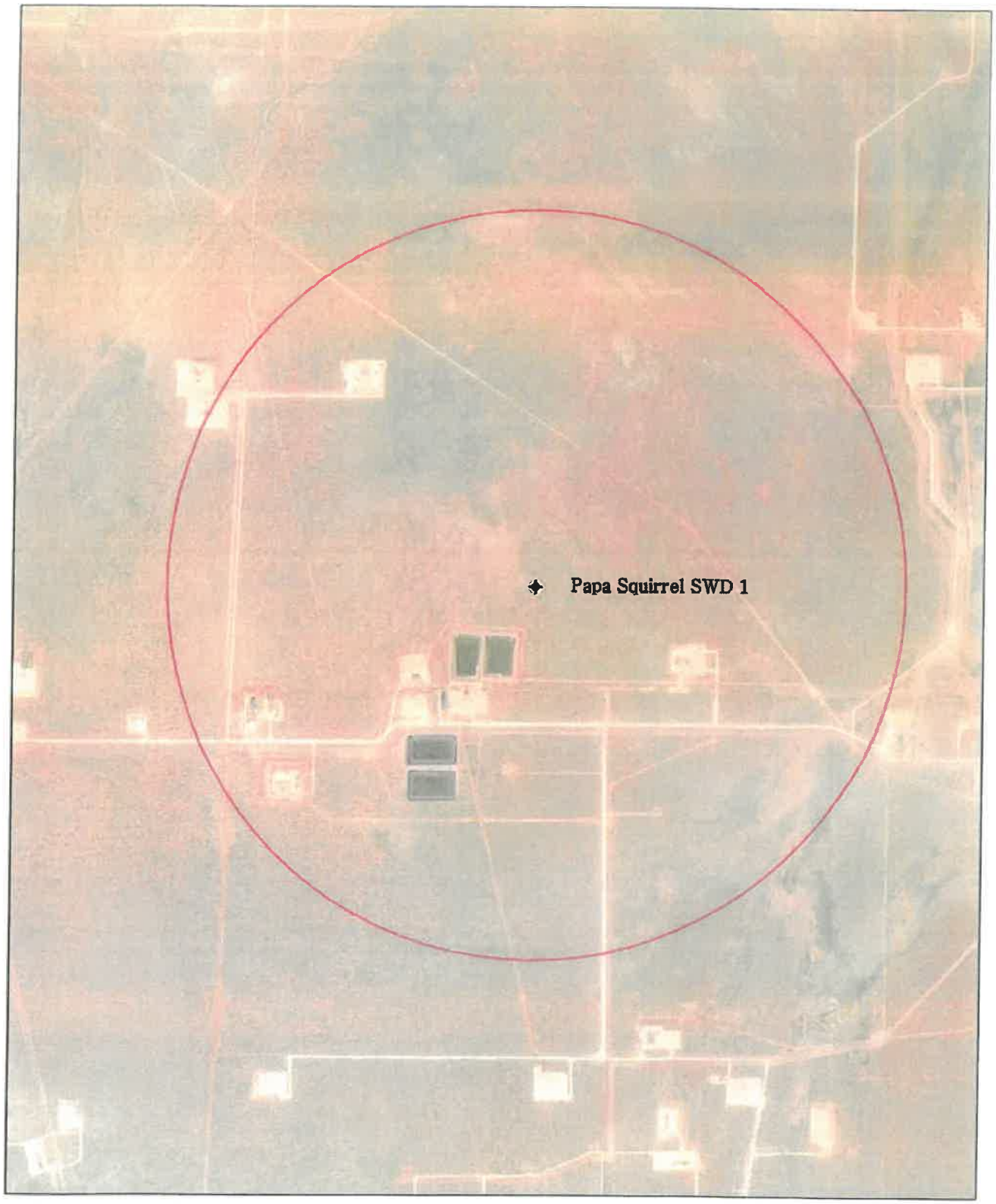
No logs have been run on the Papa Squirrel SWD 1. This is a planned well.

The following open hole logs are planned to be run if hole conditions allow: gamma-ray, resistivity, neutron-density, sonic, and image logs.

Production casing will be installed from surface to near the base of the Brushy Canyon Formation. A total of approximately six Diagnostic Fracture Injection Tests (DFITs) are planned for the Bell Canyon, Cherry Canyon and Brushy Canyon Formations. After the DFITs are run, the Brushy Canyon will be plugged. The Cherry Canyon and Bell Canyon will be perforated to the base of the Lamar Limestone. A step rate test will be run on the Bell Canyon and Cherry Canyon Formation permitted injection interval.

ATTACHMENT 7

Item XI



No fresh water wells within one mile of the Papa Squirrel SWD 1.

ATTACHMENT 8

Item XII

ATTACHMENT 8

Item XII

George T. (Tom) Merrifield, Jr., PG
SWD DRP Geologist
Chevron U.S.A. Inc.
6301 Deauville Blvd
Midland, TX 79706
Phone +1 661-448-7489
tommerrifield@chevron.com

April 10, 2023

Dylan Fuge, Acting Director
Oil Conservation Division
1220 South St. Francis Dr.
Sante Fe, New Mexico 87505

Re: Affirmation Statement C-108 Applications
Papa Squirrel SWD 1 and Severitas 2 State SWD 1

Dear Mr. Fuge:

With the increase of induced seismicity due to deep produced water injection, in 2021 Chevron decided to evaluate the potential for shallow injection in both Texas and New Mexico with exhaustive manpower and technical effort.

This effort led to the following technical evaluations of the DMG: (1) the location of high confident shallow faults in our active development areas using available seismic reflection data (2) assessment of seismic risk of any such shallow faults, (3) other geologic and reservoir engineering assessments addressing storage capabilities, potential impacts, and mitigation, and (4) collaboration and joint efforts with other operators.

Both the Papa Squirrel SWD 1 and Severitas 2 State SWD 1 are locations which we find no indication of open faults at the surface or in the subsurface and no indication of hydraulic connection between the proposed injection zone (Bell Canyon and Cherry Canyon) and an underground source of drinking water (USDW). Both locations have low potential for fault slip and induced seismicity.

Respectively yours,

G. T. Merrifield, Jr., PG
TX (#10838) and CA (#9274)

ATTACHMENT 9

Item XIII

Notice to Surface Owners, Leasehold Operators, and Affected Persons within ½ Mi Radius

Surface Owner:

United States of America (Bureau of Land Management)	Section 13: N/2, SW/4, W/2 of SE/4 and SE/4 of SE/4
	Section 14: All
	Section 15: All
	Section 23: All

Note: All part of T-26-S, R-33-E, NMPM, Lea County, NM

Leasehold Operator within ½ radius:

Operator	Well Name	API
Chevron U.S.A. Inc.	SD WE 24 FEDERAL P23 001H	30-025-43318
	SD WE 24 FEDERAL P23 002H	30-025-43296
	SD WE 24 FEDERAL P23 003H	30-025-43297
	SD WE 24 FEDERAL P23 004H	30-025-43298
	SD WE 14 FEDERAL P7 003H	30-025-43086
	SD WE 14 FEDERAL P7 004H	30-025-43087
	SD WE 23 FEDERAL P7 003H	30-025-43088
	SD WE 23 FEDERAL P7 004H	30-025-43089
	SD WE 24 FEDERAL P24 005H	30-025-43674
	SD WE 24 FEDERAL P24 006H	30-025-43673
	SD WE 24 FEDERAL P24 007H	30-025-43675
	SD 24 13 FEDERAL P415 013H	30-025-49072
	SD 24 13 FEDERAL P415 014H	30-025-49073
	SD 24 13 FEDERAL P415 015H	30-025-49074
	SD 24 13 FEDERAL P416 017H	30-025-47303
	SD 24 13 FEDERAL P416 018H	30-025-47311
	SD 24 13 FEDERAL P416 019H	30-025-47312
NGL Water Solutions Permian LLC	SALADO DRAW SWD 13-1	30-025-42354

Working Interest Owners within ½ mile radius:

Lease	Lands	Depths	WI Owner (%)	WI (%)
NMNM 118722	Section 13: N/2, SW/4, W/2 of SE/4 and SE/4 of SE/4 Section 14: All Section 15: All Section 23: All Section 24: N/2, N/2 of S/2, S/2 of SW/4	All	Chevron U.S.A. Inc.	100.000000%
SD WE P24 5H Comm Agreement (Pending Approval)	Section 13: W/2 of E/2 Section 24: W/2 of E/2	Bone Spring	Chevron U.S.A. Inc.	100.000000%
SD 24 13 Fed P416 Comm Agreement (Pending Approval)	Section 13: E/2 Section 24: E/2	Wolfcamp	Chevron U.S.A. Inc.	99.453125%
			Royalty Clearinghouse 2003 LLC	0.078125%
			Atlas OBO Energy LP	0.468750%

Note: All part of T-26-S, R-33-E, NMPM, Lea County, NM

Mineral Interest Owner within ½ mile radius:

Lease	Lands	Depths	Federal /State Mineral Interest (MI) Owner	MI (%)
NMNM 118722	Section 13: N/2, SW/4, W/2 of SE/4 and SE/4 of SE/4 Section 14: All Section 15: All Section 23: All Section 24: N/2, N/2 of S/2, S/2 of SW/4	All	United States of America	100.000000%
SD WE P24 5H Comm Agreement (Pending Approval)	Section 13: W/2 of E/2 Section 24: W/2 of E/2	Bone Spring	United States of America	100.000000%
SD 24 13 Fed P416 Comm Agreement (Pending Approval)	Section 13: E/2 Section 24: E/2	Wolfcamp	United States of America	100.000000%

Note: All part of T-26-S, R-33-E, NMPM, Lea County, NM

Karlene Schuman
Modrall Sperling Roehl Harris & Sisk P.A.
500 Fourth Street, Suite 1000
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL
07/13/2023

Firm Mailing Book ID: 249130

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
1	9314 8699 0430 0109 8675 77	United States of America Bureau of Land Management 301 Dinosaur Trail Santa Fe NM 87508	$2.31	$4.35	$2.20	$0.00	83420.0047 Papa Notice
2	9314 8699 0430 0109 8675 84	NGL Water Solutions Permian LLC 865 North Albion Street, Suite 400 Denver CO 80220	$2.31	$4.35	$2.20	$0.00	83420.0047 Papa Notice
3	9314 8699 0430 0109 8675 91	Royalty Clearinghouse 2003 LLC 201 W. 5th St. #1350 Austin TX 78701	$2.31	$4.35	$2.20	$0.00	83420.0047 Papa Notice
4	9314 8699 0430 0109 8676 07	Atlas OBO Energy LP 1900 Saint James Pl., St 800 Houston TX 77056	$2.31	$4.35	$2.20	$0.00	83420.0047 Papa Notice
5	9314 8699 0430 0109 8676 14	Mewbourne Oil Company Tim Harrington PO Box 7598 Tyler TX 75711	$2.31	$4.35	$2.20	$0.00	83420.0047 Papa Notice
		Totals:	**$11.55**	**$21.75**	**$11.00**	**$0.00**	
					Grand Total:	**$44.30**	

List Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	Postmaster: Name of receiving employee	Dated:
5			

EXHIBIT B

Transaction Report Details - CertifiedPro.net
Firm Mail Book ID= 249130
Generated: 11/1/2023 8:11:31 AM

USPS Article Number	Date Created	Reference Number	Name 1	Name 2	City	State	Zip	Postage	Fees	Firm MailBook ID	Mailing Status	Service Options	Mail Delivery Date
9314869904300109867614	2023-07-13 8:58 AM	83420.0047 Papa	Mewbourne Oil Company	Tim Harrington	Tyler	TX	75711	2.31	6.55	249130	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-18 8:56 AM
9314869904300109867607	2023-07-13 8:58 AM	83420.0047 Papa	Atlas OBO Energy LP		Houston	TX	77056	2.31	6.55	249130	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-17 12:14 PM
9314869904300109867591	2023-07-13 8:58 AM	83420.0047 Papa	Royalty Clearinghouse 2003 LLC		Austin	TX	78701	2.31	6.55	249130	Lost	Return Receipt - Electronic, Certified Mail	
9314869904300109867584	2023-07-13 8:58 AM	83420.0047 Papa	NGL Water Solutions Permian LLC		Denver	CO	80220	2.31	6.55	249130	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-19 3:37 PM
9314869904300109867577	2023-07-13 8:58 AM	83420.0047 Papa	United States of America	Bureau of Land M	Santa Fe	NM	87508	2.31	6.55	249130	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-17 1:11 PM

EXHIBIT C

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
July 16, 2023
and ending with the issue dated
July 16, 2023.

Publisher

Sworn and subscribed to before me this
16th day of July 2023.

Business Manager

My commission expires
January 29, 2027
(Seal)

STATE OF NEW MEXICO
NOTARY PUBLIC
GUSSIE RUTH BLACK
COMMISSION # 1087526
COMMISSION EXPIRES 01/29/2027

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

LEGAL NOTICE
July 16, 2023

CASE NO. 23686: Notice to all affected parties, as well as heirs and devisees of: United States of America Bureau of Land Management; NGL Water Solutions Permian LLC; Royalty Clearinghouse 2003 LLC; Atlas OBO Energy LP of Application of Chevron USA Inc. for approval of salt water disposal well in Lea County, New Mexico. The State of New Mexico through its Oil Conservation Division hereby gives notice that the Division will conduct a public hearing at 8:15 a.m. on **August 3, 2023** to consider this application. Information about accessing the electronic hearing is posted at "OCD NOTICES" at **https://www.emnrd.nm.gov/ocd/hearing-info/**. This hearing is subject to continuance by the Division to a subsequent docket date. Applicant seeks an order approving the Papa Squirrel State SWD #1 well at a surface location 1,928' from the South line and 870' from the West line, Unit L, Section 13, Township 26 South, Range 32 East, NMPM, Lea County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 4625 feet to 8939 feet. The tubing packer will be set at 4525 feet, and production casing and cement will be set at 8500 feet. The maximum anticipated injection rate will be 20,000 BWPD and maximum surface injection pressure will be 925 psi. Said area is located approximately 26 miles west of Jal, New Mexico.
#00280692

01104570 00280692

DOLORES SERNA
MODRALL, SPERLING, ROEHL, HARRIS &
P. O. BOX 2168
ALBUQUERQUE, NM 87103-2168

EXHIBIT D

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

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN EDDY COUNTY, NEW MEXICO. **CASE NO. 23687**

SELF-AFFIRMED DECLARATION OF DEANA M. BENNETT

Deana M. Bennett, attorney in fact and authorized representative of Chevron USA, Inc., the Applicant herein, declares as follows:

1) The above-referenced Application was provided under notice letter, dated July 13, 2023, and attached hereto, as Exhibit A.

2) Exhibit B is the mailing list, which show the notice letters were delivered to the USPS for mailing on July 13, 2023.

3) Exhibit C is the certified mailing tracking information, which is automatically complied by CertifiedPro, the software Modrall uses to track the mailings. This spreadsheet shows the names and addresses of the parties to whom notice was sent and the status of the mailing.

4) Exhibit D is the Affidavit of Publication from the Carlsbad Current Argus, confirming that notice of the August 3, 2023 hearing was published on July 19, 2023.

5) I attest under penalty of perjury under the laws of the State of New Mexico that the information provided herein is correct and complete to the best of my knowledge and belief.

Dated: November 1, 2023

Deana M. Bennett

MODRALL SPERLING

LAWYERS

July 13, 2023

Deana M. Bennett
505.848.1834
dmb@modrall.com

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Re: APPLICATION OF CHEVRON U.S.A. INC. TO APPROVE SALT WATER DISPOSAL WELL IN EDDY COUNTY, NEW MEXICO.

CASE NO. 23687

TO: AFFECTED PARTIES

This letter is to advise you that Chevron U.S.A. Inc. ("Chevron") has filed the enclosed application.

In Case No. 23687, Chevron seeks an order approving the Severitas 2 State SWD #1 well at a surface location 185' from the North line and 1,082' from the East line, Unit A, Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 2343 feet to 6012 feet. The tubing packer will be set at 2243 feet, and production casing and cement will be set at 5500 feet. The maximum anticipated injection rate will be 15,000 bwpd and maximum surface injection pressure will be 468 psi. Said location is approximately 13 miles southwest of Malaga, New Mexico.

The hearing will be conducted remotely on August 3, 2023 beginning at 8:15 a.m. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: https://www.emnrd.nm.gov/ocd/hearing-info/. This hearing is subject to continuance by the Division to a subsequent docket date.

As a party who may be affected by this application, we are notifying you of your right to appear at the hearing and participate in this case, including the right to present evidence either in support of or in opposition to the application. Failure to appear at the hearing may preclude you from any involvement in this case at a later date.

EXHIBIT A

Modrall Sperling
Roehl Harris & Sisk P.A.

500 Fourth Street NW
Suite 1000
Albuquerque,
New Mexico 87102

PO Box 2168
Albuquerque,
New Mexico 87103-2168

Tel: 505.848.1800
www.modrall.com

You are further notified that if you desire to appear in this case, then you are requested to file a Pre-Hearing Statement with the Division at least four business days in advance of a scheduled hearing before the Division or the Commission, but in no event later than 5:00 p.m. mountain time, on the Thursday preceding the scheduled hearing date, with a copy delivered to the undersigned.

Sincerely,

Deana M. Bennett

Deana M. Bennett
Attorney for Applicant

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

APPLICATION OF CHEVRON USA INC.
TO APPROVE SALT WATER DISPOSAL
WELL IN EDDY COUNTY, NEW MEXICO.

CASE NO. 23687

APPLICATION

Chevron USA Inc. ("Chevron"), OGRID No. 4323, through its undersigned attorneys, hereby applies to the Oil Conservation Division pursuant to the provisions of N.M. Stat. Ann. § 70-2-12, for an order approving drilling of a salt water disposal well in Eddy County, New Mexico. In support of this application, Chevron states as follows:

(1) Chevron proposes to drill the Severitas 2 State SWD #1 well at a surface location 185' from the North line and 1,082' from the East line, Unit A, Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well.

(2) Chevron seeks authority to inject into the Bell Canyon/Cherry Canyon/Brushy Canyon from 2,343' to 6,012'.

(3) The tubing packer will be set at 2,243'and production casing and cement will be set at 5,500'.

(4) Chevron requests that the Division approve a maximum daily injection rate for the well of 15,000 BWPD.

(5) Chevron requests that a maximum pressure of 468 psi be approved for the well.

(6) A proposed C-108 for the subject well is attached hereto in Attachment A.

(7) The granting of this application will avoid the drilling of unnecessary wells, will prevent waste, and will protect correlative rights.

WHEREFORE, Chevron requests that this application be set for hearing before an Examiner of the Oil Conservation Division on August 3, 2023; and that after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS & SISK, P.A.

By: Deana M Bennett

Deana Bennett
Earl E. DeBrine, JR.
Post Office Box 2168
500 Fourth Street NW, Suite 1000
Albuquerque, New Mexico 87103-2168
Telephone: 505.848.1800
Attorneys for Applicant

CASE NO. 23687: Application of Chevron USA Inc. for approval of salt water disposal well in Eddy County, New Mexico. Applicant seeks an order approving the Severitas 2 State SWD #1 well at a surface location 185' from the North line and 1,082' from the East line, Unit A, Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 2343 feet to 6012 feet. The tubing packer will be set at 2243 feet, and production casing and cement will be set at 5500 feet. The maximum anticipated injection rate will be 15,000 bwpd and maximum surface injection pressure will be 468 psi. Said location is approximately 13 miles southwest of Malaga, New Mexico.

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? _X_ Yes _____ No

II. OPERATOR: Chevron USA Inc.

ADDRESS: 6301 Deauville Blvd, Midland, TX 79706

CONTACT PARTY: Tom Merrifield PHONE: 661-448-7489

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. **ATTACHMENT 1**

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. **ATTACHMENT 2**

VII. Attach data on the proposed operation, including: **ATTACHMENT 3**

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. 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. **ATTACHMENT 4**

IX. Describe the proposed stimulation program, if any. **ATTACHMENT 5**

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **ATTACHMENT 6**

*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. **ATTACHMENT 7**

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. **ATTACHMENT 8**

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. **ATTACHMENT 9**

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: _____ **TITLE:** _____

SIGNATURE: _____ DATE: _____

E-MAIL ADDRESS: _____

XV. 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 su

DISTRIBUTION: Original and one copy to Santa Fe with one ct Office

EXHIBIT A

Side 2

III. WELL DATA

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

(1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

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

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	96100	SWD; DELAWARE

[4] Property Code	[5] Property Name	[6] Well Number
	SEVERITAS 2 STATE SWD	001

[7] OGRID No.	[8] Operator Name	[9] Elevation
4323	CHEVRON U.S.A. INC.	3172'

[10] Surface Location

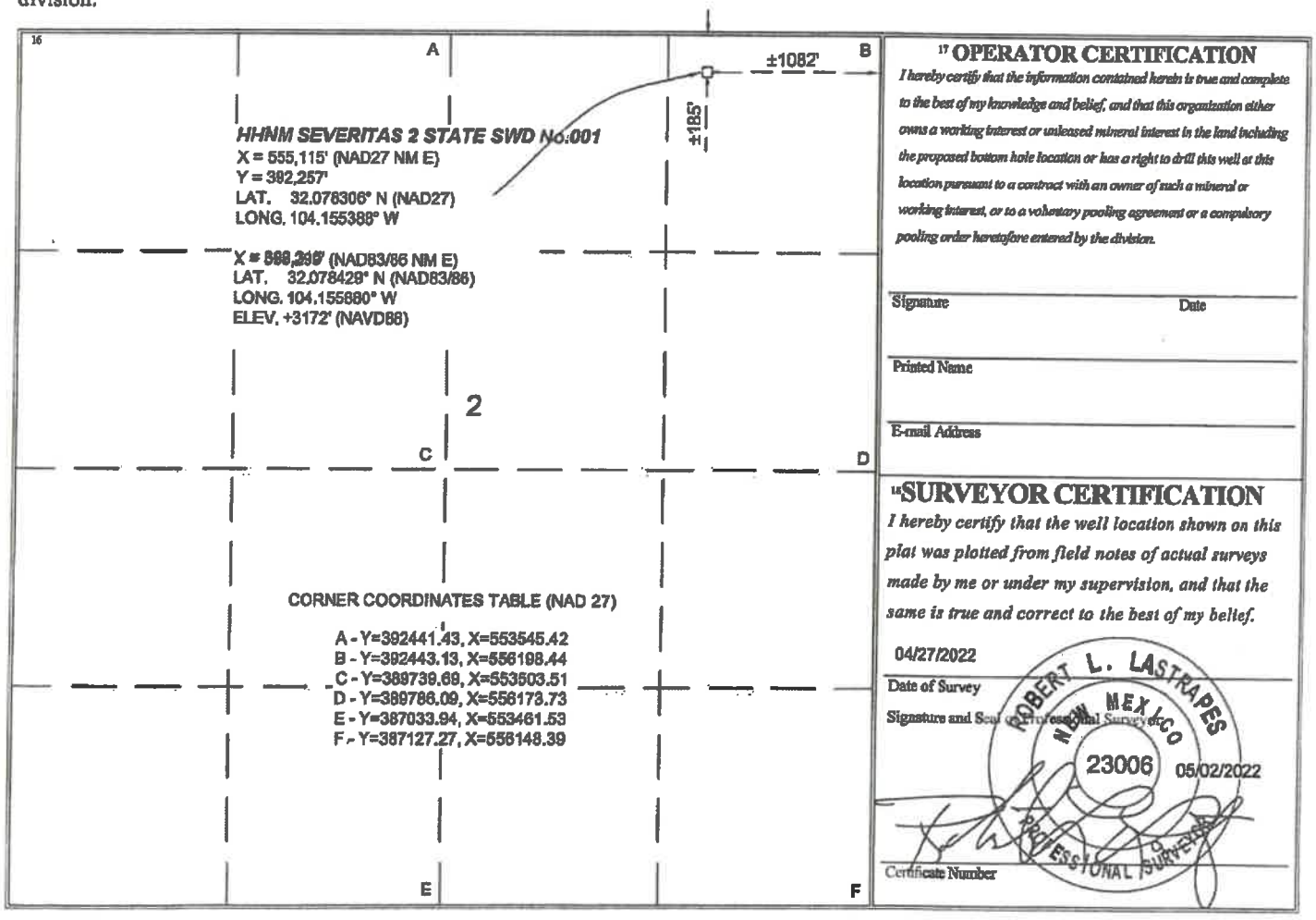
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	26 SOUTH	27 EAST, N.M.P.M.		185'	NORTH	1082'	EAST	EDDY

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	2	26 SOUTH	27 EAST, N.M.P.M.		185'	NORTH	1082'	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

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.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and 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 such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

E-mail Address

[18] SURVEYOR CERTIFICATION

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.

04/27/2022
Date of Survey

Signature and Seal of Professional Surveyor

ROBERT L. LASTRAPES
NEW MEXICO
23006
05/02/2022
PROFESSIONAL SURVEYOR

Certificate Number

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Chevron U.S.A. Inc.

WELL NAME & NUMBER: Severitas 2 State SWD 1

WELL LOCATION: 185' from North, 1082' from East, A 2, 26 South, 27 East, N.M.P.M.

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See next page

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8"

Cemented with: 253 sx. *or* 337 ft³

Top of Cement: Surface Method Determined: Volumetric

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 10-3/4"

Cemented with: _____ sx. *or* _____ ft³

Top of Cement: Surface Method Determined: Volumetric

Production Casing

Hole Size: 9-7/8" Casing Size: 7-5/8"

Cemented with: 377 sx. *or* 901 ft³

Top of Cement: Surface Method Determined: Volumetric

Total Depth: 5500'

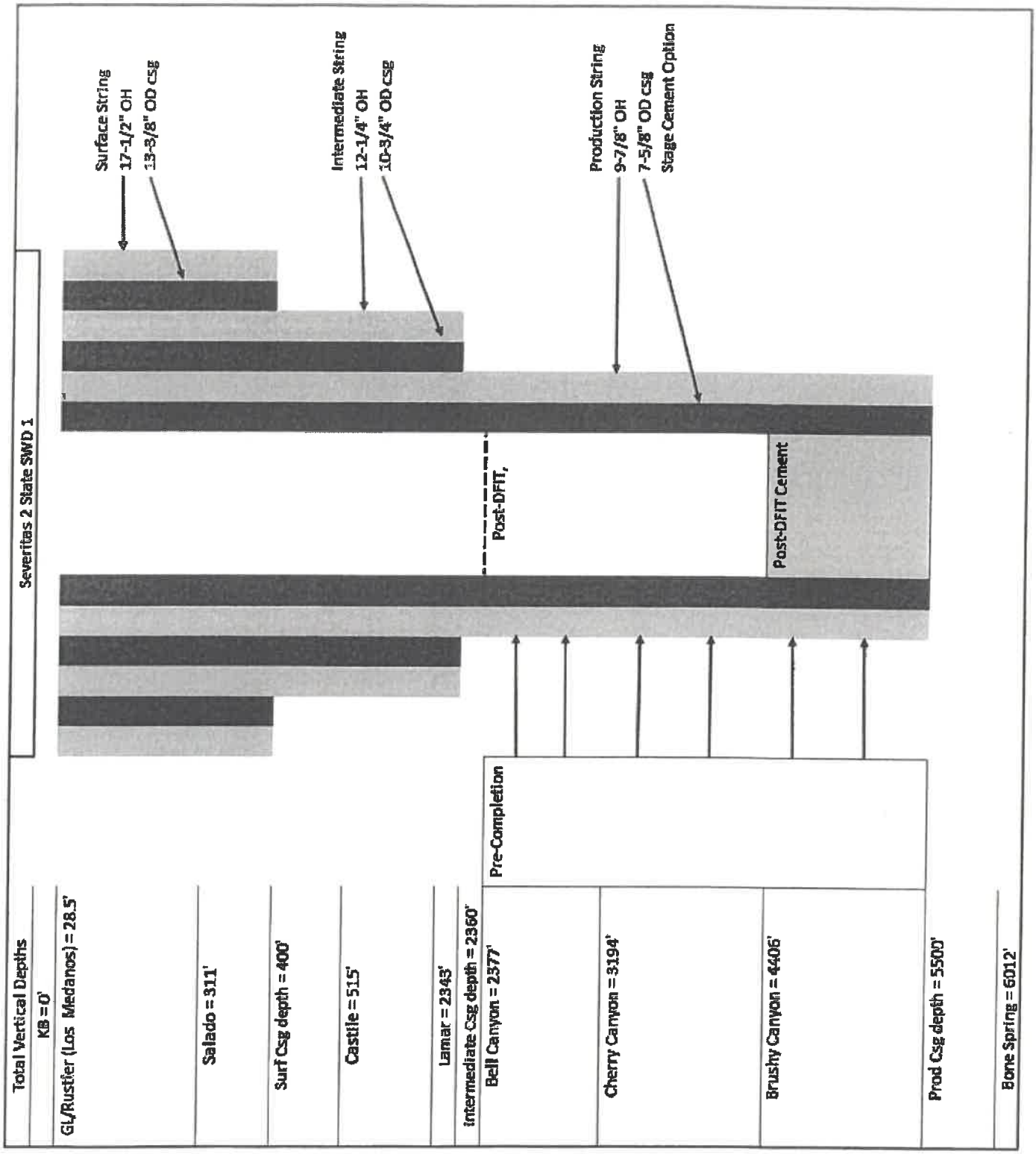
Injection Interval

2343 feet to 6012' *

(Perforated or Open Hole; indicate which)

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.

Page 5


Severitas 2 State SWD 1
Surface String
17-1/2" OH
13-3/8" OD csg
Intermediate String
12-1/4" OH
10-3/4" OD csg
Production String
9-7/8" OH
7-5/8" OD csg
Stage Cement Option
Post-DFIT,
Post-DFIT Cement
Pre-Completion
Total Vertical Depths
KB = 0'
GL/Rustler (Los Medanos) = 28.5'
Salado = 311'
Surf Csg depth = 400'
Castile = 515'
Lamar = 2343'
Intermediate Csg depth = 2360'
Bell Canyon = 2377'
Cherry Canyon = 3194'
Brushy Canyon = 4406'
Prod Csg depth = 5500'
Bone Spring = 6012'

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 5-1/2" Lining Material: _____

Type of Packer: Hydraulically set packer

Packer Setting Depth: 2243'

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

Additional Data

1. Is this a new well drilled for injection? X Yes _____ No

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

2. Name of the Injection Formation: Bell Canyon, Cherry Canyon, and Brushy Canyon *

3. Name of Field or Pool (if applicable): SWD; Delaware

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

   No, this is a proposed new SWD well.

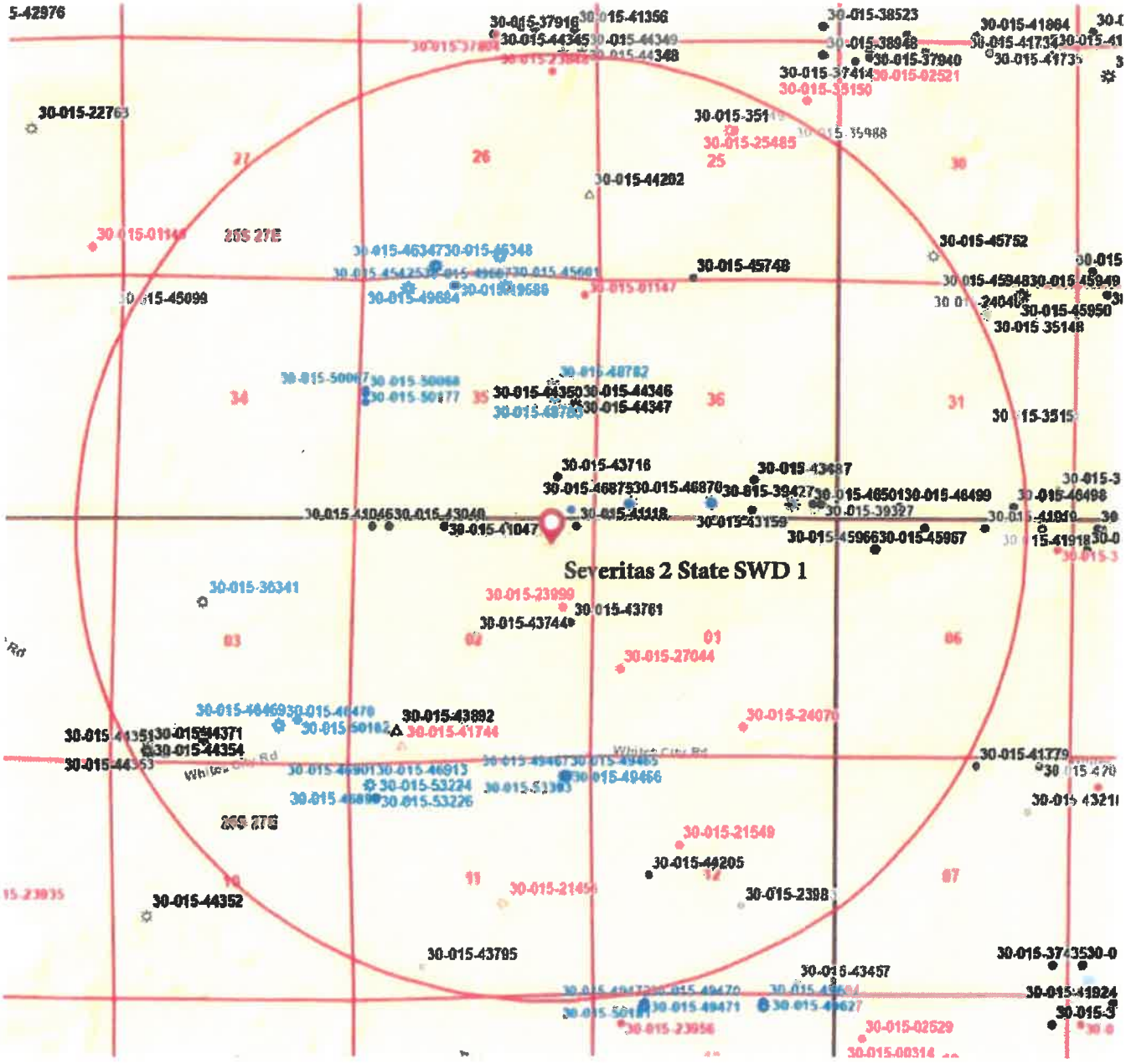
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Depths are within a 3 mile area.

   Atoka (11,643-11,794), Bone Spring (5840-18,860), Morrow (11,966-12,697), Pennsylvanian (11,154-12,522), and Strawn (11,694-11,719), and Wolfcamp (9299-21,655)

* Brushy Canyon is included as a potential injection interval. The Brushy is not intentionally targeted for injection, but the SA&O data and analysis may indicate that fluids migrate into the Brushy, but are contained by the Bone Spring Limestone.

ATTACHMENT 1

Item V

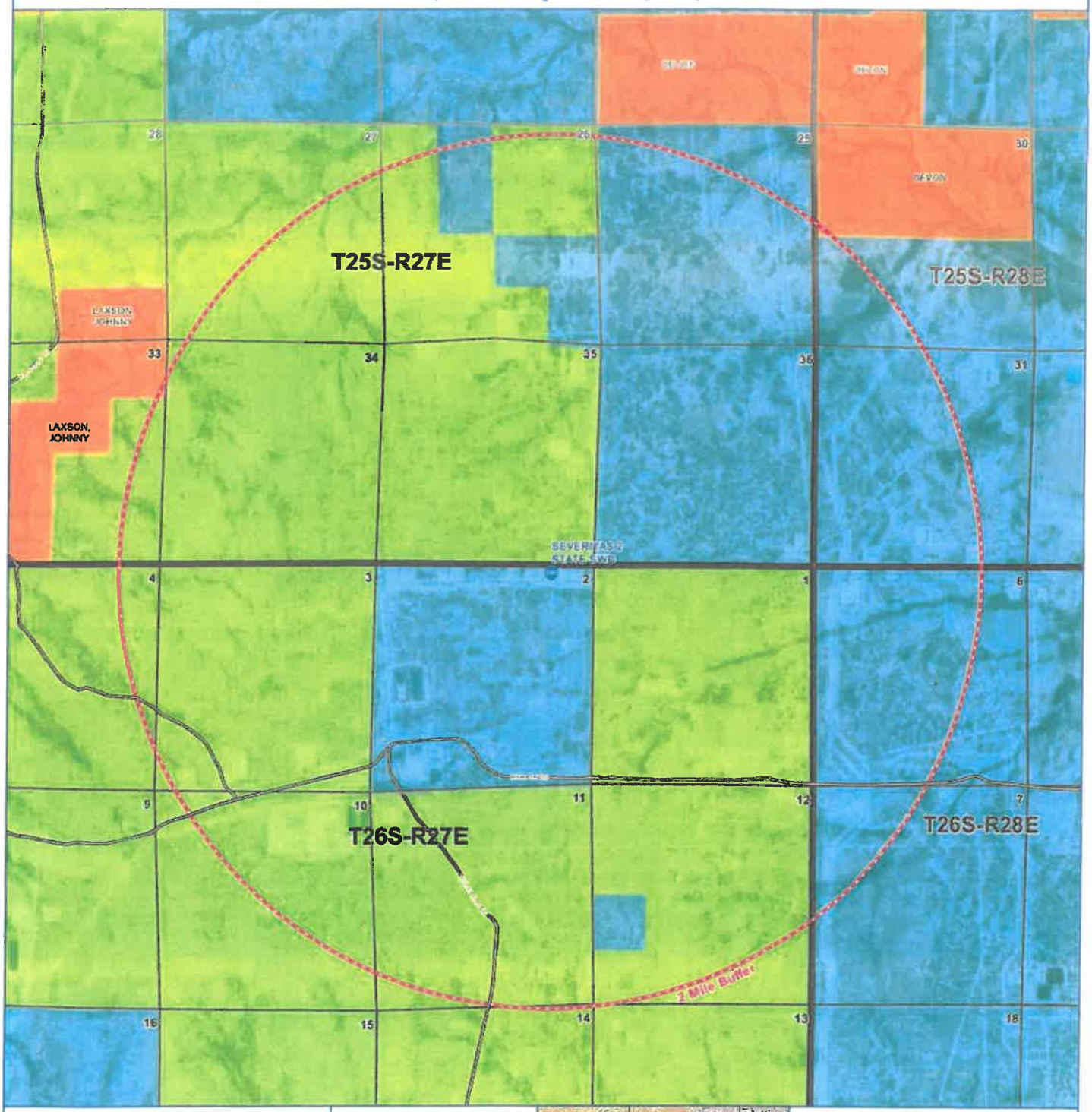


Severitas 2 State SWD 1: 2.0 mile radius circle map showing all wells within the radius.

SURFACE OWNERSHIP MAP

SEVERITAS 2 STATE SWD

Section 2, Township 26 South, Range 27 East, Eddy County, New Mexico



Miles 0.2 0.1 0 0.2 0.4 0.6 0.8
Feet 1,000 500 0 1,000 2,000 3,000 4,000

Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

TGS TRANSFORM

PO BOX 1001, Fort Worth,Texas 76101

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal
- State
- Private

Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Feet US

SEVERITAS 2 STATE SWD

SHL Location & Penetration Point:
185' FNL & 1082' FEL
Section 2, Township 26 South,
Range 27 East of P.M.
Eddy County, New Mexico

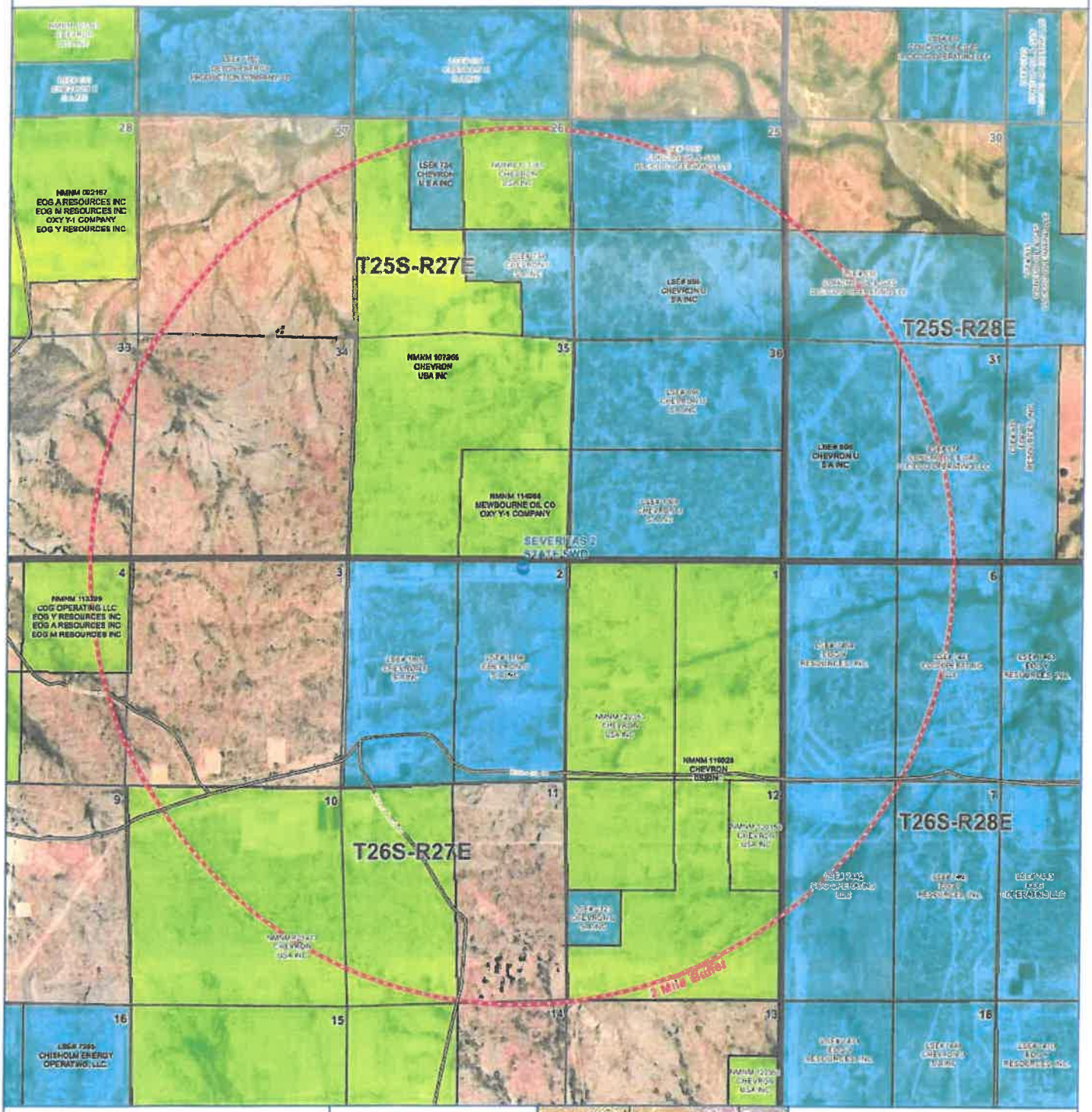
OPERATOR:
CHEVRON U.S.A. INC.

Chevron

FEDERAL & STATE LEASES MAP

SEVERITAS 2 STATE SWD

Section 2, Township 26 South, Range 27 East, Eddy County, New Mexico



Miles 0.2 0.1 0 0.2 0.4 0.6 0.8

Feet 1,000 500 0 1,000 2,000 3,000 4,000

Map Tech: VKV	1 " = 3,250 '
Date: 8/17/2022	1:39,000

TGS TRANSFORM

PO BOX 1001, Fort Worth, Texas 76101

Legend

- Proposed SWD
- 2 Mile Buffer
- Federal Lease
- State Lease

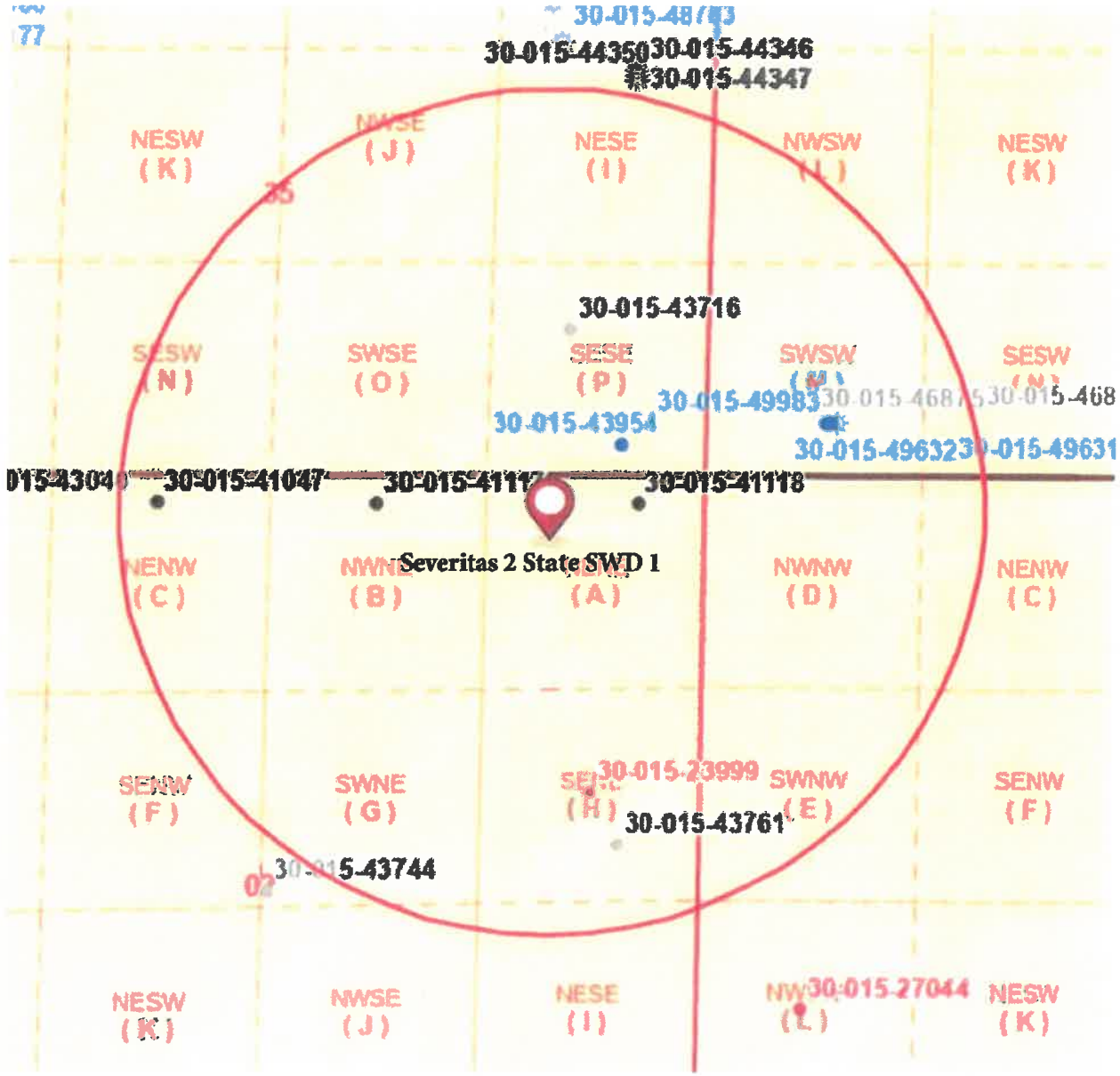
Coordinate System:
NAD 1983 StatePlane New Mexico East FIPS 3001 Feet
Projection: Transverse Mercator
Datum: North American 1983
False Easting: 541,337.5000
False Northing: 0.0000
Central Meridian: -104.3333
Scale Factor: 0.9999
Latitude Of Origin: 31.0000
Units: Foot US

SEVERITAS 2 STATE SWD

SHL Location & Penetration Point:
185' FNL & 1082' FEL
Section 2, Township 26 South,
Range 27 East of P.M.
Eddy County, New Mexico

OPERATOR:
CHEVRON U.S.A. INC.

Chevron



Severitas 2 State SWD 1: 0.5 mile radius circle map showing wells in Area of Review (AOR).

ATTACHMENT 2

Item VI

	Section	Township	Range	Latitude 83	Longitude 83	Measured Depth	Vertical Depth	Associated Pools	Plug Date	Miles from SWD
LLC	36	25S	27E	32.0798	-104.1499	0	0	[98220] PURPLE SAGE, WOLFCAMP (GAS)		0.3
INC	2	26S	27E	32.0785	-104.1632	12,619	7,792	[16800] DELAWARE RIVER, BONE SPRING		0.4
INC	2	26S	27E	32.0785	-104.1588	12,556	7,768	[16800] DELAWARE RIVER, BONE SPRING		0.2
GY	14	25S	26E	32.0814	-104.155	0	0	[97494] COTTONWOOD DRAW, BONE SPRING (O)		0.2
ELL	2	26S	27E	32.0735	-104.1546	0	0	[16800] DELAWARE RIVER, BONE SPRING	5/15/1987	0.3
INC	35	25S	27E	32.0795	-104.154	0	0	[16800] DELAWARE RIVER, BONE SPRING		0.2
GY	24	25S	26E	32.0726	-104.154	0	0	[97494] COTTONWOOD DRAW, BONE SPRING (O)		0.4
INC	2	26S	27E	32.0785	-104.1537	12,759	7,789	[16800] DELAWARE RIVER, BONE SPRING		0.1
LLC	36	25S	27E	32.0798	-104.1498	0	0	[98220] PURPLE SAGE, WOLFCAMP (GAS)		0.3
LLC	36	25S	27E	32.0798	-104.1499	0	0	[98220] PURPLE SAGE, WOLFCAMP (GAS)		0.3
LLC	36	25S	27E	32.0798	-104.1499	0	0	[16800] DELAWARE RIVER, BONE SPRING; [30216] HAY HOLLOW, BONE SPRING, NORTH		0.3

Data tabulation of wells in Area of Review of the Severitas 2 State SWD 1.

WAYNE MOORE
403 N. MARIENFELD
MIDLAND, TEXAS 79701

RECEIVED
APR 25 1983
O. C. D.
ARTESIA, OFFICE

April 18, 1983

Mr. Leslie A. Clements
Supervisor District II
Energy and Mineral Department
P.O. Drawer DD
Artesia, New Mexico 88210

WAYNE MOORE - AZTEC STATE #1, SEC 2-T26S-R27E, LEASE #L-6791,
EDDY COUNTY, NEW MEXICO

Mr. Clements,

This is in reference to your letter of April 11, 1983, concerning the above listed lease.

The well was perforated in the Bone Springs Section (perfs. 6125-6727, 37 perforations) and put on pump for testing. Down hole and surface equipment problems plagued the operation as testing continued, thus the testing took much longer than anticipated.

The well, although operating at a small profit, is not sufficiently productive so as to warrent the drilling of additional Bone Springs wells on this lease. With that in mind a completion in the Delaware Section is now in the final planning stage.

(See attached letter). We plan to:

A. Set a cast iron bridge plug at the top of the Bone Springs.

B. Spot 50' of cement on top of this bridge plug.

C. Perforate below the zones of interest and circulate cement 200' into the 8-5/8" casing set at 2330'.

D. Perforate and test zones of interest in the Delaware Section.

WAYNE MOORE
403 N. MARIENFELD
MIDLAND, TEXAS 79701

Mr. Clements, sorry for the delay in reporting, but we've until recently, been at a loss as to what to do with the well. We will file reports as this work progresses. Please let me know if you require additional information.

Thank you for your help with this problem.

Sincerely,

Tom E. Moore

TEM/mp

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED
MAY 31 1983
O. C. D.
ARTESIA, OFFICE

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [X] Fee [ ]
5. State Oil & Gas Lease No.: L-6791

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL [X] GAS WELL [ ] OTHER-

7. Unit Agreement Name: -

Name of Operator: Wayne Moore ✓

8. Farm or Lease Name: Aztec State

Address of Operator: 403 N. Marienfeld, Midland

9. Well No.: #1

Location of Well: UNIT LETTER H 1980 FEET FROM THE N LINE AND 660 FEET FROM THE E LINE, SECTION 2 TOWNSHIP 26S RANGE 27E NMPM

10. Field and Pool, or Wildcat: Wildcat-Bone Spring

15. Elevation (Show whether DF, RT, GR, etc.): 3174' Gr

12. County: Eddy

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	[X]	PLUG AND ABANDON	[ ]	REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
TEMPORARILY ABANDON	[ ]			COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
PULL OR ALTER CASING	[ ]	CHANGE PLANS	[ ]	CASING TEST AND CEMENT JOB	[ ]		
OTHER	[ ]			OTHER			

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work, SEE RULE 1103.

A. Set cast iron bridge plug at 5700' (top of Bone Springs) and spot cement from 5645' to 5700'. (4-27-83)
B. Perforate two holes at 4890. (4-27-83)
C. Pump 1300 sacks class "C" cement, 2% Gel, 5 lbs Salt/sk, .3cfe2, ¼ lb cello flake, wt. 13.7 yld = 1.38 (4-28-83)
D. Ran temperature survey - top of cement 700' from surface.
E Perforate 4752 - 4798 with 13 holes. (5-12-83)
F. Acidize and Frac (5-15-83)
G. Swab test with oil & gas show (5-17-83)
H. Put on pump for additional testing (5-25-83)

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED _____ TITLE _____ DATE 5

TITLE _____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPT.

DISTRIBUTION	
SANTA FE	✓
FILE	✓
U.S.G.S.	
LAND OFFICE	
OPERATOR	✓

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DEC 03 1984
O. C. D.
ARTESIA, OFFICE

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [X] Fee [ ]
5. State Oil & Gas Lease No.: L-6791
7. Unit Agreement Name:
8. Farm or Lease Name: Aztec State
9. Well No.: #1
10. Field and Pool, or Wildcat: Wildcat-Bone Springs
12. County: Eddy

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

OIL WELL [X] GAS WELL [ ] OTHER- 30-015-23999

1. Name of Operator: WAYNE MOORE ✓
2. Address of Operator: 403 N. Marienfeld, Midland, Texas 79701
4. Location of Well: UNIT LETTER H, 1980 FEET FROM THE N LINE AND 660 FEET FROM THE E LINE, SECTION 2, TOWNSHIP 26S, RANGE 27E, NMPM.
15. Elevation (Show whether DF, RT, GR, etc.): 3174' GL

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK	[ ]	REMEDIAL WORK	[ ]
TEMPORARILY ABANDON	[ ]	COMMENCE DRILLING OPNS.	[ ]
PULL OR ALTER CASING	[ ]	CASING TEST AND CEMENT JOB	[ ]
PLUG AND ABANDON	[ ]	ALTERING CASING	[ ]
CHANGE PLANS	[ ]	PLUG AND ABANDONMENT	[X]
OTHER	[ ]	OTHER	[ ]

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Oct. 2, 1984

Spot 25SX Plug @ 4750'

Oct 3, 1984
TAG Plug - Plug in Place
Set Bridge Plug at 2370'
Spot 50 Sx Plug on Top of Bridge Plug
Spot 25 Sx Plug @ 750'
Spot 50 Sx Plug @ 400'
Spot Plug 30' to Surface

Oct 4, 1984
Put up Regulation Surface Marker

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE Partner DATE November 5, 1984

APPROVED BY Daniel Moore TITLE Geologist DATE May 10, 1987

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW M...
GY AND MINERALS DEPARTMENT

DISTRIBUTION
SANTA FE
FILE
U.S.G.S.
LAND OFFICE
OPERATOR

OIL CONSERVATION DIVISION
P O BOX 2088
SANTA FE, NEW MEXICO 87501

RECEIVED BY
MAR 12 1984
O. C. D.
ARTESIA, OFFICE

Form C-101
Revised 10-1-78

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

Type of Lease: State [X] Fee [ ]
State Oil & Gas Lease No.: L-6791
Unit Agreement Name:
Farm or Lease Name: AZTEC STATE
Well No.: #1
Field and Pool, or Wildcat: WILDCAT-Penn Strays

OIL WELL [X] GAS WELL [ ] OTHER- DRY HOLE

Name of Operator: WAYNE MOORE
Address of Operator: 403 N Marienfeld Midland Texas 79701
Location of Well: UNIT LETTER H, 1980 FEET FROM THE N LINE AND 660 FEET FROM THE E LINE, SECTION 2 TOWNSHIP 26S RANGE 27E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.): 3174' GL
12. County: EDDY

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK	[ ]	PLUG AND ABANDON	[✓]
TEMPORARILY ABANDON	[ ]	CHANGE PLANS	[ ]
PULL OR ALTER CASING	[ ]		
OTHER	[ ]		

SUBSEQUENT REPORT OF:

REMEDIAL WORK	[ ]	ALTERING CASING	[ ]
COMMENCE DRILLING OPNS.	[ ]	PLUG AND ABANDONMENT	[ ]
CASING TEST AND CEMENT JOB	[ ]		
OTHER	[ ]		

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

1. Set Bridge Plug @ ~~2320~~ 2370' in 4 1/2" Casing
2. Spot 50' cement plug on top of Bridge Plug
3. Spot 50' cement plug at ~~354~~ 400' in 4 1/2" casing
4. Run 1 joint and spot plug to surface in 4 1/2" casing
5. Put up regulation marker at surface

WELL HISTORY 13 3/8" set at 354' - cement cir.
8 5/8" set at 2320' - cement cir.
4 1/2" set at 6333' cement to 700'
Perf. 6125 - 6478
BP at 5700' 50' cement on top BP
Perf 4752' - 4798'
Perf 2840' - 2920'
Perf 2694 - 2712'

* ADDITIONAL PLUGS
SPOT 25 SX @ 4750' & TAG
SPOT 25 SX @ 750' - (Top Cmt)
NOTIFY OCD 24 hrs Prior
To Setting 1st plug.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED [signature] TITLE PARTNER DATE 3-8-84

Original Signed By
Leslie A. Clements
Title

AUG 21 1984

NEW MEXICO OIL CONSERVATION COMMISSION
P. O. DRAWER DD
ARTESIA, NEW MEXICO 88210

DATE 1-22-85

Wayne Moore
403 N Marienfield
Midland, Tx. 79701

Gentlemen:

Re: Plugging Reports

Form C-103, Report of Plugging for your Aztec St. 1 H 2-26-27
Lease Well # Unit S-T-R

cannot be approved until a Division representative has made an inspection of the location and found it to be cleared to comply with Division Rules and Regulations. Please check each item in the space provided to indicate that the work has been done.

( ) 1. All pits have been filled and leveled.

( ) 2. Rat hole and cellar have been filled and leveled.

( ) 3. A steel marker 4" in diameter and approximately 4' above mean ground level has been set in concrete. It must show the quarter-quarter section or unit designation, section, township and range numbers which have been permanently stenciled or welded on the marker.

( ) 4. The location has been leveled as nearly as possible to original top ground contour and has been cleared of all junk and equipment.

( ) 5. The dead men and tie downs have been cut and removed.

( ) 6. If a one well lease or last remaining well on lease, the battery and burn pit locations have been leveled and cleared of all junk and equipment.

The above are minimum requirements and no plugging bond will be cancelled until all locations for plugged and abandoned wells have been inspected and Form C-103 approved.

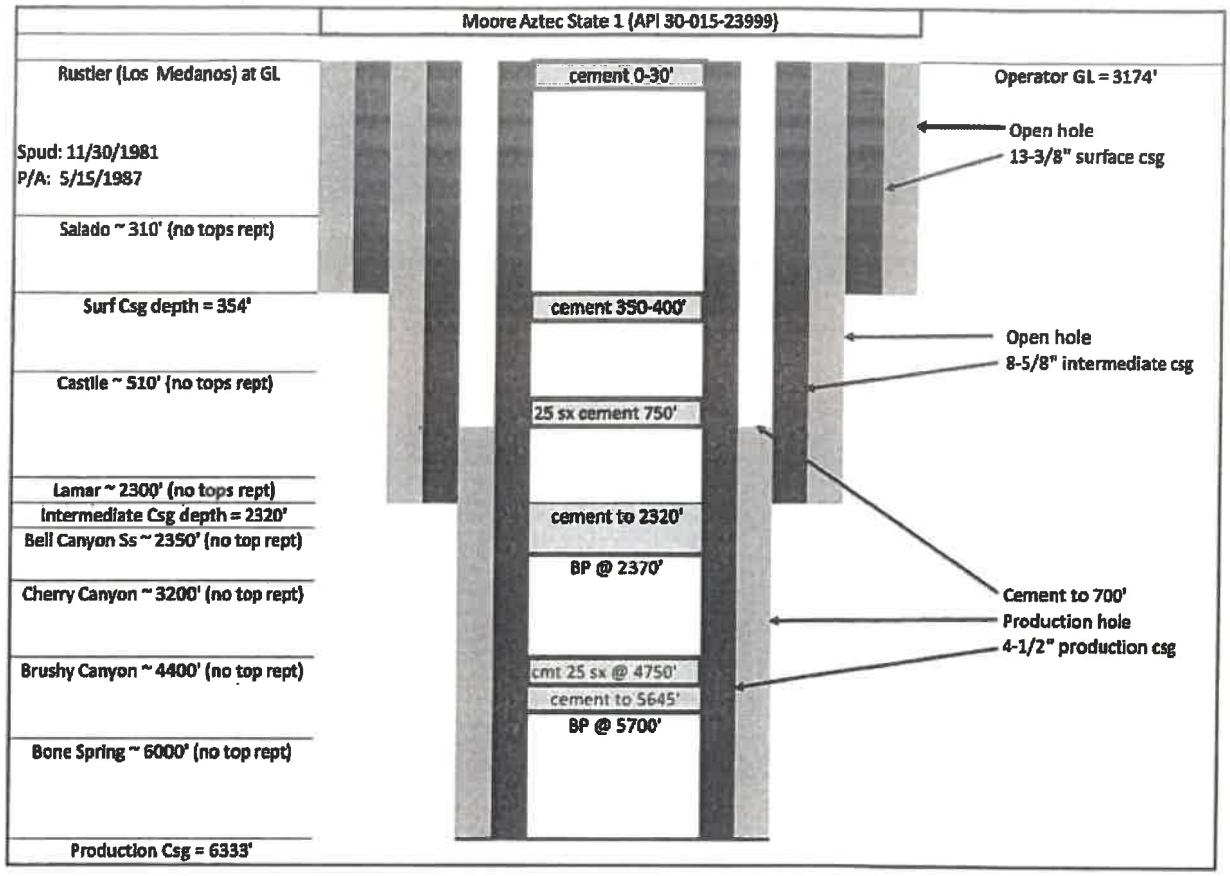
When all of the work outlined above has been done, please notify this office by filling in the blank form below and returning this letter to us so that our representative will not have to make more than one trip to the location.

OIL CONSERVATION DIVISION

Larry Brooks
DISTRICT GEOLOGIST

FILL IN BELOW AND RETURN

I certify that the above work has been done and the _____
Lease
_____ is ready for your inspection and approval.
Well No. Unit S-T-R



Schematic of plugging detail of Moore Aztec State 1 (API 30-015-23999).

ATTACHMENT 3

Item VII

Item	Well 5.5" tubing	Severitas 2 State SWD #1
1)	Permit Max Rate (bwpd)	15,000
1)	Permit Avg Daily Rate	12,500
2)	System	closed
3)	Permit Max Pressure (psig)	468
3)	Permit Avg Pressure (psig)	400

Item	Water Requirements	
4)	Reinjected produced water	source WQ of injectate and receiving formation is not required per application
5)	Disposal Zone Water	for non-productive in 1 mile
	Chicken Hawk State 1 (API 3001533682)	
	Results on next page	

WATER SAMPLES REPRESENTATIVE OF WATER BEING INJECTED INTO THE PROPOSED SWD WELL

Bone Spring												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2011128832	Craig St. Com	1H	William D Polk	9/30/2011	9/21/2011	1.13	3.15	194940.50	6.80		2390.00	664.00
Delaware												
Lab Test #	Lease	Location	Salesman	Date Out	Sample Date	Specific Gravity	Ionic Strength	TDS	pH	conductivity	Ca (mg/L)	Mg (mg/L)
2011128361	Chicken Hawk State	1	William D Polk	9/28/2011	9/13/2011	1.12	3.17	189454.89	6.90		4133.30	725.18

Water Sample Representative of Receiving Formation Water

TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
9171.58	55296.00	815.00		0.32	2.00	403.00	0.18		1220.00	0.00		150.00	134000.00	540.00	0.00
TH (CaCO3)	Na (mg/L)	K (mg/L)	Zn (mg/L)	Fe (mg/L)	Ba (mg/L)	Sr (mg/L)	Mn (mg/L)	Resistivity	HCO3 (mg/L)	CO3 (mg/L)	OH (mg/L)	SO4 (mg/L)	Cl (mg/L)	CO2 (mg/L)	H2S (mg/L)
13854.58	69462.63	1056.00	37.48	2.25	0.00	468.07	0.00		1220.00	0.00		950.00	111400.00	500.00	17.00

ATTACHMENT 4

Item VIII

Formation/Geologic Feature Tops & Datum	Lithology	TVD (from Datum)	Z (SSTVD)
KB (Kelly Bushing)	Datum	0.0	3200.5
GL (ground surface)	Ground Surface	28.5	3172.0
01 - Rustler (Los Medanos at surface)	Mudstone, Salt & Anhydrite	28.5	3172.0
02 - Salado	Gypsum & Anhydrite	310.5	2890.0
03 - Castile	Anhydrite & Salt	514.8	2685.7
04 - Lamar	Carbonate	2343.3	857.2
05 - Bell Canyon	Sandstone	2376.9	823.6
06 - Cherry Canyon	Sandstone, Siltstone & Carbonate	3193.6	6.9
07 - Brushy Canyon	Sandstone, Mudstone & Carbonate	4405.8	-1205.3
08 - Bone Spring	Carbonate	6011.7	-2811.2

Geologic prognosis tops of all formations to be encountered in the Severitas 2 State SWD 1.

ATTACHMENT 5

Item IX

Proposed acid stimulation as part of the completion for the Severitas 2 State SWD 1.

1. MI/RU Petroplex Acid and Gladiator N2 Unit
2. Perform pressure pumping checklist and record in wellview.
3. Rig up Petroplex acid lines and tie in to 4-1/16" wing valve on tree. Test all lines against wing valve to 2,100 psi for 5 min
   - Install tee in Petroplex lines to allow N2 line to be rigged up. Test all N2 lines against wing valve to 2,100 psi for 5 min
4. Pump Acid job per Petroplex Pump Schedule diverting with N2 as required.
   - Max pressure for job will be 468 psi
   - Discuss with WOE for operational pressure limits during job.
   - Diversion will be treated with 1,250 scf/bbl of N2
5. Once acid is complete R/D Petroplex and Gladiator
6. Secure and shut in well.

ATTACHMENT 6

Item X

No logs have been run on the Severitas 2 State SWD 1. This is a planned well.

The following open hole logs are planned to be run if hole conditions allow: gamma-ray, resistivity, neutron-density, sonic, and image logs.

Production casing will be installed from surface to near the base of the Brushy Canyon Formation. A total of approximately six Diagnostic Fracture Injection Tests (DFITs) are planned for the Bell Canyon, Cherry Canyon and Brushy Canyon Formations. After the DFITs are run, the Brushy Canyon will be plugged. The Cherry Canyon and Bell Canyon will be perforated to the base of the Lamar Limestone. A step rate test will be run on the Bell Canyon and Cherry Canyon Formation permitted injection interval.

ATTACHMENT 7

Item XI

Both the C–02103 and the C–02048 permits have expired with no evidence wells were drilled. The C–02474 was drilled in 1913 and may have not been used past 1918. No lab reports available. The well is confined to the first 100 ft in the Alluvium. No Rustler Aquifer exists in the immediate area.

m

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 02048 Subbasin: C Cross Reference: -
Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
Primary Status: EXP EXPIRED
Total Acres: Subfile: - Header: -
Total Diversion: 0 Cause/Case: -
Owner: DELAWARE RANCH INC

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	465436	72121	1983-02-02	EXP	EXP	C 02048	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Twn	Rng	X	Y	Other Location Desc
C 02048					2	02	26S	27E	579582	3549072*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

9/6/22 9:16 AM WATER RIGHT SUMMARY

New Mexico Office of the State Engineer
Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 465436 Transaction Desc: C 02048 File Date: 01/31/1983

Primary Status: EXP Expired Permit
Secondary Status: EXP Expired
Person Assigned: *******
Applicant: DELAWARE RANCH INC

Events

Date	Type	Description	Comment	Processed By
01/31/1983	APP	Application Received	*	*******
02/02/1983	FIN	Final Action on application		*******
02/02/1983	WAP	General Approval Letter		*******
03/01/1984	EXP	Expired Permit (well log late)		*******
05/20/2011	ARV	Rec & Arch - file location	C 02048 Box: 1870	*******

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 02048		3		STK 72-12-1 LIVESTOCK WATERING

**Point of Diversion

C 02048		579582	3549072*

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Remarks

LOCATION: DELEWARE RANCH PROPERTIES

ABSTRACTOR'S NOTE: PER LETTER DATED 03/01/1984, THIS PERMIT IS EXPIRED. NO WELL RECORD ON FILE WITH THE OFFICE OF THE STATE ENGINEER.

Conditions

1A Depth of the well shall not exceed the thickness of the valley fill.

4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

Action of the State Engineer

** See Image For Any Additional Conditions of Approval **

Approval Code: A - Approved
Action Date: 02/02/1983
Log Due Date: 02/29/1984
State Engineer:

New Mexico Office of the State Engineer
Water Right Summary

WR File Number: C 02103 Subbasin: C Cross Reference: -
Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
Primary Status: EXP EXPIRED
Total Acres: Subfile: - Header: -
Total Diversion: 0 Cause/Case: -
Owner: DELAWARE RANCH INC

get image list

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	468575	72121 1984-05-14	EXP	EXP	C 02103	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Twn	Rng	X	Y	Other Location Desc
C 02103					2	02	26S	27E	579582	3549072*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

9/6/22 9:12 AM WATER RIGHT SUMMARY

New Mexico Office of the State Engineer
Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 468575 **Transaction Desc:** C 02103 **File Date:** 05/14/1984

Primary Status: EXP Expired Permit
Secondary Status: EXP Expired
Person Assigned: *******
Applicant: DELAWARE RANCH INC

Events

	Date	Type	Description	Comment	Processed By
get images	05/14/1984	APP	Application Received	*	*******
	05/14/1984	FIN	Final Action on application		*******
	05/14/1984	WAP	General Approval Letter		*******
	06/03/1985	EXP	Expired Permit (well log late)		*******
	05/23/2011	ARV	Rec & Arch - file location	C 02103 Box: 1871	*******

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
C 02103		3		STK 72-12-1 LIVESTOCK WATERING

Point of Diversion

C 02103		579582	3549072*

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Remarks

LOCATION: DELAWARE RANCH PROPERTIES.

ABSTRACTOR'S NOTE: PER LETTER DATED 06/03/1985, THIS PERMIT IS EXPIRED. NO WELL RECORD ON FILE WITH THE OFFICE OF THE STATE ENGINEER.

Conditions

1A Depth of the well shall not exceed the thickness of the valley fill.

4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

Action of the State Engineer

** See Image For Any Additional Conditions of Approval **

Approval Code: A - Approved
Action Date: 05/14/1984
Log Due Date: 05/31/1985
State Engineer:

New Mexico Office of the State Engineer
Water Right Summary

WR File Number: C 02474 Subbasin: CUB Cross Reference: -
Primary Purpose: PLS NON 72-12-1 LIVESTOCK WATERING
Primary Status: DCL DECLARATION
Total Acres: 0 Subfile: - Header: -
Total Diversion: 3 Cause/Case: -
Owner: MARTHA SKEEN

get image list

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images 198101	DCL	1995-12-12	DCL	PRC	C-02474	T	0	3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Twn	Rng	X	Y	Other Location Desc
C 02474			4	3		02	26S	27E	578964	3548029*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Priority Summary

Priority	Status	Acres	Diversion	Pod Number
12/31/1913	DCL	0	3	C 02474

Place of Use

Q 256	Q 64	Q16	Q4	Sec	Twn	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
							0	3		PLS	12/31/1913	DCL	NO PLACE OF USE GIVEN

9/6/22 9:18 AM WATER RIGHT SUMMARY

(W-tank) Kelly Polk Wells
Revised December 1975
2-03119
24.00
198101

IMPORTANT — READ INSTRUCTIONS ON BACK BEFORE FILLING OUT THIS FORM.

Declaration of Owner of Underground Water Right

Carlsbad
BASIN NAME

Declaration No. C-2474 Date received December 12, 1995

STATEMENT

1. Name of Declarant Martha Skeen
Mailing Address 321 South Canyon, Carlsbad
County of Eddy, State of N. Mex
2. Source of water supply Shallow (artesian or shallow water aquifer)
3. Describe well location under one of the following subheadings:
a. ___ ¼ SE ¼ SW ¼ of Sec. 2 Twp. 26S. Rge. 27E. N.M.P.M., in Eddy County.
b. Tract No. ___ of Map No. ___ of the ___
c. X = ___ feet, Y = ___ feet, N. M. Coordinate System ___ Zone in the ___ Grant.
On land owned by State of N. Mex
4. Description of well: date drilled 1913 driller Hepler Bros depth 100 feet.
outside diameter of casing 6 inches; original capacity 5 gal. per min.; present capacity 5 gal. per min.; pumping lift ___ feet; static water level ___ feet (above) (below) land surface;
make and type of pump Windmill
make, type, horsepower, etc., of power plant ___
Fractional or percentage interest claimed in well 100%
5. Quantity of water appropriated and beneficially used 3 acre ft. (acre feet per acre) (acre feet per annum)
for Livestock purposes.
6. Acreage actually irrigated ___ acres, located and described as follows (describe only lands actually irrigated):

Subdivision	Sec.	Twp.	Range	Acres Irrigated	Owner

(Note: location of well and acreage actually irrigated must be shown on plat on reverse side.)

7. Water was first applied to beneficial use ___ month ___ day 1913 year and since that time has been used fully and continuously on all of the above described lands or for the above described purposes except as follows:

8. Additional statements or explanations These wells and tanks were put into use between 1912 and 1918 by the Hepler Bros. Since then the Ranch has changed ownership four times. Purdue Guitar, Fowlkes Bros, Delaware Ranch Inc. and Martha Skeen.

I, ___ being first duly sworn upon my oath, depose and say that the above is a full and complete statement prepared in accordance with the instructions on the reverse side of this form and submitted in evidence of ownership of a valid underground water right, that I have carefully read each and all of the items contained therein and that the same are true to the best of my knowledge and belief.

Martha W. Skeen, declarant.

by: ___

Subscribed and sworn to before me this 1 day of DECEMBER, A.D. 19 95

My commission expires 02/22/99 Virginia Lopez Notary Public

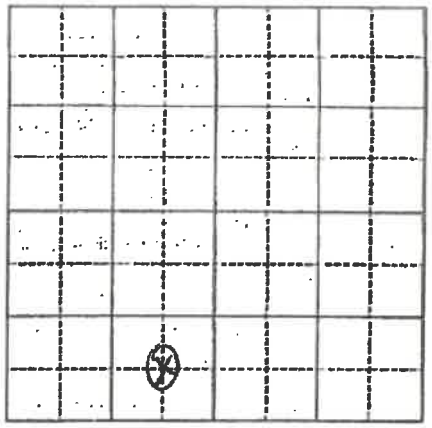
FILED
UNDER NEW MEXICO LAW A DECLARATION IS ONLY A STATEMENT OF DECLARANT'S CLAIM. ACCEPTANCE FOR FILING DOES NOT CONSTITUTE APPROVAL OR REJECTION OF THE CLAIM.

95 DEC 14 AM 9 30
STATE ENGINEER OFFICE

T-198101

Locate well and areas actually irrigated as accurately as possible on following plat:

Section (s) _____, Township _____, Range _____, N. M. P. M.



INSTRUCTIONS

Declaration shall be executed (preferably typewritten) in triplicate and must be accompanied by a $1.00 filing fee. Each of triplicate copies must be properly signed and attested.

A separate declaration must be filed for each well in use.

All blanks shall be filled out fully. Required information which cannot be sworn to by declarant shall be supplied by affidavit of person or persons familiar with the facts and shall be submitted herewith.

Secs. 1-3. Complete all blanks.

Sec. 4. Fill out all blanks applicable as fully as possible.

Sec. 5. Irrigation use shall be stated in acre feet of water per acre per year applied on the land. If used for domestic, municipal, or other purposes, state total quantity in acre feet used annually.

Sec. 6. Describe only the acreage actually irrigated. When necessary to clearly define irrigated acreages, describe to nearest 2½ acre subdivision. If located on unsurveyed lands, describe by legal subdivision "as projected" from the nearest government survey corners, or describe by metes and bounds and tie survey to some permanent, easily-located natural object.

Sec. 7. Explain and give dates as nearly as possible of any years when all or part of acreage claimed was not irrigated.

Sec. 8. If well irrigates or supplies supplemental water to any other land than that described above, or if land is also irrigated from any other source, explain under this section. Give any other data necessary to fully describe water right.

If additional space is necessary, use a separate sheet or sheets and attach securely hereto.

SF

STATE OF NEW MEXICO
STATE ENGINEER OFFICE
ROSWELL

THOMAS C. TURNEY
State Engineer

DISTRICT II
1900 West Second St.
Roswell, New Mexico 88201
(505) 622-6521

December 12, 1995

C-2474
FILES: ~~C-2473~~ thru C-2481;
LWD-C-64 thru LWD-C-70

'95 DEC 15 AM 10 51
STATE ENGINEER OFFICE
SANTA FE, NEW MEXICO

Martha Skeen
321 South Canyon
Carlsbad, NM 88220

Dear Ms. Skeen:

Enclosed are your copies of Declaration of Owner of Underground Water Right, and Declaration of Ownership of Livestock Water Dam or Tank, as numbered above, which have been accepted for filing in the office of the State Engineer.

Please refer to these numbers in all future correspondence concerning these declarations.

The acceptance for filing of these declarations by this office does not indicate affirmation or rejection of the statements contained therein.

Sincerely,

Richard C. Cibak
Area Supervisor

tg
Enclosures
cc: Santa Fe
Hydro Section

ATTACHMENT 8

Item XII

George T. (Tom) Merrifield, Jr., PG
SWD DRP Geologist
Chevron U.S.A. Inc.
6301 Deauville Blvd
Midland, TX 79706
Phone +1 661-448-7489
tommerrifield@chevron.com

April 10, 2023

Dylan Fuge, Acting Director
Oil Conservation Division
1220 South St. Francis Dr.
Sante Fe, New Mexico 87505

Re: Affirmation Statement C-108 Applications
Papa Squirrel SWD 1 and Severitas 2 State SWD 1

Dear Mr. Fuge:

With the increase of induced seismicity due to deep produced water injection, in 2021 Chevron decided to evaluate the potential for shallow injection in both Texas and New Mexico with exhaustive manpower and technical effort.

This effort led to the following technical evaluations of the DMG: (1) the location of high confident shallow faults in our active development areas using available seismic reflection data (2) assessment of seismic risk of any such shallow faults, (3) other geologic and reservoir engineering assessments addressing storage capabilities, potential impacts, and mitigation, and (4) collaboration and joint efforts with other operators.

Both the Papa Squirrel SWD 1 and Severitas 2 State SWD 1 are locations which we find no indication of open faults at the surface or in the subsurface and no indication of hydraulic connection between the proposed injection zone (Bell Canyon and Cherry Canyon) and an underground source of drinking water (USDW). Both locations have low potential for fault slip and induced seismicity.

Respectively yours,

G. T. Merrifield, Jr., PG
TX (#10838) and CA (#9274)

ATTACHMENT 9

Item XIII

Notices will be sent to the following surface owners, leasehold operators, mineral interest owners, etc., within ½ mile radius.

- Bureau of Land Management
- State Land Office
- COG Operating, LLC

Note: Chevron is the operator of the wells within the 0.5 mile area of review shown in Attachment 1.

Karlene Schuman
Modrall Sperling Roehl Harris & Sisk P.A.
500 Fourth Street, Suite 1000
Albuquerque NM 87102

PS Form 3877

Type of Mailing: CERTIFIED MAIL
07/13/2023

Firm Mailing Book ID: 249154

Line	USPS Article Number	Name, Street, City, State, Zip	Postage	Service Fee	RR Fee	Rest.Del.Fee	Reference Contents
1	9314 8699 0430 0109 8801 32	United States of America Bureau of Land Management 301 Dinosaur Trail Santa Fe NM 87508	$2.55	$4.35	$2.20	$0.00	83420.0047 severi Notice
2	9314 8699 0430 0109 8801 49	New Mexico State Land Office PO Box 1148 Santa Fe NM 87504	$2.55	$4.35	$2.20	$0.00	83420.0047 severi Notice
3	9314 8699 0430 0109 8801 56	COG Operating 600 W. Illinois Midland TX 79701	$2.55	$4.35	$2.20	$0.00	83420.0047 severi Notice
4	9314 8699 0430 0109 8801 63	Mewbourne Oil Company Tim Harrington PO Box 7598 Tyler TX 75711	$2.55	$4.35	$2.20	$0.00	83420.0047 severi Notice
		Totals:	**$10.20**	**$17.40**	**$8.80**	**$0.00**	
					Grand Total:	**$36.40**	

List Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	Postmaster: Name of receiving employee	Dated:
4			

EXHIBIT B

Transaction Report Details - CertifiedPro.net
Firm Mail Book ID= 249154
Generated: 11/1/2023 9:06:39 AM

USPS Article Number	Date Created	Reference Number	Name 1	Name 2	City	State	Zip	Mailing Status	Service Options	Mail Delivery Date
9314869904300109880163	2023-07-13 11:11 AM	83420.0047 severi	Mewbourne Oil Company	Tim Harrington	Tyler	TX	75711	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-18 8:56 AM
9314869904300109880156	2023-07-13 11:11 AM	83420.0047 severi	COG Operating		Midland	TX	79701	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-18 12:00 AM
9314869904300109880149	2023-07-13 11:11 AM	83420.0047 severi	New Mexico State Land Office		Santa Fe	NM	87504	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-17 10:27 AM
9314869904300109880132	2023-07-13 11:11 AM	83420.0047 severi	United States of America	Bureau of Land M	Santa Fe	NM	87508	Delivered	Return Receipt - Electronic, Certified Mail	2023-07-17 1:11 PM

EXHIBIT C

Carlsbad Current Argus.
PART OF THE USA TODAY NETWORK

Affidavit of Publication

Ad # 0005771514

This is not an invoice

MODRALL SPERLING
POBOX 2168

ALBUQUERQUE, NM 87103

I, a legal clerk of the **Carlsbad Current Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof in editions dated as follows:

07/19/2023

Legal Clerk

Subscribed and sworn before me this July 19, 2023:

State of WI, County of Brown
NOTARY PUBLIC

1-7-26
My commission expires

KATHLEEN ALLEN
Notary Public
State of Wisconsin

Ad # 0005771514
PO #:
# of Affidavits: 1

This is not an invoice

CASE NO. 23687: Notice to all affected parties, as well as heirs and devisees of: United States of America Bureau of Land Management; New Mexico State Land Office; COG Operating of Application of Chevron USA Inc. for approval of salt water disposal well in Eddy County, New Mexico. The State of New Mexico through its Oil Conservation Division hereby gives notice that the Division will conduct a public hearing at 8:15 a.m. on **August 3, 2023** to consider this application. Information about accessing the electronic hearing is posted at "OCD NOTICES" at https://www.emnrd.nm.gov/ocd/hearing-info/. This hearing is subject to continuance by the Division to a subsequent docket date. Applicant seeks an order approving the Severitas 2 State SWD #1 well at a surface location 185' from the North line and 1,082' from the East line, Unit A, Section 2, Township 26 South, Range 27 East, NMPM, Eddy County, New Mexico for the purpose of operating a salt water disposal well. Injection formations will be the Bell Canyon/Cherry Canyon/Brushy Canyon from 2343 feet to 6012 feet. The tubing packer will be set at 2243 feet, and production casing and cement will be set at 5500 feet. The maximum anticipated injection rate will be 15,000 bwpd and maximum surface injection pressure will be 468 psi. Said location is approximately 13 miles southwest of Malaga, New Mexico.
#5771514, Current Argus, July 19, 2023

EXHIBIT D