

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

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



ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: MANZANO, LLC **OGRID Number:** 231429
Well Name: SHUGART SWD #1 **API:** 30-015-20820
Pool: NONE **Pool Code:** NONE

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

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

A. Location – Spacing Unit – Simultaneous Dedication

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

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

[I] Commingling – Storage – Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

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

☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

2) NOTIFICATION REQUIRED TO: Check those which apply.

A. ☒ Offset operators or lease holders

B. ☐ Royalty, overriding royalty owners, revenue owners

C. ☒ Application requires published notice

D. ☐ Notification and/or concurrent approval by SLO

E. ☐ Notification and/or concurrent approval by BLM

F. ☒ Surface owner

G. ☒ For all of the above, proof of notification or publication is attached, and/or,

H. ☐ No notice required

FOR OCD ONLY

☐ Notice Complete
☐ Application Content Complete

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

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

MIKE HANAGAN

Print or Type Name

Signature

11-16-23

Date

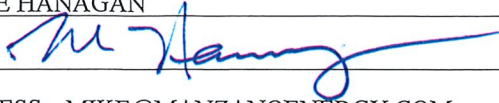
575-623-1996

Phone Number

MIKE@MANZANOENERGY.COM

e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ Disposal _____ Storage _____
Application qualifies for administrative approval? _____ X _____ Yes _____ No _____
- II. OPERATOR: MANZANO, LLC
ADDRESS: P.O. BOX 1737, ROSWELL, NM 88202
CONTACT PARTY: MIKE HANAGAN PHONE: 575-623-1996
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes _____ X _____ No _____
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: MIKE HANAGAN TITLE: MANAGER
SIGNATURE:  DATE: NOVEMBER 16, 2023
E-MAIL ADDRESS: MIKE@MANZANOENERGY.COM
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

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

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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: MANZANO, LLC

WELL NAME & NUMBER: SHUGART SWD #1

WELL LOCATION: 660 FNL, 1980 FEL

FOOTAGE LOCATION

C

UNIT LETTER

1

SECTION

20S

TOWNSHIP

25E

RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17 1/2"

Casing Size: 13 3/8" H-40

Cemented with: 320 sx. or

ft³

Top of Cement: SURFACE

Method Determined: CIRC.

Intermediate Casing

Hole Size: 12.25 AN 11"

Casing Size: 8 5/8" 32#/FT

Cemented with: 1245 sx. or

ft³

Top of Cement: SURFACE

Method Determined: CIRC.

Production Casing

Hole Size: 7 7/8

Casing Size: 5 1/2 17#/FT

Cemented with: 1425 sx. or

ft³

Top of Cement:

Method Determined:

Total Depth:

Injection Interval

10433

feet to

10700 OH

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 3.5" L-80 Lining Material: IPC 1850 COATING
Type of Packer: ARROWSET 1X
Packer Setting Depth: 10400
Other Type of Tubing/Casing Seal (if applicable): NA

Additional Data

- 1. Is this a new well drilled for injection? Yes X No
If no, for what purpose was the well originally drilled? OIL AND GAS
- 2. Name of the Injection Formation: DEVONIAN
- 3. Name of Field or Pool (if applicable): NONE
- 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
- 5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: THE YESO IS PRODUCTIVE FROM 2600 TO 3200 FEET.

Explanations to Form C-108

V. Area of Review Map. The zone of proposed injection in the Shugart SWD #1 is the Devonian formation from 10430 to 10700 feet. There are a total of ten wells within the Area of Review. In the Area of Review no wells have penetrated the Devonian formation. There are 9 horizontal wells completed in the Yeso at approximately 2600 to 3200 feet true vertical depth. The tenth well is the proposed Shugart #1 well which was previously drilled by Gulf Oil in 1973 to the top of the Mississippian and completed as a dry hole. Production casing was not run to total depth (9756 feet) and no zones were ever perforated in this well. There are no active Devonian oil producers either in the Area of Review or within the greater two mile radius circle.

VI. Table of Wells that have penetrated the Devonian in the Area of Review:. In the Area of Review no wells have penetrated the Devonian formation.

VII. The injection interval will be 10430 to 10700 feet.

1. The proposed average rate is 10,000 BWPD. The maximum rate is 20,000 BWPD.
2. The system will be a closed system.
3. The average injection pressure is 1000 psi. The proposed maximum injection pressure is 2080 psi.
4. The water to be injected is from horizontal wells drilled by Manzano, LLC in the Bone Spring formation. Manzano plans to drill horizontal wells in the acreage outline shown with a dashed red line on the Area of Review Map. A water analysis for the Bone Spring is a sample from the Tascosa Catalina 25 HE State #1H well located in Section 30-T20S-R27E. It produces from the Third Bone Spring sand, at a TVD of 7750 feet. Manzano's production is anticipated to have a similar water chemistry, as it will also be produced from the Third Bone Spring sand.
5. The Devonian formation is not productive in the area of review. The closest penetration, is the Stanolind Lakewood Unit #1 in Section 34-T19S-R26E (1980 Fsl, 660 Fel), two miles NW of the proposed injection well. See the log cross section exhibit X. In the Lakewood #1, a drill stem test of the Devonian from 10433 to 10486 feet recovered 10,030 feet "brackish water". The shut in pressure was 4475 psi. Brackish water typically is a water that is around 10,000 PPM total dissolved solids, (fresher than sea water) which is consistent with most regional Devonian water content.

VIII. The Devonian is primarily a dolomite that is highly porous and permeable. It is water-bearing in this area. The closest Devonian penetration is two miles west - the Lakewood Unit #1 (Sec. 34-T19S-R26) which was logged with a gamma ray neutron log in 1953 that shows a top of the Devonian at 10342 feet. The dolomite develops good porosity at 10400, but the log is not calibrated in terms of porosity. However, the drill stem test recovery from 10433 to 10486 recovered 10030 feet of brackish water, meaning the well almost flowed to surface. From this test it is clear the well has good porosity (10% estimate) and permeability (100 md estimate). Produced water is also being disposed into the Devonian in six additional wells shown with blue circles on the attached Devonian structure map. This table is for the seven closest penetrations of the Devonian to the proposed Manzano Shugart SWD #1. The Map Well# coincides with the number of these wells on the attached Devonian structure map. Six of these (5 active) are water disposal wells in the Devonian, where the operator is injecting into the top 200 to 300 feet of the Devonian formation. In all but one well, this is being done below a packer in the bottom of 5 ½" casing, disposing into an openhole interval. The

proposed Shugart #1 is structurally downdip of all of these wells, and should be water-bearing and porous.

VIII and XI. Surface Ground water is found at depths from 120 to 410 feet in the Seven Rivers formation. Attached are analyses from well RA-03200S and well RA-04924 identified on the attached Point of Diversion map from the NM State Engineers office.

IX. The Manzano LLC Shugart SWD #1 was originally drilled to 9756 feet by Gulf Oil in 1973. Gulf reached the top of the Mississippian formation at 9719 feet. Manzano plans to deepen the well to the Devonian, which is expected to be present at 10430 feet and drill until we encounter the good porosity not to exceed 10700 feet. Manzano will run 5 ½" casing to the top of the Devonian and complete the well naturally in openhole from 10430 to 10700 feet.

X. Log data for the proposed Manzano, LLC Shugart SWD #1 and the nearest Devonian penetration, the Stanolind Lakewood #1 in Section 34-T20S-R26E is shown on the attached cross section.

XII. We have examined the geologic and engineering data associated with the proposed disposal well. And find no evidence of open faults or other hydrologic connections between the disposal zone and any good sources of drinking water. An Affidavit is attached.

XIII. Proof of Notice is being provided to the surface owner Kevin Wilbanks, and to all leasehold owners within ½ mile of the proposed well including offset operator Spur Energy Partners, LLC, and leasehold owners Tularosa Oil Company and RMA Energy, LLC. Letters are attached.

Attachments:

Administrative Application Check List

III. Injection Well Data Sheets

III. Current and Proposed Wellbore Diagram – Shugart SWD #1

V. Area of Review Map

V. Land Tract Map Showing Offset Operators

VII. Analysis of Bone Spring Water to be injected

VIII. & XIII. Analysis of Two Fresh water wells

VIII. Point of Diversion Map

VIII. Devonian Structure Map

VIII. Data on Devonian SWD Wells

X. Neutron Log of the Shugart #1 (Cross section)

XII. Affidavit Item XIII.

XIII. Proof of Notice to offset operators and leasehold owners in Area of Review

XIII. Proof of Notice to Surface Owner

XIII. Evidence of Publication

RECEIVED

N MEXICO OIL COMPANY
WELL LOCATION AND ACREAGE DEDICATION PLAT

MAR 14 1973

All distances must be from the outer boundaries of the Section

Operator GULF OIL CORP.			Lease Rena Shugart Com			Well No. O. C. C. 1		
Unit Letter C	Section 1	Township 20 South	Range 25 East	County Eddy				
Actual Footage Location of Well: 1980 feet from the west line and 660 feet from the north line								
Ground Level Elev.	Producing Formation Morrow		Pool Wildcat			Dedicated Acreage 320 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

1980' ———— 0 Royalty, NW/4 Rena A. Shugart et al 4/12 of 1/8		660' Royalty, N/2 NE/4 = Russell F. Young et al 19.0689237 over 160.85 of 1/8	
		Royalty, SW/4, NE/4 = E. C. McGonagill et al 1/3 of 1/8	Royalty, SE/4 NE/4 = Jane McGonagill et al 1/3 of 1/8
Working Interest Gulf Oil 77.86 Bell Pet. Co. 15.39 Monsanto 3.48 El Paso Nat Gas 3.26			

CERTIFICATION

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

K. J. Breazeale
Name

K. J. Breazeale
Position

Area Engineer

Company

Gulf Oil Corporation

Date

March 12, 1973

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 knowledge and belief.

Date Surveyed

March 7, 1973

Registered Engineer and/or Land Surveyor

John W. [Signature]
Certificate No. 676

MANZANO Shugart SWD #1
WELLBORE Diagram (ACTUAL)

MANZANO Shugart SWD #1
(Orig. Gulf Oil Shugart #1)

API #30-025-20820
650' FNL & 1980' FEL
SEC 1-T20S-R25E
EDDY, NEW MEXICO
GL Elevation: 3411'
KB Elevation: 3429' (18')

San Andres @ 1005

12.25" hole to 1225'

11" hole to 2090'

Yeso @ 2600-3200'

3rd BSP @ 6536'

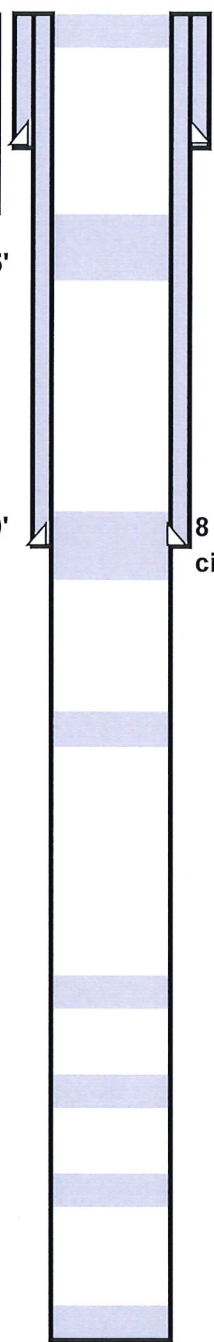
Wolfcamp @ 6886'

Cisco @ 7864'

Strawn @ 8530'

Morrow @ 9443'

Current TD 9756 7 7/8" Hole.



Plug #7 50 ft to surface

17 1/2" hole to 299'

13 3/8" 48#/ft H-40 @ 360' - Cement w/320sx - Circ.

Plug #6 2140 to 2040

8 5/8" 32#/ft @ 2090' - Cement w/1245sx
circulated cement to surface

Plug #5 4200 -4100

Plug #4 6940-6840

Plug #3 7910-7810

Plug #2 8580-8480

Plug #1 9756-9500
P&A 4-22-1973

MANZANO Shugart SWD #1
WELLBORE Diagram (PROPOSED)

MANZANO Shugart SWD #1
(Orig. Gulf Oil Shugart #1)

API #30-025-20820
650' FNL & 1980' FEL
SEC 1-T20S-R25E
EDDY, NEW MEXICO
GL Elevation: 3411'
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San Andres @ 1005
12.25" hole to 1225'

11" hole to 2090'
Yeso @ 2600-3200'

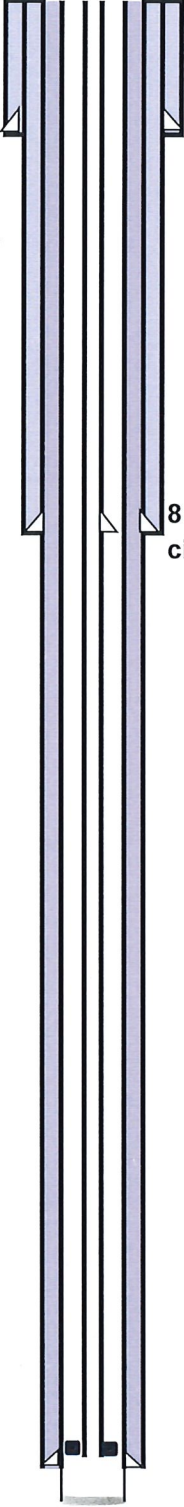
3rd BSP @ 6536'
Wolfcamp @ 6886'

Cisco @ 7864'

Strawn @ 8530'

Morrow @ 9443'

Mississippian Lime @ 9985
Woodford @ 10400
Devonian @ 10430
Drill out with 4 3/4" hole to 10700.



17 1/2" hole to 299'
13 3/8" 48#/ft H-40 @ 360' - Cement w/320sx - Circ.

8 5/8" 32#/ft @ 2090' - Cement w/1245sx
circulated cement to surface

7 7/8" Hole. To 10400. Run 5 1/2" 17#/ft Casing.
Cement with 1425 sxs to surface.
Drillout openhole to 10700 w 4 3/4" bit.
Run 3.5" 9.3#/ft L-80 Tbg w/IPC 1850 coated
Arrowset 1X coated Packer @ 10400
Complete Openhole 10430-10700

Carlsbad Current Argus.

PART OF THE USA TODAY NETWORK

Affidavit of Publication

Ad # 0005860351

This is not an invoice

MANZANO LLC
PO BOX 1737

ROSWELL, NM 88202-1737

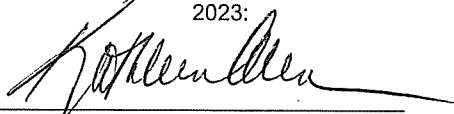
I, a legal clerk of the **Carlsbad Current Argus**, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements 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:

11/22/2023

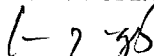


Legal Clerk

Subscribed and sworn before me this November 22,
2023:



State of WI, County of Brown
NOTARY PUBLIC



My commission expires

LEGAL NOTICE

Manzano, LLC, P O Box 1737 Roswell, New Mexico 88202, has filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well is located 660 FNL and 1980 FEL in Section 1, Township 20 South, Range 25 East, Eddy County, New Mexico. Disposal water will be sourced from Manzano's wells producing from the Bone Spring formation in the Seven Rivers area. The disposal water will be injected into the Devonian at depths between 10430 and 10700 feet at a maximum injection pressure of 2080 psi and a maximum rate of 20,000 BWPD. The well is located approximately ten miles NW of Carlsbad, New Mexico. Any interested party who has an objection to application must give notice in writing to the Oil Conservation Division, 1220 South St. Francis Street, Santa Fe, NM, 87505 within 15 days of the date of this publication. Questions or comments can be directed to Mike Hanagan at Manzano, LLC at the address above or call 575-623-1996 ext. 310. #5860351, Current Argus, November 22, 2023

KATHLEEN ALLEN
Notary Public
State of Wisconsin

Ad # 0005860351
PO #:
of Affidavits 1

This is not an invoice

Released to Imaging: 1/19/2024 10:32:07 AM

SHUGART
SWD
#1

KEVIN AND LAURIE WILBANKS

634 ROCK DAISY RD
ARTESIA, NM 88210

(Melville)

7R

4-151-115-132-264

4-151-115-330370

BLAZANO &
BMB FINANCIAL LLC REPLAT

4-151-115-399-099

4-151-112

1-800-440-0471

4-151-115-331-240

4-151-115-330-370



MANZANO, LLC

November 22, 2023

Kevin and Laurie Wilbanks
634 Rock Daisy Road
Artesia, NM 88210

RE: Notice of SWD Permit Being Filed
Manzano, LLC Shugart SWD #1

Kevin and Laurie,

For your notice, attached is a copy of a permit filed with the New Mexico Oil Conservation Division, located at 1220 South St. Francis Drive, Santa Fe, NM 87505. In this application, Manzano, LLC is proposing to reenter and inject water at 10433 to 10700 in the Devonian formation in the former Gulf Oil Shugart #1, located at 660 FNL, 1980 FEL in Section 1-T20S-R25E. Operations on this well will be subject to the surface use agreement to be negotiated between us. Should you have any questions please contact Mike Hanagan, 575-623-1996 ext. 310 or 575-420-8821 cell.

Sincerely,

Mike Hanagan
On behalf of Manzano, LLC



MANZANO, LLC

November 22, 2023

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

New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Saltwater Disposal Agreement
Manzano, LLC Shugart SWD #1

Manzano, LLC hereby submits an application to convert the plugged and abandoned Gulf Oil Shugart #1 to a salt water disposal well to be renamed the Manzano, LLC Shugart SWD #1. Accordingly, please find enclosed an original and one copy of our application Form C-108 with attachments. A third copy has been sent to the Division Office in Hobbs. A Legal Notice of our application has been filed with the Eastern New Mexico News.

Should you have any questions regarding our application, I can be reached at 575-623-1996 ext. 310 or 575-420-8821 cell. Thank you for your assistance in handling our application.

Sincerely,

Mike Hanagan
On behalf of Manzano, LLC



MANZANO, LLC

November 22, 2023

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

New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

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Sincerely,

Mike Hanagan
On behalf of Manzano, LLC



MANZANO, LLC

November 22, 2023

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

New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

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Sincerely,

Mike Hanagan
On behalf of Manzano, LLC



MANZANO, LLC

November 22, 2023

RMA Energy
Attn: Harrison Read
777 Taylor Street, Suite 1055
Ft. Worth, TX 76102

RE: Notice of SWD Permit Being Filed
Manzano, LLC Shugart SWD #1

Ladies and Gentlemen,

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Sincerely,

Mike Hanagan
On behalf of Manzano, LLC



MANZANO, LLC

November 22, 2023

Spur Energy Partners, LLC
9655 Katy Freeway, Suite 500
Houston, TX 77024

RE: Notice of SWD Permit Being Filed
Manzano, LLC Shugart SWD #1

Ladies and Gentlemen,

For your notice, attached is a copy of a permit filed with the New Mexico Oil Conservation Division, located at 1220 South St. Francis Drive, Santa Fe, NM 87505. In this application, Manzano, LLC is proposing to reenter and inject water at 10433 to 10700 in the Devonian formation in the former Gulf Oil Shugart #1, located at 660 FNL, 1980 FEL in Section 1-T20S-R25E. Your company owns interests within ½ mile of the proposed disposal well. Should you have any questions please contact Mike Hanagan, 575-623-1996 ext. 310 or 575-420-8821 cell.

Sincerely,

Mike Hanagan
On behalf of Manzano, LLC



MANZANO, LLC

November 22, 2023

Tularosa Oil Company
Attn: Dietrich Davis
P.O. Box 471349
Ft. Worth, TX 76147

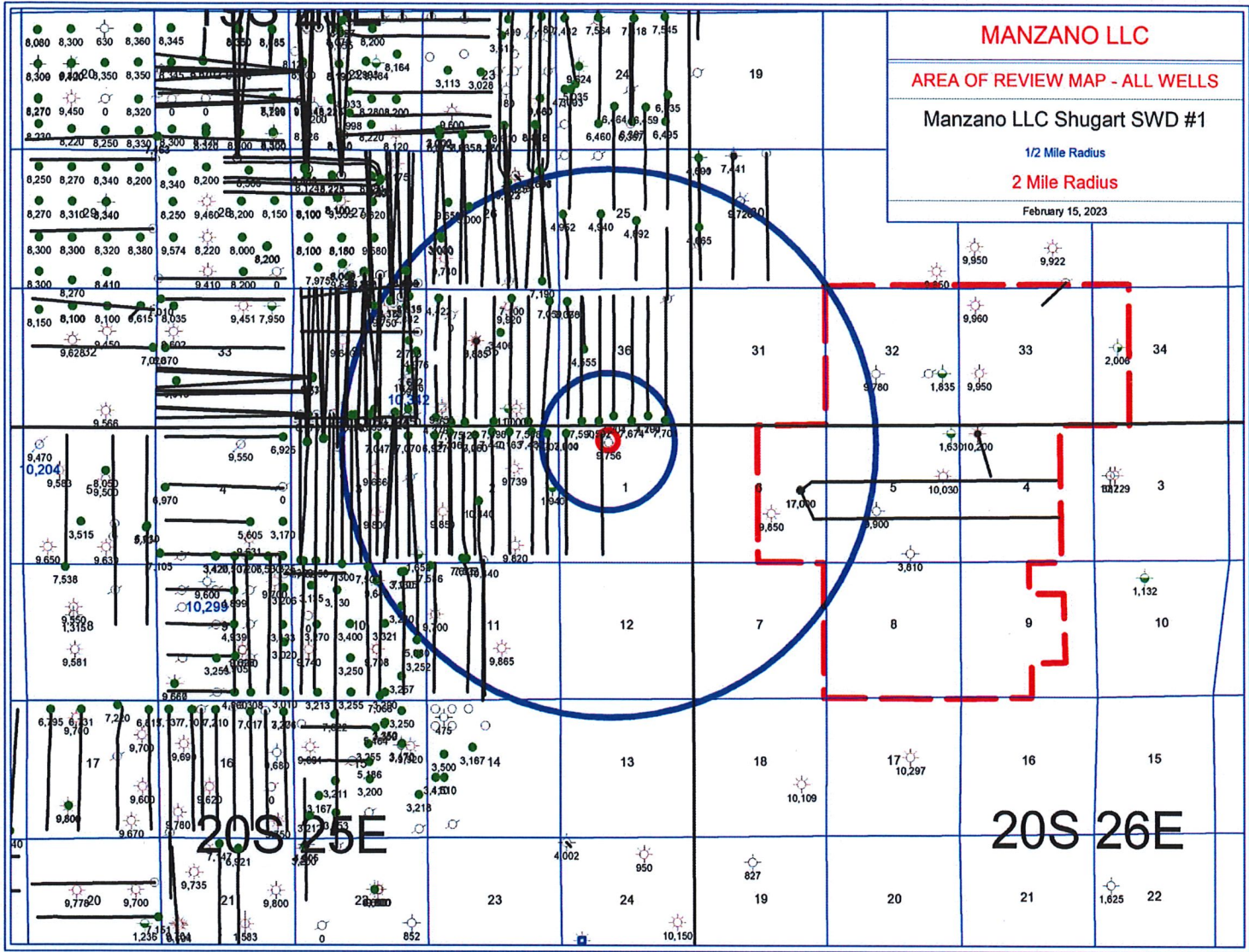
RE: Notice of SWD Permit Being Filed
Manzano, LLC Shugart SWD #1

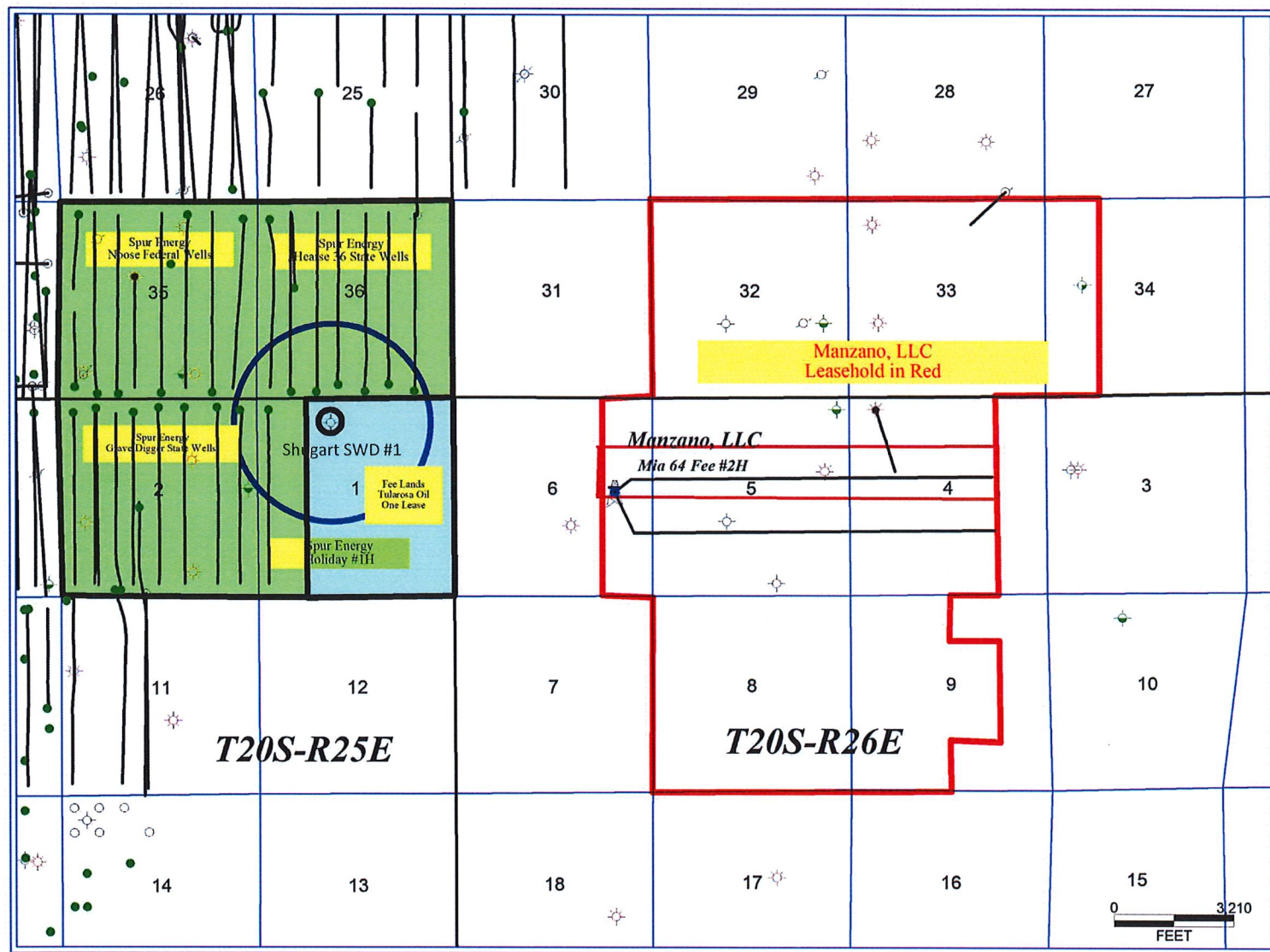
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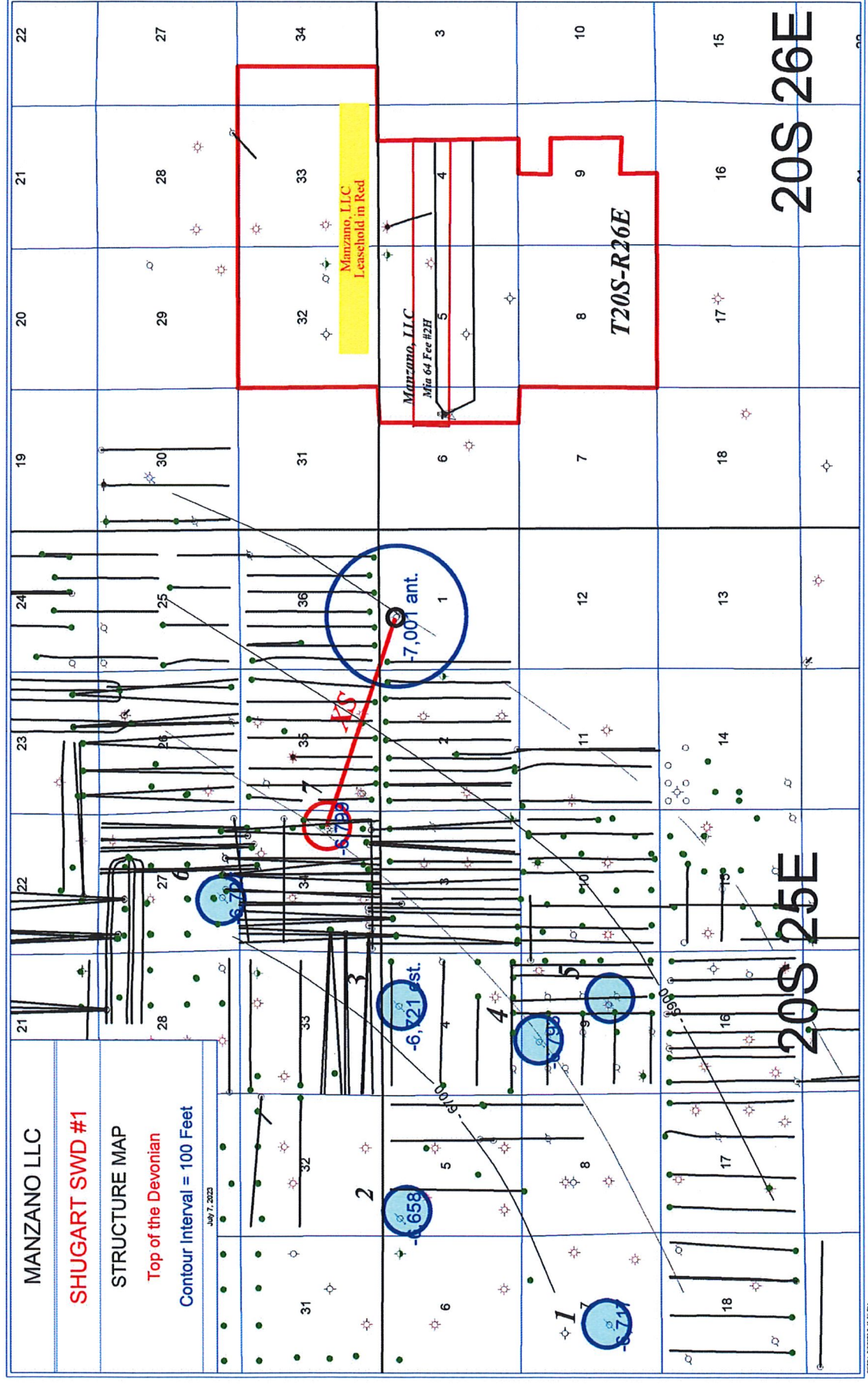
Sincerely,

Mike Hanagan
On behalf of Manzano, LLC





PETRA 7/9/2023 8:52:10 PM



MAP WELL#	1	2	3	4	5	6	7
OPERATOR	OXY USA	EOG Foster 1	Spur Energy	Silverback Operating LLC	Mewbourne Oil	Spur Energy	Stanolind
WELL	Mobil Fed SWD #1	Foster SWD #1	Holstrun SWD #1	King SWD #1	Tweedy SWD #1	Alkman SWD St #1	Lakewood #1
SU-T-R	7K-20-25	5D-20-25	4C-20-25	9c-20-25	9K-20-25	27-N-19-25	34L-19-25
KB	3560	3546	3592	3506	3480	3478	3543
AP(30-015-)	21669	10340	21141	20257	28763	21045	17
STATUS	ACTIVE	P&A	ACTIVE	ACTIVE	ACTIVE	ACTIVE	P&A
<u>Fm Tops</u>							
miss	9673	9540	9517	9547	9910	9487	9628
miss Lime		9764	nr	9752			9891
woodford	10225	10174	nr	10268			10310
silurian	10252	10204	10224	10288		10205	10342
sil sstvd	-6692	-6658	-6632	-6782		-6727	-6799
top porosity	nila	10220	nila	nila	nila	nila	10393
montoya	nde	nde	nde	nde	nde	nde	nde
ellenburger	nde	nde	nde	nde	nde	nde	nde
precambrian	nde	nde	nde	nde	nde	nde	nde
td	10800	10524	10628	10500	10600	10520	10486
Injection Zone	Devonian	Devonian	Devonian	Devonian	Devonian	Devonian	none
Injection Interval	10277-10800 OH	pf 10220-10504	10224-10600 OH	10333-10555 OH	10410-10600 OH	10205-10520 OH	none
Stimulation	A/1250	A/12000		A/180 Bls Acid	A/5000	A/15500 gals	
Injection Yrs.	1992-2023	1971-2019	1990-2023	1976-2023	2011-2023	1991-2023	none
NOTES	orig D&A 9700 TD=9700 Deepened in 1992 TD=10800	orig D&A 1965 TD= Deepened in 1971 TD=10524	orig D&A 1974 TD=9550 Deepened in 1990 TD=10600	orig. D&A 1969 TD=9600 feet Deepened in 1977 TD=10500	D&A in 1986 TD = 9625 Deepened in 2011 TD=10600	orig D&A 9544 TD=9544 Deepened in 1991 TD=10520	drld to 10486 in 1953 reentered 2004 cmpltd as Mrw gas P&A 2022
Devonian DST		DST 10159-10524					DST 10433-10486 recvd
Results		recvd 1000' WB + 8500 ft water 45" FSIP 4392					10030ft water 30" SIP=4475#

This table is for the seven closest penetrations of the Devonian to the proposed Manzano Shugart SWD #1. The Map Well# coincides with the number of these wells on the attached Devonian structure map. Six of these (5 active) are water disposal wells in the Devonian, where the operator is injecting into the top 200 to 300 feet of the Devonian formation.

Form C-108 Item VII # 4.

Manzano Shugart SWD #1

Salt Water Disposal Application

This is a water sample from the Tascosa Energy Catalina 25 HE State #1 which has a surface location in Section 30-T20S-R27E, 1881 FNL, and 201 FWL. The water is produced from the Third Bone Sandstone at a TVD of 7750 feet. Water chemistry of Manzano's produced water will also come from the Third Bone Spring Sandstone and is expected to be similar.

SYSTEM IDENTIFICATION

 MID 2112-004 Tascosa
 NM-Catalina 1H
 WTX
 Received on 12/15/2021

 Sample ID#: 0
 ID: 1.00

 Sample Date: 12-14-2021 at 1200
 Report Date: 12-16-2021

WATER CHEMISTRY
CATIONS

 Calcium(as Ca) 5802
 Magnesium(as Mg) 1152
 Barium(as Ba) 0.590
 Strontium(as Sr) 528.59
 Sodium(as Na) 47789
 Potassium(as K) 1275
 Lithium(as Li) 31.70
 Iron(as Fe) 7.60
 Ammonia(as NH₃) 0.00
 Aluminum(as Al) 2.66
 Manganese(as Mn) 1.40
 Zinc(as Zn) 5.10

ANIONS

 Chloride(as Cl) 84600
 Sulfate(as SO₄) 1114
 Dissolved CO₂(as CO₂) 15.17
 Bicarbonate(as HCO₃) 115.90
 Carbonate(as CO₃) 0.00
 Silica(as SiO₂) 12.87
 Phosphate(as PO₄) 2.60
 H₂S (as H₂S) 0.00
 Boron(as B) 45.26

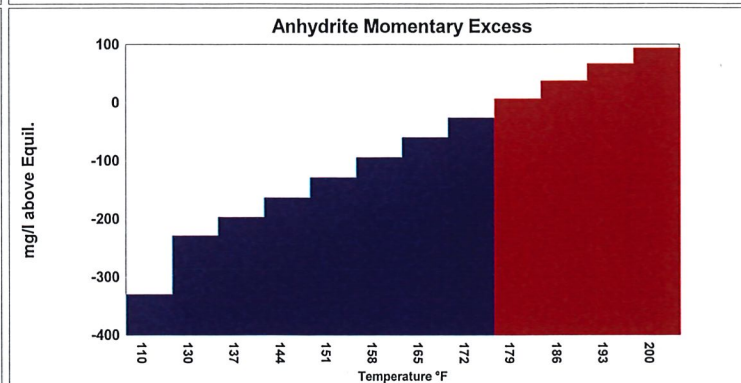
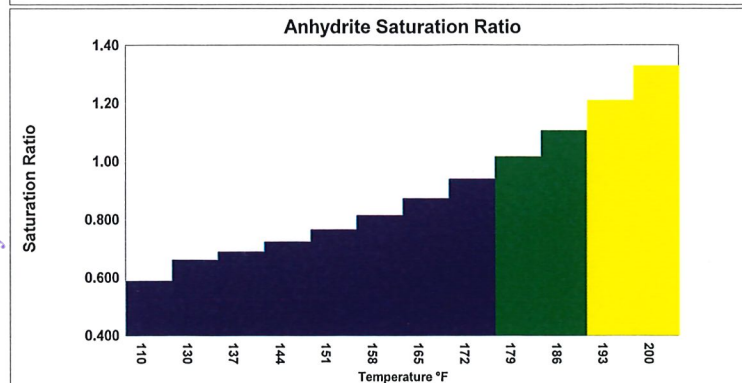
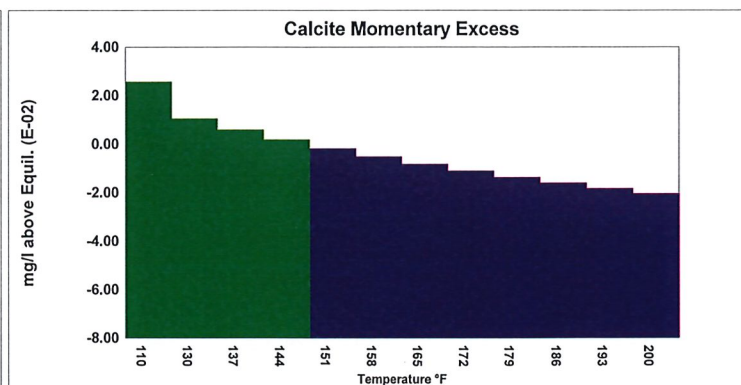
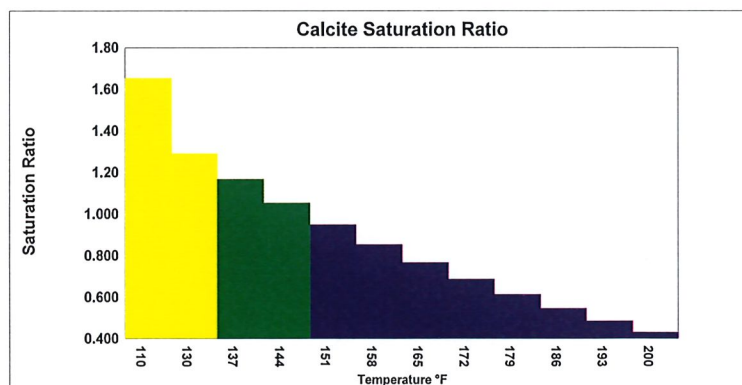
PARAMETERS

 Temperature(°F) 77.00 Sample pH 6.99
 Conductivity 233130 Sp.Gr.(g/mL) 1.10
 Resistivity 4.29 T.D.S. 152622

SCALE AND CORROSION POTENTIAL

Temp. (°F)	Press. (psia)	Calcite CaCO ₃		Anhydrite CaSO ₄		Gypsum CaSO ₄ *2H ₂ O		Barite BaSO ₄		Celestite SrSO ₄		Siderite FeCO ₃		Mackawenite FeS		CO ₂ (mpy)	pCO ₂ (atm)
110.00	14.70	1.65	0.0257	0.588	-330.08	0.674	-259.19	1.02	0.0234	1.42	136.60	1.94	0.0364	0.00	-0.914	0.0184	0.00828
130.00	150.00	1.29	0.0106	0.661	-228.93	0.719	-197.84	0.670	-0.542	1.36	116.22	1.72	0.0227	0.00	-1.30	0.0920	0.0845
137.00	282.00	1.17	0.00598	0.689	-197.15	0.724	-188.61	0.573	-0.820	1.32	103.97	1.64	0.0188	0.00	-1.46	0.127	0.159
144.00	414.00	1.05	0.00188	0.724	-163.52	0.728	-180.80	0.491	-1.14	1.28	91.79	1.55	0.0154	0.00	-1.63	0.160	0.233
151.00	546.00	0.949	-0.00182	0.765	-128.88	0.732	-174.27	0.422	-1.50	1.24	79.66	1.47	0.0124	0.00	-1.82	0.193	0.308
158.00	678.00	0.853	-0.00516	0.815	-93.95	0.734	-168.98	0.364	-1.92	1.20	67.52	1.38	0.00964	0.00	-2.02	0.216	0.382
165.00	810.00	0.766	-0.00822	0.872	-59.41	0.735	-164.88	0.314	-2.40	1.16	55.31	1.30	0.00721	0.00	-2.23	0.238	0.456
172.00	942.00	0.686	-0.0110	0.939	-25.74	0.735	-161.90	0.272	-2.94	1.12	43.00	1.22	0.00505	0.00	-2.46	0.257	0.531
179.00	1074.00	0.612	-0.0136	1.02	6.65	0.734	-160.01	0.235	-3.56	1.09	30.54	1.14	0.00310	0.00	-2.70	0.239	0.605
186.00	1206.00	0.545	-0.0160	1.11	37.45	0.732	-159.20	0.204	-4.27	1.05	17.87	1.07	0.00138	0.00	-2.96	0.171	0.679
193.00	1338.00	0.484	-0.0183	1.21	66.46	0.729	-159.44	0.177	-5.07	1.01	4.93	0.991	>-0.001	0.00	-3.23	0.104	0.754
200.00	1470.00	0.429	-0.0204	1.33	93.55	0.725	-160.73	0.154	-5.97	0.977	-8.34	0.920	-0.00155	0.00	-3.53	0.105	0.828
		xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L	xSAT	mg/L		

Saturation Ratios (xSAT) are the ratio of ion activity to solubility, e.g. {Ca}{CO₃}/K_{sp}. pCO₂ (atm) is the partial pressure of CO₂ in the gas phase.
 mg/L scale is the quantity of precipitation (or dissolution) required to instantaneously bring the water to equilibrium.



VIII. And XI.
State Engineers
POD Map.

The closest point of diversion is RA 10898-POD1 where water was found at 121 feet.

RA-10898-POD1

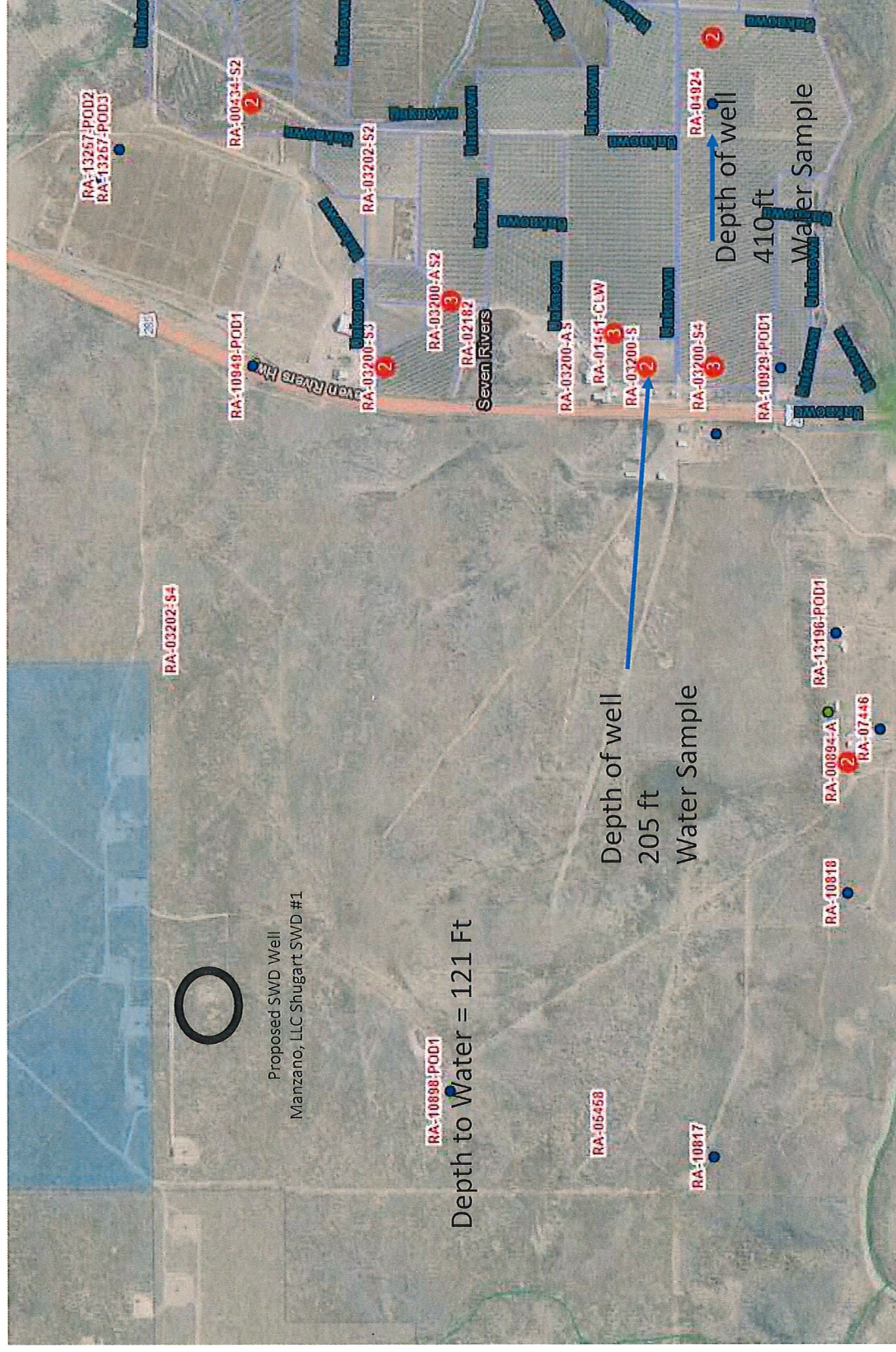
Depth to Water = 121 Ft

Two water samples were obtained from the Seven Rivers farm. Their

Depth of well
205 ft
Water Sample

Depth of well
410 ft

Shallow' well is RA-04924 in Section 5-T20S-R26E.



RA-04924 410'

Customer: Golder Associates	Order Number: 210302
Contact: Todd Stein	Receive Date: 3/11/2021 5:10:50 PM
Phone: 505-821-3043	Project: ISC / Seven Rivers
	Matrix: Water

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: Specific Conductance	Method: EPA 120.1
---	---	--------------------------------------	-----------------------------

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	2960	uS/cm	1		3/16/2021

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	7.6	ph Units	1		3/16/2021

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	514	mg/L	10	0.05 (0.5)	3/18/2021
Iron	ND	mg/L	10	0.02 (0.2)	3/18/2021
Magnesium	185	mg/L	10	0.05 (0.5)	3/18/2021
Potassium	2.04	mg/L	10	0.05 (0.5)	3/18/2021
Silicon	11.4	mg/L	10	0.01 (0.1)	3/18/2021
Sodium	74.6	mg/L	10	0.05 (0.5)	3/18/2021
Strontium	7.06	mg/L	10	0.0005 (0.005)	3/18/2021

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: Trace for Golder	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Boron	0.192	mg/L	5	0.005 (0.025)	3/19/2021
Copper	ND	mg/L	5	0.0005 (0.0025)	3/19/2021
Manganese	ND	mg/L	5	0.001 (0.005)	3/19/2021
Zinc	0.0133	mg/L	5	0.0005 (0.0025)	3/19/2021

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: Anions by IC	Method: EPA 300.0
---	---	------------------------------	-----------------------------

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	3/16/2021
Chloride	98.4	mg/L	5	1 (5)	3/16/2021
Fluoride	1.07	mg/L	5	0.1 (0.5)	3/16/2021

ND - not detected at the reporting limit

Tuesday, March 30, 2021

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The value in parentheses is reporting limit multiplied by the dilution factor and should be the value used for reporting purposes.

Customer: Golder Associates	Order Number: 210302
Contact: Todd Stein	Receive Date: 3/11/2021 5:10:50 PM
Phone: 505-821-3043	Project: ISC / Seven Rivers
	Matrix: Water

Nitrate	135	mg NO3/L	20	0.1	(2)	3/16/2021
Nitrite	ND	mg NO2/L	5	0.1	(0.5)	3/16/2021
Ortho Phosphate	ND	mg/L	5	0.5	(2.5)	3/16/2021
Sulfate	1650	mg/L	20	1	(20)	3/16/2021

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: Alkalinity	Method: EPA 310.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	200	mg/L	1	5	3/16/2021
Bicarbonate (HCO3)	245	mg/L	1	5	3/16/2021
Carbonate (CO3)	ND	mg/L	1	5	3/16/2021

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: Checking correctness w OES	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	43.46	meq/L	1		3/18/2021
Cations total	44.20	meq/L	1		3/18/2021
Percent difference	0.85	%	1		3/18/2021
SiO2	24.3	mg/L	1	0.05	3/18/2021
TDS calc	2810	mg/L	1		3/18/2021

Laboratory sample ID: 210302-12	Customer sample ID: Big Shallow	Test: Hardness by calculation	Method: SM 2340B
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	2050	mg CaCO3/ L	1		3/18/2021

RA-032005

Customer: Golder Associates	Order Number: 210302
Contact: Todd Stein	Receive Date: 3/11/2021 5:10:50 PM
Phone: 505-821-3043	Project: ISC / Seven Rivers
	Matrix: Water

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: Specific Conductance	Method: EPA 120.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Specific Conductance	2460	uS/cm	1		3/16/2021

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: pH	Method: EPA 150.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
pH	7.5	ph Units	1		3/16/2021

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: Cations by ICPOES	Method: EPA 200.7
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Calcium	506	mg/L	10	0.05 (0.5)	3/18/2021
Iron	ND	mg/L	10	0.02 (0.2)	3/18/2021
Magnesium	132	mg/L	10	0.05 (0.5)	3/18/2021
Potassium	1.65	mg/L	10	0.05 (0.5)	3/18/2021
Silicon	11.0	mg/L	10	0.01 (0.1)	3/18/2021
Sodium	38.0	mg/L	10	0.05 (0.5)	3/18/2021
Strontium	6.05	mg/L	10	0.0005 (0.005)	3/18/2021

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: Trace for Golder	Method: EPA 200.8
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Boron	0.115	mg/L	5	0.005 (0.025)	3/19/2021
Copper	ND	mg/L	5	0.0005 (0.0025)	3/19/2021
Manganese	ND	mg/L	5	0.001 (0.005)	3/19/2021
Zinc	0.0110	mg/L	5	0.0005 (0.0025)	3/19/2021

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: Anions by IC	Method: EPA 300.0
---	---------------------------------------	------------------------------	-----------------------------

Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Bromide	ND	mg/L	5	0.1 (0.5)	3/16/2021
Chloride	30.3	mg/L	5	1 (5)	3/16/2021
Fluoride	1.02	mg/L	5	0.1 (0.5)	3/16/2021

ND - not detected at the reporting limit

Tuesday, March 30, 2021

Page 25 of 26

The value in parentheses is reporting limit multiplied by the dilution factor and should be the value used for reporting purposes.

Customer: Golder Associates	Order Number: 210302
Contact: Todd Stein	Receive Date: 3/11/2021 5:10:50 PM
Phone: 505-821-3043	Project: ISC / Seven Rivers
	Matrix: Water

Nitrate	35.1	mg NO3/L	5	0.1	(0.5)	3/16/2021
Nitrite	ND	mg NO2/L	5	0.1	(0.5)	3/16/2021
Ortho Phosphate	ND	mg/L	5	0.5	(2.5)	3/16/2021
Sulfate	1470	mg/L	20	1	(20)	3/16/2021

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: Alkalinity	Method: EPA 310.1
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Alkalinity as CaCO3	189	mg/L	1	5	3/16/2021
Bicarbonate (HCO3)	231	mg/L	1	5	3/16/2021
Carbonate (CO3)	ND	mg/L	1	5	3/16/2021

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: Checking correctness w OES	Method: SM 1030E
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Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Anions total	36.03	meq/L	1		3/18/2021
Cations total	37.81	meq/L	1		3/18/2021
Percent difference	2.41	%	1		3/18/2021
SiO2	23.6	mg/L	1	0.05	3/18/2021
TDS calc	2360	mg/L	1		3/18/2021

Laboratory sample ID: 210302-13	Customer sample ID: Marcelo	Test: Hardness by calculation	Method: SM 2340B
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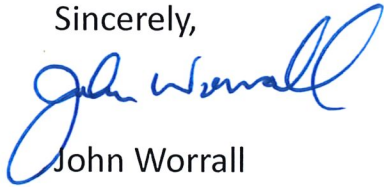
Parameter	Result	Units	Dilution	Reporting limit	Analysis Date
Hardness	1810	mg CaCO3/ L	1		3/18/2021

Form C-108 Item XII
Manzano Shugart SWD #1
Salt Water Disposal Application

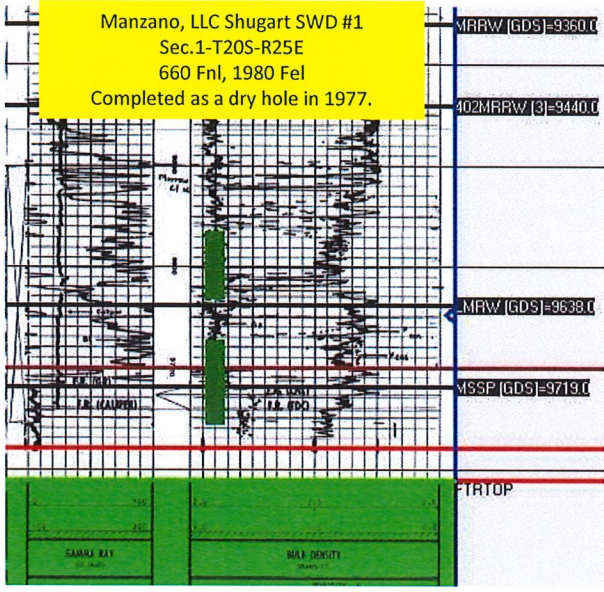
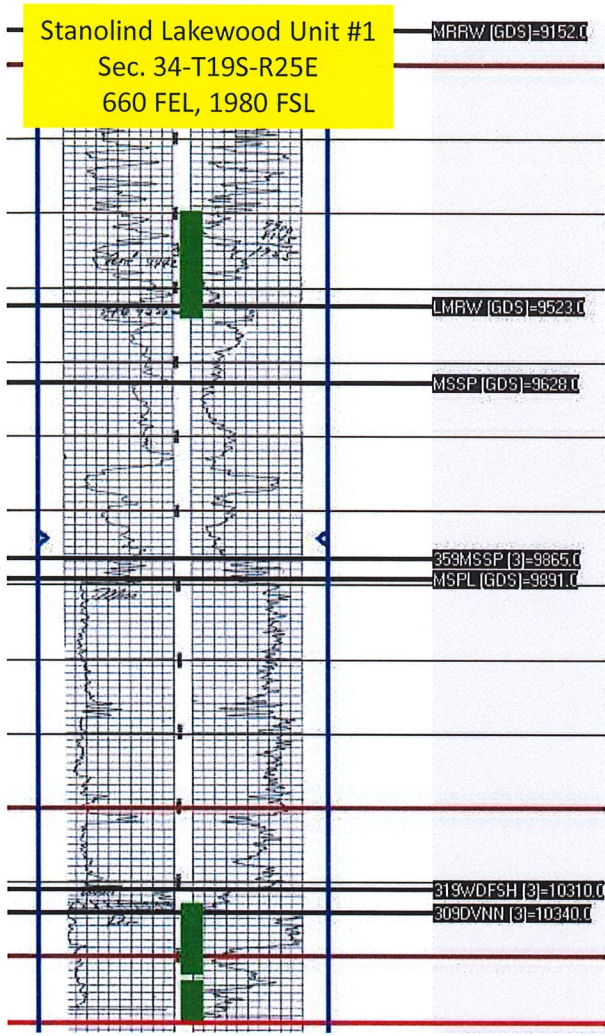
AFFIDAVIT

Manzano, LLC has examined the geologic and engineering data associated with the proposed disposal well and find no evidence of open faults or other hydrologic connections between the disposal zone and good sources of drinking water.

Sincerely,



John Worrall
Geologist, Manzano, LLC



X. Logs. Manzano plan Shugart #1 well, which to 9756 feet and completed without the running casing. The well was plugged leaving surface and in place intact and cemented in place. Plans to reenter this well to 10600 feet. Manzano casing to total depth, Devonian formation from 10430 to 10700 feet. Excellent reservoir permeability anticipated shown by the drill stem test. Lakewood Unit #1, located west of the proposed

Top Devonian expected at 10430
Top Porosity at 10480

Will Inject from 10430 to 10700 feet.

DST 10433 to 10486 recovered 10300 ft water and 270 ft mud showing excellent reservoir quality. The shut in pressure was 4475 psi.

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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 305509

CONDITIONS

Operator: MANZANO LLC P.O. Box 1737 Roswell, NM 88202	OGRID: 231429
	Action Number: 305509
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	1/19/2024