AE Order Number Banner

Application Number: pMSG2335443481

SWD-2589

SOLARIS WATER MIDSTREAM, LLC [371643]

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: Solaris Water Midstream **OGRID Number:** 371643
Well Name: Mugatu 27 Fed SWD #1 **API:** 30-015-xxxxx
Pool: SWD; Devonian-Silurian **Pool Code:** 97869

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

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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

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

Ben Stone
Print or Type Name

Signature

12/19/2023
Date

936-377-5696
Phone Number

ben@sosconsulting.us
e-mail Address

SOS Consulting, LLC
Oil & Gas Accounting - Regulatory Processing Assistance - Oil Field Technical Assistance
16 Years of Quality Service

December 19, 2023

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

Attn: Mr. Dylan Fuge, Director

Re: Application of Solaris Water Midstream, LLC to permit and otherwise configure for salt water disposal the proposed Mugatu 27 Fed SWD #1, API 30-015-xxxxx) located in Section 27, Township 23 South, Range 29 East, NMPM, Eddy County, New Mexico.

Dear Mr. Fuge,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for disposal the proposed subject well.

Solaris Water Midstream, LLC seeks to optimize efficiency, both economically and operationally, of all its operations in southeast New Mexico. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran in the November 30, 2023, edition of the Artesia Daily Press and offset operators and other affected parties have been notified individually. All required information and attachments are included for a complete Form C-108. The well is located on BLM land and minerals.

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

Best regards,

Ben Stone, Partner
SOS Consulting, LLC
Agent for Solaris Water Midstream, LLC

Cc: Application attachment and file

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ***Salt Water Disposal*** and the application ***QUALIFIES*** for administrative approval.

II. OPERATOR: ***Solaris Water Midstream, LLC***
ADDRESS: ***907 Tradewinds Blvd., Midland, TX 79706***

CONTACT PARTY: ***Agent: SOS Consulting, LLC – Ben Stone (936) 377-5696***

III. WELL DATA: ***All Well Data and Applicable Wellbore Diagrams and Packer Info are ATTACHED.***

IV. ***This is not an expansion of an existing project.***

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

*VI. A ***Tabulation is ATTACHED*** of data on all wells of public record within the area of review which penetrate the proposed injection zone. ***There are NO wells in the subject AOR which Penetrate the proposed DEVONIAN interval.*** The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail. ***NO P&A well penetrates.***

VII. ***The following data is ATTACHED*** on the proposed operation, including:

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

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

IX. ***Stimulation program – a conventional acid job of up to 25,000 gals. may be performed to clean and open the formation.***

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). ***A full suite of Well Logs WILL be run and filed with OCD.***

*XI. ***There are 2 water wells within one mile of the proposed salt water disposal well per OSE data. (Area data included.)***

XII. ***An affirmative statement is ATTACHED that available geologic and engineering data has been examined and no evidence was found*** of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. ***"Proof of Notice" section on the next page of this form has been completed and ATTACHED. There are 5 offset lessees and/or operators within ONE mile including Federal minerals - all have been noticed. Location is FEDERAL.***

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

NAME: ***Ben Stone*** TITLE: ***SOS Consulting, LLC agent for Solaris Water Midstream, LLC***

SIGNATURE: _____ DATE: ***12/19/2023***

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

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal:

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

FORM C-108 – APPLICATION FOR AUTHORIZATION TO INJECT (cont.)

III. WELL DATA – ***The following information and data is included (See ATTACHED Wellbore Schematic):***

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 Street, 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
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (405) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
	97869	SWD; DEVONIAN

Property Code	Property Name	Well Number
	MUGATU 27 SWD	#1

OGRID No.	Operator Name	Elevation
371643	SOLARIS WATER MIDSTREAM, LLC.	3028'

Surface Location

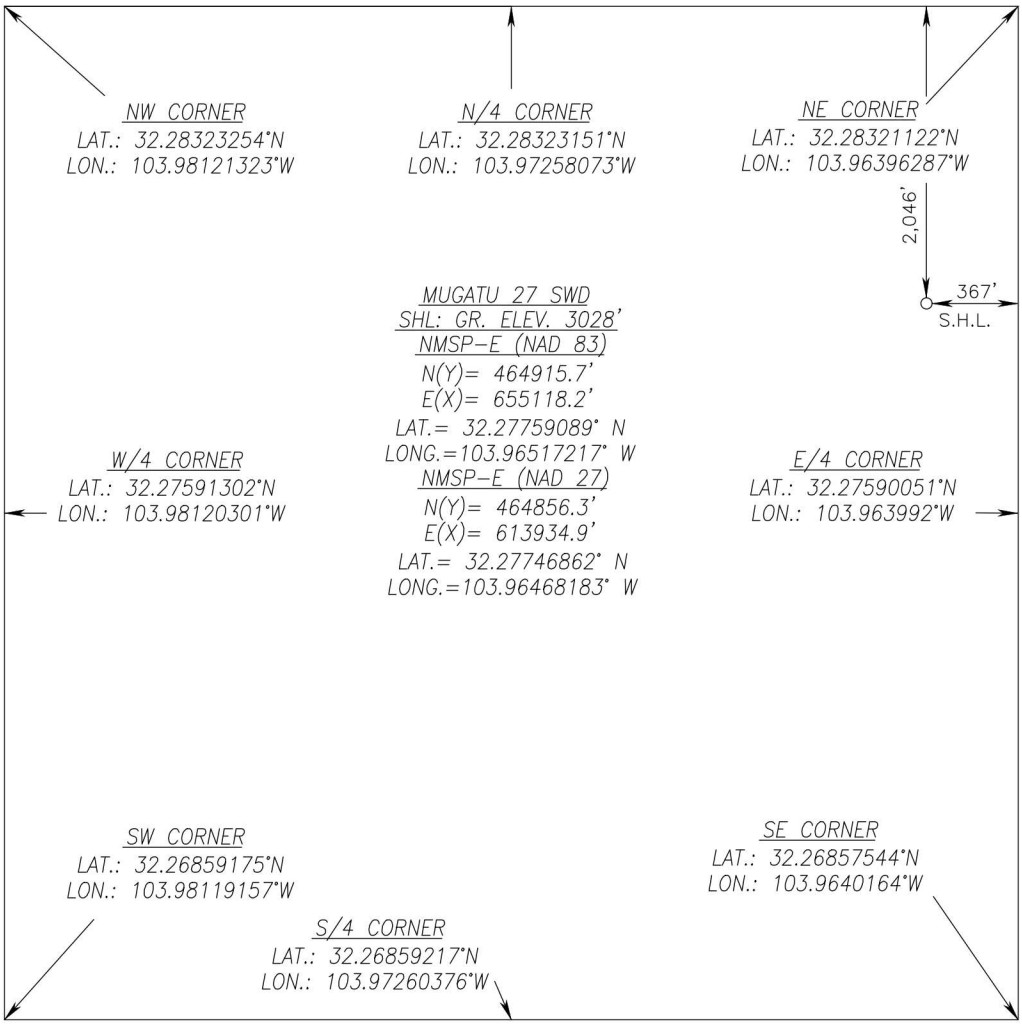
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	27	23-S	29-E		2,046	NORTH	367	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
5.51			

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



OPERATOR CERTIFICATION

I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Printed Name

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.

OCTOBER 23, 2023
Date Surveyed

Signature & Seal of Professional Surveyor

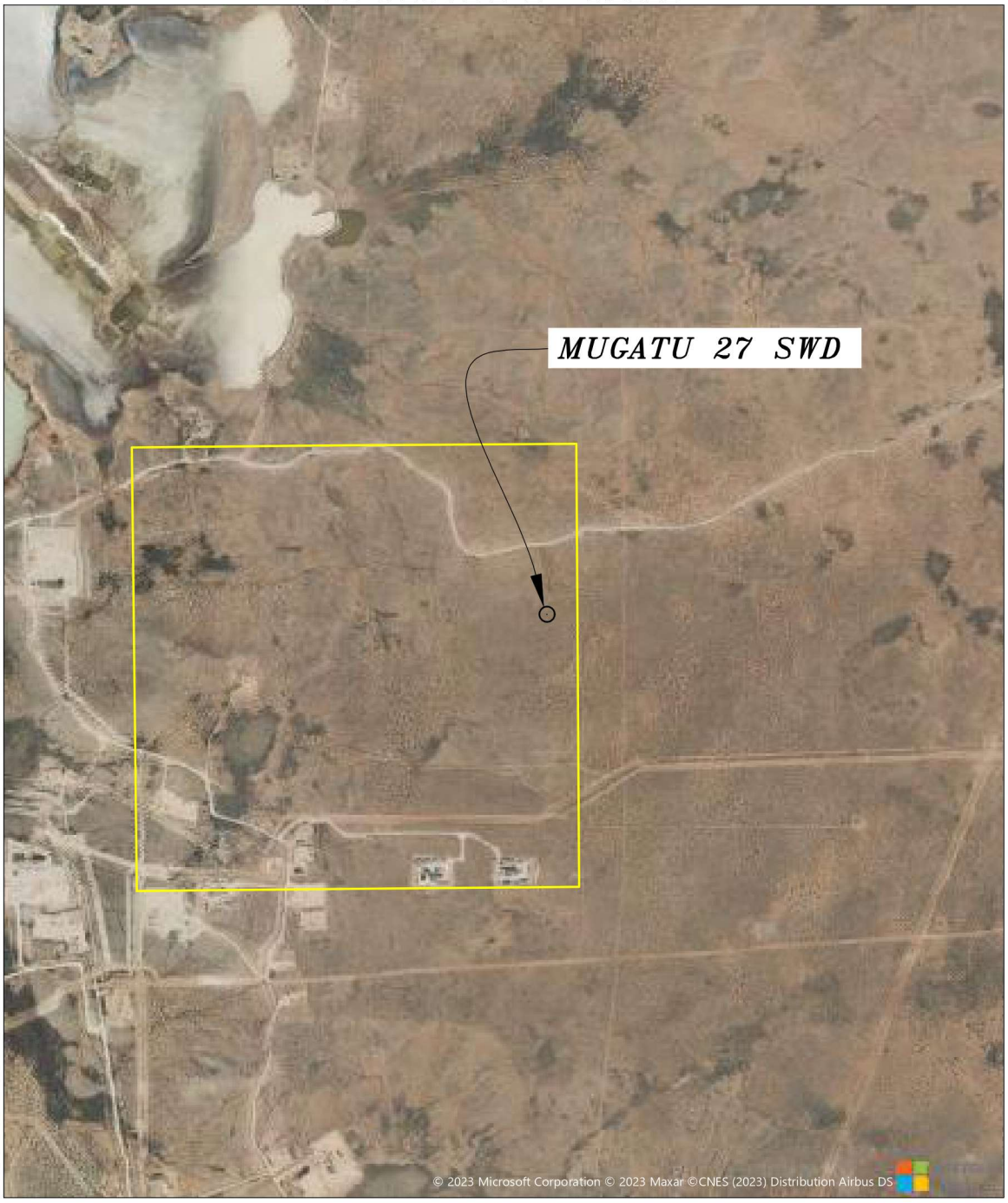
CHRIS E. CARLSON NEW MEXICO 24876 PROFESSIONAL SURVEYOR

Chris Carlson 10/23/2023

MUGATU 27 SWD

Certificate No. CHRIS E. CARLSON 24876

VICINITY MAP



NORTH

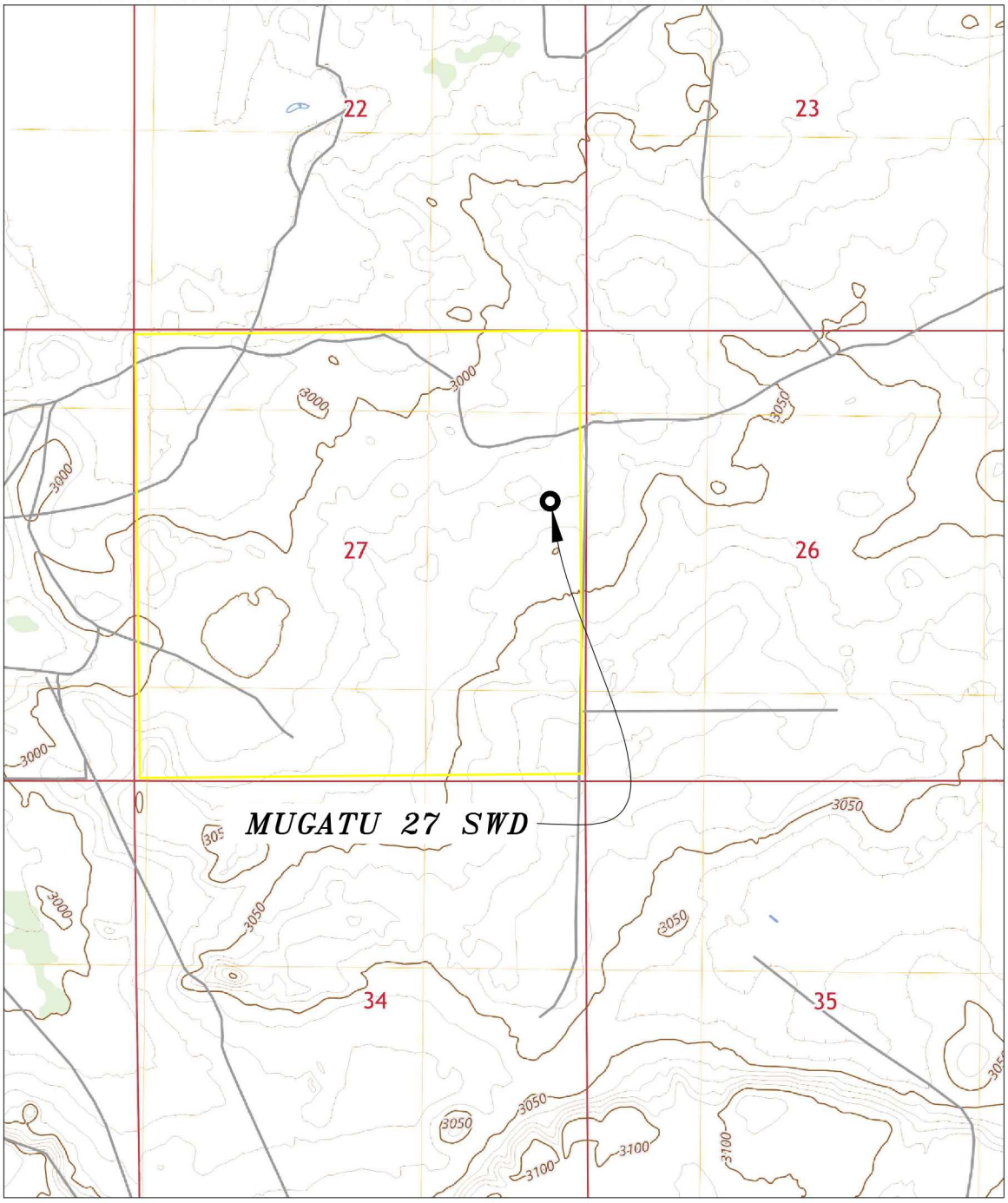
SEC. 27 TWP. 23-S RGE. 29-E
SURVEY N.M.P.M.
COUNTY EDDY STATE NEW MEXICO
DESCRIPTION 2,046 FNL & 367' FEL
N.A.V.D. 88 ELEVATION 3028'
OPERATOR SOLARIS WATER MIDSTREAM, LLC.
LEASE MUGATU 27 SWD
U.S.G.S. TOPOGRAPHIC MAP
EDDY, N.M.

SCALE: 1" = 2000'

ELEVATIONS SHOWN WERE DERIVED FROM STATIC GPS AND ARE IN N.A.V.D 1988 DATUM.

SOLARIS WATER MIDSTREAM, LLC.		
SURVEY DATE: OCT. 16, 2023	PAGE: 1 OF 1	
DRAFTING DATE: OCT 23, 2023		
APPROVED BY: CEC	DRAWN BY: TJA	FILE: MUGATU 27 SWD

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

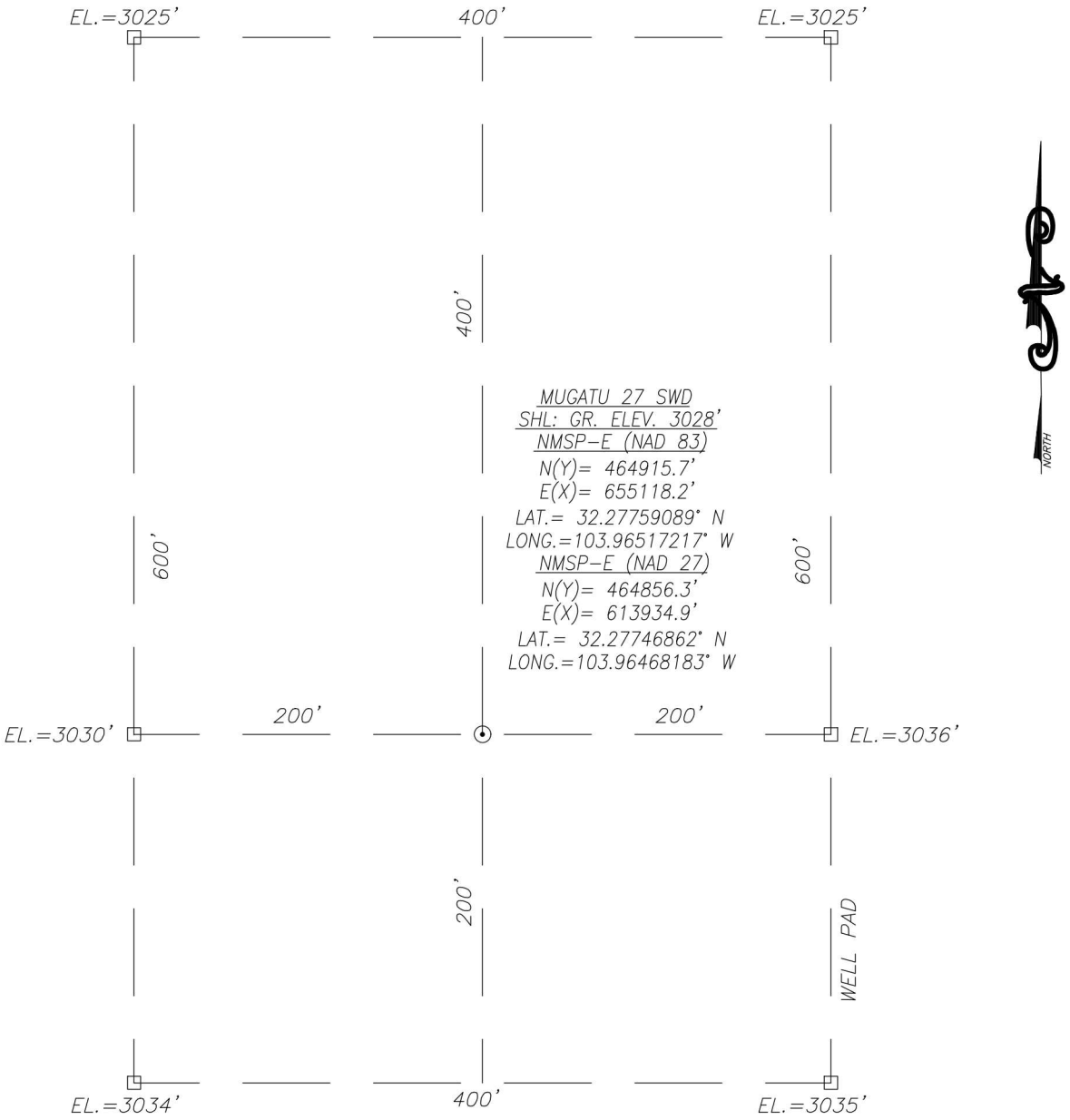
SEC. 27 TWP. 23-S RGE. 29-E
SURVEY N.M.P.M.
COUNTY EDDY STATE NEW MEXICO
DESCRIPTION 2,046 FNL & 367' FEL
N.A.V.D.88 ELEVATION 3028'
OPERATOR SOLARIS WATER MIDSTREAM, LLC.
LEASE MUGATU 27 SWD
U.S.G.S. TOPOGRAPHIC MAP
EDDY, N.M.

ELEVATIONS SHOWN WERE DERIVED FROM STATIC GPS AND ARE IN N.A.V.D 1988 DATUM.

SOLARIS WATER MIDSTREAM, LLC.		
SURVEY DATE: OCT. 16, 2023	PAGE: 1 OF 1	
DRAFTING DATE: OCT. 23, 2023		
APPROVED BY: CEC	DRAWN BY: TJA	FILE: MUGATU 27 SWD

SECTION 27, TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.,

EDDY COUNTY NEW MEXICO



DIRECTIONS TO LOCATION:

BEGINNING IN CARLSBAD, NM. HEADING EAST ON U.S. HWY. 62. TURN RIGHT AND HEAD SOUTH ON RAWHIDE ROAD ±4.1 MILES. TURN RIGHT AND HEAD WEST ON LEASE ROAD FOR ±2.3 MILES. THE WELL STAKED LOCATION FLAG IS SOUTH ±800 FEET.

ELEVATIONS SHOWN WERE DERIVED FROM STATIC GPS AND ARE IN N.A.V.D. 1988 DATUM.

100 0 100 200 Feet

Scale: 1"=100'

DOWNTOWN DESIGN SERVICES, INC.
16 EAST 16th STREET, SUITE 400
TULSA, OK 74119
Tel: 918-592-3374 Fax: 918-221-3940
www.ddsiglobal.com

SOLARIS WATER MIDSTREAM, LLC.

MUGATU 27 SWD
LOCATED 2,046 FEET FROM THE NORTH LINE
AND 367 FEET FROM THE EAST LINE OF SECTION 27,
TOWNSHIP 23 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO

SURVEY DATE: OCT. 16, 2023		PAGE: 1 OF 1
DRAFTING DATE: OCT. 23, 2023		
APPROVED BY: CEC	DRAWN BY: TJA	FILE: MUGATU 27 SWD

C-108 - Items III, IV, V

Item III - Subject Well Data

Wellbore Diagram – PROPOSED
Arrowset Packer Diagram & Datasheet

Item IV – Tabulation of AOR Wells

NO (0) Wells Penetrate the Proposed Injection Interval.

Item V – Area of Review Maps

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

2. One-Mile AOR Map

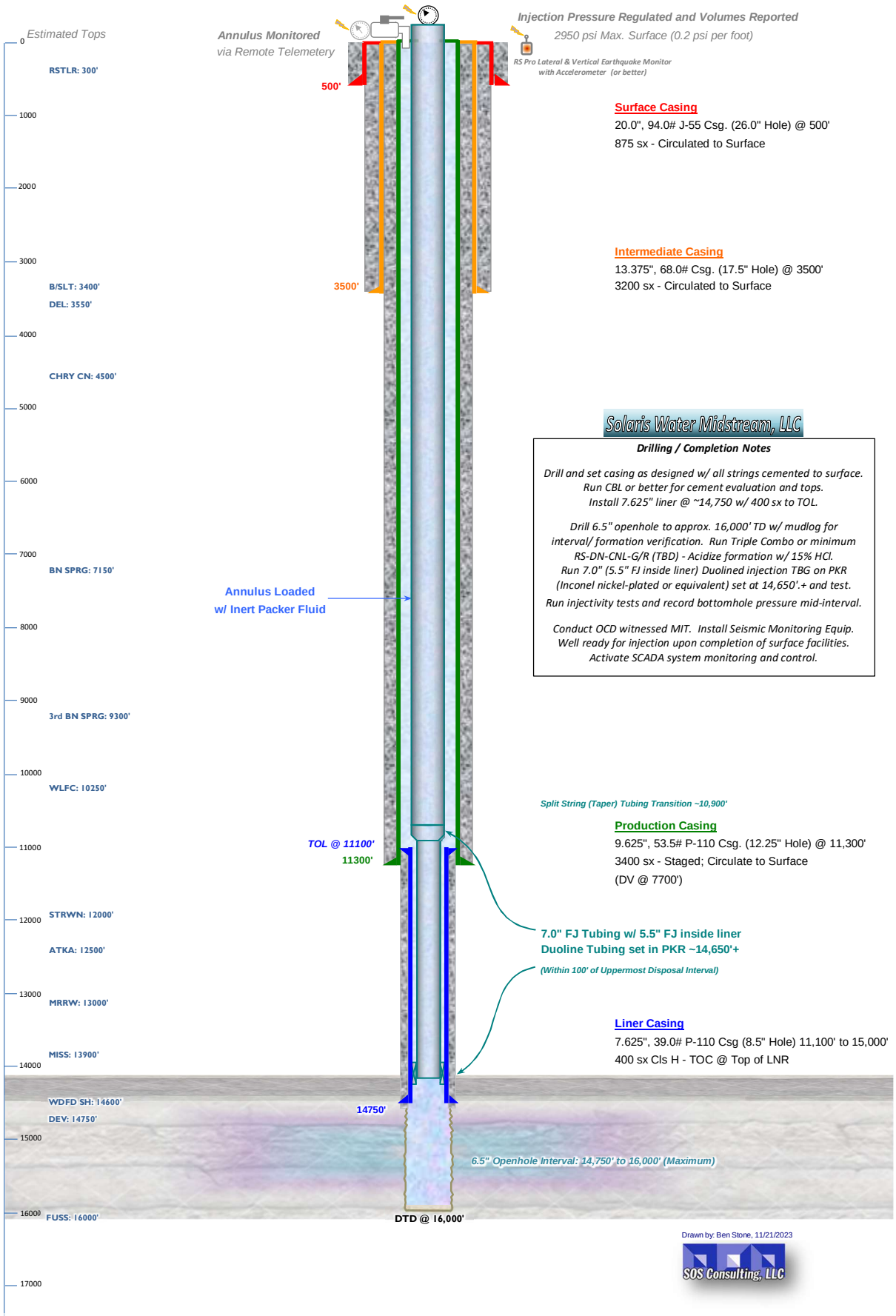
All Above Exhibits follow this page.

SOLARIS WATER MIDSTREAM, LLC

WELL SCHEMATIC - PROPOSED
Mugatu 27 Fed SWD #1

API 30-015-xxxxx
2046' FNL & 367' FEL, SEC. 27-T23S-R29E
EDDY COUNTY, NEW MEXICO

SWD; Devonian-Silurian (97869)
Spud Date: 6/15/2024
SWD Config Dt: 7/07/2024



Surface Casing
20.0", 94.0# J-55 Csg. (26.0" Hole) @ 500'
875 sx - Circulated to Surface

Intermediate Casing
13.375", 68.0# Csg. (17.5" Hole) @ 3500'
3200 sx - Circulated to Surface

Production Casing
9.625", 53.5# P-110 Csg. (12.25" Hole) @ 11,300'
3400 sx - Staged; Circulate to Surface
(DV @ 7700')

Liner Casing
7.625", 39.0# P-110 Csg (8.5" Hole) 11,100' to 15,000'
400 sx Cls H - TOC @ Top of LNR

Solaris Water Midstream, LLC

Drilling / Completion Notes

Drill and set casing as designed w/ all strings cemented to surface.
Run CBL or better for cement evaluation and tops.
Install 7.625" liner @ ~14,750 w/ 400 sx to TOL.

Drill 6.5" openhole to approx. 16,000' TD w/ mudlog for interval/ formation verification. Run Triple Combo or minimum RS-DN-CNL-G/R (TBD) - Acidize formation w/ 15% HCl.
Run 7.0" (5.5" FJ inside liner) Duolined injection TBG on PKR (Inconel nickel-plated or equivalent) set at 14,650'.+ and test.
Run injectivity tests and record bottomhole pressure mid-interval.

Conduct OCD witnessed MIT. Install Seismic Monitoring Equip.
Well ready for injection upon completion of surface facilities.
Activate SCADA system monitoring and control.

Drawn by: Ben Stone, 11/21/2023

SOS Consulting, LLC

Weatherford®

Packer Systems

Arrowset I-XS Mechanical Packer

Weatherford's Arrowset I-XS mechanical packer is a versatile, field-proven retrievable double-grip packer for isolating the annulus from the production conduit. The packer can be set with tension or compression.

A patented upper-slip releasing system reduces the force required to release the packer. A nondirectional slip is released first, making it easier to release the other slips. The packer also has a straight-pull safety release.

Applications

- Production
- Pumping
- Injection
- Fiberglass tubing
- Completions requiring periodic casing-integrity tests
- Zonal isolation

Features, Advantages and Benefits

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

Weatherford

Packer Systems

Arrowset I-XS Mechanical Packer

Specifications

Casing				Packer			
OD (in./*mm*)	Weight (lb/ft, *kg/m*)	Minimum ID (in./*mm*)	Maximum ID (in./*mm*)	Maximum OD (in./*mm*)	Minimum ID (in./*mm*)	Standard Thread Connection (in./*mm*)	Product Number
4-1/2 *114.3*	9.5 to 13.5 *14.1 to 20.1*	3.920 *99.57*	4.090 *103.89*	3.750 *95.25*	1.985 *50.42*	2-3/8 EUE 8 Rd	604-45
5-1/2 *139.7*	14.0 to 17.0 *20.8 to 25.3*	4.892 *124.26*	5.012 *127.30*	4.515 *114.68*	1.985 *50.42*	2-3/8 EUE 8 Rd	604-55
				4.625 *117.48*		2-7/8 EUE 8 Rd	604-56
	20.0 to 23.0 *29.8 to 34.2*	4.670 *118.62*	4.778 *121.36*	4.515 *114.68*		2-3/8 EUE 8 Rd	604-57
						2-7/8 EUE 8 Rd	604-59-000
6-5/8 *168.3*	24.0 to 32.0 *35.7 to 47.6*	5.675 *144.15*	5.921 *150.39*	5.515 *140.08*	2.375 *60.33*	2-7/8 EUE 8 Rd	604-65
	17.0 to 24.0 *25.3 to 35.7*	5.921 *150.39*	6.135 *155.83*	5.750 *146.00*			604-68
7 *177.8*	17.0 to 26.0 *25.7 to 39.3*	6.276 *159.41*	6.538 *166.07*	5.515 *140.08*	2.375 *60.33*	2-7/8 EUE 8 Rd	604-72
				6.000 *152.40*	3.000 *76.20*	3-1/2 EUE 8 Rd	604-74

Options

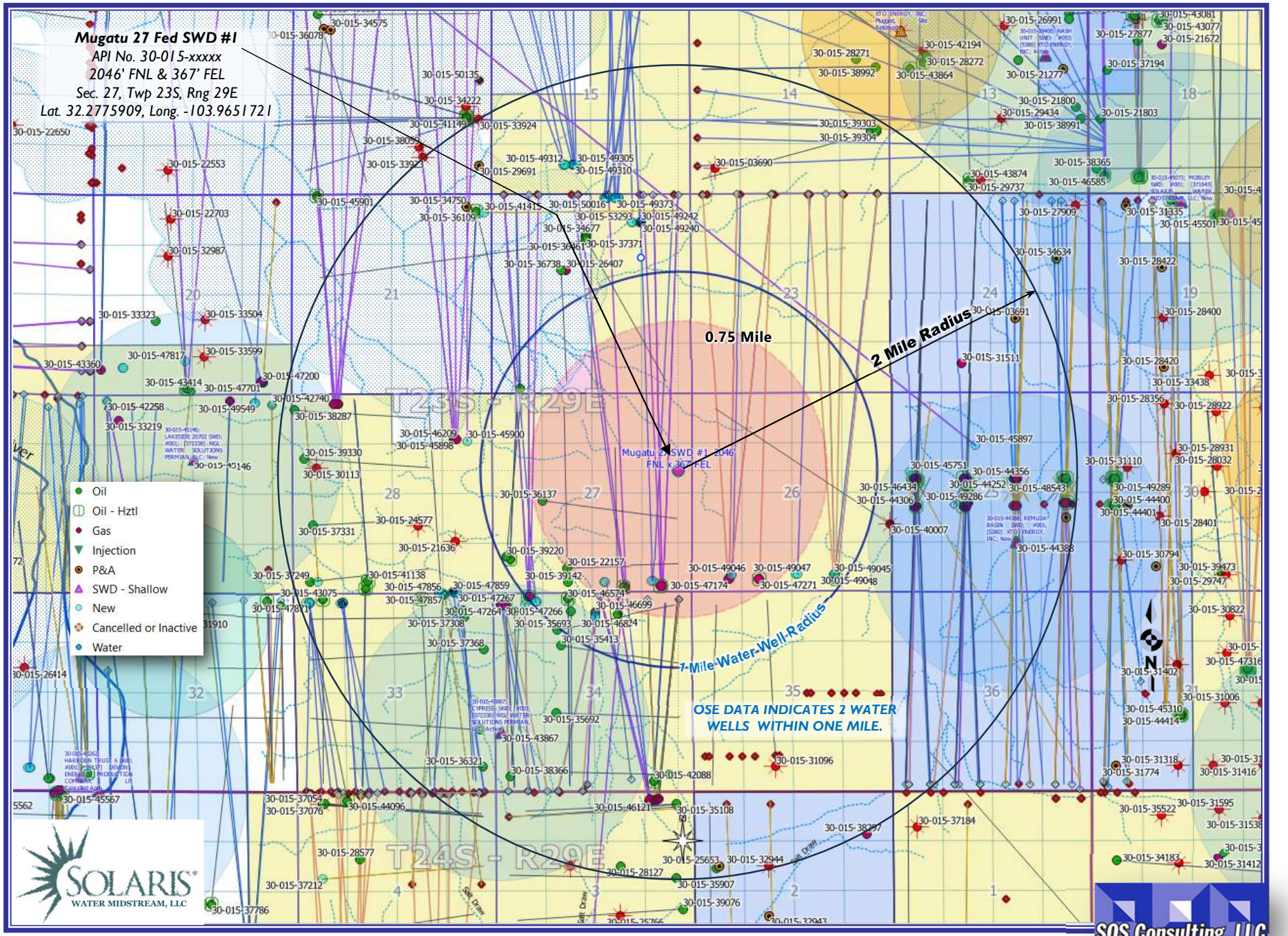
- Elastomer options are available for hostile environments.

For internal use

Link to Endeca assembly part numbers: Arrowset I-XS Mechanical Packer

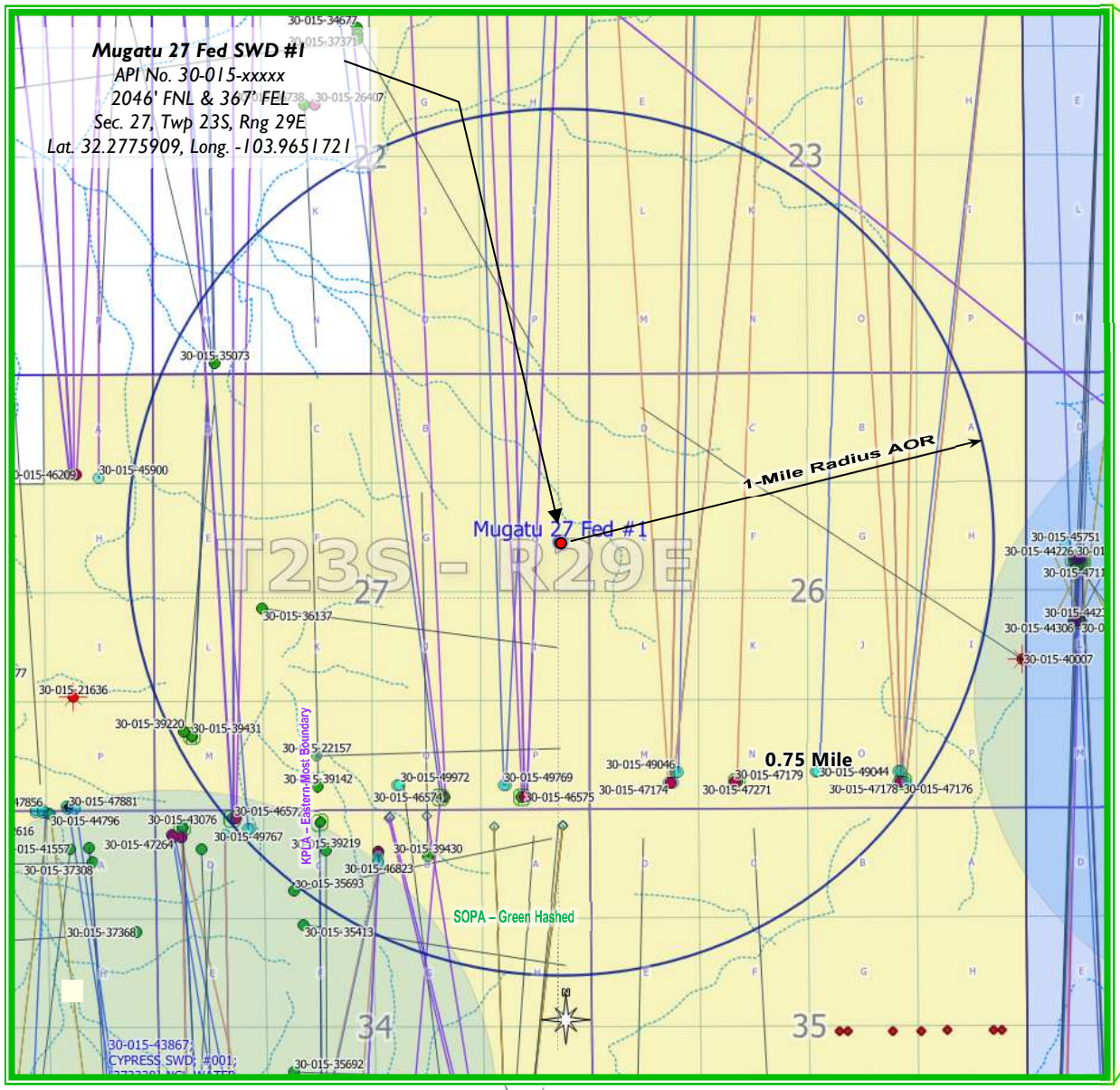
Mugatu 27 Fed SWD #1 - Area of Review / 2 Miles

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

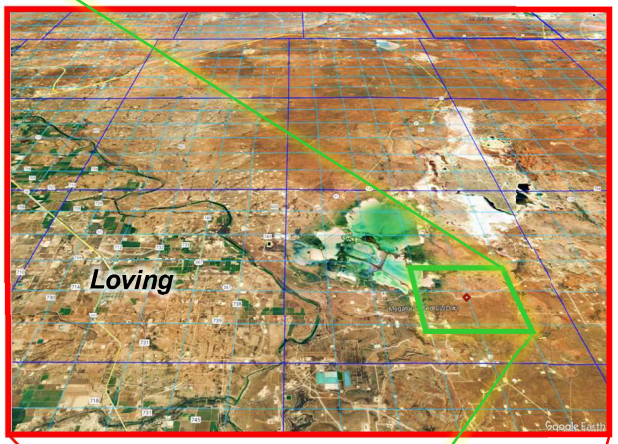


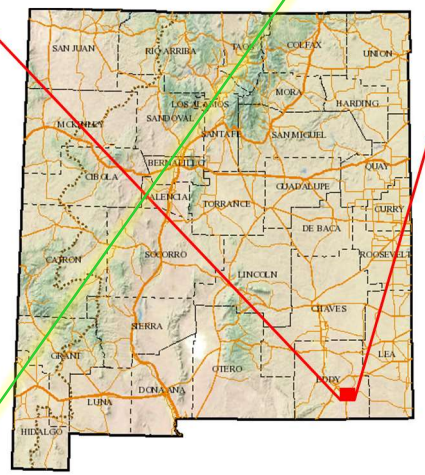
Mugatu 27 Fed SWD Well #1 - Area of Review / Overview Map

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



~7.7 miles East of Loving, NM





Eddy County, New Mexico

SOLARIS WATER MIDSTREAM, LLC

SOS Consulting, LLC

Form C-108 Item VI - Tabulation of AOR Wells

	Top of Proposed DEVONIAN Interval 14,750'				NO Wells (0) Penetrate Proposed Interval.				
API	Current Operator	Well Name	Type	Status	Lease	ULSTR	Depth (V)	Spud Dt.	Plug Dt.
Sections 22 and 26 wells									
30-015-35073	LAGUNA SALADO 22 FEDERAL #003H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	Active	Federal	M-22-23S-29E	6588'	9/2/2006	
30-015-47174	HOT POTATO 26 23 FEDERAL #331H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	M-26-23S-29E	0'*	10/31/2020	
30-015-47175	HOT POTATO 26 23 FEDERAL #332H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	M-26-23S-29E	0'*	12/31/9999	
30-015-47177	HOT POTATO 26 23 FEDERAL #621H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	M-26-23S-29E	10325'	11/1/2020	
30-015-49046	HOT POTATO 26 23 FEDERAL #231H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	M-26-23S-29E	0'*	5/18/2022	
30-015-49043	HOT POTATO 26 23 FEDERAL #232H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	M-26-23S-29E	0'*	5/19/2022	
30-015-47271	HOT POTATO 26 23 FEDERAL #399H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	Active	Federal	N-26-23S-29E	10157'	10/19/2020	
30-015-47179	HOT POTATO 26 23 FEDERAL #711H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	N-26-23S-29E	10495'	10/20/2020	
30-015-47176	HOT POTATO 26 23 FEDERAL #333H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	Active	Federal	O-26-23S-29E	10188'	9/28/2020	
30-015-47178	HOT POTATO 26 23 FEDERAL #622H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	New	Federal	O-26-23S-29E	10300'	9/26/2020	
30-015-47269	HOT POTATO 26 23 FEDERAL #712H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	O-26-23S-29E	10535'	9/27/2020	
30-015-47180	HOT POTATO 26 23 FEDERAL #623H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	New	Federal	O-26-23S-29E	0'*	12/31/9999	
30-015-49045	HOT POTATO 26 23 FEDERAL #235H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	O-26-23S-29E	0'*	5/25/2022	
30-015-49047	HOT POTATO 26 23 FEDERAL #233H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	O-26-23S-29E	0'*	5/26/2022	
30-015-49044	HOT POTATO 26 23 FEDERAL #234H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	O-26-23S-29E	0'*	5/26/2022	
30-015-49048	HOT POTATO 26 23 FEDERAL #236H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	O-26-23S-29E	0'*	5/27/2022	
Section 27 wells									
30-015-36137	GOODNIGHT 27 FEDERAL #002H	OXY USA INC	Oil	Active	Federal	L-27-23S-29E	11213'	8/19/2008	
30-015-39431	GOODNIGHT 27 FEDERAL #005H	OXY USA INC	Oil	Active	Federal	M-27-23S-29E	6661'	9/3/2012	
30-015-39220	GOODNIGHT 27 FEDERAL #003H	OXY USA INC	Oil	Active	Federal	M-27-23S-29E	7789'	12/23/2011	
30-015-22157	GOODNIGHT 27 FEDERAL #001	OXY USA INC	Oil	Active	Federal	N-27-23S-29E	10710'	1/1/1900	
30-015-39142	GOODNIGHT 27 FEDERAL #004H	OXY USA INC	Oil	Active	Federal	N-27-23S-29E	6661'	2/4/2012	
30-015-46577	PAPAS FRITAS 27 22 FEDERAL COM #622H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	O-27-23S-29E	10226'	2/1/2020	
30-015-46574	PAPAS FRITAS 27 22 FEDERAL COM #712H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	New	Federal	O-27-23S-29E	0'*	12/31/9999	
30-015-46579	PAPAS FRITAS 27 22 FEDERAL COM #332H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	Active	Federal	O-27-23S-29E	9950'	2/2/2020	
30-015-49770	PAPAS FRITAS 27 22 FEDERAL COM #233H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	O-27-23S-29E	0'*	1/6/2023	
30-015-49972	PAPAS FRITAS 27 22 FEDERAL COM #234H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	O-27-23S-29E	0'*	1/7/2023	
30-015-46576	PAPAS FRITAS 27 22 FEDERAL COM #623H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	P-27-23S-29E	10283'	2/2/2020	
30-015-46578	PAPAS FRITAS 27 22 FEDERAL COM #333H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	Active	Federal	P-27-23S-29E	10100'	1/31/2020	
30-015-46575	PAPAS FRITAS 27 22 FEDERAL COM #713H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	P-27-23S-29E	10382'	2/1/2020	
30-015-49768	PAPAS FRITAS 27 22 FEDERAL COM #236H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	P-27-23S-29E	0'*	12/19/2022	
30-015-49769	PAPAS FRITAS 27 22 FEDERAL COM #235H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	P-27-23S-29E	0'*	12/18/2022	
Sections 28 and 34 wells									
30-015-45900	BLUE STEEL 21 SB FEDERAL COM #019H	MARATHON OIL PERMIAN LLC	Oil	New	Federal	A-28-23S-29E	0'*	12/31/9999	
30-015-46699	CYPRESS 34 FEDERAL #242H	OXY USA INC	Gas	Active	Federal	B-34-23S-29E	11066'	8/2/2020	

30-015-46698	CYPRESS 34 FEDERAL #232H	OXY USA INC	Gas	New	Federal	B-34-23S-29E	0'*	12/31/9999
30-015-46823	CYPRESS 34 FEDERAL #207H	OXY USA INC	Gas	Active	Federal	B-34-23S-29E	10210'	8/3/2020
30-015-46824	CYPRESS 34 FEDERAL #212H	OXY USA INC	Gas	Active	Federal	B-34-23S-29E	10414'	8/3/2020
30-015-39219	CYPRESS 34 FEDERAL #007H	OXY USA INC	Oil	Active	Federal	C-34-23S-29E	6752'	9/7/2011
30-015-42920	CYPRESS 34 FEDERAL #011H	OXY USA INC	Oil	Active	Federal	C-34-23S-29E	8877'	1/30/2015
30-015-35693	CYPRESS 34 FEDERAL #005	OXY USA INC	Oil	Active	Federal	C-34-23S-29E	10875'	7/23/2007
30-015-43076	CYPRESS 34 FEDERAL #010H	OXY USA INC	Oil	Active	Federal	D-34-23S-29E	8749'	8/7/2015
30-015-35742	CYPRESS 34 FEDERAL #004H	OXY USA INC	Oil	Active	Federal	D-34-23S-29E	10758'	1/29/2008
30-015-47265	CYPRESS 34 FEDERAL #231H	OXY USA INC	Gas	New	Federal	D-34-23S-29E	0'*	12/31/9999
30-015-46572	PAPAS FRITAS 27 22 FEDERAL COM #711H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	D-34-23S-29E	10323'	1/28/2020
30-015-46580	PAPAS FRITAS 27 22 FEDERAL COM #331H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	Active	Federal	D-34-23S-29E	9800'	1/29/2020
30-015-46573	PAPAS FRITAS 27 22 FEDERAL COM #621H	DEVON ENERGY PRODUCTION COMPANY, LP	Gas	Active	Federal	D-34-23S-29E	10150'	1/27/2020
30-015-49766	PAPAS FRITAS 27 22 FEDERAL COM #232H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	D-34-23S-29E	0'	12/2/2022
30-015-49767	PAPAS FRITAS 27 22 FEDERAL COM #231H	DEVON ENERGY PRODUCTION COMPANY, LP	Oil	New	Federal	D-34-23S-29E	0'*	12/1/2022
30-015-35413	CYPRESS 34 FEDERAL #002H	OXY USA INC	Oil	Active	Federal	F-34-23S-29E	11075'	5/6/2007
30-015-39430	CYPRESS 34 FEDERAL #008H	OXY USA INC	Oil	Active	Federal	O-34-23S-29E	8910'	3/12/2013

**** NEW well permitted depths within ACTIVE property wells completed depths.***

SUMMARY: NO wells penetrate the proposed disposal interval, NO P&A wells penetrate.

C-108 ITEM VII – PROPOSED OPERATION

Mugatu 27 Fed SWD No.1

Commercial SWD Facility

Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take approximately 6-8 weeks. Facility construction including installation of the tank battery, berms, plumbing and other and associated equipment would occur as soon as possible and immediately after the rig is moved out. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment. The operator will have obtained all necessary easements, rights-of-way or other instruments as required to begin operations.

Configure for Salt Water Disposal

Prior to commencing any work, BLM NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per BLM and OCD test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity. The operator will have the voluntary option to install a seismic monitoring device which may or may not be coordinated with resources in the state.

Operational Summary

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

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

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

Anticipated daily maximum volume is 45,000 bpd and an average of 25,000 bpd at a maximum surface injection pressure of 2950 psi (.2 psi/ft gradient – maximum pressure will be adjusted If the top of interval is modified after well logs are run).

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

C-108 – Item VIII

Geologic Information

The target interval was determined from offsetting Devonian SWDs and area coverages of Devonian contours. A full suite of logs will be run in addition to mud logs to ensure the completion is within Devonian/ Silurian rock. If an adjustment is required, appropriate notices and documentation will be filed as needed.

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

At a proposed depth of 16,000' BGL (Below Ground Level) the well will TD approximately 1,250 feet below the estimated top of the Devonian. Mud logging through the interval will ensure the target interval remains in Devonian and Silurian. Once Devonian is determined, the casing shoe depth will be set at an approximate maximum upper depth of 14,750' BGL. Injection will occur through the resulting openhole interval.

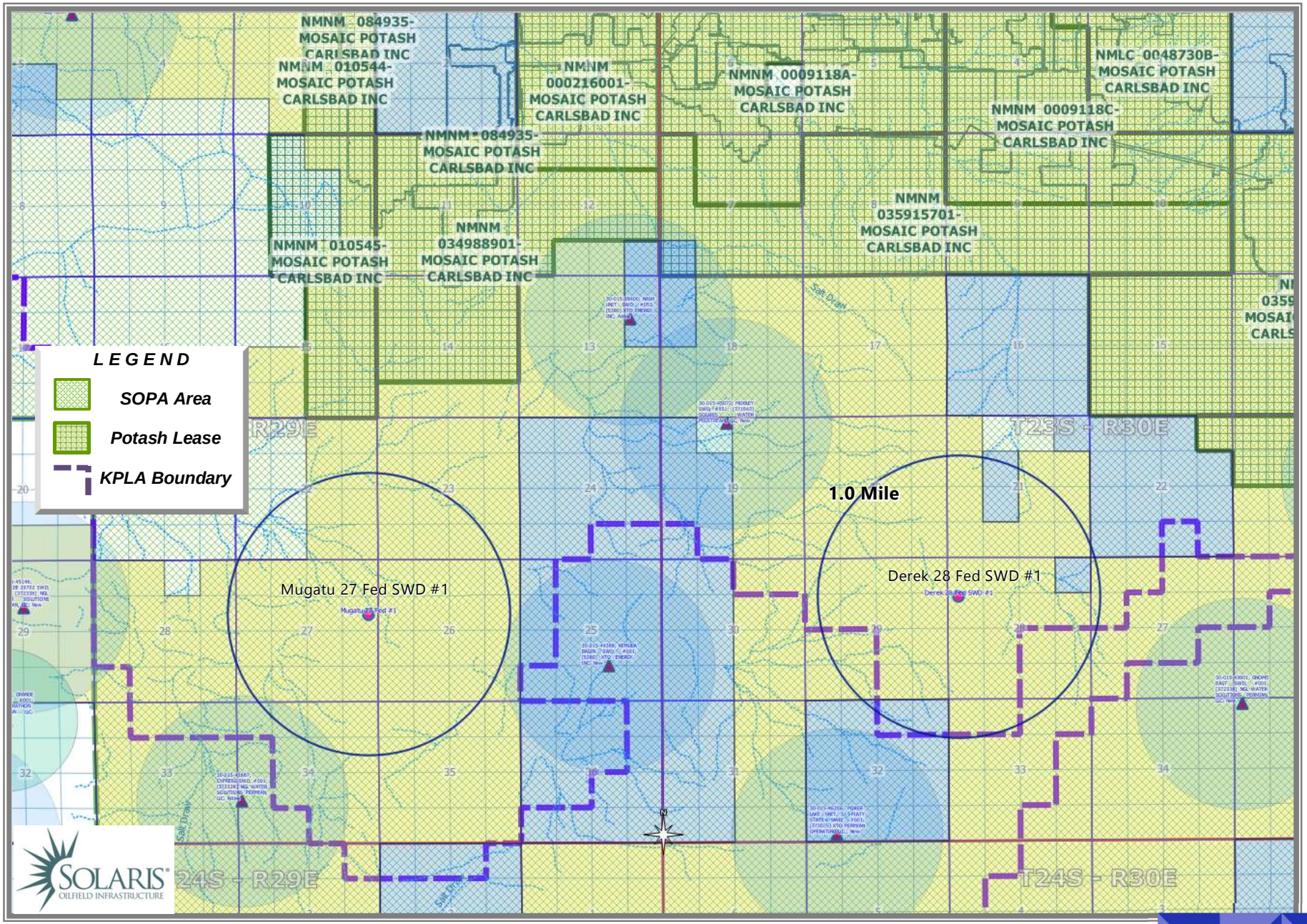
The Devonian is overlain by the Woodford Shale and lower Silurian (Fusselman) rock is underlain by the Ordovician; Simpson, McKee and Ellenburger. The included seismic FSP analysis indicates that an increased risk of induced seismicity associated with the proposed SWD is low.

The proposed SWD is located within the SOPA (Secretarial Order for Potash Area) but is approximately 1.4 miles from the nearest active potash lease according to the latest BLM potash lease GIS layer. The Mosaic Company holds all the nearby leases, and the nearest working mine is nearly 2.4 miles according to the same map. *(See Area Potash Map, next page.)* Mosaic was notified along with all other affected parties.

Fresh water in the area is limited but may be generally available from the Santa Rosa or Dewey Lake formations. State Engineer's records show water wells in the area with an average depth to groundwater of 350 feet south of this location and even deeper to the north. There are no water wells located within one mile of the proposed SWD.

Mugatu 27 Fed & Derek 28 Fed – Area Potash

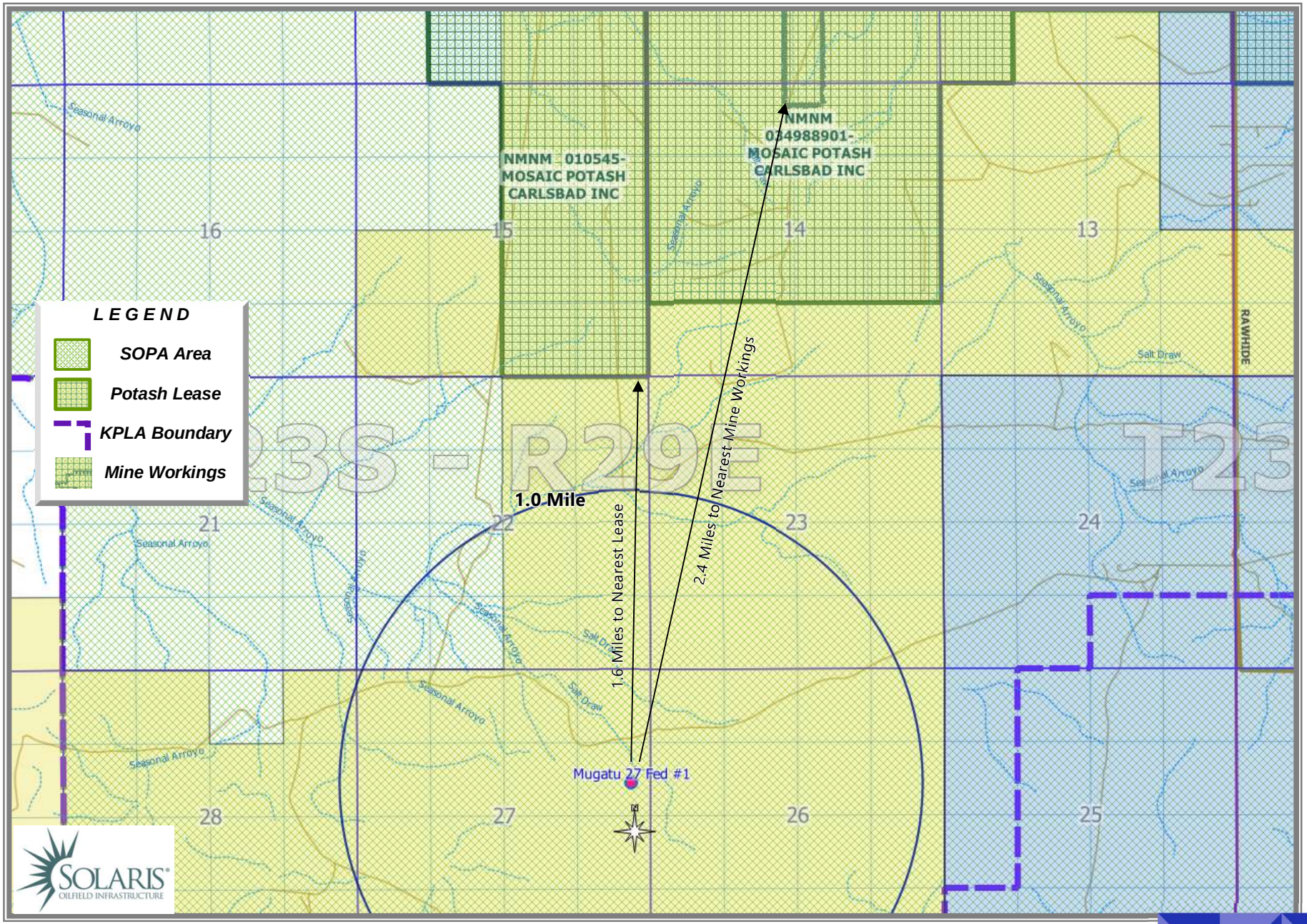
(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



SOS Consulting, LLC

Mugatu 27 Fed SWD #1 – Potash Leases/ Mine Workings

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



PERMITS WEST
PROVIDING PERMITS for LAND USERS
37 Verano Loop, Santa Fe, New Mexico 87508 505-466-8120

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

Re: Geology Statement
Solaris Water Midstream, LLC
Mugatu 27 Fed SWD #1
Section 27, T. 23S, R. 29E
Eddy County, New Mexico

To whom it may concern:

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

Sincerely,

Cory Walk

Cory Walk
Geologist

Seismic Risk Assessment

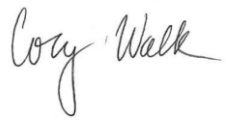
Solaris Water Midstream, LLC

Mugatu 27 Fed SWD No. 1

Section 27, Township 23 South, Range 29 East

Eddy County, New Mexico

Cory Walk, M.S.



Geologist

Permits West Inc.

December 7, 2023

GENERAL INFORMATION

Mugatu 27 Fed SWD #1 is located in the NE 1/4, section 27, T.23S, R.29E, about 7 miles east of Loving, NM in the Permian Basin. Solaris Water Midstream, LLC proposes to dispose produced water within the Devonian Formation through an open hole from 14,750'-16,000' below ground surface. This report assesses any potential concerns relating to induced seismicity along deep penetrating Precambrian faults or the connection between the injection zone and known underground potable water sources.

SEISMIC RISK ASSESSMENT

Historical Seismicity

Searching the USGS earthquake catalog resulted in one (1) earthquake above a magnitude 2.5 within 6 miles (9.7 km) of the proposed deep disposal site since 1970 (Fig. 1). The nearest earthquake occurred on March 18, 2012 about 4.3 miles (6.9 km) east of the proposed SWD site and had a magnitude of 3.1.

Basement Faults and Subsurface Conditions

A structure contour map (Fig. 1) of the Precambrian basement shows the Mugatu 27 Fed SWD #1 is approximately 11.4 miles (18.4 km) from the nearest basement-rooted fault inferred by Horne et al (2021). **Information about known nearby faults based on GIS data from Horne et al. (2021) is listed in Table 1**.

Snee and Zoback (2018) state, "In the western part of Eddy County, New Mexico, S_{Hmax} is ~north-south (consistent with the state of stress in the Rio Grande Rift; Zoback and Zoback, 1980) but rotates to ~east-northeast-west-southwest in southern Lea County, New Mexico and the northernmost parts of Culberson and Reeves counties, Texas." **Around the Mugatu 27 Fed SWD #1 site, Snee and Zoback indicate a S_{Hmax} direction of N075°E and an A_{φ} of 0.60, indicating an extensional (normal) stress regime.**

Fault Slip Potential (FSP) Modeling

Induced seismicity is a growing concern of deep SWD wells. Software developed by the Stanford Center for Induced and Triggered Seismicity allows for the probabilistic screening of deeply penetrating faults near the proposed injection zone (Walsh et al., 2016; Walsh et al., 2017). This software uses parameters such as stress orientations, fault strike/dip, injection rates, fault friction coefficients, etc. to estimate the potential for fault slip. Using the best available data as input parameters (Table 2) including the subject well injecting at the proposed maximum of 45,000 bbls/day and all other existing SWDs within a 6 mile radius injecting at their individual historical peak annual volume and the proposed SWDs injecting at their proposed maximum rates (20 total SWD wells), the Fault Slip Potential (FSP) models suggest a seven (0.07) percent chance of slip on a nearby fault, inferred by Horne et al. (2021), through the year 2044 (Fig. 2; Table 1). **This model also suggests a pore pressure increase of 62 psi on the nearest publicly known fault (Fault 11; Fig. 3; Table 1) by the year 2044.** Geomechanical modeling shows that the primary fault of concern (fault 6) would need a pressure increase of 1872 psi to reach a 100% probability

of slip on the fault. A 50% probability requires an increase of 296 psi which is 10x greater than the modeled increase of 26 psi (Fig. 3).

GROUNDWATER SOURCES

Quaternary Alluvium acts as the principal aquifer used for potable ground water near the Mugatu 27 Fed SWD #1 location (Hendrickson and Jones, 1952). Nicholson and Clebsch (1961) state, "Potable ground water is not available below the Permian and Triassic unconformity but, because this boundary is not easily defined, the top of the Rustler anhydrite formation is regarded as the effective lower limit of 'potable' ground water." Around the Mugatu 27 Fed SWD #1, the top of the Rustler Formation lies at an estimated depth of 200' bgs.

VERTICAL MIGRATION OF FLUIDS

Permeability barriers exist above (Woodford shale; 125 ft thick) and below (Simpson Group; 335 ft thick) the targeted Devonian injection zone (Plate 2, Comer et al., 1991; Fig. 8, Frenzel et al., 1988). Precambrian structure contours (Ruppel, 2009) show the basement to be at a depth of approximately 17,030' in this area. Therefore, the injection zone lies approximately 1,030' above the Precambrian basement and approximately 14,550' below the previously stated lower limit of potable water at the top of the Rustler formation.

CONCLUDING STATEMENTS

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

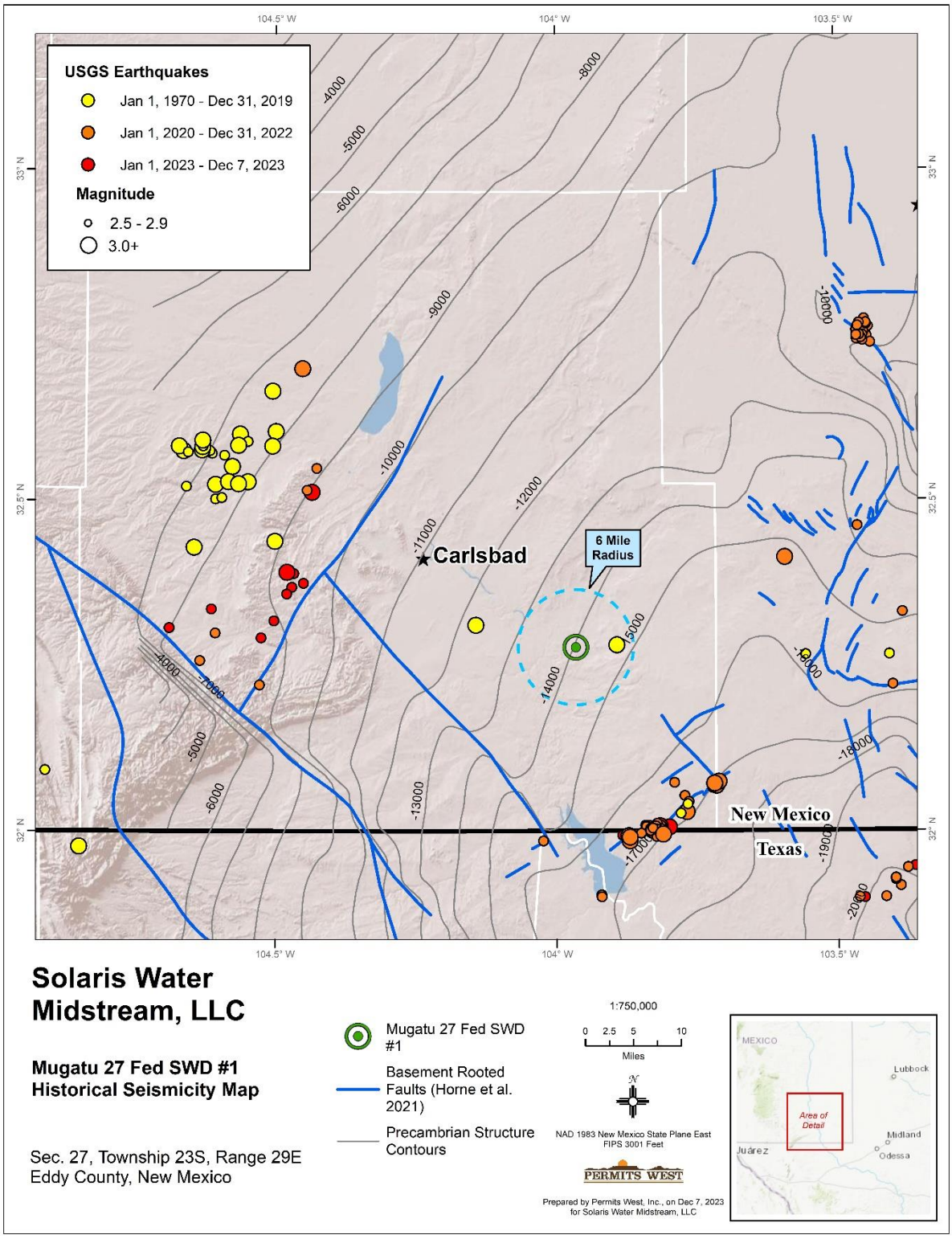


Figure 1. Structural contour map of the Precambrian basement in feet below sea level. Blue lines represent the locations of Precambrian basement-rooted faults (Horne et al., 2021). Mugatu 27 Fed SWD #1 well lies ~11.4 miles northwest of the closest deeply penetrating fault and 4.3 miles west from the closest historic earthquake.

Table 1: Nearby Basement Fault Model Results

Fault Number	Distance to proposed SWD (mi)	Strike (°)	Dip (°)	FSP (2044)	Δ Pore Pressure after 20 years (psi)	Δ Pore Pressure needed for 100% FSP (psi)	Δ Pore Pressure needed for 50% FSP (psi)
Fault 11	11.4	147	60	0.00	62	5599	3081
Fault 6	15.5	249	66	0.07	26	1872	296

Table 2: Fault Slip Potential model input parameters

Faults	Value	Notes
Friction Coefficient	0.58	Ikari et al. (2011)
Dip Angle (deg)	60-72	Horne et al. (2021)
Stress		
Vertical stress gradient (psi/ft)	1.1	Hurd and Zoback (2012)
Max Horizontal Stress Direction (deg)	75	Snee and Zoback (2018)
Depth for calculations (ft)	16000	Proposed injection zone
Initial Reservoir Pressure Gradient (psi/ft)	0.7	calculated from mud wt (ppg) used in drilling at these depths
A Phi Parameter	0.60	Snee and Zoback (2018)
Reference Friction Coefficient	0.58	Ikari et al. (2011)
Hydrology		
Aquifer thickness (ft)	1250	Proposed injection zone
Porosity (%)	6	
Permeability (mD)	150	
Injection Rate (bbl/day)	45000	Maximum proposed injection rate

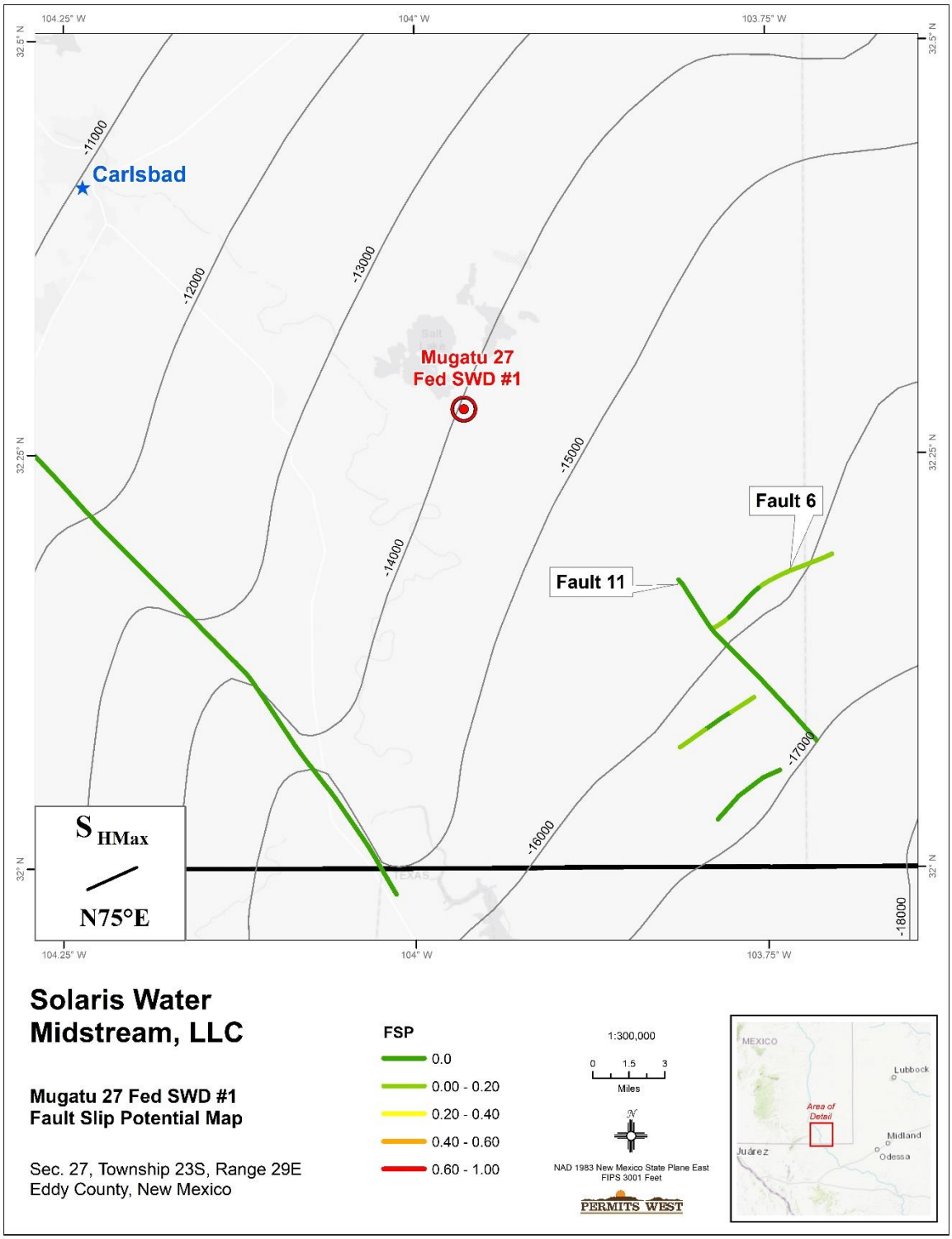


Figure 2. Precambrian fault map of the Mugatu 27 Fed SWD #1 area as mapped by Horne et al. (2021). Faults are colored based on probability of fault slip as modeled using Fault Slip Potential software (Walsh and Zoback, 2016). Labeled values represent the calculated fault slip potential using the parameters indicated in Table 2. Contours show the top of the Precambrian basement in feet below sea level.

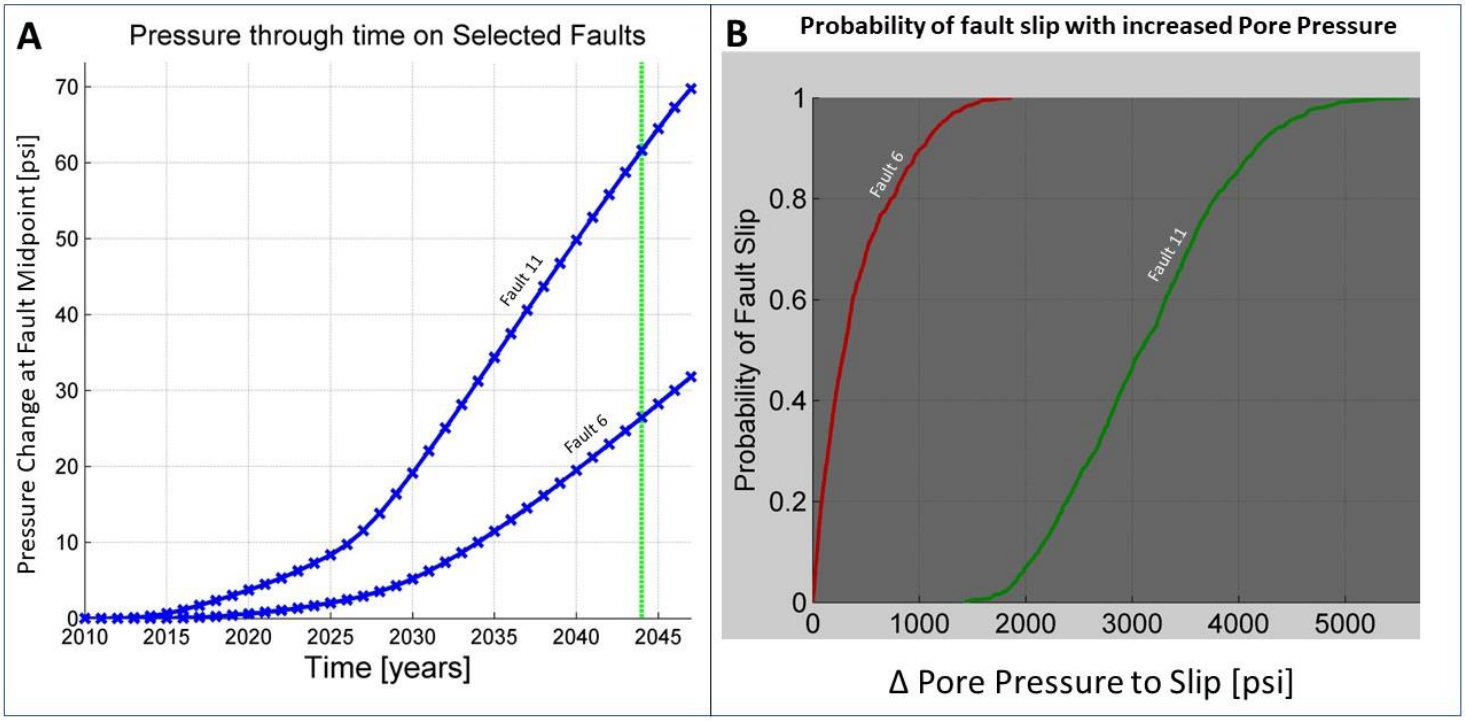


Figure 3. A) Plot showing the modeled change of pore pressure on nearby faults through time as a response to the proposed SWD well. B) Plot showing the required pore pressure increase needed to produce specific probabilities of fault slip on nearby faults.

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Zoback, M. L., and M. D. Zoback, 1980, State of stress in the conterminous United States: Journal of Geophysical Research, 85, no. B11, 6113–6156, https://doi.org/10.1029/JB085iB11p06113.

C-108 ITEM XII – GEOLOGIC AFFIRMATION

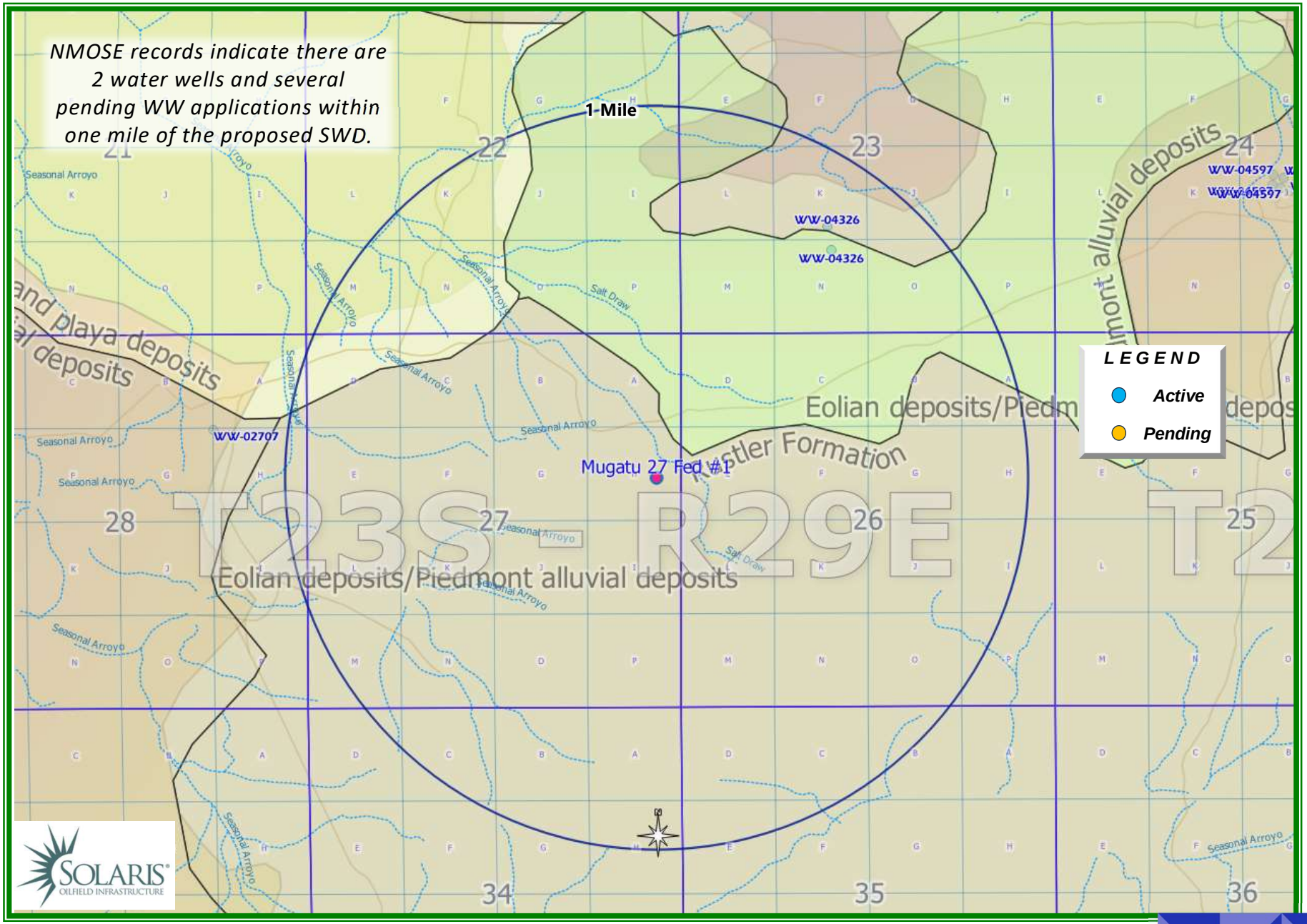
We have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and any underground sources of drinking water.

Ben Stone, Partner
SOS Consulting, LLC

Project: Solaris Water Midstream, LLC
Mugatu 27 Fed SWD #1
Reviewed 11/14/2023

Mugatu 27 Fed SWD #1 – 1-Mile AOR Water Wells

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



SOS Consulting, LLC

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 00571		CUB	ED	1	3	3	30	23S	29E	591241	3570957*	90	38	52
C 00571 CLW241602	O	CUB	ED	3	3	3	30	23S	29E	591241	3570757*	89	38	51
C 01217 S		CUB	ED	4	1	4	16	23S	29E	595413	3574403*	350		
C 01627		C	ED	1	4	4	28	23S	29E	595649	3570959*	170		
C 02182		C	ED			4	30	23S	29E	592328	3571048*	75	30	45
C 02608		CUB	ED	3	1	4	17	23S	29E	593598	3574387*	400		
C 02613		CUB	ED	4	4	2	20	23S	29E	594203	3573176*	400		
C 02704		C	ED			1	19	23S	29E	591531	3573493*	174		
C 02705		C	ED			2	17	23S	29E	593902	3575093*	68	28	40
C 02706		C	ED			4	18	23S	29E	592302	3574291*	17	10	7
C 02707		C	ED			2	28	23S	29E	595535	3571868*	40	18	22
C 02715		CUB	ED	4	1	3	15	23S	29E	596221	3574411*	400		
C 02716		CUB	ED	4	4	4	16	23S	29E	595818	3574002*	400		
C 02717		CUB	ED	4	2	4	16	23S	29E	595817	3574407*	400		
C 02718		CUB	ED	4	4	2	16	23S	29E	595816	3574812*	400		
C 02720		CUB	ED		2	1	21	23S	29E	594911	3573690*	150		
C 02721		CUB	ED		2	3	21	23S	29E	594915	3572879*	150		
C 02792		CUB	ED		4	3	04	23S	29E	594868	3577336*	200		
C 02793		CUB	ED		4	3	04	23S	29E	594868	3577336*	100		
C 02794		CUB	ED		4	3	10	23S	29E	596518	3575731*	100		
C 02795		CUB	ED		4	3	10	23S	29E	596518	3575731*	200		
C 02797		CUB	ED		2	3	22	23S	29E	596540	3572895*	200		
C 02804		CUB	ED		2	1	08	23S	29E	593262	3576905*	100		
C 02805		CUB	ED		2	1	08	23S	29E	593262	3576905*	100		
C 02806		CUB	ED		1	1	09	23S	29E	594473	3576927*	100		
C 02807		CUB	ED		1	1	09	23S	29E	594473	3576927*	100		

***UTM location was derived from PLSS - see Help**

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 02808	CUB	ED		2	3	16	23S	29E	594909	3574501*	100		
C 02809	CUB	ED		2	3	16	23S	29E	594909	3574501*	100		
C 03057 EXPLORE	CUB	ED	4	1	1	21	23S	29E	594605	3573586*	150		
C 03058 EXPLORE	CUB	ED	4	1	1	16	23S	29E	594605	3575206*	150		
C 03059 EXPLORE	CUB	ED	4	1	3	17	23S	29E	592993	3574378*		65	
C 03587 POD1	CUB	ED	1	4	3	29	23S	29E	593338	3570754	99	44	55
C 03587 POD2	CUB	ED	1	2	4	19	23S	29E	592213	3572706	77	16	61
C 04326 POD14	CUB	ED	4	2	3	23	23S	29E	598191	3572765	58	54	4
C 04326 POD16	CUB	ED	2	4	3	23	23S	29E	598209	3572664	64	54	10
C 04470 POD1	CUB	ED	3	1	3	07	23S	29E	591280	3576086			
C 04472 POD1	CUB	ED	2	2	4	13	23S	29E	600639	3574619		37	
C 04594 POD1	CUB	ED	4	2	2	13	23S	29E	600629	3575241	36	31	5
C 04594 POD2	CUB	ED	4	2	2	13	23S	29E	600604	3575232	42	34	8
C 04594 POD3	CUB	ED	4	2	2	13	23S	29E	600645	3575280	38	27	11
C 04594 POD4	CUB	ED	4	2	2	13	23S	29E	600704	3575224	45	28	17
C 04594 POD5	CUB	ED	4	2	2	13	23S	29E	600626	3575236	30	30	0
C 04594 POD6	CUB	ED	4	2	2	13	23S	29E	600659	3575220	34	28	6
C 04594 POD7	CUB	ED	4	2	2	13	23S	29E	600659	3575217	34	28	6
C 04597 POD1	CUB	ED	1	1	4	24	23S	29E	600124	3573002			
C 04597 POD2	CUB	ED	1	1	4	24	23S	29E	600122	3572959			
C 04597 POD3	CUB	ED	1	1	4	24	23S	29E	600172	3572991			
C 04597 POD4	CUB	ED	1	1	4	24	23S	29E	600159	3572947			
C 04597 POD5	CUB	ED	2	1	4	24	23S	29E	600198	3572931			

***UTM location was derived from PLSS - see Help**

Average Depth to Water: **33 feet**

Minimum Depth: **10 feet**

Maximum Depth: **65 feet**

Record Count: 49

PLSS Search:

Township: 23S **Range:** 29E

C-108 ITEM XI – WATER WELLS IN AOR

Representative analysis of fresh water in general area.

CARDINAL Laboratories

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

Analytical Results For:

DTC ENERGY GROUP 518 17NTH STREET SUITE 650 DENVER CO, 80202	Project: MOBLEY RANCH SWD #001 Project Number: NONE GIVEN Project Manager: MATT MEYER Fax To:	Reported: 17-Aug-15 14:44

MOBLEY RANCH

H502051-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	170		5.00	mg/L	1	5080504	AP	14-Aug-15	310.1	
Alkalinity, Carbonate	ND		0.00	mg/L	1	5080504	AP	14-Aug-15	310.1	
Chloride*	470		4.00	mg/L	1	5081206	AP	13-Aug-15	4500-Cl-B	
Conductivity*	4250		1.00	uS/cm	1	5081103	AP	11-Aug-15	120.1	
pH*	7.34		0.100	pH Units	1	5081104	AP	11-Aug-15	150.1	
Sulfate*	1440		500	mg/L	50	5081105	AP	13-Aug-15	375.4	
TDS*	3950		5.00	mg/L	1	5081404	AP	14-Aug-15	160.1	
Alkalinity, Total*	140		4.00	mg/L	1	5080504	AP	14-Aug-15	310.1	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Calcium*	624		0.200	mg/L	10	B508149	JGS	15-Aug-15	EPA200.7	
Magnesium*	159		1.00	mg/L	10	B508149	JGS	15-Aug-15	EPA200.7	
Potassium*	11.0		10.0	mg/L	10	B508149	JGS	15-Aug-15	EPA200.7	
Sodium*	309		10.0	mg/L	10	B508149	JGS	15-Aug-15	EPA200.7	

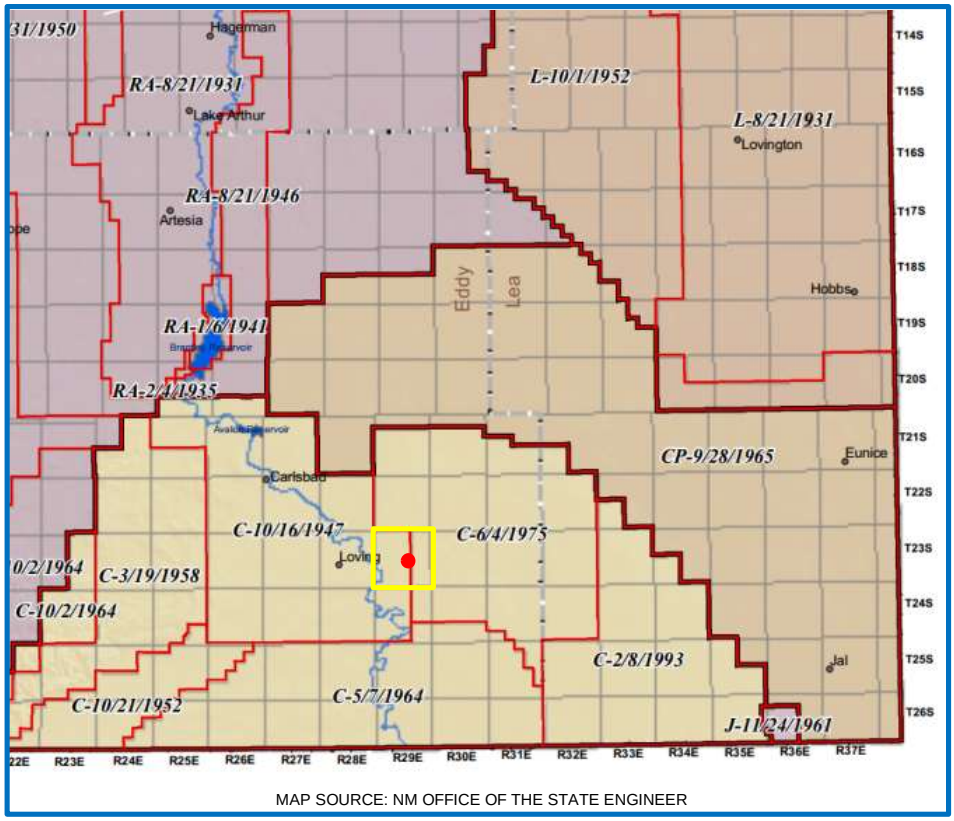
Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such

C-108 - Item XI

Groundwater Basins - Water Column / Depth to Groundwater



MAP SOURCE: NM OFFICE OF THE STATE ENGINEER

The subject well is located within the Carlsbad Basin.

Fresh water in the area is generally available from the Santa Rosa or Cenozic alluvial deposits of the Carlsbad Basin. State Engineer's records show water wells in 23S-29E with an average depth to water at 103 feet.

There are 2 water wells located within one mile of the proposed SWD.

SOS Consulting, LLC

C-108 ITEM XIII – PROOF OF NOTIFICATION

IDENTIFICATION AND NOTIFICATION OF AFFECTED PARTIES

Exhibits for Section

Affected Parties Map

List of Affected Parties

Notification Letter to Affected Parties

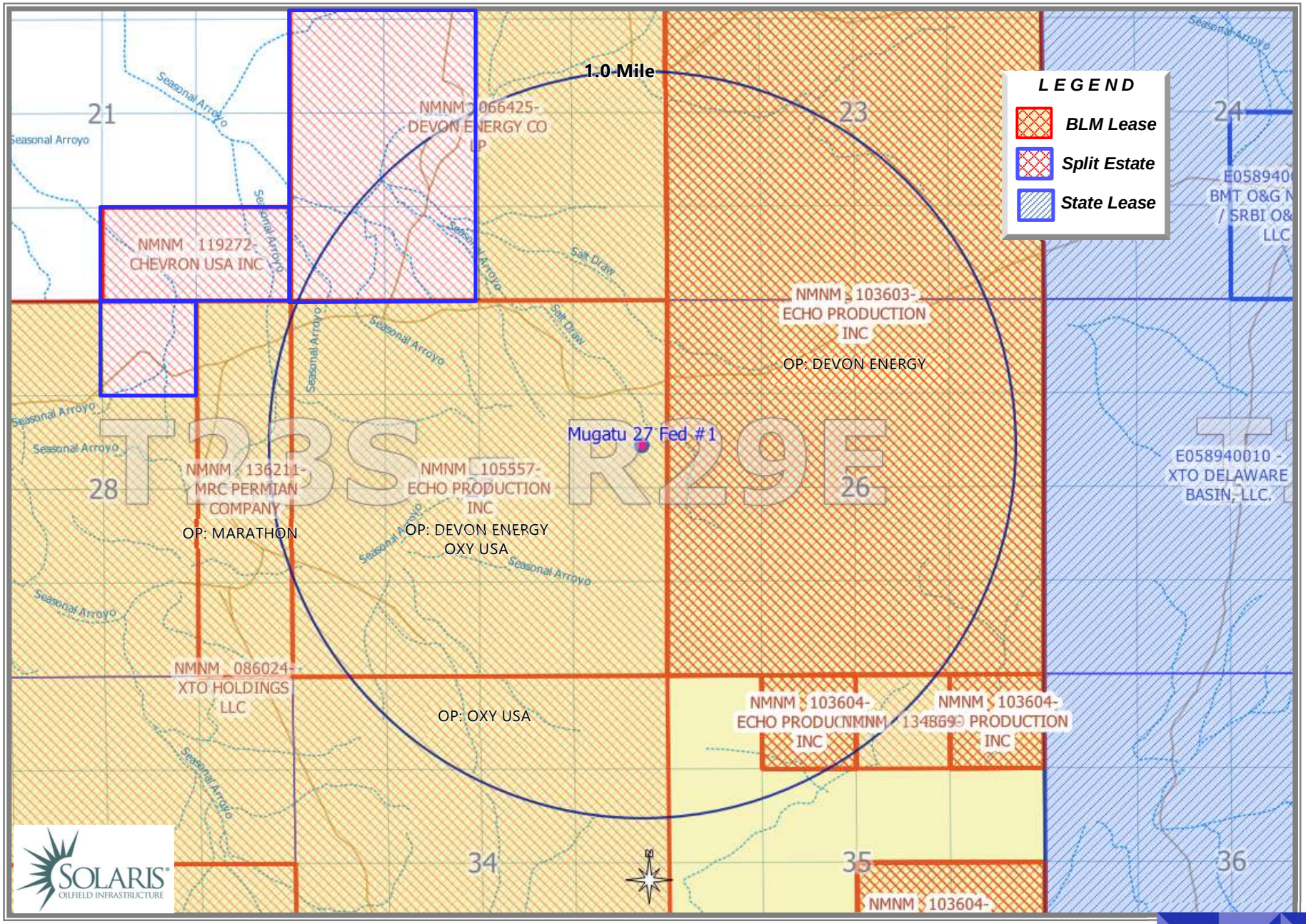
Instructions for PDF Document Access

Proof of Certified Mailing

Affidavit Published Legal Notice

Mugatu 27 Fed SWD #1 – Lease/ Affected Party Plat

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



SOS Consulting, LLC

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

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

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

SURFACE OWNER

NOTICE #	ENTITY	US CERTIFIED TRACKING	SOS DOC ACCESS CODE
1	**U.S. DEPARTMENT OF INTERIOR** **Bureau of Land Management** Oil & Gas Division 620 E. Greene St. Carlsbad, NM 88220	7018 2290 0001 2038 8203	☒

OFFSET MINERALS LESSEES and/ or OPERATORS

2	**DEVON ENERGY COMPANY, LP** 333 W Sheridan Avenue Oklahoma City, OK 73102	7018 2290 0001 2038 8210	☒
3	**OXY USA, INC.** P.O. Box 4294 Houston, TX 772104294	7018 2290 0001 2038 8227	☒
4	**MARATHON OIL PERMIAN, LLC** 5555 San Felipe Street Houston, TX 77056	7018 2290 0001 2038 8258	☒
5	**ECHO PRODUCTION, INC.** P.O. Box 1210 Graham, TX 76450	7018 2290 0001 2038 8234	☒
6	**MOSAIC POTASH COMPANY** 1361 Potash Mines Rd. Carlsbad, NM 88220	7018 2290 0001 2038 8265	☒

REGULATORY

NM OIL CONSERVATION DIVISION 1220 S. St. Francis Dr. Santa Fe, NM 87505	***Filed via OCD Online e-Permitting***	
U.S. DEPARTMENT OF INTERIOR **Bureau of Land Management** Oil & Gas Division 620 E. Greene St. Carlsbad, NM 88220		☐

December 7, 2023

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

To Whom It May Concern:

Solaris Water Midstream, Houston, Texas, has made application to the New Mexico Oil Conservation Division to permit and drill for salt water disposal the Mugatu 27 Fed SWD #1. The SWD operation will be for commercial water disposal from area operators. As indicated in the notice below, the well is located in Section 27, Township 23 South, Range 29 East in Eddy County, New Mexico.

The published notice states that the interval will be from 14,750 feet to 16,000 feet into the Devonian/ Silurian formations. Following is the notice [to be] published in the Artesia Daily Press, Artesia, New Mexico on or about November 30, 2023.

LEGAL NOTICE

Solaris Water Midstream, LLC, 9651 Katy Freeway, Suite 400, Houston, Texas, 77024, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, Mugatu 27 Fed SWD No.1, (API: TBD) will be located 2046' FNL and 367' FEL, Section 27, Township 23 South, Range 29 East, Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Devonian/ Silurian formations at a depth of 14,750' to 16,000' at a maximum surface pressure of 2950 psi with a maximum daily rate of 45,000 bwpd and an average daily rate of 25,000 bwpd. The proposed SWD well is located approximately 7.5 miles east of Loving, NM.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (936)377-5696 or, email info@sosconsulting.us.

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

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

Thank you for your attention in this matter.

Best regards,

Ben Stone, SOS Consulting, LLC
Agent for Solaris Water Midstream, LLC
Cc: Application File

User Information for the SOS Client & Affected Party Portal

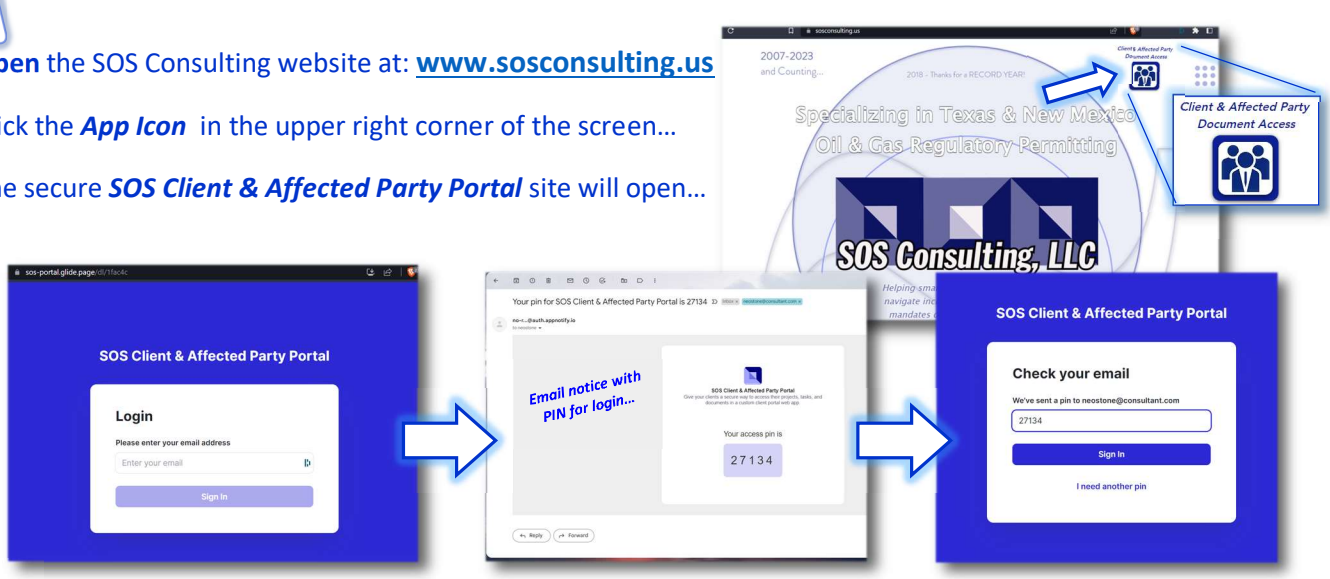
Thank you for using the new SOS Document Portal. This system allows for the ***secure delivery of all types of applications and any resulting permits****. The system is built in and stored in the cloud using the best available platforms and code for a secure and robust app. We hope you appreciate our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

1

Open the SOS Consulting website at: **www.sosconsulting.us**

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

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



2

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

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

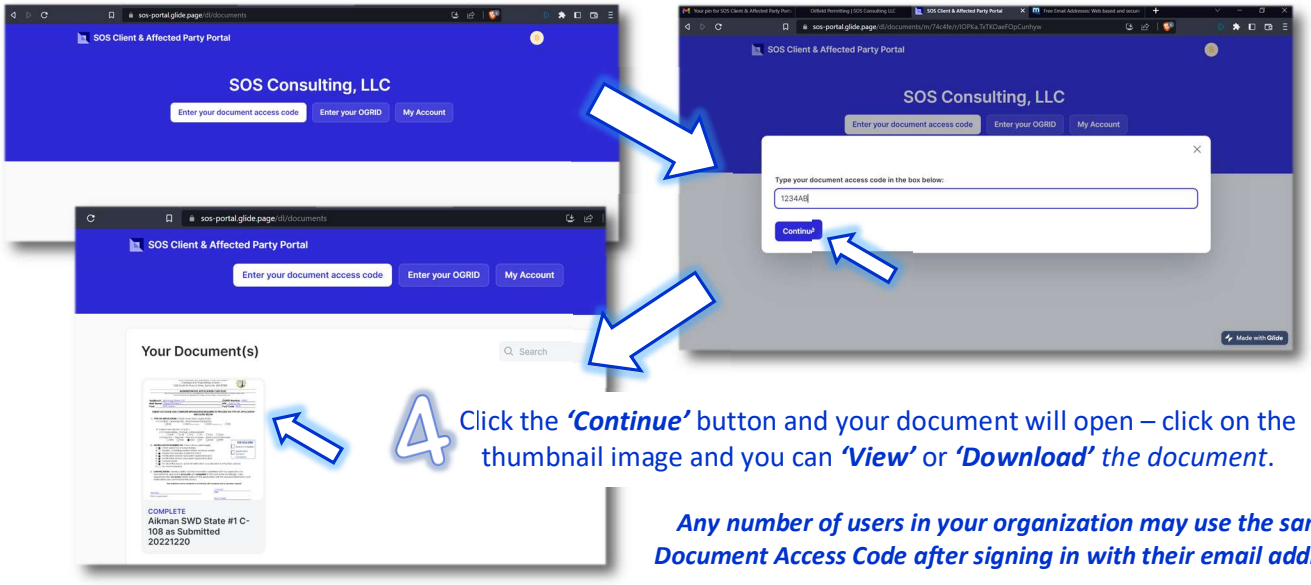
Each time you log into the SOS Portal, you will be sent a pin code for ***2-Step Verification*** *to your email within 15 seconds. Enter the code for access to the portal.*

MOBILE ACCESS

3

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

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



4

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

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

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

U.S. Postal Service™
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For delivery information, visit our website at www.usps.com®.

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Postage $0.66
Total Postage and Fees $8.56

0360 04

Postmark Here

12/08/2023

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

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Oklahoma City, OK 73102

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OXY USA, INC.
P.O. Box 4294
Houston, TX 77210-4294

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- Adult Signature Restricted Delivery $

Postage $0.66
Total Postage and Fees $8.56

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12/08/2023

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Sent To
MARATHON OIL PERMIAN, LLC
5555 San Felipe Street
Houston, TX 77056

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- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.66
Total Postage and Fees $8.56

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12/08/2023

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ECHO PRODUCTION, INC.
P.O. Box 1210
Graham, TX 76450

PS Fo

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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $0.66
Total Postage and Fees $8.56

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12/08/2023

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Sent To
Mosaic Potash Company
1361 Potash Mines Rd.
Carlsbad, NM 88220

PS Form

Affidavit of Publication

No. 26703

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn, sayes that he is the **Publisher**

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same day as follows:

First Publication	November 30, 2023
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	

Subscribed ans sworn before me this

30th day of November 2023

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

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

Legal Notice

Solaris Water Midstream, LLC, 9651 Katy Freeway, Suite 400, Houston, Texas, 77024, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, Mugatu 27 Fed SWD No.1, (API: TBD) will be located 2046' FNL and 367' FEL, Section 27, Township 23 South, Range 29 East, Eddy County, New Mexico. Produced water from area production will be commercially disposed into the Devonian/ Silurian formations at a depth of 14,750' to 16,000' at a maximum surface pressure of 2950 psi with a maximum daily rate of 45,000 bwpd and an average daily rate of 25,000 bwpd. The proposed SWD well is located approximately 7.5 miles east of Loving, NM.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the filing of the application which is expected 10 days from the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (936)377-5696 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., Nov. 30, 2023 Legal No. 26703.

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 296709

CONDITIONS

Operator: SOLARIS WATER MIDSTREAM, LLC 907 Tradewinds Blvd, Suite B Midland, TX 79706	OGRID: 371643
	Action Number: 296709
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	12/20/2023