

Initial Application Part I

Received 11/20/19

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

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: Solaris Water Midstream, LLC **OGRID Number:** 371643
Well Name: Aardvark State SWD #1 **API:** 30-015-xxxxx
Pool: Proposed; SWD; Devonian-Fusselman **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

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.

Whitney McKee

Print or Type Name

9/25/19

Date

432-203-9020

Phone Number

whitney.mckee@solarismidstream.com

e-mail Address

Signature

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance XX Disposal
_____ Storage Application qualifies for administrative approval? X X Yes _____ No
- II. OPERATOR: Solaris Water Midstream, LLC
ADDRESS: 70701 Tradewinds Blvd., Suite C Midland, TX 797066
CONTACT PARTY: Drew Dixon 832-304-7028
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
- 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. See Addendum
- 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. See Addendum
- 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.).
See Addendum
- VIII. VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, the 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.. See Addendum
- IX. Describe the proposed stimulation program, if any.
Stimulations program- A conventional acid job 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).
Well Logs will be filed with OCD.
- *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.nj
- 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. See Addendum
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. "Proof of notice" portion has been completed and attached. All parties have been notified.
- 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: Whitney McKee TITLE: Regulatory Specialist Solaris Water Midstream, LLC
- XV. SIGNATURE: Whitney McKee Date: 9/25/19
E-MAIL ADDRESS: whitney.mckee@solarismidstream.com
- XVI. If the information required under Sections VI, VIII, X, and X
resubmitted. Please show the date and circumstances of the earlier submission: previously submitted, it need not be

III. WELL DATA [See Addendum](#)

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.

C. PROOF OF NOTICE [See Addendum](#)

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.



Sept. 25th , 2019

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

Attn: Ms. Adrienne Sandoval, Director

Re: Application of Solaris Water Midstream, LLC to drill and permit for saltwater disposal
The Aardvark State SWD Well #1, to be located in Section 33, Township 23 South, Range 33
East, NMPM, Lea County, New Mexico.

Dear Ms. Sandoval,

Please find the enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request for saltwater disposal. The well will be operated as a commercial endeavor offering operators in the area additional options for produced water disposal.

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

I would point out that this application for a proposed Devonian SWD interval is part of a larger produced water recycling facility. A published legal notice will run this week in the Hobbs News Sun and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded upon receipt. This application also includes a wellbore schematic, area of review maps, affected party plat and other required information for a complete Form C-108. The well is located on State Trust Land and minerals. There are state lands & minerals within the one-mile radius notice area; the State Land Office and offset operators have been notified of this application.

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.

Thank you,

A handwritten signature in blue ink, appearing to read "Whitney McKee".

Whitney McKee

Solaris Water Midstream, LLC

Regulatory Specialist

INJECTION WELL DATA SHEET

OPERATOR: _____ Solaris Water Midstream, LLC _____

WELL NAME & NUMBER: _____ Aardvark State SWD#1 _____

WELL LOCATION: _____ 2,056' FSL & 200' FEL _____ S: 33 _____ T:23S _____ R:33E _____
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: _____ 18.125" _____ Casing Size: _____ 16" _____

Cemented with: _____ 400 _____ sx. *or* _____ ft³

Top of Cement: _____ SURFACE _____ Method Determined: _____ CIRCULATE _____

Intermediate CasingHole Size: _____ 14.75" _____ and 12.25" _____ Casing Size: _____ 13.375" and 9.625" *or*Cemented with: _____ 1200 sx. and 4100 sx. _____ ft³

Top of Cement: _____ SURFACE _____ Method Determined: _____ CIRCULATE _____

Production CasingHole Size: _____ 9.625" _____ Casing Size: _____ 7.625" _____ *or*Cemented with: _____ 670 _____ sx. _____ ft³

Top of Cement: _____ SURFACE _____ Method Determined: CIRCULATE

Total Depth: _____ Liner @ 11,650' & TD@ 18,980 _____

Injection Interval

_____ 9.625" Hole Size 17,720 to 18,980 feet

Open Hole: _____

INJECTION WELL DATA SHEET

Tubing Size: _____5.5"_____ Lining Material: _____Douline Glassbore_____

Type of Packer: _____Nickel plated double grip retrievable_____

Packer Setting Depth: _____17,700_____

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

Additional Data

1. Is this a new well drilled for injection? _____X_____Yes _____No

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

2. Name of the Injection Formation: _____Devonian, Fusselman, _____

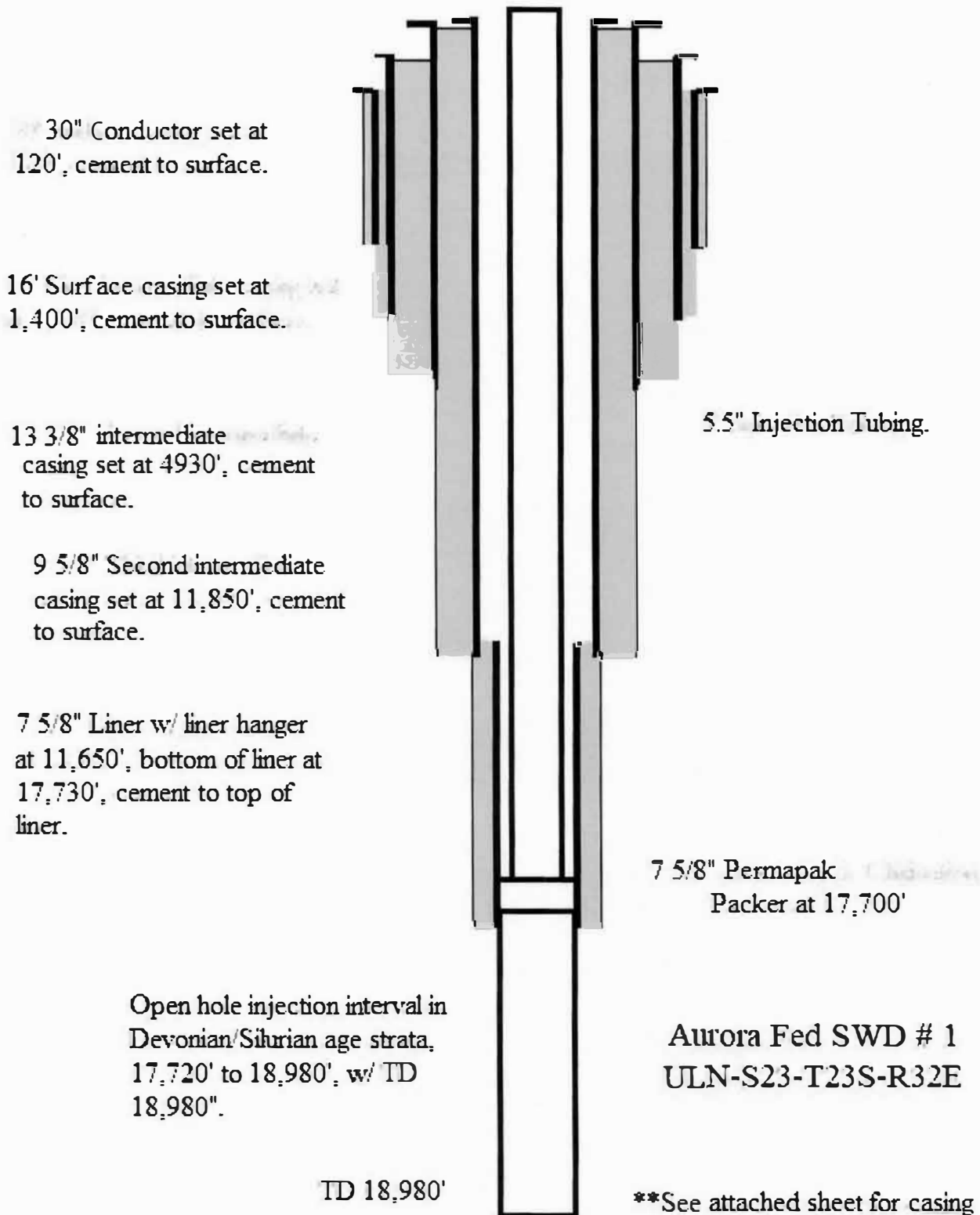
3. Name of Field or Pool (if applicable): _____SWD Devonian_____

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: _____Over: Bell Canyon (5,200'), Cherry Canyon (6,350'), Brushy Canyon (7,500'), 1st BS Sand (10,225'), 2nd BS Sand (10,875'), 3rd BS Sand (11,925'), Wolfcamp (13,125'), Strawn (14,150'), Atoka (14,400'), Morrow (14,950')

Under: NONE _____

Solaris Water Midstream, LLC
Aardvark State SWD # 1
ULI-S33-T23S-R33E
Lea County, NM



**See attached sheet for casing and cement schedule.

Solaris Water Midstream, LLC
Casing and cement schedule.
Aardvark State SWD # 1
ULI-S33-T23S-R33E
Lea County, NM

Casing Size	Weight (lbs)	Hole Size	Sacks Cement
30"	157.6	36"	275
16"	84.0	17.5"	400
13 3/8"	68.0	14.75"	1200
9 5/8"	36.0	12.25"	4100
7 5/8"	39.0	9.675"	670

**Sacks of cement are to approximate fill up. Excess volume pumped will be determined appropriate to drilling conditions.

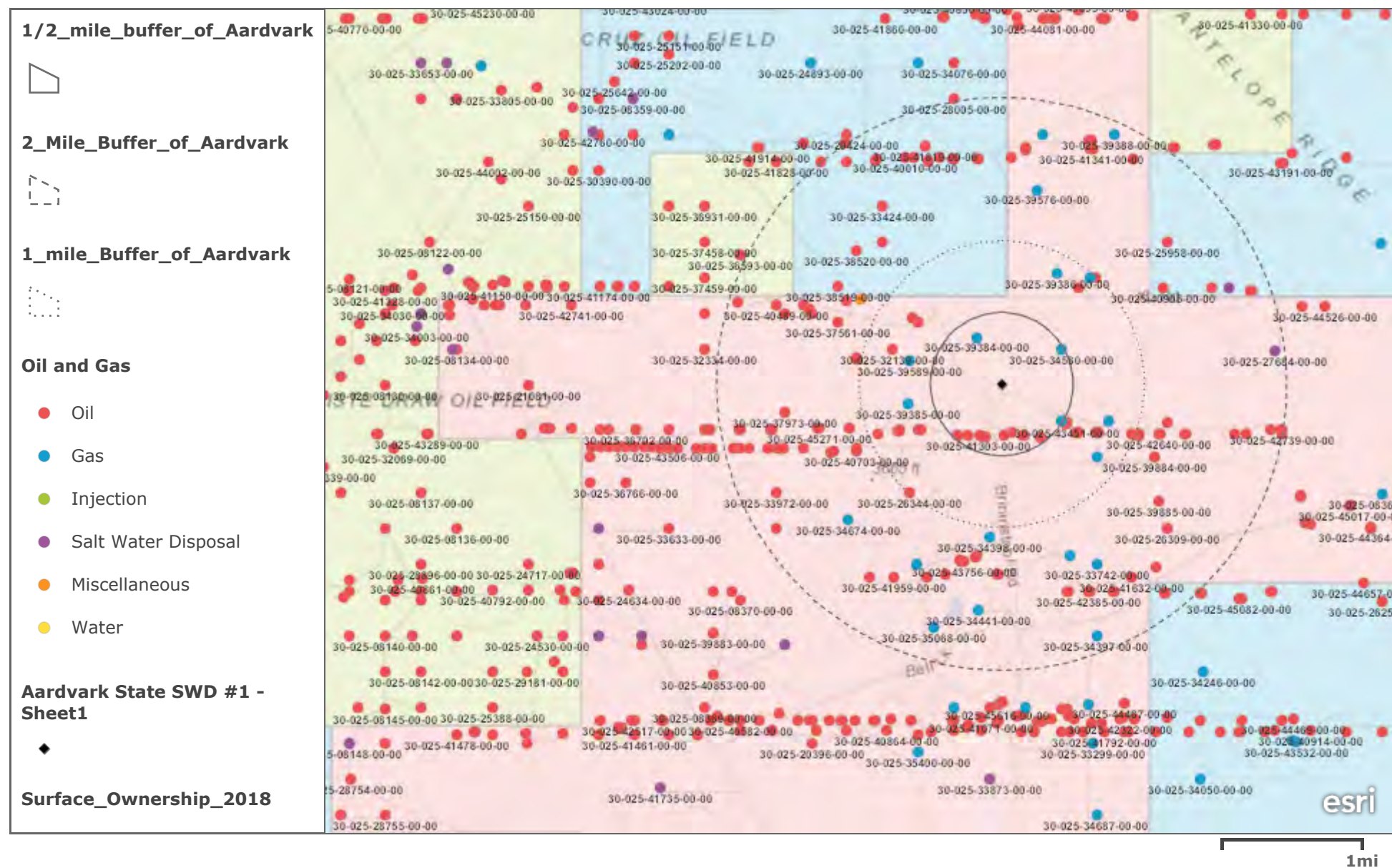
C- 108 Item VI

Area of Review Well Data

Aardvark State SWD #1

There are no wells which penetrate the proposed Devonian formation in the one mile area of review.

Aardvark State SWD #1



Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA

C- 108 Item X

Logs and Available Test Data

Aardvark State SWD #1

A Standard Suite of Logs will be run after drilling the well and submitted to the Division.

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name AARDVARK STATE SWD	
⁷ OGRID No.	⁸ Operator Name SOLARIS WATER MIDSTREAM, LLC	⁶ Well Number 1 ⁹ Elevation 3,658'

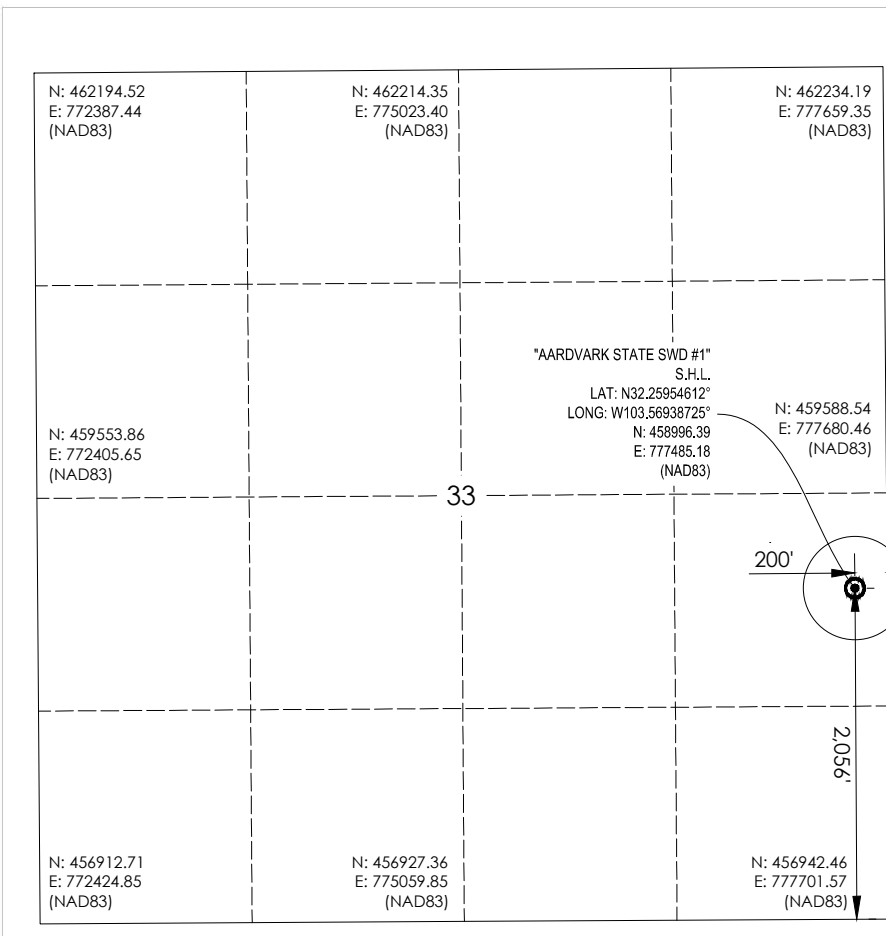
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	33	23 S	33 E		2,056'	SOUTH	200'	EAST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres		¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

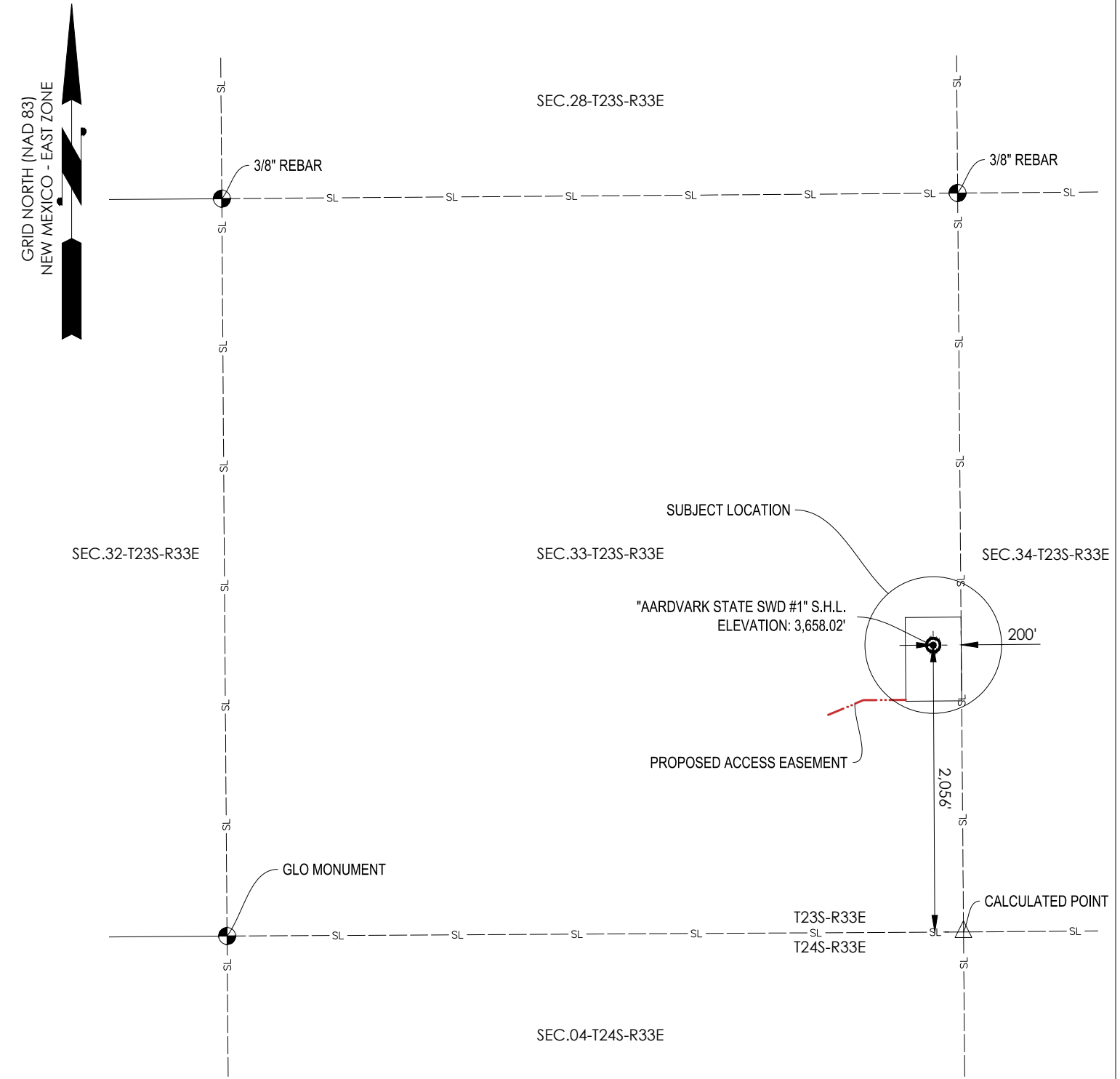
Signature _____ Date _____
Printed Name _____
E-mail Address _____

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from the 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.

9/19/19
Date of Survey
Signature and Seal of Professional Surveyor
23783
9/19/2019
Certificate Number

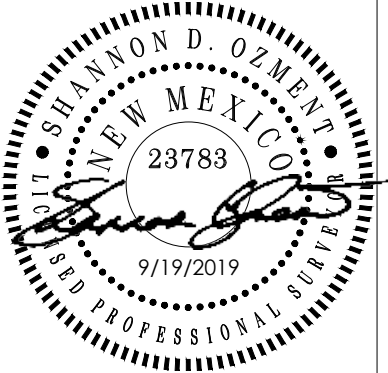
WELL PAD
LOCATION OVERVIEW



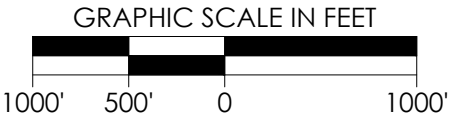
REFERENCE	ELEVATION	NAD83 (1986)		NAD27	
		STATE PLANE NEW MEXICO EAST	GEOGRAPHIC	STATE PLANE NEW MEXICO EAST	GEOGRAPHIC
S. H. L.	3,658.02'	N: 458996.39 E: 777485.18	LAT: 32.25954612° LONG: -103.56938725°	N: 458937.26 E: 736301.45	LAT: 32.25942239° LONG: -103.56890722°


CALLS FROM SECTION LINE

S.H.L.	2,056' FSL, 200' FEL (SEC. 33)
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DISTANCE & DIRECTION
FROM HWY JCT OR TOWN: ±24.24 MILES NORTHWEST OF JAL, NEW MEXICO
FROM THE INTERSECTION OF HWY 128 AND HWY 18 , HEAD WEST ON HWY 18 FOR ±23.9 MILES,
TURN RIGHT ONTO COUNTY ROAD 2-A AND HEAD NORTH FOR ±3.5 MILES, TURN RIGHT ONTO
THE PROPOSED LEASE ROAD, HEAD EAST FOR ±0.11 MILES TO LOCATION.



REVISION		"AARDVARK STATE SWD #1"				
DATE	BY					
		PROPOSED PAD AND ACCESS EASEMENT SURVEY STATE OF NEW MEXICO SEC. 33-T23S-R33E LEA COUNTY, NEW MEXICO				
		SCALE: 1" = 1000'	CHECKED BY:	J.PARKER	APPROVED BY:	SO
		PLOT DATE: 09-19-2019	DRAWN BY:	L.DOW	SHEET NO.: 1 OF 4	

PROPOSED PAD
(5.51 ACRES)

LEGEND

- SECTION LINE
- PROPERTY LINE
- EXISTING PIPELINE ROUTE
- OVERHEAD ELECTRIC
- FENCE
- EDGE OF EXISTING ROAD
- CL OF PROPOSED ACCESS EASEMENT
- EDGE OF PROPOSED ACCESS EASEMENT
- EDGE OF PROPOSED PAD
- POINT OF COMMENCEMENT
- POINT OF BEGINNING
- POINT OF TERMINATION
- LINEAR FEET
- POWER POLE
- PROPOSED WELL LOCATION
- EXISTING WELL LOCATION
- FOUND MONUMENT (AS NOTED)



P.O.C.
A 3/8" REBAR, AT THE NE CORNER
OF S.33-T23S-R33E, BEING
N 00°27'25" W - 3,036.73' FROM THE P.O.B.

STATE OF NEW MEXICO
SEC. 33-T23S-R33E
(240,000 SQ. FT. OR 5.51 ACRES)

PROPOSED ACCESS
EASEMENT (SEE PAGE 4)

EXISTING
PIPELINES

EXISTING PIPELINE

EXISTING PIPELINE

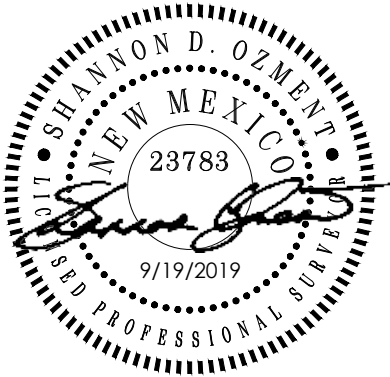
LINE #	BEARING	DISTANCE
L1	S 00°27'25" E	600'
L2	S 89°32'35" W	400'
L3	N 00°27'25" W	600'
L4	N 89°32'35" E	400'


GRAPHIC SCALE IN FEET



SECTION 23
NE1/4 SE1/4 ±5.51 ACRES

- GENERAL NOTES
- THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON REASONABLE VISUAL OBSERVATION. LOCATIONS OF UNDERGROUND UTILITIES/ STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREIN. ADDITIONAL BURIED UTILITIES/ STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/ STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, THE OFFICES OF THE VARIOUS UTILITIES SERVICING THIS AREA SHOULD BE CONTACTED FOR THEIR UTILITY LOCATION.
 - BASIS OF BEARINGS : NEW MEXICO STATE PLANE GRID, EAST ZONE, NAD83 AS DETERMINED BY GPS OBSERVATION.
 - VERTICAL DATUM IS NAVD 88
 - AREAS, DISTANCES, AND COORDINATES ARE "GRID" BASED ON U.S. SURVEY FEET.
 - THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY.
 - ALL LEASE AND TRACT INFORMATION SHOWN HERE ON IS DONE SO BY LIMITED DEED RECORD INFORMATION ONLY. ALL ACREAGE SHOWN ARE BY DEED AND LEASE CALL EXCEPT WHERE NOTED.



REVISION		"AARDVARK STATE SWD #1"				
----	-----					
		PROPOSED PAD AND ACCESS EASEMENT SURVEY STATE OF NEW MEXICO SEC. 33-T23S-R33E LEA COUNTY, NEW MEXICO				
		SCALE: 1" = 200'	CHECKED BY:	J.PARKER	APPROVED BY:	SO
		PLOT DATE: 09-19-2019	DRAWN BY:	L.DOW	SHEET NO.:	2 OF 4



PROPOSED ACCESS EASEMENT
(577.11 L.F. OR 34.98 RODS)

LEGEND

- SL--- SECTION LINE
- P--- PROPERTY LINE
- E--- EXISTING PIPELINE ROUTE
- OHE--- OVERHEAD ELECTRIC
- F--- FENCE
- EOR--- EDGE OF EXISTING ROAD
- CLPE--- CL OF PROPOSED ACCESS EASEMENT
- EPAE--- EDGE OF PROPOSED ACCESS EASEMENT
- EPD--- EDGE OF PROPOSED PAD
- P.O.C. POINT OF COMMENCEMENT
- P.O.B. POINT OF BEGINNING
- P.O.T. POINT OF TERMINATION
- LF LINEAR FEET
- ⊙ POWER POLE
- ⊙ PROPOSED WELL LOCATION
- ⊙ EXISTING WELL LOCATION
- ⊙ FOUND MONUMENT (AS NOTED)

P.O.C.
A 3/8" REBAR, AT THE NE CORNER
OF S.33-T23S-R33E, BEING
N 05°50'12" E - 3,648.72' FROM THE P.O.B.

"AARDVARK STATE SWD
#1"
S.H.L.

STATE OF NEW MEXICO
SEC. 33-T23S-R33E
(577.11 L.F. OR 34.98 RODS)

A GLO MONUMENT, AT THE SW CORNER
OF S.33-T23S-R33E, BEING
S 69°48'26" W - 4,589.62' FROM THE P.O.T.

P.O.T.

P.O.B.

L5

L6

EXISTING PIPELINE

EXISTING
PIPELINES

COUNTY ROAD 2-A

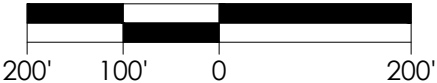
PROPOSED ACCESS EASEMENT

LINE #	BEARING	DISTANCE
L5	S 89°32'35" W	304.23'
L6	S 67°16'27" W	272.88'

SITE COORDINATES

REFERENCE	ELEVATION	NAD83 (1986)		NAD27	
		STATE PLANE NEW MEXICO EAST	GEOGRAPHIC	STATE PLANE NEW MEXICO EAST	GEOGRAPHIC
P.O.B.	3,654.39'	N: 458604.81 E: 777288.30	LAT: 32.25847365° LONG: -103.57003313°	N: 458545.69 E: 736104.56	LAT: 32.25834992° LONG: -103.56955312°
P.O.T.	3,653.59'	N: 458496.96 E: 776732.38	LAT: 32.25818807° LONG: -103.57183386°	N: 458437.85 E: 735548.64	LAT: 32.25806434° LONG: -103.57135381°

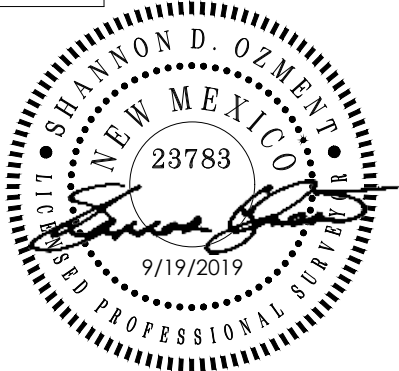
GRAPHIC SCALE IN FEET




SECTION 23
NE1/4 SE1/4 ±577.11 FEET OR 34.98 RODS

GENERAL NOTES

- THE LOCATIONS OF UNDERGROUND UTILITIES/ STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREIN. ADDITIONAL BURIED UTILITIES/ STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/ STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, THE OFFICES OF THE VARIOUS UTILITIES SERVICING THIS AREA SHOULD BE CONTACTED FOR THEIR UTILITY LOCATION.
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REVISION		"AARDVARK STATE SWD #1"			
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		PROPOSED PAD AND ACCESS EASEMENT SURVEY STATE OF NEW MEXICO SEC. 33-T23S-R33E LEA COUNTY, NEW MEXICO			
		SCALE: 1" = 200'	CHECKED BY: J.PARKER	APPROVED BY: SO	
		PLOT DATE: 09-19-2019	DRAWN BY: L.DOW	SHEET NO.: 3 OF 4	

C- 108 Item VII Proposed Operation

Aardvark State SWD #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 be occurring during the same interval but at a different location from the well. 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.

Configure for Salt Water Disposal

Prior to commencing any work, an 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 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.

Operational Summary

The SWD facility will not be fenced so that trucks may access 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 40,000 bpd and an average of 25,000 bpd at a maximum surface injection pressure of 3,546 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 VII
Produced Water Analyses**

Aardvark State SWD #1

Item VII.4- Water Analysis of Source Zone Water

Delaware
Bone Spring

Item VII.5- Water Analysis of Disposal Zone Water

Devonian

Water Analyses follow this page.

C- 108 Item VIII

Geologic Information

Aardvark State SWD #1

The Devonian 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 believed present within the subject formations in the area. Depth control data was inferred from deep wells to the south and east. If the base of Devonian come in as expected the well will only be drilled deep enough for adequate logging rathole.

At a proposed injection interval of 17,730-18,980' BGL (Below Ground Level) the well will TD at approximately 18,980'. Mud logging through the interval will ensure the target interval remains in Devonian and Fusselman. Once Devonian is determined, the casing shoe depth will be set at an approximate maximum upper depth of 17,730 BGL. Injection will occur through the resulting openhole interval. Should mud or other logs indicate depth adjustment is required to exploit the desired formation as described; sundries with appropriate data will be filed with the OCD.

The Devonian is overlain by the Woodford, Mississippian LM, Barnett and by the Morrow and Atoka.

Fresh water in the area is generally available from the Rustler formation and some alluvial deposits. State Engineer's records show water wells in a 5 mile radius with a depth to groundwater of 400-800 feet.

Solaris Water Midstream, LLC
Estimated Formation Tops
Aardvark State SWD # 1
ULI-S33-T23S-R33E
Lea County, NM

Surface Elevation : 3658.02'

Est Tops :	Depths (BGL)
Accumulation of Quaternary alluvium.	Surface
Rustler	1,325'
Salt	1,450'
Base of Salt	4,860'
Bell Canyon	5,200'
Cherry Canyon	6,350'
Brushy Canyon	7,500'
Bone Spring Lime	9,100'
1st Bone Spring Sand	10,225'
2nd Bone Spring Sand	10,875'
3rd Bone Spring Sand	11,925'
Wolfcamp	13,125'
Strawn	14,150'
Atoka	14,400'
Morrow	14,950'
Barnett	16,700'
Mississippi Lime	17,050'
Woodford	17,500'
Devonian	17,725'
Fusselman	18,475'
Montoya	19,200'
Simpson	19,725'
Ellenburger	20,375'

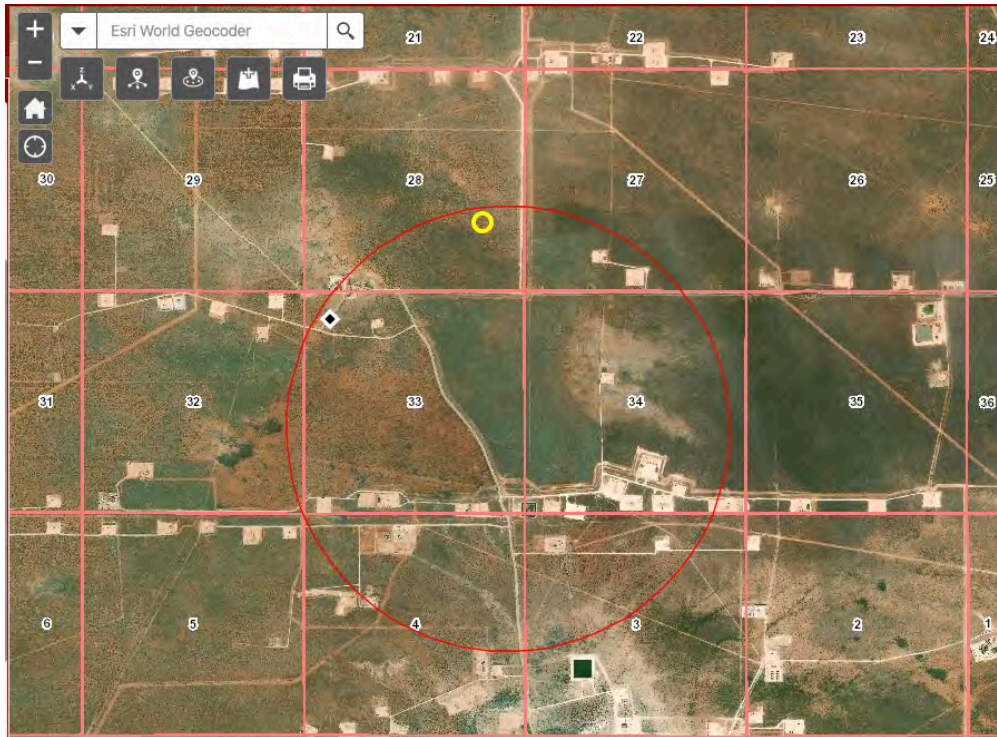
As no Devonian/Silurian depth well bore exists in the vicinity of this well for reference, tops below Bone Spring Sands are estimated. A log suite will be ran on this well to identify markers as soon as drilling is completed and before liner setting depth is determined. Logs will be presented for governing agency review.

Known production intervals penetrated :

Bell Canyon
Cherry Canyon
Brushy Canyon
Bone Spring Sands

C- 108 Item VIII & XI
Groundwater Basins- Water Column/ Depth to Groundwater
Water Wells in AOR

Aardvark State SWD #1 Water Well Map



The subject well is located within the Carlsbad Basin.

Fresh water in the area is generally available from valley and basin fill of the Carlsbad-Pecos segment of the lower Pecos Valley complex of Quaternary alluvial sand and gravel deposits. State Engineer's records show water wells in surrounding area with an average depth to water at 700 ft.

There is 1 water well located within one mile of the proposed SWD.

C- 108 Item XII
Geologic Affirmation

Aardvark State SWD #1

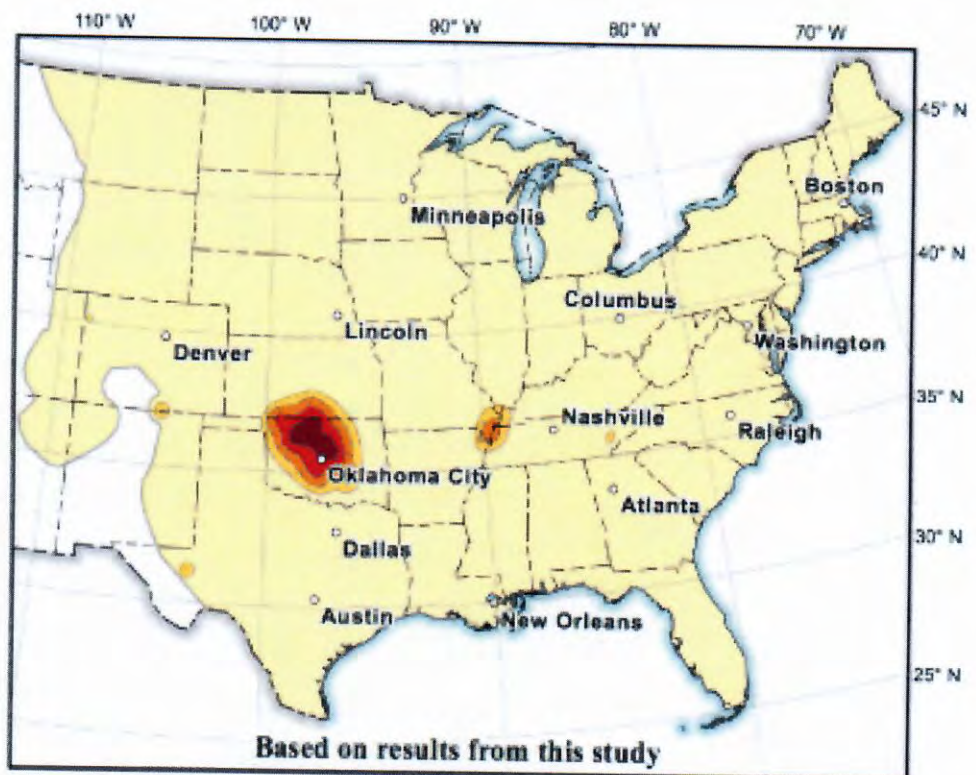
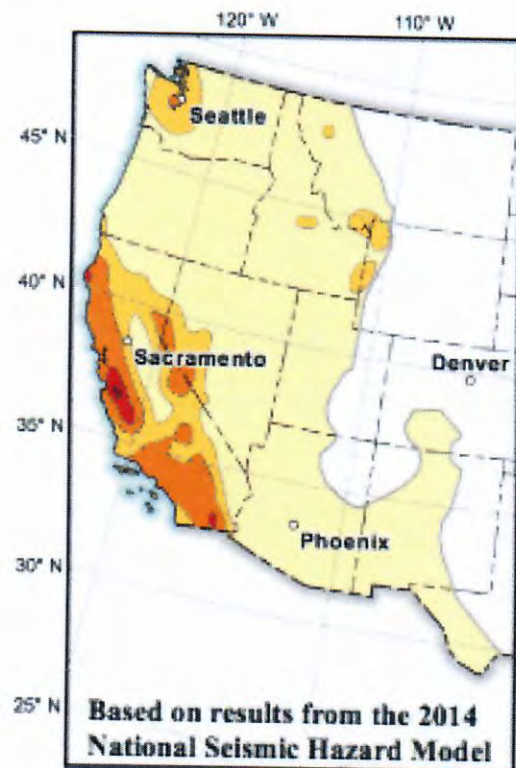
Solaris Water Midstream, LLC
Aardvark State # 1 SWD
ULI-S33-T23S-R33E
Lea County, NM

Geologic Affirmation

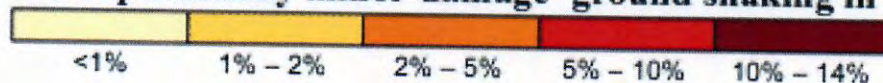
I have examined all available geologic and engineering data, and have found no evidence of open faults or other hydrologic connection between the disposal interval so applied for, and underground sources of drinking water. The primary source of investigation was USGS United States fault line mapping.



Marvin Burrows
Manager, Cart Hill Consulting, LLC



Chance of potentially minor-damage* ground shaking in 2018

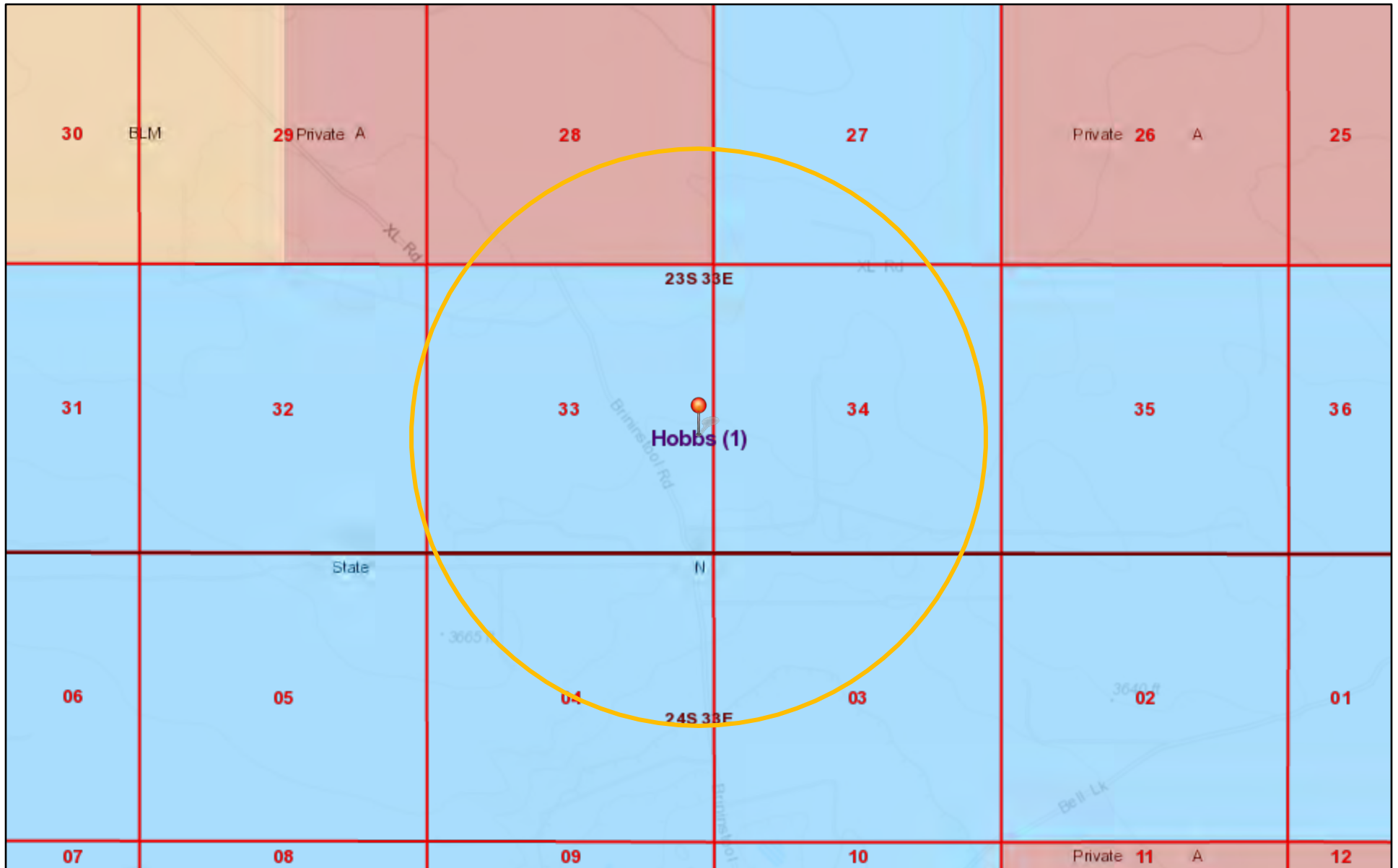


* equivalent to Modified Mercalli Intensity VI, which is defined as: "Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight."








**C- 108 Item XIII
Proof of Notification
Affected Parties List**


Aardvark State SWD #1

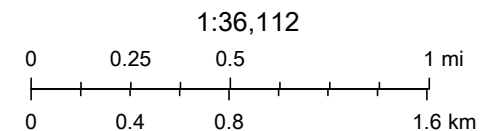
Mineral Owner Aardvark



10/28/2019, 10:57:17 AM

-  OCD Districts
-  OCD District Offices
-  PLSS First Division
-  PLSS Second Division
-  PLSS Townships
-  <all other values>
-  A-All minerals are owned by U.S.

 C-Only coal is owned by the U.S.



U.S. BLM, Sources: Esri, HERE, Garmin, Intermap, increment P Corp.,

The map displays a grid of land parcels, each labeled with a unique identifier. A yellow circular boundary is drawn around the central area, highlighting a specific region. The parcels are labeled with various codes, including NMNM, VB, E, and NMLC. The map also shows a road labeled 'Hobbs (1)' and a point labeled 'THISTLE'.

Parcel labels include:

- NMNM 031224, NMNM 107395, NMNM 118725, NMNM 111418, NMNM 114186, NMNM 126495, NMNM 121489, NMNM 112940, V027941, V040570, V062342, VB11661, V062761, V027871, V027981, VB17691, VB17862, E050761, V062162, V046543, V083041, V083141, L031751, V043681, V052892, VB18140, E056962, V043681, V043681, VB18191, E04908, V082421, VC190, VC210, V043962, V040961, V043972, NMLC 0063798, NMLC 0063993.

Other labels include 'THISTLE', 'Hobbs (1)', 'BELL LAKE', and 'Bell Lake'.



1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km



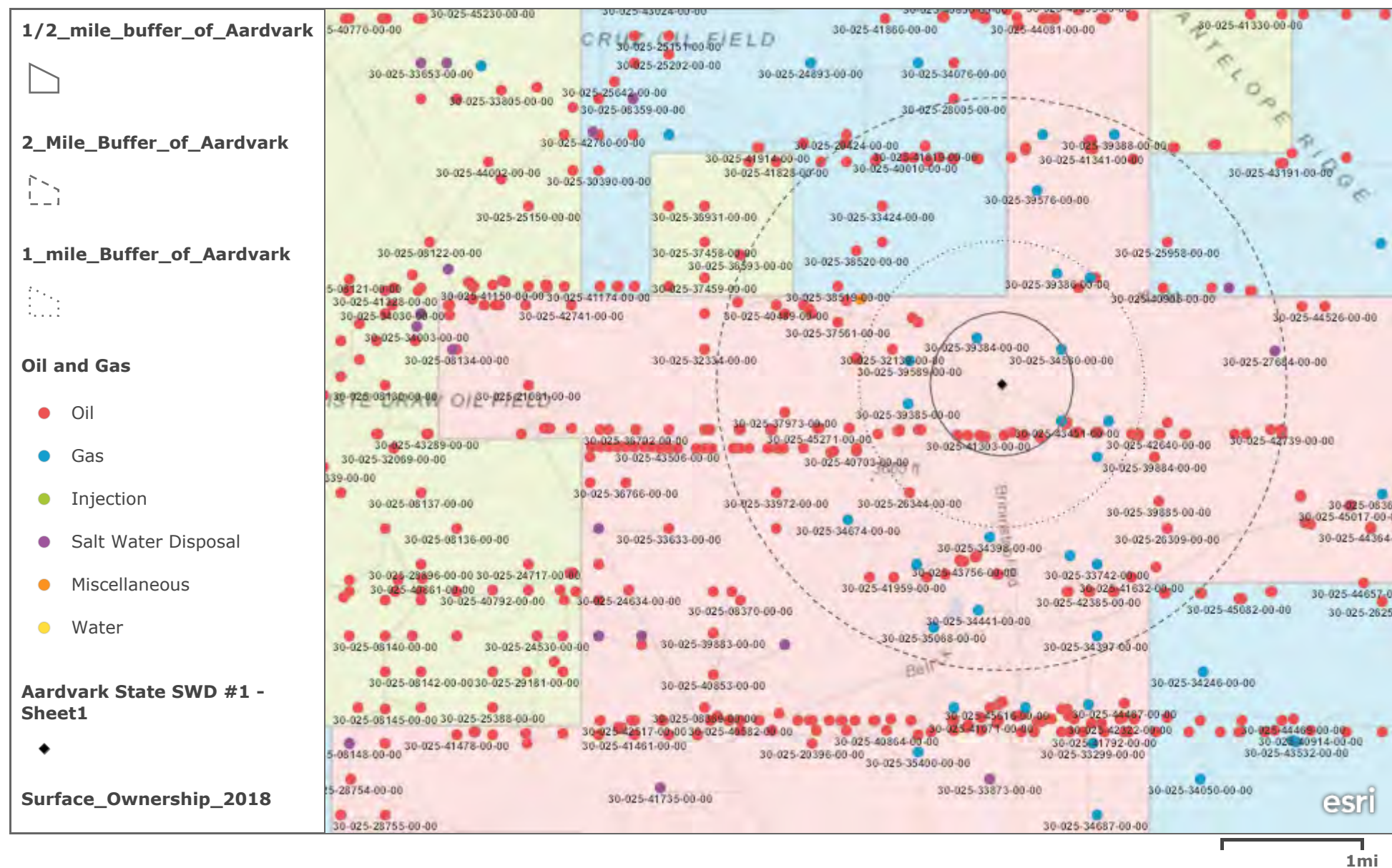
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, OGD, BLM



New Mexico Oil Conservation Division

Aardvark State SWD #1					
Owner Category	Name	Address	Location	Source	Info
Well Operator	Devon Energy Production Company, LP	333 W. Sheridan Avenue, Oklahoma City, OK 73102	27, 33, 34-23S-33E	OCD	
Well Operator	Fulfer Oil & Cattle LLC	PO Box 1224, Jal, NM 88252	4-24S-33E	OCD	
Lessee	Devon Energy Production Company, LP	333 W. Sheridan Avenue, Oklahoma City, OK 73102	33,34-23S-33E	BLM Records	NMNM-088526X
Lessee	Conoco Phillips	PO Box 2197, Houston, TX 77252	28-23S-33E	BLM Records	NMNM-094186
Lessee	EOG Y Resources	104 S 4th St. Artesia, NM 88210	26-23S-33E	BLM Records	VO-6276001
Lessee	EOG Resources	PO Box 2267, Midland, TX 79702	7-24S-33E	BLM Records	LG-31750001 VO-43680001 VO-5289002
Mineral Owner	Bureau of Land Management	620 East Greene Street, Carlsbad, NM 88220	27, 33, 34, 35-23S-33E 4,3,2- 24S-33E	BLM Records	
Surface Owner	Hughes Properties LLC	PO Box 5097, Carlsbad NM 88221	28-23S-33E	Lea County Assessor	
Surface Owner	New Mexico State Land Office	310 Old Santa Fe Trail, Santa Fe, NM 87504	27, 33, 34, 35-23S-33E 4,3,2- 24S-33E	Lea County Assessor	

Aardvark State SWD #1



Bureau of Land Management, Texas Parks & Wildlife, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA



Sept. 25th, 2019

NOTIFICATION TO INTERESTED PARTIES

Via U.S. Certified Mail- Return Receipt Requested

To whom it may concern,

Solaris Water Midstream, LLC, Midland, Texas, has made an application to the New Mexico Oil Conservation Division to drill and complete, for salt water disposal, the Aardvark State SWD No. 1. The proposed commercial operation will be for produced water disposal from area operators. As indicated in the notice below, the well is located in Section 33, Township 23 South, Range 33 East in Lea County, New Mexico.

The published notice states that the interval will be from 17,730 feet to 18,980 feet into the Devonian and Fusselman Formations.

Following is the notice to be published in the Hobbs News Sun, Hobbs, New Mexico on or about Sept. 24th, 2019.

LEGAL NOTICE

Solaris Water Midstream, LLC, 907 Tradewinds Blvd., Suite B, Midland, TX 79706 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, the Aardvark State SWD No. 1 will be located 2,056 feet from the South line and 200 feet from the East line, Section 33, Township 23 South, Range 33 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Devonian and Fusselman Formations at a depth of 17,730 feet to 18,890 feet at a maximum surface pressure of 3,546 psi and an average injection rate of 40,000 barrels per day. (Final completion depths may be adjusted per mudlogging and reported to the NMOCD on form C-105; pressure will remain at the standard gradient of 0.2 psi/ft of the uppermost injection interval depth). The proposed SWD well is located approximately 25 miles NW of Jal, NM.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 S. 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, Gavilan Solutions, LLC, 505-360-9819 or email: awhite@gavilansolutions.com.

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. A full copy in PDF format is available for immediate download with the link below.

URL Link: <https://www.dropbox.com/sh/0dert9ujv2m11co/AADM0qhqzXsFvpNKE2QauYrKa?dl=0>

You may also receive a copy by emailing awhite@gavilansolutions.com with your request Please use a subject like Aardvark State SWD #1 request.

Thank you for your attention to this matter.

A handwritten signature in blue ink, appearing to read "Whitney McKee", with a stylized flourish at the end.

Whitney McKee
Solaris Water Midstream, LLC
Regulatory Specialist

**C- 108 Item XIV
Proof of Notice
Certified Mail Receipts**

Aardvark State SWD #1

U.S. Postal Service[®]
CERTIFIED MAIL[®] RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com

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Extra Services & Fees (check box, add fee as appropriate)

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<input type="checkbox"/> Return Receipt (electronic)	\$0.00
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00
<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Total \$6.85

Sent To
EOG Resources
PO Box 2267
Midland, TX 79702

City, State
Midland, TX 79702

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Total \$6.85

Sent To
EOG Y Resources
104 S 4th St.
Artesia, NM 88210

City, State
Artesia, NM 88210

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Postage \$0.55

Total \$6.85

Sent To
Conoco Phillips
PO Box 2197
Houston, TX 77252

City, State
Houston, TX 77252

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Total \$6.85

Sent To
Purfer Oil & Cattle LLC
PO Box 1224,
Jal, NM 88252

City, State
Jal, NM 88252

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Total \$6.85

Sent To
Shes Properties LLC
PO Box 5097
Carlsbad NM 88221

City, State
Carlsbad NM 88221

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Total \$6.85

Sent To
Bureau of Land Management
620 East Greene Street
Carlsbad, NM 88220

City, State
Carlsbad, NM 88220

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Total \$6.85

Sent To
Devon Energy Production Company
333 W. Sheridan Avenue,
Oklahoma City, OK 73102

City, State
Oklahoma City, OK 73102

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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<input type="checkbox"/> Adult Signature Required	\$0.00
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00

Postage \$0.55

Total \$6.85

Sent To
New Mexico State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87504

City, State
Santa Fe, NM 87504

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

C- 108 Item XIV
Proof of Notice
Legal Notice in Newspaper of General Circulation

Aardvark State SWD #1

Below is the affidavit of publication from the Hobbs Sun News.

Affidavit of Publication


STATE OF NEW MEXICO
COUNTY OF LEA

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

Beginning with the issue dated
September 24, 2019
and ending with the issue dated
September 24, 2019.


Publisher

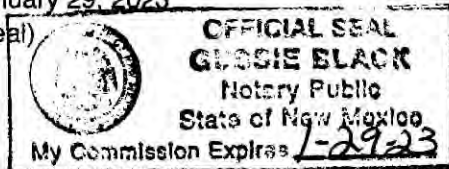
Sworn and subscribed to before me this
24th day of September 2019.


Business Manager

My commission expires

January 29, 2023

(Seal)



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

LEGAL NOTICE Solaris

Midland, TX 79708, titled: "Application for Approval of a Well" with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Aardvark State SWD No. 1 will be located 2,050 feet from the South line and 200 feet from the East line, Section 33, Township 23 South, Range 33 East, Lea County, New Mexico. Produced water from area production will be commercially disposed into the Devonian and Fusselman Formations at a depth of 17,730 feet to 18,690 feet at a maximum surface pressure of 3,548 psi and an average injection rate of 40,000 barrels per day. Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 S. 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, Gavilan Solutions, LLC, 2815 E. 1st Ave., Suite 100, White, NM 87155. awhite@gavilansolutions.com
#34728

67115886

00233764

ASHLEY WHITE
GAVILAN SOLUTIONS, LLC
4533 17TH AVE NE
RIO RANCHO, NM 87144

C- 108 Item XIV Seismic Maps

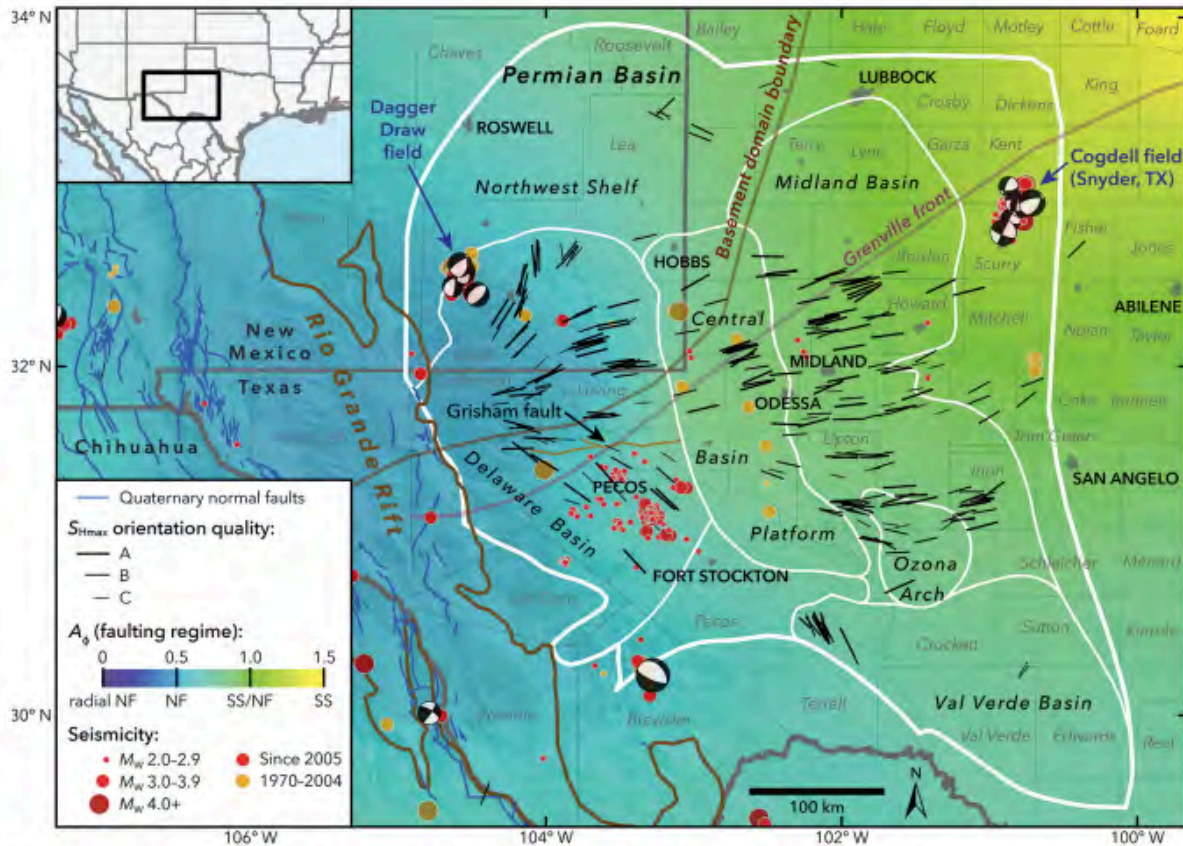


Figure 1. State of stress in the Permian Basin, Texas and New Mexico. Black lines are the measured orientations of S_{Hmax} with line length scaled by data quality. The colored background is an interpolation of measured relative principal stress magnitudes (faulting regime) expressed using the A_s parameter (see text for details) of Simpson (1997). Blue lines are fault traces known to have experienced normal-sense offset within the past 1.6 Ma, from the USGS Quaternary Faults and Folds Database (Crone and Wheeler, 2000). The boundary between the Shawnee and Mazatzal basement domains is from Lund et al. (2015), and the Precambrian Grenville Front is from Thomas (2006). The Permian Basin boundary is from the U.S. Energy Information Administration, and the subsurface boundaries are from the Texas Bureau of Economic Geology Permian Basin Geological Synthesis Project. Earthquakes are from the USGS National Earthquake Information Center, the TexNet Seismic Monitoring Program, and Gan and Frohlich (2013). Focal mechanisms are from Saint Louis University (Herrmann et al., 2011).

Solaris Water Midstream, LLC
Aardvark State SWD #1

FORM C-108 Supplemental Information

III. Well Data

A. Wellbore Information

1

Well Information	
Lease Name	Aardvark State SWD
Well No.	1
Location	S 33 T23S - R33E
Footage Location	2,056' FSL & 200' FEL

2

a) **Wellbore Description**

Casing Information				
Type	Surface	Intermediate 1	Intermediate 2	Liner
OD	16"	13.375"	9.625"	7.625"
WT	84 lb/ft	68 lb/ft	53.50 lb/ft	39 lb/ft
ID	15.010"	12.415"	8.535"	6.625"
Drift ID	14.822"	12.259"	8.500"	6.500"
Weight	84 lb/ft	68 lb/ft	53.50 lb/ft	39 lb/ft
Grade	N-80	L-80, EZ-GO FJ3	HCP-110, BTC	P-110, BTC
Hole Size	17-1/8"	14-3/4"	12-1/4"	8-1/2"
Depth Set	1,400'	4,930'	11,850'	17,675'
open hole from 17,730' to 18,980'				

b) **Cementing Program**

Cement Information				
Casing String	Surface	Intermediate 1	Intermediate 2	Liner
Lead Cement	100 Class C Premium	65:10:25 Class C Premium Compass Poz-Mix	100 TXI Lightweight Cement	100 HSLD 87 Cement
Lead Cement Volume (sacks)	590	1,000	1,730	455
Lead Cement Density (ft3/sack)	13.5	12.7	10.6	15.6
Tail Cement	100 Class C Premium	50:50 Class H Premium Compass Poz-Mix	85:15 Class H Premium Compass Poz-Mix	-
Tail Cement Volume (sacks)	180	335	200	-
Tail Cement Density (ft3/sack)	14.8	14.8	15.0	-
Cement Excess	100% 50%	250% 65%	75% 50%	40%

Total Sacks	770	1,335	1,930	455
TOC	Surface	Surface	Surface	Top: 11,650' Bottom: 17,675'
Method	Circulate to Surface	Circulate to Surface	Circulate to Surface	Logged

3

Tubing Description

Tubing Information	
OD	5.5" 5.0"
WT	20# 18#
ID	4.778" 4.276"
Drift ID	4.653" 4.151"
Weight	20# 18#
Grade	P-110