

Initial Application Part I

Received: 07/15/2019

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

RECEIVED: 07/05/2019	REVIEWER:	TYPE: SWD	APP NO: pMAM1919656321
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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: Anteater 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**

SWD-2190

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

Signature

7/3/19

Date


432-203-9020

Phone Number

whitney.mckee@solarismidstream.com

e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance _____ XX _____ Disposal
_____ Storage Application qualifies for administrative approval? _____ Yes _____ No
- II. OPERATOR: _____ Solaris Water Midstream, LLC _____
ADDRESS: _____ 70701 Tradewinds Blvd., Suite C Midland, Tx 797066 _____
CONTACT PARTY: _____ Whitney McKee _____ PHONE: _____ 432-203-9020;9005 _____
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? _____ Yes _____ X _____ No
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review. 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, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any. 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.
- 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 _____
SIGNATURE:  _____ DATE: 7/3/2019 _____
E-MAIL ADDRESS: _____ whitney.mckee@solarismidstream.com _____
- XV. If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.
Please show the date and circumstances of the earlier submittal: _____
- DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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.

INJECTION WELL DATA SHEET

OPERATOR: _____ Solaris Water Midstream, LLC _____

WELL NAME & NUMBER: _____Anteater State SWD_#1_____

WELL LOCATION: _____1550' FNL & 500 'FEL_____H_____S: 5_____T:24S_____R:33E_____

FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA
Surface Casing

Hole Size: _____18.125"_____ Casing Size: _____16"_____

Cemented with: _____3,297_____sx. *or* _____ft³

Top of Cement: _____SURFACE_____ Method Determined: _____CIRCULATE_____

Intermediate Casing

Hole Size: _____14.75"_____ and _____12.25"_____ Casing Size: _____13.375" and 9.625"*or* _____ft³

Cemented with: _____3,111 and 3,108 sx. _____

Top of Cement: _____SURFACE_____ Method Determined: _____CIRCULATE_____

Production Casing

Hole Size: _____8.5"_____ Casing Size: _____7.625"_____ *or* _____ft³

Cemented with: _____203_____sx. _____

Top of Cement: _____12,855_____ Method Determined: _____CBL

Total Depth: _____Liner @ 17,755' & TD@ 19030_____

Injection Interval

_____6.5 Hole Size 17,755 to 19,030 feet_____

Open Hole;

INJECTION WELL DATA SHEET

Tubing Size: ____ 4.5" ____ Lining Material: ____ Douline Glassbore ____

Type of Packer: ____ Nickel plated double grip retrievable ____

Packer Setting Depth: ____ approx= 17,705 ____

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, Montoya ____

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 ____



July 3rd, 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 Anteater State SWD Well #1, to be located in Section 5, Township 24 South, Range 33
East, NMMPM, 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 and private 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", is written over a horizontal line.

Whitney McKee

Solaris Water Midstream, LLC

Regulatory Specialist

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) 476-3460 Fax: (505) 476-3462

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

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 97869	Pool Name SWD; DEVONIAN
Property Code	Property Name ANTEATER STATE SWD	Well Number #1
OGRID No. 371643	Operator Name SOLARIS WATER MIDSTREAM, LLC	Elevation 3664'

Surface Location

UL or lot no. H	Section 5	Township 24S	Range 33E	Lot Idn	Feet from the 1550	North/South line NORTH	Feet from the 550	East/West line EAST	County LEA
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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 5.51	Joint or Infill	Consolidated Code	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.

31	32	NW CORNER LAT.: = 32.2539533°N LON.: = -103.6028832°W	NE CORNER LAT.: = 32.2539169°N LON.: = -103.5858034°W	32	33
6	5	ANTEATER STATE SWD #1 SHL: GR. ELEV. 3664' NMSP-E (NAD 83) N.(Y): = 455360.6' E.(X): = 771886.5' LAT.: = 32.2496609° N LON.: = 103.5875797° W NMSP-E (NAD 27) N.(Y): = 455301.6' E.(X): = 730702.6' LAT.: = 32.2495372° N LON.: = 103.5870995° W		5	4
6	5			5	4
7	8	SW CORNER LAT.: = 32.2394534°N LON.: = -103.6028946°W	SE CORNER LAT.: = 32.2394293°N LON.: = -103.5857954°W	8	9

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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.


Signature _____ Date _____

Print Name _____

E-mail Address _____

SURVEYORS 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.

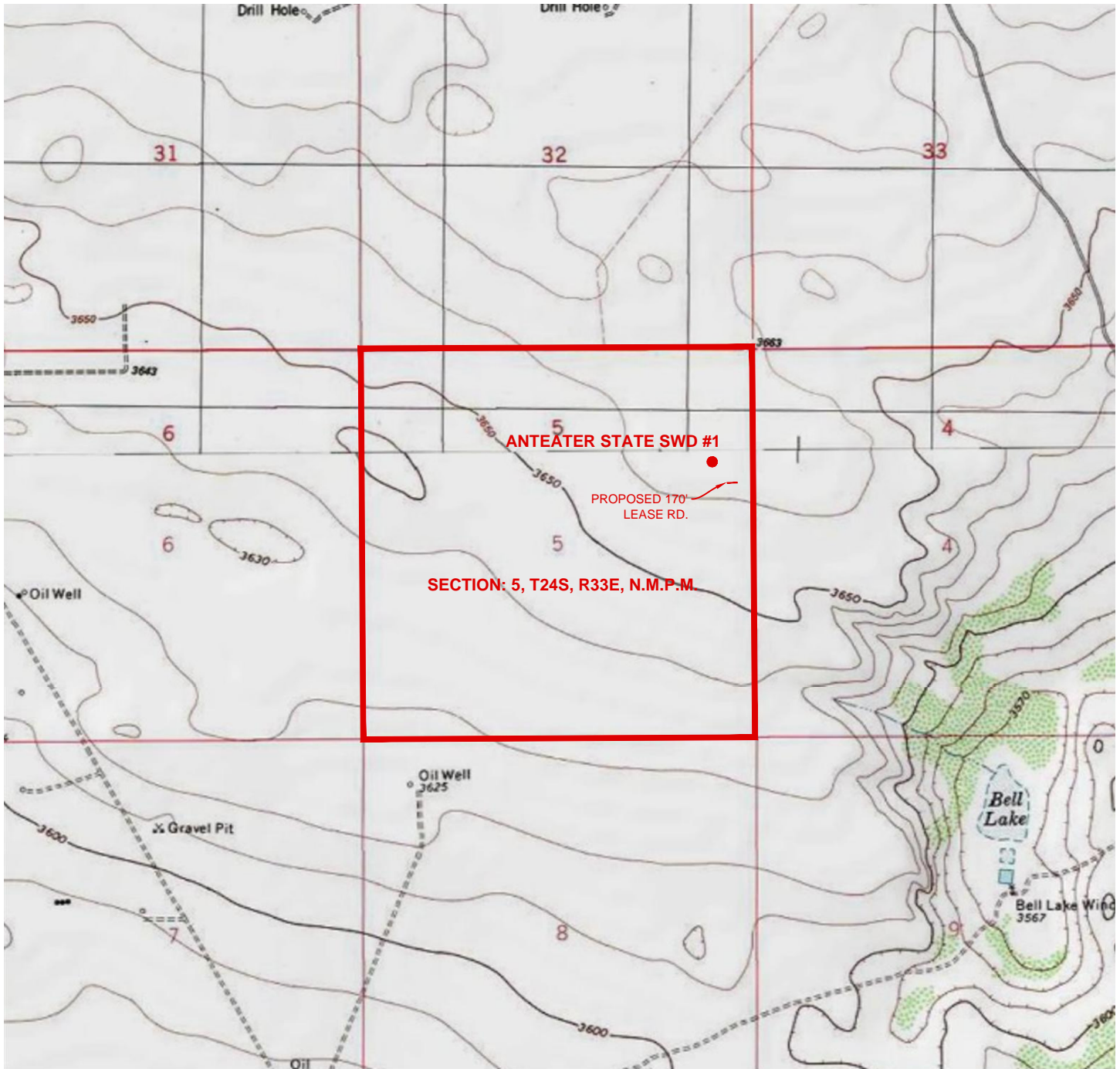
APRIL 23, 2019
Date of Survey

Signature and Seal of Professional Surveyor: 

Job No.: WTC53208
James E. Tompkins 14729
Certificate Number _____
Draft: M.P.

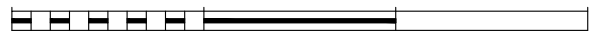
PLAT: X:\PROJECTS\OIL & GAS SURVEYS\SOLARIS MIDSTREAM\STAKE & PLAT 5 SWD LOCATIONS. LEA CO. NM DRAWINGS\53208-SOLARIS MIDSTREAM\STAKE & PLAT 5 SWD LOCATIONS. LEA CO. NM LAYOUT TAB: MAPS4/26/2019 1:54 PM

LOCATION VERIFICATION MAP



SECTION: 5, T24S, R33E, N.M.P.M.

2000 0 2000 4000 FEET



SCALE: 1" = 2000'

COUNTY: LEA STATE: NEW MEXICO

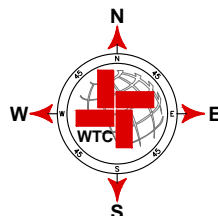
DESCRIPTION: 1550' FNL & 550' FEL

OPERATOR: SOLARIS WATER MIDSTREAM, LLC

WELL NAME: ANTEATER STATE SWD #1

DRIVING DIRECTIONS:

BEGINNING AT THE INTERSECTION OF US-285 AND POTASH MINES RD. IN CARLSBAD, NEW MEXICO; HEAD EASTERLY ON POTASH MINES RD. FOR ±7.7 MILES TO JAL HWY ROAD. TURN RIGHT. HEAD EASTERLY/SOUTHEASTERLY FOR ±19.0 MILES TO COUNTY RD. 31. TURN LEFT. HEAD NORTHEAST FOR ±5.6 MILES TO A LEASE ROAD (ALISHA LN). TURN RIGHT. HEAD SOUTHEAST ±3.7 TO A LEASE ROAD ON THE LEFT. TURN LEFT AND FOLLOW LEASE ROAD FOR ±1.2 MILES. THE STAKED LOCATION FLAG IS TO THE WEST ±0.7 MILES FROM THE LEASE ROAD.



JOB No.: WTC53208

AERIAL MAP



SECTION: 5, T24S, R33E, N.M.P.M.

2000 0 2000 4000 FEET



SCALE: 1" = 2000'

COUNTY: LEA STATE: NEW MEXICO

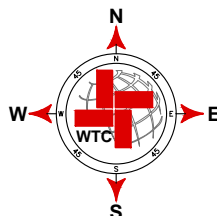
DESCRIPTION: 1550' FNL & 550' FEL

OPERATOR: SOLARIS WATER MIDSTREAM, LLC

WELL NAME: ANTEATER STATE SWD #1

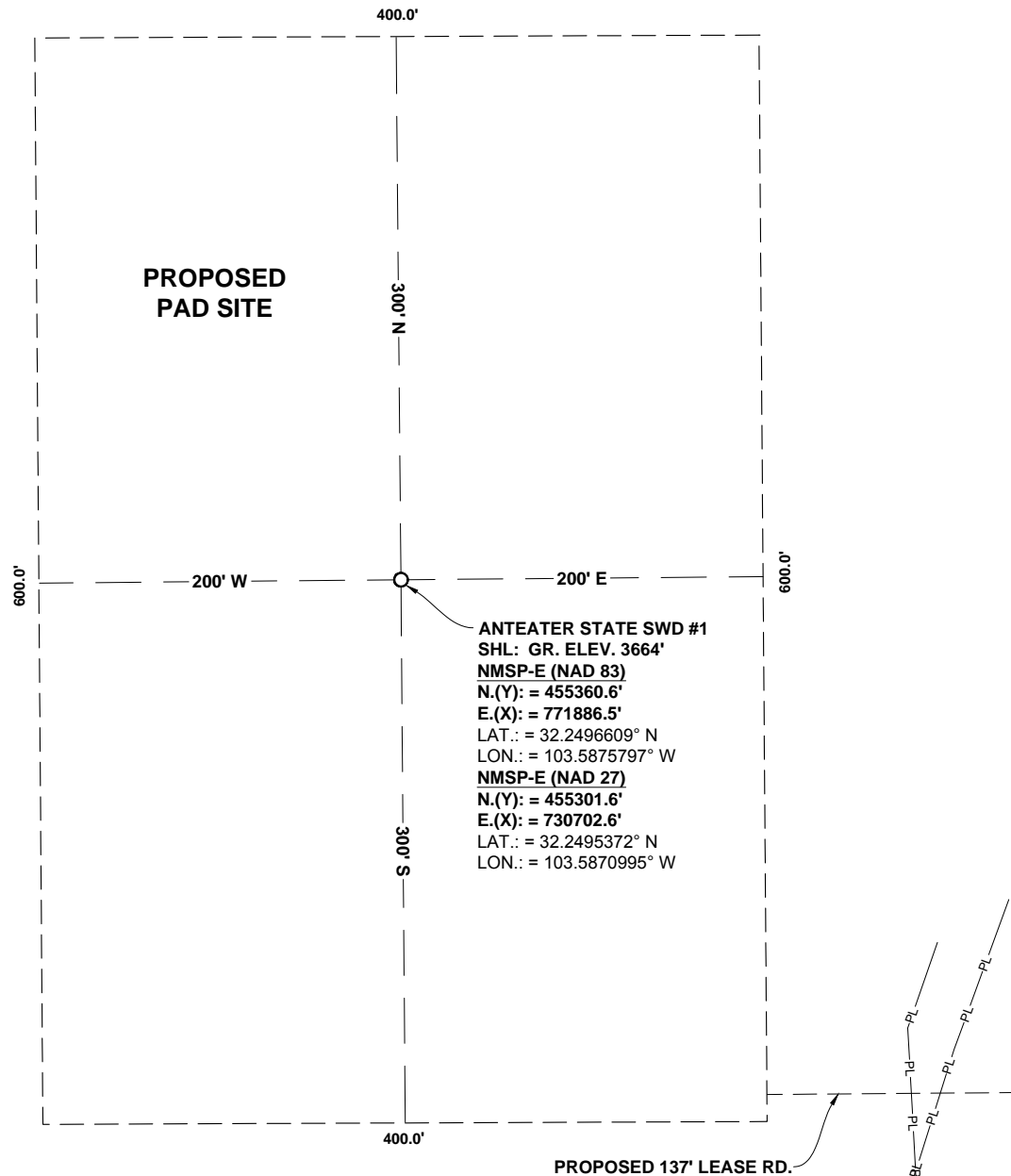
DRIVING DIRECTIONS:

BEGINNING AT THE INTERSECTION OF US-285 AND POTASH MINES RD. IN CARLSBAD, NEW MEXICO; HEAD EASTERLY ON POTASH MINES RD. FOR ±7.7 MILES TO JAL HWY ROAD. TURN RIGHT. HEAD EASTERLY/SOUTHEASTERLY FOR ±19.0 MILES TO COUNTY RD. 31. TURN LEFT. HEAD NORTHEAST FOR ±5.6 MILES TO A LEASE ROAD (ALISHA LN). TURN RIGHT. HEAD SOUTHEAST ±3.7 TO A LEASE ROAD ON THE LEFT. TURN LEFT AND FOLLOW LEASE ROAD FOR ±1.2 MILES. THE STAKED LOCATION FLAG IS TO THE WEST ±0.7 MILES FROM THE LEASE ROAD.



JOB No.: WTC53208

SITE LOCATION



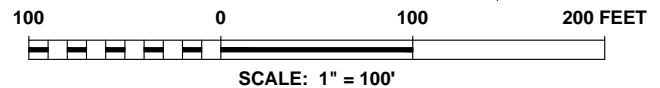
SECTION: 5, T24S, R33E, N.M.P.M.

COUNTY: LEA STATE: NEW MEXICO

DESCRIPTION: 1550' FNL & 550' FEL

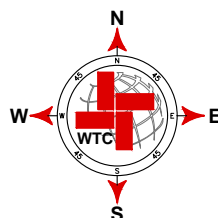
OPERATOR: SOLARIS WATER MIDSTREAM, LLC

WELL NAME: ANTEATER STATE SWD #1



W T C, INC.
405 S.W. 1st Street
Andrews, TX 79714
(432) 523-2181

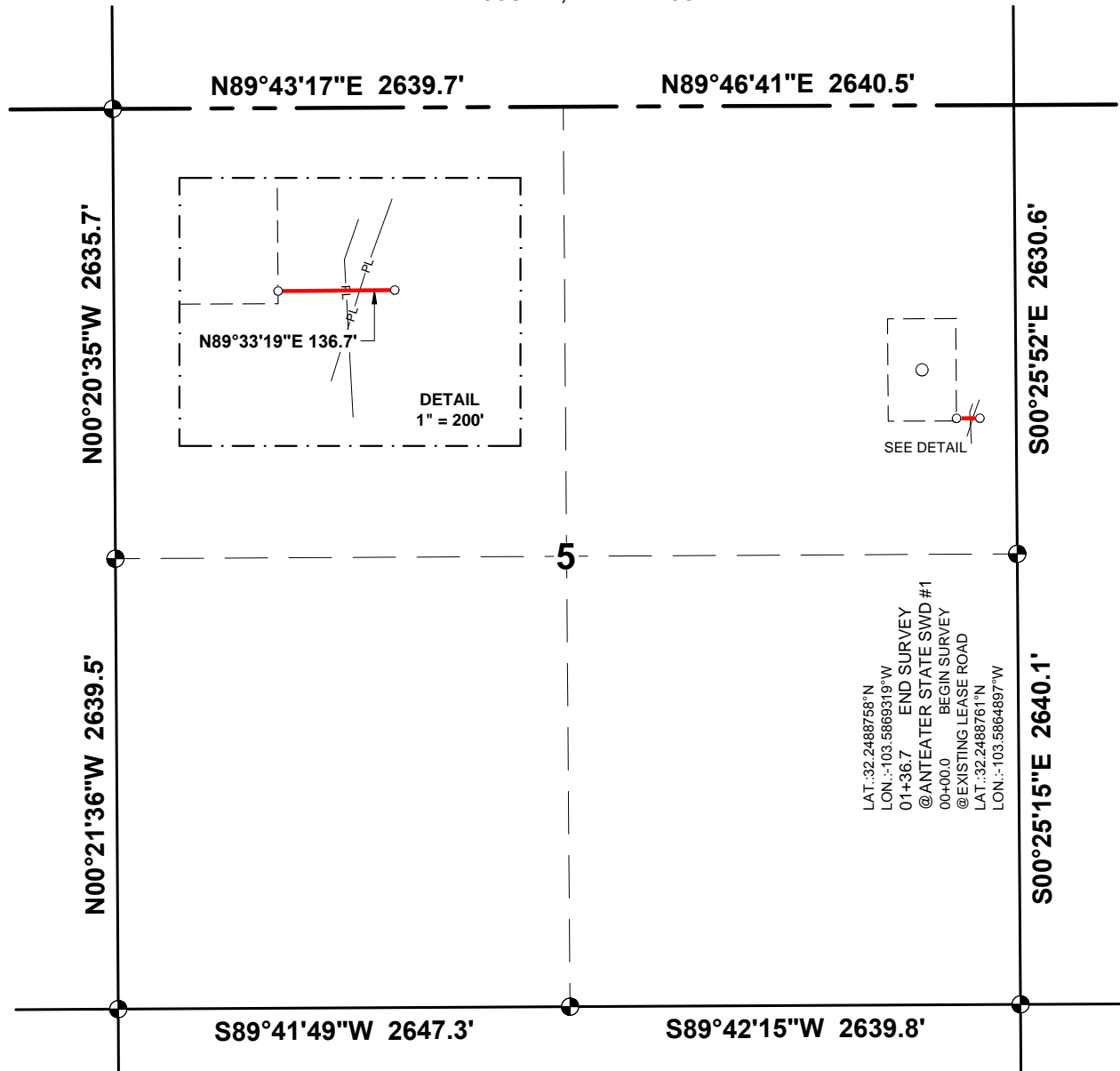
WTC
ENGINEERS | SURVEYORS



SOLARIS
WATER MIDSTREAM

JOB No.: WTC53208

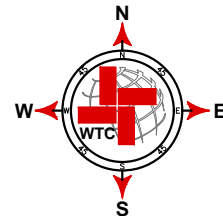
SECTION 5, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO



CENTERLINE DESCRIPTION
A STRIP OF LAND 30 FEET IN WIDTH AND 136.7 FEET, 0.03 MILES OR 8.28 RODS IN LENGTH, SITUATED IN SECTION 5, TOWNSHIP 24 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AND BEING 15 FEET LEFT AND 15 FEET RIGHT OF THE SURVEY OF CENTERLINE AS SHOWN HEREON.

- NOTES:
- SET SPIKE NAIL FOR BEGIN/END OR ANGLE POINT
 - Fnd. USGLO BRASS CAP
 - ⊗ CALCULATED CORNER

BASIS OF BEARING, COORDINATES, AND DISTANCES ARE A TRANSVERSE MERCATOR PROJECTION OF THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83, BASED ON CONTROL POINT **TORMUND** AT N.=451855.341' - E.=763323.720', WITH A CONVERGENCE ANGLE OF -00°22'58.93\"



1000 0 1000 2000 FEET
SCALE: 1" = 1000'



I, JAMES E. TOMPKINS, NEW MEXICO PROFESSIONAL SURVEYOR NO. 14729, DO HEREBY CERTIFY THAT THIS PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

James E. Tompkins 04/25/2019
JAMES E. TOMPKINS, N.M. P.L.S. No.14729
SURVEY DATE: 04/25/2019 DRAFT:M.P.
JOB NO.: WTC53208 SHEET:01 OF 01



A PROPOSED
LEASE ROAD
CROSSING SECTION 5,
T-24-S, R-33-E, N.M.P.M.,
LEA COUNTY, NEW MEXICO



W T C, INC.
405 S.W. 1st Street
Andrews, TX 79714
(432) 523-2181

C- 108 Item VI
Area of Review Well Data

Anteater State SWD #1

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

C- 108 Item X

Logs and Available Test Data

Anteater State SWD #1

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

C- 108 Item VII

Proposed Operation

Anteater 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 3,551 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.

SOLARIS WATER MIDSTREAM - WELLBORE DATA SHEET
Anteater State SWD #1



AREA/SYSTEM:	Pecos Star System
WELL NAME:	Anteater State SWD #1
OBJECTIVE:	Devotion
SHL:	1550' FHL & 550' FEL; Sec 5, T24S-R33E
BHL:	Same as SHL
SURFACE ELEV.:	3664
TOTAL DEPTH:	19,030

MUD LOGGING		CASING		RKB DRILL		BOPE		FORMATION		HOLE		FRAC	
DIRECTIONAL	SIZE (IN.)	MD	DEPTH	TVD	MD	DEPTH	FORMATION	SIZE (IN.)	MUD WT.	GRAD	WT.	GRAD	
Grnd Level													
GL ELEV.		30"											
120' / 120'		Set and grouted											
120' / 120'		Open											
13,375' / 5,130'		8.8											
13,375' / 5,130'		8.4											
13,375' / 5,130'		8.4											
13,375' / 5,130'		9.5											
13,375' / 5,130'		10											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
13,375' / 5,130'		9.4											
13,375' / 5,130'		10.0											
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int	Casing Weight lb/ft	Setting Depth		Sacks of Cement	TOC
		TOP	Bottom		
68	lb/ft	0	1430	3.27	Surface
53	lb/ft	0	1305	3.11	Surface
39	lb/ft	1285	1775	3.08	Surface
		1775	203		Liner Top
		1775	1903		