

Initial Application Part I

Received: 07/16/2019

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

RECEIVED: 07/16/2019	REVIEWER:	TYPE: SWD	APP NO: pMAM1919747382
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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: Alligator 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

SWD-2192

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

07/03/19


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: _____ Alligator State SWD_#1 _____

WELL LOCATION: _____ 530' FSL & 250' FWL _____ M _____ S: 36 _____ T: 23S _____ R: 32E _____
 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 CasingHole Size: _____ 14.75" and 12.25" _____ Casing Size: _____ 13.375" and 9.625" **or**Cemented with: _____ 3,111 and 3,108 sx. _____ ft³

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

Production CasingHole Size: _____ 8.5" _____ Casing Size: _____ 7.625" _____ **or**Cemented with: _____ 203 _____ sx. _____ ft³

Top of Cement: _____ 12,855 _____ Method Determined: _____ CBL

Total Depth: _____ Liner @ 17,730' & TD@ 18980 _____

Injection Interval

_____ 6.5 Hole Size 17,730 to 18,980 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= 17,680_____

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 and 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 (5,000'), Cherry Canyon (6,150'), Brushy Canyon (7,275'), 1st BS Sand (9,900'), 2nd BS Sand (10,850'), 3rd BS Sand (11,900'), Wolfcamp (12,275'), Strawn (14,100'), Atoka (14,350'), Morrow (14,900')

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 Alligator State SWD Well #1, to be located in Section 36, Township 23 South, Range 32
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,

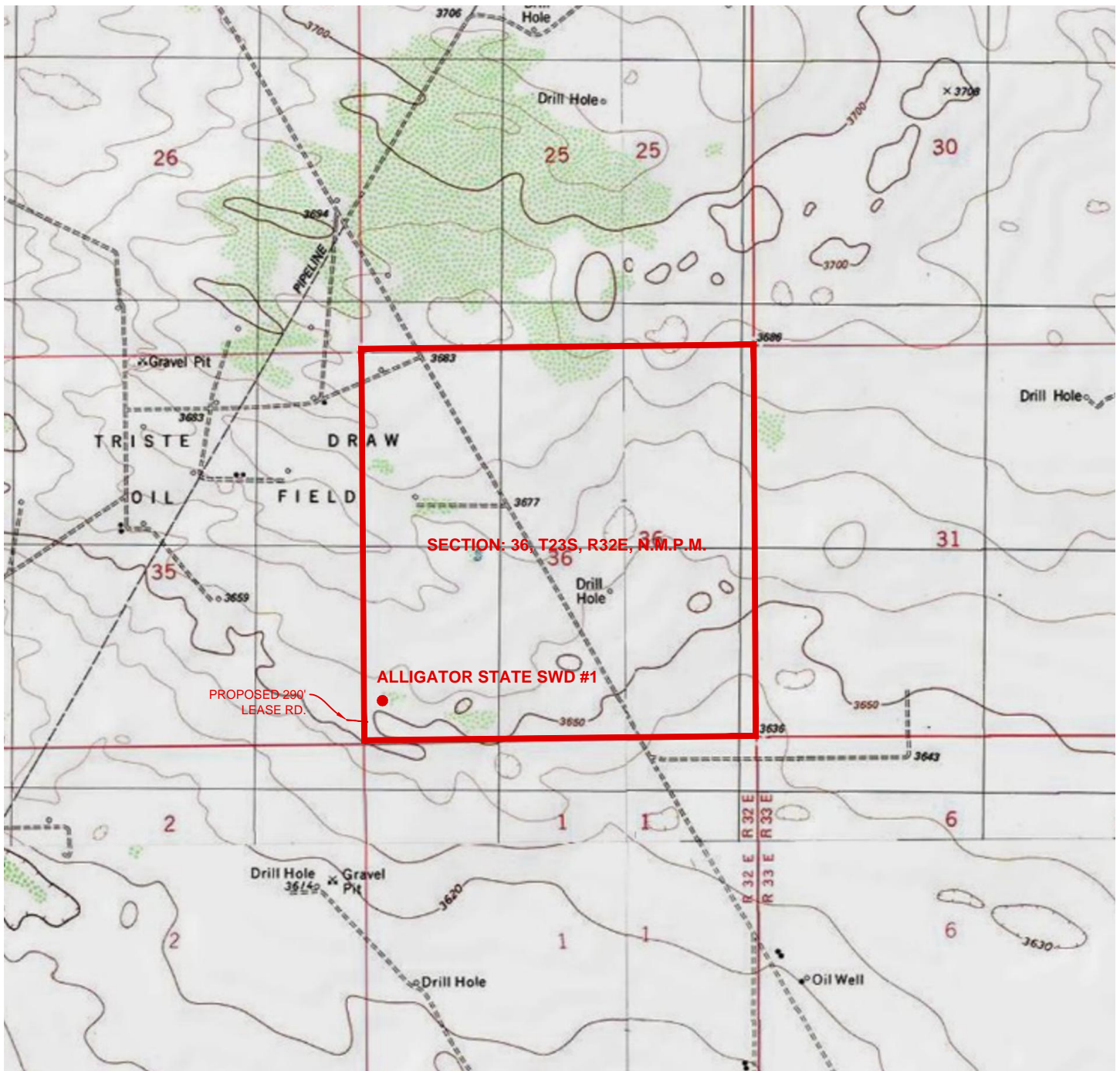
A handwritten signature in blue ink, appearing to read "Whitney McKee".

Whitney McKee

Solaris Water Midstream, LLC
Regulatory Specialist

PLAT. X: PROJECT SOIL & 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: MAPS 4/26/2019 9:31 AM

LOCATION VERIFICATION MAP



SECTION: 36, T23S, R32E, N.M.P.M.

2000 0 2000 4000 FEET



SCALE: 1" = 2000'

COUNTY: LEA STATE: NEW MEXICO

DESCRIPTION: 530' FSL & 250' FWL

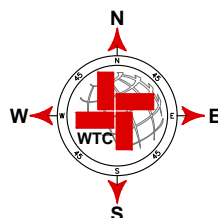
OPERATOR: SOLARIS WATER MIDSTREAM, LLC

WELL NAME: ALLIGATOR 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 ±18.4 MILES TO A LEASE ROAD (ALISHA LN). TURN RIGHT. HEAD SOUTHEAST ±7.8 MILES THE STAKED LOCATION FLAG IS TO THE SOUTHWEST ±0.5 MILES FROM THE LEASE ROAD.

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



JOB No.: WTC53208

AERIAL MAP



SECTION: 36, T23S, R32E, N.M.P.M.

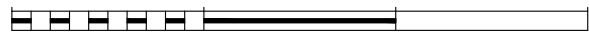
COUNTY: LEA STATE: NEW MEXICO

DESCRIPTION: 530' FSL & 250' FWL

OPERATOR: SOLARIS WATER MIDSTREAM, LLC

WELL NAME: ALLIGATOR STATE SWD #1

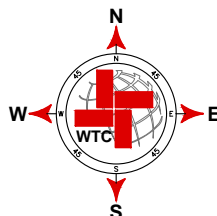
2000 0 2000 4000 FEET



SCALE: 1" = 2000'

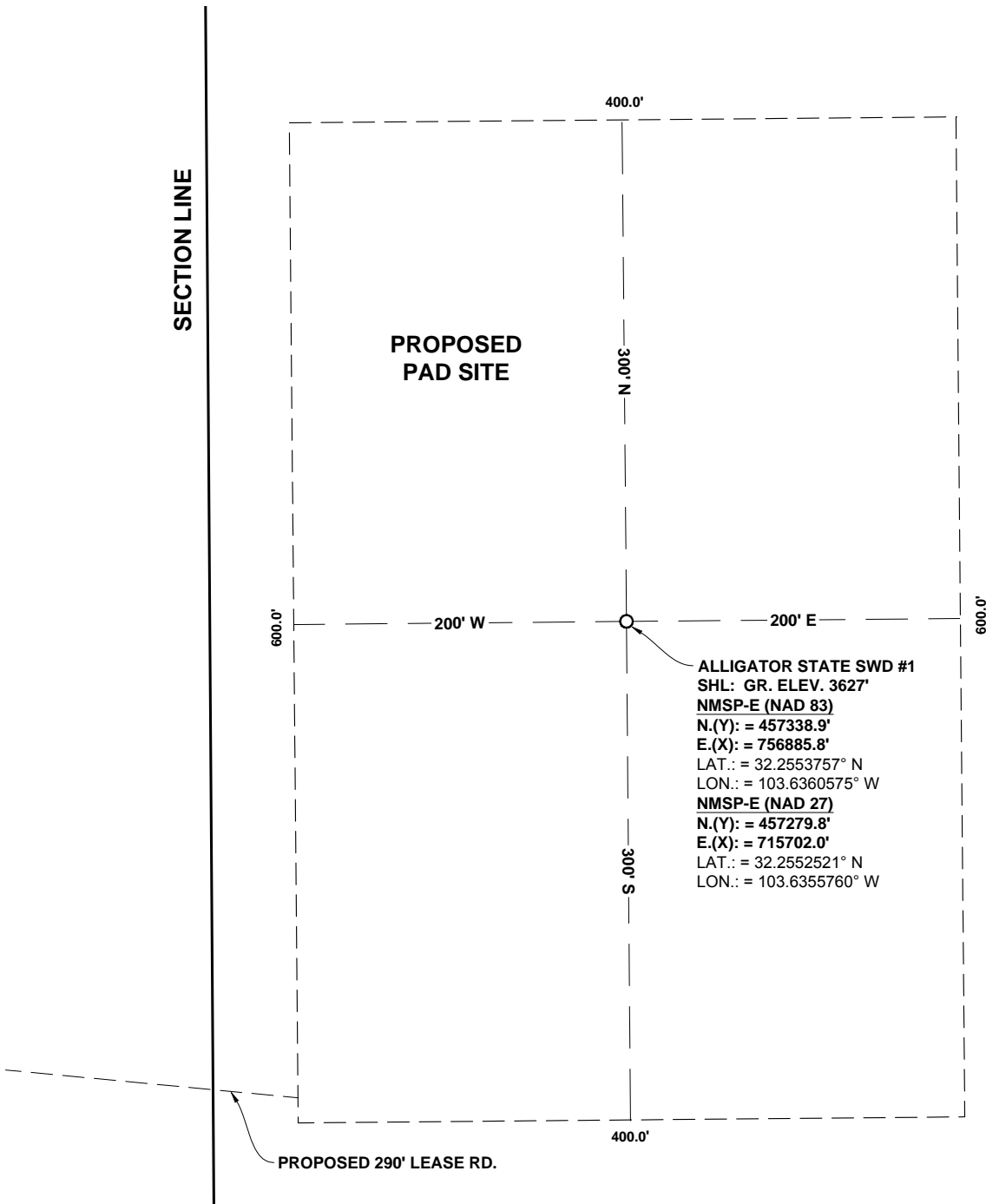
DRIVING DIRECTIONS:

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 ±18.4 MILES TO A LEASE ROAD (ALISHA LN). TURN RIGHT. HEAD SOUTHEAST ±7.8 MILES THE STAKED LOCATION FLAG IS TO THE SOUTHWEST ±0.5 MILES FROM THE LEASE ROAD.



JOB No.: WTC53208

SITE LOCATION



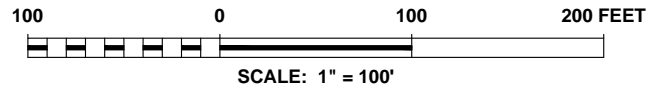
SECTION: 36, T23S, R32E, N.M.P.M.

COUNTY: LEA STATE: NEW MEXICO

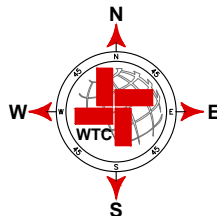
DESCRIPTION: 530' FSL & 250' FWL

OPERATOR: SOLARIS WATER MIDSTREAM, LLC

WELL NAME: ALLIGATOR 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 ±18.4 MILES TO A LEASE ROAD (ALISHA LN). TURN RIGHT. HEAD SOUTHEAST ±7.8 MILES THE STAKED LOCATION FLAG IS TO THE SOUTHWEST ±0.5 MILES FROM THE LEASE ROAD.



JOB No.: WTC53208

N89°23'24"E 5293.7'

N00°24'16"W 2639.6'

N00°24'13"W 2641.8'

LAT.:32.2546743°N
 LONG.:103.6376336°W
 00+00.0 BEGIN SURVEY
 @EXISTING LEASE ROAD
13"W 2641.8'
 02+38.6 SECTION LINE
 02+89.8 END SURVEY
 @ALLIGATOR STATE SWD #
 LAT.:32.2545937°N
 LONG.:103.6367011°W

SEE DETAIL

35 36

S89°22'54"W 2642.3'

S89°21'29"W 2641.9'

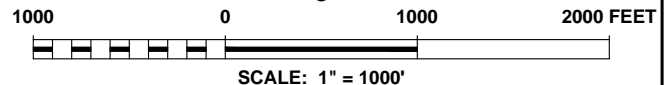
S00°14'15"E 2639.5'

S00°21'50"E 2640.0'

36 31
1 6

A STRIP OF LAND 30 FEET IN WIDTH AND 289.8 FEET, 0.05 MILES OR 17.56 RODS IN LENGTH, SITUATED IN SECTION 36, TOWNSHIP 23 SOUTH, RANGE 32 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:**
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" AND A COMBINED SCALE OF 0.999795938



James E. Tompkins

04/25/2019
No.14729
DRAFT:M.P.
SHEET:01 OF 01



A PROPOSED
LEASE ROAD
CROSSING SECTION 36,
T-23-S, R-32-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

Alligator 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

Alligator 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

Alligator 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.

SOLARIS WATER MIDSTREAM - WELLBORE DATA SHEET

Alligator State SWD #1



AREA/SYSTEM:	Pecos Star System
WELL NAME:	Alligator State SWD #1
OBJECTIVE:	Devonion
SHL:	530' FSL & 250' FWL; Sec 36, T23S-R32E
BHL:	Same as SHL
SURFACE ELEV.:	3627
TOTAL DEPTH:	18,980

MUD LOGGING E LOGGING/ DIRECTIONAL	CASING SIZE (IN.)	RKB DRILL DEPTH MD TVD	BOPE	FORMATION	HOLE SIZE (IN.)	MUD WT.	FRAC GRAD
Grnd Level	RKB	30					
GL ELEV.				Set and grouted			
30"		120' / 120'	Open			8.8	
					18.125"	8.4	
		1,255		Rustler			
16"		1,580 / 1,580	21-1/4"-5M Annular/Diverter			8.4	
84 lb/ft J55, BTC		1,630		T/Salt		9.5	
Mud Logging to begin @ 2,500'							
		4,780		B/Salt	14.75"	9.5 to 10	
13.375"		4,930 / 4,930	13-5/8"-5M Annular	Bell Canyon		10.0	
68 lb/ft L-80, EZ-GO FJ3		5,030	13-5/8"-5M BOP's			9.4	FIT
		6,180		Cherry Canyon			
		7,305		Brushy Canyon			
		8,880		Bone Spring			
		9,930		1st BS Sand			
		10,880		2nd BS Sand			
		11,930		3rd BS Sand	12.25"	9.4 to 10.0	
TOL		12,205 / 12,205					
		12,305		Wolfcamp			
53.5lb/ft HCP-110, BTC		12,405 / 12,405	13-5/8"-5M Annular			10.0	
			13-5/8"-10M BOP's			12.5	15.6
		14,130		Strawn			
		14,380		Atoka			
		14,930		Morrow			
					8.5"	12.5 to 13.5	
		15,805		Barnett			
		16,705		Miss LM			
		17,305		Woodford			
Liner Wedge 513	7.625"	17,730 / 17,730	13-5/8"-5M Annular	Devonion		13.5	
39 lb/ft P-110			13-5/8"-10M BOP's				
Run #1					6.5"	9.0	
GR/NEUTRON	18,980 - 0						
USIT/CBL	17,730 - 0						
Dual 0"							
TD		18,980 / 18,980	13-5/8"-5M Annular	Base of Fusselman			
			13-5/8"-10M BOP's				

Formation	GL	3627
Tops	KB	3657
	SS	TVD
Rustler	2402	1255
T/Salt	2027	1630
B/Salt	-1123	4780
Lamar		
Bell Canyon	-1373	5030
Cherry Canyon	-2523	6180
Brushy Canyon	-3648	7305
Bone Spring	-5223	8880
1st BS Sand	-6273	9930
2nd BS Sand	-7223	10880
3rd BS Sand	-8273	11930
Wolfcamp	-8648	12305
Penn		
Cisco		
Canyon		
Strawn	-10473	14130
Atoka	-10723	14380
Morrow	-11273	14930
Morrow Clastics		
Morrow Lower		
Barnett	-12148	15805
Miss LM	-13048	16705
Woodford	-13648	17305
Devonion	-14073	17730
Fusselman	-14823	18480
T/Montoya	-15523	19180
Simpson	-16048	19705
Ellenburger	-16698	20355
Glanite	-17373	21030
Injection Interval	17730	18980
TD		18980

Casing Set Depths/ Ceme			
Conductor	120'	Hole Size	Casing Size
Surface		18.125"	16"
1st Intermediate		14.75"	13.375"
2nd Intermediate		12.25"	9.625"
Liner Wedge 513		8.5"	7.625"
Openhole		6.5"	

nt				
	Setting Depth			
Casing Weight	TOP	Bottom	Sacks of Cement	TOC
84 lb/ft	0-	1580	3,637	Surface
68 lb/ft	0-	4930	2,966	Surface
53.5lb/ft	0-	12405	2,935	Surface
39 lb/ft	12205	17730	225	Liner Top
	17730	18980		

