

**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**APPLICATION OF PILOT WATER SOLUTIONS  
SWD, LLC FOR SALT WATER DISPOSAL IN  
LEA COUNTY, NEW MEXICO**

**CASE NO.** \_\_\_\_\_

**APPLICATION FOR SALT WATER DISPOSAL**

PILOT WATER SOLUTIONS SWD, LLC, (OGRID 331374) by and through its undersigned attorney, applies for an order approving a salt water disposal well, and in support thereof, states:

1. Applicant seeks an order for a salt water disposal well for its Juice SWD State No. 1, (Pool Code 96121) to be drilled at a location 497 FNL and 771 FWL, Unit D, Section 7, Township 19 South, Range 37 East, N.M.P.M., Lea County, New Mexico.
2. Applicant proposes to set a packer at 4,408' feet below the surface of the earth and then inject into the San Andres formation at depths between 4,461' through 5,510' open hole, as stated in the attached C-108.
3. Attached hereto as Exhibit A is the C-108 for the subject well.
4. The granting of this application will prevent waste and protect correlative rights.

**WHEREFORE**, Applicant requests that, after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

PADILLA LAW FIRM, P.A.

/s/ Ernest L. Padilla

Ernest L. Padilla

Attorney for Pilot Water Solutions SWD, LLC

PO Box 2523

Santa Fe, New Mexico 87504

505-988-7577

[padillalawnm@outlook.com](mailto:padillalawnm@outlook.com)



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September 01, 2023

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

Subject: Pilot Water Solutions SWD LLC  
Application for Authorization to Inject  
Juice SWD State #1

Mr. Fuge,

Pilot Water Solutions SWD LLC (Pilot) is applying for administrative approval of the attached Application for Authorization to Inject (Form C-108) for their proposed Juice SWD State #1. The application is requesting authorization to dispose of saltwater from oil and gas production in the area via commercial disposal into the San Andres Formation in Lea County, NM.

Questions regarding this application or the included materials can be directed to Nate Alleman (Pilot Regulatory Advisor Contractor) via telephone at 918-237-0559 or via email at [nate.alleman@aceadvisors.com](mailto:nate.alleman@aceadvisors.com).

Sincerely,

A handwritten signature in black ink that reads "Nathan Alleman".

Nate Alleman  
Chief Regulatory Advisor  
Ace Energy Advisors

Revised March 23, 2017

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: Pilot Water Solutions SWD LLC OGRID Number: 331374  
 Well Name: Juice SWD State #1 API: 30-025-  
 Pool: SWD; San Andres Pool Code: 96121

### 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.

David Grounds

Print or Type Name

David Grounds

Signature

09/01/2023

Date

713-307-8752

Phone Number

david.grounds@pilotwater.com

e-mail Address

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL  
RESOURCES DEPARTMENT

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

FORM C-108  
Revised June 10, 2003

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_ ☒ Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_ ☒ Yes \_\_\_\_\_ No
- II. OPERATOR: Pilot Water Solutions SWD LLC  
ADDRESS: 20 Greenway Plaza, Suite 200, Houston, TX 77046  
CONTACT PARTY: David Grounds PHONE: 713-307-8752
- 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 \_\_\_\_\_ ☒ No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: David Grounds TITLE: VP - Regulatory Compliance  
SIGNATURE: David Grounds DATE: 09/01/2023  
E-MAIL ADDRESS: david.grounds@pilotwater.com
- \* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

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

### III. Well Data

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

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

Operator: Pilot Water Solutions SWD LLC (OGRID# 331374)

Lease/Well Name & Number: Juice SWD State #1

Legal 497' FNL & 771' FWL - Unit D – Section 7 T19S R37E – Lea County

- (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.**

Casing String	Hole Size (in)	Casing Size (in)	Casing Depth (ft)	Sacks Cement (sx)	Top of Cement (ft)	Method Determined
Surface	17-1/2	13-3/8	1,448	2,269.6	0	Circulation
Production	12-1/4	9-5/8	5,510	1,644.7	0	Circulation

A wellbore diagram is included in **Attachment 1**.

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

5-1/2" fiberglass-coated tubing set at 4,408'

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

Weatherford AS1X Stainless 9-5/8" X 5-1/2" set at 4,408'

**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.**

Injection Formation Name - San Andres

Pool Name - SWD; San Andres

Pool Code – 96121

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

Cased-hole injection between 4,408' - 5,510'

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

New drill for injection

- (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.**

None

- (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.**

- **Overlying**
  - Yates (2,729')
  - 7 Rivers (3,006')
  - Queen (3,586')
  - Grayburg (3,969')
- **Underlying** - No underlying oil and gas zones present.

**Note:** the proposed SWD is located on the Central Basin Platform. Therefore, the listed productive zones are limited to those productive zones occurring on the Central Basin Platform.

## **V. AOR Maps**

**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.**

The following maps are included in **Attachment 2**:

- ½-Mile AOR/Surface & Mineral Ownership Map
- ½-Mile Lease Map
- 2-Mile Oil & Gas Well Map

## **VI. AOR List**

**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.**

Details of the wells within the 0.5-mile AOR are included in **Attachment 2**. No wells within the 0.5-mile AOR penetrate the top of the proposed injection zone.

## **VII. Operational Information**

**Attach data on the proposed operation, including:**

- (1) Proposed average and maximum daily rate and volume of fluids to be injected;**

Maximum: 25,000 bpd

Average: 15,000 bpd

- (2) Whether the system is open or closed;**

The system will be closed.

- (3) Proposed average and maximum injection pressure;**

Maximum: 882 psi (surface)

Average: approx. 500-600 psi (surface)

- (4) Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water;**

It is anticipated that produced water from Wolfcamp and Bone Spring production wells in the area will be injected into the proposed SWD. Therefore, water analysis from these formations was obtained and is included in **Attachment 3**.

- (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.).**

The proposed injection interval for this SWD is the San Andres formation, which is a non-productive zone known to be compatible with formation water from the Wolfcamp and Bone Spring formations. Water analyses of samples collected from the proposed injection formation in the area were obtained and are included in **Attachment 4**.

## **VIII. Geologic Description**

**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.**

The proposed injection interval is located in the San Andres formation between the depths of 4,408 and 5,510 feet. The San Andres formation consists of an interbedded carbonate sequence composed of limestone and dolomite. These cycles tend to be mappable within the San Andres and are differentiated by sections of either very high or very low porosity and permeability development. Upper and lower confinement will be provided by tight carbonate facies present within San Andres that occur above and below the porous injection interval. The upper confining interval occurs at the top of the San Andres formation, directly underlying the Grayburg formation, and ranges from 125' – 150' net thickness based on a review of nearby open-hole geophysical logs. The lower confining interval occurs at the bottom of the San Andres formation, directly overlying the Glorieta formation, and ranges from 150' - 200' net thickness based on a review of nearby open-hole geophysical logs.

The base of the lowermost Underground Source of Drinking Water (USDW), identified as the top of the first anhydrite, was determined to occur at the top of the Rustler formation at a depth of 1,423'. Water wells in the area are drilled to a depth of approximately 95' – 143'.

## **IX. Proposed Stimulation Program**

**Describe the proposed stimulation program, if any.**

A minor acid job utilizing 15-20% hydrochloric acid may be used to cleanup the wellbore.

## **X. Logging and Test Data**

**Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).**

Logs will be run and submitted to the Division once the well is completed.

## **XI. Groundwater Wells**

**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.**

Based on data obtained from the New Mexico Office of the State Engineer (OSE), a total of 14 groundwater wells (8 active, 1 pending, 5 plugged) are located within 1 mile of the proposed SWD location. Water samples have been collected and analyzed for 3 of these water wells.

**Attachment 5** includes a table with details of the water wells within 1-mile, a water well map, and analysis of the collected water samples.

## **XII. No Hydrologic Connection Statement**

**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.**

A geologic review conducted on offset wireline log data and published regional studies did not identify any faulting in the vicinity of the proposed locations that would allow for the hydraulic communication between the injection interval and overlying USDWs. The base of the lowermost Underground Source of Drinking Water (USDW), identified as the top of the first anhydrite, was determined to occur at the top of the Rustler formation at a depth of 1,423'.

### **XIII. Proof of Notice**

**Applicants must complete the "Proof of Notice" section on the reverse side of this form.**

**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.**

A copy of the application was mailed to the Affected Persons, including the OCD District Office, surface owner, leasehold operators within the AOR, and BLM/SLO if they own minerals within the AOR. **Attachment 6** includes a list of the Affected Persons receiving notice of the application and the associated certified mailing receipts (green sheets).

**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.**

A Public Notice was published in the Hobbs NewsSun, a newspaper of general circulation in the area, and the associated affidavit is included in **Attachment 6**.



## **Attachment 1**

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

<sup>1</sup> API Number	<sup>2</sup> Pool Code 96121	<sup>3</sup> Pool Name SWD; San Andres
<sup>4</sup> Property Code	<sup>5</sup> Property Name JUICE SWD STATE	<sup>6</sup> Well Number #1
<sup>7</sup> OGRID No. 371374	<sup>8</sup> Operator Name Pilot Water Solutions SWD LLC	<sup>9</sup> Elevation 3723.65'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	7	19 S	37 E		497	NORTH	771	WEST	LEA

<sup>11</sup> 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

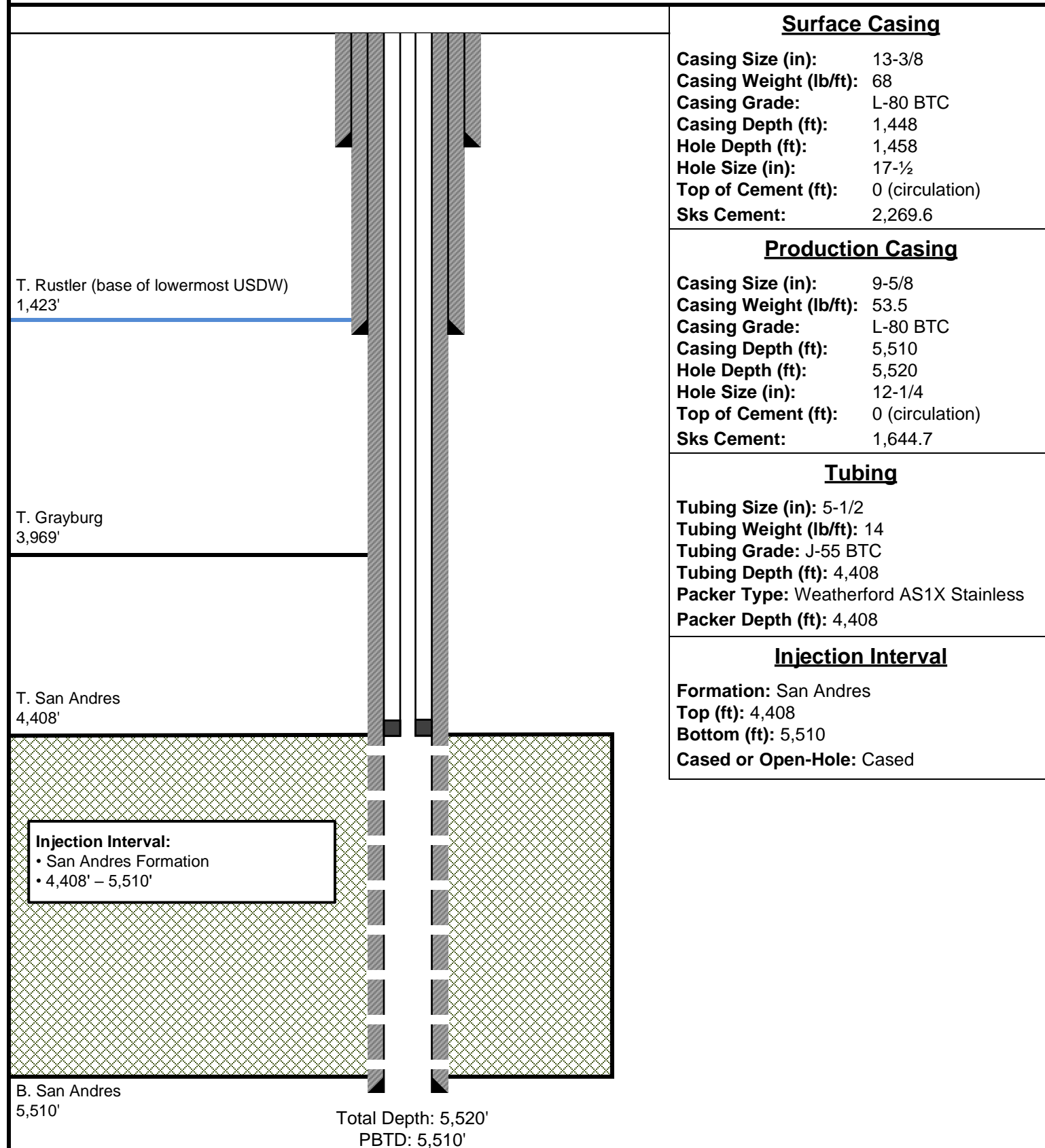
<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.

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.

<sup>16</sup> 	C	B	A	<sup>17</sup> <b>OPERATOR CERTIFICATION</b> 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 08/22/2023 Date Nate Alleman Printed Name nate.alleman@aceadvisors.com E-mail Address	
	E	F	G		H
	GEODETIC DATA NAD 83 NM EAST JUICE SWD STATE 1 X: 860296.21' Y: 613019.33' LAT.: N 32.680951196 LONG.: W -103.296683626 1-Y=613523.07', X=859519.35' 2-Y=613473.44', X=864761.20' 3-Y=608197.49', X=864814.68' 4-Y=608228.87', X=859582.20'				I
	L	K	J		
M	N	O	P	<sup>18</sup> <b>SURVEYOR CERTIFICATION</b> 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.  Date of Survey Signature and Seal of Professional Surveyor: 07/25/2023 Date Certificate Number	

# Pilot Water Solutions SWD LLC

## Juice SWD State #1 Wellbore Diagram



Note: Listed depths and cement volumes are approximates based on available information.

NOT TO SCALE

## **Attachment 2**

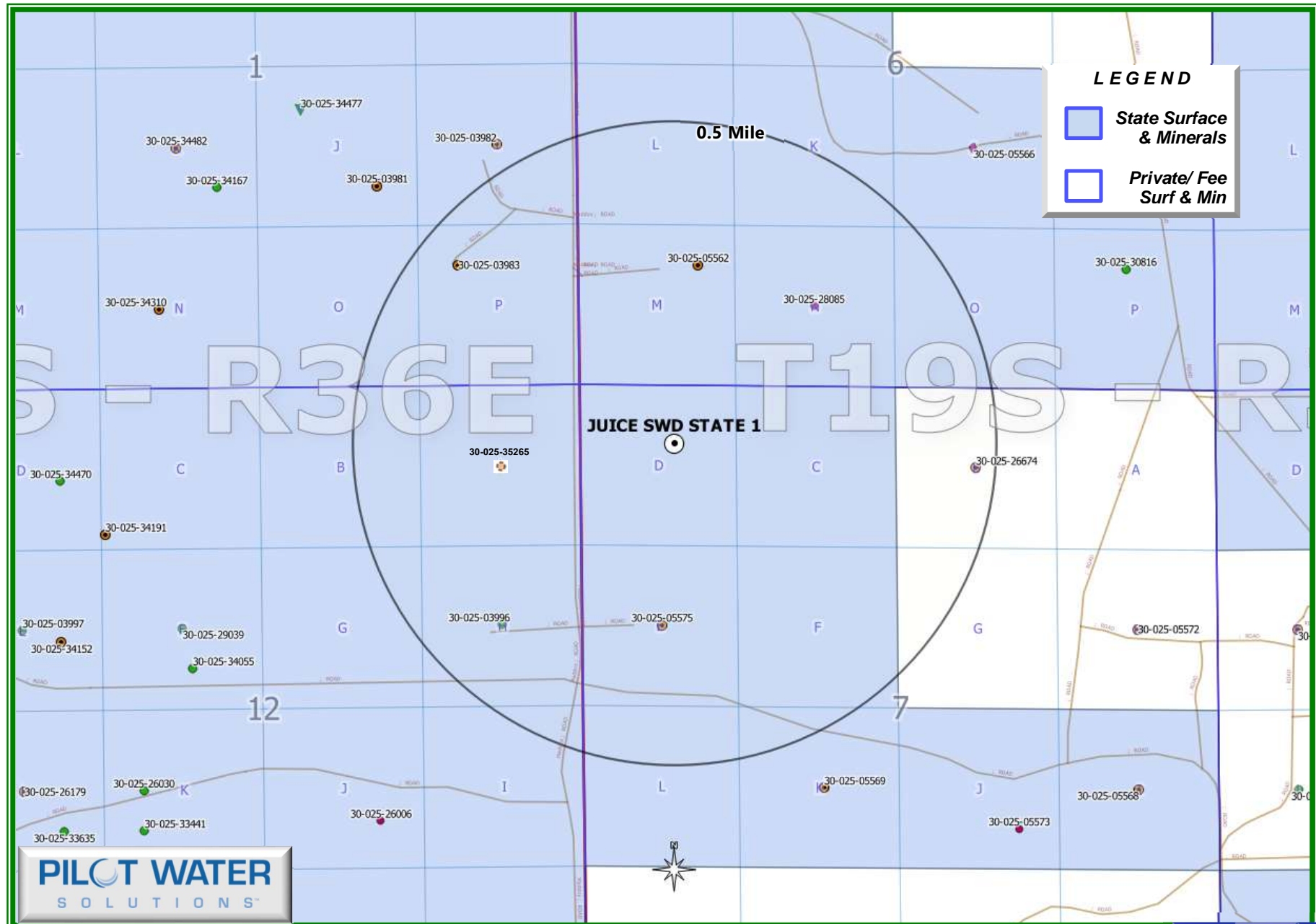
(Attachment to NMOCD Form C-108 - Item V)





# Juice SWD State #1 – Surface & Minerals Ownership

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



**1/2-mile AOR Tabulation for Juice SWD State #1 (Top of Injection Interval: 4,408')**

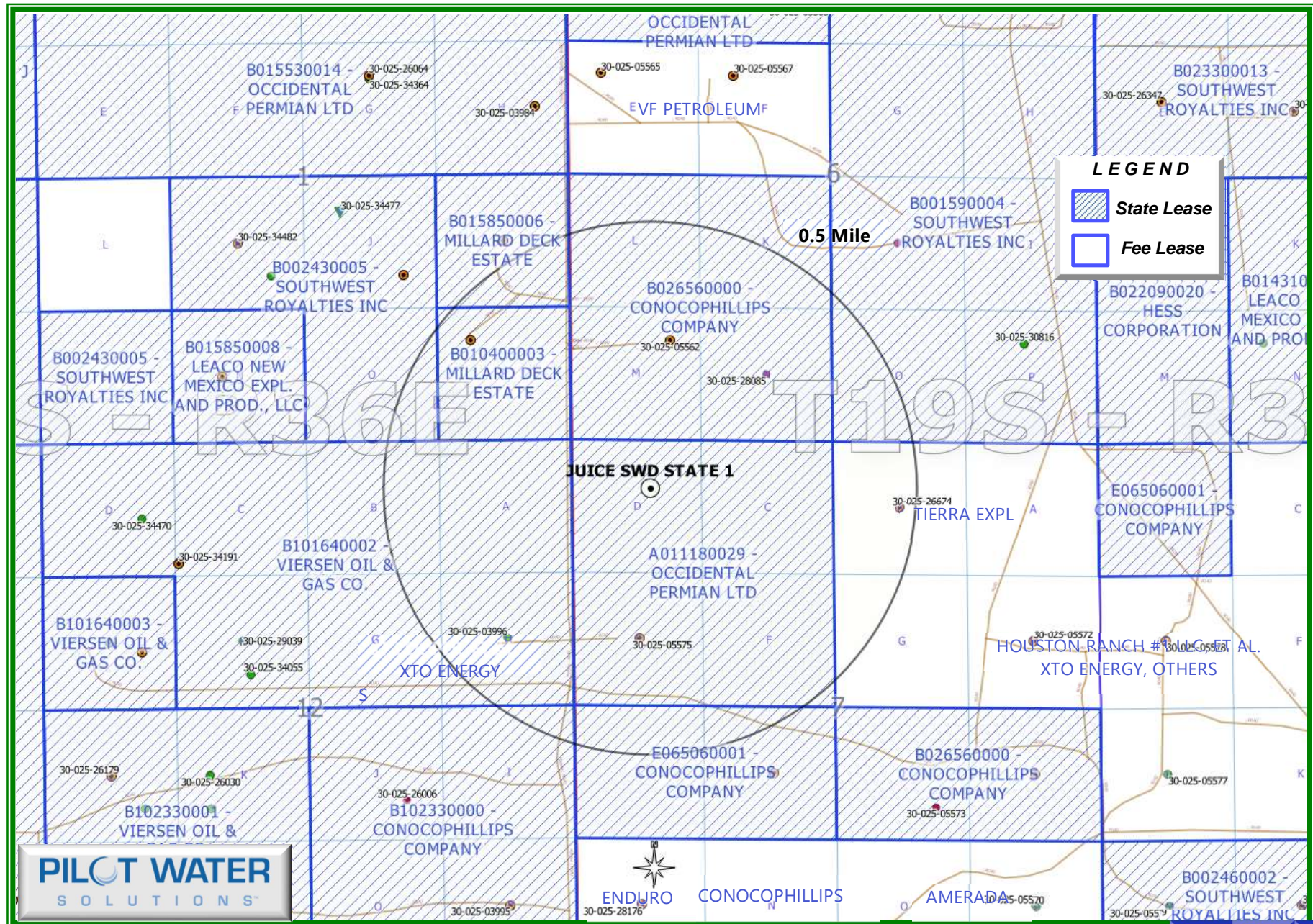
Well Name	API#	Well Type	Operator	Status	Spud Date	Location (Sec., Tn., Rng.)	Total Vertical Depth (feet)	Penetrate Inj. Zone?
STATE YA #001	30-025-03983	O	MACK ENERGY CORP	Plugged (site released)	10/30/1958	P-01-19S-36E	4,057	No
MONUMENT #006	30-025-35265	O	SAGA PETROLEUM LIMITED LIABILITY CO.	Cancelled		A-12-19S-36E	0	No
PENROC MONUMENT #001	30-025-03996	O	FULFER OIL & CATTLE LLC	Active	3/8/1953	H-12-19S-36E	3,900	No
SHELL STATE #001	30-025-05575	G	BURLESON PETROLEUM, INC	Plugged (site released)	8/30/1953	E-07-19S-37E	3,880	No
JO #002	30-025-05562	G	LANEXCO INC	Plugged (site released)	7/23/1954	M-06-19S-37E	3,885	No
JO #001	30-025-28085	G	Energy Acumen LLC	Active	1/7/1983	N-06-19S-37E	3,950	No
GULF-HOUSTON #001	30-025-26674	G	TIERRA EXPL INC	Plugged (site released)	2/13/1980	B-07-19S-37E	4,100	No

**Notes:** No wells within the 1/2-mile AOR penetrate the injection interval.



# Juice SWD State #1 – Leasehold Plat

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





### **Attachment 3**

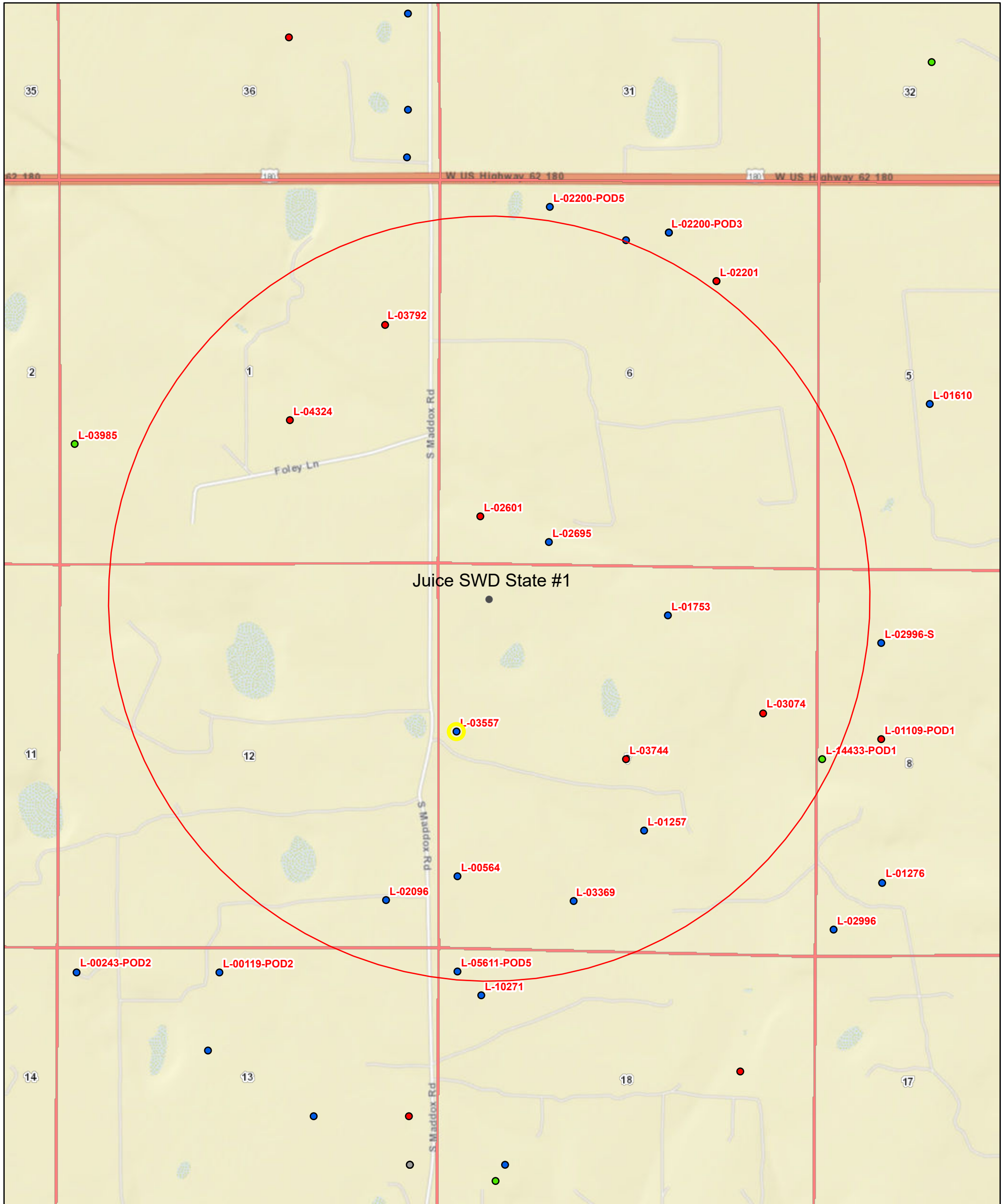
Source Formation Water Analysis																							
Well Name	API	Latitude	Longitude	Section	Township	Range	Unit	Ftgns	Ftgew	County	State	Formation	Sampled	PH	TDS (Mg/L)	Sodium (Mg/L)	Calcium (MG/L)	Iron (MG/L)	Magnesium (MG/L)	Manganese (MG/L)	Chloride (MG/L)	Bicarbonate (MG/L)	Sulfate (MG/L)
STATE NPA #001	3002503156	32.6879654	-103.5031815	6	19S	35E	L	1980S	660W	LEA	NM	BONE SPRING	1960	7.7	25800.0						14100.0	830.0	1120.0
SHOOTING STAR STATE SWD #001	3002529805	32.7594261	-103.4270935	11	18S	35E	J	1650S	2310E	LEA	NM	BONE SPRING	2001	6.2			15600.0	2.5	981.9		148248.0	244.0	650.0
SINCLAIR STATE #002	3002503123	32.7386246	-103.4561005	21	18S	35E	A	660N	660E	LEA	NM	WOLFCAMP	1960	7.1	60950.0						33568.0	1087.0	3049.0
IRONHOUSE 19 STATE COM #001H	3002540676	32.7266121	-103.499527	19	18S	35E	N	200S	1800W	Lea	NM	BONE SPRING 2ND SAND	2014	6.4	182863.9	58171.0	4944.4	49.0	1892.6	1.4	113954.0	195.2	0.0
IRONHOUSE 19 STATE COM #004H	3002541245	32.7264938	-103.5014343	19	18S	35E	M	150S	1215W	Lea	NM	BONE SPRING 2ND SAND	2014	6.2	189029.2	64016.2	5319.3	38.8	2044.4	1.5	113566.0	158.6	0.0
IRONHOUSE 19 STATE COM #002H	3002541094	32.7271118	-103.4903336	19	18S	35E	P	410S	630E	Lea	NM	BONE SPRING 2ND SAND	2014	6.0	205332.0	72646.0	4828.0	39.0	2316.0	2.0	130450.0	488.0	1503.0
IRONHOUSE 20 STATE COM #001	3002540611	32.7265129	-103.4774857	20	18S	35E	O	200S	1980E	Lea	NM	BONE SPRING 2ND SAND	2014	6.1	186865.0	65638.0	4698.0	16.0	1700.0	1.0	116510.0	1098.0	1804.0
IRONHOUSE 20 STATE #002H	3002540748	32.7265129	-103.4731903	20	18S	35E	P	200S	660E	Lea	NM	BONE SPRING 2ND SAND	2014	6.6	196865.0	66738.0	4631.0	23.0	1790.0	1.0	116580.0	1298.0	1894.0
IRONHOUSE 19 STATE COM #003H	3002541050	32.7264977	-103.4941711	19	18S	35E	O	175S	1810E	Lea	NM	BONE SPRING 2ND SAND	2014	6.2	178457.0	56874.0	6125.0	22.0	1457.0	1.0	125412.0	845.0	849.0
HAMON STATE #001	3002503140	32.7175827	-103.4464035	27	18S	35E	K	2310S	2310W	LEA	NM	BONE SPRING			154510.0						96360.0	430.0	1210.0
LEA 403 STATE #001	3002503126	32.7386093	-103.4518051	22	18S	35E	D	660N	660W	LEA	NM	BONE SPRING	1958	6.7	255451.0						156699.0	327.0	779.0

## **Attachment 4**

Injection Formation Water Analysis																		
Well Name	API	Latitude	Longitude	Section	Township	Range	Unit	Ftgns	Ftgew	County	State	Formation	Sampled	PH	TDS (Mg/L)	Chloride (MG/L)	Bicarbonate (MG/L)	Sulfate (MG/L)
B V CULP NCT A #008	3002505640	32.6467896	-103.2919235	19	19S	37E	F	2310N	2239W	LEA	NM	SAN ANDRES			10905	2350	1100	3700
B V CULP NCT A #008	3002505640	32.6467896	-103.2919235	19	19S	37E	F	2310N	2239W	LEA	NM	SAN ANDRES			26735	14500	1370	1020
B V CULP NCT A #008	3002505640	32.6467896	-103.2919235	19	19S	37E	F	2310N	2239W	LEA	NM	SAN ANDRES			40250	20800	1390	3100
B V CULP NCT A #008	3002505640	32.6467896	-103.2919235	19	19S	37E	F	2310N	2239W	LEA	NM	SAN ANDRES			71110	39800	810	3500
B V CULP NCT A #008	3002505640	32.6467896	-103.2919235	19	19S	37E	F	2310N	2239W	LEA	NM	SAN ANDRES			156218	95130	176	771
NORTH MONUMENT G/SA UNIT #001	3002505647	32.6512489	-103.2843475	19	19S	37E	A	660N	660E	Lea	NM	SAN ANDRES	1964	6.0		10200	592	1938
GOODWIN #002	3002520651	32.7204323	-103.2928467	30	18S	37E	F	1980N	1980W	LEA	NM	SAN ANDRES			80467	45060	1492	3315
GOODWIN #002	3002520651	32.7204323	-103.2928467	30	18S	37E	F	1980N	1980W	LEA	NM	SAN ANDRES			69848	39130	1225	3114
NORTH HOBBS UNIT #001	3002505449	32.7530632	-103.21138	13	18S	37E	D	660N	660W	LEA	NM	SAN ANDRES	1960	8.0	12100	4500	504	2300
NORTH HOBBS UNIT #001	3002505449	32.7530632	-103.21138	13	18S	37E	D	660N	660W	LEA	NM	SAN ANDRES			12100	4541	509	2321
BOBBI STATE WF UNIT #006	3002503978	32.7231979	-103.373436	29	18S	36E	B	990N	1650E	LEA	NM	SAN ANDRES			20882	11190	645	1232
STATE NG #001	3002522795	32.7349815	-103.3057404	24	18S	36E	G	1980N	1980E	LEA	NM	SAN ANDRES	1968	6.5	265665	157000	98	5400
STATE NG #001	3002522795	32.7349815	-103.3057404	24	18S	36E	G	1980N	1980E	LEA	NM	SAN ANDRES	1968	6.3	203913	122000	110	3000
GRAHAM STATE NCT F #003	3002512476	32.6149902	-103.3056641	36	19S	36E	J	1980S	1980E	LEA	NM	SAN ANDRES	1900	6.5		16406	611	
NORTHWEST EUMONT UNIT #156	3002504099	32.617733	-103.3518143	33	19S	36E	H	2310N	330E	Lea	NM	SAN ANDRES	1960	7.0		38119	405	4317
GRAHAM STATE NCT F #003	3002512476	32.6149902	-103.3056641	36	19S	36E	J	1980S	1980E	Lea	NM	SAN ANDRES	1964	6.5		16406	611	
GRAHAM STATE NCT F #003	3002512476	32.6149902	-103.3056641	36	19S	36E	J	1980S	1980E	LEA	NM	SAN ANDRES			26344			
E M E SWD #008	3002506017	32.5895042	-103.2725601	8	20S	37E	G	1980N	2310E	LEA	NM	SAN ANDRES	1964	8.5	65365	36905	560	1460
THEODORE ANDERSON #002	3002506139	32.5785942	-103.2758102	17	20S	37E	C	660N	1980W	Lea	NM	SAN ANDRES	1964	6.7		67245	564	489
E M E SWD #008	3002506017	32.5895042	-103.2725601	8	20S	37E	G	1980N	2310E	LEA	NM	SAN ANDRES			65361	36900	560	1460
EUNICE MONUMENT UNIT #031	3002506169	32.5531693	-103.2843781	19	20S	37E	P	660S	660E	LEA	NM	SAN ANDRES			91120	59850	0	722

## **Attachment 5**

# Juice SWD State #1 - Water Well Map

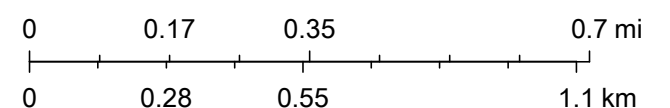


9/1/2023, 7:40:59 AM

## GIS WATERS PODs

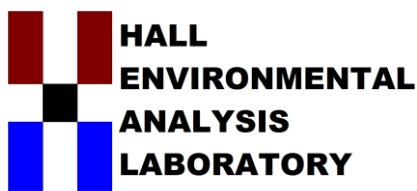
- Active  
 ● Pending  
 ● Capped
- Plugged  
 ● Incomplete  
 Sections

1:18,056



OSE SLO, Bureau of Land Management, Esri, HERE,  
Garmin, INCREMENT P, NGA, USGS

Water Well Sampling Table					
Water Well ID	OSE Status	Owner	Available Contact Information	Use	Notes
L 03557	Active	VERSADO GAS PROCESSORS LLC	Versado Gas Processors, Llc Po Box 1909 Eunice, NM 88235	Industrial	Industrial use - not fresh water supply well
L 01257	Active	GULF OIL CORPORATION	Gulf Oil Corporation Box 1290 Fort Worth, TX	Prospecting	O&G Prospecting - not fresh water supply well
L 02096	Active	TRINITY DRILLING COMPANY	Trinity Drilling Company Box 1906 Odessa, TX	Prospecting	O&G Prospecting - not fresh water supply well
L 02601	Plugged	CONTINENTAL OIL COMPANY	Continental Oil Company Box Cc Hobbs, NM	Prospecting	Plugged - O&G Prospecting - not fresh water supply well
L 02695	Active	THE TEXAS COMPANY	The Texas Company Box Ff Hobbs, NM	Prospecting	O&G Prospecting - not fresh water supply well
L 03074	Plugged	OSCAR BOURG DRILLING COMPANY	Oscar Bourg Drilling Company C/o O R Musslewhite Box 56 Hobbs, NM	Prospecting	Plugged - O&G Prospecting - not fresh water supply well
L 03369	Active	VELMA PETROLEUM COMPANY	Velma Petroleum Company Box 1955 Hobbs, NM	Prospecting	O&G Prospecting - not fresh water supply well
L 04324	Plugged	DONNELLY DRILLING CO INC	Donnelly Drilling Co Inc Box 433 Artesia, NM	Prospecting	Plugged - O&G Prospecting - not fresh water supply well
L 03744	Plugged	HOWARD P HOLMES DRILLING CONT.	Howard P Holmes Drilling Cont. Box 667 Hobbs, NM	Prospecting	Plugged - O&G Prospecting - not fresh water supply well
L 03792	Plugged	GACKLE DRILLING COMPANY	Gackle Drilling Company Box 1076 Hobbs, NM	Prospecting	Plugged - O&G Prospecting - not fresh water supply well
L 01753	Active	HUSTON JR.	Robert H. Huston, Jr. Box 1082 Hobbs, NM	Irrigation	OSE Records indicate water right was cancelled.
L 00564	Active	VERSADO GAS PROCESSORS LLC	Versado Gas Processors, Llc Po Box 1909 Eunice, NM 88235	Industrial	Sample collected 7/26/2023
L 05611 POD5	Active	MONUMENT WATER USERS COOP.	Monument Water Users Coop. Po Box 48 Monument, NM 88265	Municipal	Sample collected 7/26/2023
L 14433 POD1	Pending	HUSTON RANCH NO 1 LLC	Huston Ranch No 1 Llc Po Drawer 1599 Lovington, NM 88260	Livestock watering	Sample collected 7/12/2023
Notes:	L-2996 is outside the 1-mile water sampling radius; however, the analytical results for the sample of this water well are included in the attachments because they were attached to the report with the results for L-14433-P				



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

August 09, 2023

Brian Wood  
Permits West  
37 Verano Loop  
Santa Fe, NM 87508  
TEL: (505) 466-8120  
FAX: (505) 466-9682

Sample ID "Pump Tank" is from Water Well L-00564  
Sample ID "PWRTank" is from Water Well L-05611-  
POD5

RE: Pilot

OrderNo.: 2307D30

Dear Brian Wood:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/27/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109



**Hall Environmental Analysis Laboratory, Inc.**

## Analytical Report

Lab Order **2307D30**

Date Reported: 8/9/2023

**CLIENT:** Permits West

**Client Sample ID:** PWRTank **L-05611 POD5**

**Project:** Pilot

**Collection Date:** 7/26/2023 10:10:00 AM

**Lab ID:** 2307D30-001

**Matrix:** AQUEOUS

Received Date: 7/27/2023 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B							Analyst: SMS
N-Hexane Extractable Material	ND	5.06		mg/L	1	8/4/2023 5:29:00 PM	76563
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	29	2.5		mg/L	5	7/27/2023 2:20:37 PM	R98559
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JAG
Total Dissolved Solids	332	100	D	mg/L	1	7/31/2023 4:18:00 PM	76539

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 1 of 5

CLIENT: Permits West

Client Sample ID: Pump Tank L-00546

Project: Pilot

Collection Date: 7/26/2023 10:30:00 AM

Lab ID: 2307D30-002

Matrix: AQUEOUS

Received Date: 7/27/2023 9:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B							Analyst: SMS
N-Hexane Extractable Material	ND	4.83		mg/L	1	8/4/2023 5:29:00 PM	76563
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	65	2.5		mg/L	5	7/27/2023 2:46:22 PM	R98559
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JAG
Total Dissolved Solids	452	50.0		mg/L	1	7/31/2023 4:18:00 PM	76539

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**WO#: **2307D30****09-Aug-23****Client:** Permits West**Project:** Pilot

Sample ID: <b>MB-76563</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 1664B</b>								
Client ID: <b>PBW</b>	Batch ID: <b>76563</b>	RunNo: <b>98748</b>								
Prep Date: <b>8/1/2023</b>	Analysis Date: <b>8/4/2023</b>	SeqNo: <b>3596785</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	5.00								
Silica Gel Treated N-Hexane Extract	ND	5.00								

Sample ID: <b>LCS-76563</b>	SampType: <b>LCS-1L</b>	TestCode: <b>EPA Method 1664B</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>76563</b>	RunNo: <b>98748</b>								
Prep Date: <b>8/1/2023</b>	Analysis Date: <b>8/4/2023</b>	SeqNo: <b>3596786</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	36.3	5.00	40.00	0	90.8	78	114			
Silica Gel Treated N-Hexane Extract	12.9	5.00	20.00	0	64.5	64	132			

Sample ID: <b>LCSD-76563</b>	SampType: <b>LCSD-1L</b>	TestCode: <b>EPA Method 1664B</b>								
Client ID: <b>BatchQC</b>	Batch ID: <b>76563</b>	RunNo: <b>98748</b>								
Prep Date: <b>8/1/2023</b>	Analysis Date: <b>8/4/2023</b>	SeqNo: <b>3596787</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	35.3	5.00	40.00	0	88.3	78	114	2.79	20	
Silica Gel Treated N-Hexane Extract	13.1	5.00	20.00	0	65.5	64	132	1.54	20	

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307D30

09-Aug-23

Client: Permits West

Project: Pilot

Sample ID: <b>MB</b>	SampType: <b>mblk</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R98559</b>		RunNo: <b>98559</b>							
Prep Date:	Analysis Date: <b>7/27/2023</b>		SeqNo: <b>3589058</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: <b>LCS</b>	SampType: <b>lcs</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>R98559</b>		RunNo: <b>98559</b>							
Prep Date:	Analysis Date: <b>7/27/2023</b>		SeqNo: <b>3589059</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.1	90	110			

Sample ID: <b>MB</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 300.0: Anions</b>							
Client ID: <b>PBW</b>	Batch ID: <b>R98559</b>		RunNo: <b>98559</b>							
Prep Date:	Analysis Date: <b>7/27/2023</b>		SeqNo: <b>3589173</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307D30

09-Aug-23

Client: Permits West

Project: Pilot

Sample ID: <b>MB-76539</b>	SampType: <b>MBLK</b>	TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>								
Client ID: <b>PBW</b>	Batch ID: <b>76539</b>	RunNo: <b>98611</b>								
Prep Date: <b>7/28/2023</b>	Analysis Date: <b>7/31/2023</b>	SeqNo: <b>3591121</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: <b>LCS-76539</b>	SampType: <b>LCS</b>	TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>76539</b>	RunNo: <b>98611</b>								
Prep Date: <b>7/28/2023</b>	Analysis Date: <b>7/31/2023</b>	SeqNo: <b>3591122</b>	Units: <b>mg/L</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	50.0	1000	0	100	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Permits West

Work Order Number: 2307D30

RcptNo: 1

Received By: Steve McQuiston

7/27/2023 9:55:00 AM

Completed By: Desiree Dominguez

7/27/2023 10:02:07 AM

Reviewed By:

7-27-23

*Handwritten signature*

*Handwritten initials*

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace  $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?  
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☐ No ☒
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?  
(If no, notify customer for authorization.) Yes ☒ No ☐

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted?

Checked by:

*Handwritten signature: SCM 07/27/23*

### Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via:

☐ eMail

☐ Phone

☐ Fax

☐ In Person

Regarding:

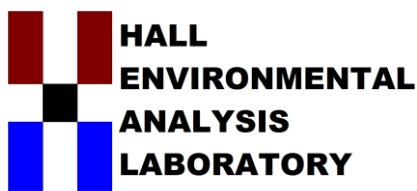
Client Instructions:

16. Additional remarks:

### 17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Not Present	Morty		





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

July 25, 2023

Brian Wood  
Permits West  
37 Verano Loop  
Santa Fe, NM 87508  
TEL: (505) 466-8120  
FAX: (505) 466-9682

Sample ID "Tank 1" is from Water Well L-02996  
Sample ID "WM Pond" is from Water Well L-14433-POD1

RE: Pi

OrderNo.: 2307569

Dear Brian Wood:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/13/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

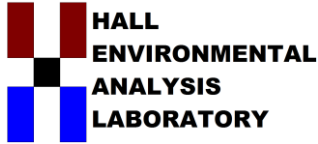
ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109





Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

## Case Narrative

WO#: 2307569  
Date: 7/25/2023

---

**CLIENT:** Permits West

**Project:** Pi

---

Analytical Notes Regarding EPA Method 1664:  
A matrix spike was not performed with this batch of samples.

CLIENT: Permits West  
Project: Pi  
Lab ID: 2307569-001

Client Sample ID: Tank 1 L-02996  
Collection Date: 7/12/2023 1:30:00 PM  
Received Date: 7/13/2023 10:18:00 AM

Matrix: AQUEOUS

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B							Analyst: SMS
N-Hexane Extractable Material	ND	9.58		mg/L	1	7/19/2023 7:21:00 PM	76250
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	85	2.5		mg/L	5	7/13/2023 5:30:18 PM	R98202
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JAG
Total Dissolved Solids	448	50.0		mg/L	1	7/19/2023 2:20:00 PM	76283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2307569

Date Reported: 7/25/2023

CLIENT: Permits West Client Sample ID: WM Pond L-14433-POD1  
Project: Pi Collection Date: 7/12/2023 12:45:00 PM  
Lab ID: 2307569-002 Matrix: AQUEOUS Received Date: 7/13/2023 10:18:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 1664B							Analyst: SMS
N-Hexane Extractable Material	ND	10.9		mg/L	1	7/19/2023 7:21:00 PM	76250
EPA METHOD 300.0: ANIONS							Analyst: JMT
Chloride	160	5.0		mg/L	10	7/13/2023 5:55:00 PM	R98202
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JAG
Total Dissolved Solids	910	100	*D	mg/L	1	7/19/2023 2:20:00 PM	76283

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

**QC SUMMARY REPORT****Hall Environmental Analysis Laboratory, Inc.**

WO#: 2307569

25-Jul-23

**Client:** Permits West**Project:** Pi

Sample ID: <b>MB-76250</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 1664B</b>								
Client ID: <b>PBW</b>	Batch ID: <b>76250</b>	RunNo: <b>98341</b>								
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579205</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10.0								

Sample ID: <b>LCS-76250</b>	SampType: <b>LCS</b>	TestCode: <b>EPA Method 1664B</b>								
Client ID: <b>LCSW</b>	Batch ID: <b>76250</b>	RunNo: <b>98341</b>								
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579206</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	34.6	10.0	40.00	0	86.5	78	114			

Sample ID: <b>LCSD-76250</b>	SampType: <b>LCSD</b>	TestCode: <b>EPA Method 1664B</b>								
Client ID: <b>LCSS02</b>	Batch ID: <b>76250</b>	RunNo: <b>98341</b>								
Prep Date: <b>7/17/2023</b>	Analysis Date: <b>7/19/2023</b>	SeqNo: <b>3579207</b> Units: <b>mg/L</b>								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	36.4	10.0	40.00	0	91.0	78	114	5.07	20	

**Qualifiers:**

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2307569  
25-Jul-23

Client: Permits West  
Project: Pi

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R98202	RunNo: 98202								
Prep Date:	Analysis Date: 7/13/2023	SeqNo: 3573573 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R98202	RunNo: 98202								
Prep Date:	Analysis Date: 7/13/2023	SeqNo: 3573574 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.6	0.50	5.000	0	92.9	90	110			

Qualifiers:

\* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 5 of 6

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 2307569

25-Jul-23

Client: Permits West

Project: Pi

Sample ID: <b>MB-76283</b>	SampType: <b>MBLK</b>		TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>							
Client ID: <b>PBW</b>	Batch ID: <b>76283</b>		RunNo: <b>98335</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3578905</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: <b>LCS-76283</b>	SampType: <b>LCS</b>		TestCode: <b>SM2540C MOD: Total Dissolved Solids</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>76283</b>		RunNo: <b>98335</b>							
Prep Date: <b>7/18/2023</b>	Analysis Date: <b>7/19/2023</b>		SeqNo: <b>3578906</b>		Units: <b>mg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	50.0	1000	0	102	80	120			

### Qualifiers:

\* Value exceeds Maximum Contaminant Level.  
D Sample Diluted Due to Matrix  
H Holding times for preparation or analysis exceeded  
ND Not Detected at the Reporting Limit  
PQL Practical Quantitative Limit  
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank  
E Above Quantitation Range/Estimated Value  
J Analyte detected below quantitation limits  
P Sample pH Not In Range  
RL Reporting Limit

Page 6 of 6



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: www.hallenvironmental.com

## Sample Log-In Check List

Client Name: Permits West

Work Order Number: 2307569

RcptNo: 1

Received By: Steve McQuiston 7/13/2023 10:18:00 AM

Completed By: Cheyenne Cason 7/13/2023 10:59:52 AM

Reviewed By: 7/13/23

### Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐

2. How was the sample delivered? Client

### Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐

4. Were all samples received at a temperature of  $>0^{\circ}\text{C}$  to  $6.0^{\circ}\text{C}$ ? Yes ☐ No ☒ NA ☐

5. Sample(s) in proper container(s)? Yes ☒ No ☐ Not required

6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐

7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐

8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐

9. Received at least 1 vial with headspace  $<1/4$ " for AQ VOA? Yes ☐ No ☐ NA ☒

10. Were any sample containers received broken? Yes ☐ No ☒

11. Does paperwork match bottle labels? Yes ☒ No ☐

(Note discrepancies on chain of custody)

12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐

13. Is it clear what analyses were requested? Yes ☒ No ☐

14. Were all holding times able to be met? Yes ☒ No ☐

(If no, notify customer for authorization.)

# of preserved  
bottles checked  
for pH:

( $<2$  or  $>12$  unless noted)

Adjusted?

Checked by: JA 7-13-23

### Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

### 17. Cooler Information

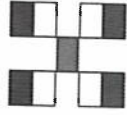
Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	14.3	Good	Not Present	Morty		

## Chain-of-Custody Record

Chain-of-Custody Record		Turn-Around Time:	
Client:	Permits West	<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Rush
Mailing Address:	30 Verao	Project Name: P3	
Phone #:	SF 414 87508	Project #: 666	
email or Fax#:	brian@	Project Manager: Brian Wood	
QA/QC Package:	permitswest.com	Sampler:	
<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Level 4 (Full Validation)	On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Accreditation:	<input type="checkbox"/> Az Compliance	# of Copies: 1	
<input type="checkbox"/> NELAC	<input type="checkbox"/> Other		
<input type="checkbox"/> EDD (Type)			

[illegible]

Date: 1-13-93	Time: 1:13 PM	Relinquished by: [Signature]	Received by: SCN	Via: CDO	Date: 07/13/93	Time: 10:18
Date:	Time:	Relinquished by:	Received by:	Via:	Date:	Time:



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

[www.hallenvironmental.com](http://www.hallenvironmental.com)

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

BTEX / MTBE / TMB's (8021)	
TPH:8015D(GRO / DRO / MRO)	
8081 Pesticides/8082 PCB's	
EDB (Method 504.1)	
PAHs by 8310 or 8270SIMS	
RCRA 8 Metals	
<del>Cl, F, Br, NO<sub>3</sub>, NO<sub>2</sub>, PO<sub>4</sub>, SO<sub>4</sub></del>	
8260 (VOA)	
8270 (Semi-VOA)	
Total Coliform (Present/Absent)	

Remarks:

Temp approved cme 7/13/23



## **Attachment 6**

**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  
August 24, 2023  
and ending with the issue dated  
August 24, 2023.



Publisher

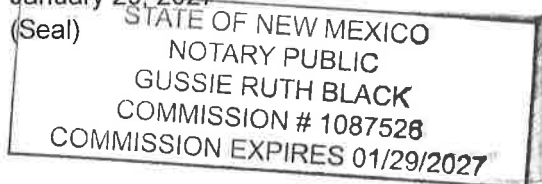
Sworn and subscribed to before me this  
24th day of August 2023.



Business Manager

My commission expires  
January 29, 2027

(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 publication has been made.

**LEGAL NOTICE**  
**August 24, 2023**

Pilot Water Solutions SWD LLC, 20 Greenway Plaza, Suite 200, Houston, TX 77046, is filing Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for commercial saltwater injection into its Juice SWD State #1. This will be a new well located 497' FNL & 771' FWL in Section 7 Township 19S Range 37E in Lea County, New Mexico. The purpose of the well is to inject produced water from permitted oil and gas wells in the area for commercial disposal into the San Andres formation at depths of 4,408' - 5,510' at a maximum surface injection pressure of 882 psi and a maximum injection rate of 25,000 barrels of water per day.

Objections or requests for hearing must be filed with the New Mexico Oil Conservation Division within fifteen (15) days. Any objection or request for hearing should be mailed to the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505. Additional information may be obtained by contacting the operator contact, David Grounds, at 713-307-8752.  
#00281923

67117907

00281923

NATE ALLEMAN  
ACE ENERGY ADVISORS  
501 E. FRANK PHILLIPS BLVD.  
SUITE 201  
BARTLESVILLE, OK 74006

### Statement of Affected Person Notification

A copy of the C-108 application has been provided to the following Affected Persons as notification of the subject Application for Authorization to Inject (C-108).

Entity Name	Entity Address	Mailing Date
<b>Surface Owner</b>		
STATE LAND OFFICE	P.O. Box 1148, Santa Fe, NM 87504	09/01/2023
<b>Mineral Owners (BLM/SLO or Unleased Tracts)</b>		
STATE LAND OFFICE	P.O. Box 1148, Santa Fe, NM 87504	09/01/2023
<b>OCD District</b>		
OCD - DISTRICT 1	1625 N. French Drive, Hobbs, NM 88240	09/01/2023
<b>Applicable Affected Persons</b>		
SOUTHWEST ROYALTIES INC	6 Desta Drive, Suite 2100 Midland, TX 79705	09/01/2023
CONOCOPHILLIPS COMPANY	10 Desta Drive Midland, TX 79705	09/01/2023
MILLARD DECK ESTATE	C/O Nations Bank P.O. Box 270 Midland, TX 797020270	09/01/2023
XTO ENERGY	500 W. Illinois, Suite 100 Midland, TX 79701	09/01/2023
VIERSEN OIL & GAS	P.O. Box 702708 Tulsa, OK 74170	09/01/2023
TIERRA EXPLORATION	P.O. Box 56 Midland, TX 797020056	09/01/2023
OCCIDENTAL PERMIAN LTD	P.O. Box 50250 Midland, TX 79710	09/01/2023
FULFER OIL & CATTLE	P.O. Box 1224 Jal, NM 88252	09/01/2023
ENERGY ACUMEN LLC	10103 Gutierrez Rd NE Albuquerque, NM 87111	09/01/2023

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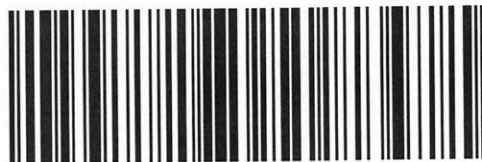
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Midland TX 79705-4515

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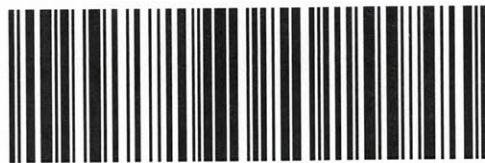




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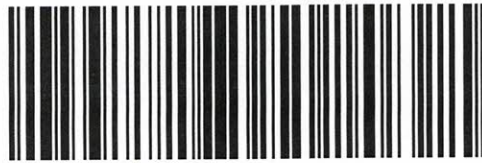
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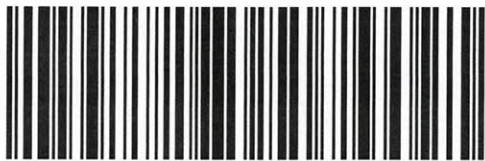
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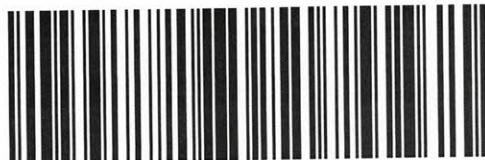
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