AE Order Number Banner

Application Number: pMSG2335440753

SWD-2586

Pilot Water Solutions SWD LLC [331374]

ACE Energy Advisors

December 11, 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
Dayne 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 Dayne 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 Regulator Advisor Contractor) via telephone at 918-237-0559 or via email at nate.alleman@aceadvisors.com.

Sincerely,

Nate Alleman
Chief Regulatory Advisor
Ace Energy Advisors

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: Pilot Water Solutions SWD LLC OGRID Number: 331374
Well Name: Dayne State SWD #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

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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

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

David Grounds
Print or Type Name

David Grounds
Signature

12/11/2023
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 ____X__Disposal _____Storage
Application qualifies for administrative approval? ____X____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 ____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.

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: 12/11/2023

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: Dayne SWD State #1
Legal Location: 819' FSL & 1,915' FWL - Unit N – Section 4 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	1,548	2,426.3	0	Circulation
Production	12-1/4	9-5/8	5,667	1,691.6	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 4,321'

(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 4,321'

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 4,321' - 5,667'

(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 (2,774')
  - Seven Rivers (3,044')
  - Queen (3,599')
  - Grayburg (3,937')
- **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 figures are included in ***Attachment 2***:

- 2-Mile Well Map
- 2-Mile Lease Map
- 1/2-Mile Well & Lease Map
- 1/2-Mile Well List
- 1/2-Mile Surface Ownership Map
- 1/2-Mile Mineral Ownership 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: 864 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 Wofcamp 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 Wofcamp 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 4,321 and 5,667 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 1,523'. Water wells in the area are drilled to a depth of approximately 50' - 175'.

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 (7 active, 2 pending, 4 plugged, 1 inactive) are located within 1 mile of the proposed SWD location. Water samples have been collected and analyzed for 2 of these 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 1,523'.

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.

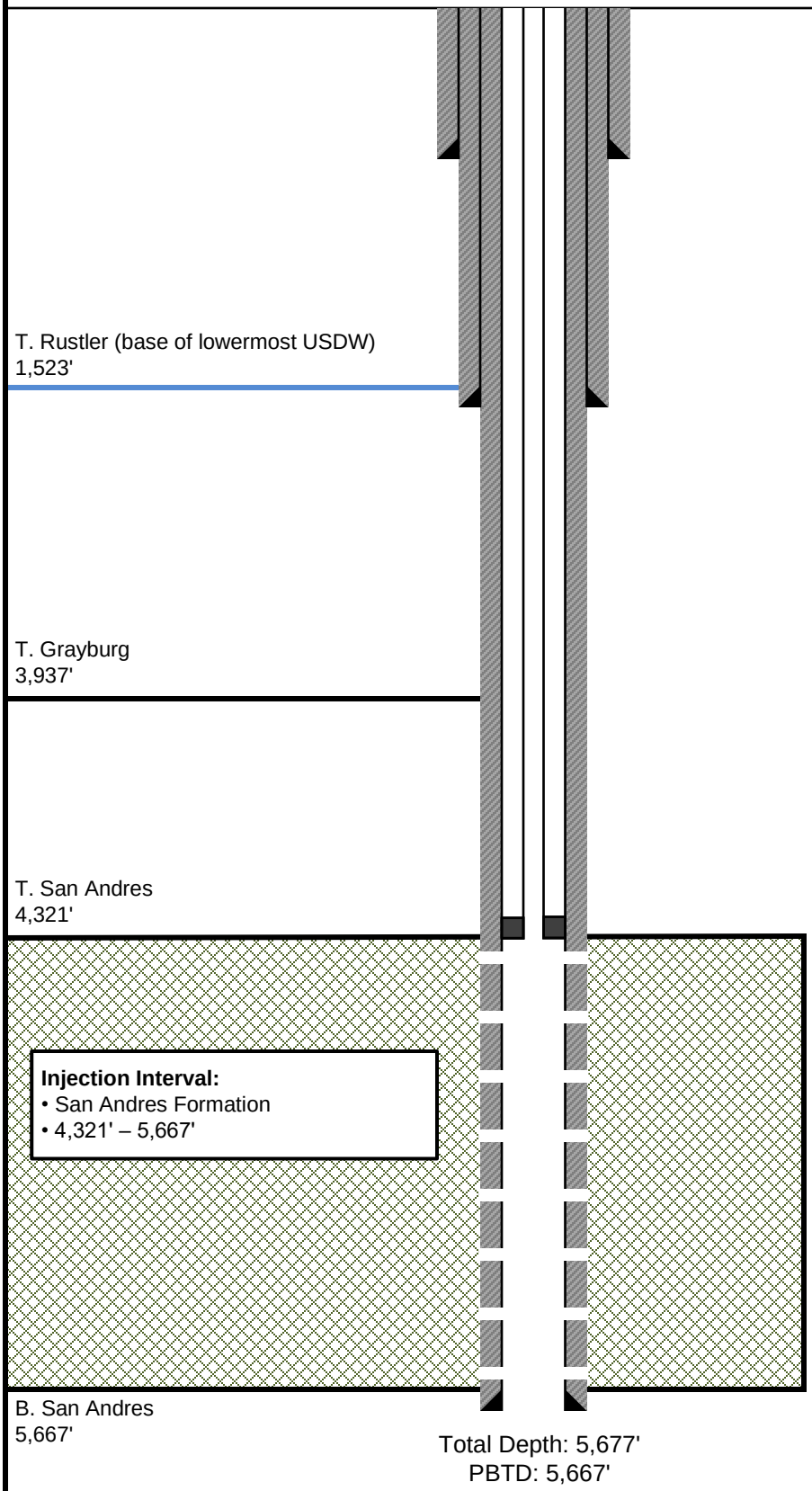
A Public Notice was published in the Hobbs NewsSun, a newspaper of general circulation in the area, and the associated affidavit is included in ***Attachment 6***.

Attachment 1

Pilot Water Solutions SWD LLC

Dayne SWD State #1

Wellbore Diagram



Surface Casing

Casing Size (in):	13-3/8
Casing Weight (lb/ft):	68
Casing Grade:	L-80 BTC
Casing Depth (ft):	1,548
Hole Depth (ft):	1,558
Hole Size (in):	17-½
Top of Cement (ft):	0 (circulation)
Sks Cement:	2,426.3

Production Casing

Casing Size (in):	9-5/8
Casing Weight (lb/ft):	53.5
Casing Grade:	L-80 BTC
Casing Depth (ft):	5,667
Hole Depth (ft):	5,677
Hole Size (in):	12-1/4
Top of Cement (ft):	0 (circulation)
Sks Cement:	1,691.6

Tubing

Tubing Size (in): 5-1/2
Tubing Weight (lb/ft): 14
Tubing Grade: J-55 BTC
Tubing Depth (ft): 4,321
Packer Type: Weatherford AS1X Stainless
Packer Depth (ft): 4,321

Injection Interval

Formation: San Andres
Top (ft): 4,321
Bottom (ft): 5,667
Cased or Open-Hole: Cased

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

NOT TO SCALE

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	96121	SWD; San Andres

[4] Property Code	[5] Property Name	[6] Well Number
	DAYNE SWD STATE	#1

[7] OGRID No.	[8] Operator Name	[9] Elevation
331374	PILOT WATER SOLUTIONS SWD LLC	3768.32'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	4	19 S	37 E		819	SOUTH	1915	WEST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.

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

[16]

① D	C	B	② A
E	F	G	H
L	K	J	I
④ M	N	O	③ P

GEODETIC DATA
NAD 83 NM EAST

DAYNE SWD STATE 1
N: 614347.17'
E: 871938.72'
LAT.: N 32.684282022
LONG.: W 103.258806158

1-Y=618886.35', X=869988.38'
2-Y=618920.60', X=875265.75'
3-Y=613555.50', X=875307.55'
4-Y=613512.04', X=870034.42'

1915'
819'

[17] OPERATOR CERTIFICATION

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

Nathan Alleman — 12/08/2023
Signature — Date

Nate Alleman
Printed Name

nate.alleman@aceadvisors.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

11/22/2023
Date of Survey — Date

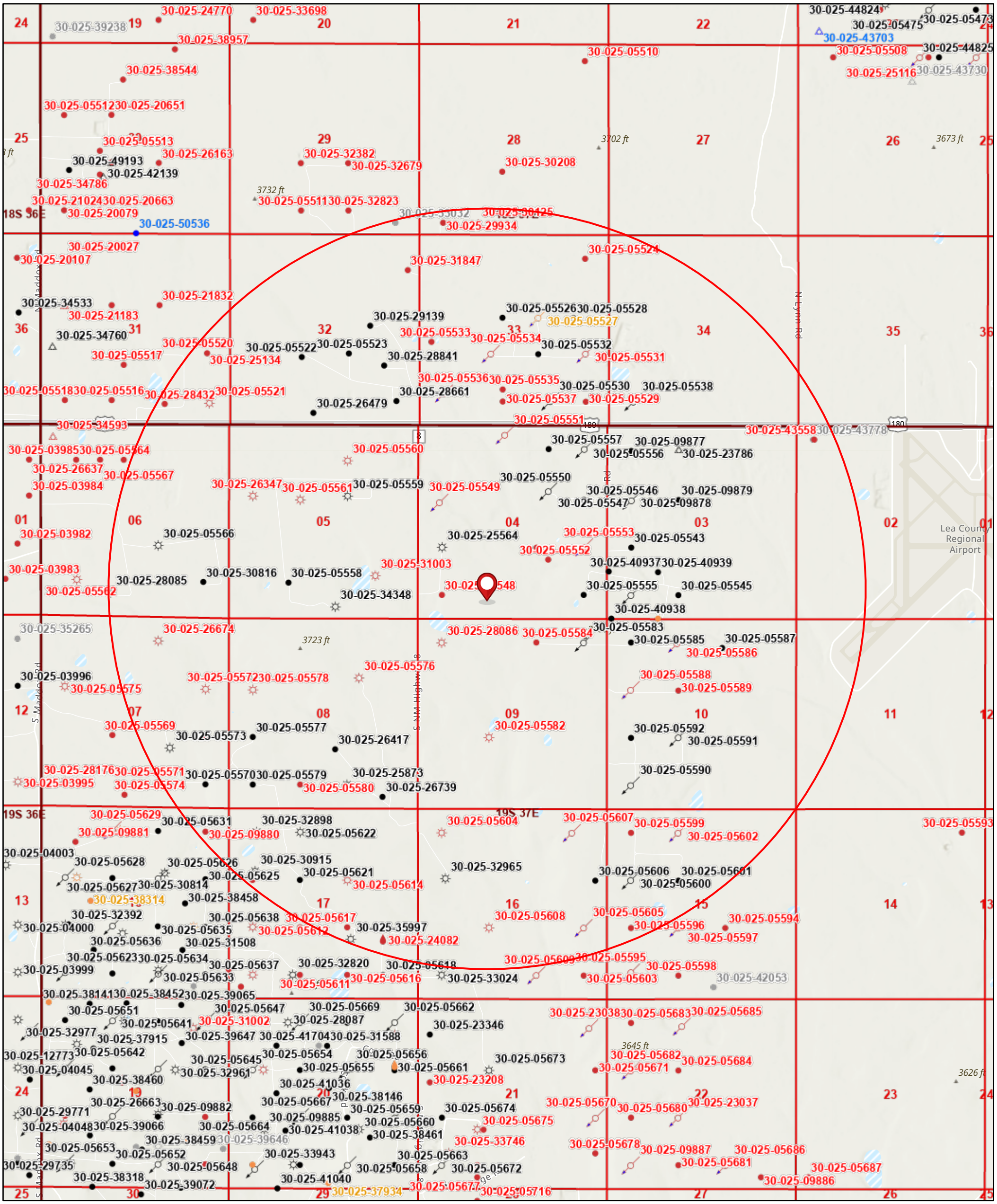
Signature and Seal of Professional Surveyor:

LEROY W. FARLEY
NEW MEXICO
17320
CENSED PROFESSIONAL SURVEYOR

Certificate Number

Attachment 2

2 Mile Well Map



11/30/2023, 8:06:50 AM

Wells - Large Scale

- Gas, Active
- Gas, Cancelled
- Gas, Plugged
- Gas, Temporarily Abandoned
- Injection, Active
- Injection, Plugged
- Injection, Temporarily Abandoned
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Cancelled
- Salt Water Injection, New
- Salt Water Injection, Plugged
- Water, Plugged
- Water, Temporarily Abandoned
- PLSS First Division
- PLSS Townships

1:36,112

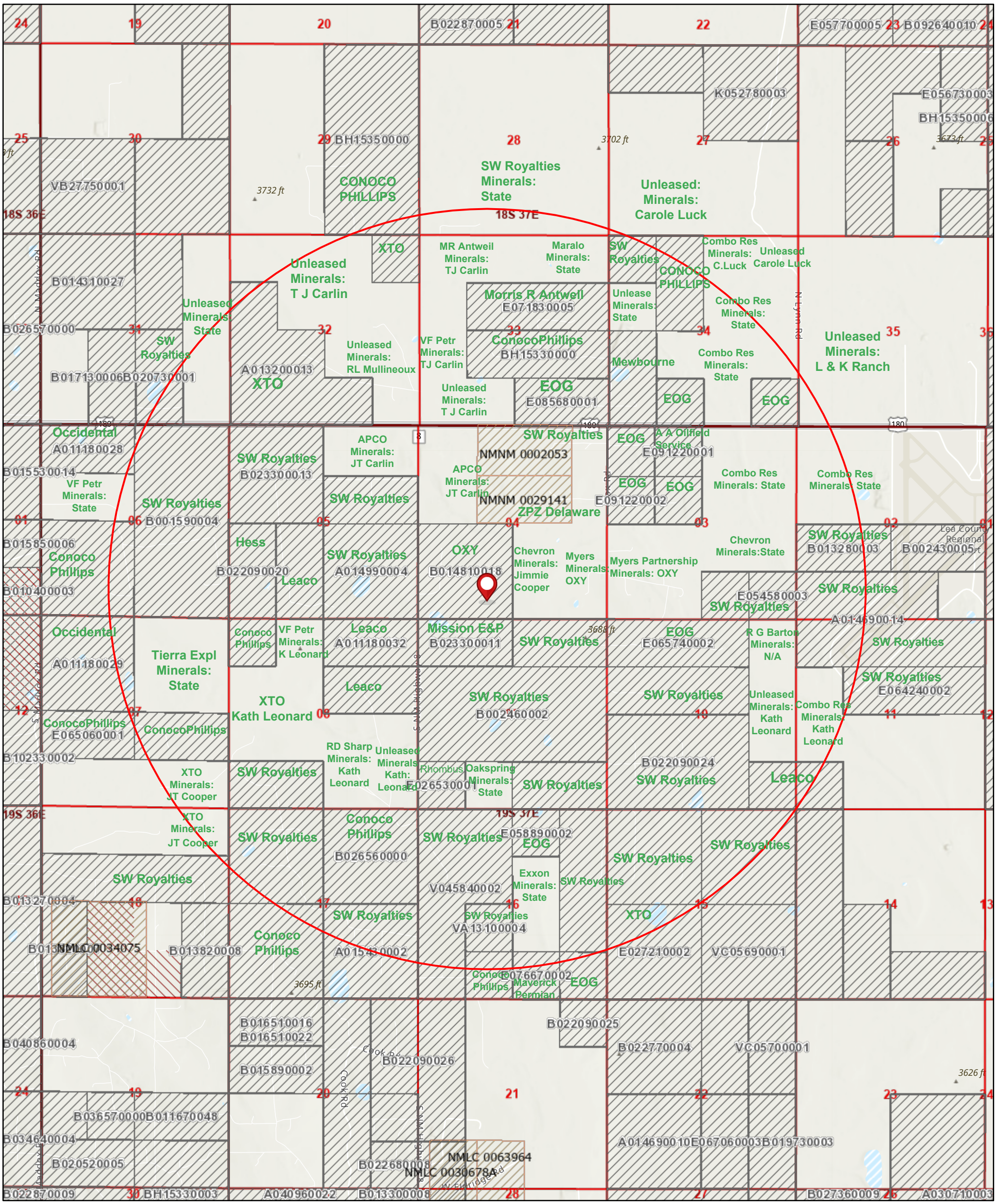
0 0.35 0.7 1.4 mi

0 0.5 1 2 km

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75: New Mexico Oil Conservation Division

2 Mile Lease Map



11/30/2023, 8:12:05 AM

- Authorized
- Oil and Gas Leasing Restrictions
- Oil and Gas Leases
- PLSS First Division
- PLSS Townships

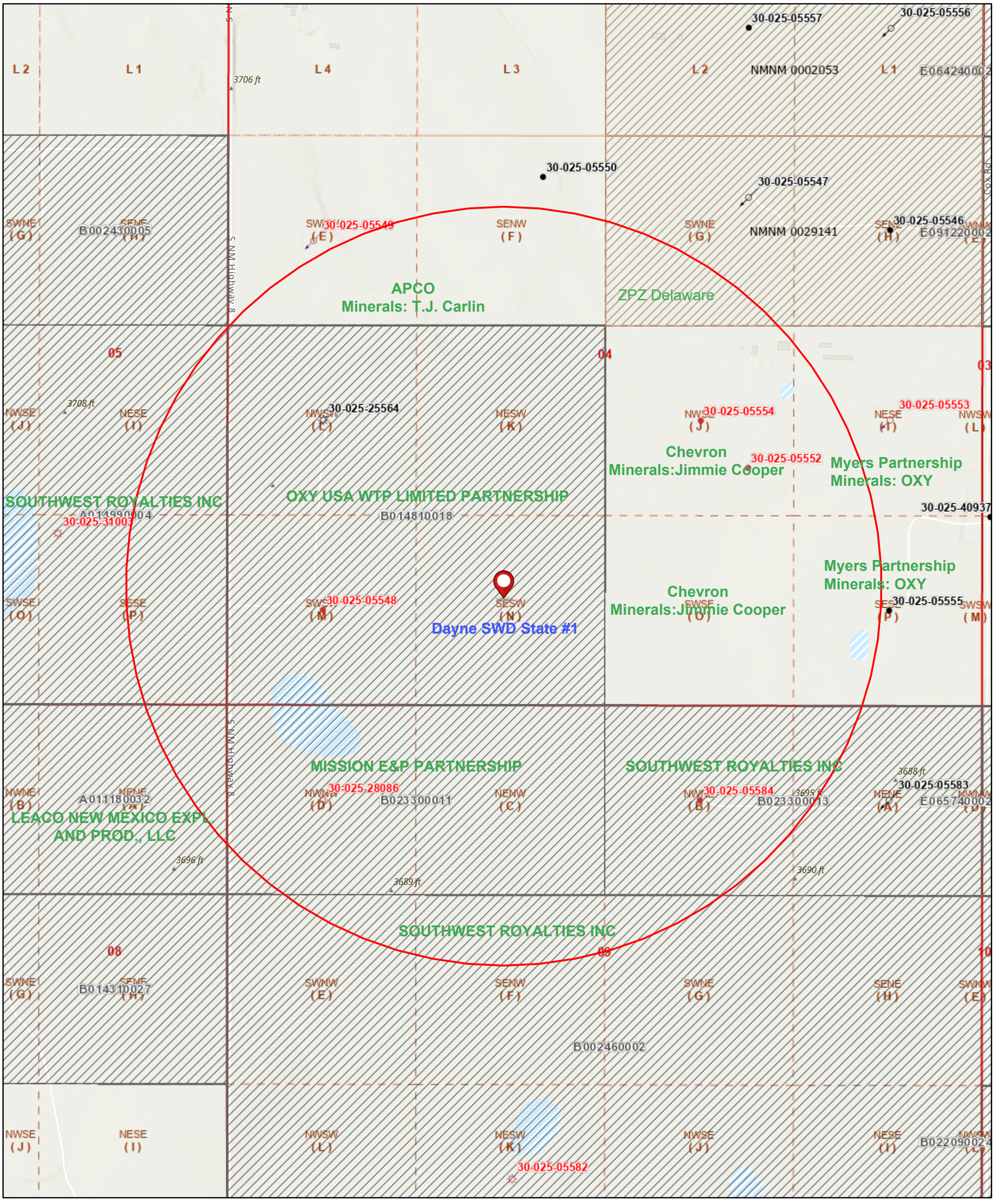
1:36,112

0 0.35 0.7 1.4 mi

0 0.5 1 2 km

U.S. Department of Interior, Bureau of Land Management (BLM), Esri, NASA, NGA, USGS, FEMA, BLM, New Mexico State University, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

1/2 Mile Well & Lease Map



11/29/2023, 12:07:03 PM

- Oil, Plugged
- Gas, Active
- Gas, Plugged
- Injection, Active
- Injection, Plugged
- Oil, Active
- Authorized
- Oil and Gas Leasing Restrictions
- Oil and Gas Leases
- PLSS Second Division
- PLSS First Division

1:9,028

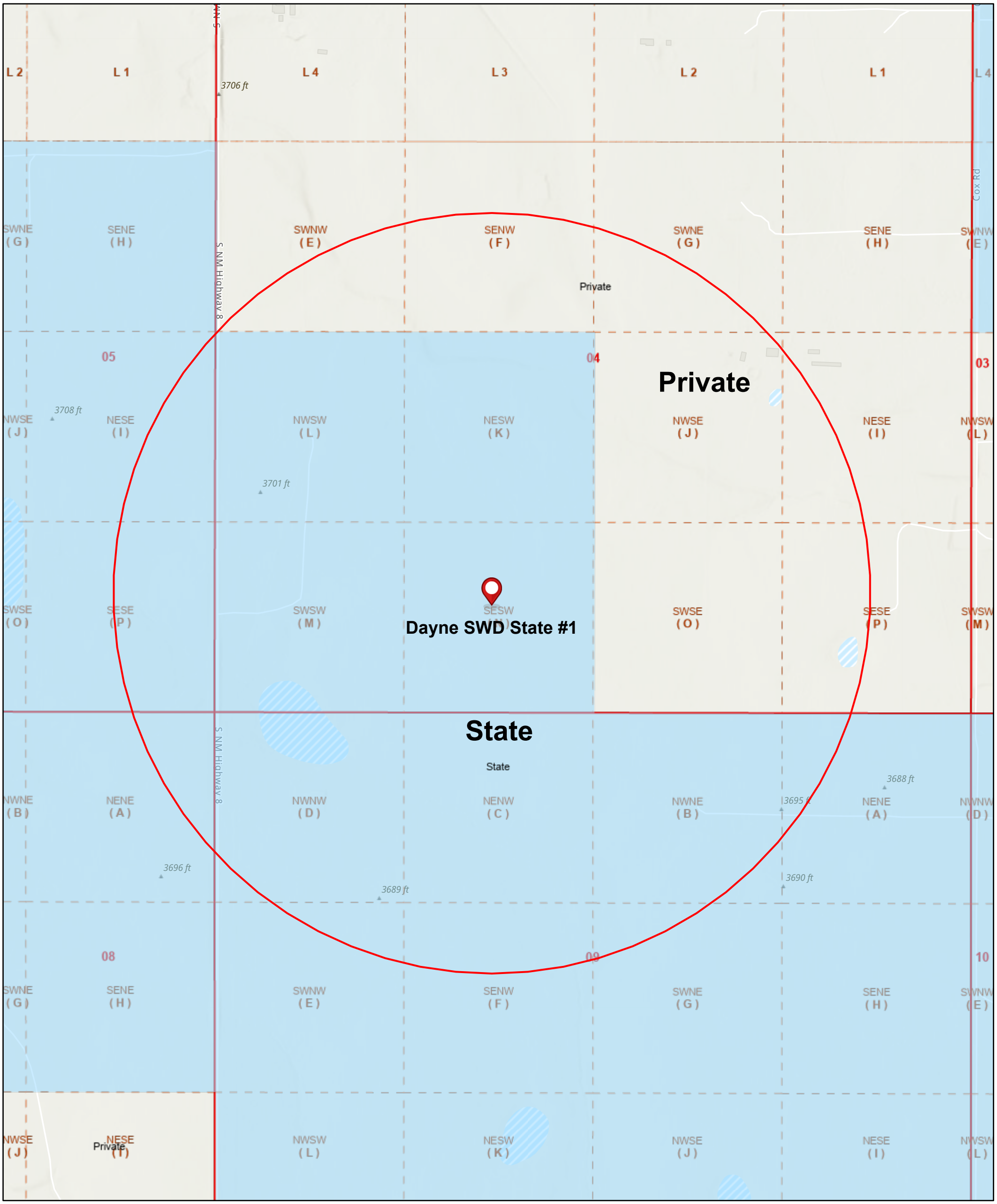
0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

New Mexico Oil Conservation Division

1/2-Mile Well List (Top of Injection Interval: 4,321')								
Well Name	**API#**	**Well Type**	**Operator**	**Status**	**Spud Date**	**Location (Sec., Tn., Rng.)**	**Total Vertical Depth (feet)**	**Penetrate Inj. Zone?**
PRE-ONGARD WELL #001	30-025-05548	Oil	PRE-ONGARD WELL OPERATOR	Plugged (site released)	4/13/1955	M-04-19S-37E	4,000	No
STATE AT #002	30-025-25564	Gas	BRADLEY MCINROE DBA BIG AL OIL & GAS	Active	6/16/1977	L-04-19S-37E	4,000	No
ONEY #001	30-025-28086	Gas	LANEXCO INC	Plugged (site released)	5/11/1983	D-09-19S-37E	3,949	No
PRE-ONGARD WELL #003	30-025-05554	Oil	PRE-ONGARD WELL OPERATOR	Plugged (site released)	5/1/1956	J-04-19S-37E	3,950	No
EAST EUMONT UNIT #027	30-025-05584	Oil	J R OIL, LTD. CO.	Plugged (not released)	12/12/1957	B-09-19S-37E	3,980	No
PRE-ONGARD WELL #001	30-025-05552	Oil	PRE-ONGARD WELL OPERATOR	Plugged (site released)	9/8/1949	J-04-19S-37E	3,200	No
Notes: No wells within the 1/2-mile AOR penetrate the injection interval								

1/2 Mile Surface Ownership Map



12/1/2023, 10:00:59 AM

Land Ownership

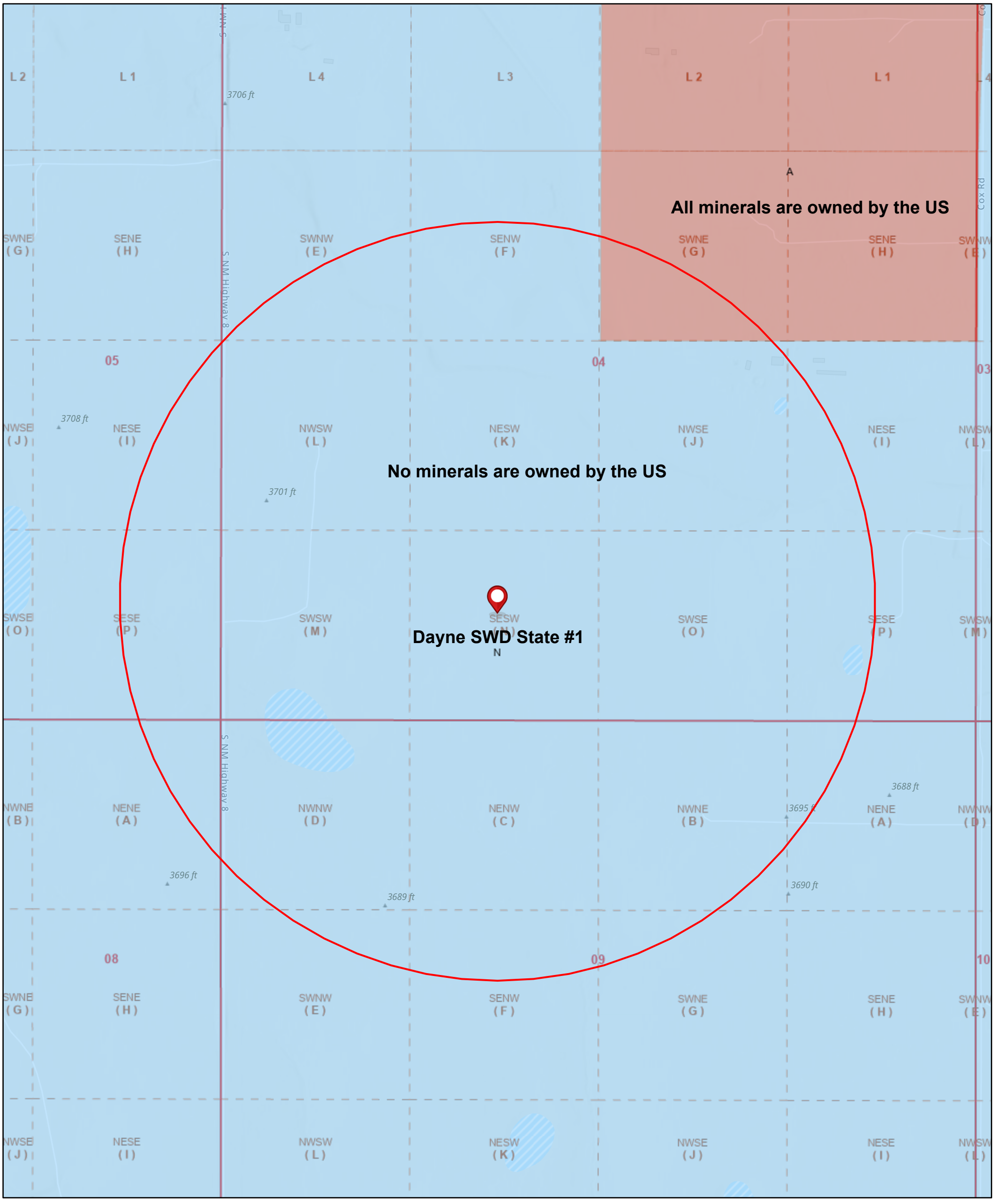
- P
- S
- PLSS Second Division
- PLSS First Division

1:9,028

0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

1/2 Mile Mineral Ownership Map



12/1/2023, 10:07:29 AM

Mineral Ownership

- A-All minerals are owned by U.S.
- N-No minerals are owned by the U.S.
- PLSS Second Division
- PLSS First Division

1:9,028

0 0.07 0.15 0.3 mi

0 0.13 0.25 0.5 km

Attachment 3

Source Formation Water Analysis

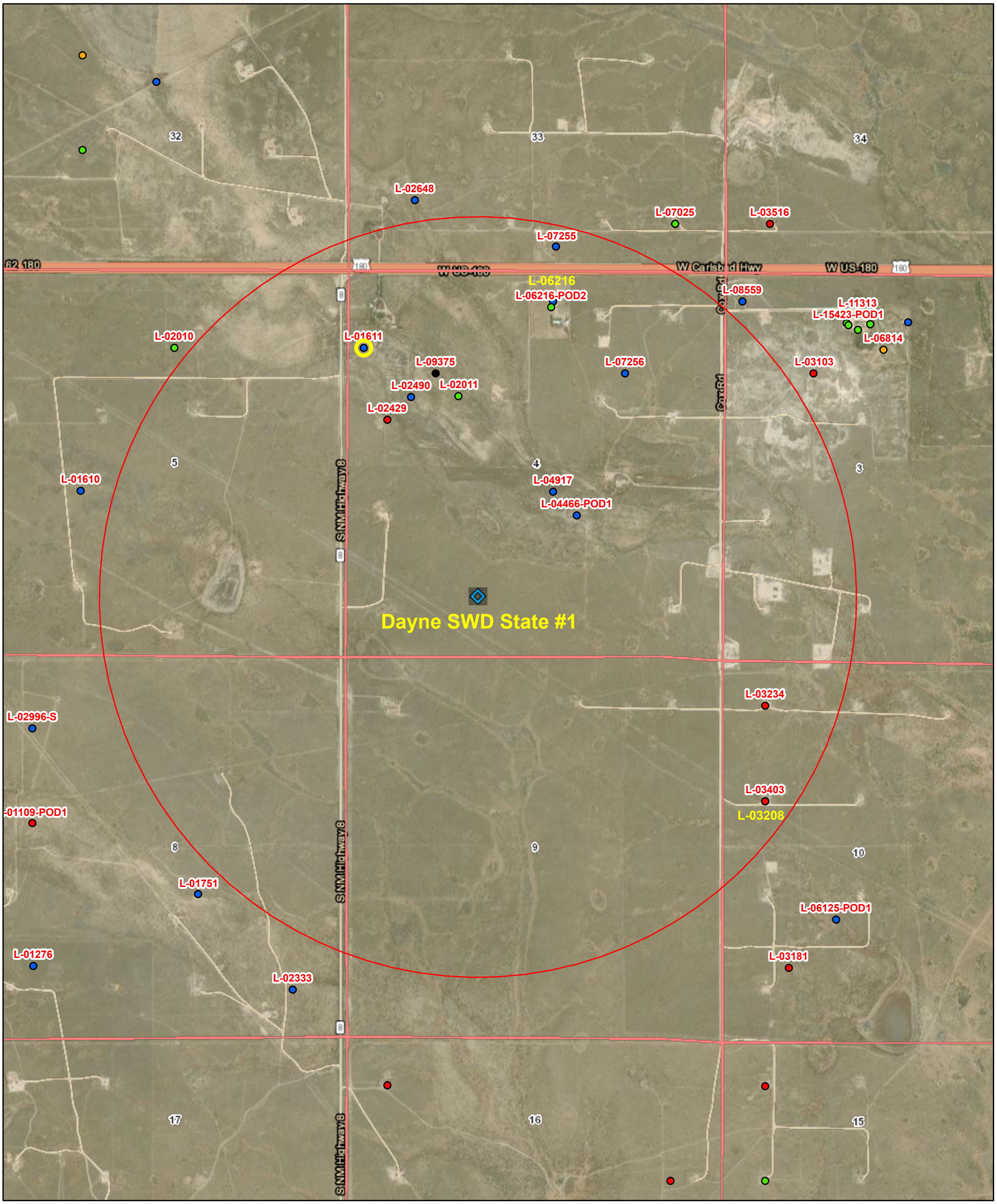
Well Name	API	Latitude	Longitude	Section	Township	Range	Unit	Ftgns	Ftgew	County	State	Formation	Sampled	PH	TDS (Mg/L)	Sodium (Mg/L)	Calcium (MG/L)	Iron (MG/L)	Magnesium (MG/L)	Manganese (MG/L)	Chloride (MG/L)	Bicarbonate (MG/L)	Sulfate (MG/L)
STATE NPA #001	3002503156	32.6879654	-103.5031815	6	19S	35E	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

Dayne SWD State #1 - 1-mile Water Well Map



11/30/2023, 3:53:50 PM

GIS WATERS PODs

- Active
- Pending
- Inactive
- Capped
- Plugged
- Sections

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Esri, HERE, iPC, OSE SLO, Esri, HERE, Garmin, iPC, Maxar

Online web user

This is an unofficial map from the OSE's online application.

Water Well Sampling Table					
Water Well ID	**OSE Status**	**Owner**	**Available Contact Information**	**Use**	**Notes**
L 01611	Active	Bruce Alene Carlin	PO Box 61 Hobbs, NM 88241	Irrigation	
L 09375	Inactive	Virgil Linam Estate	Box 743 Hobbs, NM	Irrigation	
L 02490	Active	Virgil Linam Estate	Box 743 Hobbs, NM	Livestock watering	
L 02429	Plugged	Lamance Drilling Company	Box 2686 Midland, TX	Prospecting	
L 03208	Plugged	Oscar Bourg Drilling Company	C/o O R Musslewhite Box 56 Hobbs, NM	Prospecting	
L 03234	Plugged	Makin Drilling Company	Box 1628 Hobbs, NM	Prospecting	
L 03403	Plugged	Oscar Bourg Drilling Company	C/o O R Musslewhite Box 56 Hobbs, NM	Prospecting	
L 04917	Active	E W Cox	602 East Corbett Street Hobbs, NM	Domestic and livestock watering	
L 04466 POD1	Active	Jimmie B. Cooper	P.o. Box 36 Monument, NM 88265	Irrigation	
L 02011	Pending	Virgil Linam	Box 743 Hobbs, NM	Irrigation	
L 06216	Active	Michael P Evans	9201 West Carlsbad Hwy Hobbs, NM 88240	Commercial	Sampled 8-17-23
L 07255	Active	E W Cox	PO Box 1118 Hobbs, NM 88240	Livestock watering	
L 07256	Active	E W Cox	PO Box 1118 Hobbs, NM 88240	Domestic and livestock watering	
L 06216 POD2	Pending	Ryanne N Evans	9201 West Carlsbad Hwy Hobbs, NM 88240	Commercial	Sampled 8/17/2023
Notes:					

CARDINAL Laboratories

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

August 24, 2023

NATE ALLEMAN

ACE ENERGY ADVISORS

501 E. FRANK PHILLIPS BLVD. SUITE 201

BARTLESVILLE, OK 74003

RE: PILOT

Enclosed are the results of analyses for samples received by the laboratory on 08/17/23 10:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
L - 06216-POD 2	H234446-01	Water	17-Aug-23 09:10	17-Aug-23 10:20
L - 04917	H234446-02	Water	17-Aug-23 09:20	17-Aug-23 10:20
L - 06216	H234446-03	Water	17-Aug-23 09:00	17-Aug-23 10:20

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

L - 06216-POD 2

H234446-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	**215**		5.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
Chloride*	**56.0**		4.00	mg/L	1	3081602	AC	17-Aug-23	4500-Cl-B	
Conductivity*	**632**		1.00	umhos/cm @ 25°C	1	3081722	AC	17-Aug-23	120.1	
pH*	**7.73**		0.100	pH Units	1	3081722	AC	17-Aug-23	150.1	
Temperature °C	**19.9**			pH Units	1	3081722	AC	17-Aug-23	150.1	
Resistivity	**15.8**			Ohms/m	1	3081722	AC	17-Aug-23	120.1	
Sulfate*	**57.0**		10.0	mg/L	1	3081701	AC	17-Aug-23	375.4	
TDS*	**378**		5.00	mg/L	1	3081603	AC	22-Aug-23	160.1	
Alkalinity, Total*	**176**		4.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
TSS*	<2.00		2.00	mg/L	1	3081737	AC	18-Aug-23	160.2	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Barium*	**0.080**		0.050	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Calcium*	**64.3**		0.200	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Hardness as CaCO3	**207**		0.911	mg/L	1	[CALC]	AES	23-Aug-23	2340 B	
Iron*	**0.217**		0.050	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Magnesium*	**11.3**		0.100	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Potassium*	**3.00**		1.00	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Sodium*	**44.4**		1.00	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Strontium*	**0.681**		0.100	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

L - 04917

H234446-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	**244**		5.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
Chloride*	**44.0**		4.00	mg/L	1	3081602	AC	17-Aug-23	4500-Cl-B	
Conductivity*	**604**		1.00	umhos/cm @ 25°C	1	3081722	AC	17-Aug-23	120.1	
pH*	**7.51**		0.100	pH Units	1	3081722	AC	17-Aug-23	150.1	
Temperature °C	**19.9**			pH Units	1	3081722	AC	17-Aug-23	150.1	
Resistivity	**16.6**			Ohms/m	1	3081722	AC	17-Aug-23	120.1	
Sulfate*	**71.5**		10.0	mg/L	1	3081701	AC	17-Aug-23	375.4	
TDS*	**376**		5.00	mg/L	1	3081603	AC	22-Aug-23	160.1	
Alkalinity, Total*	**200**		4.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
TSS*	**3.00**		2.00	mg/L	1	3081737	AC	18-Aug-23	160.2	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Barium*	**0.064**		0.050	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Calcium*	**64.8**		0.200	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Hardness as CaCO3	**210**		0.911	mg/L	1	[CALC]	AES	23-Aug-23	2340 B	
Iron*	<0.050		0.050	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Magnesium*	**11.7**		0.100	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Potassium*	**2.93**		1.00	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Sodium*	**37.4**		1.00	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Strontium*	**0.684**		0.100	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

L - 06216

H234446-03 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	**259**		5.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
Chloride*	**132**		4.00	mg/L	1	3081602	AC	17-Aug-23	4500-Cl-B	
Conductivity*	**950**		1.00	umhos/cm @ 25°C	1	3081722	AC	17-Aug-23	120.1	
pH*	**7.32**		0.100	pH Units	1	3081722	AC	17-Aug-23	150.1	
Temperature °C	**19.9**			pH Units	1	3081722	AC	17-Aug-23	150.1	
Resistivity	**10.5**			Ohms/m	1	3081722	AC	17-Aug-23	120.1	
Sulfate*	**66.6**		25.0	mg/L	2.5	3081701	AC	17-Aug-23	375.4	
TDS*	**528**		5.00	mg/L	1	3081603	AC	22-Aug-23	160.1	
Alkalinity, Total*	**212**		4.00	mg/L	1	3080401	AC	17-Aug-23	310.1	
TSS*	**2.00**		2.00	mg/L	1	3081737	AC	18-Aug-23	160.2	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Barium*	**0.082**		0.050	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Calcium*	**89.7**		0.200	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Hardness as CaCO3	**290**		0.911	mg/L	1	[CALC]	AES	23-Aug-23	2340 B	
Iron*	**0.454**		0.050	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Magnesium*	**16.1**		0.100	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Potassium*	**3.46**		1.00	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Sodium*	**68.2**		1.00	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	
Strontium*	**0.927**		0.100	mg/L	1	B232484	AES	23-Aug-23	EPA200.7	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3080401 - General Prep - Wet Chem										
Blank (3080401-BLK1)				Prepared & Analyzed: 04-Aug-23						
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
LCS (3080401-BS1)				Prepared & Analyzed: 04-Aug-23						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	330	12.5	mg/L				80-120			
Alkalinity, Total	270	10.0	mg/L	250		108	80-120			
LCS Dup (3080401-BSD1)				Prepared & Analyzed: 04-Aug-23						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	330	12.5	mg/L				80-120	0.00	20	
Alkalinity, Total	270	10.0	mg/L	250		108	80-120	0.00	20	
Batch 3081602 - General Prep - Wet Chem										
Blank (3081602-BLK1)				Prepared & Analyzed: 16-Aug-23						
Chloride	ND	4.00	mg/L							
LCS (3081602-BS1)				Prepared & Analyzed: 16-Aug-23						
Chloride	100	4.00	mg/L	100		100	80-120			
LCS Dup (3081602-BSD1)				Prepared & Analyzed: 16-Aug-23						
Chloride	104	4.00	mg/L	100		104	80-120	3.92	20	
Batch 3081603 - Filtration										
Blank (3081603-BLK1)				Prepared: 16-Aug-23 Analyzed: 17-Aug-23						
TDS	ND	5.00	mg/L							

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3081603 - Filtration										
LCS (3081603-BS1)				Prepared: 16-Aug-23 Analyzed: 17-Aug-23						
TDS	247		mg/L	300		82.3	80-120			
Duplicate (3081603-DUP1)		**Source: H234290-05**		Prepared: 16-Aug-23 Analyzed: 17-Aug-23						
TDS	6220	5.00	mg/L		6370			2.41	20	
Batch 3081701 - General Prep - Wet Chem										
Blank (3081701-BLK1)				Prepared & Analyzed: 17-Aug-23						
Sulfate	ND	10.0	mg/L							
LCS (3081701-BS1)				Prepared & Analyzed: 17-Aug-23						
Sulfate	19.3	10.0	mg/L	20.0		96.6	80-120			
LCS Dup (3081701-BSD1)				Prepared & Analyzed: 17-Aug-23						
Sulfate	19.2	10.0	mg/L	20.0		96.0	80-120	0.623	20	
Batch 3081722 - General Prep - Wet Chem										
LCS (3081722-BS1)				Prepared & Analyzed: 17-Aug-23						
pH	2.02		pH Units	2.00		101	90-110			
Conductivity	490		uS/cm	500		98.0	80-120			
Duplicate (3081722-DUP1)		**Source: H234446-01**		Prepared & Analyzed: 17-Aug-23						
pH	7.75	0.100	pH Units		7.73			0.258	20	
Conductivity	629	1.00	umhos/cm @ 25°C		632			0.476	20	
Resistivity	15.9		Ohms/m		15.8			0.476	20	
Temperature °C	19.9		pH Units		19.9			0.00	200	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3081737 - Filtration										
Blank (3081737-BLK1)				Prepared: 17-Aug-23 Analyzed: 18-Aug-23						
TSS	ND	2.00	mg/L							
Duplicate (3081737-DUP1)		**Source: H234446-01**		Prepared: 17-Aug-23 Analyzed: 18-Aug-23						
TSS	1.00	2.00	mg/L		1.00			0.00	52.7	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ACE ENERGY ADVISORS 501 E. FRANK PHILLIPS BLVD. SUITE 201 BARTLESVILLE OK, 74003	Project: PILOT Project Number: NONE GIVEN Project Manager: NATE ALLEMAN Fax To:	Reported: 24-Aug-23 08:51

Total Recoverable Metals by ICP (E200.7) - Quality Control

Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B232484 - Total Recoverable by ICP										
Blank (B232484-BLK1)				Prepared: 22-Aug-23 Analyzed: 23-Aug-23						
Strontium	ND	0.100	mg/L							
Barium	ND	0.050	mg/L							
Sodium	ND	1.00	mg/L							
Potassium	ND	1.00	mg/L							
Iron	ND	0.050	mg/L							
Magnesium	ND	0.100	mg/L							
Calcium	ND	0.200	mg/L							
LCS (B232484-BS1)				Prepared: 22-Aug-23 Analyzed: 23-Aug-23						
Sodium	1.67	1.00	mg/L	1.62		103	85-115			
Potassium	4.19	1.00	mg/L	4.00		105	85-115			
Strontium	2.06	0.100	mg/L	2.00		103	85-115			
Magnesium	10.4	0.100	mg/L	10.0		104	85-115			
Iron	2.04	0.050	mg/L	2.00		102	85-115			
Calcium	2.04	0.200	mg/L	2.00		102	85-115			
Barium	1.00	0.050	mg/L	1.00		100	85-115			
LCS Dup (B232484-BSD1)				Prepared: 22-Aug-23 Analyzed: 23-Aug-23						
Potassium	4.20	1.00	mg/L	4.00		105	85-115	0.171	20	
Iron	2.01	0.050	mg/L	2.00		101	85-115	1.34	20	
Sodium	1.65	1.00	mg/L	1.62		102	85-115	1.35	20	
Calcium	2.03	0.200	mg/L	2.00		101	85-115	0.389	20	
Barium	1.01	0.050	mg/L	1.00		101	85-115	0.213	20	
Strontium	2.05	0.100	mg/L	2.00		103	85-115	0.286	20	
Magnesium	10.4	0.100	mg/L	10.0		104	85-115	0.372	20	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

501 E. Frank Phillips Blvd., Suite 201

Company Name:	Ace Energy Advisors
Project Manager:	Nate Alleman
Address:	501 E. Frank Phillips Blvd., Suite 201
City:	Bartlesville State: OK Zip: 74003
Phone #:	918-237-0559 Fax #:
Project #:	Project Owner:
Project Name:	Pilot
Project Location:	
Sampler Name:	Nate Alleman

BILL TO

P.O. #:	
Company:	Ace Energy Advisors
Attn:	Nate Alleman
Address:	~~501 E. Frank~~
City:	Bartlesville
State:	OK Zip: 74003
Phone #:	918-237-0559
Fax #:	

FOR LAB USE ONLY

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	Cation/Anions	Ba, Fe, Sr	Resistivity	Total Hardness	TSS
H234446	~~L-06216~~ (NA)																		
1	L-06216-POD2	G	2	X									8/17/23	0910	X	X	X	X	X
2	L-04917	G	2	X									8/17/23	0920	X	X	X	X	X
3	L-06216	G	2	X									8/17/23	0900	X	X	X	X	X

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

Relinquished By:	Date: 8/17/23 Time: 1020	Received By:	
Relinquished By:	Date: Time:	Received By:	

Verbal Result: ☐ Yes ☐ No Add'l Phone #:
All Results are emailed. Please provide Email address:
nate.alleman@aceadvisors.com
REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 28.8	Sample Condition Cool: ☐ Yes ☑ No	Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) TO
	Corrected Temp. °C			

Turnaround Time: Standard ☐ Rush ☑
Thermometer ID #140
Correction Factor 0°C

Bacteria (only) Sample Condition
Cool: ☐ Yes ☐ No Intact: ☐ Yes ☐ No
Observed Temp. °C
Corrected Temp. °C

FORM-006 R 3.4 07/11/23

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

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
December 06, 2023
and ending with the issue dated
December 06, 2023.

LEGAL NOTICE
December 6, 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 Dayne SWD State #1. This will be a new well located 819' FSL & 1,915' FWL in Section 4 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 4,321' – 5,667' at a maximum surface injection pressure of 864 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. Additional information may be obtained by contacting the operator contact, David Grounds, at 713-307-8752.
#00285546

Publisher

Sworn and subscribed to before me this
6th day of December 2023.

Business Manager

My commission expires
January 29, 2027
(Seal)

STATE OF NEW MEXICO
NOTARY PUBLIC
GUSSIE RUTH BLACK
COMMISSION # 1087526
COMMISSION EXPIRES 01/29/2027

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.

67117907 00285546

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
Site Surface Owner		
STATE LAND OFFICE	P.O. Box 1148 Santa Fe, NM 87504	12/12/2023
Mineral Owner		
Bureau of Land Management Oil & Gas Division	620 E. Greene St. Carlsbad, NM 88240	12/12/2023
STATE LAND OFFICE	P.O. Box 1148 Santa Fe, NM 87504	12/12/2023
OCD District		
OCD - DISTRICT 1	1625 N. French Drive Hobbs, NM 88240	12/12/2023
Leaseholders		
OXY USA WTP LIMITED PARTNERSHIP	5 Greenway Plaza Ste 110 Houston, TX 77046	12/12/2023
MISSION E&P PARTNERSHIP	1331 Lamar Ste 1455 Houston, TX 77010-3039	12/12/2023
SOUTHWEST ROYALTIES. INC	200 N Loraine St Ste 400 Midland, TX 79701	12/12/2023
LEACO NEW MEXICO EXPL. AND PROD., LLC	2000 Post Oak Blvd Ste 100 Houston Tx, 77056	12/12/2023
ZPZ DELAWARE, LLC	2000 Post Oak Blvd Ste 100 Houston Tx, 77056	12/12/2023
APCO OIL CORP	17th Floor HNG Bldg. Houston, TX 77002	12/12/2023
CHEVRON	6301 Deauville Blvd Midland, TX 79706	12/12/2023
Well Operators		
BRADLEY MCINROE DBA BIG AL OIL & GAS	P.O. Box 669 Levelland, TX 79336	12/12/2023

Note: contact information could not be identified for “Myers Partnership”, identified as a leaseholder of the SW Quarter of Section 3 T19S R37E. Therefore, OXY, the mineral owner of record for that tract, is listed on the Leaseholder Map in Attachment 2 and is being notified as an Affected Party for this application.

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6574 16

State Land Office
Po Box 1148
Santa Fe NM 87504-1148

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6575 15

Bureau of Land Mngmnt Oil&Gas Div.
620 E Greene St
Carlsbad NM 88220-6292

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6575 08

OCD- District 1
1625 N French Dr
Hobbs NM 88240-9273

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6575 46

Oxy USA WTP Limited Partnership
5 Greenway Plz Ste 110
Houston TX 77046-0521

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6828 21

Mission E&P Partnership
1331 Lamar St Ste 1455
Houston TX 77010-3148

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6828 45

SOUTHWEST ROYALTIES INC
200 N Loraine St Ste 400
Midland TX 79701-4735

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6827 60

LEACO NEW MEXICO EXP &PROD., LLC
2000 Post Oak Blvd Ste 100
Houston TX 77056-4497

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®

CERTIFIED MAIL®

9407 1118 9956 2649 6827 08

ZPZ Delaware, LLC
2000 Post Oak Blvd Ste 100
Houston TX 77056-4497

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®
CERTIFIED MAIL®

9407 1118 9956 2649 6860 27

APCO OIL CORP
PO Box 1841
Oklahoma City OK 73101-1841

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®
CERTIFIED MAIL®

9407 1118 9956 2649 6860 89

Chevron USA Inc
6301 Deauville
Midland TX 79706-2964

Nathan Alleman
Ace Energy Advisors
501 Se Fph Blvd Ste 201
BARTLESVILLE OK 74003-3931

$4.98⁰ US POSTAGE FIRST-CLASS FROM 74003 12/12/2023 stamps endicia 062S0002203377

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®
CERTIFIED MAIL®

9407 1118 9956 2649 6860 72

BRADLEY MCINROE DBA & GAS
Po Box 669
Levelland TX 79336-0669

Place label at top of the center of the envelope and fold at dotted line.

CERTIFIED MAIL®
CERTIFIED MAIL®

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 296689

CONDITIONS

Operator: Pilot Water Solutions SWD LLC 20 Greenway Plaza, Suite 200 Houston, TX 77046	OGRID: 331374
	Action Number: 296689
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

CONDITIONS

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