

# AE Order Number Banner

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**Application Number: pEG2514130879**

# Initial Application Part 1

**SWD-2656**

**MACK ENERGY CORP [13837]**

**Received: 4/24/2025**

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: \_\_\_\_\_ OGRID Number: \_\_\_\_\_  
 Well Name: \_\_\_\_\_ API: \_\_\_\_\_  
 Pool: \_\_\_\_\_ Pool Code: \_\_\_\_\_

**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

<u>FOR OCD ONLY</u>	
<input type="checkbox"/>	Notice Complete
<input type="checkbox"/>	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.**

\_\_\_\_\_  
 Print or Type Name

\_\_\_\_\_  
Date

*Deana Weaver*  
 \_\_\_\_\_  
 Signature

\_\_\_\_\_  
Phone Number

\_\_\_\_\_  
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 XX \_\_\_\_\_ Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? XX \_\_\_\_\_ Yes \_\_\_\_\_ No

II. OPERATOR: Mack Energy Corporation

ADDRESS: P.O. Box 960 Artesia, NM 88210

CONTACT PARTY: Deana Weaver PHONE: 575-748-1288

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 XX \_\_\_\_\_ 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: Deana Weaver TITLE: Regulatory Tech II

SIGNATURE: Deana Weaver DATE: 5/19/2025

E-MAIL ADDRESS: dweaver@mec.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: File Electronically Via OCD Permitting

Side 2

### 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.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

### XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

### INJECTION WELL DATA SHEET

OPERATOR: Mack Energy Corporation

WELL NAME & NUMBER: Bigfoot SWD #1

WELL LOCATION: 300 FSL 388 FEL

P

11

T16S

R27E

FOOTAGE LOCATION

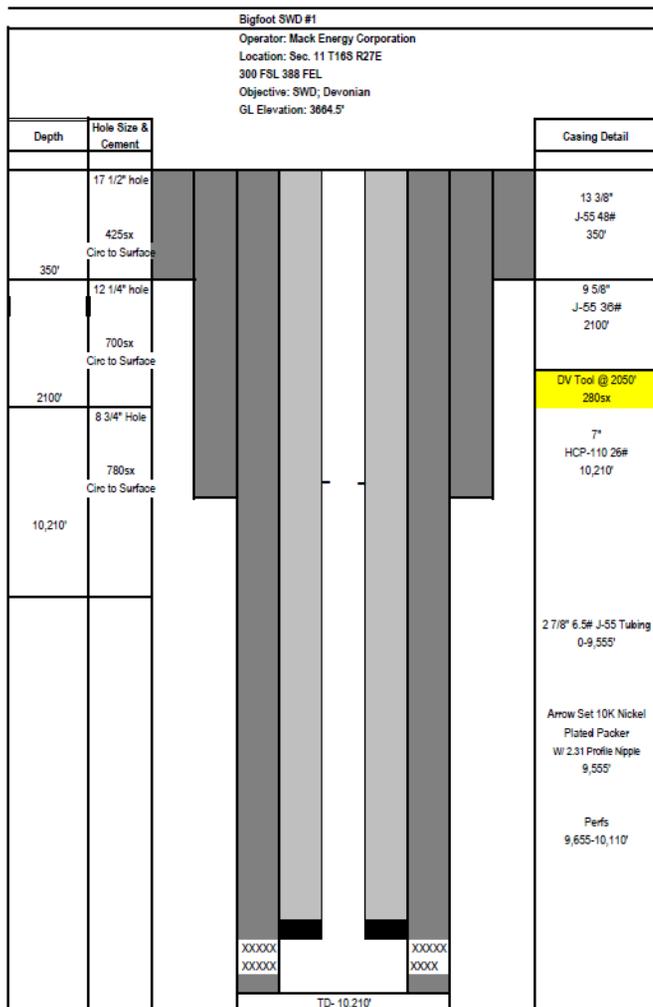
UNIT LETTER

SECTION

TOWNSHIP

RANGE

**WELLBORE SCHEMATIC**



**WELL CONSTRUCTION DATA**

Surface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8"

Cemented with: 425sx sx. *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circ

Intermediate Casing

Hole Size: 12 1/4" Casing Size: 9 5/8"

Cemented with: 700sx sx. *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circ

Production Casing

Hole Size: 8 3/4" Casing Size: 7"

Cemented with: 780sx sx. *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: Surface Method Determined: Circ

Total Depth: 10,210'

Injection Interval

9,655' feet to 10,110'

(Perforated or Open Hole; indicate which)

Side 2

**INJECTION WELL DATA SHEET**

Tubing Size: 2 7/8" Lining Material: 1850 Coating

Type of Packer: Arrow Set 10K Nickel Plated Packer w/ 2.31 Profile Nipple

Packer Setting Depth: 9,555'

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

Additional Data

1. Is this a new well drilled for injection? XX Yes        No

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

\_\_\_\_\_

2. Name of the Injection Formation: Devonian

3. Name of Field or Pool (if applicable): SWD; Devonian

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. NO

\_\_\_\_\_

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: U. Miss 8925', L. 9175', Woodford 9625'

Montoya 10,110', Simpson 10,370'

\_\_\_\_\_

\_\_\_\_\_

Mack Energy Corporation  
 Bigfoot SWD #1- C-108

**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: Mack Energy Corporation (OGRID # 013837)  
 Lease/Well Name & Number: Bigfoot SWD #1  
 Legal Location: 300 FSL & 388 FEL – Unit P – Section 11 T16S R27E – Eddy County  
 Coordinates: 32.9310883, -104.2419554 (NAD 83)

- (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 Cmt (sx)	Top of Cmt (ft)	Method Determined
Surface	17 1/2	13 3/8	350'	425	0	Circulation
Intermediate	12 1/4	9 5/8	2,100'	700	0	Circulation
Production	8 3/4	7	10,210'	780	0	Circulation

**DV Tool:** @ 2050' on Production Casing string 280sx cement.  
 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.**  
 2 7/8" 6.5 J-55 EUE IPC @ 9,555'

- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.**  
 Arrow Set 10K Nickel Plated Packer w/ 2.31 R Profile Nipple @ 9,555'

- 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- Devonian  
 Pool Name- SWD; Devonian  
 Pool Code- 96101

- (2) The injection interval and whether it is perforated or open-hole.**  
 Perforated injection between 9,655-10,110'

- (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 details on the sacks of cement or bridge plugs used to seal off such perforations.**  
 None

Mack Energy Corporation  
Bigfoot SWD #1- C-108

**(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 (220')	Cisco (7190')
Seven Rivers (443')	Atoka (8680')
Queen (900')	Morrow (8845')
Grayburg (1310')	U. Miss (8925')
San Andres (2000')	L. Miss (9175')
Glorieta (3125')	Woodford (9625')
Tubb (4375')	
Abo (5125')	
Wolfcamp (6360')	
- **Underlying**
  - Montoya (10,110')
  - Simpson (10,370')

**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
- 1-Mile Well Map
- 1-Mile AOR Well List
- 2-Mile Lease Map
- 1-Mile Surface Ownership Map
- 1-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 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 1-mile AOR are included in **Attachment 2**.

**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: 20,000 bwpd  
Average: 15,000 bwpd
- (2) Whether the system is open or closed;**  
The system is closed.

Mack Energy Corporation  
Bigfoot SWD #1- C-108

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

Maximum: 1,931 psi

Average: 1,000 psi

**(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 San Andres production wells in the area will be injected into the proposed SWD. Therefore, water analyses from these formations was obtained and are 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.)**

N/A- There is not a Devonian well in the area to get a sample. We can provide the sample during completion. We can perf and swab the well to provide a sample.

**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 Bigfoot SWD #1 injected fluid will be contained within the Devonian Formation. Immediately above the Devonian, the Woodford Shale is low permeability and the Mississippian Lime Formation is low porosity and low permeability carbonate. The Woodford and Mississippian Lime Formations, which are combined 730' thick, will be the upper seal and contain the Devonian injected fluid. Below the Devonian Formation is 50' of low porosity and low permeability carbonate in the Montoya Formation. The top 50' of the Montoya will be the bottom seal and contain the Devonian injected fluid.

- Lithologic Detail- Dolomite
- Geological Name- Devonian
- Thickness- 455'
- TD- 10,210'
- Injection Depth- 9,655-10,110' perforated completion

A Seismic Risk Assessment is included in **Attachment 4**.

Mack Energy Corporation  
Bigfoot SWD #1- C-108

**IX. Proposed Stimulation Program**

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

Treated with 10,000 gallons 15% acid.

**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. Attachment 5**

There is not an active water well in the 1mile area of the Bigfoot SWD #1.

**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 signed affirmative statement is included in **Attachment 6**.

**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 7** includes a list and letters of the Affected Persons receiving notice of the application and the associated certified mailing receipts.

**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 Artesia Daily Press, a newspaper of general circulation in the area, and the associated affidavit is included in **Attachment 7**.

## Attachment 1



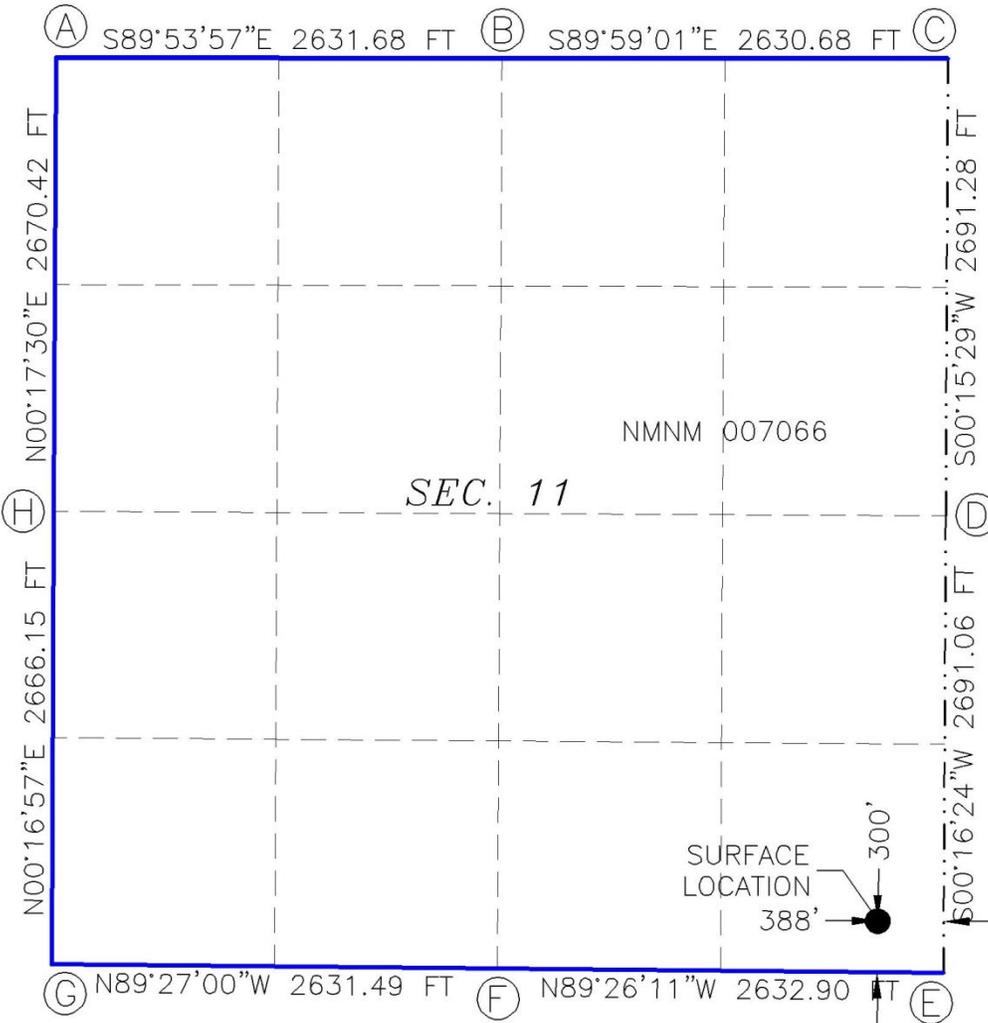
This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

**BIGFOOT SWD 1**  
 EL. = 3664.5

GEODETIC COORDINATES  
 NAD 83 NMSP EAST  
 SURFACE LOCATION  
 300' FSL, 388' FEL  
 N.=702476.88  
 E.=569373.59  
 LAT.=32.9310883°N  
 LONG.=104.2419554°W

BOTTOM OF HOLE  
 300' FSL, 388' FEL  
 N.=702476.88  
 E.=569373.59  
 LAT.=32.9310883°N  
 LONG.=104.2419554°W



**CORNER COORDINATES TABLE**  
 NAD 83 NMSP EAST

A	-	N.=707559.45	E.=564523.98
B	-	N.=707554.82	E.=567155.00
C	-	N.=707554.06	E.=569785.03
D	-	N.=704863.48	E.=569772.91
E	-	N.=702173.12	E.=569760.08
F	-	N.=702199.01	E.=567127.96
G	-	N.=702224.26	E.=564497.24
H	-	N.=704889.72	E.=564510.38

**LEGEND**

---	SECTION LINE
- - - - -	QUARTER LINE
---	LEASE LINE
---	WELL PATH



**BIGFOOT SWD 1**  
**MACK ENERGY CORPORATION**  
 IN THE SE/4 SE/4 SE/4 OF  
 SECTION 11, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 APRIL 15, 2025

**DESCRIPTION**

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN BUREAU OF LAND MANAGEMENT LAND IN THE SE/4 SE/4 SE/4 OF SECTION 11, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BEGINNING AT THE SOUTHEAST CORNER OF THE PARCEL, WHENCE THE SOUTHEAST CORNER OF SECTION 11, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS S58°40'03"E, A DISTANCE OF 247.74 FEET;  
 THENCE S89°59'00"W A DISTANCE OF 350.01 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;  
 THENCE N00°00'12"W A DISTANCE OF 350.28 FEET TO THE NORTHWEST CORNER OF THE PARCEL;  
 THENCE S89°58'52"E A DISTANCE OF 350.12 FEET TO THE NORTHEAST CORNER OF THE PARCEL;  
 THENCE S00°00'52"W A DISTANCE OF 350.06 FEET TO THE SOUTHWEST CORNER OF THE PARCEL, THE POINT OF BEGINNING;  
 CONTAINING 2.814 ACRES MORE OR LESS.

**GENERAL NOTES**

- 1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A WELL PAD
- 2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE MODIFIED TO THE SURFACE (NAD83), COORDINATES ARE NAD 83, ELEVATIONS ARE NAVD 88

**SURVEYOR CERTIFICATE**

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 15th DAY OF APRIL 2025

FILIMON F. JARAMILLO, PLS. 12797  
 PROFESSIONAL SURVEYOR

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3327

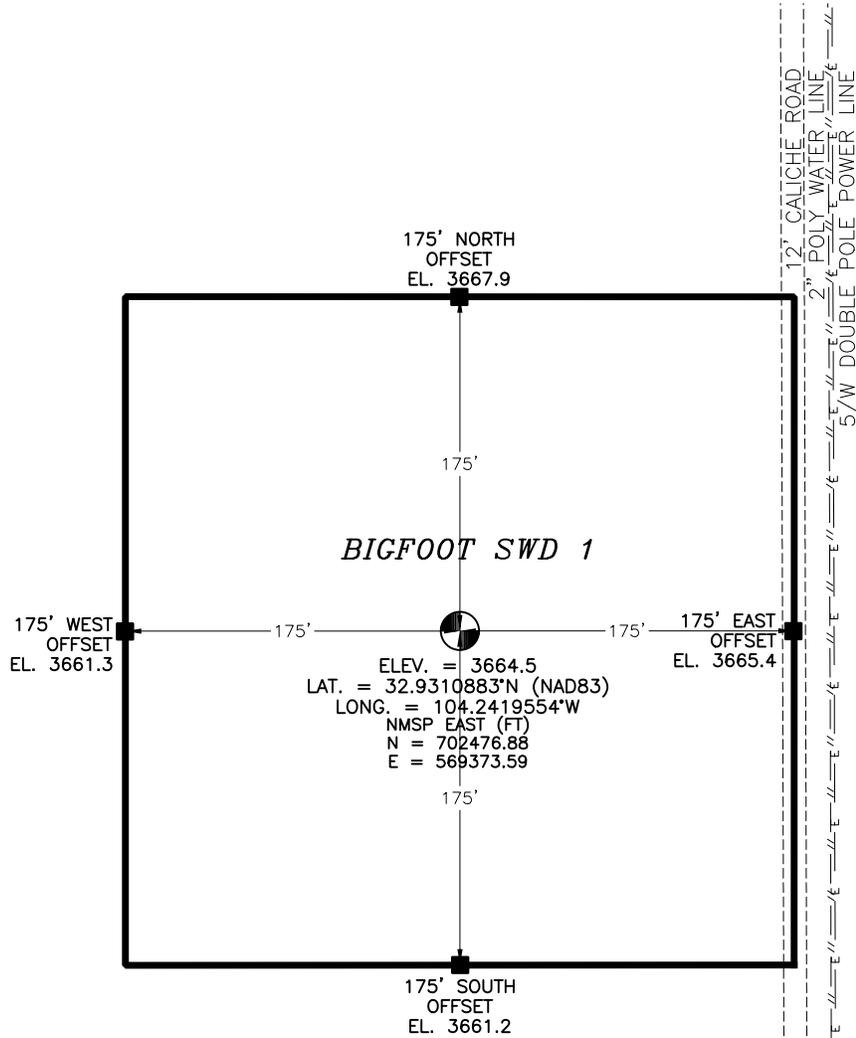
**SURVEY NO. 10325A**

**SHEET: 2-7**

**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3327

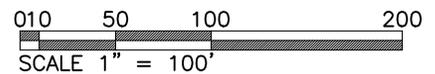
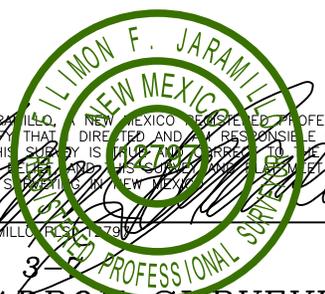
**BIGFOOT SWD 1**  
**MACK ENERGY CORPORATION**  
 IN THE SE/4 SE/4 SE/4 OF  
 SECTION 11, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 APRIL 15, 2025

**SITE MAP**



I, FILIMON F. JARAMILLO, NEW MEXICO LICENSED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND HAS COMPLIED WITH ALL THE MINIMUM STANDARDS FOR SURVEYS IN THE STATE OF NEW MEXICO.

FILIMON F. JARAMILLO, P.C.S. 10325A



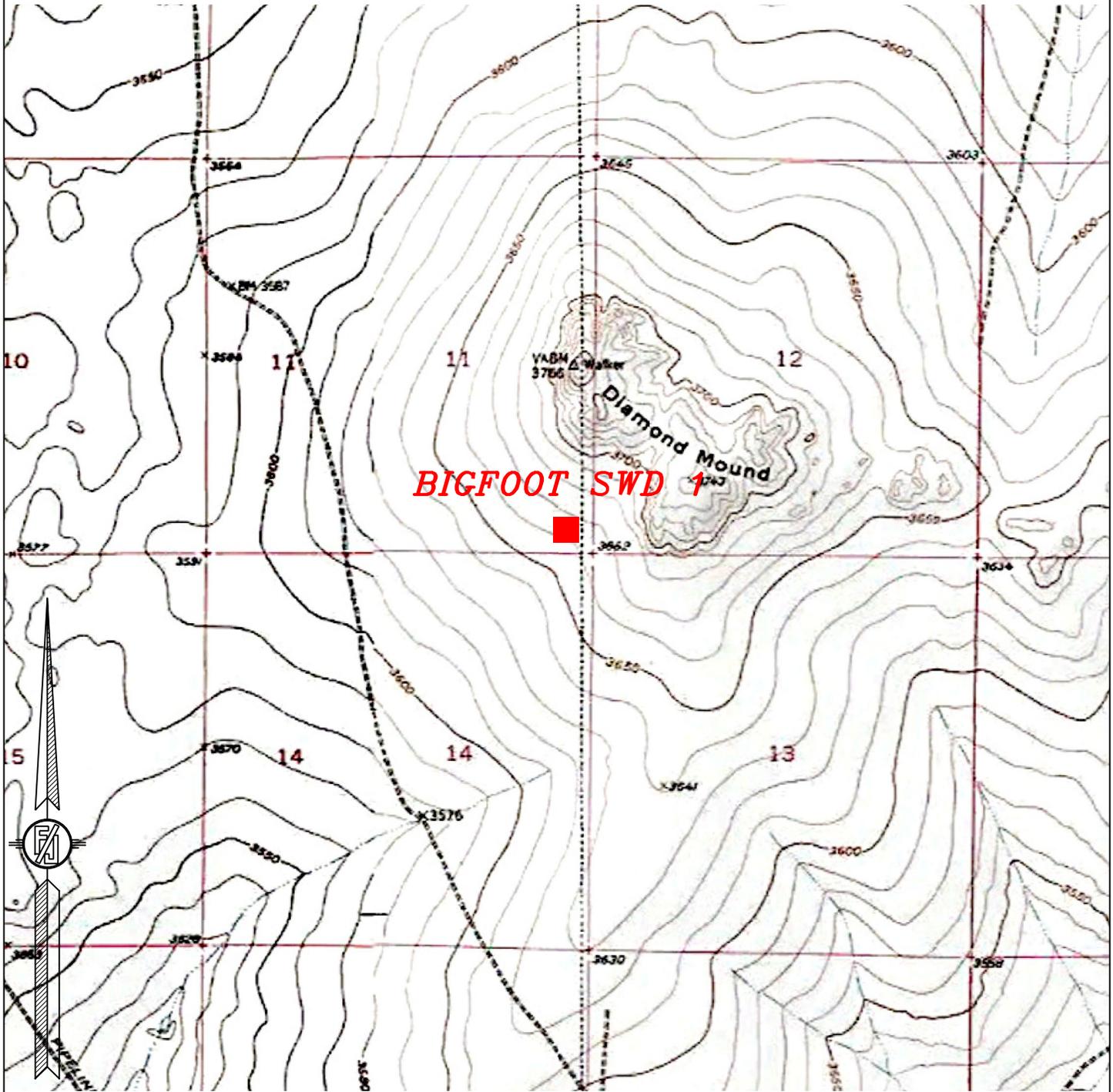
SHEET: 3

SURVEY NO. 10325A

**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3327

BIGFOOT SWD 1  
 MACK ENERGY CORPORATION  
 IN THE SE/4 SE/4 SE/4 OF  
 SECTION 11, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 APRIL 15, 2025

LOCATION VERIFICATION MAP



NOT TO SCALE

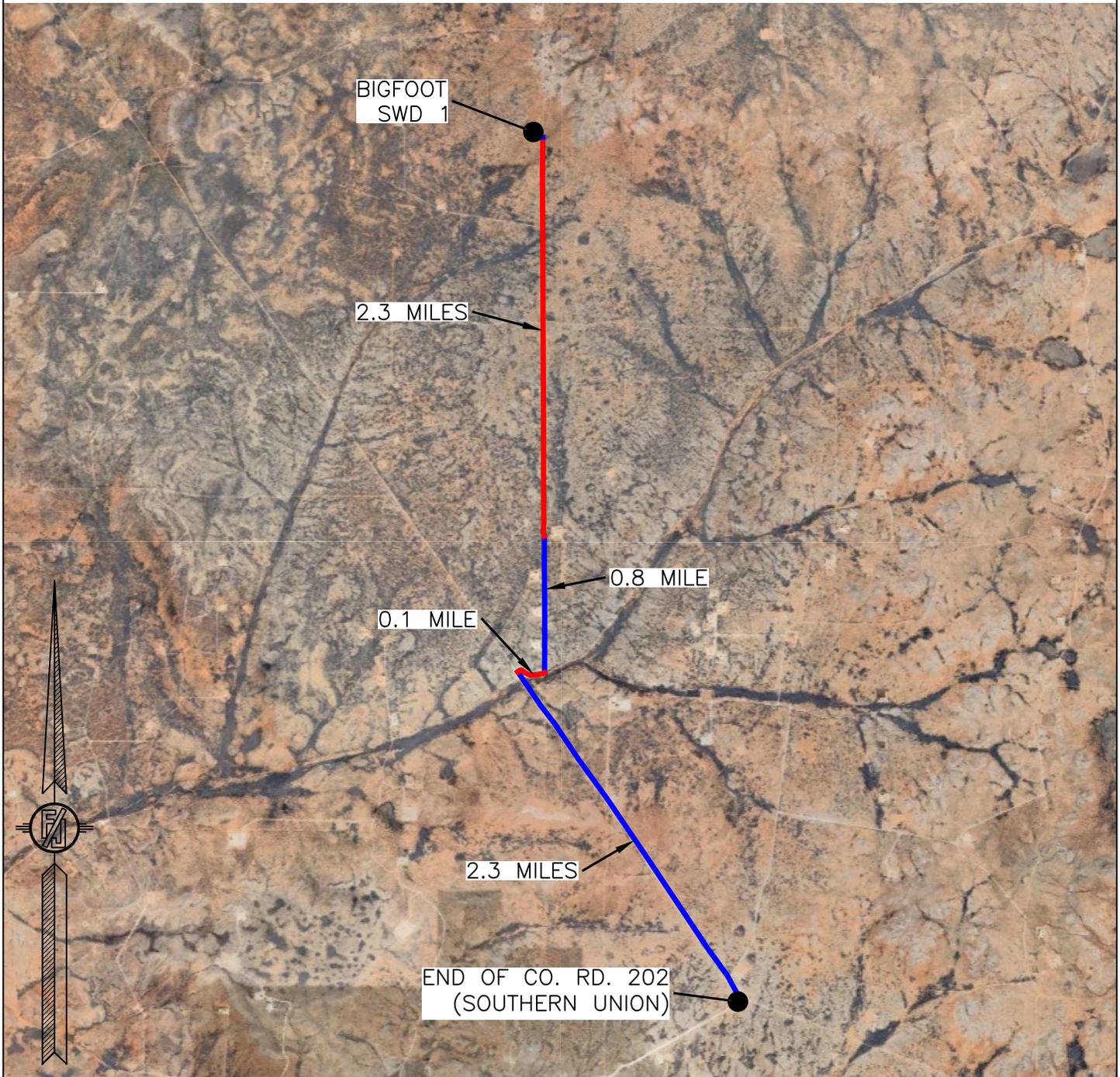
SHEET: 4-7

SURVEY NO. 10325A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

**BIGFOOT SWD 1**  
**MACK ENERGY CORPORATION**  
 IN THE SE/4 SE/4 SE/4 OF  
 SECTION 11, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 APRIL 15, 2025

**AERIAL ACCESS ROUTE MAP**



**NOT TO SCALE**  
**AERIAL PHOTO:**  
**GOOGLE EARTH**

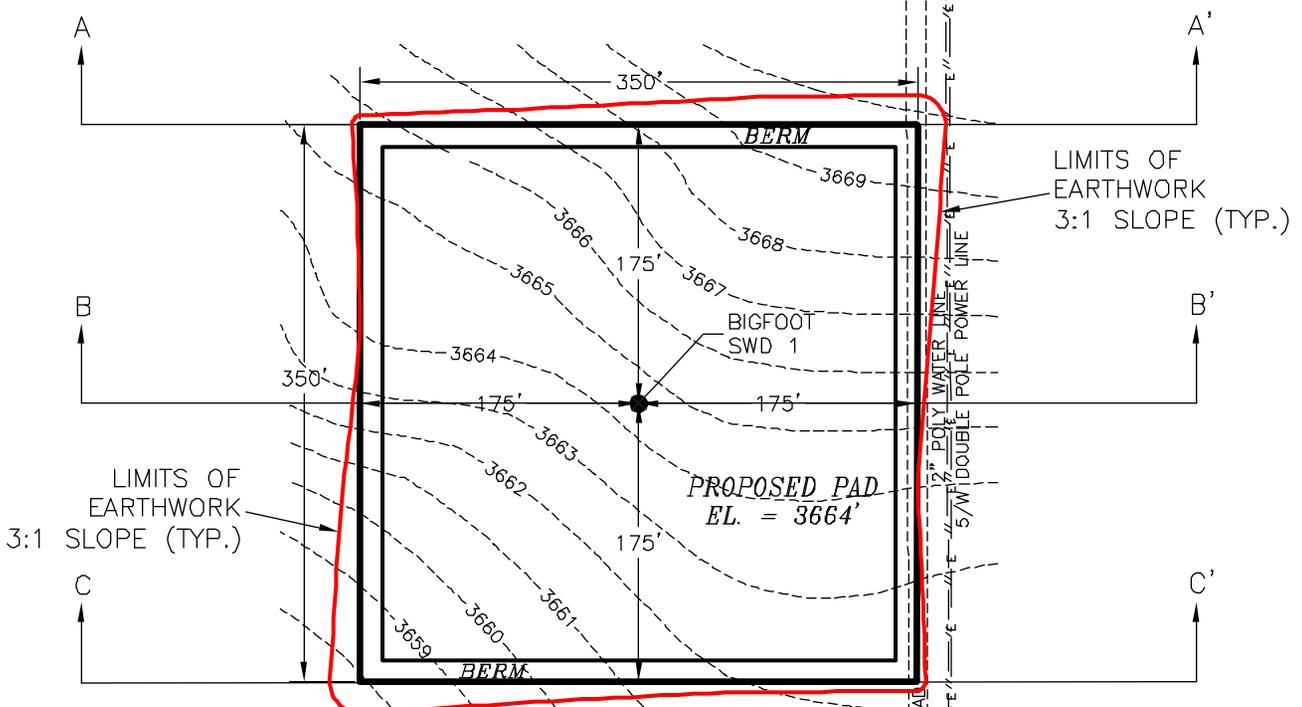
**DRIVING DIRECTIONS:** FROM THE END OF CO. RD. 202 (SOUTHERN UNION) GO NORTHWEST ON 20' CALICHE ROAD APPROX. 2.3 MILES, TURN RIGHT (EASTERLY) AND GO APPROX 0.1 MILE, TURN LEFT (NORTH) AND GO APPROX. 0.8 MILE TO THE END OF 20' CALICHE ROAD, CONTINUE NORTH ON 12' CALICHE ROAD APPROX. 2.3 MILES TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

**SHEET: 5-7**

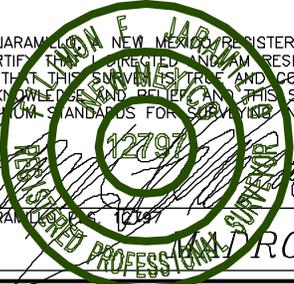
**SURVEY NO. 10325A**

**MADRON SURVEYING, INC.** 301 SOUTH CANAL (575) 234-3327 **CARLSBAD, NEW MEXICO**

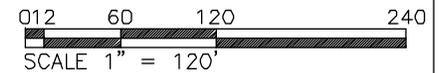
# PLAN VIEW



I, FILIMON F. JARAMILA, NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THE SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



**MACK ENERGY CORPORATION**  
**PAD ELEVATIONS AND CROSS SECTIONS**  
**FOR BIGFOOT SWD 1**  
 SECTION 11, TOWNSHIP 16 SOUTH,  
 RANGE 27 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO



CUT	FILL	NET
5528 CU. YD	5073 CU. YD	455 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

APRIL 15, 2025

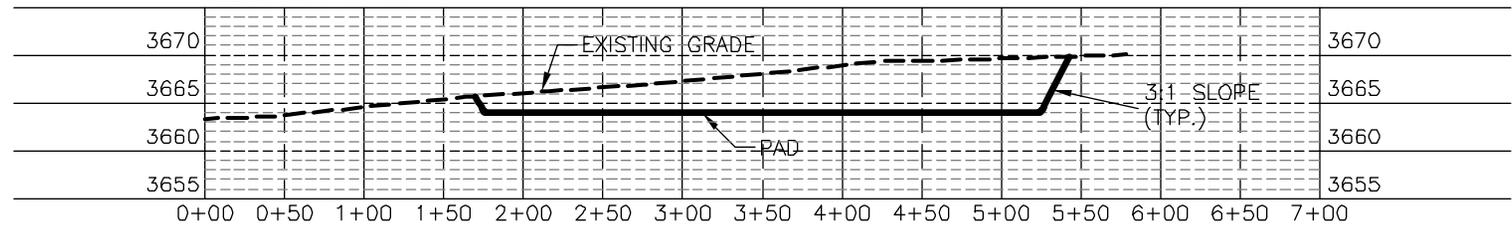
FILIMON F. JARAMILA 12797

**IRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3327

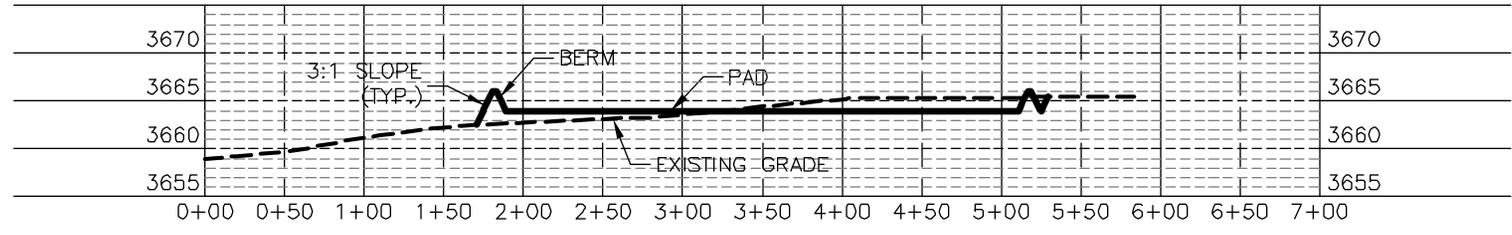
SHEET 6-7 SURVEY NO. 10325A

# CROSS-SECTIONS

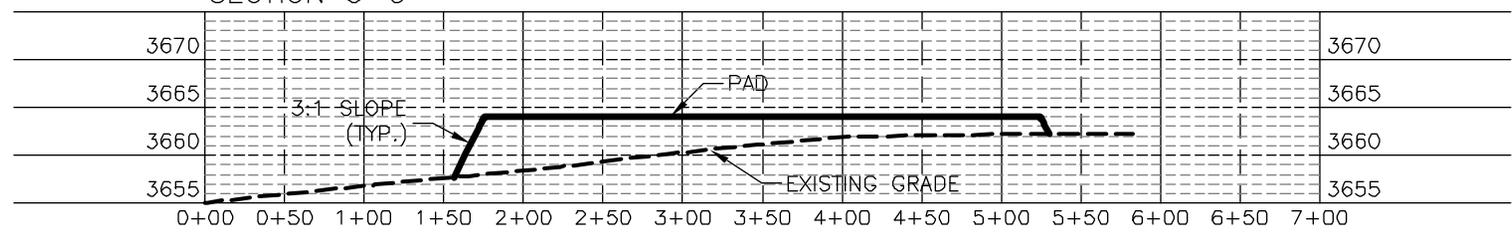
### SECTION A-A'



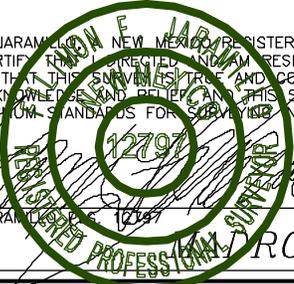
### SECTION B-B'



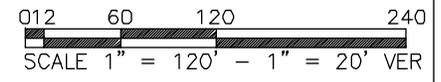
### SECTION C-C'



I, FILIMON F. JARAMILA, NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT THE FOREGOING IS A TRUE AND CORRECT REPRESENTATION OF THE SURVEY AND PLAT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



MACK ENERGY CORPORATION  
 PAD ELEVATIONS AND CROSS SECTIONS  
**FOR BIGFOOT SWD 1**  
 SECTION 11, TOWNSHIP 16 SOUTH,  
 RANGE 27 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO



CUT	FILL	NET
5528 CU. YD	5073 CU. YD	455 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

APRIL 15, 2025

FILIMON F. JARAMILA 12797

IRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3327

SHEET 7-7 SURVEY NO. 10325A

Bigfoot SWD #1			
Operator: Mack Energy Corporation Location: Sec. 11 T16S R27E 300 FSL 388 FEL Objective: SWD: Devonian GL Elevation: 3664.5'			
Depth	Hole Size & Cement		Casing Detail
350'	17 1/2" hole 425sx Circ to Surface		13 3/8" J-55 48# 350'
2100'	12 1/4" hole 700sx Circ to Surface		9 5/8" J-55 36# 2100'
			DV Tool @ 2050' 280sx
10,210'	8 3/4" Hole 780sx Circ to Surface		7" HCP-110 26# 10,210'
			2 7/8" 6.5# J-55 Tubing 0-9,555'
			Arrow Set 10K Nickel Plated Packer W/ 2.31 Profile Nipple 9,555'
			Perfs 9,655-10,110'
		XXXXX XXXXX	
		XXXXX XXXXX	
		TD- 10,210'	

BigFoot SWD #1  
300 FSL 388FEL  
Sec. 11 T16S R27E  
Formation Tops

Quaternary	Surface
Yates	220'
Seven Rivers	443'
Queen	900'
Grayburg	1310'
San Andres	2000'
Glorieta	3125'
Tubb	4375'
Abo	5125'
Wolfcamp	6360'
Cisco	7190'
Atoka	8680'
Morrow	8845'
U.Miss	8925'
L.Miss	9175'
Woodford	9625'
Devonian	9655'
Montoya	10,110'
Simpson	10,370'

## Attachment 7

AFFIDAVIT OF PUBLICATION

ARTESIA NEWS  
PO BOX 507  
HUTCHINSON, KS 67504-0507

STATE OF NEW MEXICO } SS  
COUNTY OF EDDY }

Account Number: 459  
Ad Number: 45170  
Description: Bigfoot SWD  
Ad Cost: \$37.89

Sherry Groves, being first duly sworn, says:

That she is the Agent of the the Artesia News, a weekly newspaper of general circulation, printed and published in Artesia, Eddy County, New Mexico; that the publication, a copy of which is attached hereto, was published in said newspaper on the following dates:

May 1, 2025

That said newspaper was regularly issued and circulated on those dates.

SIGNED:

*Sherry Groves*

Agent

Subscribed to and sworn to me this 1<sup>st</sup> day of May 2025.

*Leanne Kaufenberg*

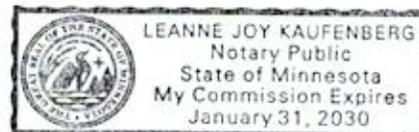
Leanne Kaufenberg, Notary Public, Redwood County  
Minnesota

LEGAL NOTICE

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Bigfoot SWD #1 300 FSL 388 FEL of Section 11, T16S, R27E, NMPM, Eddy County, New Mexico. The water will be injected into the Devonian at a disposal depth of 9,655-10,110' (Perforated). Water will be injected at a maximum surface pressure of 1,931# and a maximum injection rate of 15,000-20,000 BWPD. Any interest party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960 or call 575-748-1288. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within fifteen days of the date of publication of this notice.

Published in the Artesia Daily Press May 1, 2025.  
#45170

Accounts Payable  
Mack Energy Corporation  
PO Box 960  
Artesia, NM 88211



Legal Notice

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Bigfoot SWD #1 300 FSL 388 FEL of Section 11, T16S, R27E, NMPM, Eddy County, New Mexico. The water will be injected into the Devonian at a disposal depth of 9,655-10,110' (Perforated). Water will be injected at a maximum surface pressure of 1,931# and a maximum injection rate of 15,000-20,000 BWPD. Any interest party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960 or call 575-748-1288. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within fifteen days of the date of publication of this notice.

**LEGAL NOTICE**

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Published in the Artesia Daily Press May 1, 2025.  
#45170

**Statement of Affected Person Notification**

**C-108**

**Bigfoot SWD #1**

**Mack Energy Corporation**

**Proposed Disposal Well**

<u>Name</u>	<u>Address</u>	<u>City</u>	<u>State</u>	<u>Zip</u>	<u>Certified Mail Id</u>
Bureau of Land Management	620 E. Greene Street	Carlsbad	NM	88220-6292	9589 0710 5270 0130 1880 26
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe	NM	87501	9589 0710 5270 0130 1880 19
Chase Oil Corporation	11352 Lovington Hwy	Artesia	NM	88210	
Magnum Hunter Production Inc	840 Gessner Rd Suite 1400	Houston	TX	77024	9589 0710 5270 0130 1880 33
Plains Radio Petro Co	P.O. Box 9354	Amarillo	TX	79105	9589 0710 5270 0130 1880 40
Toreador Royalty Corp	8117 Preston Rd #530	Dallas	TX	75225	9589 0710 5270 0130 1880 57
KE Andrews	1900 Dalrock	Rowlett	TX	75088	9589 0710 5270 0130 1880 64
COG Operating	600 W. Illinois	Midland	TX	79701	9589 0710 5270 0130 1881 49
Rubicon Oil & Gas I LP	400 W. Illinois Ave 1130	Midland	TX	79701-4399	9589 0710 5270 0130 1880 71
EOG Resources Inc	5509 Champions Dr	Midland	TX	79706	9589 0710 5270 0130 1880 88
Sta Oil Producers LLC	104 S Pecos St	Midland	TX	79701	9589 0170 5270 0130 1880 95
Chi Energy Inc	212 N. Main Ste 200	Midland	TX	79702	9589 0710 5270 0130 1881 01
Legacy Reserves Operating	P.O. Box 267	Denver	CO	80201	9589 0710 5270 0130 1881 18



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 748-7374

March 23, 2022

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

**RE: Mack Energy Corporation & Chase Affiliates**

Dear Mr. McClure:

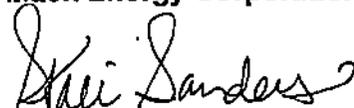
Mack Energy Corporation is a Chase Family owned entity. The following Chase individuals or companies are all affiliates of Mack Energy Corporation and usually own an interest in wells drilled and/or operated by Mack Energy Corporation.

- Mack C. Chase Trust
- Robert C. Chase or RDC Minerals LLC
- Richard L. Chase or Ventana Minerals LLC
- Gerene Dianne Chase Ferguson or DiaKan Minerals LLC
- Broken Arrow Royalties LLC
- Chase Oil Corporation
- Sendero Energy LLC
- Katz Resources LLC
- M Squared Energy LLC

All of these family members and companies all office in the same building so notifications can be hand delivered; therefore we request that the certified mail process be waived when these parties are involved.

If you have any questions or need additional information please do not hesitate to contact me. Your assistance is greatly appreciated.

Sincerely,  
**Mack Energy Corporation**

  
Staci Sanders  
Land Manager

/ss

**Re: Application of Mack Energy Corporation for administrative approval for Central Tank Battery and Off Lease Measurement of oil and gas production at a CTB Facility located in Section 28, Township 15S Range 29E, NMPM, Chaves County, New Mexico.**

List of Affected Parties

Sendero Energy LLC

Katz Resources LLC

M Squared Energy LLC

Chase Oil Corp

Robert C Chase

Broken Arrow Royalties LLC

Ventana Minerals LLC

DiaKan Minerals LLC

Bureau of Land Management

Received by **OCD: 4/24/2025 7:49:27 AM**  
SENDER: NIXIE 731 4E 18CU 0105/06/25  
RETURN TO SENDER  
INSUFFICIENT ADDRESS  
UNABLE TO FORWARD  
BC: 88211096060 2266N126151-00435

SENDER: NIXIE 731 40 18CU 0105/07/25 **Page 30 of 80**  
RETURN TO SENDER  
NO SUCH NUMBER  
UNABLE TO FORWARD  
BC: 88211096060 2266N127140-00279

1. Complete item  
Print your name so that we can  
Attach this card on the front

Toreador Royalty Corp  
8117 Preston Rd #530  
Dallas, TX 75225

9590 9402 7443 2055 9315 04  
9589 0710 5270 0130 1880 57

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

1. Complete item  
Print your name so that we can  
Attach this card on the front

Rubicon Oil & Gas I LP  
400 W. Illinois Ave 1130  
Midland, TX 79701-4399

9590 9402 7443 2055 9314 81  
9589 0710 5270 0130 1880 71

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt

PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt

SENDER: COM  
-R-T-S- 79105-RFS-1N \*95 04/28/25  
RETURN TO SENDER  
VACANT  
UNABLE TO FORWARD  
RETURN TO SENDER

1. Complete item  
Print your name so that we can  
Attach this card on the front

Plains Radio Petro Co  
P.O. Box 9354  
Amarillo, TX 79105

9590 9402 7443 2055 9315 11  
9589 0710 5270 0130 1880 40

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

SENDER: NIXIE 731 40 18CU 0105/08/25  
COMPLETE THIS SECTION ON DELIVERY  
RETURN TO SENDER  
NOT DELIVERABLE AS ADDRESSED  
UNABLE TO FORWARD  
BC: 88211096060 2266N126085-00046

1. Complete item  
Print your name so that we can  
Attach this card on the front

KE Andrews  
1900 Dalrock  
Rowlett, TX 75088

9590 9402 7443 2055 9314 98  
9589 0710 5270 0130 1880 64

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt

PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. **Article Number (Transfer from service label)**  
 9589 0710 5270 0130 1880 88

PS Form 3811, July 2020 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
 Agent  
 Addressee

B. Received by (Printed Name)  
 Chu Berry

C. Date of Delivery  
 4/27

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. **Article Number (Transfer from service label)**  
 9589 0710 5270 0130 1880 33

PS Form 3811, July 2020 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
 Agent  
 Addressee

B. Received by (Printed Name)  
 R Bollman

C. Date of Delivery  
 4-28-25

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. **Article Number (Transfer from service label)**  
 9589 0710 5270 0130 1880 95

PS Form 3811, July 2020 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
 Agent  
 Addressee

B. Received by (Printed Name)  
 Josh Do

C. Date of Delivery  
 4/29/25

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Insured Mail  
 Insured Mail Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. **Article Number (Transfer from service label)**  
 9589 0710 5270 0130 1880 19

PS Form 3811, July 2020 PSN 7530-02-000-9053

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
 Agent  
 Addressee

B. Received by (Printed Name)  
 Marcus Burch

C. Date of Delivery  
 4/29/25

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery

Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation™  
 Signature Confirmation Restricted Delivery

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1.

**COG Operating**  
600 W. Illinois  
Midland, TX 79701



9590 9402 7443 2055 9314 12

2. Article Number (Transfer from service label)

9589 0710 5270 0130 1881 49

COMPLETE THIS SECTION ON DELIVERY

A. Signature  
 *[Signature]*  Agent  
 Addressee

B. Received by (Printed Name) C. Date of Delivery  
*[Signature]* 4-28

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type
- Adult Signature
  - Adult Signature Restricted Delivery
  - Certified Mail®
  - Collect on Delivery Restricted Delivery
  - Insured Mail
  - Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
  - Registered Mail™
  - Registered Mail Restricted Delivery
  - Signature Confirmation™
  - Signature Confirmation Restricted Delivery

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Receipt

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1.

**Chi Energy Inc.**  
212 N. Main Ste. 200  
Midland, TX 79702



9590 9402 7443 2055 9314 50

2. Article Number (Transfer from service label)

9589 0710 5270 0130 1881 01

COMPLETE THIS SECTION ON DELIVERY

A. Signature  
 *[Signature]*  Agent  
 Addressee

B. Received by (Printed Name) C. Date of Delivery  
*[Signature]* 9/28/25

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

3. Service Type
- Adult Signature
  - Adult Signature Restricted Delivery
  - Certified Mail®
  - Certified Mail Restricted Delivery
  - Collect on Delivery
  - Collect on Delivery Restricted Delivery
  - Insured Mail
  - Insured Mail Restricted Delivery (over \$500)
- Priority Mail Express®
  - Registered Mail™
  - Registered Mail Restricted Delivery
  - Signature Confirmation™
  - Signature Confirmation Restricted Delivery

PS Form 3811, July 2020 PSN 7530-02-000-9053

Domestic Return Receipt



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 19

Return Receipt Requested

New Mexico State Land Office  
310 Old Santa Fe Trail  
Santa Fe, NM 87501

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 9,655-10,110'. The Bigfoot SWD #1 located 300 FSL & 388 FEL, Sec. 11 T16S R27E, Eddy County.

The letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to drill this well as a water disposal. If you have any objections, you must notify the Oil Conservation Division in Santa Fe in writing at 1220 South St. Francis Drive, Santa Fe, NM 87505 within fifteen (15) days of receiving this letter.

Sincerely,

Mack Energy Corporation

A handwritten signature in black ink that reads "Deana Weaver". The signature is written in a cursive style.

Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 26  
Return Receipt Requested

Bureau of Land Management  
620 E. Greene Street  
Carlsbad, NM 88220-6292

To all Interest Owners:

Enclosed for you review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 9,655-10,110'. The Bigfoot SWD #1 located 300 FSL & 388 FEL, Sec. 11 T16S R27E, Eddy County.

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Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 33  
Return Receipt Requested

Magnum Hunter Production Inc.  
840 Gessner Rd Suite 1400  
Houston, TX 77024

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 9,655-10,110'. The Bigfoot SWD #1 located 300 FSL & 388 FEL, Sec. 11 T16S R27E, Eddy County.

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Sincerely,

Mack Energy Corporation

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Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 40  
Return Receipt Requested

Plains Radio Petro Co  
P.O. Box 9354  
Amarillo, TX 79105

To all Interest Owners:

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Sincerely,

Mack Energy Corporation

A handwritten signature in black ink that reads "Deana Weaver".

Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 57

Return Receipt Requested

Toreador Royalty Corp  
8117 Preston Rd #530  
Dallas, TX 75225

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 9,655-10,110'. The Bigfoot SWD #1 located 300 FSL & 388 FEL, Sec. 11 T16S R27E, Eddy County.

The letter will serve as a notice that Mack Energy Corporation has requested administrative approval from the NMOCD to drill this well as a water disposal. If you have any objections, you must notify the Oil Conservation Division in Santa Fe in writing at 1220 South St. Francis Drive, Santa Fe, NM 87505 within fifteen (15) days of receiving this letter.

Sincerely,

Mack Energy Corporation

A handwritten signature in black ink that reads "Deana Weaver".

Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
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---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 64  
Return Receipt Requested

KE Andrews  
1900 Dalrock  
Rowlett, TX 75088

To all Interest Owners:

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DW/

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Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 71  
Return Receipt Requested

Rubicon Oil & Gas I LP  
400 W. Illinois Ave 1130  
Midland, TX 79701-4399

To all Interest Owners:

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---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 88

Return Receipt Requested

EOG Resources Inc.  
5509 Champions Dr.  
Midland, TX 79706

To all Interest Owners:

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Regulatory Technician II

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Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1880 95  
Return Receipt Requested

Sta Oil Producers LLC  
104 S. Pecos St.  
Midland, TX 79701

To all Interest Owners:

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Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1881 01

Return Receipt Requested

Chi Energy Inc.  
212 N. Main Ste. 200  
Midland, TX 79702

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 9,655-10,110'. The Bigfoot SWD #1 located 300 FSL & 388 FEL, Sec. 11 T16S R27E, Eddy County.

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Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1881 18  
Return Receipt Requested

Legacy Reserves Operating  
P.O. Box 267  
Denver, CO 80201

To all Interest Owners:

Enclosed for you review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 9,655-10,110'. The Bigfoot SWD #1 located 300 FSL & 388 FEL, Sec. 11 T16S R27E, Eddy County.

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Sincerely,

Mack Energy Corporation

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Deana Weaver  
Regulatory Technician II

DW/

Attachments



P.O. Box 960  
Artesia, NM 88211-0960  
Office (575) 748-1288  
Fax (575) 746-9539

---

April 24, 2025

Via Certified Mail 9589 0710 5270 0130 1881 49

Return Receipt Requested

COG Operating  
600 W. Illinois  
Midland, TX 79701

To all Interest Owners:

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Mack Energy Corporation

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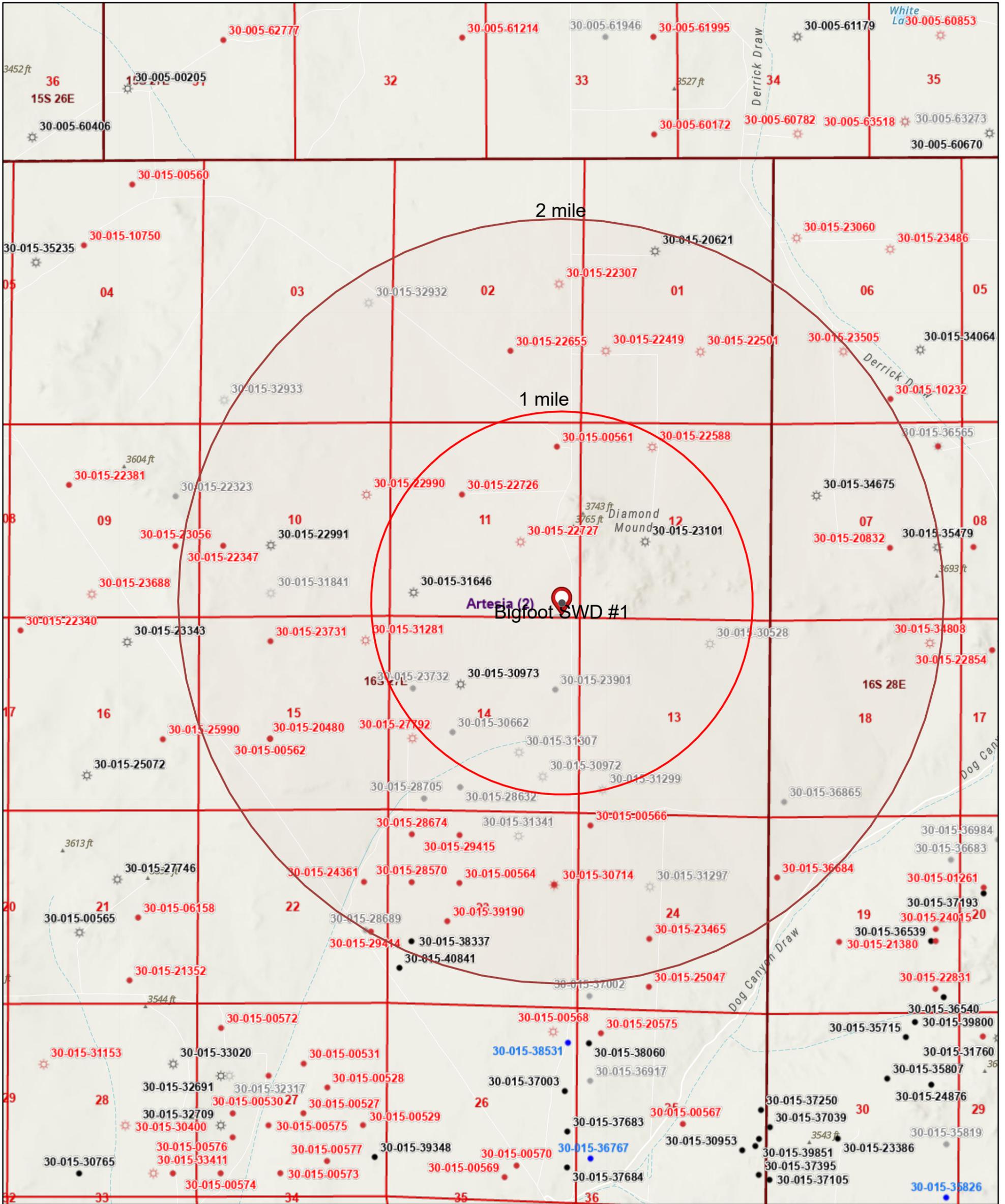
Deana Weaver  
Regulatory Technician II

DW/

Attachments

## Attachment 2

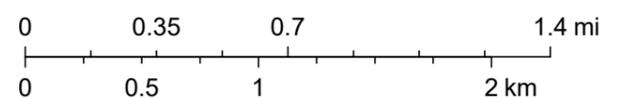
# 2 Mile Well Map



2/21/2025, 9:51:02 AM

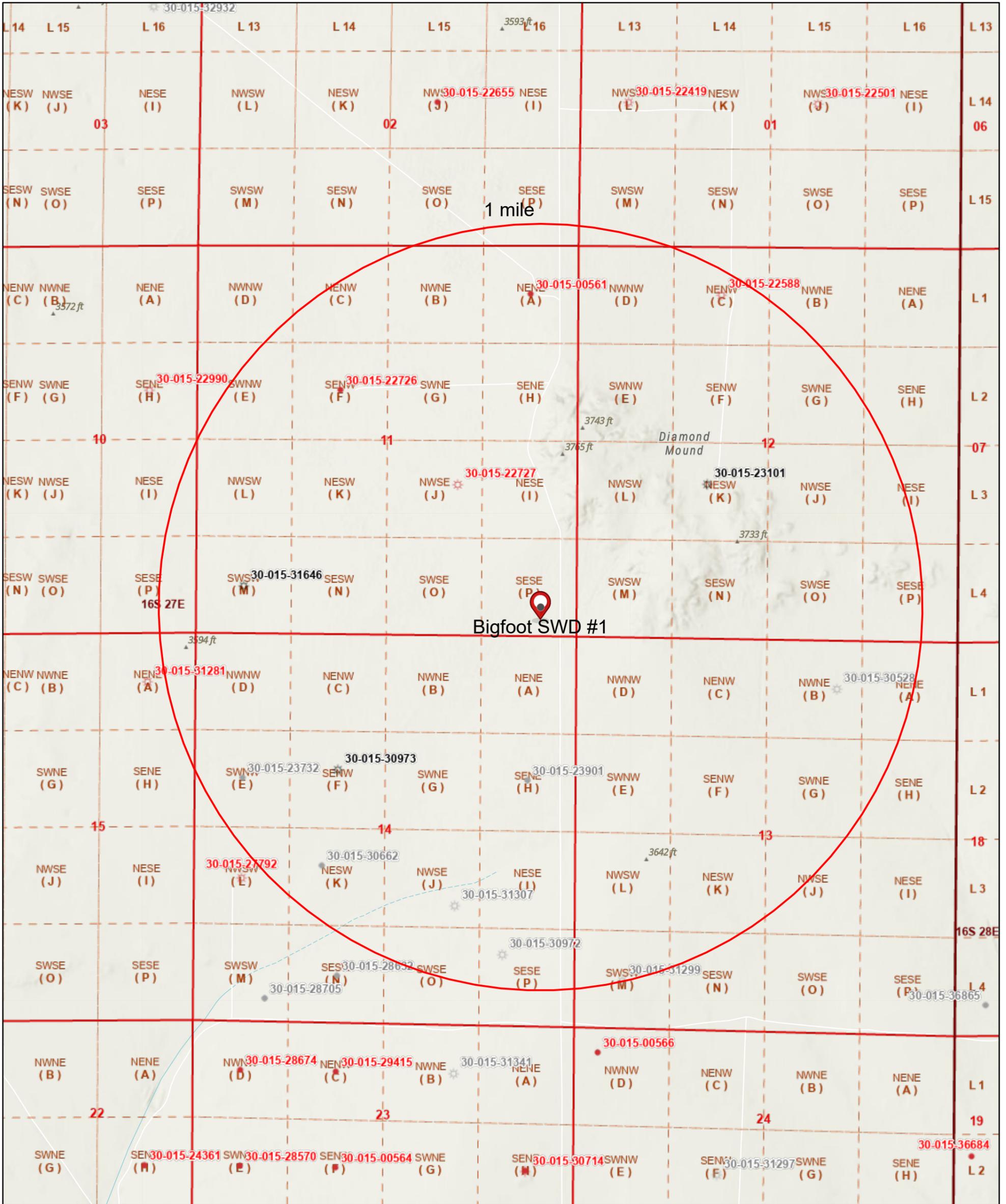
- Override 1
- \* Gas, Plugged
- Oil, Plugged
- Wells - Large Scale
- Oil, Active
- OCD Districts
- \* Gas, Active
- Oil, Cancelled
- PLSS First Division
- \* Gas, Cancelled
- Oil, New
- PLSS Townships

1:36,112



Esri, NASA, NGA, USGS, FEMA, OCD, BLM, Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

# 1 Mile Well Map

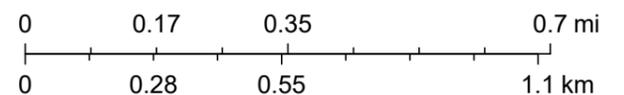


2/21/2025, 9:54:02 AM

Wells - Large Scale

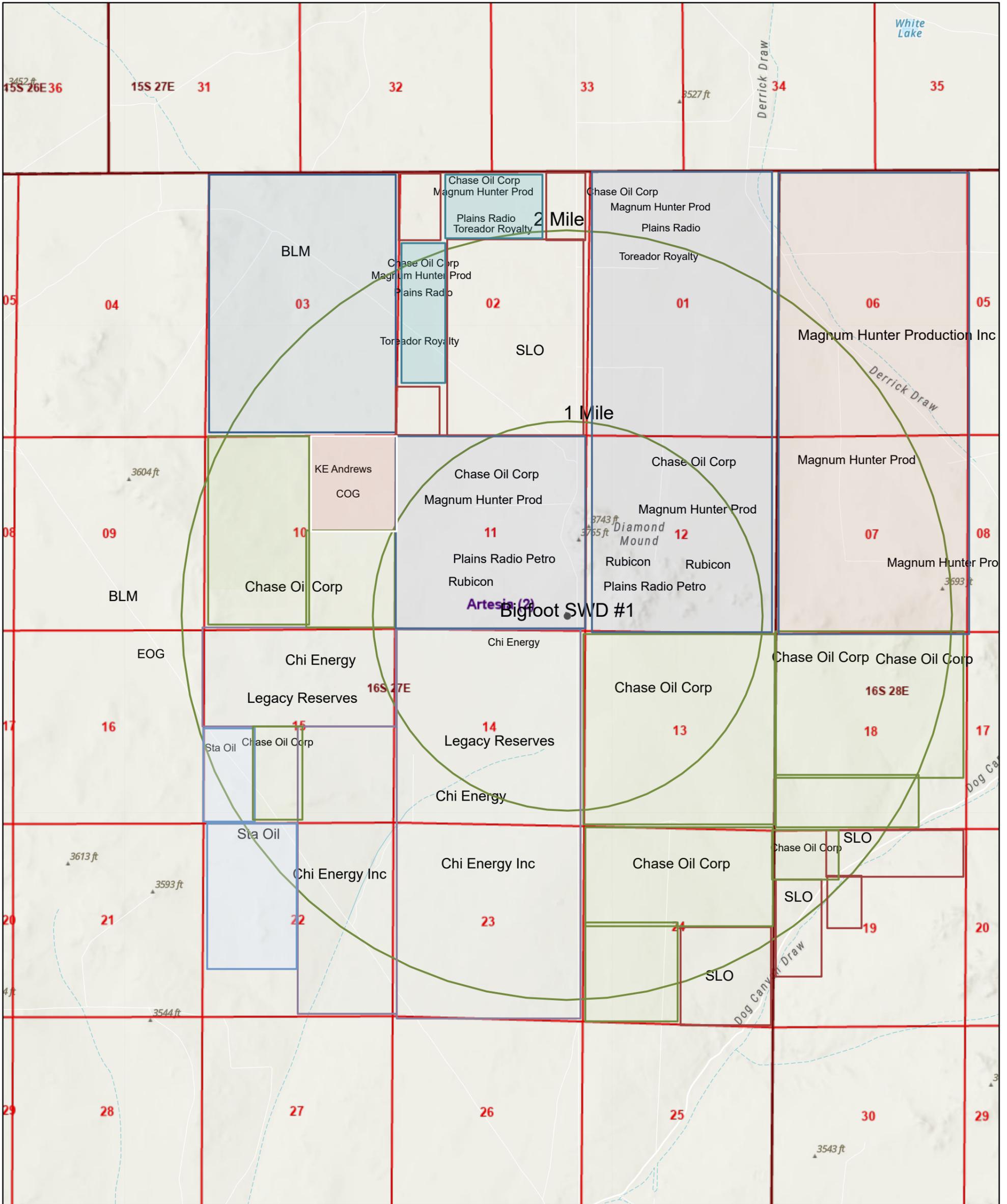
- Oil, Plugged
- ⚙ Gas, Active
- ⚙ Gas, Cancelled
- ⚙ Gas, Plugged
- Oil, Cancelled
- ⬜ PLSS Second Division
- ⬜ PLSS First Division
- ⬜ PLSS Townships

1:18,056



Esri, NASA, NGA, USGS, FEMA, OCD, Esri Community Maps Contributors, New Mexico State University, Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS, BLM

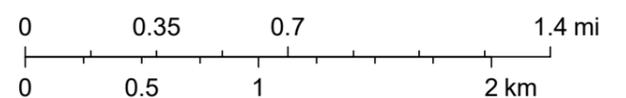
# Leaseholder Map



2/24/2025, 9:54:37 AM

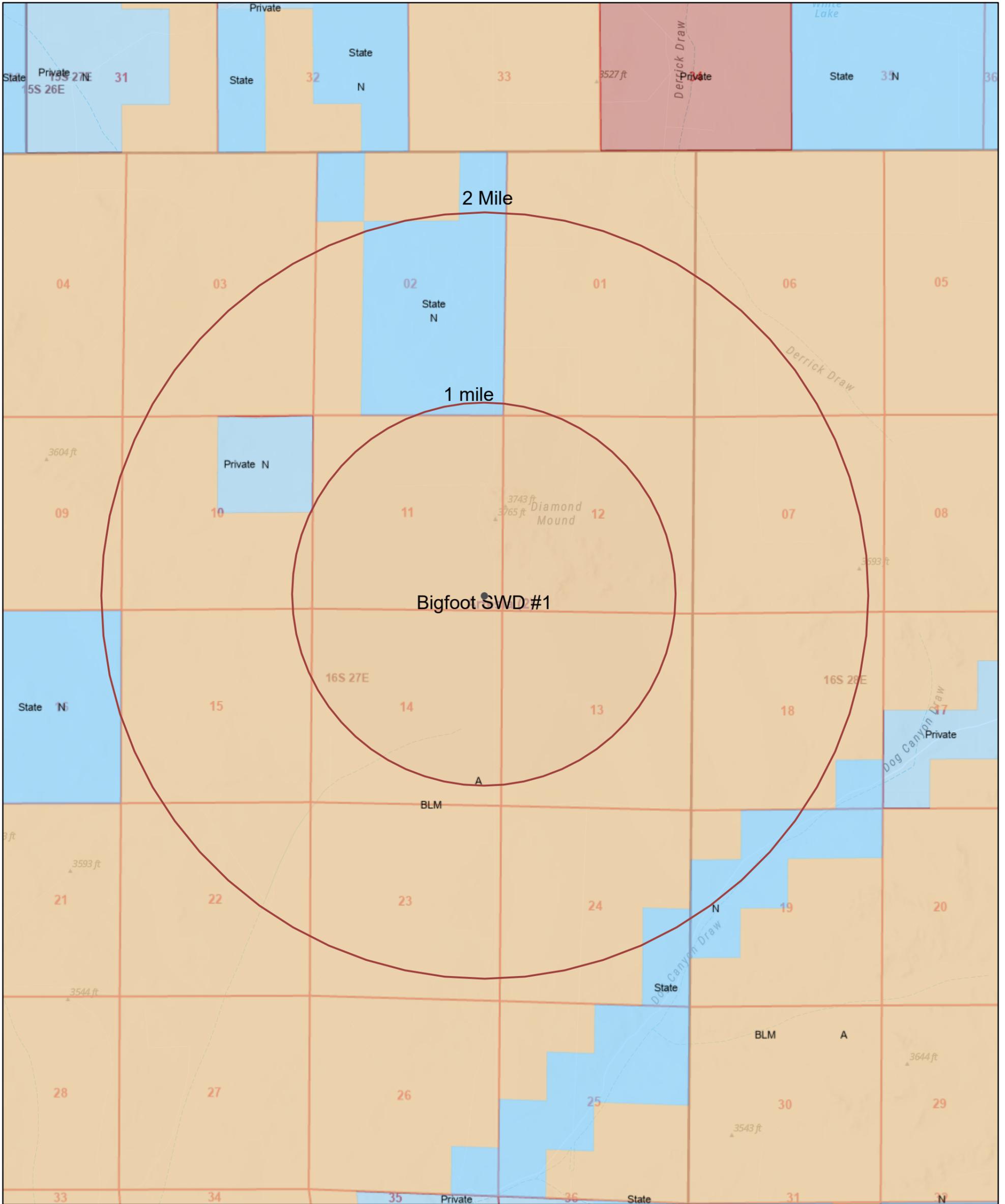
- Areas
- Override 5
  - Override 10
  - OCD Districts
  - Override 1
  - Override 6
  - Override 11
  - PLSS First Division
  - Override 2
  - Override 7
  - Override 12
  - PLSS Townships
  - Override 3
  - Override 8
  - Override 13
  - Override 4
  - Override 9
  - Override 14

1:36,112



Esri, NASA, NGA, USGS, FEMA, OCD, BLM, Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

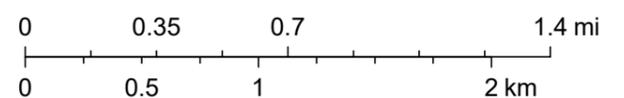
# 1 Mile Surface Ownership



2/21/2025, 10:17:05 AM

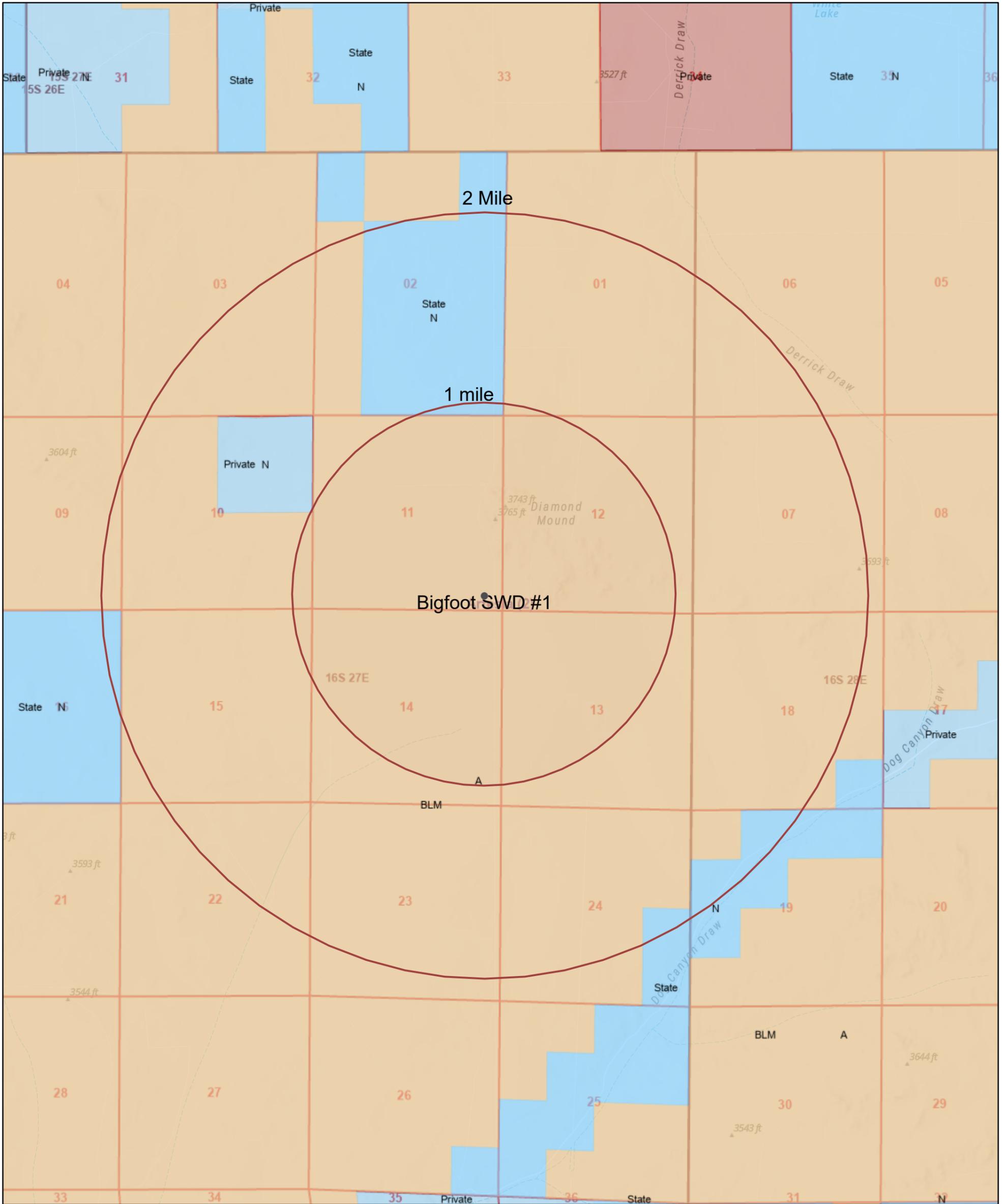
- Areas**
- Override 1
  - Override 2
- Mineral Ownership**
- A-All minerals are owned by U.S.
  - N-No minerals are owned by the U.S.
- Land Ownership**
- BLM
  - P
  - S
  - OCD Districts
  - PLSS First Division
  - PLSS Townships

1:36,112



U.S. BLM, Esri, NASA, NGA, USGS, FEMA, OCD, BLM, Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

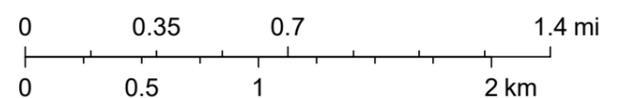
# 1 Mile Mineral Ownership



2/21/2025, 10:19:30 AM

- |   |   |
|---|---|
| <b>Areas</b>  | <b>Mineral Ownership</b>  |
| <span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px;"></span> Override 1                       | <span style="background-color: #f4a460; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> A-All minerals are owned by U.S.    |
| <span style="border: 1px solid orange; display: inline-block; width: 15px; height: 10px;"></span> Override 2                    | <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> N-No minerals are owned by the U.S. |
| <b>Land Ownership</b>   | <span style="border: 1px dashed purple; display: inline-block; width: 15px; height: 10px;"></span> OCD Districts  |
| <span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> BLM | <span style="border: 1px solid red; display: inline-block; width: 15px; height: 10px;"></span> PLSS First Division  |
| <span style="background-color: #ffff00; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> P   | <span style="border: 1px solid orange; display: inline-block; width: 15px; height: 10px;"></span> PLSS Townships  |
| <span style="background-color: #add8e6; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> S   |   |

1:36,112



U.S. BLM, Esri, NASA, NGA, USGS, FEMA, OCD, BLM, Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

API	Well Name	Well Type	Well Status	ogrid	ogrid_name	PLSS Location (ULSTR)	SPUD Date	Lease Type	Measured Depth	Associated Pools	Effective Date	Last Produced	Plug Date
30-015-31646	FARGO 11 FEDERAL #001	Gas	Active	13837	MACK ENERGY CORP	M-11-165-27E	4/15/2001	Federal	8,925	[76079] DIAMOND MOUND, MORROW (GAS); [76079] DIAMOND MOUND, MORROW (GAS);	10/31/2019	10/31/2024	12/30/9999
30-015-30973	CARBON VALLY 14 FEDERAL #002	Gas	Active	13837	MACK ENERGY CORP	F-14-165-27E	5/10/2000	Federal	9,000	[97254] DIAMOND MOUND, STRAWN, SW (G)	10/31/2019	10/31/2024	12/30/9999
30-015-23101	WILLIAMSON FEDERAL COM #002	Gas	Active	13837	MACK ENERGY CORP	K-12-165-27E	4/1/1981	Federal	9,210	[76079] DIAMOND MOUND, MORROW (GAS)	10/31/2019	10/31/2024	12/30/9999
30-015-22726	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	F-11-165-27E	12/31/1899	Federal	8,860	No Data	12/31/1899	12/30/9999	5/26/1982
30-015-22727	WELLS FEDERAL #002	Gas	Plugged (site released)	169355	DEVON LOUISIANA CORPORATION	G-11-165-27E	12/30/9999	Federal	8,912	[76079] DIAMOND MOUND, MORROW (GAS)	3/31/1998	12/31/1993	6/19/2001
30-015-00561	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	A-11-165-27E	12/31/1899	Federal	10,770'	No Data	12/31/1899	12/30/9999	7/13/1951
30-015-22588	WILLIAMSON FEDERAL COM #001	Gas	Plugged (site released)	6137	DEVON ENERGY PRODUCTION COMPANY, LP	C-12-165-27E	7/28/1978	Federal	9,119	[76079] DIAMOND MOUND, MORROW (GAS)	12/30/2005	4/30/2019	6/13/2019
<u>Penetrate Proposed Injection Interval</u>													
30-015-00561	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	A-11-165-27E	12/31/1899	Federal	10,770'	No Data	12/31/1899	12/30/9999	7/13/1951

Williamson Federal Com #2		API# 30-015-23101	
Operator: Mack Energy Corporation Location: Sec. 12 T16S R27E 2130 FSL 1800 FWL Objective: Diamond Mound; Morrow GL Elevation: 3508'			
Depth	Hole Size & Cement	Casing Detail	
371'	17 1/2" Hole 400sx	13 3/8" 371'	
1699'	11" Hole 1,000sx	11" 1699'	
9205'	7 7/8" Hole 1600sx	4 1/2" 9205'	
		Perfs 8916-9020'	
TD-9210'			

Carbon Valley 14 Federal #2		API# 30-015-30973	
Operator: Mack Energy Corporation Location: Sec. 14 T16S R2/E 1860 FNL 1980 FWL Objective: Diamond Mound; Morrow GL Elevation: 3508'			
Depth	Hole Size & Cement	Casing Detail	
1579'	12 1/4" Hole 950ax	8 5/8" 1579'	
		4 1/2" 9000'	
9000'	7 7/8" Hole 850ax TOC 5170'	Perfs 8192-8200' CIBP @ 8700' w/ 35' cmt 8762-8844'	
		XXX XXXX XXX	
		TD-9000'	

Depth		Hole Size & Cement		Casing Detail	
Fargo 11 Federal #1      API# 30-015-31646 Operator: Mack Energy Corporation Location: Sec. 11 T16S R27E 860 FSL 680 FWL Objective: Diamond Mound; Morrow GL Elevation: 3592'					
1535'	12 1/4" Hole 1180sx			8 5/8"	1535'
8925'	7 7/8" Hole 845sx TOC 4465'			4 1/2"	8925'
				Perfs	8632-8686'
TD-8925'					





P&A 7/13/1951		Pre-Ongard Well #1		API# 30-015-00561	
Operator: Pre-Ongard Well Operator Location: Sec. 11 T16S R27E 660 FNL 660 FEL Objective: GL Elevation: 3669'					
Depth	Hole Size & Cement	Information incomplete on OCD		Casing Detail	
134'	Hole			10 3/4"	134'
1587'	Hole			8 5/8"	1627'
10,770'	Hole				
Perfs					
Plugs					
40sx cmt 10670-10770' 40sx cmt 10230-10330' 40sx cmt 9480-9580 40sx cmt 6690-6790' 40sx cmt 1580-1680' 100' cmt plug 450-550 40' cmt 50'-Surface					
TD- 10,770					



## Attachment 3



Catalyst Oilfield Services  
 11999 E Hwy 158  
 Gardendale, TX 79758  
 (432) 563-0727  
 Fax: (432) 224-1038

### Water Analysis Report

Customer: Mack Energy Corporation      Sample #: 81463  
 Area: Artesia      Analysis ID #: 80383  
 Lease: Prince Rupert  
 Location: Fed #4H      0  
 Sample Point: Wellhead      San Andres

<b>Sampling Date:</b>	1/10/2019	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
<b>Analysis Date:</b>	1/22/2019	<b>Chloride:</b>	89383.7	2521.19	<b>Sodium:</b>	53970.0	2347.56
<b>Analyst:</b>	Catalyst	<b>Bicarbonate:</b>	175.7	2.88	<b>Magnesium:</b>	1013.0	83.33
<b>TDS (mg/l or g/m3):</b>	150968.6	<b>Carbonate:</b>			<b>Calcium:</b>	2725.0	135.98
<b>Density (g/cm3):</b>	1.102	<b>Sulfate:</b>	2800.0	58.3	<b>Potassium:</b>	644.4	16.48
Hydrogen Sulfide:	5	<b>Borate*:</b>	190.4	1.2	<b>Strontium:</b>	55.6	1.27
Carbon Dioxide:	97	<b>Phosphate*</b>			<b>Barium:</b>	0.9	0.01
Comments:		*Calculated based on measured elemental boron and phosphorus.			<b>Iron:</b>	9.0	0.32
		pH at time of sampling:		6.65	<b>Manganese:</b>	0.857	0.03
		pH at time of analysis:					
		pH used in Calculation:		6.65	<b>Conductivity (micro-ohms/cm):</b>		200079
		Temperature @ lab conditions (F):		75	<b>Resistivity (ohm meter):</b>		.0500

**Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl**

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.05	0.91	-0.13	0.00	-0.13	0.00	-0.11	0.00	1.22	0.60
100	0.13	2.72	-0.20	0.00	-0.13	0.00	-0.13	0.00	1.02	0.30
120	0.22	4.84	-0.26	0.00	-0.11	0.00	-0.15	0.00	0.84	0.30
140	0.30	7.26	-0.30	0.00	-0.06	0.00	-0.15	0.00	0.69	0.30
160	0.37	9.68	-0.34	0.00	0.00	6.96	-0.15	0.00	0.56	0.30
180	0.45	12.70	-0.37	0.00	0.08	166.07	-0.14	0.00	0.45	0.30
200	0.52	15.73	-0.40	0.00	0.18	328.81	-0.13	0.00	0.36	0.30
220	0.60	18.75	-0.42	0.00	0.28	485.19	-0.11	0.00	0.28	0.30



Catalyst Oilfield Services  
 11999 E Hwy 158  
 Gardendale, TX 79758  
 (432) 563-0727  
 Fax: (432) 224-1038

### Water Analysis Report

Customer: Mack Energy Corporation      Sample #: 78595  
 Area: Artesia      Analysis ID #: 76096  
 Lease: Chilliwack  
 Location: Fed Com 1H      0  
 Sample Point: Wellhead      San Andres

Sampling Date: 11/28/2018 Analysis Date: 12/3/2018 Analyst: Catalyst TDS (mg/l or g/m3): 175963.5 Density (g/cm3): 1.118 Hydrogen Sulfide: 4 Carbon Dioxide: 108 Comments:	<b>Anions</b> mg/l      meq/l Chloride: <b>104292.8</b> 2941.72 Bicarbonate: 131.8      2.16 Carbonate: Sulfate: 3200.0      66.62 Borate*: 108.1      0.68 Phosphate* *Calculated based on measured elemental boron and phosphorus. pH at time of sampling: 6.95 pH at time of analysis: pH used in Calculation: 6.95 Temperature @ lab conditions (F): 75	<b>Cations</b> mg/l      meq/l Sodium: 63550.0      2764.27 Magnesium: 1027.0      84.49 Calcium: 2882.0      143.81 Potassium: 707.0      18.08 Strontium: 63.7      1.45 Barium: 0.8      0.01 Iron: 0.1      0. Manganese: 0.189      0.01 Conductivity (micro-ohms/cm): 200381 Resistivity (ohm meter): .0499
---	--	---

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
°F										
80	0.28	2.95	-0.07	0.00	-0.05	0.00	-0.04	0.00	1.17	0.30
100	0.32	3.84	-0.14	0.00	-0.06	0.00	-0.07	0.00	0.97	0.30
120	0.36	5.02	-0.21	0.00	-0.05	0.00	-0.09	0.00	0.79	0.30
140	0.39	6.20	-0.26	0.00	-0.01	0.00	-0.10	0.00	0.63	0.30
160	0.43	7.38	-0.31	0.00	0.05	111.64	-0.10	0.00	0.50	0.30
180	0.46	9.16	-0.34	0.00	0.12	261.08	-0.09	0.00	0.38	0.30
200	0.50	10.93	-0.38	0.00	0.21	418.50	-0.08	0.00	0.29	0.30
220	0.55	12.99	-0.41	0.00	0.31	573.26	-0.07	0.00	0.21	0.30

Water Analysis- San Andres



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**Water Analysis Report**

Customer: Mack Energy Corporation      Sample #: 81533  
 Area: Artesia      Analysis ID #: 80615  
 Lease: Saskatoon  
 Location: Fed Com 1H      0  
 Sample Point: Wellhead      San Andres

<b>Sampling Date:</b>	1/10/2019	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
<b>Analysis Date:</b>	1/23/2019	<b>Chloride:</b>	91681.1	2585.99	<b>Sodium:</b>	54050.0	2351.04
<b>Analyst:</b>	Catalyst	<b>Bicarbonate:</b>	153.7	2.52	<b>Magnesium:</b>	1173.0	96.5
<b>TDS (mg/l or g/m3):</b>	151377.2	<b>Carbonate:</b>			<b>Calcium:</b>	2767.0	138.07
<b>Density (g/cm3):</b>	1.105	<b>Sulfate:</b>	700.0	14.57	<b>Potassium:</b>	647.0	16.55
<b>Hydrogen Sulfide:</b>	4	<b>Borate*:</b>	144.3	0.91	<b>Strontium:</b>	60.1	1.37
<b>Carbon Dioxide:</b>	90	<b>Phosphate*</b>			<b>Barium:</b>	0.6	0.01
<b>Comments:</b>		*Calculated based on measured elemental boron and phosphorus.			<b>Iron:</b>	0.0	0.
		pH at time of sampling:		7.23	<b>Manganese:</b>	0.416	0.02
		pH at time of analysis:					
		pH used in Calculation:		7.23	<b>Conductivity (micro-ohms/cm):</b>		197210
		Temperature @ lab conditions (F):		75	<b>Resistivity (ohm meter):</b>		.0507

**Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl**

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.57	6.35	-0.72	0.00	-0.71	0.00	-0.66	0.00	0.45	0.30
100	0.57	7.26	-0.79	0.00	-0.72	0.00	-0.69	0.00	0.25	0.00
120	0.58	8.77	-0.84	0.00	-0.69	0.00	-0.70	0.00	0.07	0.00
140	0.59	10.28	-0.89	0.00	-0.65	0.00	-0.71	0.00	-0.08	0.00
160	0.60	12.10	-0.93	0.00	-0.59	0.00	-0.70	0.00	-0.21	0.00
180	0.63	13.91	-0.96	0.00	-0.51	0.00	-0.70	0.00	-0.32	0.00
200	0.66	16.03	-0.99	0.00	-0.41	0.00	-0.69	0.00	-0.42	0.00
220	0.71	18.45	-1.01	0.00	-0.31	0.00	-0.67	0.00	-0.49	0.00



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### Water Analysis Report

Customer: Mack Energy Corporation      Sample #: 118208  
 Area: Artesia      Analysis ID #: 107555  
 Lease: Montreal  
 Location: 1H      0  
 Sample Point: Wellhead      San Andres

Sampling Date:	2/13/2020	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
Analysis Date:	3/4/2020	Chloride:	101615.8	2866.21	Sodium:	62440.0	2715.99
Analyst:	Catalyst	Bicarbonate:	197.6	3.24	Magnesium:	965.3	79.41
TDS (mg/l or g/m3):	172020.9	Carbonate:			Calcium:	2569.0	128.19
Density (g/cm3):	1.116	Sulfate:	3400.0	70.79	Potassium:	660.8	16.9
Hydrogen Sulfide:	7.4	Borate*:	110.4	0.7	Strontium:	57.8	1.32
Carbon Dioxide:	102	Phosphate*			Barium:	3.4	0.05
Comments:		*Calculated based on measured elemental boron and phosphorus.			Iron:	0.2	0.01
		pH at time of sampling:		7.14	Manganese:	0.550	0.02
		pH at time of analysis:					
		pH used in Calculation:		7.14	Conductivity (micro-mhos/cm):		199270
		Temperature @ lab conditions (F):		75	Resistivity (ohm meter):		.0502

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.58	8.60	-0.09	0.00	-0.08	0.00	-0.05	0.00	1.83	1.78
100	0.59	10.08	-0.16	0.00	-0.08	0.00	-0.08	0.00	1.63	1.78
120	0.60	11.86	-0.23	0.00	-0.07	0.00	-0.10	0.00	1.45	1.78
140	0.61	13.93	-0.28	0.00	-0.03	0.00	-0.10	0.00	1.30	1.78
160	0.63	16.01	-0.32	0.00	0.03	69.97	-0.10	0.00	1.16	1.78
180	0.65	18.38	-0.36	0.00	0.11	226.51	-0.10	0.00	1.05	1.78
200	0.68	21.05	-0.39	0.00	0.19	391.65	-0.09	0.00	0.95	1.48
220	0.73	24.01	-0.42	0.00	0.29	555.31	-0.08	0.00	0.87	1.48



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### Water Analysis Report

Customer: Mack Energy Corporation      Sample #: 100487  
 Area: Drilling      Analysis ID #: 94751  
 Lease: Maple Ridge  
 Location: Fed #1      0  
 Sample Point: Wellhead      San Andres

Sampling Date:	7/29/2019	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	8/8/2019	Chloride:	84902.3	2394.79	Sodium:	51250.0	2229.25
Analyst:	Catalyst	Bicarbonate:	241.6	3.96	Magnesium:	1177.0	96.82
TDS (mg/l or g/m3):	144232	Carbonate:			Calcium:	2566.0	128.04
Density (g/cm3):	1.097	Sulfate:	3300.0	68.71	Potassium:	564.2	14.43
Hydrogen Sulfide:	14	Borate*:	173.9	1.1	Strontium:	53.5	1.22
Carbon Dioxide:	162.8	Phosphate*			Barium:	1.5	0.02
Comments:		*Calculated based on measured elemental boron and phosphorus.			Iron:	1.5	0.05
		pH at time of sampling:		6.41	Manganese:	0.460	0.02
		pH at time of analysis:			Conductivity (micro-mhos/cm):		194536
		pH used in Calculation:		6.41	Resistivity (ohm meter):		.0514
		Temperature @ lab conditions (F):		75			

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> *2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	-0.09	0.00	-0.09	0.00	-0.09	0.00	-0.04	0.00	1.52	0.91
100	0.01	0.30	-0.15	0.00	-0.08	0.00	-0.06	0.00	1.33	0.91
120	0.10	3.96	-0.20	0.00	-0.06	0.00	-0.08	0.00	1.15	0.61
140	0.21	8.22	-0.25	0.00	-0.01	0.00	-0.08	0.00	1.00	0.61
160	0.31	12.48	-0.28	0.00	0.06	131.82	-0.08	0.00	0.87	0.61
180	0.41	17.35	-0.31	0.00	0.14	299.86	-0.07	0.00	0.76	0.61
200	0.51	21.92	-0.33	0.00	0.24	471.86	-0.06	0.00	0.67	0.61
220	0.61	26.79	-0.35	0.00	0.35	637.46	-0.04	0.00	0.60	0.61



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### Water Analysis Report

Customer: Mack Energy Corporation      Sample #: 55880  
 Area: Artesia      Analysis ID #: 53988  
 Lease: White Rock  
 Location: Federal #1H      0  
 Sample Point: Wellhead      San Andres

<b>Sampling Date:</b>	12/21/2017	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
<b>Analysis Date:</b>	1/6/2018	<b>Chloride:</b>	93901.4	2648.62	<b>Sodium:</b>	58100.0	2527.21
<b>Analyst:</b>	Catalyst	<b>Bicarbonate:</b>	241.6	3.96	<b>Magnesium:</b>	969.6	79.76
<b>TDS (mg/l or g/m3):</b>	161820.5	<b>Carbonate:</b>			<b>Calcium:</b>	2737.0	136.58
<b>Density (g/cm3):</b>	1.107	<b>Sulfate:</b>	5000.0	104.1	<b>Potassium:</b>	571.6	14.62
<b>Hydrogen Sulfide:</b>	11	<b>Borate*:</b>	229.5	1.45	<b>Strontium:</b>	66.0	1.51
<b>Carbon Dioxide:</b>	242	<b>Phosphate*</b>			<b>Barium:</b>	0.0	0.0
<b>Comments:</b>		*Calculated based on measured elemental boron and phosphorus.			<b>Iron:</b>	3.8	0.14
		pH at time of sampling:		6.9	<b>Manganese:</b>	0.000	0.0
		pH at time of analysis:			<b>Conductivity (micro-ohms/cm):</b>		176042
		pH used in Calculation:		6.9	<b>Resistivity (ohm meter):</b>		.0568
		<b>Temperature @ lab conditions (F):</b>		75			

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl

Temp	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.43	9.88	0.10	359.72	0.11	305.55	0.18	14.96	0.00	0.00
100	0.49	12.27	0.03	111.03	0.10	296.88	0.16	13.17	0.00	0.00
120	0.55	14.96	-0.03	0.00	0.13	355.53	0.14	11.97	0.00	0.00
140	0.60	17.96	-0.08	0.00	0.17	467.16	0.13	11.67	0.00	0.00
160	0.64	20.95	-0.12	0.00	0.23	615.30	0.14	11.67	0.00	0.00
180	0.69	24.54	-0.15	0.00	0.31	784.69	0.14	12.27	0.00	0.00
200	0.75	28.13	-0.18	0.00	0.40	962.15	0.15	12.87	0.00	0.00
220	0.80	31.72	-0.20	0.00	0.51	1137.23	0.17	13.77	0.00	0.00

## Attachment 4



April 1, 2025

PN 1904.SEIS.00

Mr. Phillip Goetze, P.G.  
NM EMNRD – Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Subject: **Mack Energy Corporation**  
**Bigfoot SWD #1 - Seismic Potential Letter**

Dear Mr. Goetze,

At the request of Mack Energy Corporation (Mack), ALL Consulting, LLC (ALL) has assessed the potential injection-induced seismicity risks in the vicinity of Mack's Bigfoot SWD #1, a proposed saltwater disposal (SWD) facility in Eddy County, New Mexico, and summarized the findings in this letter. This assessment used publicly available data to identify the proximity and characteristics of seismic events and known faults to evaluate the potential for the operation of the Bigfoot SWD #1 to contribute to seismic activity in the area.

## Geologic Evaluation

The Bigfoot SWD #1 is requesting a permit to inject into the Devonian Formation at a depth of 9,655-10,110 feet below ground surface (bgs). The Devonian Formation consists of cherty limestone and dolomites and is overlain by approximately 80 feet of low porosity and permeability Woodford Shale, which would prevent the upward migration of injection fluid and serve as the upper confining layer (see **Attachment 1**). Additionally, the Devonian Formation is underlain by various low porosity and permeability zones within the Silurian and Montoya Groups, both of which consist of limestones, dolomites, and interbedded shale zones. No geophysical logs penetrating the Silurian and Montoya Groups were identified within 10 miles of the Bigfoot SWD #1. A stratigraphic chart depicting the geologic setting is included as **Figure 1**.<sup>1</sup>

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<sup>1</sup> Yang, K.-M., & Dorobek, S. L. (1995). The Permian Basin of west Texas and New Mexico: Tectonic history of a "composite" Foreland Basin and its effects on stratigraphic development. *Stratigraphic Evolution of Foreland Basins*, 149–174. <https://doi.org/10.2110/pec.95.52.0149>

Mack Energy Corporation  
 Bigfoot SWD #1 Seismic Potential Letter  
 April 1, 2025

### Seismic Events and Fault Data

A review of United States Geological Survey (USGS) and New Mexico Tech Seismological Observatory (NMTSO) earthquake catalogues determined that the closest recorded seismic event was a M1.78 that occurred on May 25th, 2021, and was located approximately 10.04 miles south of the Bigfoot SWD #1 (see **Attachment 2**). Per the NMTSO seismic catalog, the event was recorded at 5.0km depth, which is the standard value when actual depth is unknown – indicating location data quality for this event is poor. **Per the USGS earthquake catalog, zero (0) seismic event M2.5 or greater have been recorded within 10 miles of the Bigfoot SWD #1.**<sup>2</sup>

Fault data from United States Geological Survey (USGS) and the Texas Bureau of Economic Geology (BEG)<sup>3</sup> indicates that the closest known fault is located approximately 17.42 miles south of the Bigfoot SWD #1 (see **Attachment 2**). This identified fault is within the Precambrian basement, which is approximately 2,890 feet below the proposed injection interval. A map of the seismic events and faults within 10 miles of the Bigfoot SWD #1 is included as **Attachment 2**.

### Seismic Potential Evaluation

Experience in evaluating induced seismic events indicates that most injection-induced seismicity throughout the U.S. (e.g., Oklahoma, Ohio, Texas, New Mexico, and Colorado) occurs as a result of injection into Precambrian basement rock, into overlying formations that are in hydraulic communication with the Precambrian basement rock, or as a result of injection near critically stressed and optimally oriented faults. Seismicity at basement depths occurs because critically stressed faults generally originate in crystalline basement rock and may also extend into overlying sedimentary formations.<sup>4</sup>

**Figure 1 – Delaware Basin Stratigraphic Chart (Adapted from Yang and Dorobek 1995)**

SYSTEM	SERIES/STAGE	CENTRAL BASIN PLATFORM	DELAWARE BASIN
PERMIAN	OCHOAN	DEWEY LAKE RUSTLER SALADO	DEWEY LAKE RUSTLER SALADO CASTILE
	GUADALUPIAN	TANSILL YATES SEVEN RIVERS QUEEN GRAYBURG SAN ANDRES GLORIETA	DELAWARE MT GROUP BELL CANYON CHERRY CANYON BRUSHY CANYON
	LEONARDIAN	CLEAR FORK WICHITA	BONE SPRING
	WOLFCAMPIAN	WOLFCAMP	WOLFCAMP
PENNSYLVANIAN	VIRGILIAN	CISCO	CISCO
	MISSOURIAN	CANYON	CANYON
	DESMOINESIAN	STRAWN	STRAWN
	ATOKAN	ATOKA	ATOKA
MISSISSIPPIAN	MORROWAN	(ABSENT)	MORROW
	CHESTERIAN MERAMECIAN OSAGEAN KINDERHOOKIAN	CHESTER MERAMEC OSAGE KINDERHOOK WOODFORD DEVONIAN	CHESTER MERAMEC OSAGE KINDERHOOK WOODFORD DEVONIAN
DEVONIAN		SILURIAN SHALE FUSSELMAN	MIDDLE SILURIAN FUSSELMAN
SILURIAN			
ORDOVICIAN	UPPER	MONTOYA	SYLVAN MONTOYA
	MIDDLE	SIMPSON	SIMPSON
	LOWER	ELLENBURGER	ELLENBURGER
CAMBRIAN	UPPER	CAMBRIAN	CAMBRIAN
PRECAMBRIAN			

<sup>2</sup> USGS Earthquake Catalog. U.S. Geological Survey. (n.d.). <https://earthquake.usgs.gov/earthquakes/search/>

<sup>3</sup> Horne E. A. Hennings P. H., and Zahm C. K. 2021. Basement structure of the Delaware Basin, in The Geologic Basement of Texas: A Volume in Honor of Peter Flawn, Callahan O. A., and Eichubl P., The University of Texas at Austin, Bureau of Economic Geology.

<sup>4</sup> Ground Water Protection Council and Interstate Oil and Gas Compact Commission. *Potential Injection-Induced Seismicity Associated with Oil & Gas Development: A Primer on Technical and Regulatory Considerations Informing Risk Management and Mitigation*. 2015. 141 pages.

Mack Energy Corporation  
Bigfoot SWD #1 Seismic Potential Letter  
April 1, 2025

Injection into either the Precambrian basement rock or its overlying formations that are hydraulically connected to the basement rock through faulting or fracture networks can increase the pore pressure and may lead to the fault slipping, resulting in a seismic event.<sup>4</sup> As such, the vertical distance between the injection formation and Precambrian basement rock and the presence or lack of faulting within the injection interval are major considerations when determining the risk of injection-induced seismicity.

### Depth to Precambrian Basement

Geophysical data from nearby well records, aeromagnetic surveys, and gravity surveys indicates the top of the Precambrian basement to be approximately 13,000 feet bgs at the Bigfoot SWD #1, or approximately 2,890 feet below the proposed injection interval.<sup>3</sup> **There are insufficient Precambrian basement penetrations and/or public well data regarding Precambrian basement depth to generate an accurate structural contour map of the Precambrian basement in the vicinity of the Bigfoot SWD #1.**

### Formation Parting Pressure

Class II SWDs in New Mexico are administratively permitted with a maximum pressure gradient of 0.2 psi/ft. Review of New Mexico Oil Conservation Division (NMOCD) Order IPI-537 from the Mack Energy Round Tank SWD #1, which is located approximately 13 miles east of the Bigfoot SWD #1, determined the fracture gradient of the Devonian Formation in the region is 0.41 psi/ft from an approved step-rate test. Typical SWD permitting standards in New Mexico would indicate that formation parting pressure would not be exceeded by the Bigfoot SWD #1.

### Conclusion

As experts on the issue of induced seismicity, seismic monitoring, and mitigation, it is our expert opinion that the potential for the Bigfoot SWD #1 to cause injection-induced seismicity is expected to be minimal, at best. This conclusion assumes the Bigfoot SWD #1 will be operated under formation parting pressure at the regulated 0.2 psi per foot and is based on (1) the presence of numerous confining layers above and below the proposed injection interval, (2) the significant vertical and lateral distance between the proposed injection interval and the nearest identified Precambrian basement fault, and (3) the lack of historic seismicity within 10-miles of the proposed Bigfoot SWD #1 location.

Sincerely,  
ALL Consulting



Reed Davis  
Geophysicist



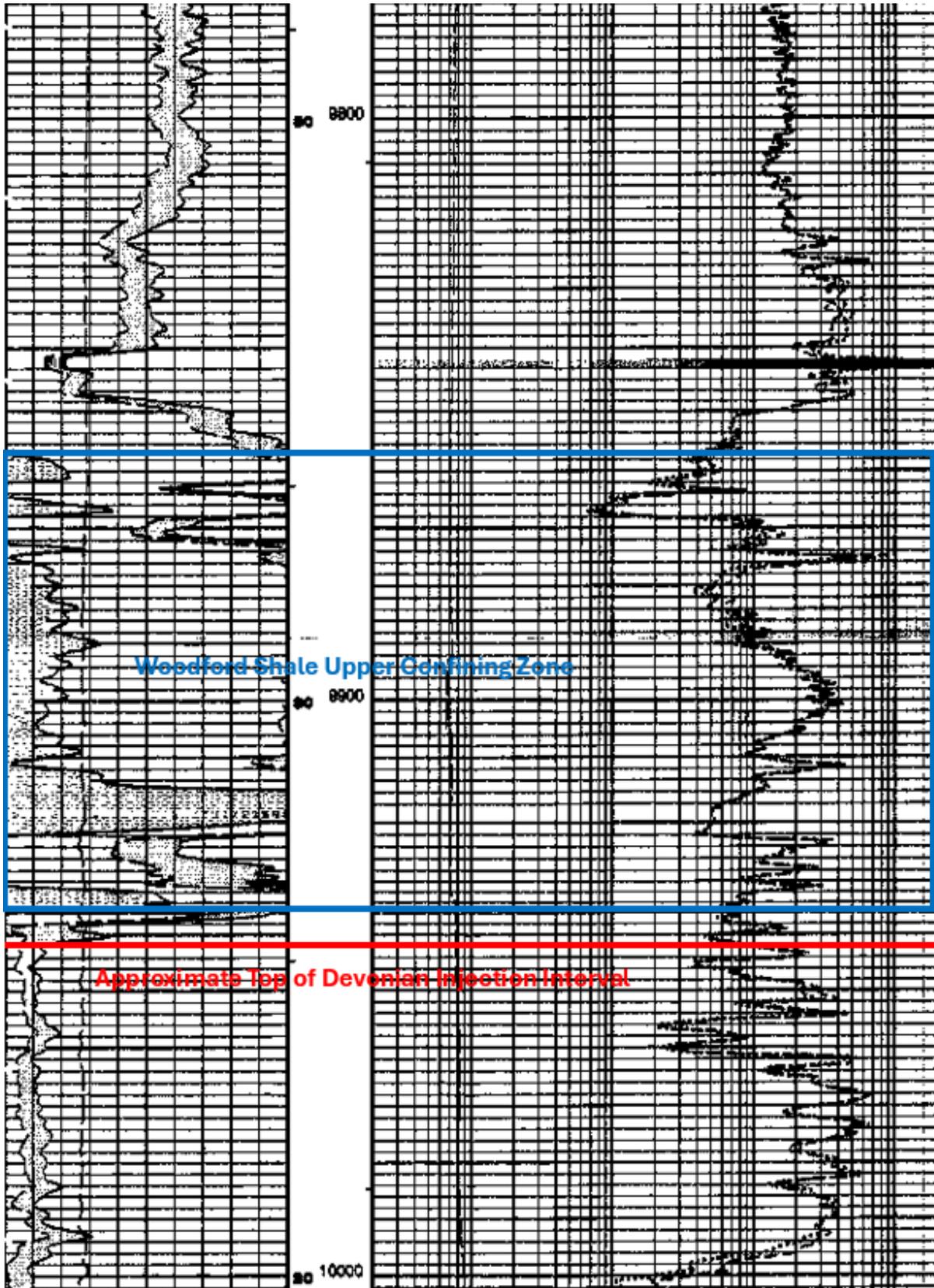
Tom Tomastik  
Chief Geologist

Mack Energy Corporation  
Bigfoot SWD #1 Seismic Potential Letter  
April 1, 2025

**Attachment 1**  
**Upper Confining Zone**

Mack Energy Corporation  
Bigfoot SWD #1 Seismic Potential Letter  
April 1, 2025

### Woodford Shale Upper Confining Zone from API No. 30-015-32444

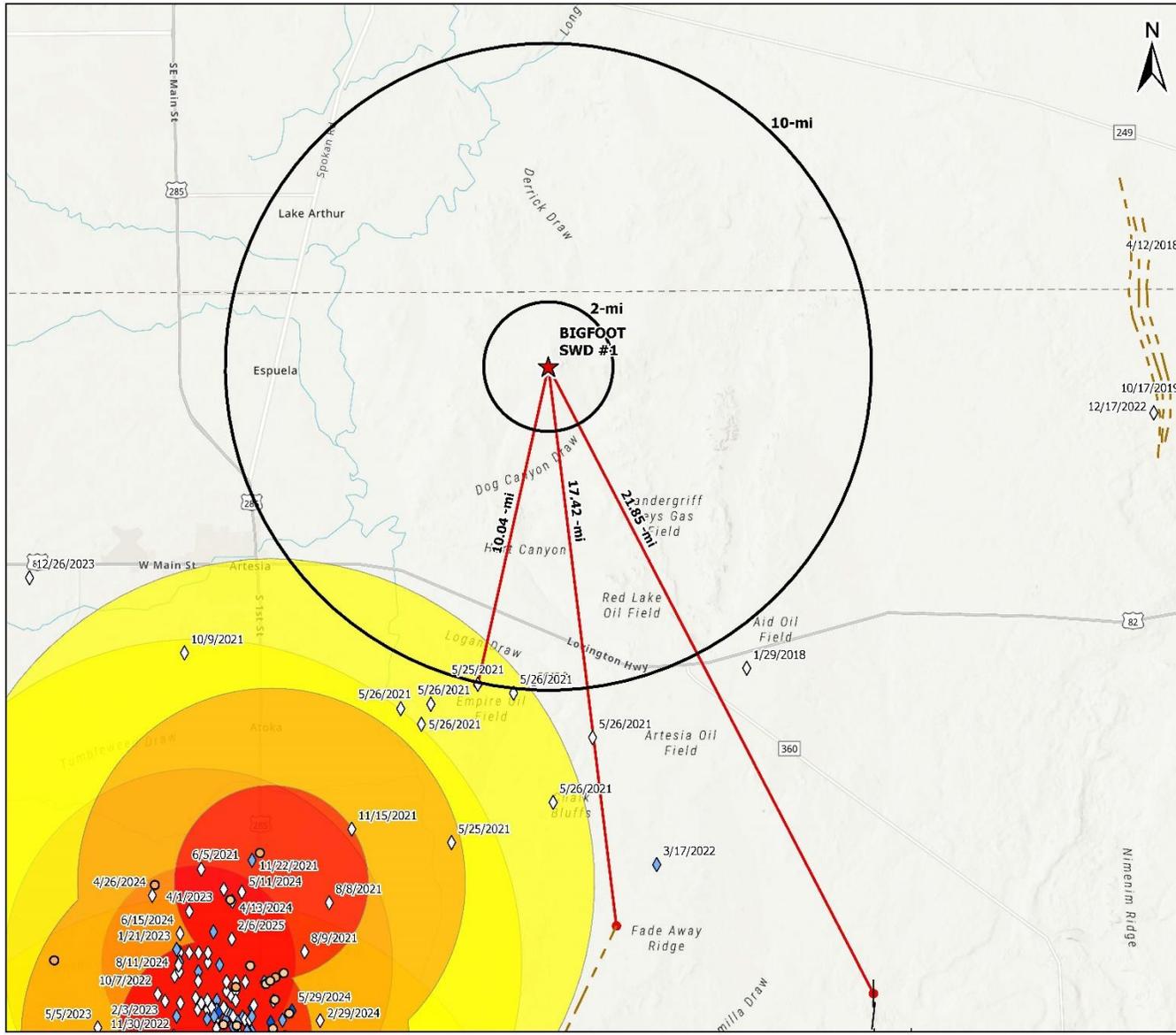


Mack Energy Corporation  
Bigfoot SWD #1 Seismic Potential Letter  
April 1, 2025

**Attachment 2**  
**Seismic Analysis Map**

Mack Energy Corporation  
 Bigfoot SWD #1 Seismic Potential Letter  
 April 1, 2025

**Bigfoot SWD #1 Nearby Seismic Events and Faults**



**Legend**

- ★ Proposed SWD
  - Shallow Faults
  - Deep Faults
- Stress Orientations (Lund, Snee, Zoback 2020)
- Indicator, Quality
- | Wellbore, A (2)
  - | Wellbore, B (2)
- NMTSO Seismic Events - 3/31/2025
- Magnitude
- ◇ 0 - 2.0 (78)
  - ◇ 2.1 - 3.0 (25)
  - ◇ 3.1 - 4.0 (4)
  - ◇ 4.1 - 4.5 (0)
- USGS Seismic Events - 3/31/2025
- Magnitude
- 0.8 - 2.0 (0)
  - 2.1 - 3.0 (10)
  - 3.1 - 4.0 (7)
  - 4.1 - 4.6 (0)

**Seismic Analysis Map**

**BIGFOOT SWD #1**  
 EDDY COUNTY, NEW MEXICO

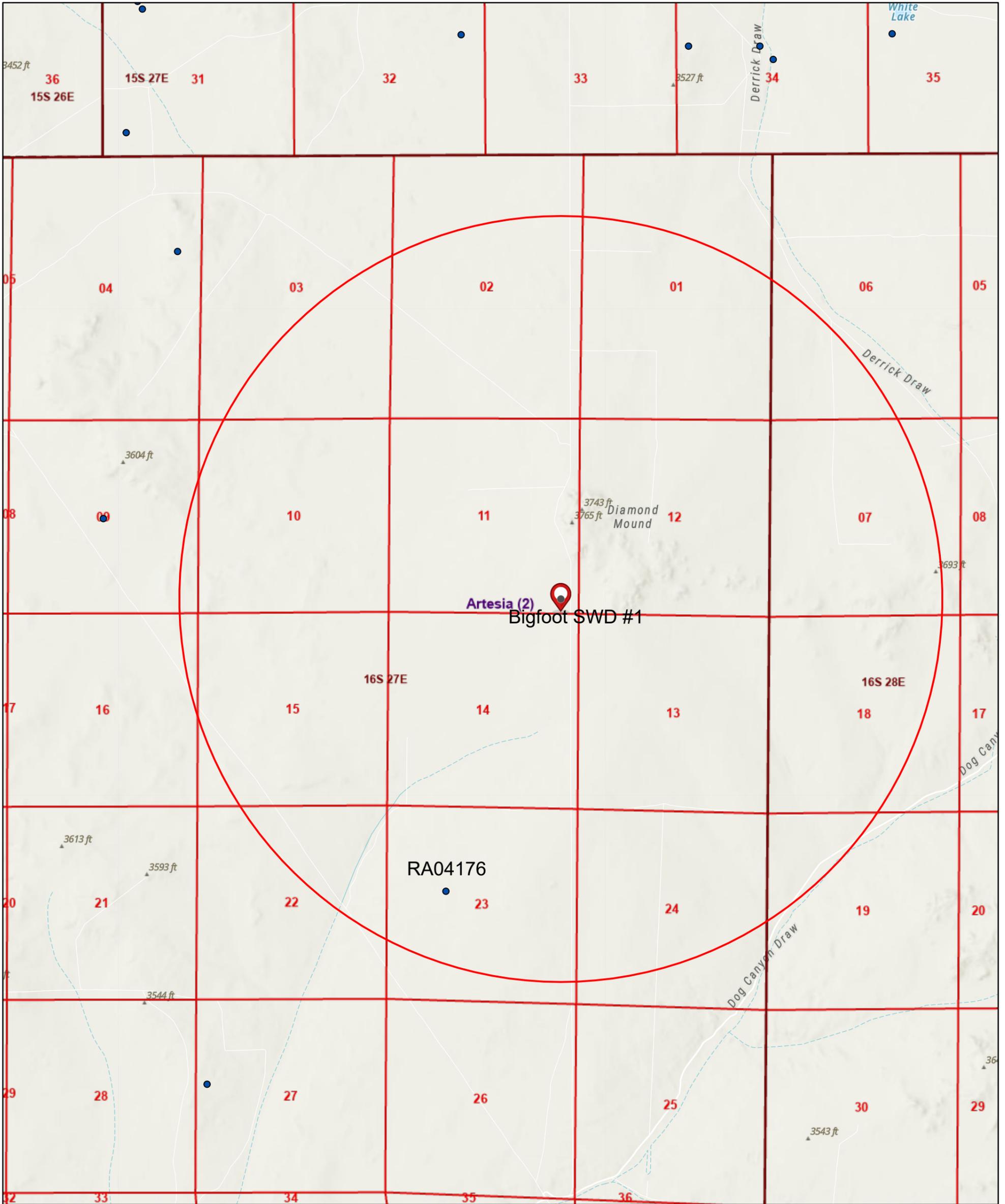
Proj Mgr: Reed Davis	March 31, 2025	Mapped by: Ben Bockelmann
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Prepared for: <b>MACK</b> Energy Corporation	Prepared by: <b>ALL</b> CONSULTING
--	---------------------------------------

Service Layer Credits: World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community  
 World Hillshade: Esri, NASA, NGA, USGS, FEMA

## Attachment 5

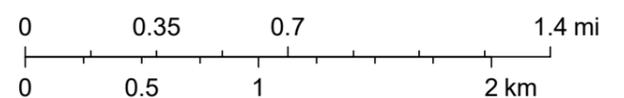
# 2 Mile POD Map



2/20/2025, 3:44:42 PM

- OSE Water PODs
- OCD Districts
- PLSS First Division
- PLSS Townships

1:36,112



Esri, NASA, NGA, USGS, FEMA, OCD, BLM, Texas Parks & Wildlife, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS



# New Mexico Office of the State Engineer

## Active & Inactive Points of Diversion

WR File Nbr	Sub basin	Use	Diversion	County	POD Number	Well Tag	Code	Grant	Source	(R=POD has been replaced and no longer serves this file, C=the file is closed)				(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest)				(NAD83 UTM in meters)		Map	Start Date	End Date	Depth Well (in feet)	Depth Water (in feet)
										q64	q16	q4	Sec	Tws	Range	X	Y							
<a href="#">RA 04176</a>	RA	PRO	0.000	ED	<a href="#">RA 04176</a>					SW	SE	NW	23	16S	27E	569885.0	3641470.0	*						

**Record Count:** 1

**Filters Applied:**

**PLSS Search:**

**Range:** 27E  
**Township:** 16S  
**Section:** 23

**Sorted By:** File Number(basin, nbr, suffix)

\* UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



# New Mexico Office of the State Engineer

## Water Column/Average Depth to Water

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No report data available.

### **PLSS Search:**

**Range:** 27E

**Township:** 16S

**Section:** 11

\* UTM location was derived from PLSS - see Help

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The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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## Attachment 6

## XII. AFFIRMATIVE STATEMENT

RE: Bigfoot SWD #1

We have examined the available geologic and engineering data and find no evidence of open faults or any other hydraulic connection between the disposal zone and any underground source of drinking water.

Mack Energy Corporation

Date: 1/29/25

  
\_\_\_\_\_  
Charles Sadler, Geologist

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

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

CONDITIONS

Action 455058

**CONDITIONS**

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 455058
	Action Type: [C-108] Fluid Injection Well (C-108)

**CONDITIONS**

Created By	Condition	Condition Date
erica.gordan	None	5/21/2025