

# AE Order Number Banner

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**Application Number: pMSG2322957300**

**SWD-2550**

**MACK ENERGY CORP [13837]**

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 XXX Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? xxx 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 X 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: Deana Weaver TITLE: Regulatory Tech II

SIGNATURE: Deana Weaver DATE: 6/14/2023

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

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**

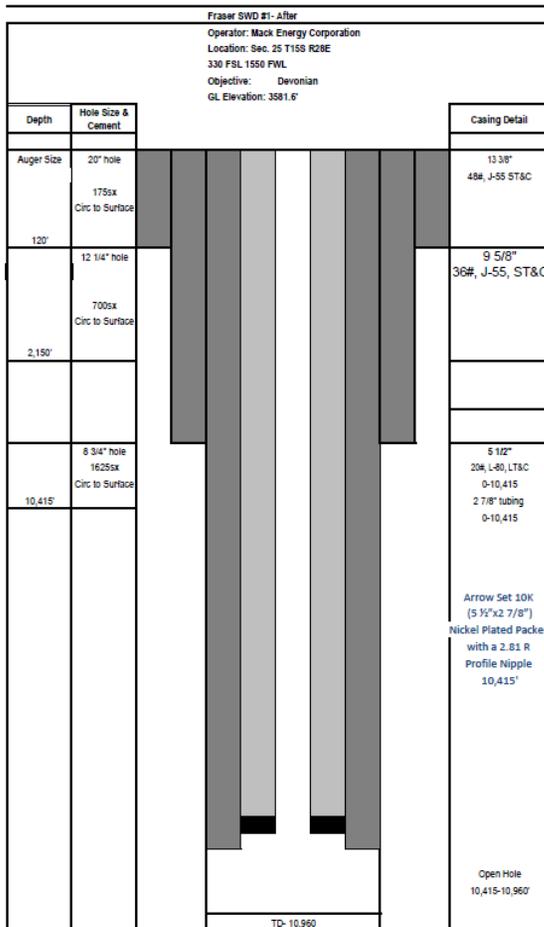
OPERATOR: Mack Energy Corporation

WELL NAME & NUMBER: Fraser SWD #1

WELL LOCATION: 330 FSL 1550 FWL      N      25      15S      28E  
 FOOTAGE LOCATION      UNIT LETTER      SECTION      TOWNSHIP      RANGE

**WELLBORE SCHEMATIC**

**WELL CONSTRUCTION DATA**  
Surface Casing



Hole Size: 20"      Casing Size: 13 3/8"

Cemented with: 100 sx.      *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 0      Method Determined: Circ

Intermediate Casing

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

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

Top of Cement: 0      Method Determined: Circ

Production Casing

Hole Size: 8 3/4"      Casing Size: 5 1/2"

Cemented with: 1625 sx.      *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 0      Method Determined: Circ

Total Depth: 10,415'

Injection Interval

10,415' feet to 10,960' Open Hole

(Perforated or Open Hole; indicate which)



**Fraser SWD #1 (Devonian Openhole)**

**VII. DATA SHEET: PROPOSED OPERATIONS**

- 1. Proposed average and maximum daily rate and volume of fluids to be injected;  
**Respectively, 10,000 BWPD and 15,000 BWPD**
- 2. The system is closed or open;  
**Closed**
- 3. Proposed average and maximum injection pressure;  
**1,000psi average-2,083psi maximum**
- 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water;  
**We will be re-injecting produced water**
- 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;

N/A

**VIII. GEOLOGICAL DATA**

- 1. Lithologic Detail; **Dolomite**
- 2. Geological Name; **SWD; Devonian**
- 3. Thickness; **545'- Openhole Completion (10,415'-10,960')**
- 4. Depth; **TD 10,960'**

**IX. PROPOSED STIMULATION PROGRAM**

- 5. To be treated with 10000 gallons 15% acid

**X. LOGS AND TEST DATA**

- 1. Well data will be filed with the OCD.

**XI. ANALYSIS OF FRESHWATER WELLS**

Additional Information

**Waters Injected:**

**San Andres**

## XII. AFFIRMATIVE STATEMENT

RE: Fraser 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: 5/23/23

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

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

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

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name	
		96101		SWD; Devonian	
<sup>4</sup> Property Code		<sup>5</sup> Property Name			<sup>6</sup> Well Number
		FRASER SWD			1
<sup>7</sup> OGRID No.		<sup>8</sup> Operator Name			<sup>9</sup> Elevation
13837		MACK ENERGY CORPORATION			3581.6

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	25	15 S	28 E		330	SOUTH	1550	WEST	CHAVES

<sup>11</sup> Bottom Hole Location If Different From Surface

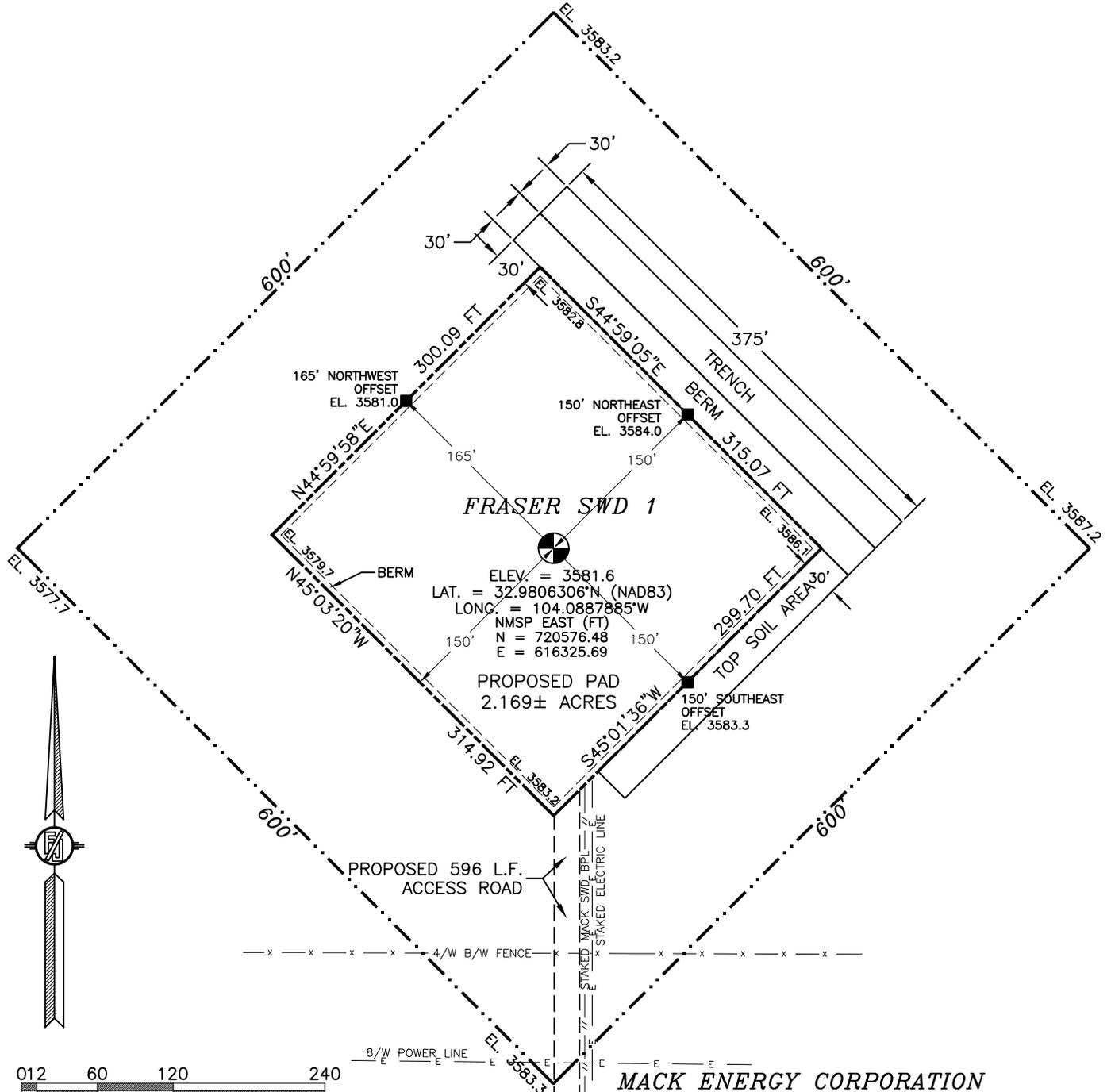
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
40			

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.

	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><i>Deana Weaver</i> 6/22/2023 Signature Date</p> <p>Deana Weaver Printed Name</p> <p>dweaver@mec.com E-mail Address</p>
	<p><b><sup>18</sup> SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>JUNE 13, 2023 Date of Survey</p> <p><i>[Signature]</i> Signature and Seal of Professional Surveyor</p> <p>Certificate Number: 12797 NEW MEXICO PROFESSIONAL SURVEYORS BOARD NO. 9748A</p>

# SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. CHAVES COUNTY, STATE OF NEW MEXICO SITE MAP



ELEV. = 3581.6  
 LAT. = 32.9806306°N (NAD83)  
 LONG. = 104.0887885°W  
 NMSP EAST (FT)  
 N = 720576.48  
 E = 616325.69

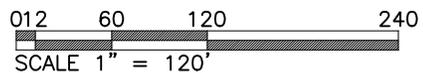
PROPOSED PAD  
 2.169± ACRES

PROPOSED 596 L.F.  
 ACCESS ROAD

**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
 LOCATED 330 FT. FROM THE SOUTH LINE  
 AND 1550 FT. FROM THE WEST LINE OF  
 SECTION 25, TOWNSHIP 15 SOUTH,  
 RANGE 28 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

SURVEY NO. 9748A

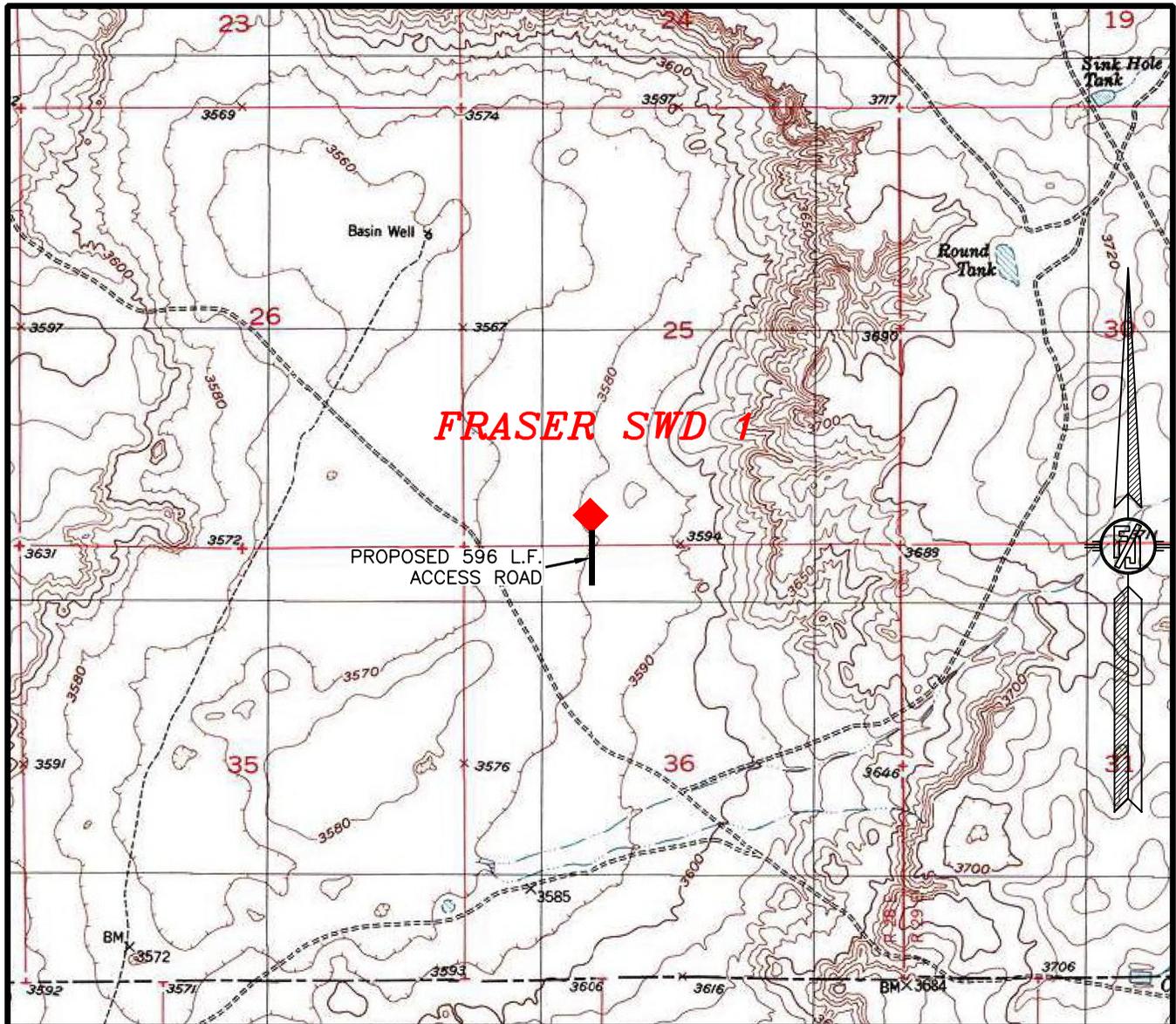


**DIRECTIONS TO LOCATION**  
 FROM INTERSECTION OF STATE HIGHWAY 82 AND CR 209 (TURKEY TRACT)  
 GO NORTH ON CR 209 APPROX. 3.0 MILES TO END OF CR MAINTENANCE,  
 CONTINUE NORTH ON TURKEY TRACT ROAD APPROX. 6.5 MILES, CONTINUE  
 NORTHEAST ON 20' CALICHE LEASE ROAD APPROX. 0.6 OF A MILE, TURN  
 EAST ON 20' CALICHE LEASE ROAD AND GO APPROX. 0.6 OF A MILE TO A  
 ROAD SURVEY ON LEFT (NORTH), FOLLOW ROAD SURVEY NORTH APPROX.  
 596' TO THE SOUTH PAD CORNER FOR THIS LOCATION.

I, FILMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL  
 SURVEYOR, CERTIFY THAT I DIRECTED THE SURVEY AND THIS SURVEY  
 SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY  
 KNOWLEDGE AND BELIEF AND THAT I HAVE COMPLIED WITH THE MINIMUM  
 STANDARDS FOR SURVEYING PRACTICE IN THE STATE OF NEW MEXICO.

FILMON F. JARAMILLO, REGISTERED PROFESSIONAL SURVEYOR  
**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3327

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
BASIN WELL

NOT TO SCALE

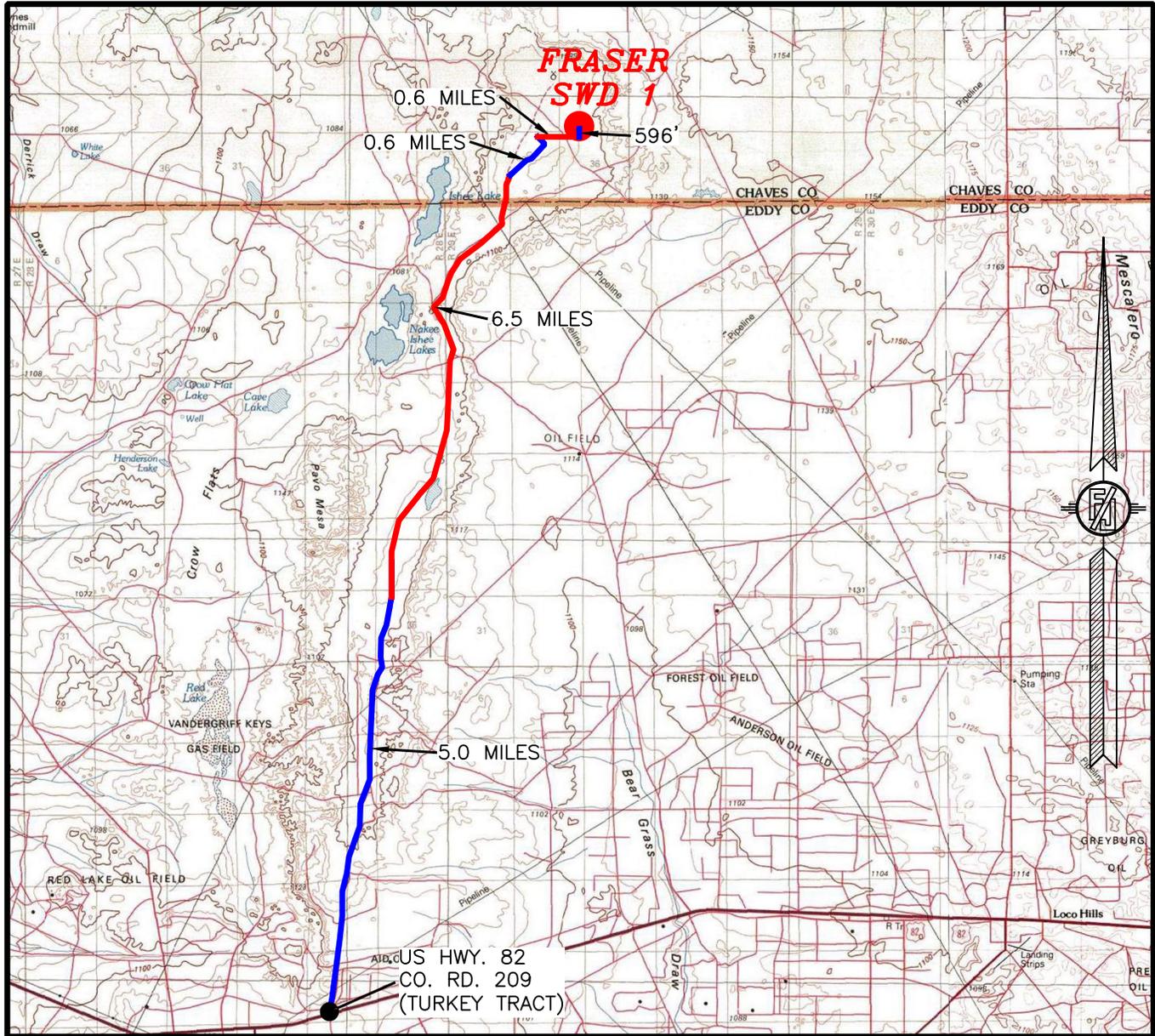
**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1550 FT. FROM THE WEST LINE OF  
SECTION 25, TOWNSHIP 15 SOUTH,  
RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

SURVEY NO. 9748A

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

# SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. CHAVES COUNTY, STATE OF NEW MEXICO VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

### DIRECTIONS TO LOCATION

FROM INTERSECTION OF STATE HIGHWAY 82 AND CR 209 (TURKEY TRACT) GO NORTH ON CR 209 APPROX. 5.0 MILES TO END OF CR MAINTENANCE, CONTINUE NORTH ON TURKEY TRACT ROAD APPROX. 6.5 MILES, CONTINUE NORTHEAST ON 20' CALICHE LEASE ROAD APPROX. 0.6 OF A MILE, TURN EAST ON 20' CALICHE LEASE ROAD AND GO APPROX. 0.6 OF A MILE TO A ROAD SURVEY ON LEFT (NORTH), FOLLOW ROAD SURVEY NORTH APPROX. 596' TO THE SOUTH PAD CORNER FOR THIS LOCATION.

**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
 LOCATED 330 FT. FROM THE SOUTH LINE  
 AND 1550 FT. FROM THE WEST LINE OF  
 SECTION 25, TOWNSHIP 15 SOUTH,  
 RANGE 28 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

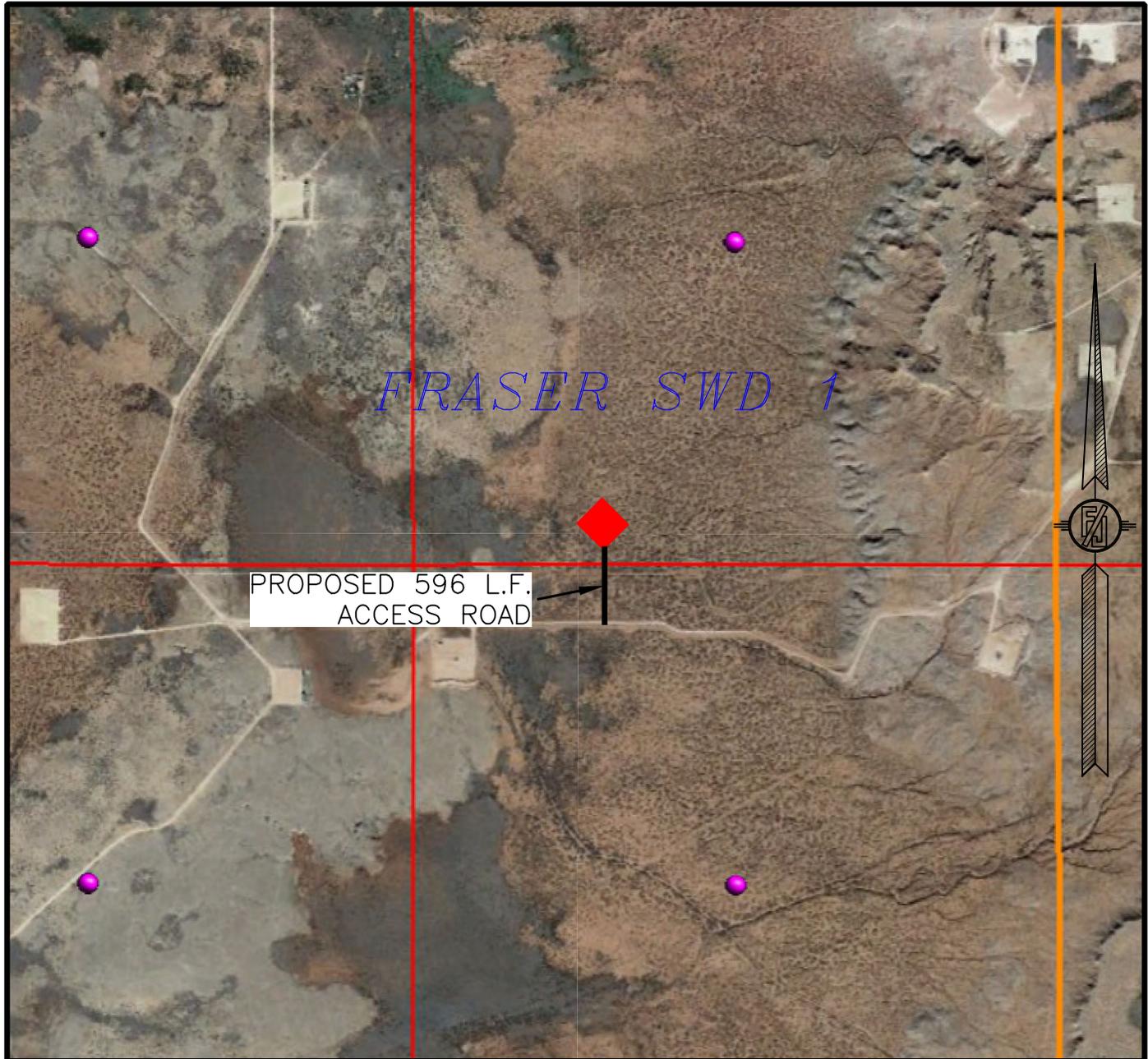
MADRON SURVEYING, INC.

301 SOUTH CANAL  
(575) 234-3327

CARLSBAD, NEW MEXICO

SURVEY NO. 9748A

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
DEC. 2019

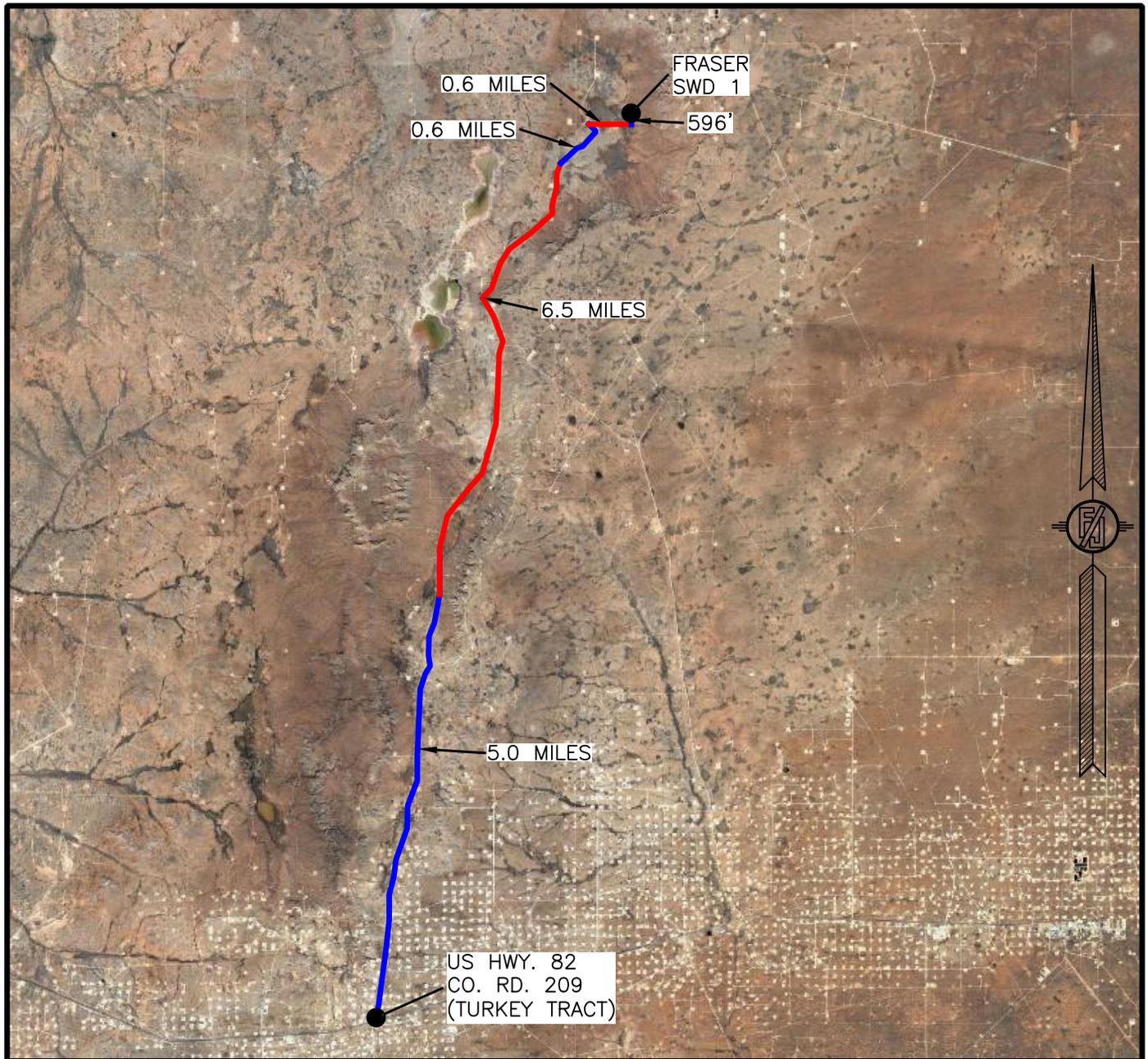
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RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

SURVEY NO. 9748A

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

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
AERIAL ACCESS ROUTE MAP



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
DEC. 2019

**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1550 FT. FROM THE WEST LINE OF  
SECTION 25, TOWNSHIP 15 SOUTH,  
RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

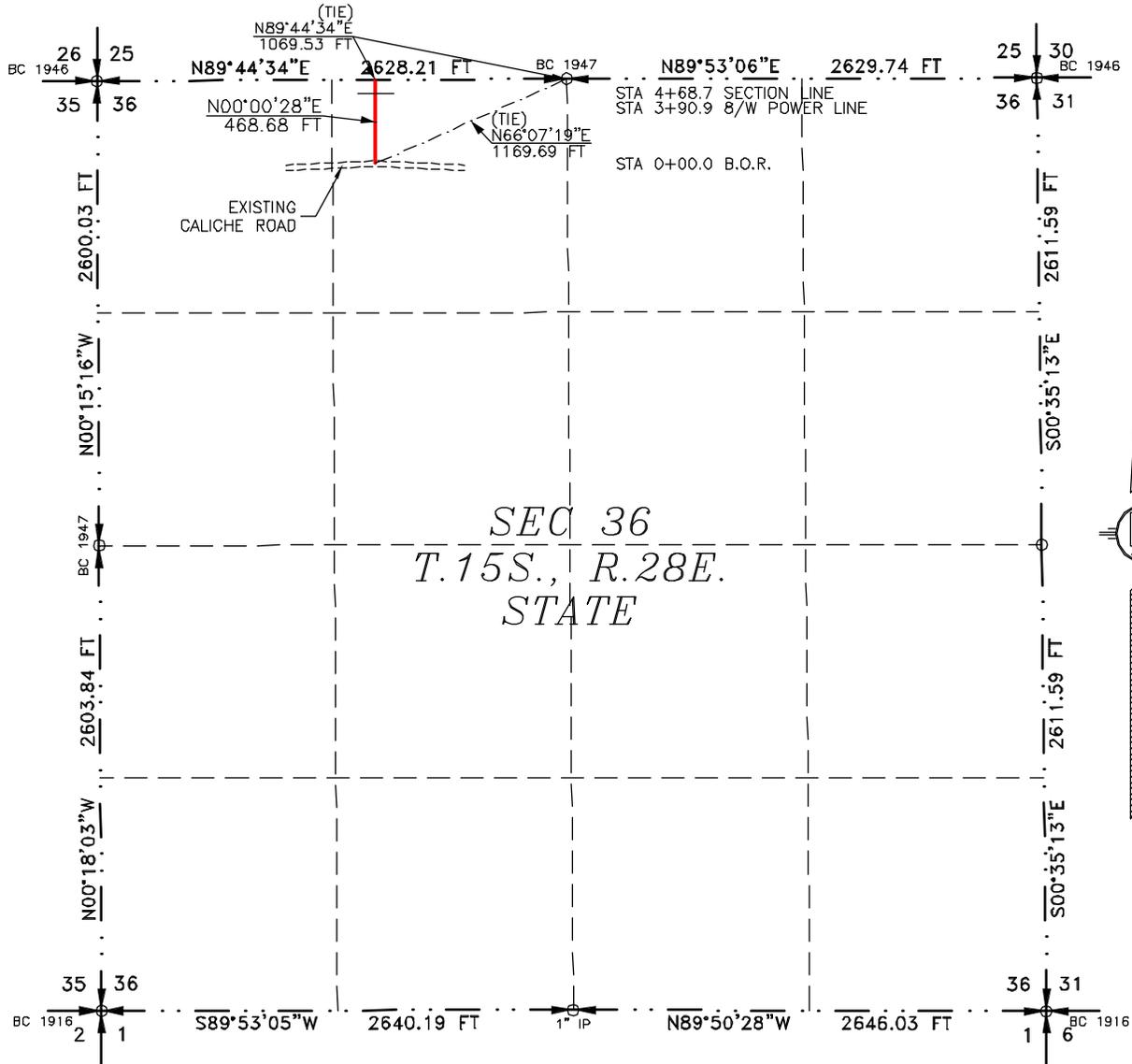
JUNE 13, 2023

SURVEY NO. 9748A

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

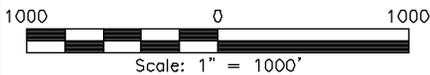
**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
JUNE 13, 2023



SEC 36  
T. 15 S., R. 28 E.  
STATE

SEE NEXT SHEET (2-4) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSF EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**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 13<sup>TH</sup> DAY OF JUNE 2023

FILIMON F. JARAMILLO  
NEW MEXICO  
12797  
PROFESSIONAL SURVEYOR

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

SURVEY NO. 9748A

SHEET: 1-4

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

**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.**  
**CHAVES COUNTY, STATE OF NEW MEXICO**  
**JUNE 13, 2023**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., CHAVES COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NE/4 NW/4 OF SAID SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N66°07'19"E, A DISTANCE OF 1169.69 FEET;  
THENCE N00°00'28"E A DISTANCE OF 468.68 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N89°44'34"E, A DISTANCE OF 1069.53 FEET;

SAID STRIP OF LAND BEING 468.68 FEET OR 28.40 RODS IN LENGTH, CONTAINING 0.323 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NW/4    468.68 L.F.    28.40 RODS    0.323 ACRES

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**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 13<sup>TH</sup> DAY OF JUNE 2023



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

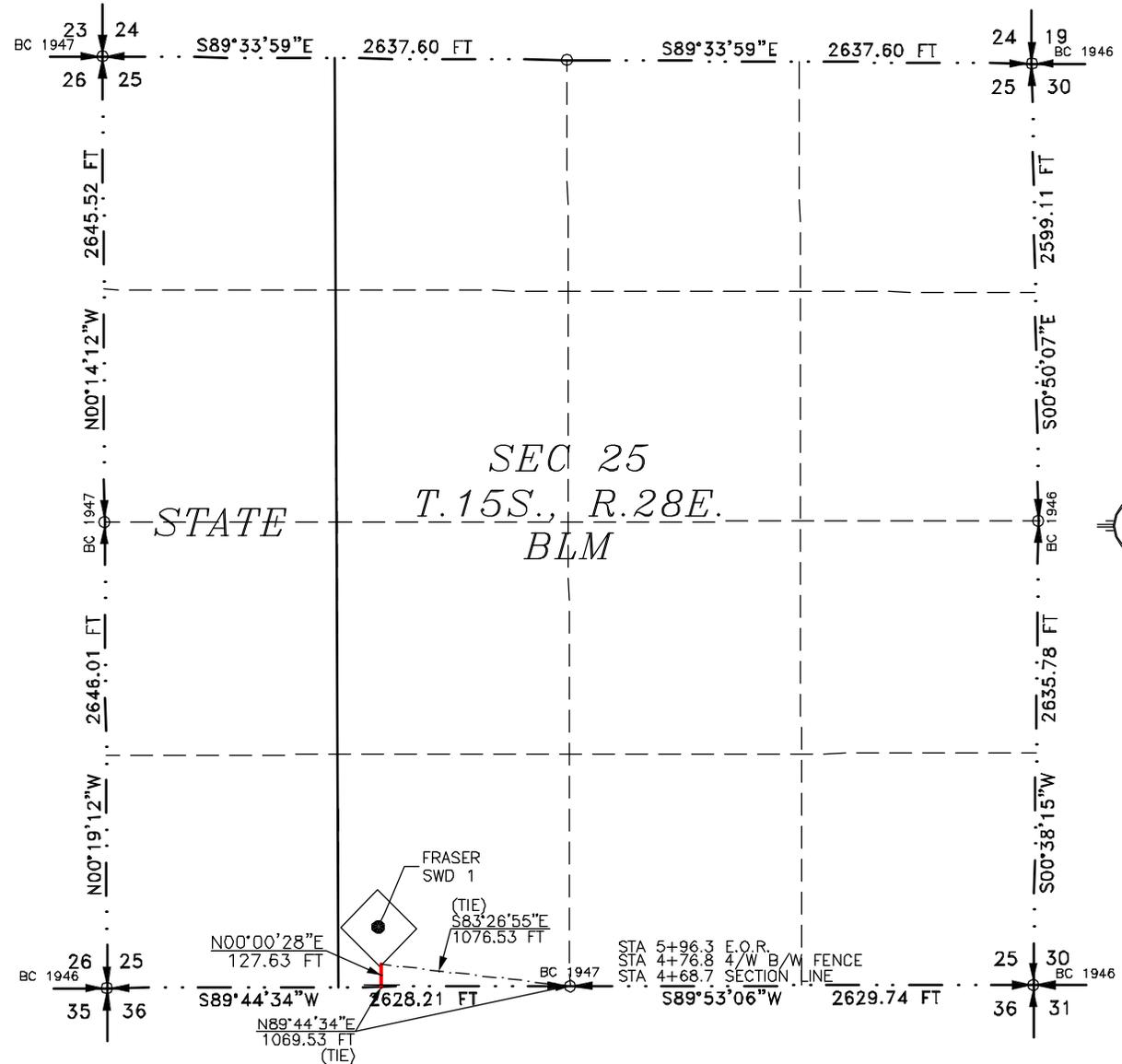
**SURVEY NO. 9748A**

**SHEET: 2-4**

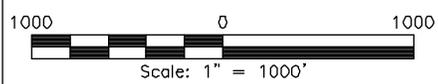
**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3327

**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
JUNE 13, 2023



SEE NEXT SHEET (4-4) FOR DESCRIPTION



**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 13<sup>TH</sup> DAY OF JUNE 2023



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

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SHEET: 3-4

**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3327 **SURVEY NO. 9748A**

**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.**  
**CHAVES COUNTY, STATE OF NEW MEXICO**  
**JUNE 13, 2023**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., CHAVES COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SE/4 SW/4 OF SAID SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N89°44'34"E, A DISTANCE OF 1069.53 FEET;  
THENCE N00°00'28"E A DISTANCE OF 127.63 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS S83°26'55"E, A DISTANCE OF 1076.53 FEET;

SAID STRIP OF LAND BEING 127.63 FEET OR 7.73 RODS IN LENGTH, CONTAINING 0.088 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SW/4    127.63 L.F.    7.73 RODS    0.088 ACRES

**GENERAL NOTES**

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**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 14th DAY OF JUNE 2023



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

**SURVEY NO. 9748A**

**SHEET: 4-4**

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

Fraser SWD #1  
Unit N Sec. 25 T15S R28E  
330 FSL 1550 FWL, Chaves County  
Formation Tops

Yates	575'
7 Rivers	810'
Queen	1300'
Grayburg	1715'
San Andres	2045'
Glorieta	3545'
Tubb	4835'
Abo	5530'
Wolfcamp	6880'
Cisco	7750'
Atoka	9220'
Miss	9585'
Woodford	10,360'
Devonian	10,415'
Montoya	10,960'

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name	
		96101		SWD; Devonian	
<sup>4</sup> Property Code		<sup>5</sup> Property Name			<sup>6</sup> Well Number
		FRASER SWD			1
<sup>7</sup> OGRID No.		<sup>8</sup> Operator Name			<sup>9</sup> Elevation
13837		MACK ENERGY CORPORATION			3581.6

<sup>10</sup> Surface Location

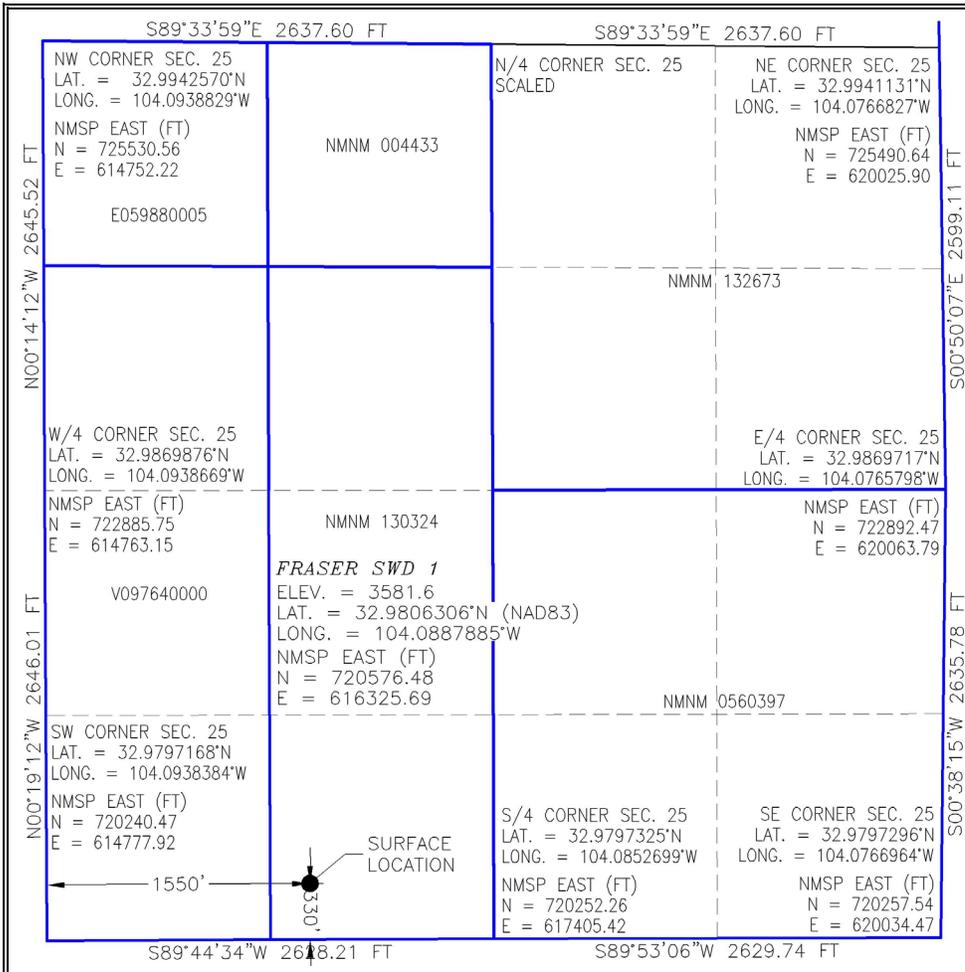
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	25	15 S	28 E		330	SOUTH	1550	WEST	CHAVES

<sup>11</sup> Bottom Hole Location If Different From Surface

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

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
40			

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



**<sup>17</sup> 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.

*Deana Weaver* 6/22/2023  
Signature Date

Deana Weaver  
Printed Name

dweaver@mec.com  
E-mail Address

**<sup>18</sup> SURVEYOR CERTIFICATION**

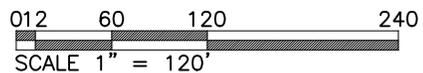
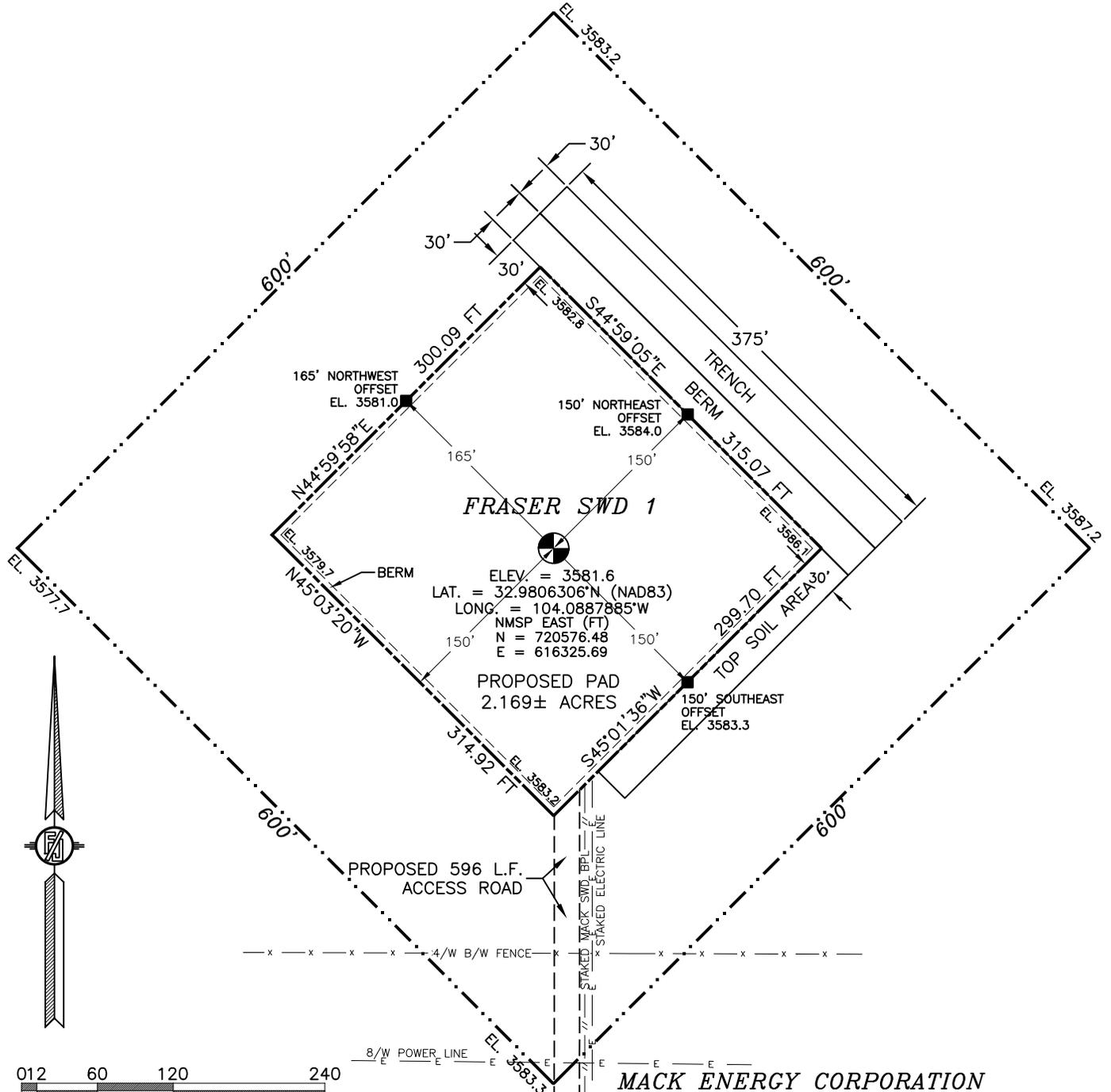
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JUNE 13, 2023  
Date of Survey

*[Signature]*  
Signature and Seal of Professional Surveyor

Certificate Number: 12797  
Professional Surveyor License No. 9748A

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
SITE MAP



**DIRECTIONS TO LOCATION**  
FROM INTERSECTION OF STATE HIGHWAY 82 AND CR 209 (TURKEY TRACT) GO NORTH ON CR 209 APPROX. 3.0 MILES TO END OF CR MAINTENANCE, CONTINUE NORTH ON TURKEY TRACT ROAD APPROX. 6.5 MILES, CONTINUE NORTHEAST ON 20' CALICHE LEASE ROAD APPROX. 0.6 OF A MILE, TURN EAST ON 20' CALICHE LEASE ROAD AND GO APPROX. 0.6 OF A MILE TO A ROAD SURVEY ON LEFT (NORTH), FOLLOW ROAD SURVEY NORTH APPROX. 596' TO THE SOUTH PAD CORNER FOR THIS LOCATION.

I, FILMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR, CERTIFY THAT I DIRECTED THE SURVEY AND CONDUCTED THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT I AM A MEMBER OF THE MINIMUM STANDARDS FOR SURVEYING IN THE STATE OF NEW MEXICO.

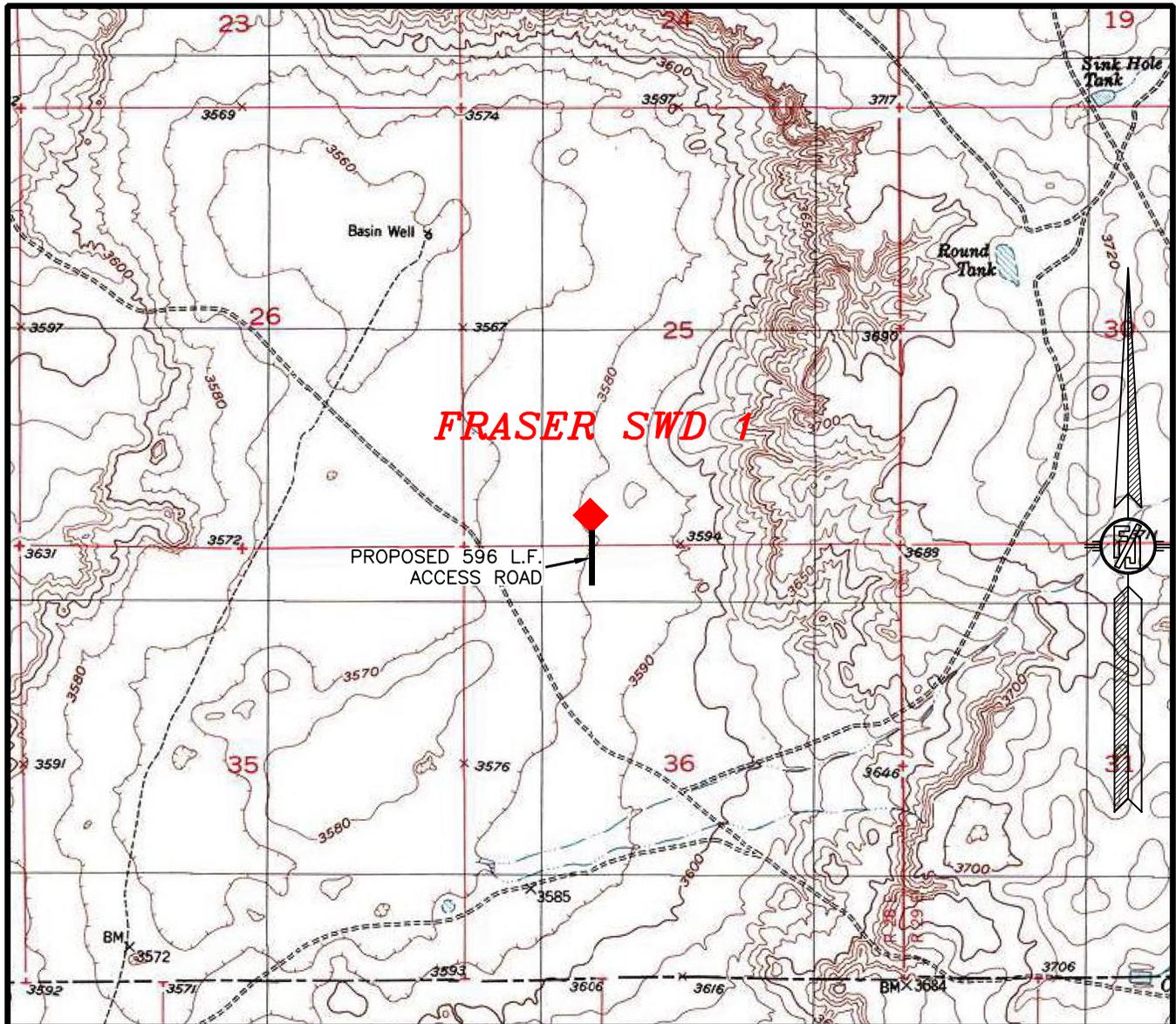
FILMON F. JARAMILLO, REGISTERED PROFESSIONAL SURVEYOR  
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3327

**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1550 FT. FROM THE WEST LINE OF  
SECTION 25, TOWNSHIP 15 SOUTH,  
RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

SURVEY NO. 9748A

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
LOCATION VERIFICATION MAP



USGS QUAD MAP:  
BASIN WELL

NOT TO SCALE

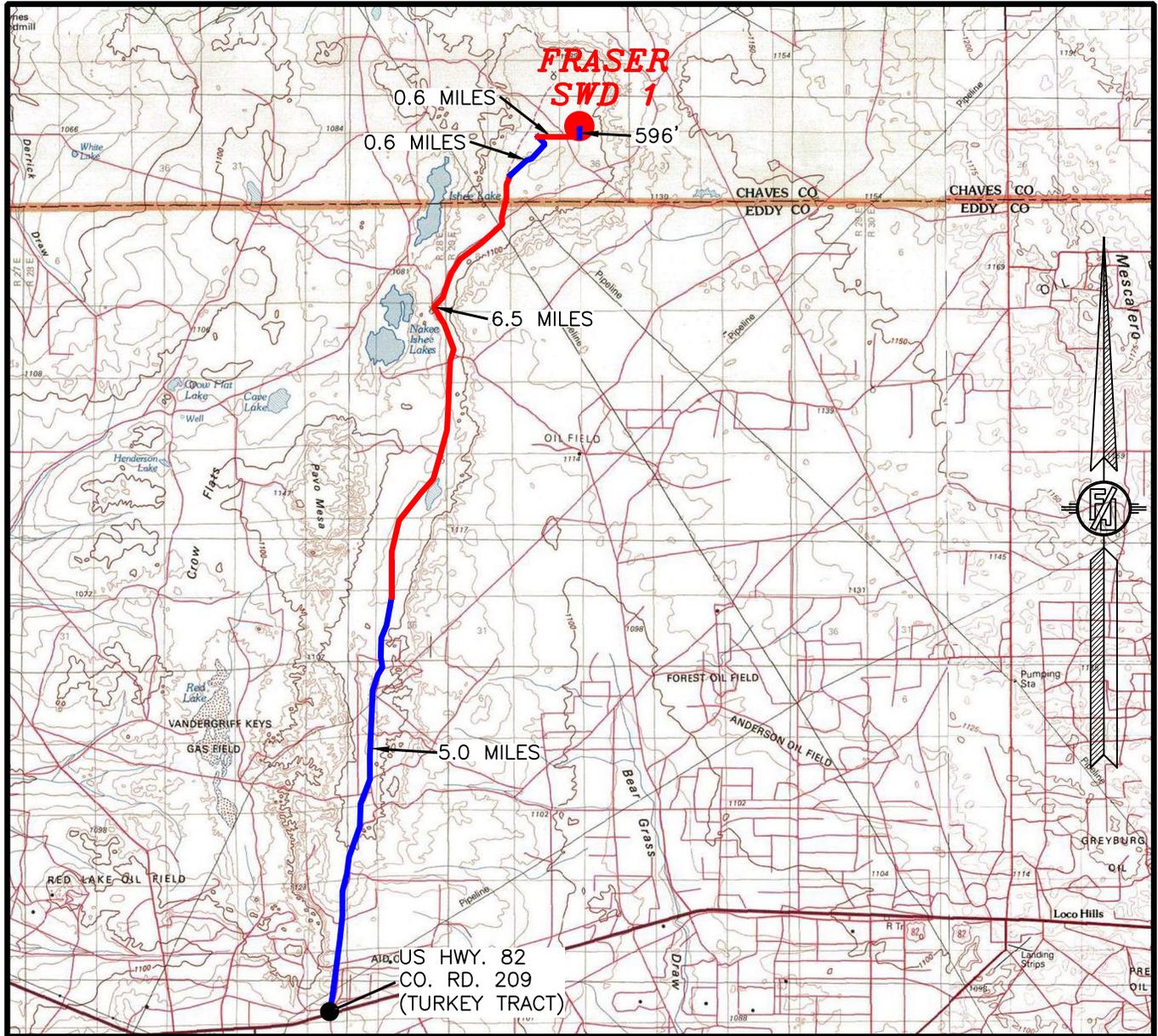
**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
LOCATED 330 FT. FROM THE SOUTH LINE  
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SECTION 25, TOWNSHIP 15 SOUTH,  
RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

SURVEY NO. 9748A

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

# SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. CHAVES COUNTY, STATE OF NEW MEXICO VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

### DIRECTIONS TO LOCATION

FROM INTERSECTION OF STATE HIGHWAY 82 AND CR 209 (TURKEY TRACT) GO NORTH ON CR 209 APPROX. 5.0 MILES TO END OF CR MAINTENANCE, CONTINUE NORTH ON TURKEY TRACT ROAD APPROX. 6.5 MILES, CONTINUE NORTHEAST ON 20' CALICHE LEASE ROAD APPROX. 0.6 OF A MILE, TURN EAST ON 20' CALICHE LEASE ROAD AND GO APPROX. 0.6 OF A MILE TO A ROAD SURVEY ON LEFT (NORTH), FOLLOW ROAD SURVEY NORTH APPROX. 596' TO THE SOUTH PAD CORNER FOR THIS LOCATION.

**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
 LOCATED 330 FT. FROM THE SOUTH LINE  
 AND 1550 FT. FROM THE WEST LINE OF  
 SECTION 25, TOWNSHIP 15 SOUTH,  
 RANGE 28 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

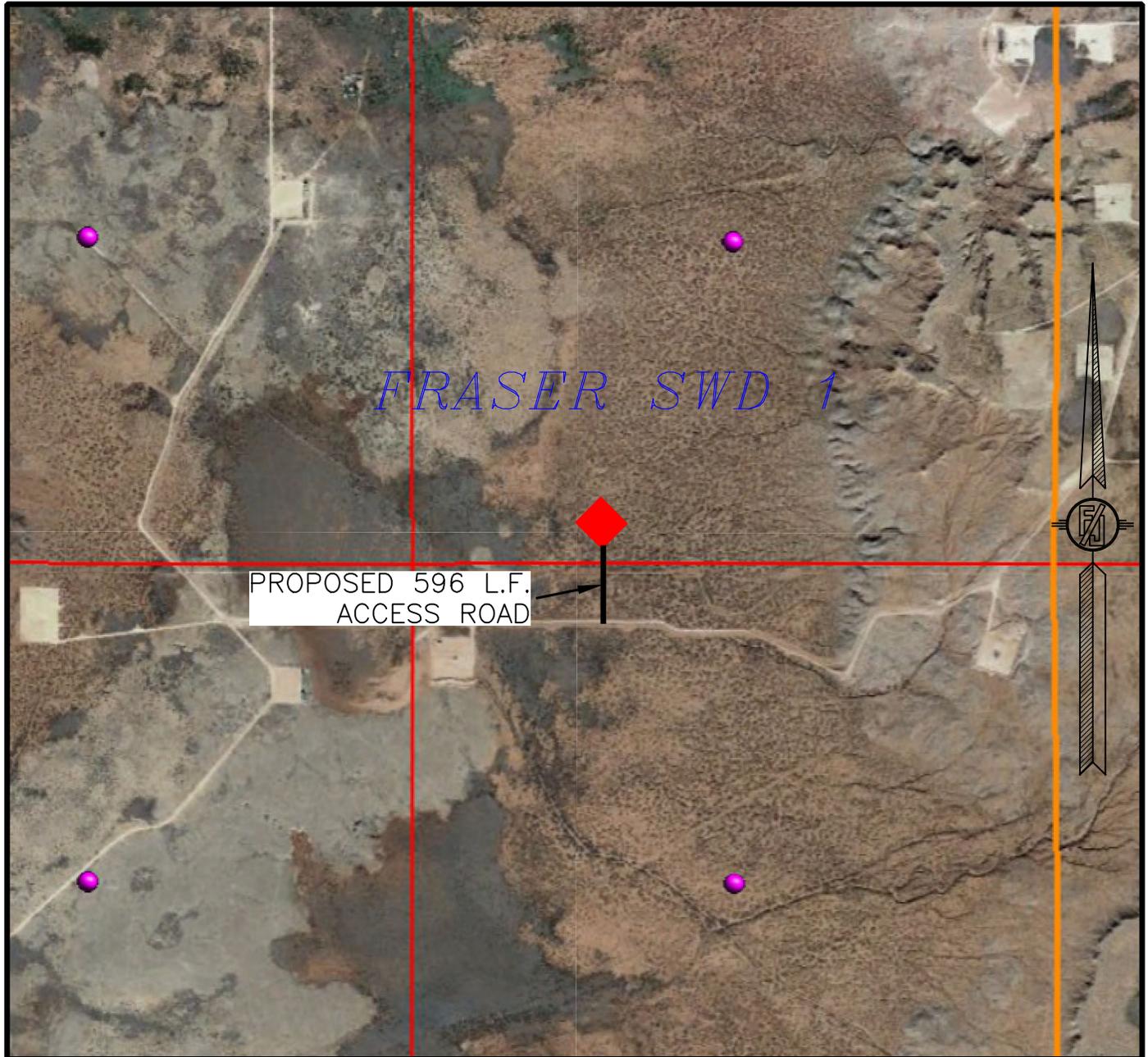
MADRON SURVEYING, INC.

301 SOUTH CANAL  
(575) 234-3327

CARLSBAD, NEW MEXICO

SURVEY NO. 9748A

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO  
 AERIAL PHOTO



NOT TO SCALE  
 AERIAL PHOTO:  
 GOOGLE EARTH  
 DEC. 2019

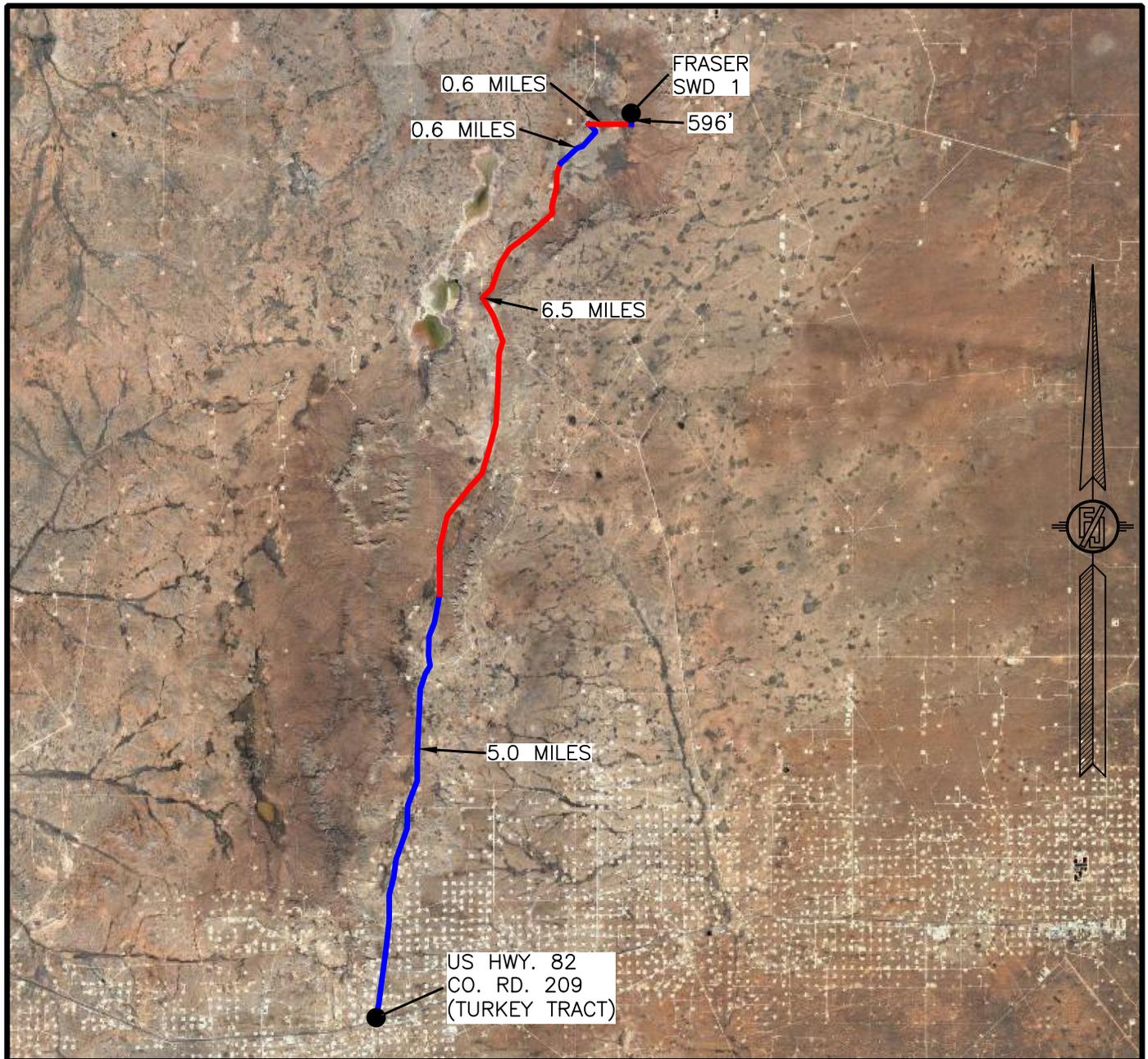
**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
 LOCATED 330 FT. FROM THE SOUTH LINE  
 AND 1550 FT. FROM THE WEST LINE OF  
 SECTION 25, TOWNSHIP 15 SOUTH,  
 RANGE 28 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

JUNE 13, 2023

SURVEY NO. 9748A

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

SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
AERIAL ACCESS ROUTE MAP



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
DEC. 2019

**MACK ENERGY CORPORATION**  
**FRASER SWD 1**  
LOCATED 330 FT. FROM THE SOUTH LINE  
AND 1550 FT. FROM THE WEST LINE OF  
SECTION 25, TOWNSHIP 15 SOUTH,  
RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

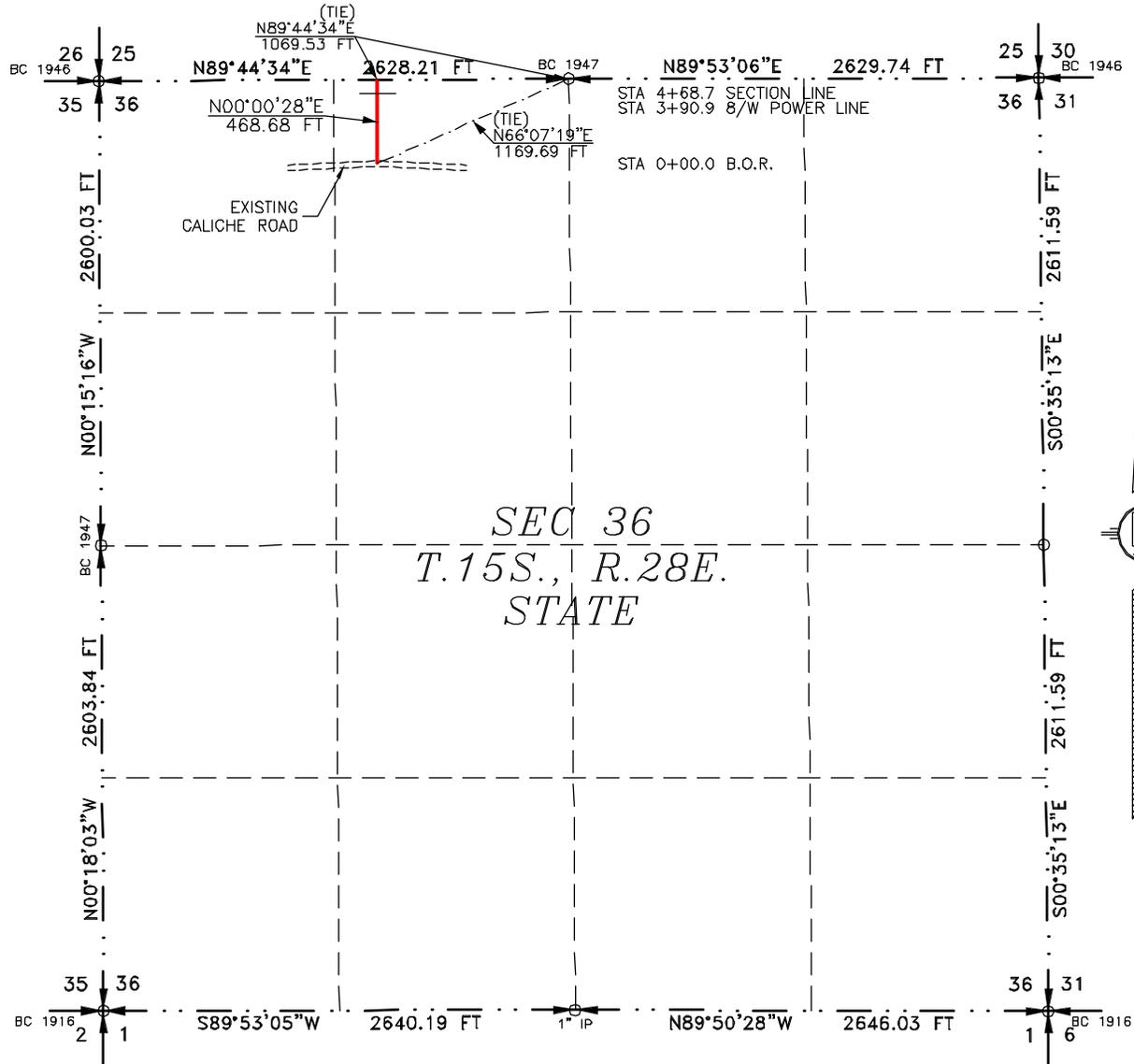
JUNE 13, 2023

SURVEY NO. 9748A

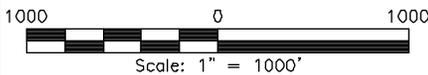
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3327

**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
JUNE 13, 2023



SEE NEXT SHEET (2-4) FOR DESCRIPTION



**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSF EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**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 13<sup>TH</sup> DAY OF JUNE 2023



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

**SURVEY NO. 9748A**

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

**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
JUNE 13, 2023

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., CHAVES COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NE/4 NW/4 OF SAID SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N66°07'19"E, A DISTANCE OF 1169.69 FEET;  
THENCE N00°00'28"E A DISTANCE OF 468.68 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTH QUARTER CORNER OF SAID SECTION 36, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N89°44'34"E, A DISTANCE OF 1069.53 FEET;

SAID STRIP OF LAND BEING 468.68 FEET OR 28.40 RODS IN LENGTH, CONTAINING 0.323 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NW/4    468.68 L.F.    28.40 RODS    0.323 ACRES

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

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IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 13<sup>TH</sup> DAY OF JUNE 2023



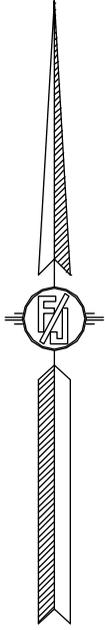
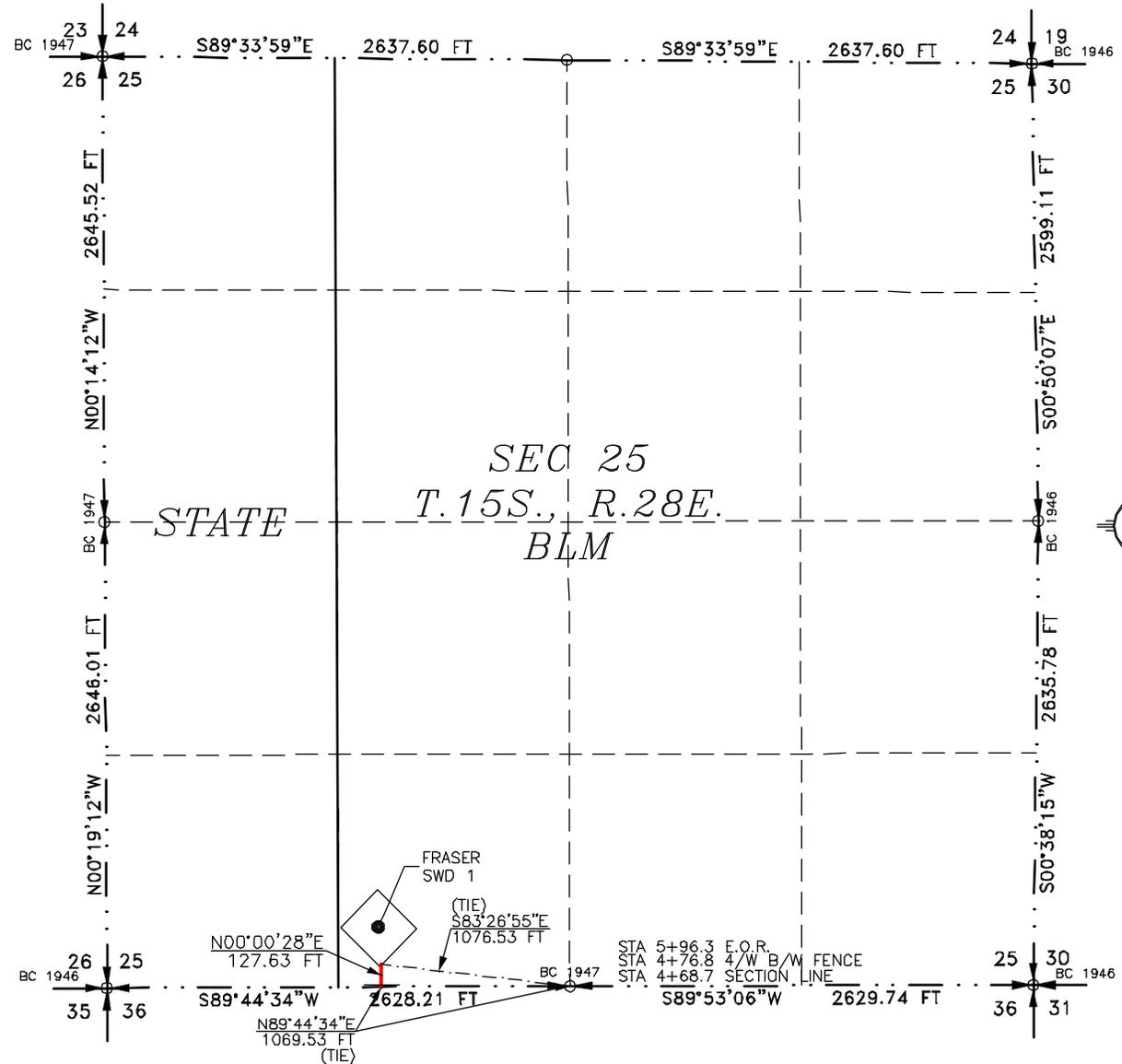
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3327

SHEET: 2-4

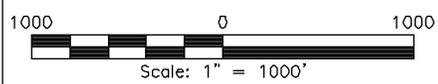
**MADRON SURVEYING, INC.** 301 SOUTH CANAL, CARLSBAD, NEW MEXICO 88220 (575) 234-3327 **SURVEY NO. 9748A**

**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
JUNE 13, 2023



SEE NEXT SHEET (4-4) FOR DESCRIPTION



**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 13<sup>TH</sup> DAY OF JUNE 2023



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

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
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SHEET: 3-4

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

SURVEY NO. 9748A

**ACCESS ROAD PLAT**  
ACCESS ROAD FOR FRASER SWD 1

**MACK ENERGY CORPORATION**  
**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING**  
**SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M.**  
**CHAVES COUNTY, STATE OF NEW MEXICO**  
**JUNE 13, 2023**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., CHAVES COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SE/4 SW/4 OF SAID SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N89°44'34"E, A DISTANCE OF 1069.53 FEET;  
THENCE N00°00'28"E A DISTANCE OF 127.63 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 25, TOWNSHIP 15 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS S83°26'55"E, A DISTANCE OF 1076.53 FEET;

SAID STRIP OF LAND BEING 127.63 FEET OR 7.73 RODS IN LENGTH, CONTAINING 0.088 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SW/4    127.63 L.F.    7.73 RODS    0.088 ACRES

**GENERAL NOTES**

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
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**SURVEYOR CERTIFICATE**

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IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 13<sup>TH</sup> DAY OF JUNE 2023



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

**SURVEY NO. 9748A**

**SHEET: 4-4**

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

Fraser SWD #1  
Unit N Sec. 25 T15S R28E  
330 FSL 1550 FWL, Chaves County  
Formation Tops

Yates	575'
7 Rivers	810'
Queen	1300'
Grayburg	1715'
San Andres	2045'
Glorieta	3545'
Tubb	4835'
Abo	5530'
Wolfcamp	6880'
Cisco	7750'
Atoka	9220'
Miss	9585'
Woodford	10,360'
Devonian	10,415'
Montoya	10,960'

Fraser SWD #1- After		
Operator: Mack Energy Corporation		
Location: Sec. 25 T15S R28E		
330 FSL 1550 FWL		
Objective: Devonian		
GL Elevation: 3581.6'		
Depth	Hole Size & Cement	Casing Detail
Auger Size 120'	20" hole 175sx Circ to Surface	13 3/8" 48#, J-55 ST&C
2,150'	12 1/4" hole 700sx Circ to Surface	9 5/8" 36#, J-55, ST&C
10,415'	8 3/4" hole 1625sx Circ to Surface	5 1/2" 20#, L-80, LT&C 0-10,415 2 7/8" tubing 0-10,415  Arrow Set 10K (5 1/2"x2 7/8") Nickel Plated Packer with a 2.81 R Profile Nipple 10,415'
		Open Hole 10,415-10,960'
		TD- 10,960

AFFIDAVIT OF PUBLICATION  
STATE OF NEW MEXICO

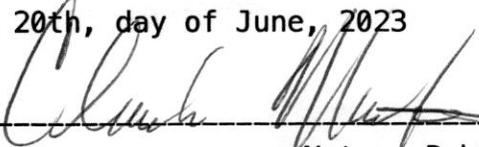
I, Noely L. Martinez  
Legals Clerk

Of the Roswell Daily Record, a daily newspaper published at Roswell, New Mexico do solemnly swear that the clipping hereto attached was published in the regular and entire issue of said paper and not in a supplement thereof for a period of:

One time with the issue dated  
June 16, 2023

-----  
  
-----  
Clerk

Sworn and subscribed to before me  
this 20th, day of June, 2023

  
-----  
Notary Public



**LEGALS**

---

**Public Notice...**

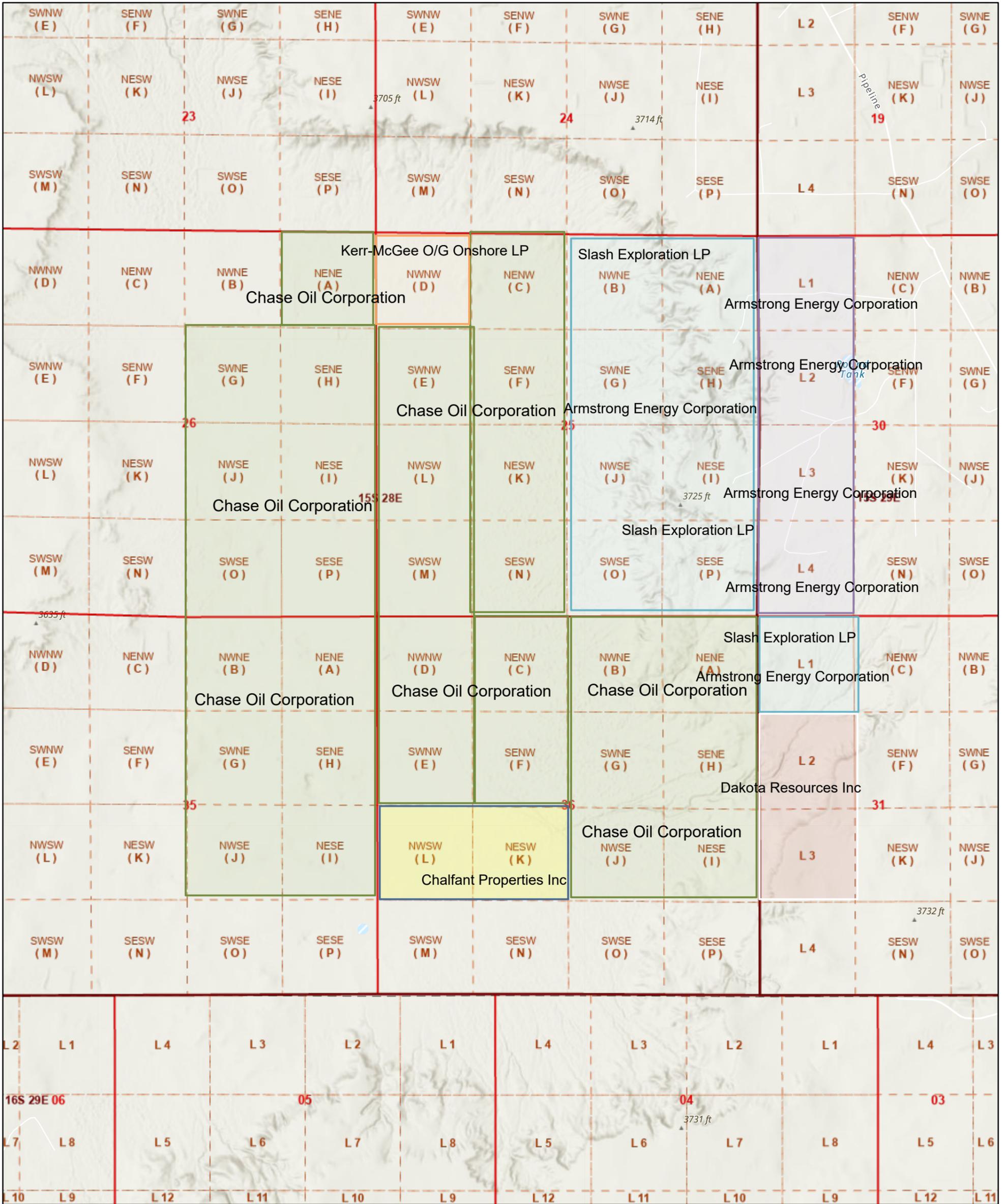
**Publish June 16, 2023**

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-1370, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Fraser SWD #1 330 FSL 1550 FWL of Section 25, T15S, R28E, NMPM, Chaves County, New Mexico. The water will be injected into the Devonian at a disposal depth of 10,415-10,960'. Water will be injected at a maximum surface pressure of 2083psi and a maximum injection rate of 10,000-15,000 BWPD. Any interest party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-1370 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

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-1370, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Fraser SWD #1 330 FSL 1550 FWL of Section 25, T15S, R28E, NMPM, Chaves County, New Mexico. The water will be injected into the Devonian at a disposal depth of 10,415-10,960'. Water will be injected at a maximum surface pressure of 2083psi and a maximum injection rate of 10,000-15,000 BWPD. Any interest party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-1370 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.

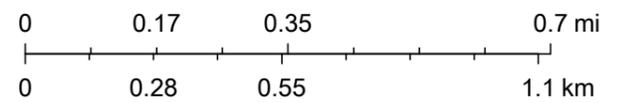
# OCD Well Locations



5/4/2023, 12:11:01 PM

- Areas
- Override 4
  - PLSS Second Division
  - Override 1
  - Override 5
  - PLSS First Division
  - Override 2
  - Override 6
  - PLSS Townships
  - Override 3

1:18,056



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

Name	Address	City	State	Zip	Certified Mail Id
Armstrong Energy Corporation	P.O. Box 1973	Roswell	NM	88202-1973	7022 3330 0001 8949 9039
Slash Exploration LP	P.O. Box 1973	Roswell	NM	88202-1973	7022 3330 0001 8949 9046
Dakota Resources Inc	4519 Santa Rosa DR	Midland	TX	79707-2260	7022 3330 0001 8949 9053
Bureau of Land Management	2909 W. 2nd St	Roswell	NM	88201-1287	7019 1120 0000 0728 4806
Chalfant Properties, Inc	P.O. Box 3123	Midland	TX	79702-3123	7019 1120 0000 0728 4813
Kerr-McGee O/G Onshore LP	P.O. Box 1330	Houston	TX	77251	7019 1120 0000 0728 4820
Commissioner of Public Land	P.O. Box 1148	Santa Fe	NM	87504-1148	7019 1120 0000 0728 4837
Chase Oil Corporation	11352 Lovington HWY	Artesia	NM	88210	



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:

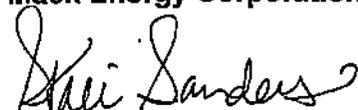
Mack Energy Corporation is a Chase Family owned entity. The following Chase individuals or companies are all affiliates of Mack Energy Corporation and usually own an interest in wells drilled and/or operated by Mack Energy Corporation.

- 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

July 24, 2023

Via Certified Mail 7022 3330 0001 8949 9039  
Return Receipt Requested

Armstrong Energy Corporation  
P.O. Box 1973  
Roswell, NM 88202-1973

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 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves 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

*Deana Weaver*

Deana Weaver  
Regulatory Technician II

DW/

Attachments

July 24, 2023

Via Certified Mail 7022 3330 0001 8949 9046  
Return Receipt Requested

Slash Exploration LP  
P.O. Box 1973  
Roswell, NM 88202-1973

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 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves County.

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Sincerely,

Mack Energy Corporation

*Deana Weaver*

Deana Weaver  
Regulatory Technician II

DW/

Attachments

July 24, 2023

Via Certified Mail 7022 3330 0001 8949 9053  
Return Receipt Requested

Dakota Resources Inc.  
4519 Santa Rosa Dr.  
Midland, TX 79707-2260

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 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves 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

*Deana Weaver*

Deana Weaver  
Regulatory Technician II

DW/

Attachments

July 24, 2023

Via Certified Mail 7019 1120 0000 0728 4806  
Return Receipt Requested

Bureau of Land Management  
2909 W. 2<sup>nd</sup> Street  
Roswell, NM 88201-1287

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 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves 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

*Deana Weaver*

Deana Weaver  
Regulatory Technician II

DW/

Attachments

July 24, 2023

Via Certified Mail 7019 1120 0000 0728 4813

Return Receipt Requested

Chalfant Properties, Inc.  
P.O. Box 3123  
Midland, TX 79702-3123

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 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves 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

*Deana Weaver*

Deana Weaver  
Regulatory Technician II

DW/

Attachments

July 24, 2023

Via Certified Mail 7019 1120 0000 0728 4820

Return Receipt Requested

Kerr-McGee O/G Onshore LP  
P.O. Box 1330  
Houston, TX 77251

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 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves 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

*Deana Weaver*

Deana Weaver  
Regulatory Technician II

DW/

Attachments

July 24, 2023

Via Certified Mail 7019 1120 0000 0728 4837  
Return Receipt Requested

Commissioner of Public Land  
P.O. Box 1148  
Santa Fe, NM 87504-1148

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 10,415-10,960'. The Fraser SWD #1 located 330 FSL & 1550 FWL, Sec. 25 T15S R28E, Chaves 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

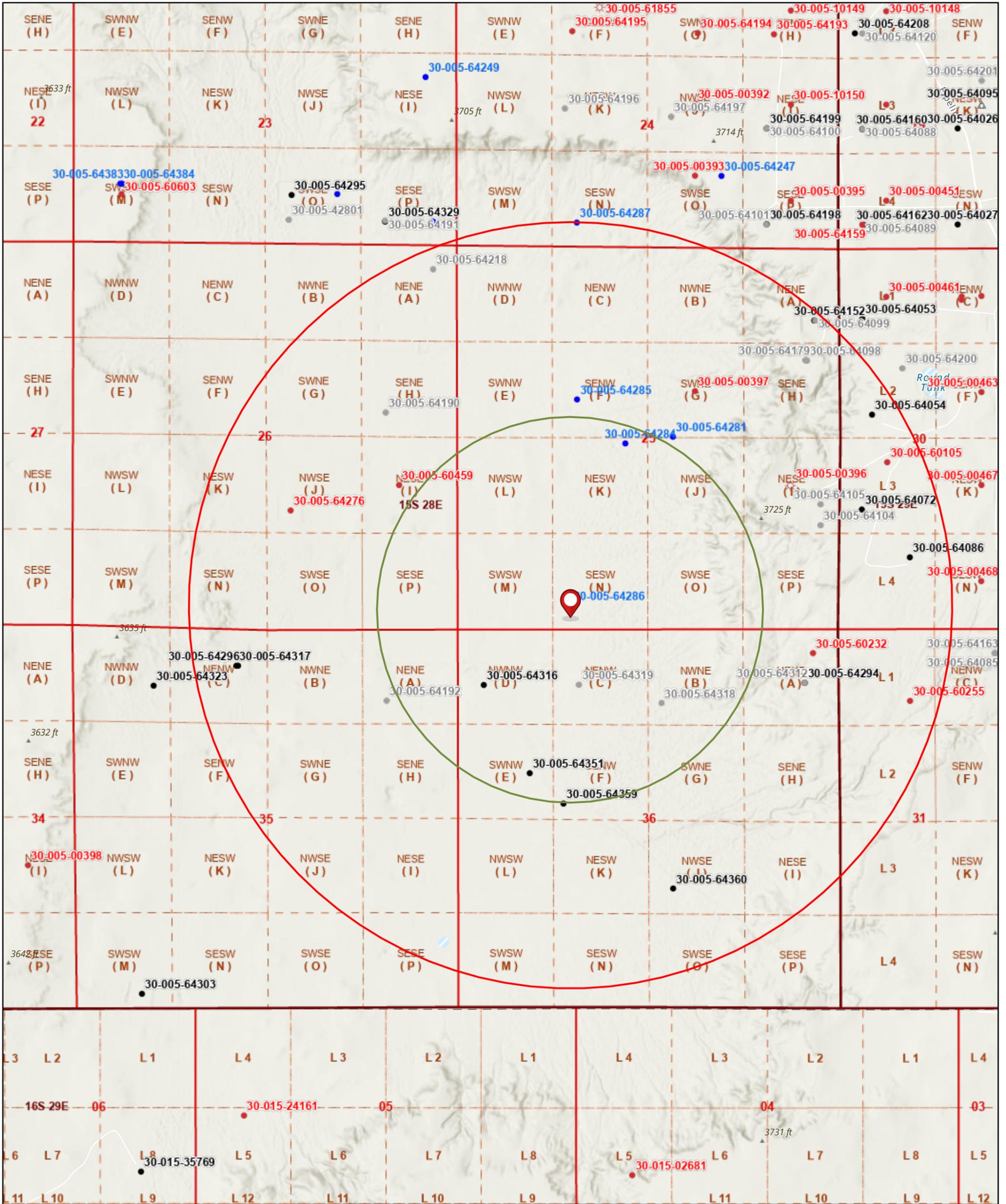
*Deana Weaver*

Deana Weaver  
Regulatory Technician II

DW/

Attachments

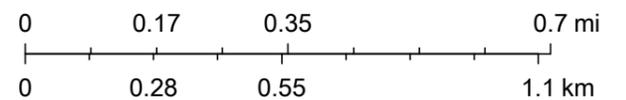
# OCD Well Locations



5/3/2023, 12:28:01 PM

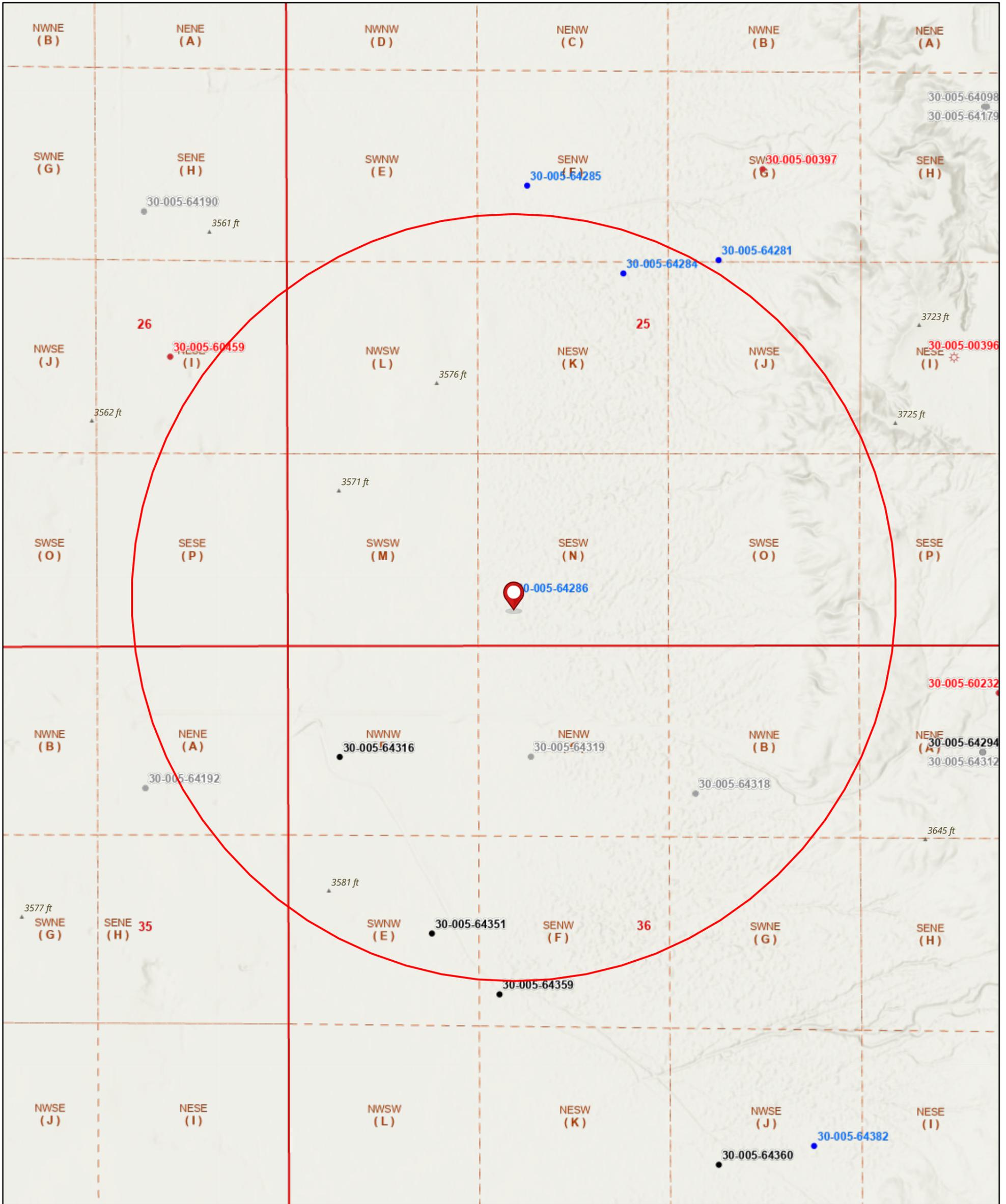
- Override 1
- Oil, Plugged
- △ Salt Water Injection, Active
- ⚙ Gas, Plugged
- PLSS Second Division
- Oil, Active
- PLSS First Division
- Oil, Cancelled
- PLSS Townships
- Oil, New

1:18,056



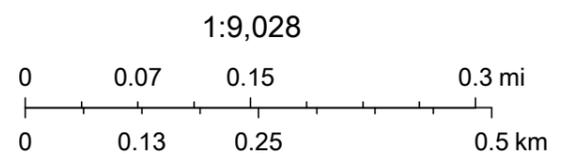
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# OCD Well Locations



5/3/2023, 12:22:32 PM

- Wells - Large Scale
- Oil, New
- Oil, Plugged
- ☆ Gas, Plugged
- Oil, Active
- Oil, Cancelled
- PLSS Second Division
- PLSS First Division



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Fraser SWD #1  
 C-108  
 Well Tabulation Penetrating Injection Zone in Review Area  
 Mack Energy Corporation  
 Proposed Disposal Well

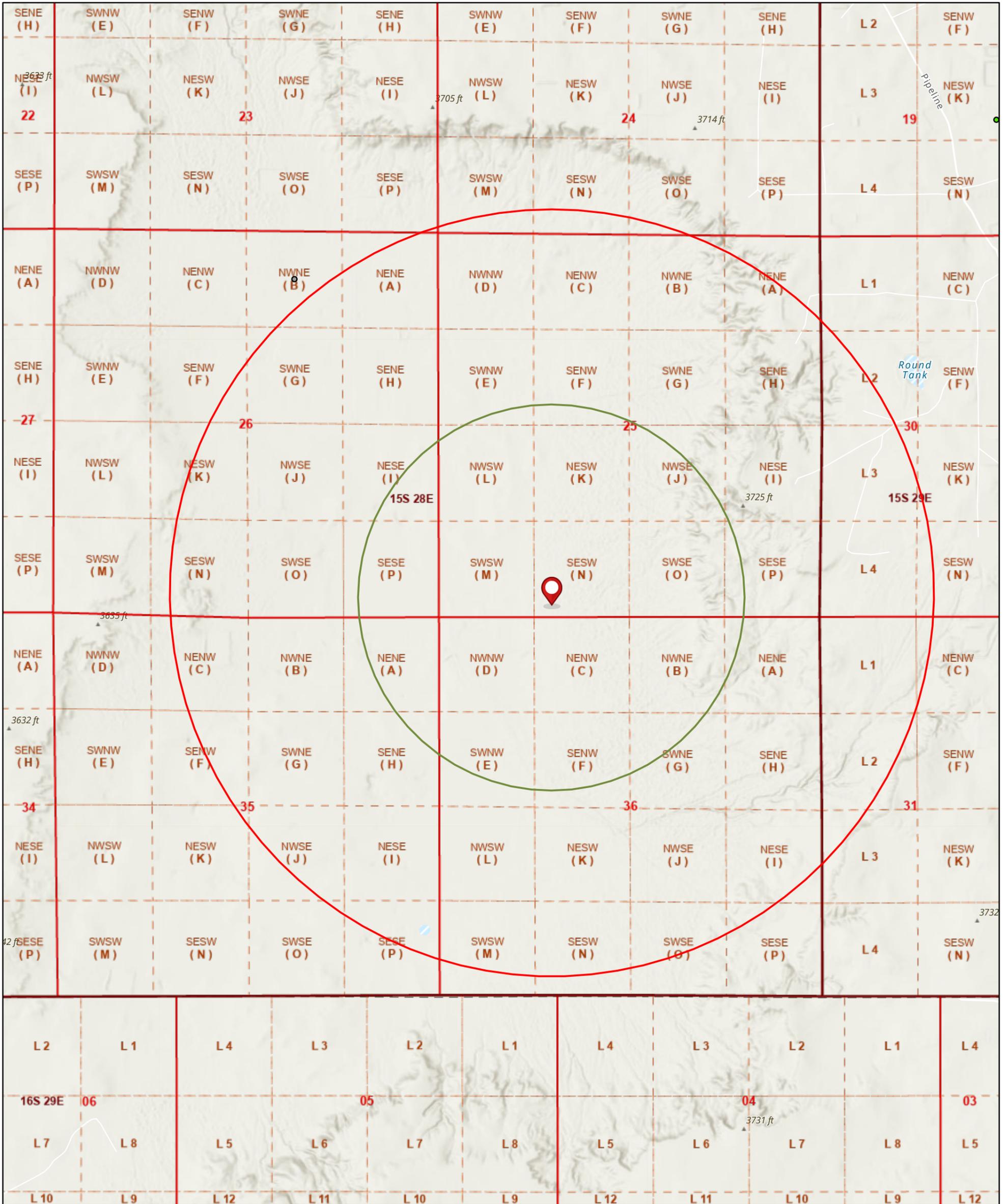
Operator	Well Name	API #	County	Footage	Sec	TWN	RNG	Type	Status	Spud Date	Comp Date	TD	PBTD	Comp Zone	Comp Interval	Casing Prog	Cement
Mack Energy Corporation	Fraser SWD #1		Chaves	330 FSL 1550 FWL	25	15S	28E	SWD	Not Drilled			10960		Devonian	10,415-10,960'	13 3/8"	175sx
																9 5/8"	700sx
																5 1/2"	1625sx
Mack Energy Corporation	Duncan State Com #1H	30-005-64316	Chaves	765 FNL 355 FWL	36	15S	28E	Oil	Producing	4/4/2019	6/19/2029	9,935'	9,908'	San Andres	3,289-9,840'	13 3/8"	550sx
																9 5/8"	550sx
																7 & 5 1/2"	2120sx
Mack Energy Corporation	Duncan State Com #2H	30-005-64351	Chaves	1980 FNL 990 FWL	36	15S	28E	Oil	Producing	5/6/2021	10/1/2021	11,156'	11,106'	San Andres	3,330-11,050'	13 3/8"	550sx
																9 5/8"	600sx
																7 & 5 1/2"	1590sx
Amoco Production Company	State EV Com #1	30-005-60459	Chaves	1980 FSL 810 FEL	26	15S	28E	Oil	P&A 2/23/1978	11/16/1977	11/21/1977	1,504'	1,480'	Round Tank Queen	1,250-1,469'	8 5/8"	200sx
Pre-Ongard Well Operator	Pre-Ongard Well #1								10sx Cmt Plug to Surface							5 1/2"	550sx
									100sx sqz perms @ 1250-1270'								

Duncan State Com #1H 30-005-64316			
Operator: Mack Energy Corporation			
Location: Sec. 36 T15S R28E			
765 FNL 355 FWL			
Zone: San Andres			
GL Elevation: 3576.1'			
Depth	Hole Size & Cement	Casing Detail	
461'	17 1/2" hole	13 3/8" J-55 550sx CMT Circ to Surface	
1500'	12 1/4" hole	9 5/8" J-55 550sx CMT Circ to surface	
9935'	8 3/4" hole	7" P-110 5 1/2" P-110 2120sx CMT Circ to Surface	
		Perfs 3,289-9,840'	
		Stator Pump 3 1/2" J-55 Tbg 2209'	
		TD- 9935'	

Duncan State Com #2H 30-005-64351			
Operator: Mack Energy Corporation			
Location: Sec. 36 T15S R28E			
1980 FNL 990 FWL			
Zone: San Andres			
GL Elevation: 3582.7'			
Depth	Hole Size & Cement	Casing Detail	
504'	17 1/2" hole	13 3/8" J-55 550sx CMT Circ to Surface	
1500'	12 1/4" hole	9 5/8" J-55 600sx CMT Circ to surface	
11,156'	8 3/4" hole	7" P-110 5 1/2" P-110 1590sx CMT Circ to Surface	
		Perfs 3,330-11,050'	
		3 1/2" J-55 Tbg 2042' 123M1200 Stator 2090'	
		TD- 11,156"	

State EV Com #1		Pre-Ongard Well #1		
Amoco Production Company P&A 2/23/1978		Operator: Pre-Ongard Well Operator Location: Sec. 26 T15S R28E 1980 FSL 810 FEL Zone: Und. Round Tank Queen GL Elevation: 3561.2'		
Depth	Hole Size & Cement	Casing Detail		
229'	12 1/4" hole	8 5/8" 220sx Circ to Surface		
1504'	7 7/8" hole	5 1/2" 550sx Circ to surface		
		Perfs 1250-1270" 1451-1469'		
		TD- 1504'		
		Sqz Perfs 1250-1270' w/ 100sx Class C		
		10sx Cmt Plug to Surface		

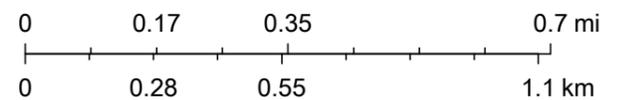
# OSE POD Location Map



5/3/2023, 12:34:59 PM

- Override 1
- PLSS Second Division
- OSE Water PODs
- PLSS First Division
- Pending
- Unknown
- PLSS Townships

1:18,056



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New Mexico Office of the State Engineer  
**Active & Inactive Points of Diversion**  
(with Ownership Information)

No PODs found.

**PLSS Search:**

**Q4:** SE    **Section(s):** 25    **Township:** 15S    **Range:** 28E

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.

5/3/23 1:24 PM

ACTIVE & INACTIVE POINTS OF DIVERSION







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 #:	252946
Area:	Artesia	Analysis ID #:	193290
Lease:	Fraser		
Location:	SWD #1		0
Sample Point:	Wellhead		

<b>Sampling Date:</b>	7/13/2023	<b>Anions</b>	mg/l	meq/l	<b>Cations</b>	mg/l	meq/l
<b>Analysis Date:</b>	7/19/2023	<b>Chloride:</b>	4196.7	118.37	<b>Sodium:</b>	1777.0	77.3
<b>Analyst:</b>	Catalyst	<b>Bicarbonate:</b>	157.9	2.59	<b>Magnesium:</b>	266.8	21.95
<b>TDS (mg/l or g/m3):</b>	8579.8	<b>Carbonate:</b>			<b>Calcium:</b>	898.8	44.85
<b>Density (g/cm3):</b>	1.008	<b>Sulfate:</b>	1200.0	24.98	<b>Potassium:</b>	58.9	1.51
Hydrogen Sulfide:	0	<b>Borate*:</b>	5.4	0.03	<b>Strontium:</b>	17.6	0.4
Carbon Dioxide:	0	<b>Phosphate*</b>			<b>Barium:</b>	0.1	0.
Comments:		<b>*Calculated based on measured elemental boron and phosphorus.</b>			<b>Iron:</b>	0.1	0.
		pH at time of sampling:		7	<b>Manganese:</b>	0.479	0.02
		pH at time of analysis:					
		<b>pH used in Calculation:</b>		7	<b>Conductivity (micro-mhos/cm):</b>		12896
		<b>Temperature @ lab conditions (F):</b>		75	<b>Resistivity (ohm meter):</b>		.7754

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>		
	°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	
80	0.15	3.13	-0.23	0.00	-0.30	0.00	-0.22	0.00	0.66	0.00	
100	0.27	5.91	-0.24	0.00	-0.25	0.00	-0.21	0.00	0.51	0.00	
120	0.39	9.04	-0.24	0.00	-0.16	0.00	-0.19	0.00	0.38	0.00	
140	0.52	12.16	-0.23	0.00	-0.06	0.00	-0.16	0.00	0.28	0.00	
160	0.66	15.29	-0.21	0.00	0.07	67.42	-0.12	0.00	0.21	0.00	
180	0.80	18.77	-0.18	0.00	0.20	186.62	-0.07	0.00	0.15	0.00	
200	0.94	22.24	-0.15	0.00	0.36	287.40	-0.03	0.00	0.11	0.00	
220	1.08	25.37	-0.12	0.00	0.52	369.07	0.02	0.70	0.08	0.00	



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

<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
<b>Hydrogen Sulfide:</b>	5	<b>Borate*:</b>	190.4	1.2	<b>Strontium:</b>	55.6	1.27
<b>Carbon Dioxide:</b>	97	<b>Phosphate*</b>			<b>Barium:</b>	0.9	0.01
<b>Comments:</b>		*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



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### Water Analysis Report

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

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



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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

<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

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		

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:					
		pH used in Calculation:		6.41	Conductivity (micro-mhos/cm):		194536
		Temperature @ lab conditions (F):		75	Resistivity (ohm meter):		.0514

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

<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

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

CONDITIONS

Action 253580

**CONDITIONS**

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 253580
	Action Type: [IM-SD] Admin Order Support Doc (ENG) (IM-AAO)

**CONDITIONS**

Created By	Condition	Condition Date
mgebremichael	None	8/17/2023