

AE Order Number Banner

Application Number: pMSG2313533970

SWD-2531

MACK ENERGY CORP [13837]

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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



ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: _____ 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

FOR OCD ONLY

- ☐ Notice Complete
☐ Application Content Complete

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

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

 Print or Type Name

 Date

 Phone Number

 Signature

 e-mail Address

Deana Weaver

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance ☒ Disposal _____ Storage
Application qualifies for administrative approval? ☒ Yes _____ No
- II. OPERATOR: 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 ☒ 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 Technician II
SIGNATURE: Deana Weaver DATE: 4/24/2023
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.

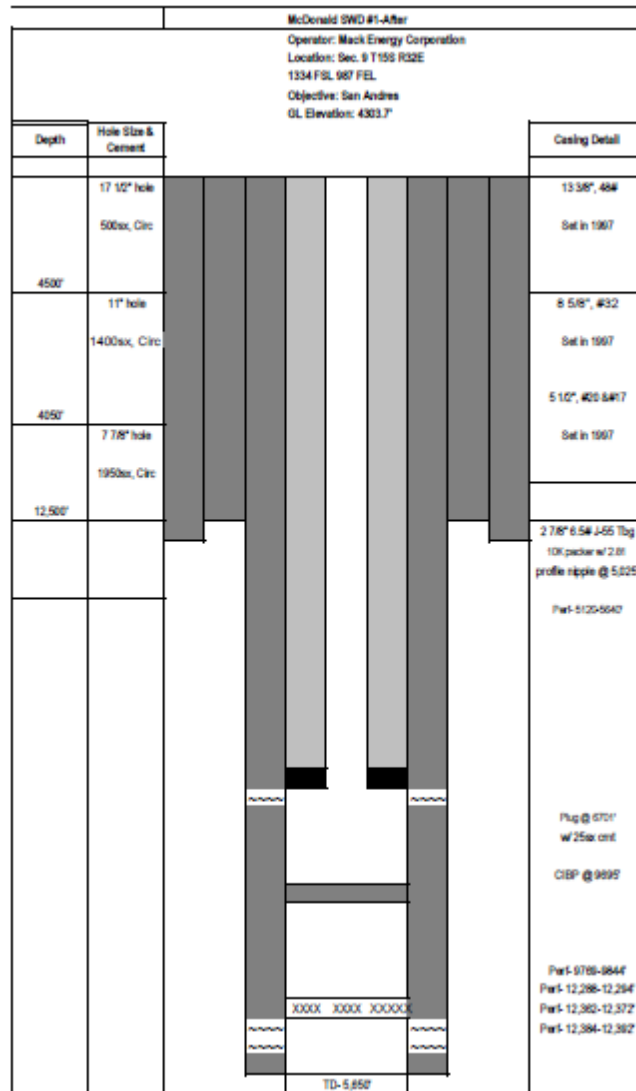
NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Mack Energy CorporationWELL NAME & NUMBER: McDonald SWD #1

WELL LOCATION: 1334 FSL 987 FEL I 9 15S 32E
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8"Cemented with: 500sx sx. *or* _____ ft³Top of Cement: 0 Method Determined: Circ
In place 1997Intermediate CasingHole Size: 11" Casing Size: 8 5/8"Cemented with: 1400 sx. *or* _____ ft³Top of Cement: 0 Method Determined: Circ
In place 1997Production CasingHole Size: 7 7/8" Casing Size: 5 1/2"Cemented with: 1950 sx. *or* _____ ft³Top of Cement: 0 Method Determined: Circ
In place 1997Total Depth: 5650'Injection Interval5120' feet to 5640' perforated

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEETTubing Size: 2 7/8" Lining Material: IPCType of Packer: Arrow Set 10K packer w/ 2.81 profile nipplePacker Setting Depth: 5,025'

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

Additional Data

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

If no, for what purpose was the well originally drilled? Gas Well

2. Name of the Injection Formation: San Andres

3. Name of Field or Pool (if applicable): SWD; San Andres 96121

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. Perfs 9769-9844', 12,288-12,294'

12,362-12,372', 12,384-12,392'; CIBP @ 9695', 25sx Cmt Plug @

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Overlying- Grayburg @ 3715' Underlying - Glorieta @ 5650'

Tops- Yates @ 2483', Seven Rivers @ 2750', Queen @ 3298', Grayburg @ 3715',

San Andres @ 4048', Glorieta @ 5650'

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;
0-1,024 psi
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;
See Attached

VIII. GEOLOGICAL DATA

1. Lithologic Detail; Dolomite
2. Geological Name; **San Andres**
3. Thickness; 1602'
4. Depth; **4048'-5650'** Disposal Interval= **5120-5640'**

IX. PROPOSED STIMULATION PROGRAM

1. 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

See attached
Additional Information

Waters Injected:

San Andres


XII. AFFIRMATIVE STATEMENT

RE: McDonald 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: 2/1/23



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

¹ API Number 30-025-33678	² Pool Code 96121	³ Pool Name SWD; San Andres
⁴ Property Code	⁵ Property Name McDONALD SWD	
⁷ OGRID No. 13837	⁸ Operator Name MACK ENERGY CORPORATION	
	⁶ Well Number 1	⁹ Elevation 4303.7

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	9	15 S	32 E		1334	SOUTH	987	EAST	LEA

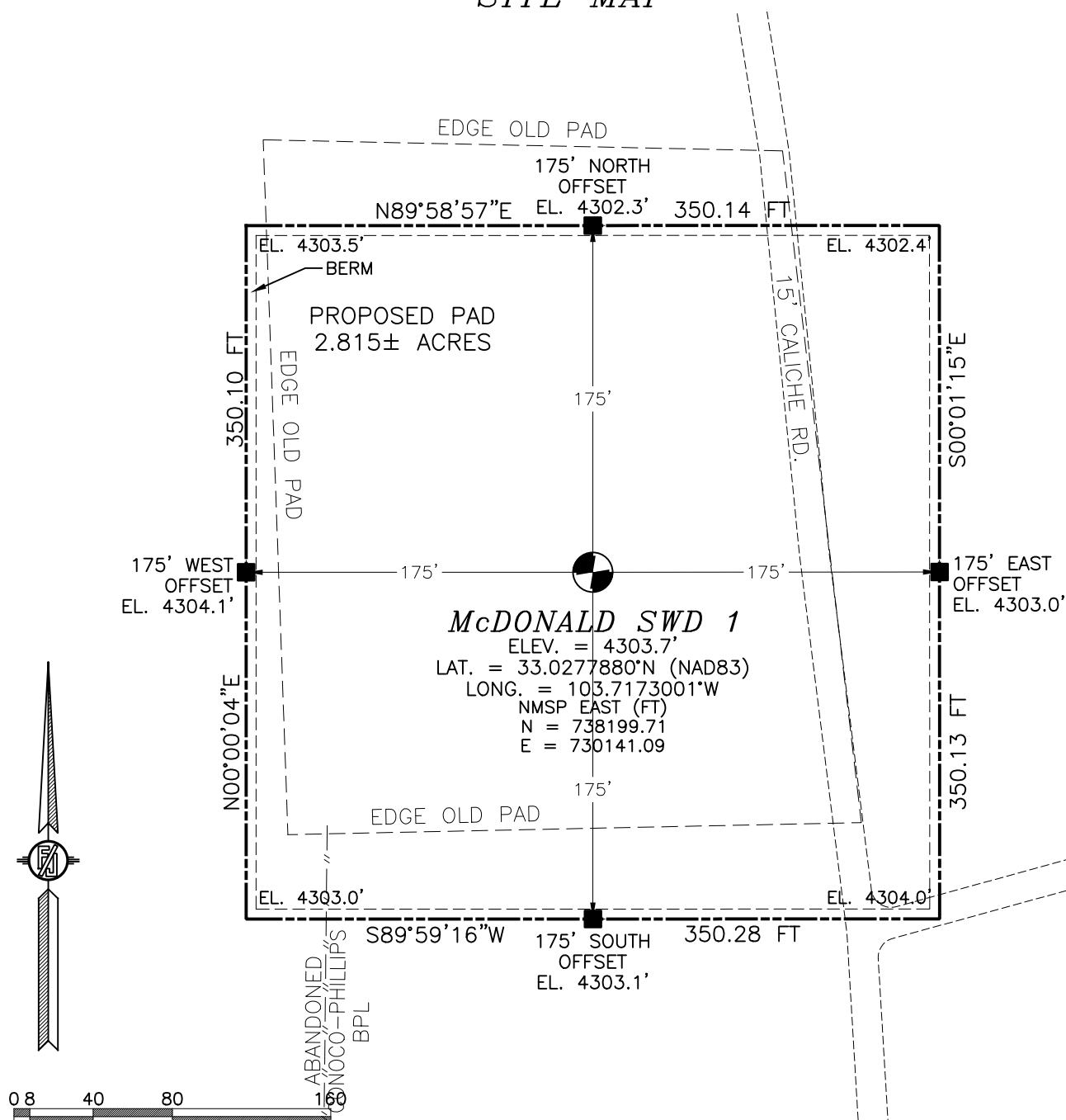
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

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

<p>N89°36'21"E 2636.03 FT</p> <p>NW CORNER SEC. 9 LAT. = 33.0386401°N LONG. = 103.7313295°W NMSP EAST (FT) N = 742123.19 E = 725818.67</p> <p>N/4 CORNER SEC. 9 SCALED</p> <p>NE CORNER SEC. 9 LAT. = 33.0386555°N LONG. = 103.7141306°W NMSP EAST (FT) N = 742159.43 E = 731089.22</p> <p>W/4 CORNER SEC. 9 LAT. = 33.0313816°N LONG. = 103.7313182°W NMSP EAST (FT) N = 739482.32 E = 725837.25</p> <p>E/4 CORNER SEC. 9 LAT. = 33.0313723°N LONG. = 103.7140912°W NMSP EAST (FT) N = 739509.59 E = 731116.91</p> <p>McDONALD SWD 1 ELEV. = 4303.7' LAT. = 33.0277880°N (NAD83) LONG. = 103.7173001°W NMSP EAST (FT) N = 738199.71 E = 730141.09</p> <p>SW CORNER SEC. 9 LAT. = 33.0241360°N LONG. = 103.7313094°W NMSP EAST (FT) N = 736846.10 E = 725855.05</p> <p>S/4 CORNER SEC. 9 LAT. = 33.0241270°N LONG. = 103.7227033°W NMSP EAST (FT) N = 736858.03 E = 728492.84</p> <p>SE CORNER SEC. 9 LAT. = 33.0241183°N LONG. = 103.7140730°W NMSP EAST (FT) N = 736870.37 E = 731138.05</p> <p>SURFACE LOCATION 987'</p> <p>1334'</p> <p>S89°44'27"W 2638.50 FT</p> <p>S89°43'58"W 2645.93 FT</p>		<p>¹⁷ OPERATOR CERTIFICATION</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> 3/6/2023 Signature Date</p> <p>Deana Weaver Printed Name</p> <p>dweaver@mec.com E-mail Address</p> <p>¹⁸ SURVEYOR CERTIFICATION</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>FEBRUARY 12, 2023 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: Certificate Number: 12797 Professional Surveyor No. 9656</p>
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SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
SITE MAP

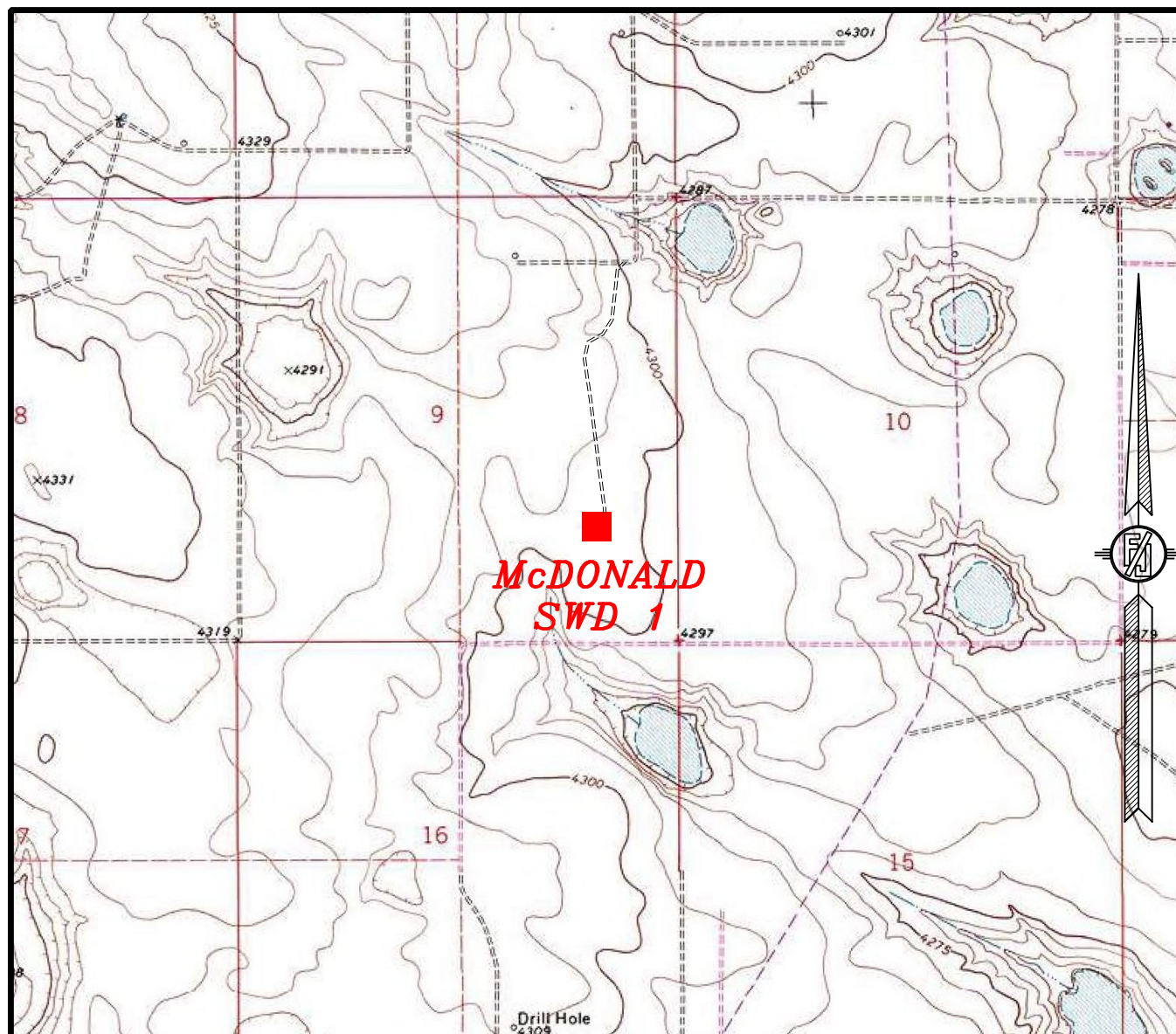


FILIMON, F. JARAMILLO, R. S. 1379

SURVEY NO. 9656

CARLSBAD, NEW MEXICO

SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
DEAN RANCH

NOT TO SCALE

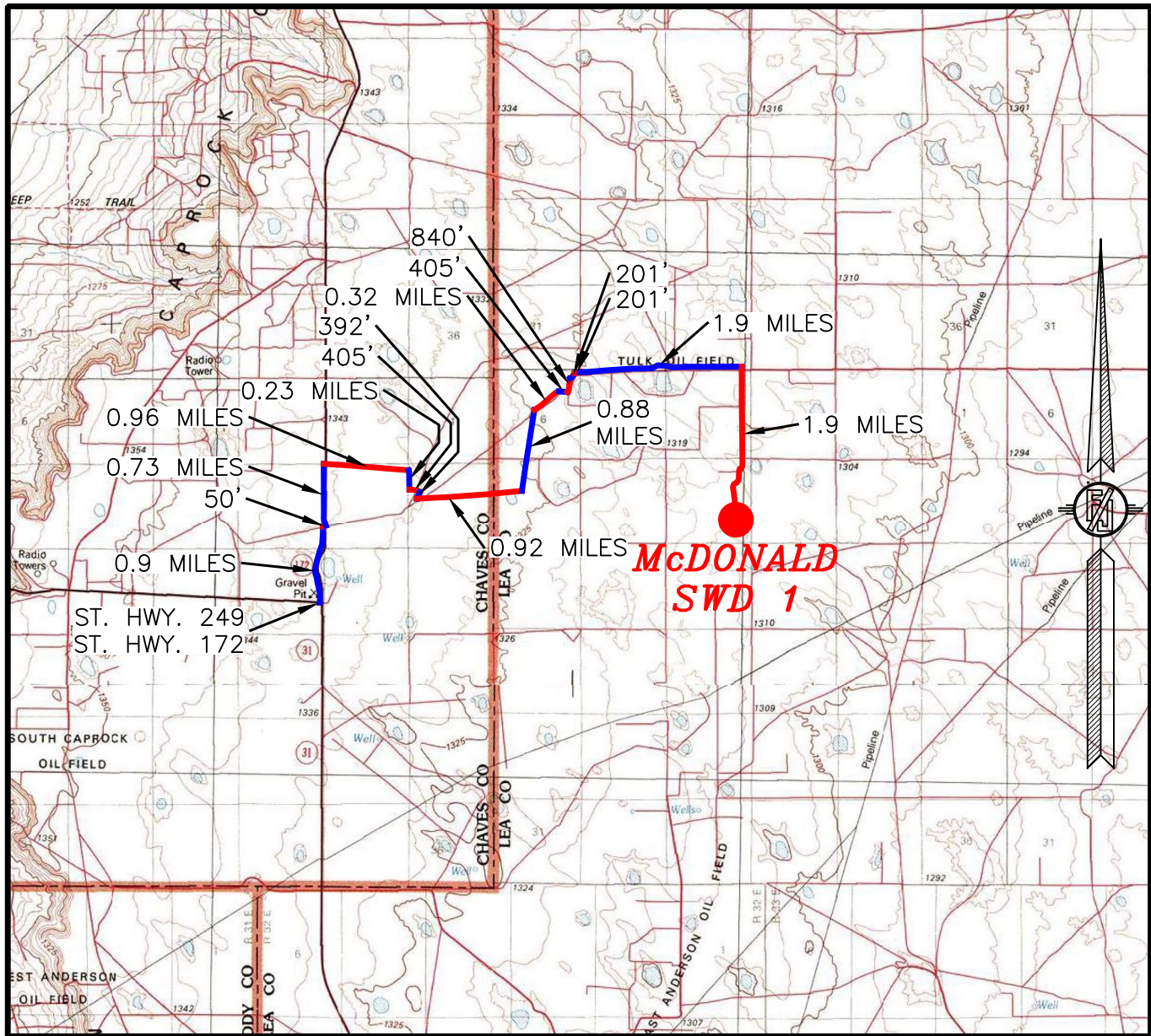
MACK ENERGY CORPORATION
McDONALD SWD 1
LOCATED 1334 FT. FROM THE SOUTH LINE
AND 987 FT. FROM THE EAST LINE OF
SECTION 9, TOWNSHIP 15 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

FEBRUARY 12, 2023

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

SURVEY NO. 9656
CARLSBAD, NEW MEXICO

SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM THE INTERSECTION ST. HWY. 249 & ST. HWY. 172, GO NORTH ON ST. HWY. 172 APPROX. 0.9 MILES, GO NORTHEAST ON CALICHE ROAD APPROX. 50', GO NORTH APPROX. 0.73 MILES, GO EAST APPROX. 0.96 MILES, GO SOUTH APPROX. APPROX. 0.23 MILES, GO EAST APPROX. 405', GO SOUTHWEST APPROX. 392', GO EAST APPROX. 0.92 MILES, GO NORTH APPROX. 0.88 MILES, GO NORTHEAST APPROX. 0.32 MILES, GO EAST APPROX. 405', GO NORTH APPROX. 840', GO NORTHEAST APPROX. 201', GO EAST APPROX. 201', CONTINUE EAST APPROX. 1.9 MILES, GO SOUTH APPROX. 1.9 MILES TO NORTH EDGE OF PAD FOR THIS LOCATION.

MACK ENERGY CORPORATION
McDONALD SWD 1
LOCATED 1334 FT. FROM THE SOUTH LINE
AND 987 FT. FROM THE EAST LINE OF
SECTION 9, TOWNSHIP 15 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

FEBRUARY 12, 2023

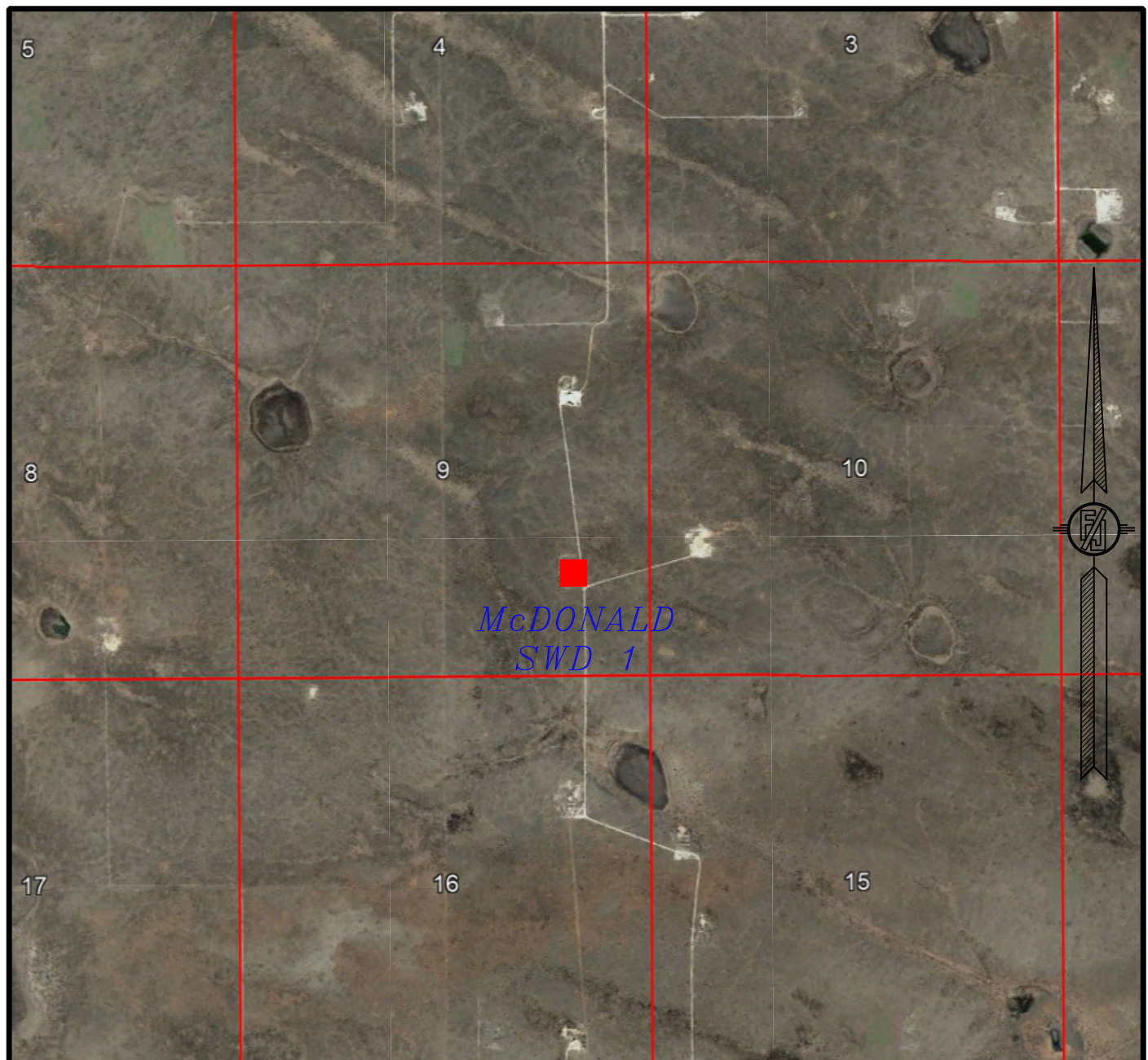
SURVEY NO. 9656

MADRON SURVEYING, INC. 301 SOUTH CANAL

(575) 234-3327

CARLSBAD, NEW MEXICO

SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
JAN. 2018

MACK ENERGY CORPORATION
McDONALD SWD 1
LOCATED 1334 FT. FROM THE SOUTH LINE
AND 987 FT. FROM THE EAST LINE OF
SECTION 9, TOWNSHIP 15 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

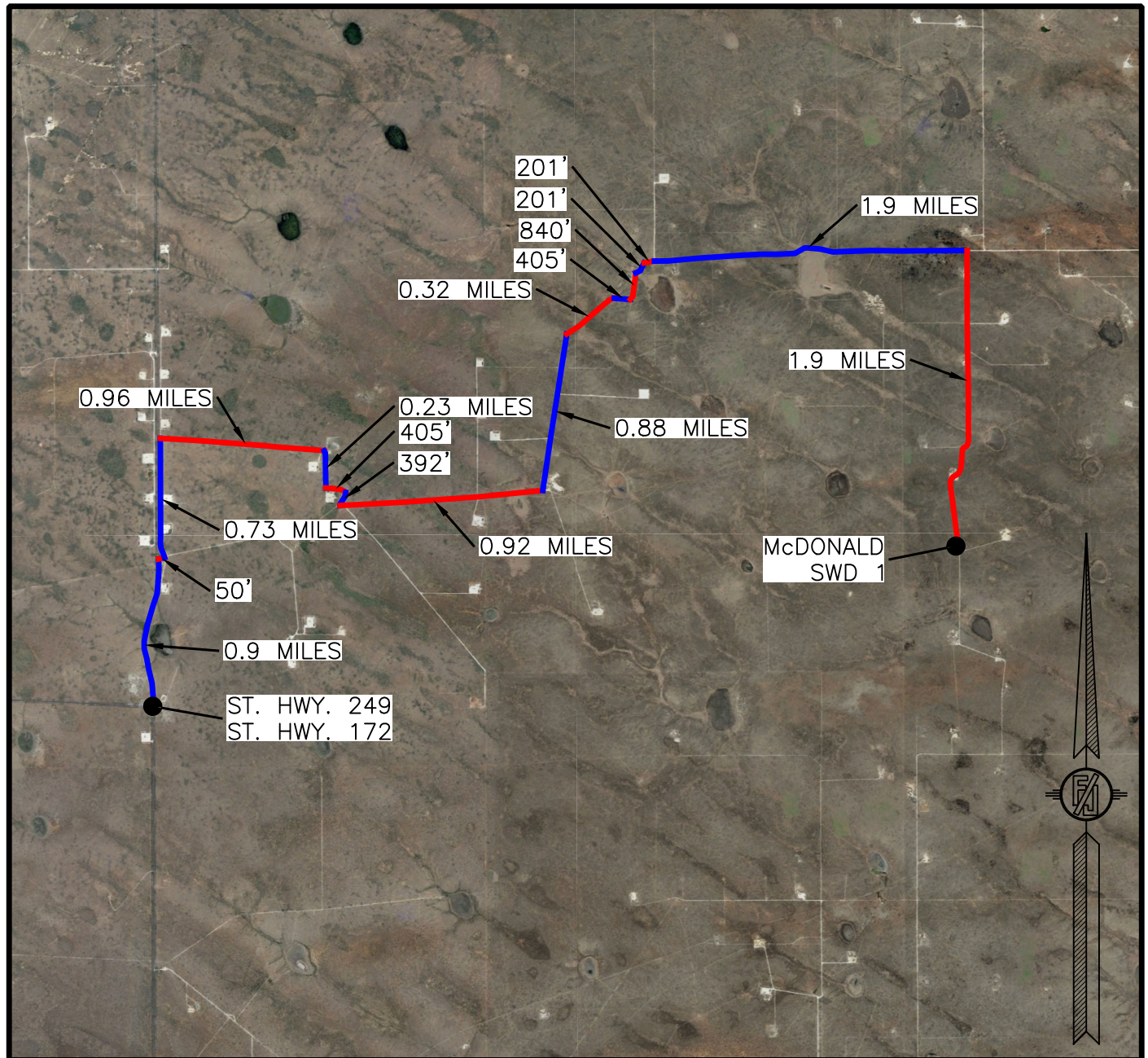
FEBRUARY 12, 2023

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3327

SURVEY NO. 9656
CARLSBAD, NEW MEXICO

SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
JAN. 2018

MACK ENERGY CORPORATION
McDONALD SWD 1
LOCATED 1334 FT. FROM THE SOUTH LINE
AND 987 FT. FROM THE EAST LINE OF
SECTION 9, TOWNSHIP 15 SOUTH,
RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

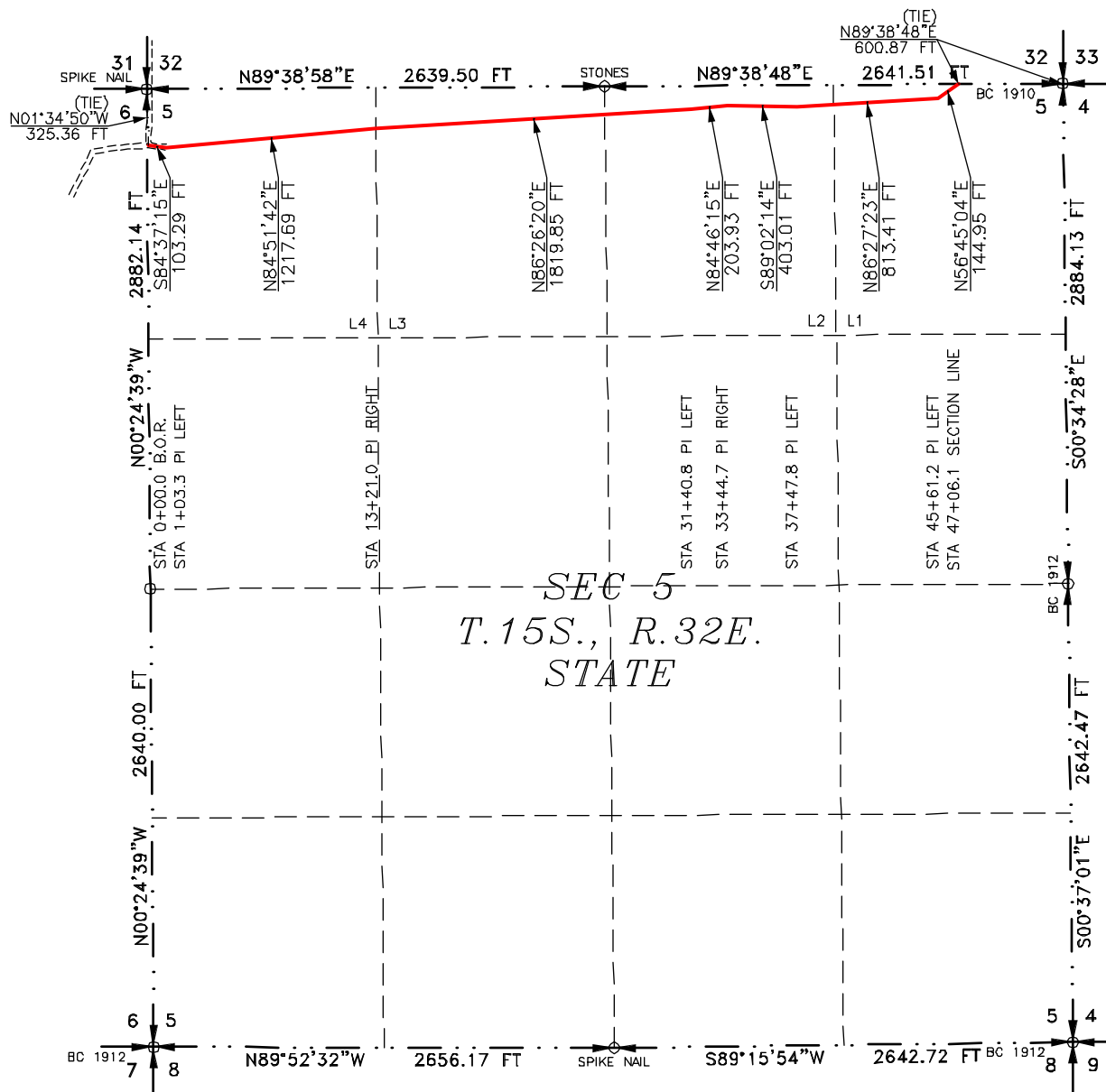
FEBRUARY 12, 2023

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3327

SURVEY NO. 9656
CARLSBAD, NEW MEXICO

*MACK ENERGY CORPORATION
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 5, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023*



SHEET: 1-10

MADRON SURVEYING, INC. 301 SOUTH CUMAL, ALBUQUERQUE, NEW MEXICO
(505) 231-1527

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 28th DAY OF FEBRUARY 2023

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

SURVEY NO. 9656

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 5, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 5, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN LOT 4 OF SAID SECTION 5, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 5, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N01°34'50"W, A DISTANCE OF 325.36 FEET;
 THENCE S84°37'15"E A DISTANCE OF 103.29 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE N84°51'42"E A DISTANCE OF 1217.69 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE N86°26'20"E A DISTANCE OF 1819.85 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE N84°46'15"E A DISTANCE OF 203.93 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE S89°02'14"E A DISTANCE OF 403.01 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE N86°27'23"E A DISTANCE OF 813.41 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE N56°45'04"E A DISTANCE OF 144.95 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 5, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°38'48"E, A DISTANCE OF 600.87 FEET;

SAID STRIP OF LAND BEING 4706.13 FEET OR 285.22 RODS IN LENGTH, CONTAINING 3.241 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 4	1318.12 L.F.	79.89 RODS	0.908 ACRES
LOT 3	1321.88 L.F.	80.11 RODS	0.910 ACRES
LOT 2	1322.53 L.F.	80.15 RODS	0.911 ACRES
LOT 1	743.60 L.F.	45.07 RODS	0.512 ACRES

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 28TH DAY OF FEBRUARY 2023

FILIMON F. JARAMILLO
 12797
 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: 2-10

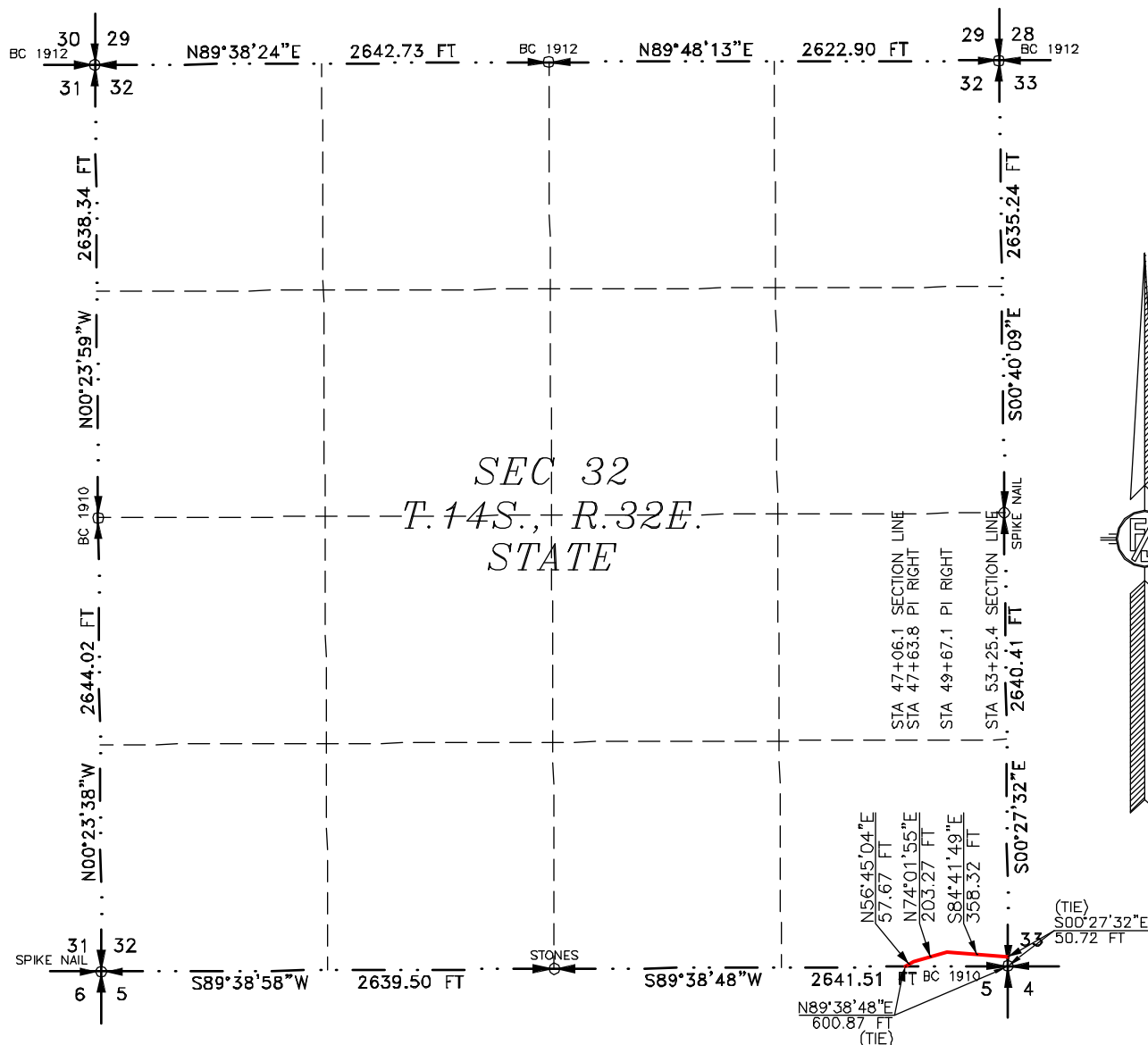
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3327

SURVEY NO. 9656

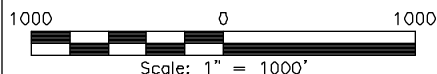
ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 32, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023



SEE NEXT SHEET (4-10) FOR DESCRIPTION

**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: 3-10

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

SURVEYOR CERTIFICATE

I, FILMON 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 28th DAY OF FEBRUARY 2023

FILMON F. JARAMILLO
 12797
 NEW MEXICO PROFESSIONAL SURVEYOR
 MADRON SURVEYING, INC.
 301 SOUTH CANAL
 CARLSBAD, NEW MEXICO 88220
 Phone (575) 234-3327

SURVEY NO. 9656

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 32, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 32, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M., LEA 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 SE/4 OF SAID SECTION 32, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTHEAST CORNER OF SAID SECTION 32, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°38'48"E, A DISTANCE OF 600.87 FEET;
 THENCE N56°45'04"E A DISTANCE OF 57.67 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE N74°01'55"E A DISTANCE OF 203.27 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE S84°41'49"E A DISTANCE OF 358.32 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 32, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S00°27'32"E, A DISTANCE OF 50.72 FEET;

SAID STRIP OF LAND BEING 619.26 FEET OR 37.53 RODS IN LENGTH, CONTAINING 0.426 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4 619.26 L.F. 37.53 RODS 0.426 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.

SHEET: 4-10

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

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.

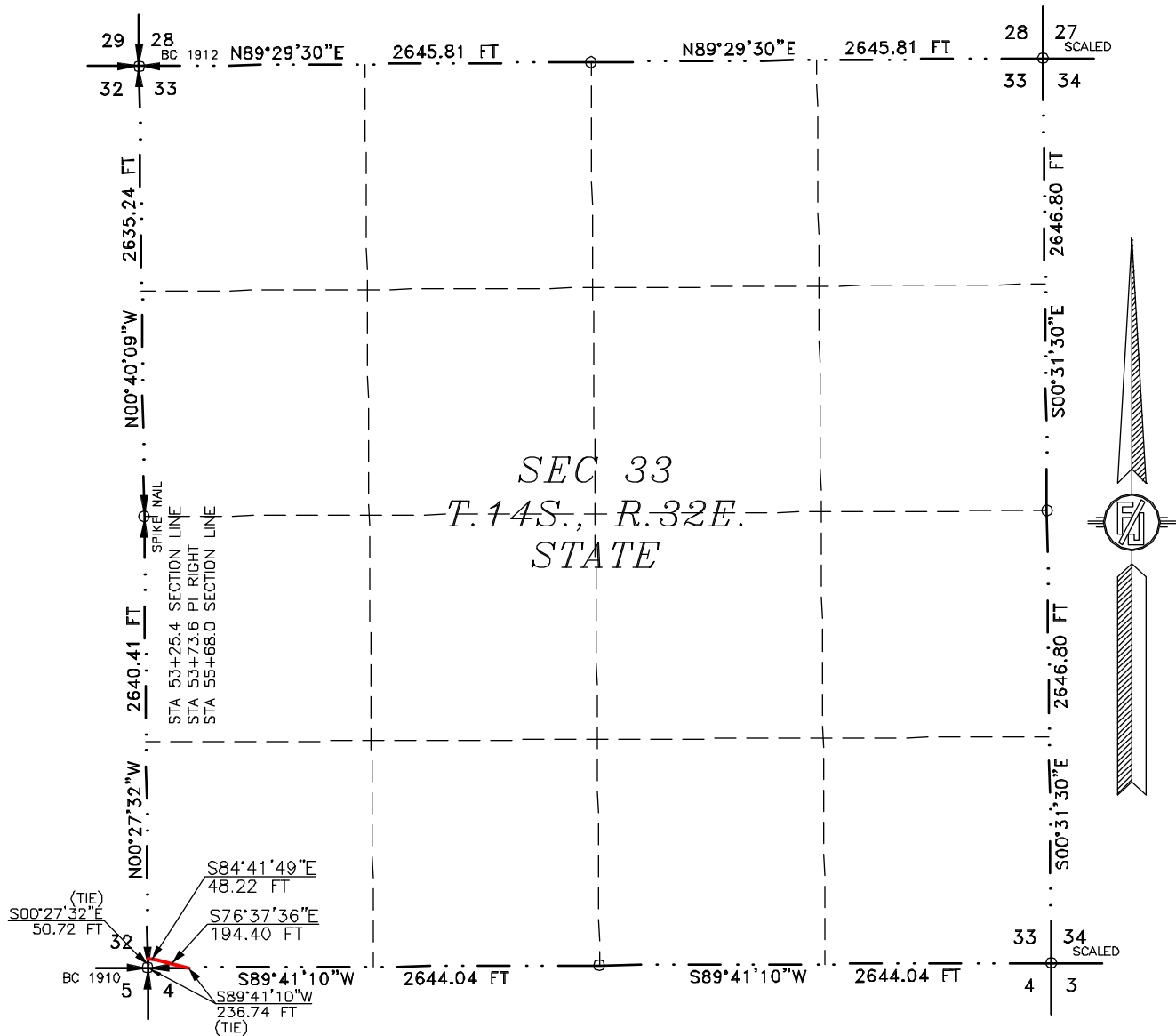
IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 12th DAY OF FEBRUARY 2023



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

SURVEY NO. 9656

MACK ENERGY CORPORATION
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 33, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023



SEE NEXT SHEET (6-10) 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 28 DAY OF FEBRUARY 2023

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

SURVEY NO. 9656

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: 5-10

MADRON SURVEYING, INC. 301 SOUTH CENTRAL AVE. ALBUQUERQUE, NEW MEXICO
(505) 234-1527

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 33, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 33, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 33, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 33, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S00°27'32"E, A DISTANCE OF 50.72 FEET;
 THENCE S84°41'49"E A DISTANCE OF 48.22 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
 THENCE S76°37'36"E A DISTANCE OF 194.40 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 33, TOWNSHIP 14 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S89°41'10"W, A DISTANCE OF 236.74 FEET;

SAID STRIP OF LAND BEING 242.62 FEET OR 14.70 RODS IN LENGTH, CONTAINING 0.167 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4 242.62 L.F. 14.70 RODS 0.167 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.

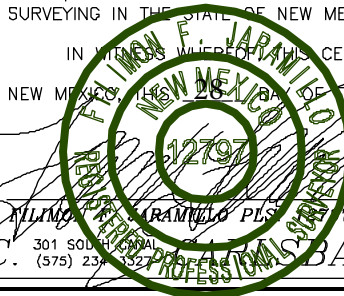
SHEET: 6-10

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

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 26TH DAY OF FEBRUARY 2023



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

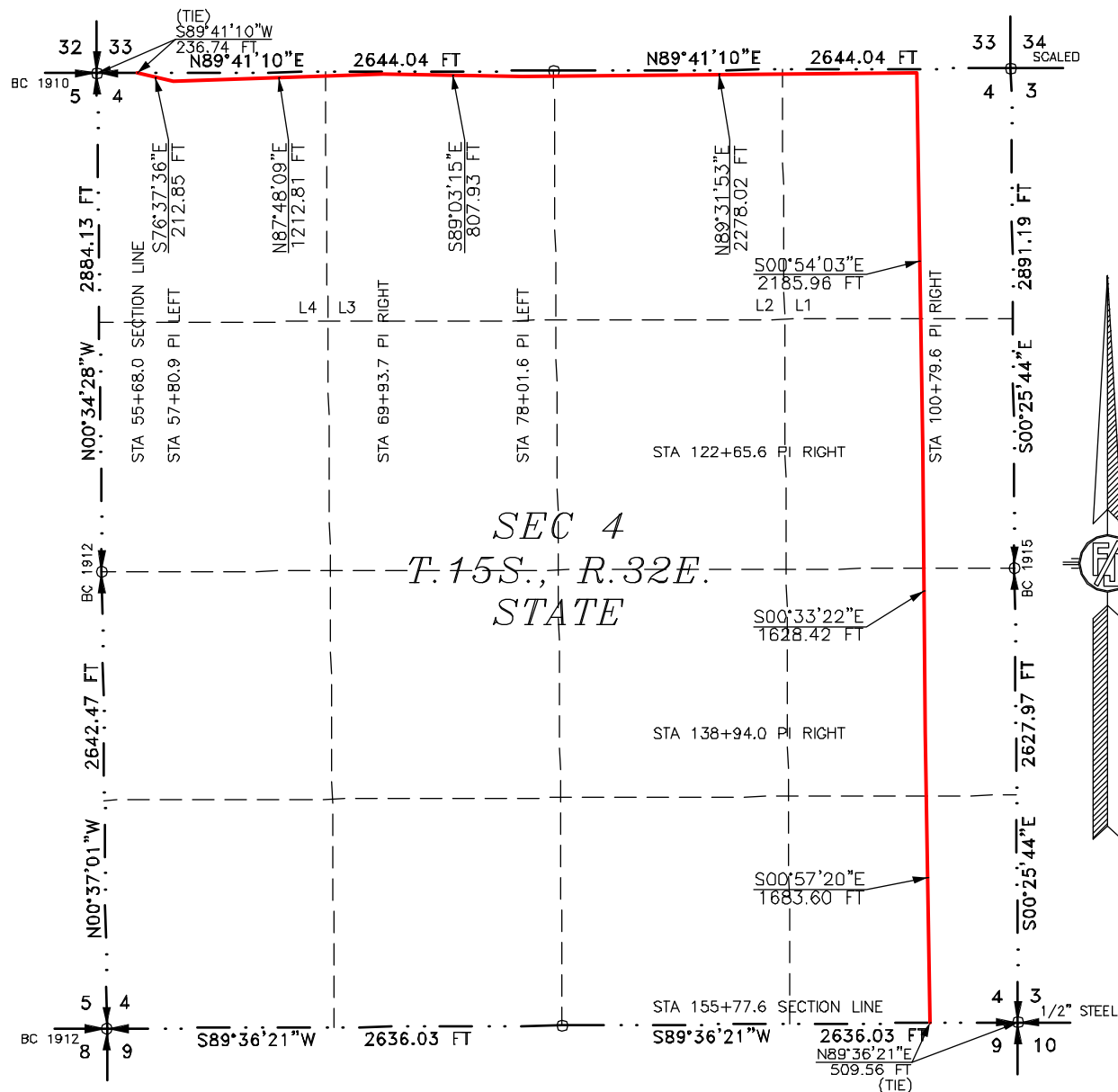
SURVEY NO. 9656

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION

**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 4, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023**



SEE NEXT SHEET (8-10) FOR DESCRIPTION

SURVEYOR CERTIFICATE

I, FILMON 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 12th DAY OF FEBRUARY 2023

FILMON F. JARAMILLO
12797
MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3327

SURVEY NO. 9656

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO

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: 7-10

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION

**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 4, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023**

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 4, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN LOT 4 RR/4 OF SAID SECTION 4, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 4, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S89°41'10"W, A DISTANCE OF 236.74 FEET;
THENCE S76°37'36"E A DISTANCE OF 212.85 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N87°48'09"E A DISTANCE OF 1212.81 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S89°03'15"E A DISTANCE OF 807.93 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N89°31'53"E A DISTANCE OF 2278.02 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°54'03"E A DISTANCE OF 2185.96 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°33'22"E A DISTANCE OF 1628.42 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°57'20"E A DISTANCE OF 1683.60 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 4, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°36'21"E, A DISTANCE OF 509.56 FEET;

SAID STRIP OF LAND BEING 10009.59 FEET OR 606.94 RODS IN LENGTH, CONTAINING 6.894 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 4	1091.89 L.F.	66.18 RODS	0.752 ACRES
LOT 3	1322.40 L.F.	80.15 RODS	0.911 ACRES
LOT 2	1321.99 L.F.	80.12 RODS	0.910 ACRES
LOT 1	2198.52 L.F.	133.24 RODS	1.514 ACRES
SE/4 NE/4	1445.29 L.F.	87.59 RODS	0.995 ACRES
NE/4 SE/4	1314.74 L.F.	79.68 RODS	0.905 ACRES
SE/4 SE/4	1314.76 L.F.	79.68 RODS	0.905 ACRES

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 26TH DAY OF FEBRUARY 2023

FILIMON F. JARAMILLO
12797
NEW MEXICO PROFESSIONAL SURVEYOR
301 SOUTH CANAL
(575) 234-3327

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: 8-10

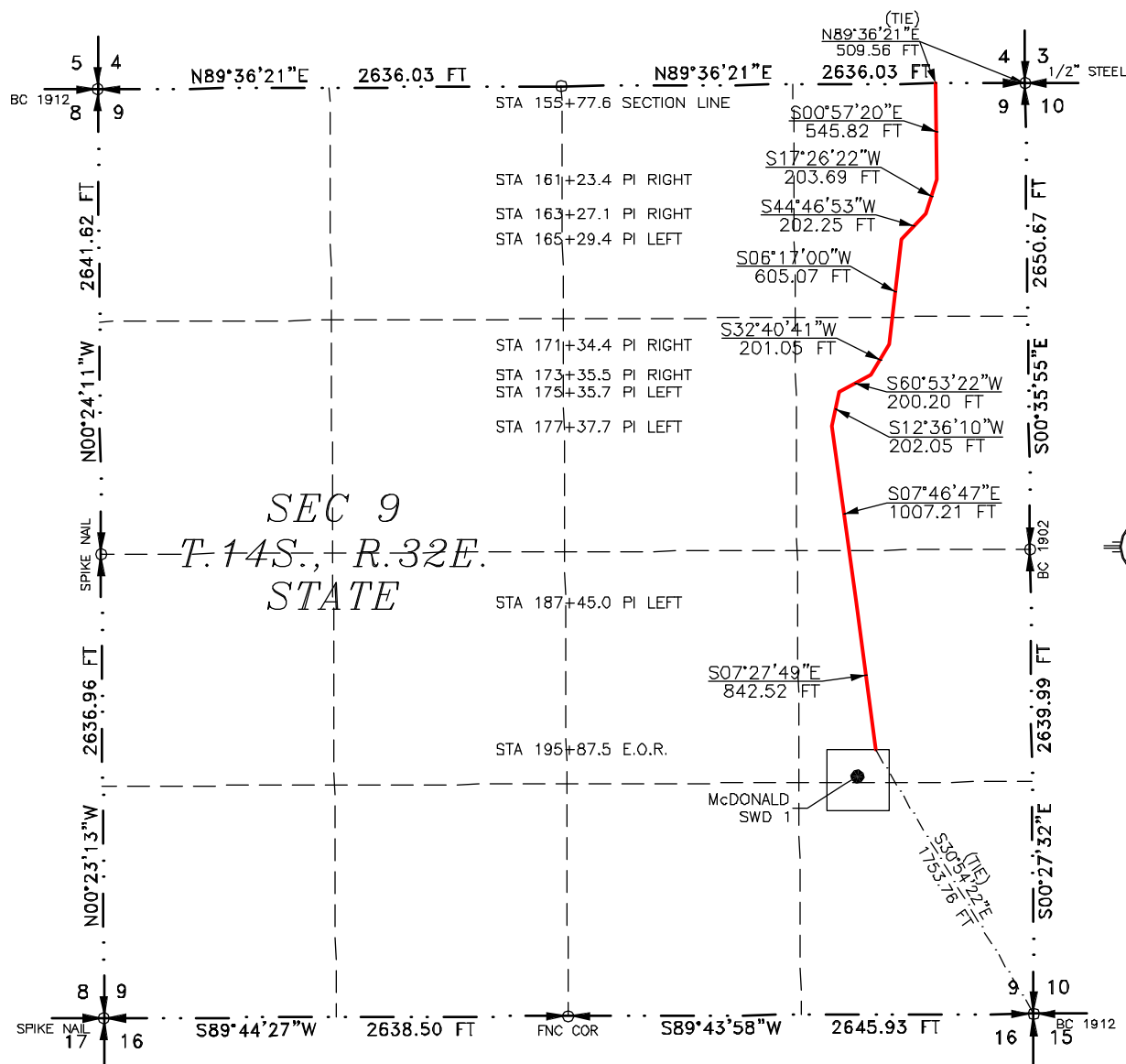
MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 9656

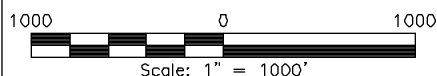
ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023



SEE NEXT SHEET (10-10) FOR DESCRIPTION

**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: 9-10

MADRON SURVEYING, INC.

SURVEYOR CERTIFICATE

I, FILMON 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 FEBRUARY 2023

FILMON F. JARAMILLO
 12797
 NEW MEXICO PROFESSIONAL SURVEYOR

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

SURVEY NO. 9656

CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO McDONALD SWD 1

MACK ENERGY CORPORATION

**CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
FEBRUARY 12, 2023**

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M., LEA 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 NE/4 OF SAID SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS N89°36'21"E, A DISTANCE OF 509.56 FEET;
THENCE S00°57'20"E A DISTANCE OF 545.82 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S17°26'22"W A DISTANCE OF 203.69 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S44°46'53"W A DISTANCE OF 202.25 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S06°17'00"W A DISTANCE OF 605.07 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S32°40'41"W A DISTANCE OF 201.05 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S60°53'22"W A DISTANCE OF 200.20 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S12°36'10"W A DISTANCE OF 202.05 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S07°46'47"E A DISTANCE OF 1007.21 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S07°27'49"E A DISTANCE OF 842.52 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 9, TOWNSHIP 15 SOUTH, RANGE 32 EAST, N.M.P.M. BEARS S30°54'22"E, A DISTANCE OF 1753.76 FEET;

SAID STRIP OF LAND BEING 4009.86 FEET OR 243.02 RODS IN LENGTH, CONTAINING 2.762 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NE/4	1397.18 L.F.	84.68 RODS	0.962 ACRES
SE/4 NE/4	1472.96 L.F.	89.27 RODS	1.014 ACRES
NE/4 SE/4	1139.72 L.F.	69.07 RODS	0.785 ACRES

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 26TH DAY OF FEBRUARY 2023

FILIMON F. JARAMILLO
12797
NEW MEXICO PROFESSIONAL SURVEYOR
301 SOUTH CANAL
(575) 234-3327

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: 10-10

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 9656

		McDonald SWD #1-After									
		Operator: Mack Energy Corporation Location: Sec. 9 T15S R32E 1334 FSL 987 FEL Objective: San Andres GL Elevation: 4303.7'									
Depth	Hole Size & Cement									Casing Detail	
4500'	17 1/2" hole 500sx, Circ									13 3/8", 48# Set in 1997	
4050'	11" hole 1400sx, Circ									8 5/8", #32 Set in 1997	
12,500'	7 7/8" hole 1950sx, Circ									5 1/2", #20 & #17 Set in 1997	
										2 7/8" 6.5# J-55 Tbg 10K packer w/ 2.81 profile nipple @ 5,025'	
										Perf- 5120-5640'	
										Plug @ 6701' w/ 25sx cmt	
										CIBP @ 9695'	
										Perf- 9769-9844' Perf- 12,288-12,294'	
										Perf- 12,362-12,372'	
										Perf- 12,384-12,392'	
										TD- 5,650'	

Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof, for a period of 1 issue(s).

Beginning with the issue dated
March 09, 2023
and ending with the issue dated
March 09, 2023.



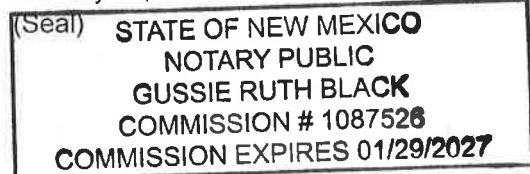
Publisher

Sworn and subscribed to before me this
9th day of March 2023.



Business Manager

My commission expires
January 29, 2027



This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGAL NOTICE March 9, 2023

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 McDonald SWD #1 1334 FSL 987 FEL of Section 9, T15S, R32E, NMPM, Lea County, New Mexico. The water will be injected into the San Andres at a disposal depth of 5,120-5,640'. Water will be injected at a maximum surface pressure of 1,024# and a maximum injection rate of 10,000-15,000 BWP. 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. #00276451

67100900

00276451

NORA VAZQUEZ
MACK ENERGY CORPORATION
PO BOX 960
ARTESIA, NM 88211-0960

LEGAL NOTICE

March 9, 2023

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 McDonald SWD #1 1334 FSL 987 FEL of Section 9, T15S, R32E, NMPM, Lea County, New Mexico. The water will be injected into the San Andres at a disposal depth of 5,120-5,640'. Water will be injected at a maximum surface pressure of 1,024# 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 88211-0960 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.

#00276451

OCD Well Locations



2/2/2023, 9:26:09 AM

Areas

Override 1

Override 2

Override 3

Wells - Large Scale

Gas, Active

Gas, Plugged

Oil, Active

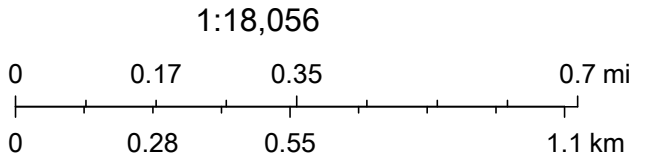
Oil, Cancelled

Oil, Plugged

PLSS Second Division

PLSS First Division

PLSS Townships



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
Stearns	HC 65 Box 900	Crossroads	NM	88114	7021 0350 0000 4936 7403
Chevron USA Inc.	P.O. Box 1635	Houston	TX	77251-1635	7018 1130 0002 2208 6788
Commissioner of Public Lands State Land Office	P.O. Box 1148	Santa Fe	NM	87504-1148	7018 1130 0002 2208 6795



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

April 24, 2023

Via Certified Mail 7021 0350 0000 4936 7403
Return Receipt Requested

Stearns
HC 65 Box 900
Crossroads, NM 88114

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a San Andres SWD well. Produced water will be injected at a proposed depth of 5,120-5,640'. The McDonald SWD #1 located 1334 FSL & 987 FEL, Sec. 9 T15S R32E, Lea 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 blue 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, 2023

Via Certified Mail 7018 1130 0002 2208 6795

Return Receipt Requested

Commissioner of Public Lands
New Mexico State Land Office
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 San Andres SWD well. Produced water will be injected at a proposed depth of 5,120-5,640'. The McDonald SWD #1 located 1334 FSL & 987 FEL, Sec. 9 T15S R32E, Lea County.

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

April 24, 2023

Via Certified Mail 7018 1130 0002 2208 6788
Return Receipt Requested

Chevron USA Inc
P.O. Box 1635
Houston, TX 77251-1635

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Sincerely,

Mack Energy Corporation

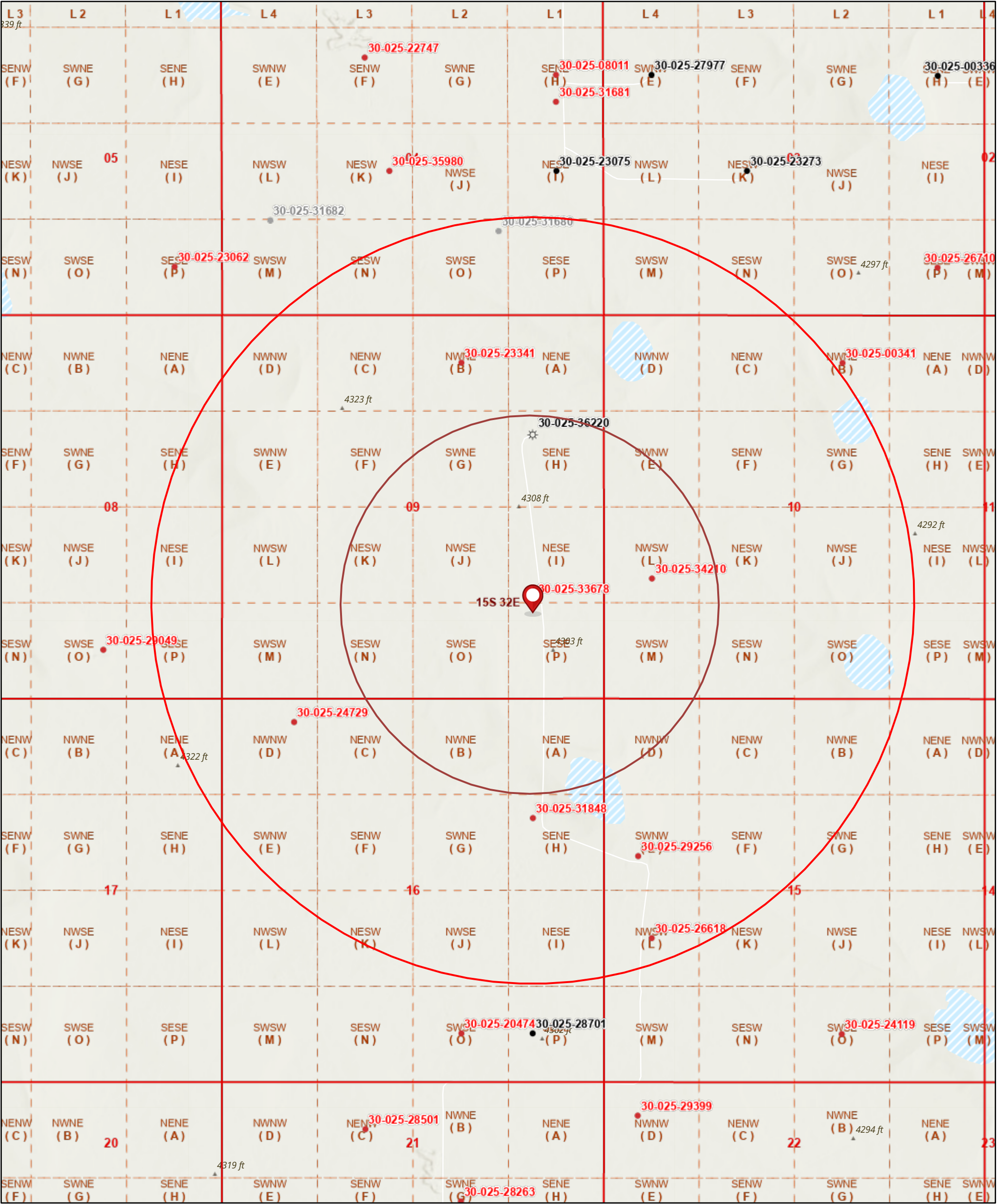
A handwritten signature in blue ink that reads "Deana Weaver".

Deana Weaver
Regulatory Technician II

DW/

Attachments

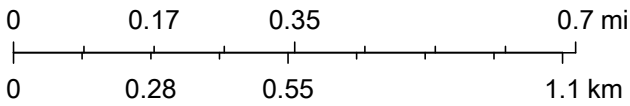
OCD Well Locations



1/30/2023, 10:39:35 AM

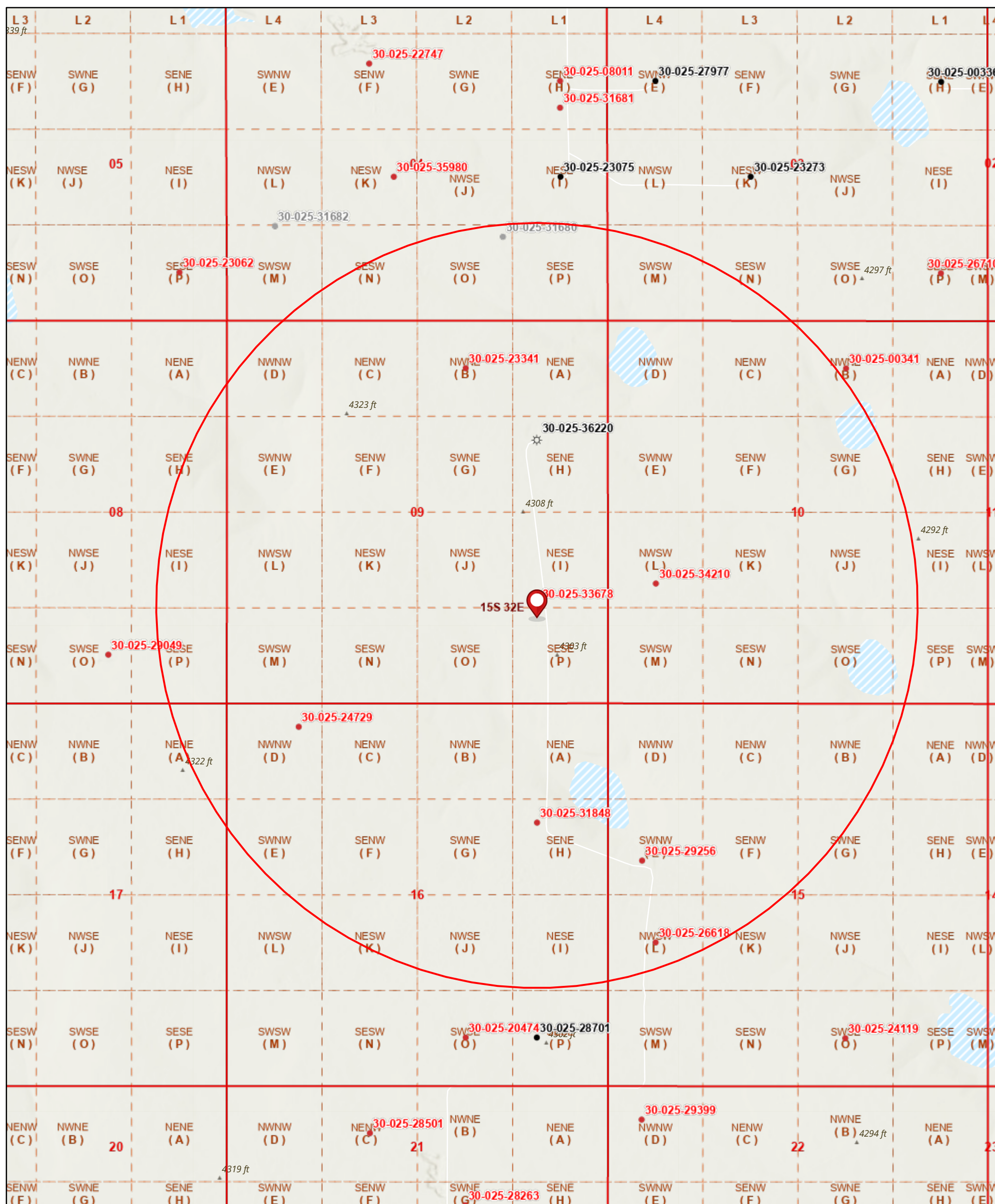
- Override 1
- Oil, Active
- PLSS Second Division
- Oil, Cancelled
- PLSS First Division
- Oil, Plugged
- PLSS Townships
- ⚙ Gas, Active
- ⚙ Gas, Plugged

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,

OCD Well Locations



1/30/2023, 10:38:02 AM

Wells - Large Scale

Gas, Active

Gas, Plugged

- Oil, Active

- Oil, Cancelled

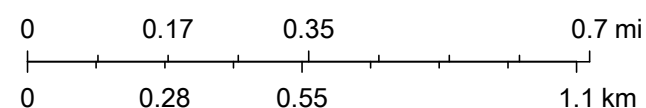
Oil, Plugged

PLSS Second Division

PLSS First Division

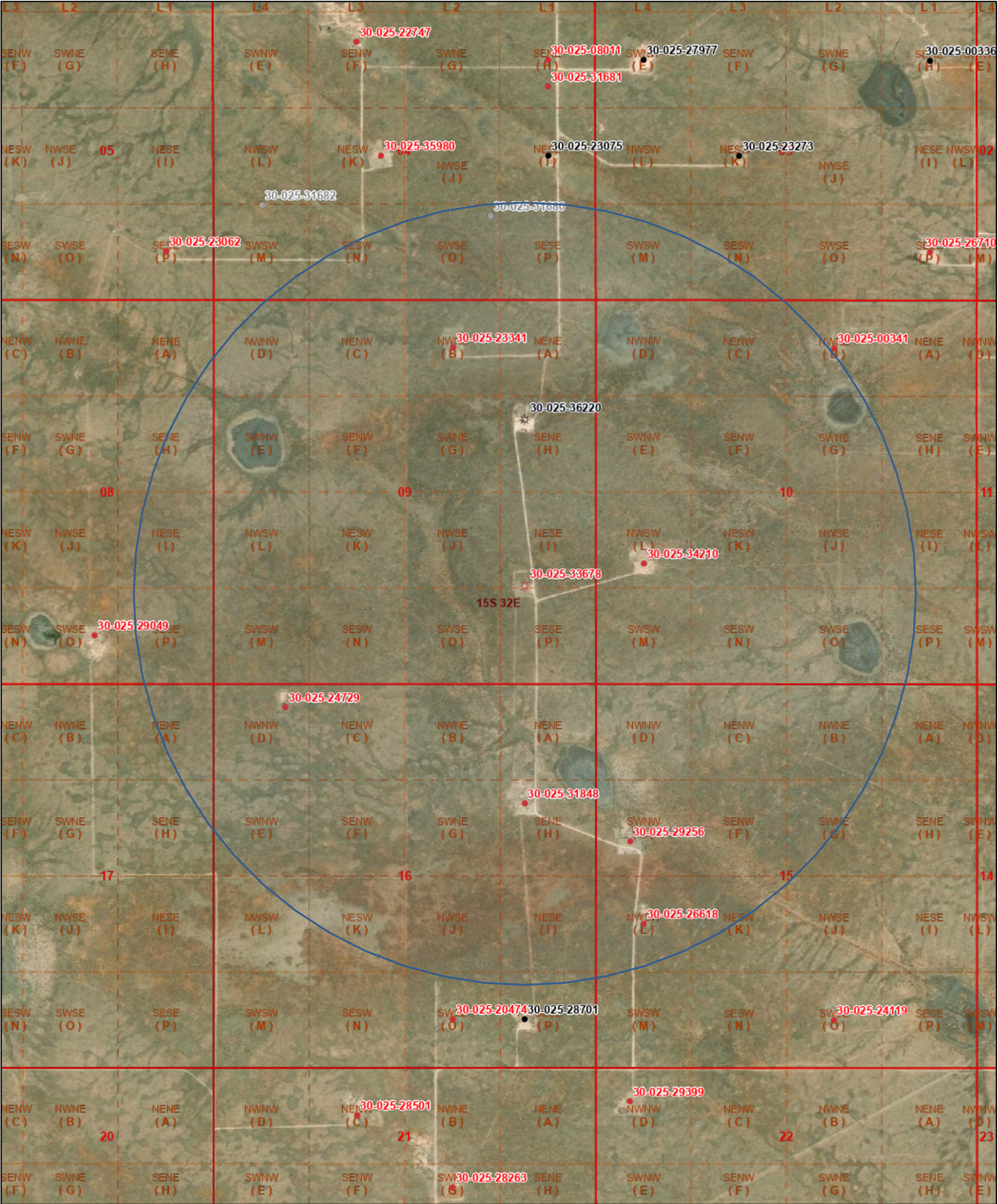
 PLSS Townships

1:18,056



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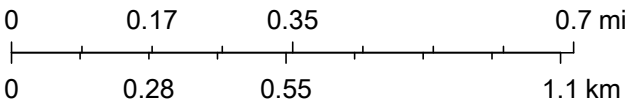
Location Map



2/2/2023, 2:48:26 PM

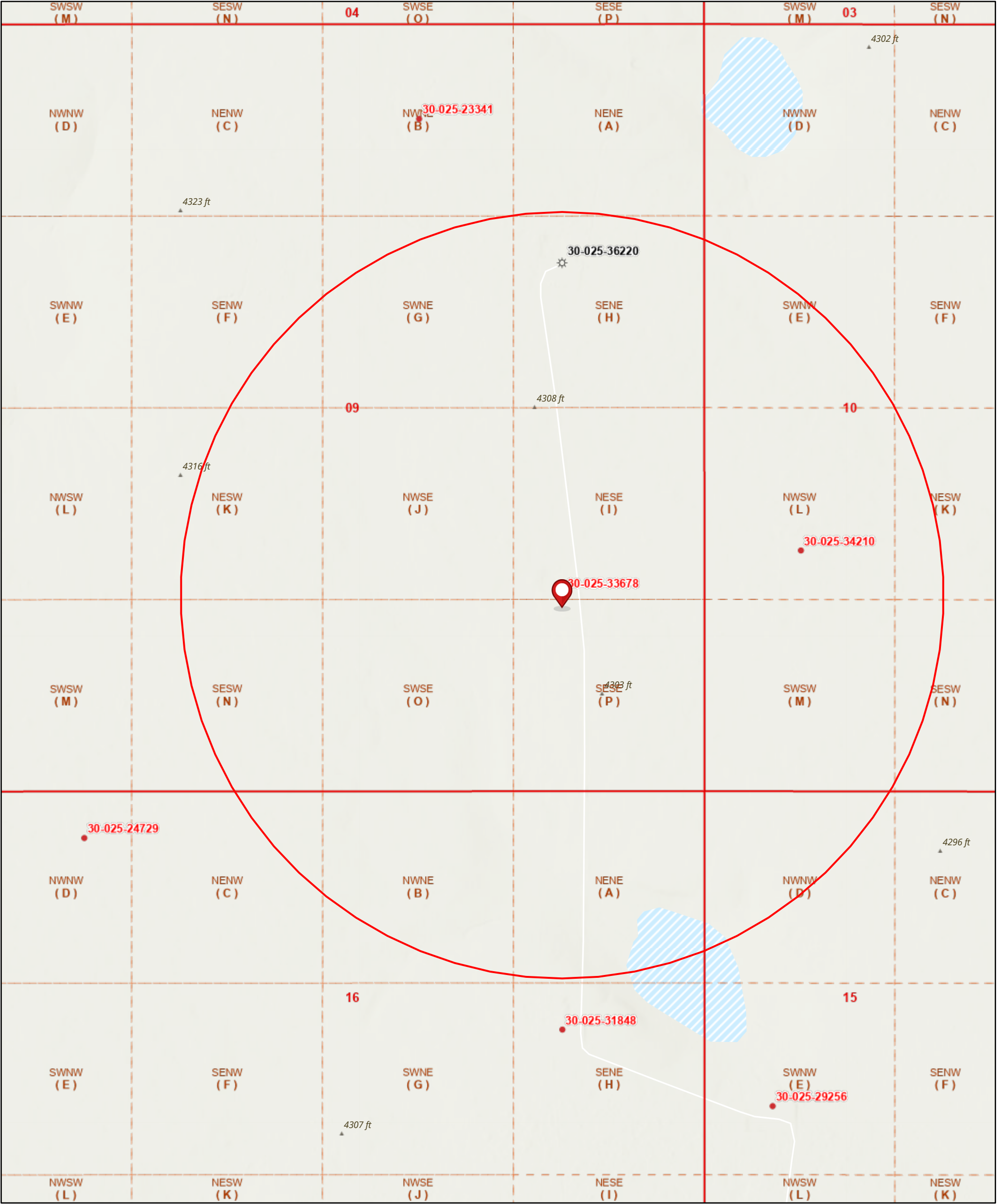
- Override 1
- Oil, Active
- Oil, Cancelled
- Oil, Plugged
- Gas, Active
- Gas, Plugged
- PLSS Second Division
- PLSS First Division
- PLSS Townships

1:18,056



Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department., Esri, HERE, Garmin, iPC, Maxar, BLM

OCD Well Locations

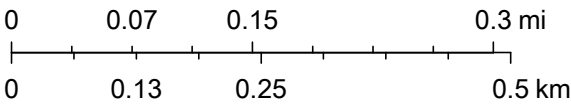


1/30/2023, 10:34:04 AM

Wells - Large Scale

- Gas, Active
- Gas, Plugged
- Oil, Plugged
- PLSS Second Division
- PLSS First Division

1:9,028



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		North Feather State Unit #2									
		Operator: HL Brown Operating LLC Location: Sec. 9 T15S R32E 1340 FSL 990 FEL Objective: Feather; Morrow North GL Elevation: 4301'									
Depth	Hole Size & Cement									Casing Detail	
4500'	17 1/2" hole									13 3/8", 48# 500sx, Circ Set in 1997 Plug @ 585' -Surface	
4050'	11" hole									8 5/8", #32 1400sx, Circ Set in 1997 5 1/2", #20 & #17 1950sx, Circ Set in 1997	
12,500'	7 7/8" hole									Plug @ 1564' w/ 25sx cmt	
										Plug @ 4109' w/ 25sx cmt	
										Plug @ 6701' w/ 25sx cmt	
										CIBP @ 9695'	
										Perf- 9769-9844' Perf- 12,288-12,294' Perf- 12,362-12,372' Perf- 12,384-12,392'	
										TD- 12,500'	

[illegible]



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 #:	4212360
Area:	Artesia	Analysis ID #:	184904
Lease:	McDonald	BOPD:	
Location:	Fresh Water Well 1	BWPD:	
Sample Point:	Wellhead		

		Anions	mg/l	meq/l	Cations	mg/l	meq/l
Sampling date:	4/5/2023	Chloride:	237.8	6.71	Sodium:	139.7	6.08
Analysis date:	4/20/2023	Bicarbonate:	217.2	3.56	Magnesium:	13.1	1.08
Analysis:	Catalyst	Carbonate:		0.00	Calcium:	49.4	2.47
TDS (mg/l or g/m3):	687	Sulfate:	0.0	0.00	Potassium:	26.0	0.66
Density (g/cm3):	1.003	Borate:	2.6	0.02	Strontium:	0.0	0.00
Hydrogen Sulfide:	0	Phosphorus:		0.00	Barium:	1.1	0.02
Carbon Dioxide:	0				Iron:	0.0	0.00
Comments:		pH at time of sampling:		7.08	Manganese:	0.0	0.00
		pH at time of analysis:					
		pH used in Calculation:		7.08	Conductivity (micro-ohms/cm):		1696
		Temperature @ lab conditions(F):		75	Resistivity (ohm meter):		5.8962

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl											
Temp	Calcite CaCO ₃		Gypsum CaSO ₄ *2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄		
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
80	-0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100	-0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120	-0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
140	0.08	1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
160	0.24	5.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
180	0.42	10.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
200	0.60	15.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
220	0.79	19.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	



New Mexico Office of the State Engineer

Water Right Summary


[get image list](#)

WR File Number: L 10748 **Subbasin:** L **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Owner: YATES PETROLEUM
Contact: CORKY GLENN

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2		To				
	513603	72121	1997-12-10	EXP	EXP	L 10748 (T) EXPIRED	T			3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
L 10303		Shallow	1	4	2	16 15S 32E	619797	3654188*	1650' FNL, 1190' FEL

An () after northing value indicates 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.

2/2/23 9:41 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary


[get image list](#)

WR File Number: L 06485 **Subbasin:** L **Cross Reference:** -
Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 3 **Cause/Case:** -
Owner: CACTUS DRILLING CORP
Contact: BETTY STRAUER

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2		To				
get images	509803	72121	1969-12-05	PMT	APR	L 06485	T			3	
get images	509800	72121	1969-03-19	PMT	LOG	L 06485 (T EXPIRED)	T			3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64Q16Q4Sec	Tws	Rng	X	Y	Other Location Desc
L 06485		Shallow	4	4	4	05 15S 32E	618358	3656383*	

An () after northing value indicates 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.

2/2/23 9:43 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



[get image list](#)

WR File Number: L 09614 **Subbasin:** L **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Owner: WILLBROS DRILLING
Contact: CORKY GLENN

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2		To				
get images	515522	72121	2006-08-04	EXP	EXP	L 09614 (T2) EXPIRED	T			3	
get images	515519	72121	1985-01-28	PMT	LOG	L 09614 (T) EXPIRED	T			3	

Current Points of Diversion

POD Number	Well Tag	Source	Q (NAD83 UTM in meters)							Other Location Desc	
			64	Q16	Q4	Sec	Tws	Rng	X		Y
L 09614		Shallow	3	3	4	08	15S	32E	617875	3654869	 E/2 - 1850'FEL, 660'FSL

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.

2/2/23 9:43 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary




[get image list](#)

WR File Number: L 12495 **Subbasin:** L **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
User: NOVA MUD
Contact: CORKY GLENN

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/		Acres	Diversion	Consumptive
				1	2		To				
get images	493325	72121	2009-12-03	PMT	APR	L 12495	T			3	
get images	445826	72121	2009-12-01	PMT	APR	L 12495	T			3	

Current Points of Diversion

POD Number	Well Tag	Source	Q					(NAD83 UTM in meters)		Other Location Desc
			64	Q16	Q4	Sec	Tws	Rng	X	
L 08187		Shallow	2	3	23	12S	32E	622362	3681552	
L 08265		Shallow	4	4	03	15S	32E	621405	3656521	

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.

2/2/23 9:45 AM

WATER RIGHT SUMMARY



New Mexico Office of the State Engineer

Water Right Summary



WR File Number: L 05147 **Subbasin:** L **Cross Reference:** -
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres: **Subfile:** - **Header:** -
Total Diversion: 0 **Cause/Case:** -
Owner: CARPER DRILLING COMPANY INC

Documents on File

	Trn #	Doc	File/Act	Status		Transaction Desc.	From/ To	Acres	Diversion	Consumptive
				1	2					
	503678	72121	1963-05-16	PMT	LOG	L 05147 (T EXPRIED)	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q	64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
L 05147		Shallow		3	4	16	15S	32E		619505	3653279*	

An () after northing value indicates 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.

2/2/23 9:46 AM

WATER RIGHT SUMMARY

OSE POD Locations Map



3/6/2023, 2:21:59 PM

Override 1

GIS WATERS PODs

Active

Pending

Capped

New Mexico State Trust Lands

Both Estates

NHD Flowlines

Artificial Path

Stream River

SiteBoundaries

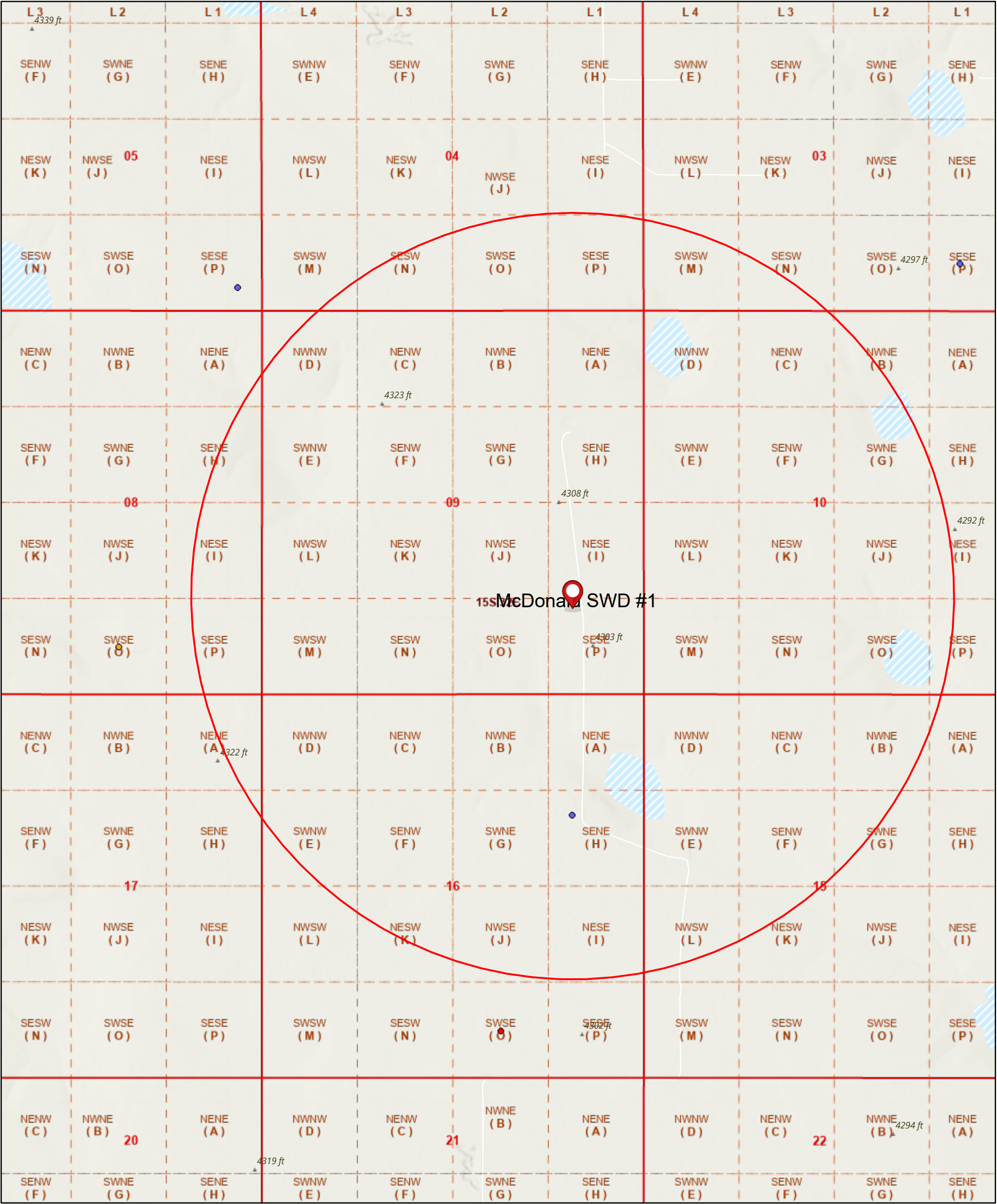
1:18,056

00.170.350.7 mi

00.30.61.2 km

Esri, HERE, iPC, U.S. Department of Energy Office of Legacy Management, Esri, HERE, Garmin, iPC, Maxar

OCD Well Locations



1/31/2023, 9:08:18 AM

- OSE PODs
- Active

●

Inactive

●

Pending

●

Changed Location of Well

●

Capped

●

Plugged

●

Unknown

PLSS Second Division

PLSS First Division

PLSS Townships
-
- 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, OSE GIS, Esri,
- Released to Imaging: 5/15/2023 9:39:38 AM

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

POD Location Map



2/2/2023, 9:39:42 AM

- Override 1

OSE PODs

Active

Inactive

Pending
- Changed Location of Well

Capped

Plugged

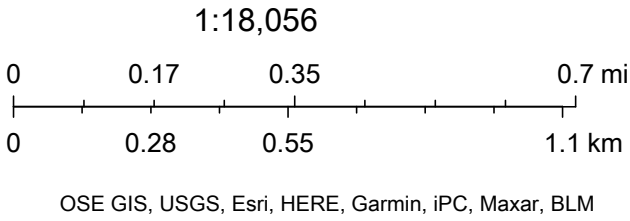
Unknown

USGS Historical GW Wells
- USGS Active Monitoring GW Wells

PLSS Second Division

PLSS First Division

PLSS Townships





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		

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

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
°F	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:	Chilliwick		
Location:	Fed Com 1H		0
Sample Point:	Wellhead		

		mg/l		meq/l	mg/l		meq/l
Sampling Date:	11/28/2018	Anions			Cations		
Analysis Date:	12/3/2018	Chloride:		2941.72	Sodium:		2764.27
Analyst:	Catalyst	Bicarbonate:		2.16	Magnesium:		84.49
TDS (mg/l or g/m3):	175963.5	Carbonate:			Calcium:		143.81
Density (g/cm3):	1.118	Sulfate:		66.62	Potassium:		18.08
		Borate*:		0.68	Strontium:		1.45
		Phosphate*			Barium:		0.01
Hydrogen Sulfide:	4	*Calculated based on measured elemental boron and phosphorus.			Iron:		0.
Carbon Dioxide:	108				Manganese:		0.01
Comments:				pH at time of sampling:			
				pH at time of analysis:			
				pH used in Calculation:			
				Temperature @ lab conditions (F):			
					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 ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
°F	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



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 #:	81533
Area:	Artesia	Analysis ID #:	80615
Lease:	Saskatoon		
Location:	Fed Com 1H		0
Sample Point:	Wellhead		

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

Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
°F	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



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 #:	118208
Area:	Artesia	Analysis ID #:	107555
Lease:	Montreal		
Location:	1H		0
Sample Point:	Wellhead		

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

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

Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
°F										
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



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 #:	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
		Carbonate:			Calcium:	2566.0	128.04
TDS (mg/l or g/m3):	144232	Sulfate:	3300.0	68.71	Potassium:	564.2	14.43
Density (g/cm3):	1.097	Borate*:	173.9	1.1	Strontium:	53.5	1.22
		Phosphate*			Barium:	1.5	0.02
Hydrogen Sulfide:	14	*Calculated based on measured elemental boron and phosphorus.			Iron:	1.5	0.05
Carbon Dioxide:	162.8				Manganese:	0.460	0.02
Comments:		pH at time of sampling:			6.41		
		pH at time of analysis:					
		pH used in Calculation:			6.41		
		Temperature @ lab conditions (F):			75		
					Conductivity (micro-mhos/cm):		194536
					Resistivity (ohm meter):		.0514

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

Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
	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



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 #:	55880
Area:	Artesia	Analysis ID #:	53988
Lease:	White Rock		
Location:	Federal #1H		0
Sample Point:	Wellhead		

Sampling Date: 12/21/2017		Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date: 1/6/2018		Chloride:	93901.4	2648.62	Sodium:	58100.0	2527.21
Analyst: Catalyst		Bicarbonate:	241.6	3.96	Magnesium:	969.6	79.76
TDS (mg/l or g/m3): 161820.5		Carbonate:			Calcium:	2737.0	136.58
Density (g/cm3): 1.107		Sulfate:	5000.0	104.1	Potassium:	571.6	14.62
Hydrogen Sulfide: 11		Borate*:	229.5	1.45	Strontium:	66.0	1.51
Carbon Dioxide: 242		Phosphate*			Barium:	0.0	0.
Comments:		*Calculated based on measured elemental boron and phosphorus.			Iron:	3.8	0.14
		pH at time of sampling: 6.9			Manganese:	0.000	0.
		pH at time of analysis:			Conductivity (micro-ohms/cm): 176042		
		pH used in Calculation: 6.9			Resistivity (ohm meter): .0568		
		Temperature @ lab conditions (F): 75					

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

Temp	Calcite CaCO ₃		Gypsum CaSO ₄ ·2H ₂ O		Anhydrite CaSO ₄		Celestite SrSO ₄		Barite BaSO ₄	
	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

AE Order Number Banner

Application Number: pMSG2313533970

SWD-2531

MACK ENERGY CORP [13837]

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
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ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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



ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: _____ 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

FOR OCD ONLY

- ☐ Notice Complete
☐ Application Content Complete

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

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

 Print or Type Name

 Date

 Phone Number

 Signature

 e-mail Address

Deana Weaver

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance ☒ Disposal _____ Storage
Application qualifies for administrative approval? ☒ Yes _____ No
- II. OPERATOR: 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 ☒ 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 Technician II
SIGNATURE: Deana Weaver DATE: 4/24/2023
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.

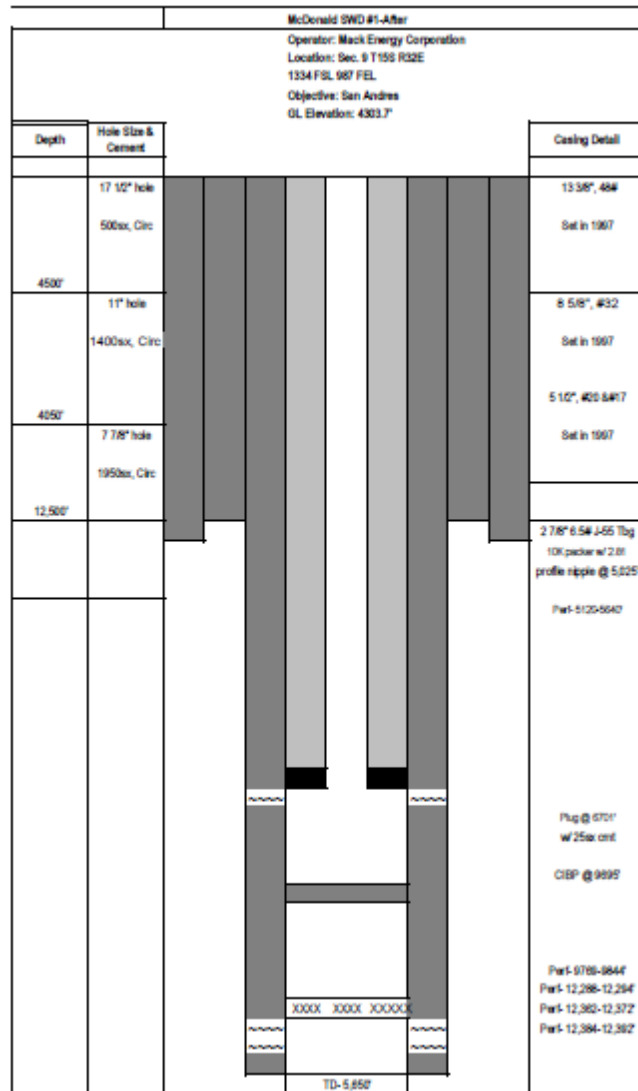
NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Mack Energy CorporationWELL NAME & NUMBER: McDonald SWD #1

WELL LOCATION: 1334 FSL 987 FEL I 9 15S 32E
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8"Cemented with: 500sx sx. *or* _____ ft³Top of Cement: 0 Method Determined: Circ
In place 1997Intermediate CasingHole Size: 11" Casing Size: 8 5/8"Cemented with: 1400 sx. *or* _____ ft³Top of Cement: 0 Method Determined: Circ
In place 1997Production CasingHole Size: 7 7/8" Casing Size: 5 1/2"Cemented with: 1950 sx. *or* _____ ft³Top of Cement: 0 Method Determined: Circ
In place 1997Total Depth: 5650'Injection Interval5120' feet to 5640' perforated

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEETTubing Size: 2 7/8" Lining Material: IPCType of Packer: Arrow Set 10K packer w/ 2.81 profile nipplePacker Setting Depth: 5,025'

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

Additional Data

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

If no, for what purpose was the well originally drilled? Gas Well

2. Name of the Injection Formation: San Andres

3. Name of Field or Pool (if applicable): SWD; San Andres 96121

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. Perfs 9769-9844', 12,288-12,294'

12,362-12,372', 12,384-12,392'; CIBP @ 9695', 25sx Cmt Plug @

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Overlying- Grayburg @ 3715' Underlying - Glorieta @ 5650'

Tops- Yates @ 2483', Seven Rivers @ 2750', Queen @ 3298', Grayburg @ 3715',

San Andres @ 4048', Glorieta @ 5650'

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;
0-1,024 psi
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;
See Attached

VIII. GEOLOGICAL DATA

1. Lithologic Detail; Dolomite
2. Geological Name; **San Andres**
3. Thickness; 1602'
4. Depth; **4048'-5650'** Disposal Interval= **5120-5640'**

IX. PROPOSED STIMULATION PROGRAM

1. 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

See attached
Additional Information

Waters Injected:

San Andres


XII. AFFIRMATIVE STATEMENT

RE: McDonald 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: 2/1/23



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 Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 210243

CONDITIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 210243
	Action Type: [C-108] Fluid Injection Well (C-108)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	This is an acknowledgment of that OCD has received the C-108 application.	5/15/2023