

# Initial Application Part I

Received: 5/31/2022

*This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete*

RECEIVED: 05/31/2022	REVIEWER:	TYPE: SWD	APP NO: pJZT2215952045
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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

<b>Applicant:</b> Mack Energy Corporation	<b>OGRID Number:</b> 013837
<b>Well Name:</b> Labrador SWD #1	<b>API:</b> 30-005-00456
<b>Pool:</b> SWD; Devonian	<b>Pool Code:</b> 96101

**SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW**

1) **TYPE OF APPLICATION:** Check those which apply for [A] SWD-2488

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.**

Deana Weaver  
\_\_\_\_\_  
Print or Type Name

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

5.31.2022  
\_\_\_\_\_  
Date

575-748-1288  
\_\_\_\_\_  
Phone Number

dweaver@mec.com  
\_\_\_\_\_  
e-mail Address

**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: 5.31.22  
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: \_\_\_\_\_

### 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.

**INJECTION WELL DATA SHEET**

OPERATOR: Mack Energy Corporation

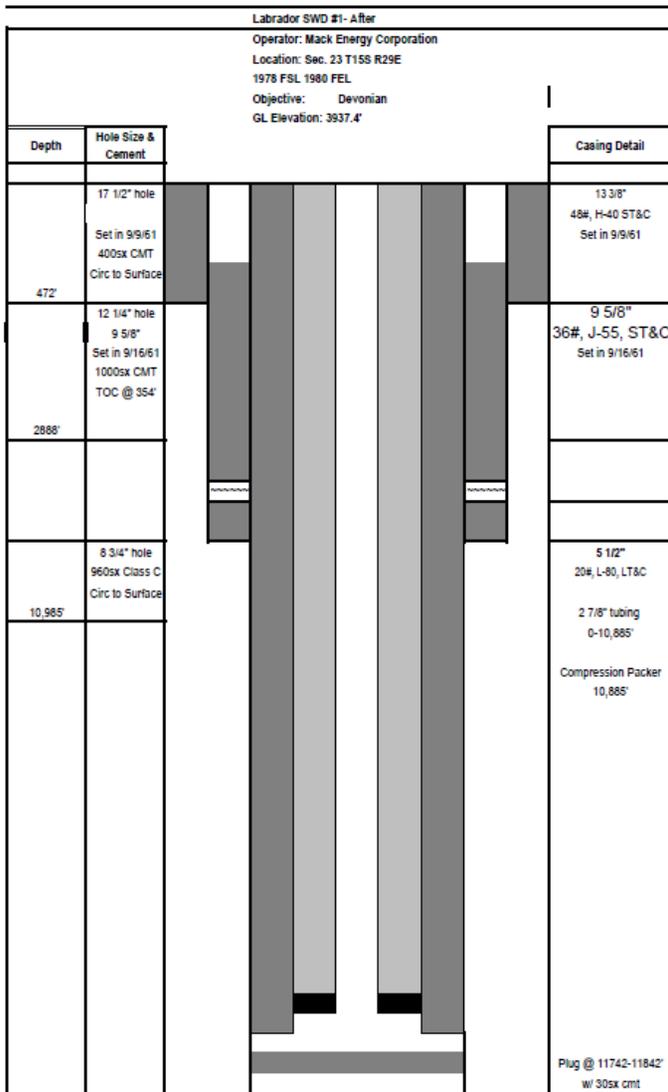
WELL NAME & NUMBER: Labrador SWD #1

WELL LOCATION: 1978 FSL 1980 FEL                      J                      23                      15S                      29E  
 FOOTAGE LOCATION                      UNIT LETTER                      SECTION                      TOWNSHIP                      RANGE

**WELLBORE SCHEMATIC**

**WELL CONSTRUCTION DATA**

Surface Casing



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

Cemented with: 400 sx.                      *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 0                      Method Determined: Circ  
 (in place 1961)

Intermediate Casing

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

Cemented with: 1000 sx.                      *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 354'                      Method Determined: (in place 1961)

Production Casing

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

Cemented with: 960 sx.                      *or* \_\_\_\_\_ ft<sup>3</sup>

Top of Cement: 0                      Method Determined: circ

Total Depth: 10,985'

Injection Interval

10,985' feet to 11,525' Open Hole

(Perforated or Open Hole; indicate which)

**INJECTION WELL DATA SHEET**

Tubing Size: 2 7/8" Lining Material: IPC

Type of Packer: Compression Packer

Packer Setting Depth: 10,885'

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

Additional Data

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

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

2. Name of the Injection Formation: Devonian

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

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. Perf's @ 1919-1936'

CIBP @ 1972 w/2sx  
Plugs @ Surface(10sx), 400-500'(30sx), 1893-1993', 2838-2938'(35sx), 3995-4095'(30sx), 6105-6205'(30sx), 7445-7545'(30sx), 8400-8600'(30sx), 9639-9739'(30sx), 10150-10250'(30sx), 10935-11035'(30sx), 11742-11842'(30sx)

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: L. Miss 10,435', Devonian 10,985', Montoya 11,525'

Simpson 11,725',

Labrador SWD #1  
1980 FSL 1980 FEL  
Sec. 23 T15S R29E  
Formation Tops

Quaternary	Surface
Top Salt	462'
Base Salt	1023'
Yates	1187'
San Andres	2605'
Glorieta	4060'
Tubb	5382'
Abo	6155'
Wolfcamp	7495'
Atoka	9689'
U. Miss	10,200'
L. Miss	10,435'
Devonian	10,985'
Montoya	11,525'
Simpson	11,725'
Ellenburger	11,992'

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
	LABRADOR SWD		1
<sup>7</sup> OGRID No.	<sup>8</sup> Operator Name		<sup>9</sup> Elevation
13837	MACK ENERGY CORPORATION		3937.4

<sup>10</sup> Surface Location

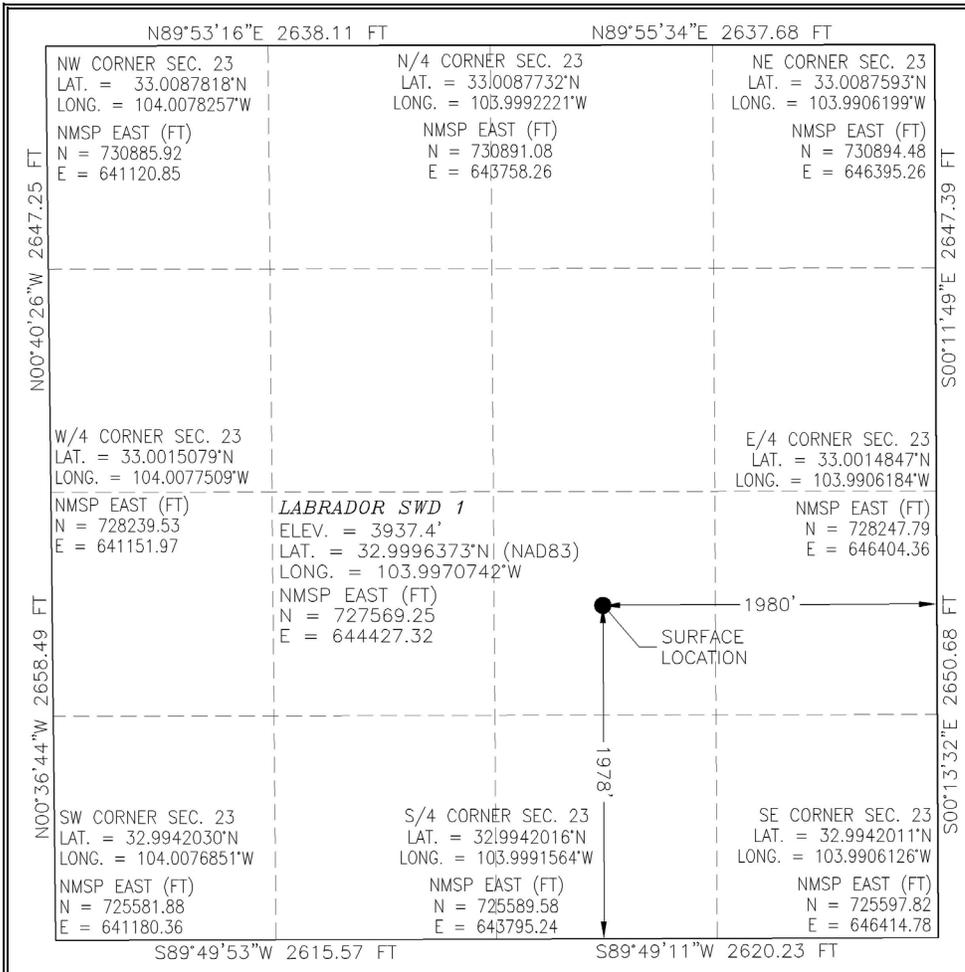
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	23	15 S	29 E		1978	SOUTH	1980	EAST	CHAVES

<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* 4/4/2022  
Signature Date

Deana Weaver  
Printed Name

dweaver@mec.com  
E-mail Address

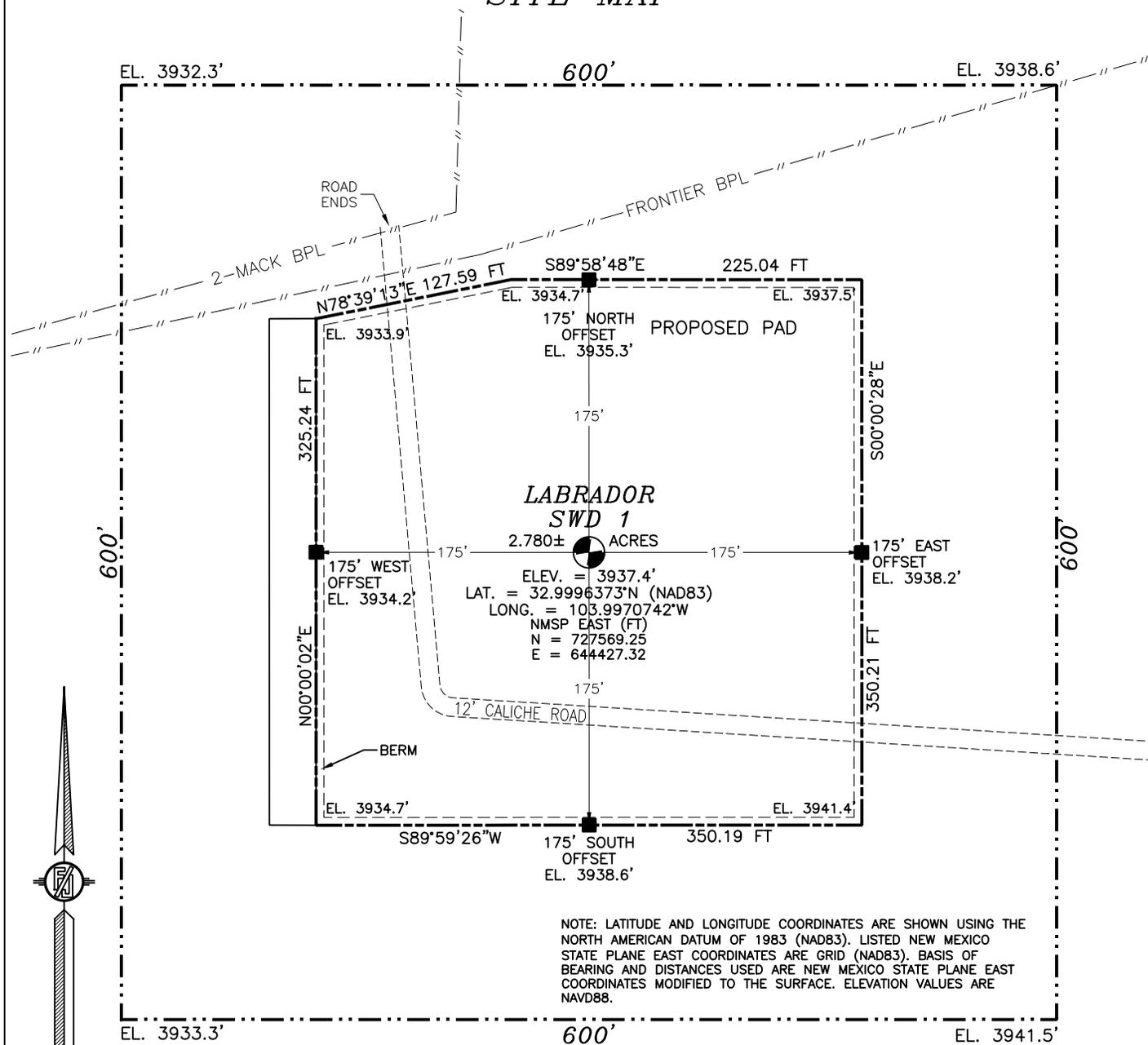
**<sup>18</sup> SURVEYOR CERTIFICATION**  
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

MARCH 30, 2022  
Date of Survey

*[Signature]*  
Signature and Seal of Professional Surveyor:  
Certificate Number: 12797

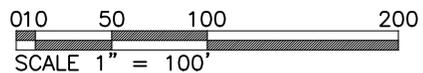
*[Seal: ALMON F. JARAMILLO, NEW MEXICO SURVEYOR, 12797, PROFESSIONAL SURVEYOR, NO. 9361]*

SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO  
 SITE MAP



**LABRADOR SWD 1**  
 2.780± ACRES  
 ELEV. = 3937.4'  
 LAT. = 32.9996373°N (NAD83)  
 LONG. = 103.9970742°W  
 NMSP EAST (FT)  
 N = 727569.25  
 E = 644427.32

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. ELEVATION VALUES ARE NAVD88.



**DIRECTIONS TO LOCATION**  
 FROM THE INTERSECTION OF ST. HWY. 82 & CO. RD. 217 (HAGERMAN CUTOFF), GO NORTH ON CO. RD. 217 APPROX. 12 MILES, TURN LEFT (WEST) ON 12\"/>

**MACK ENERGY CORPORATION**  
**LABRADOR SWD 1**  
 LOCATED 1978 FT. FROM THE SOUTH LINE  
 AND 1980 FT. FROM THE EAST LINE OF  
 SECTION 23, TOWNSHIP 15 SOUTH,  
 RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

MARCH 30, 2022

I, FILIMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED THE SURVEY AND AM AWARE OF MY KNOWLEDGE AND BELIEVE IT TO BE IN ACCORDANCE WITH THE MINIMUM STANDARDS FOR SURVEYING IN THE STATE OF NEW MEXICO.

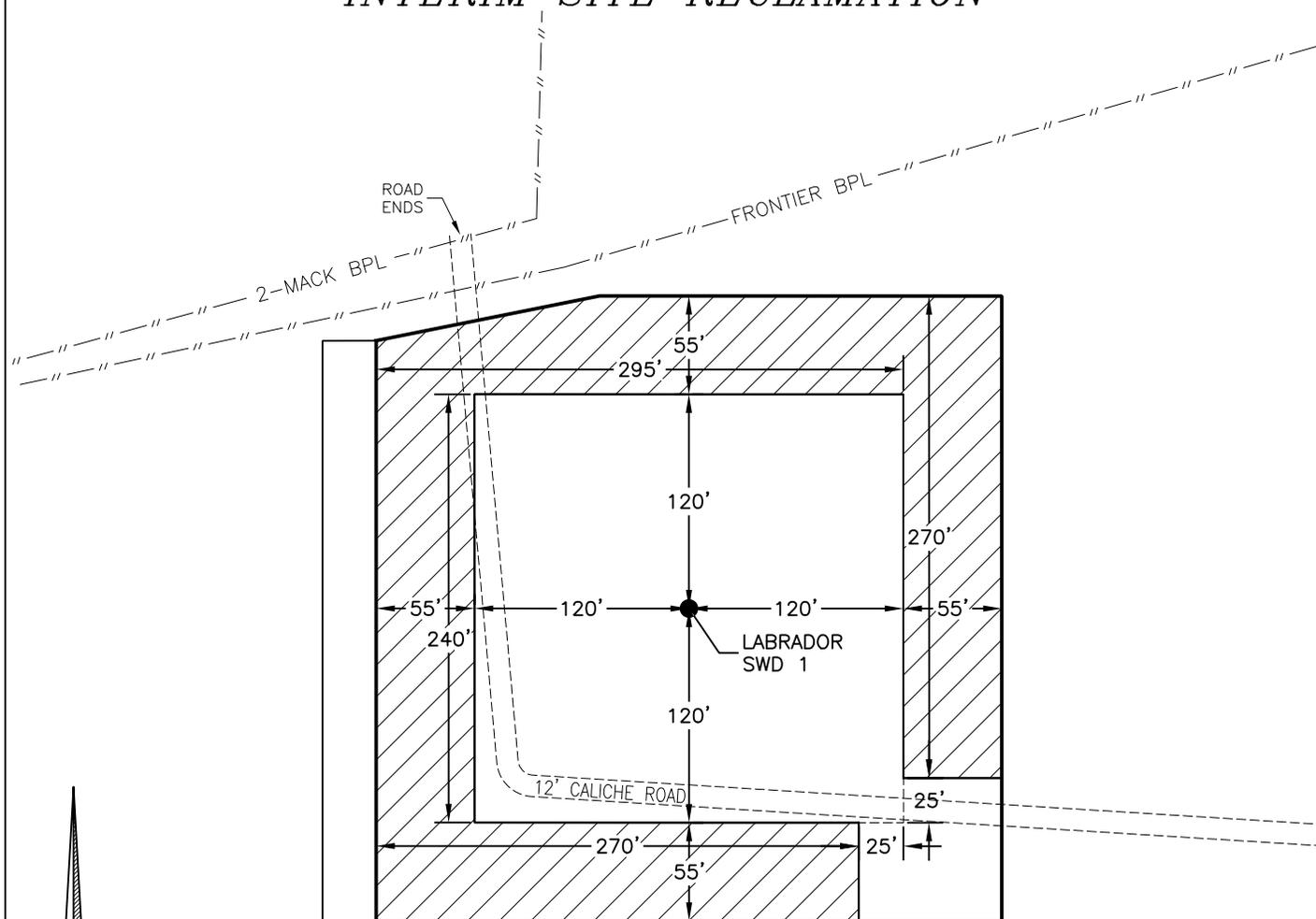
FILIMON F. JARAMILLO, REGISTERED PROFESSIONAL SURVEYOR  
**MADRON SURVEYING, INC.**

301 SOUTH CANAL  
 (575) 234-3341

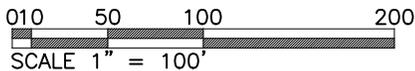
CARLSBAD, NEW MEXICO

SURVEY NO. 9361

SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO  
 INTERIM SITE RECLAMATION



 DENOTES RECLAMATION AREA  
 1.325± ACRES RECLAMATION AREA



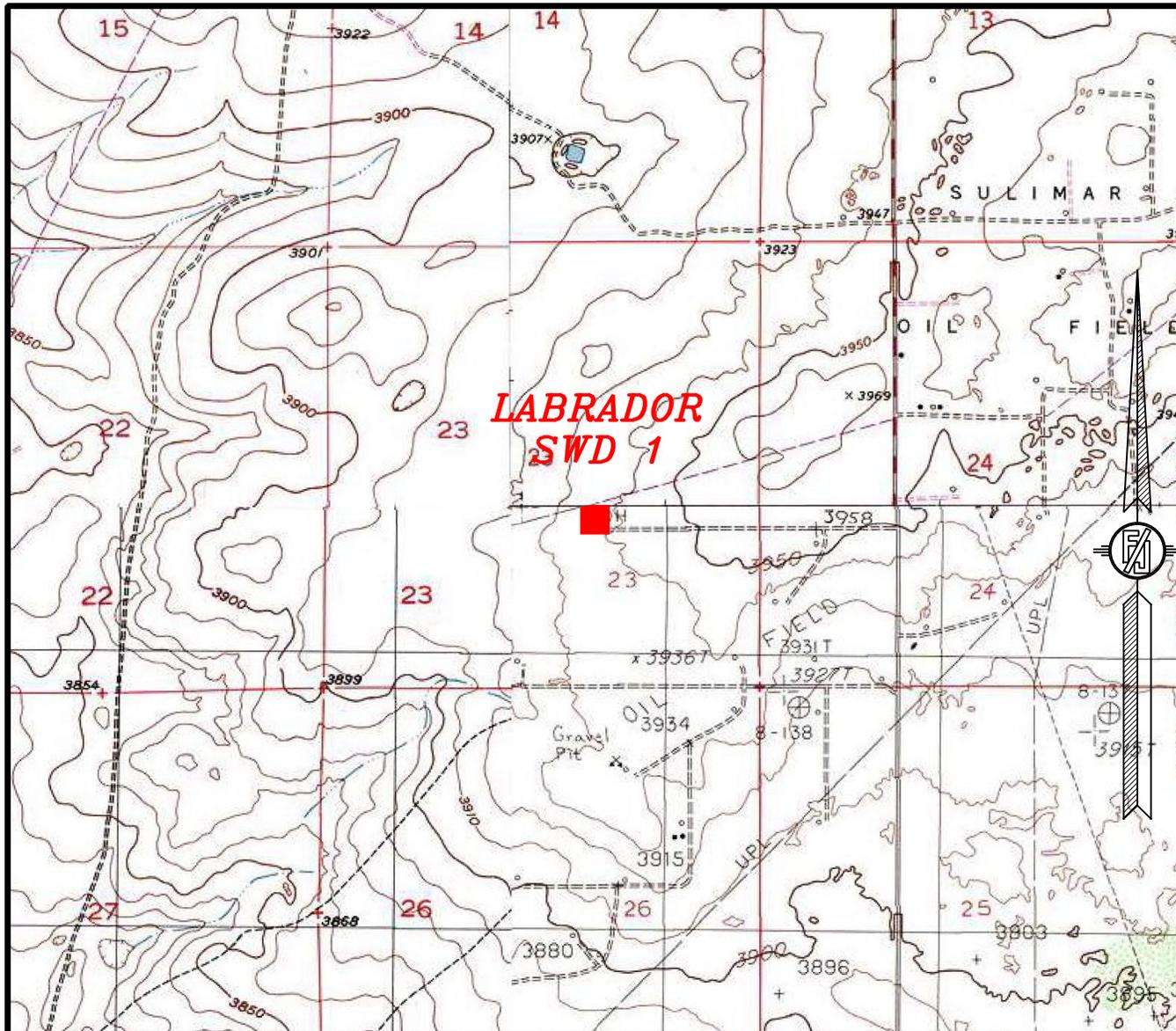
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 AND 1980 FT. FROM THE EAST LINE OF  
 SECTION 23, TOWNSHIP 15 SOUTH,  
 RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

MARCH 30, 2022

SURVEY NO. 9361

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO  
 LOCATION VERIFICATION MAP



USGS QUAD MAP:  
 HENSHAW TANK  
 CEDAR POINT  
 KING CAMP  
 BASIN WELL

NOT TO SCALE

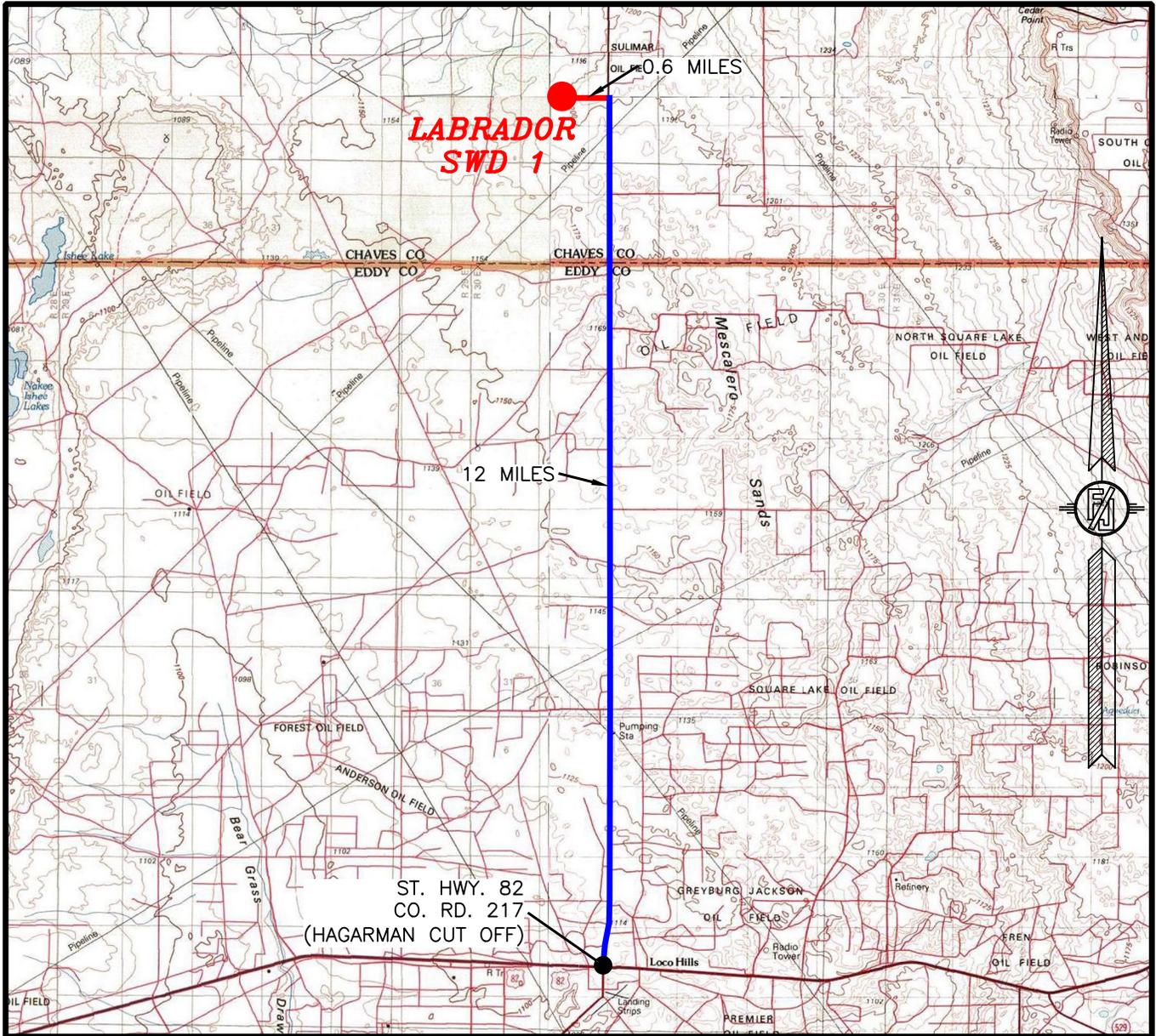
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 RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

MARCH 30, 2022

SURVEY NO. 9361

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO  
 VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

**DIRECTIONS TO LOCATION**

FROM THE INTERSECTION OF ST. HWY. 82 & CO. RD. 217 (HAGERMAN CUTOFF), GO NORTH ON CO. RD. 217 APPROX. 12 MILES, TURN LEFT (WEST) ON 12' CALICHE LEASE ROAD AND GO APPROX 0.6 OF A MILE TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

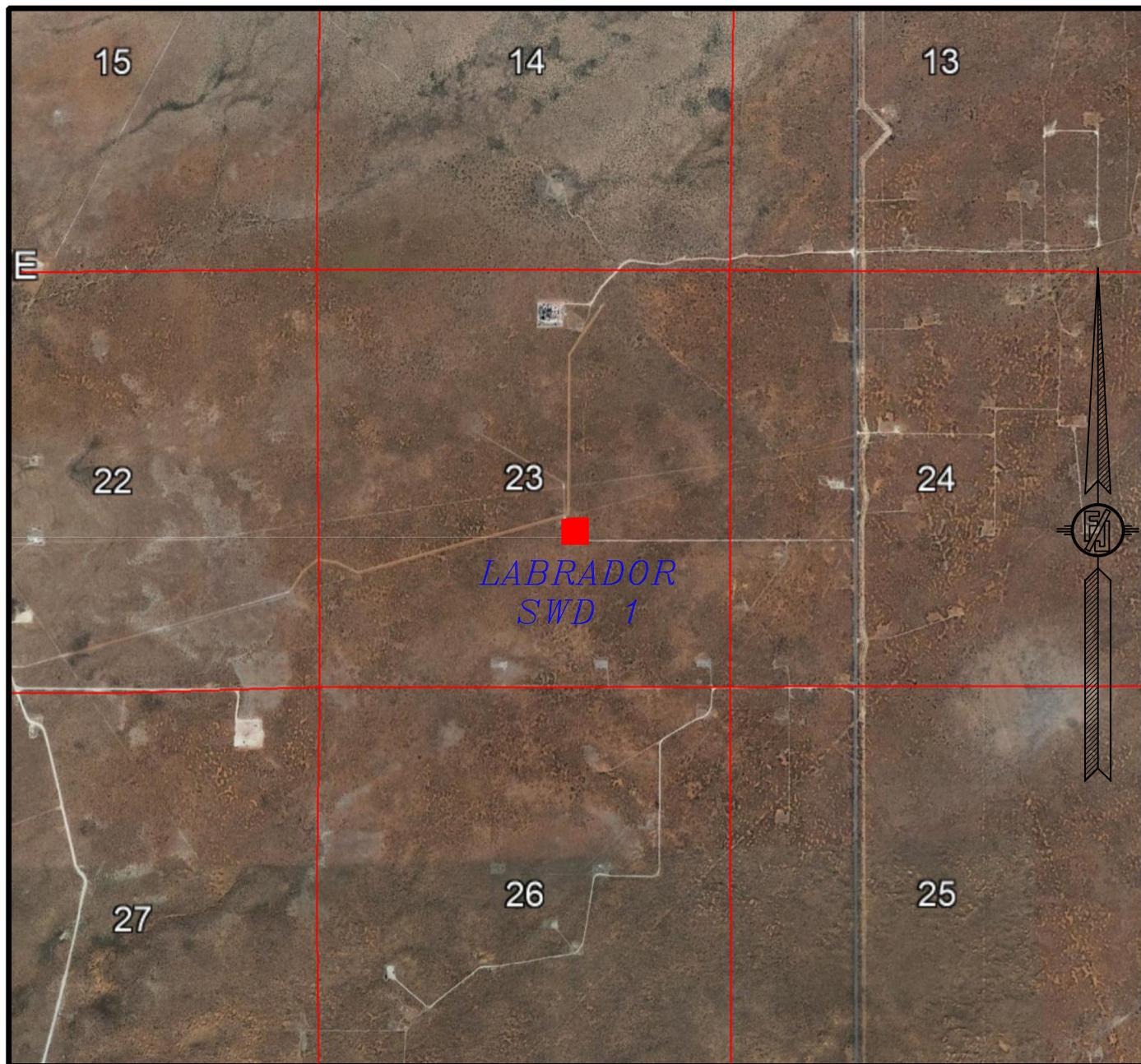
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 RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

MARCH 30, 2022

MADRON SURVEYING, INC. 301 SOUTH CANAL  
 (575) 234-3341

SURVEY NO. 9361  
 CARLSBAD, NEW MEXICO

SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
DEC. 2019

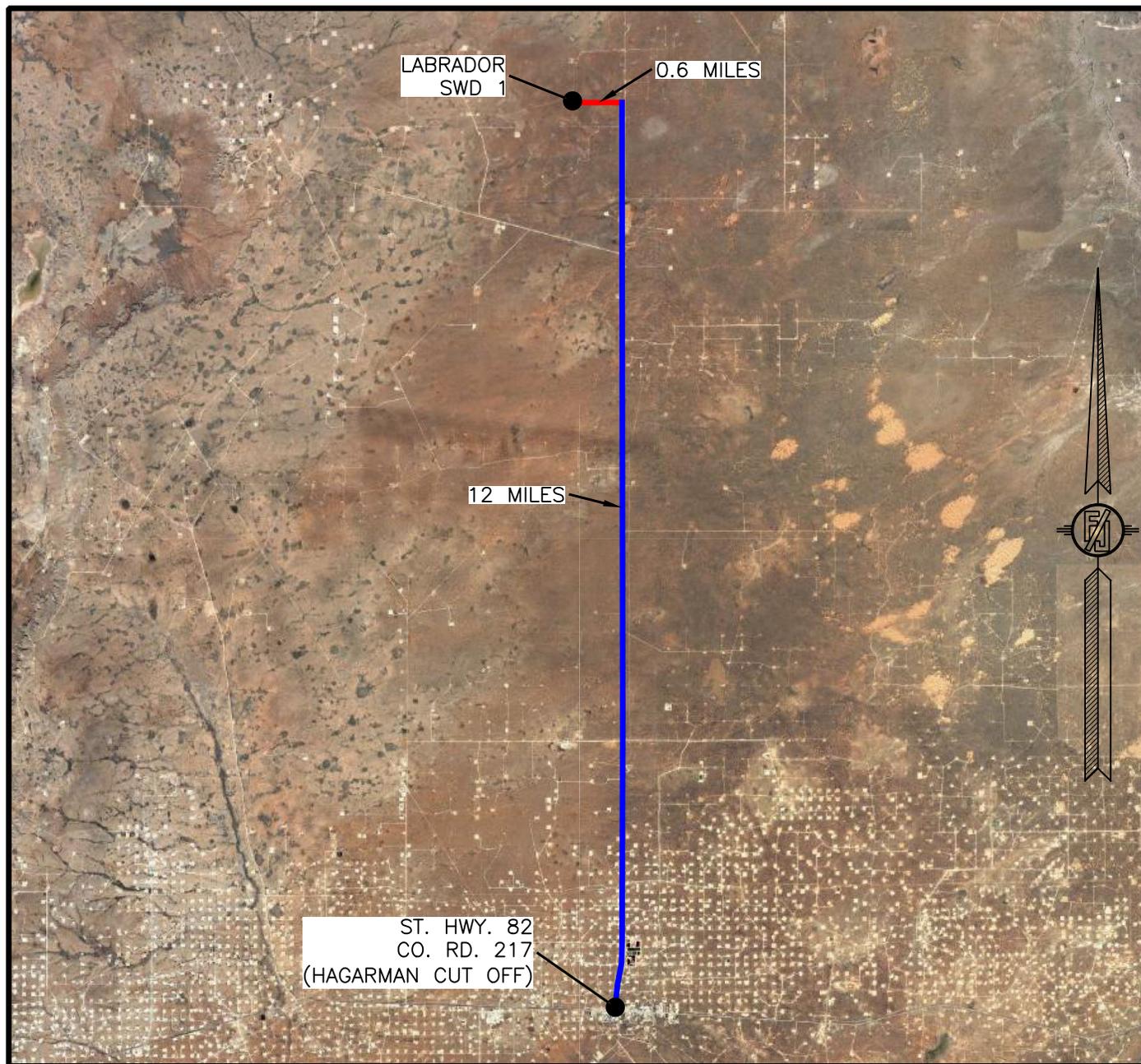
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**LABRADOR SWD 1**  
LOCATED 1978 FT. FROM THE SOUTH LINE  
AND 1980 FT. FROM THE EAST LINE OF  
SECTION 23, TOWNSHIP 15 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

MARCH 30, 2022

SURVEY NO. 9361

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
AERIAL ACCESS ROUTE MAP



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
DEC. 2019

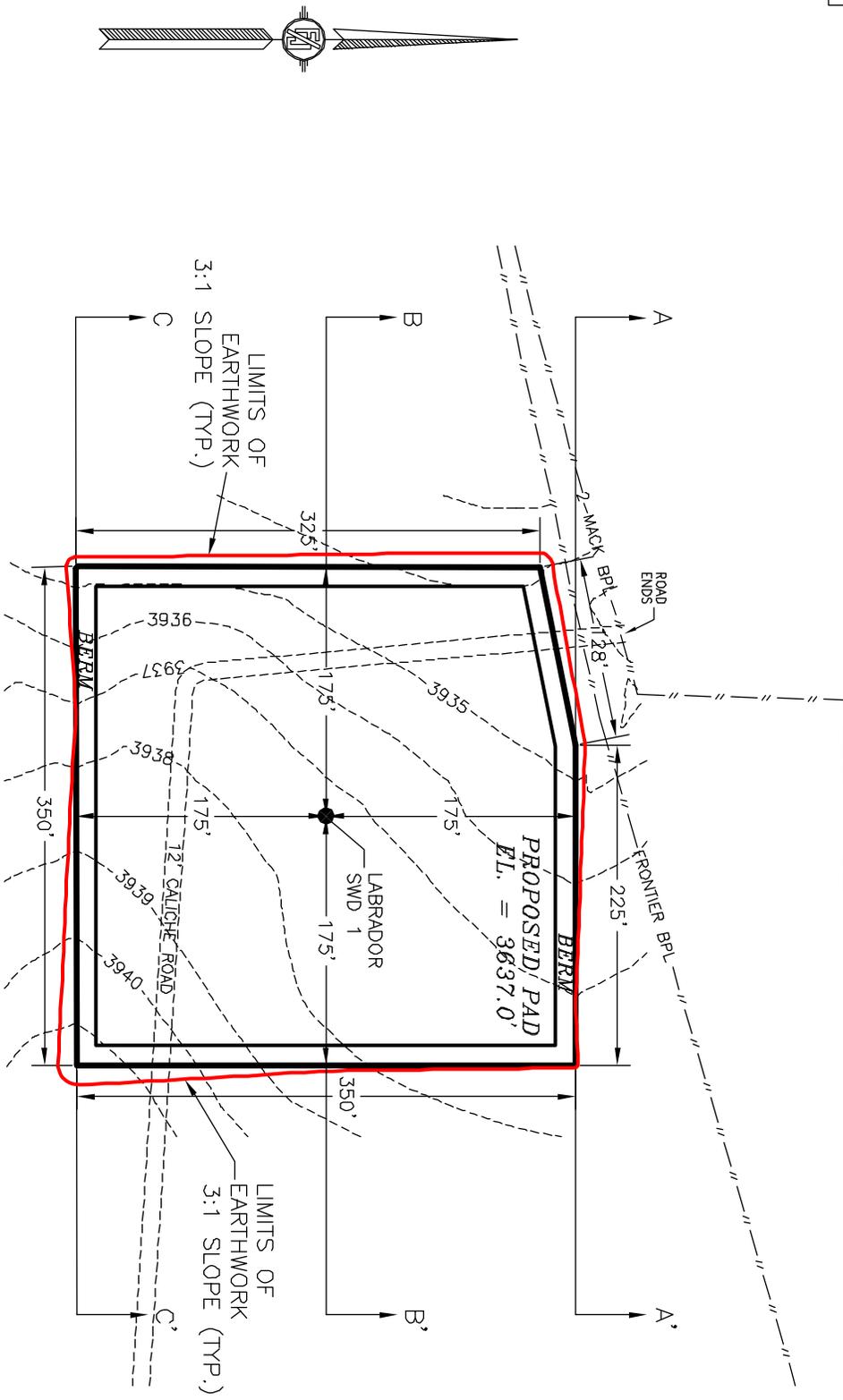
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SECTION 23, TOWNSHIP 15 SOUTH,  
RANGE 29 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO

MARCH 30, 2022

SURVEY NO. 9361

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
(575) 234-3341

PLAN VIEW

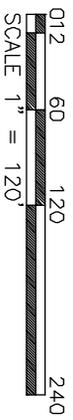


I, FILMON F. JARAMA, NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFICATE NO. 12299, AM RESPONSIBLE FOR THIS SURVEY. THE SURVEY IS MADE AND REPORT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THIS SURVEY AND PLAN MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



MACK ENERGY CORPORATION  
 PAD GRADING AND CROSS SECTIONS  
 FOR LABRADOR SWD 1  
 SECTION 23, TOWNSHIP 16 SOUTH,  
 RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO

MARCH 30, 2021  
 301 SOUTH CANAL CARLSBAD, NEW MEXICO



CUT	FILL	NET
2667 CU. YD	3706 CU. YD	1039 CU. YD (FILL)

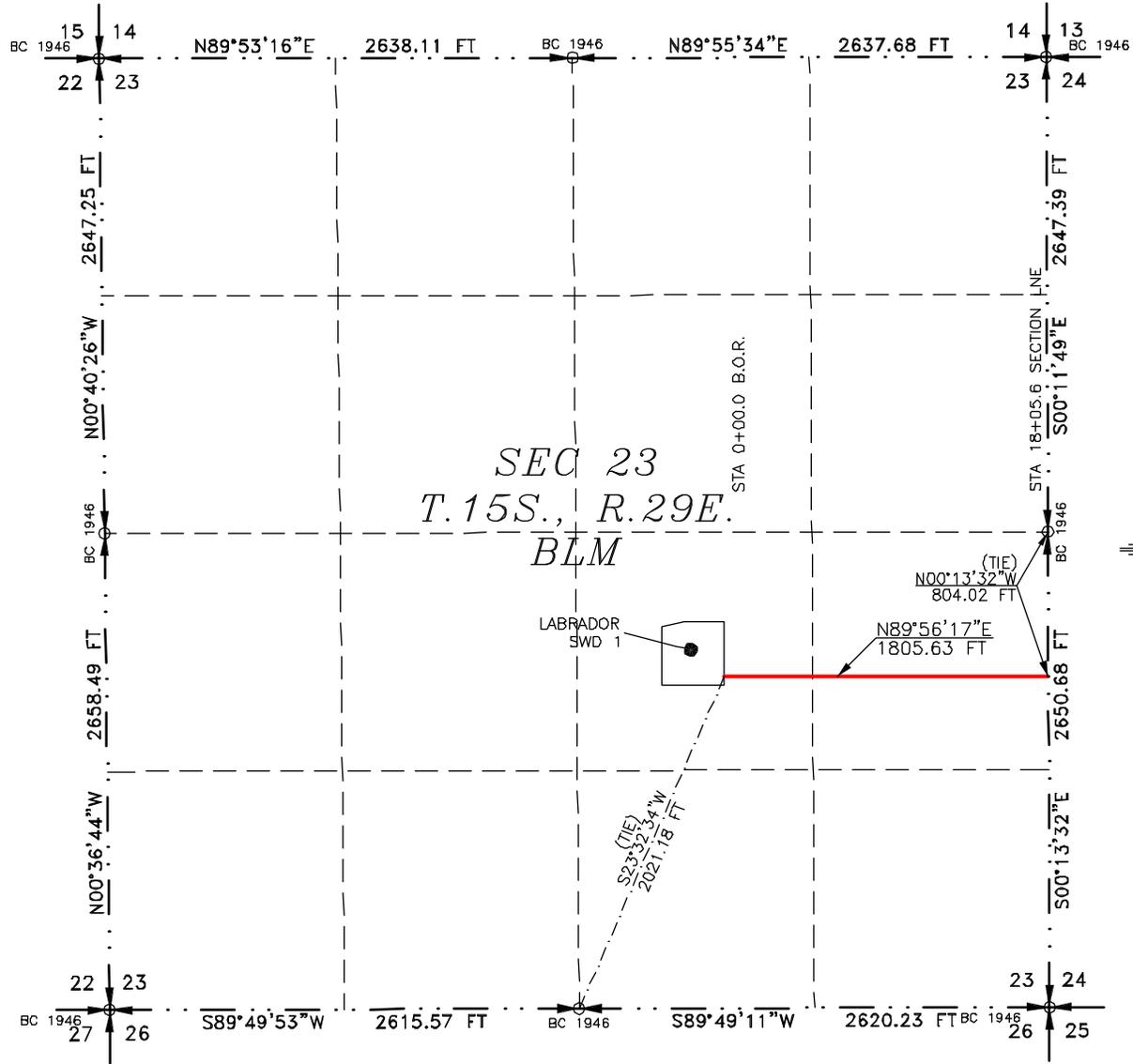
EARTHWORK QUANTITIES ARE ESTIMATED

SHEET 1-2  
 SURVEY NO. 9367

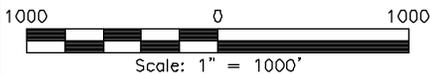


**ACCESS ROAD PLAT**  
 EXISTING CALICHE ROAD FOR ACCESS TO LABRADOR SWD 1

**MACK ENERGY CORPORATION**  
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
 SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO  
 MARCH 30, 2022



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 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 30th DAY OF MARCH 2022

FILIMON F. JARAMILLO, PLS  
 301 SOUTH CANAL  
 (575) 234-3341

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

SHEET: 1-4

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

SURVEY NO. 9361

**ACCESS ROAD PLAT**

EXISTING CALICHE ROAD FOR ACCESS TO LABRADOR SWD 1

**MACK ENERGY CORPORATION  
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
CHAVES COUNTY, STATE OF NEW MEXICO  
MARCH 30, 2022**

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 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 SW/4 SE/4 OF SAID SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M., WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M. BEARS S23°32'34"W, A DISTANCE OF 2021.18 FEET;  
THENCE N89°56'17"E A DISTANCE OF 1805.63 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 23, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M. BEARS N00°13'32"W, A DISTANCE OF 804.02 FEET;

SAID STRIP OF LAND BEING 1805.63 FEET OR 109.43 RODS IN LENGTH, CONTAINING 1.244 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 SE/4	492.92 L.F.	29.87 RODS	0.339 ACRES
NE/4 SE/4	1312.71 L.F.	79.56 RODS	0.904 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 30th DAY OF MARCH 2022



MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

**SURVEY NO. 9361**

**GENERAL NOTES**

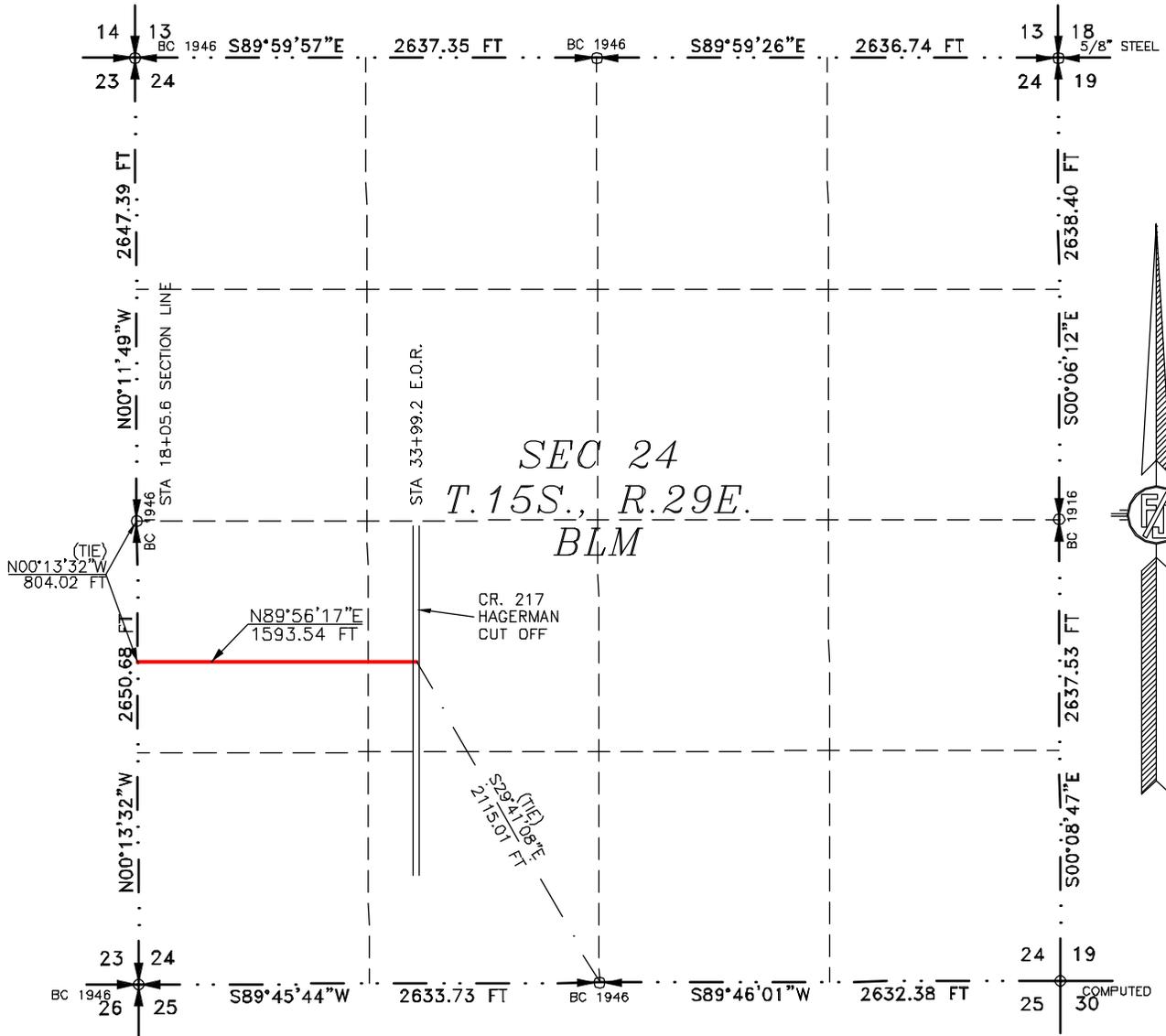
- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

**SHEET: 2-4**

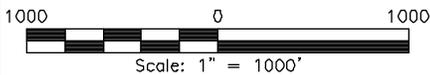
**MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO**

**ACCESS ROAD PLAT**  
 EXISTING CALICHE ROAD FOR ACCESS TO LABRADOR SWD 1

**MACK ENERGY CORPORATION**  
 CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING  
 SECTION 24, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.  
 CHAVES COUNTY, STATE OF NEW MEXICO  
 MARCH 30, 2022



SEE NEXT SHEET (4-4) 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, 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 30th DAY OF MARCH 2022

MADRON SURVEYING, INC.  
 301 SOUTH CANAL  
 CARLSBAD, NEW MEXICO 88220  
 Phone (575) 234-3341

SHEET: 3-4

**MADRON SURVEYING, INC.** 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3341

SURVEY NO. 9361

**ACCESS ROAD PLAT**  
*EXISTING CALICHE ROAD FOR ACCESS TO LABRADOR SWD 1*

**MACK ENERGY CORPORATION**  
*CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING*  
*SECTION 24, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M.*  
*CHAVES COUNTY, STATE OF NEW MEXICO*  
*MARCH 30, 2022*

**DESCRIPTION**

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 24, TOWNSHIP 15 SOUTH, RANGE 29 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 NW/4 SW/4 OF SAID SECTION 24, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 24, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M. BEARS N00°13'32"W, A DISTANCE OF 804.02 FEET;  
THENCE N89°56'17"E A DISTANCE OF 1593.54 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTH QUARTER CORNER OF SAID SECTION 24, TOWNSHIP 15 SOUTH, RANGE 29 EAST, N.M.P.M. BEARS S29°41'08"E, A DISTANCE OF 2115.01 FEET;

SAID STRIP OF LAND BEING 1593.54 FEET OR 96.58 RODS IN LENGTH, CONTAINING 1.097 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 SW/4	1317.95 L.F.	79.88 RODS	0.908 ACRES
NE/4 SW/4	275.58 L.F.	16.70 RODS	0.190 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 30<sup>TH</sup> DAY OF MARCH 2022

FILIMON F. JARAMILLO  
12797  
MADRON SURVEYING, INC.  
301 SOUTH CANAL  
CARLSBAD, NEW MEXICO 88220  
Phone (575) 234-3341

FILIMON F. JARAMILLO, PLS. SURVEYOR  
MADRON SURVEYING, INC. 301 SOUTH CANAL, CARLSBAD, NEW MEXICO  
(575) 234-3341

**SURVEY NO. 9361**

**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: 4-4**

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

## VII. DATA SHEET: PROPOSED OPERATIONS

1. Proposed average and maximum daily rate and volume of fluids to be injected;  
**Respectively, 2000 BWPD and 4000 BWPD**
2. The system is closed or open;  
**Closed**
3. Proposed average and maximum injection pressure;  
**0-2,030#**
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; Devonian
3. Thickness; 540'
4. Depth; 10,985' (Open Hole 10,985-11,525')

## 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

Additional Information

**Waters Injected:** San Andres

## XII. AFFIRMATIVE STATEMENT

RE: Labrador 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:

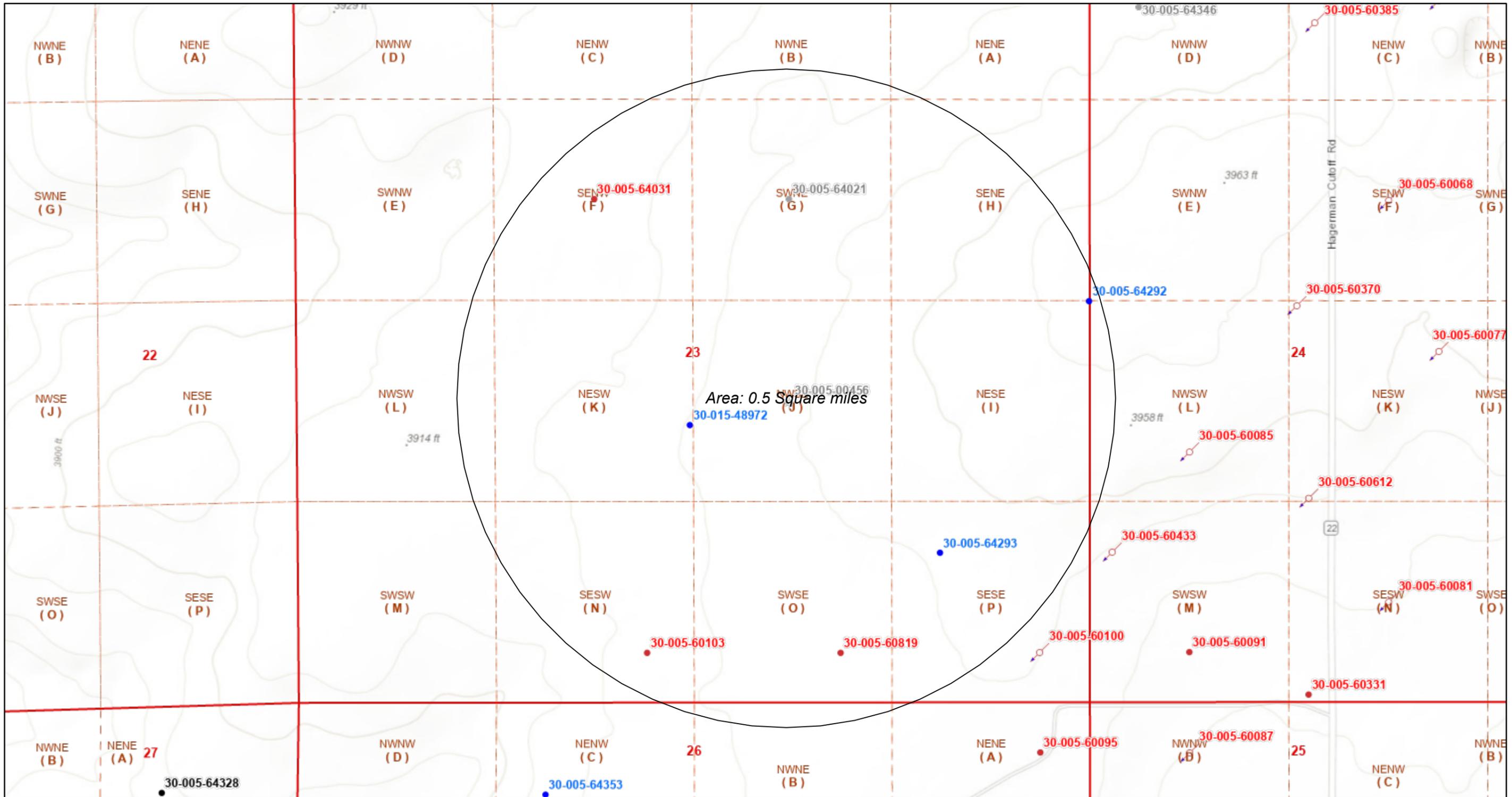
3/17/22



\_\_\_\_\_

Charles Sadler, Geologist

# OCD Well Locations

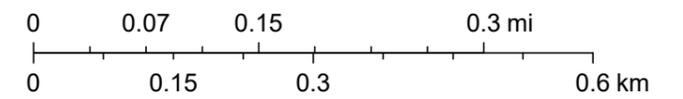


Area: 0.5 Square miles

5/12/2022, 11:46:50 AM

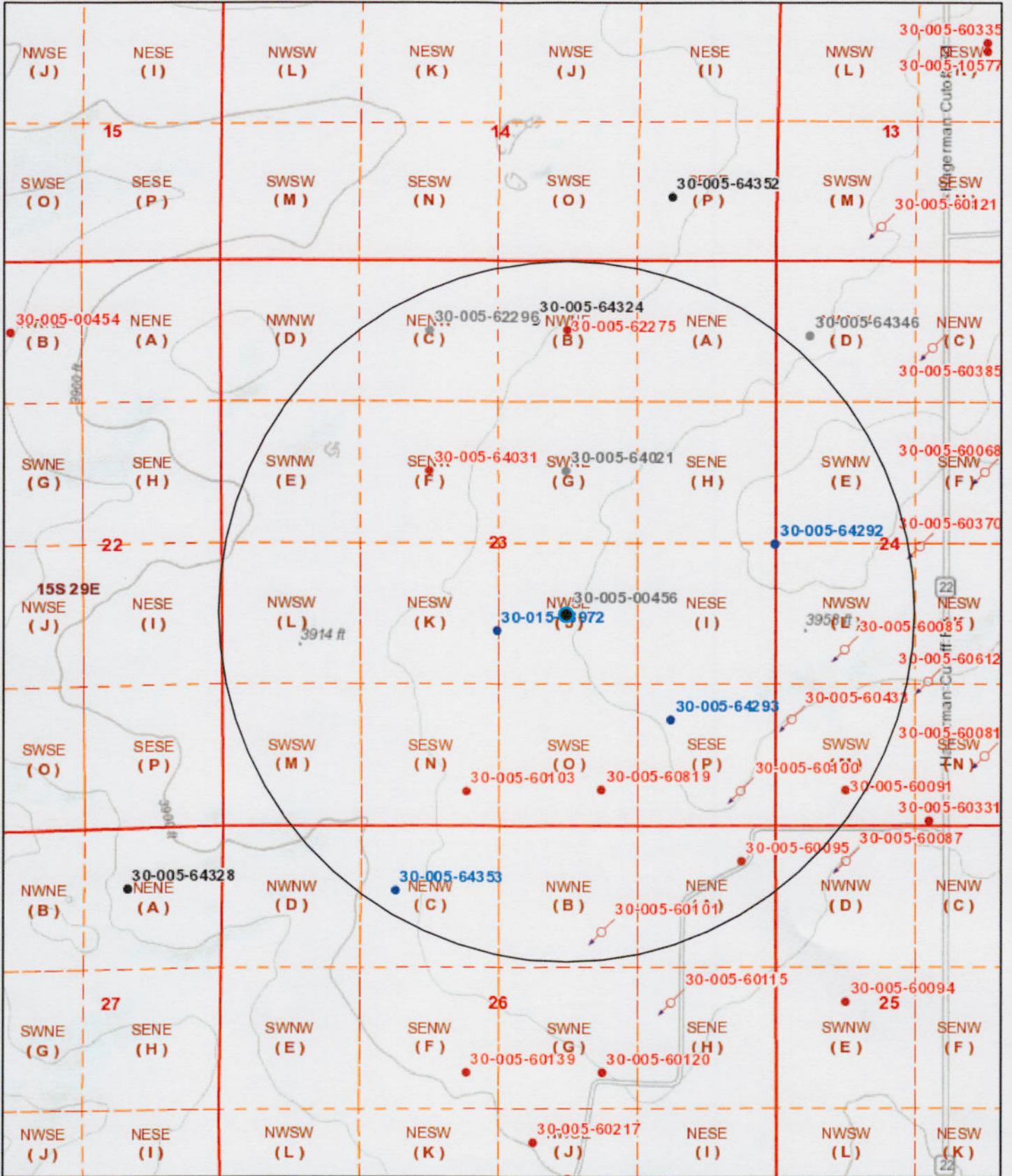
1:9,028

- Override 1
- Oil, Active
- Oil, Plugged
- Oil, Cancelled
- PLSS Second Division
- Oil, New
- PLSS First Division
- ☆ Gas, Cancelled
- ↗ Injection, Plugged



Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the

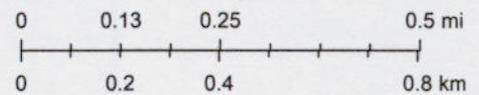
# OCD Well Locations



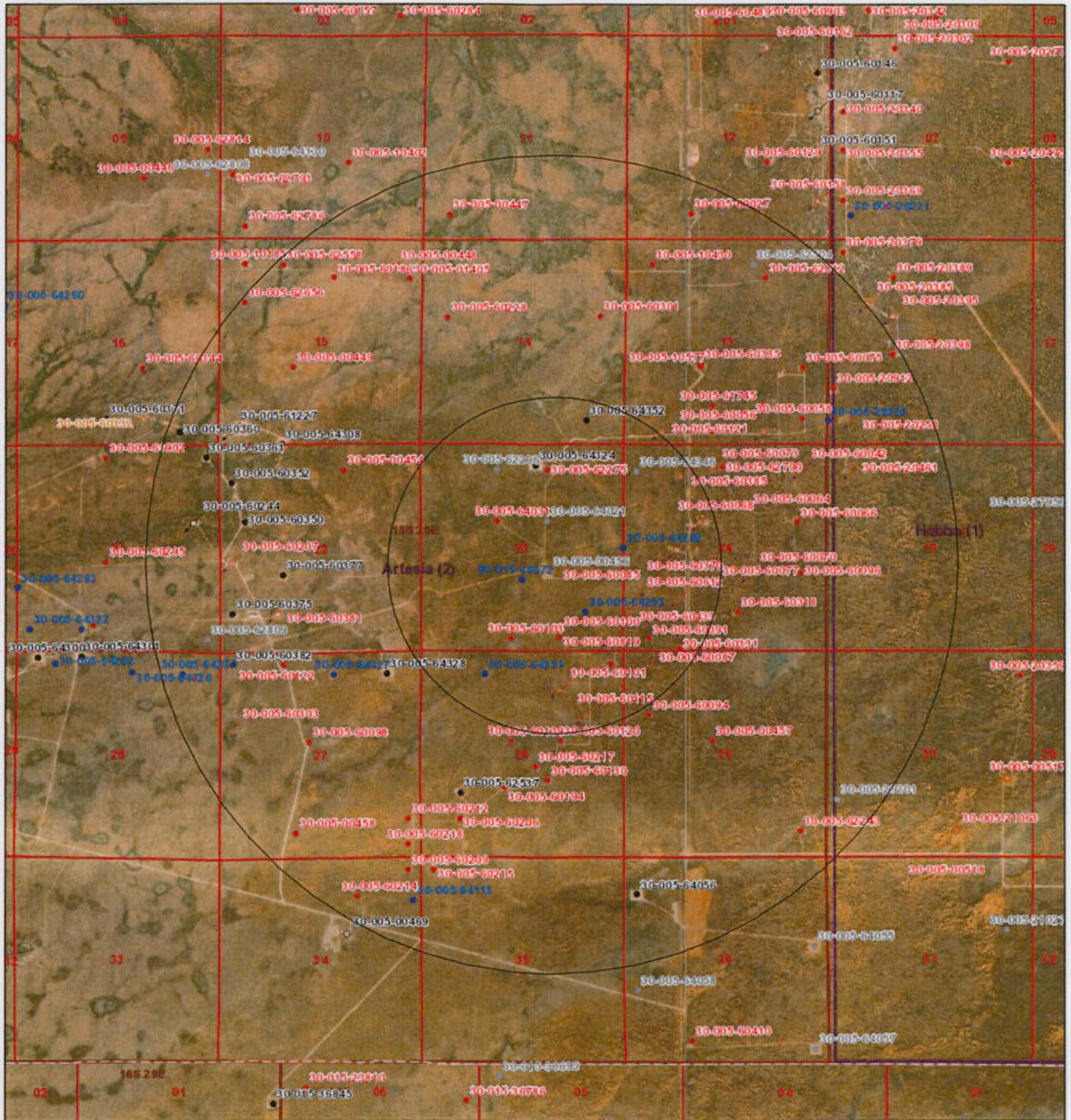
3/11/2022, 9:03:42 AM

1:18,056

- |  |                     |  |                            |  |                      |
|--|---------------------|--|----------------------------|--|----------------------|
|  | Override 1          |  | CO2, Plugged               |  | Injection, Active    |
|  | Wells - Large Scale |  | CO2, Temporarily Abandoned |  | Injection, Cancelled |
|  | undefined           |  | Gas, Active                |  | Injection, New       |
|  | Miscellaneous       |  | Gas, Cancelled             |  | Injection, Plugged   |
|  | CO2 Active          |  | Gas, New                   |  |                      |



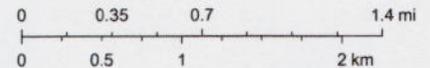
# OCD Well Locations



3/15/2022, 11:21:36 AM

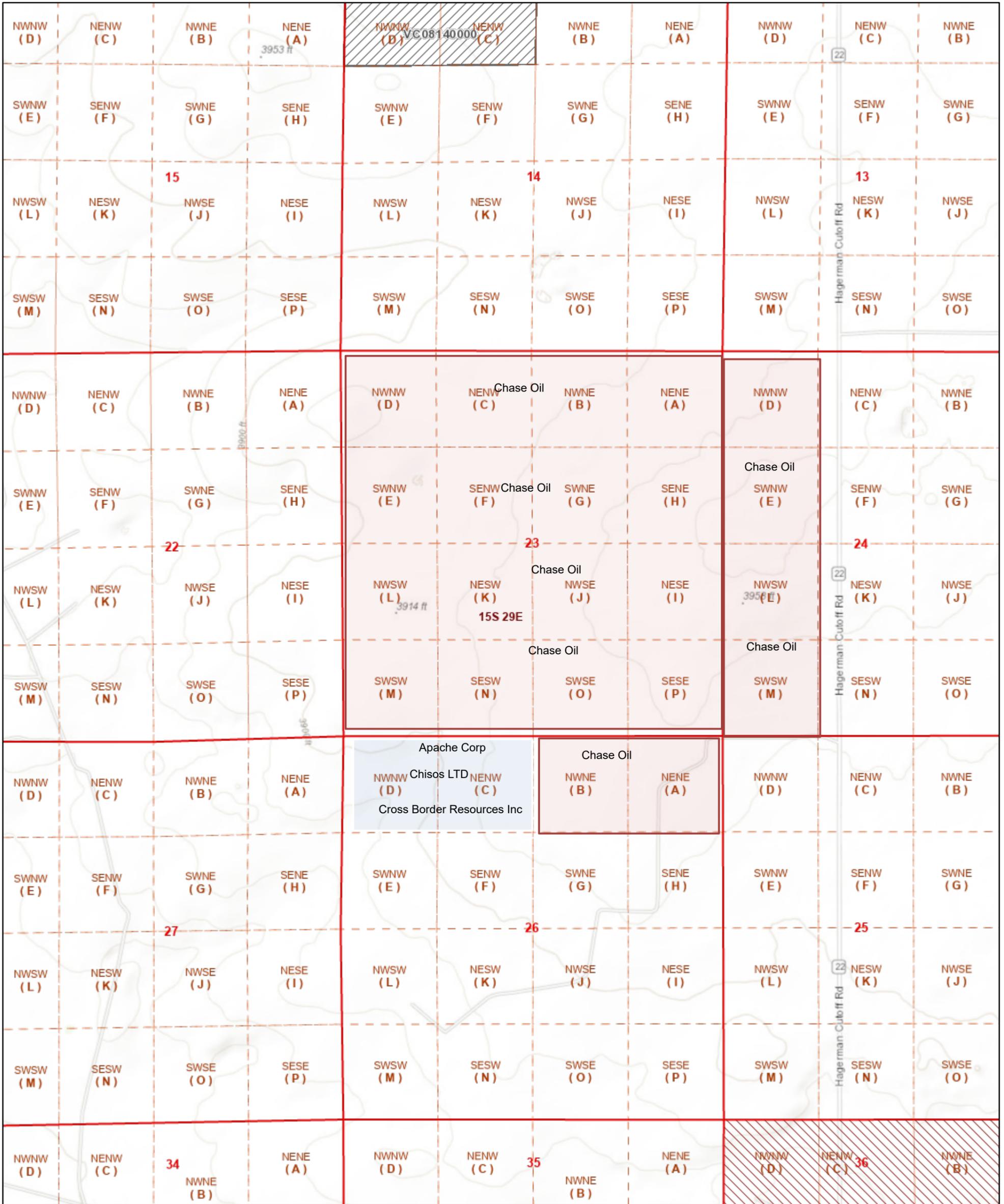
1:36,112

- |                            |                                  |                                             |
|----------------------------|----------------------------------|---------------------------------------------|
| Override 1                 | Gas, Temporarily Abandoned       | Salt Water Injection, New                   |
| Wells - Large Scale        | Injection, Active                | Salt Water Injection, Plugged               |
| undefined                  | Injection, Cancelled             | Salt Water Injection, Temporarily Abandoned |
| Miscellaneous              | Injection, New                   | Water, Active                               |
| CO2, Active                | Injection, Plugged               | Water, Cancelled                            |
| CO2, Cancelled             | Injection, Temporarily Abandoned | Water, New                                  |
| CO2, New                   | Oil, Active                      | Water, Plugged                              |
| CO2, Plugged               | Oil, Cancelled                   | Water, Temporarily Abandoned                |
| CO2, Temporarily Abandoned | Oil, New                         | OCD Districts                               |
| Gas, Active                | Oil, Plugged                     | OCD District Offices                        |
| Gas, Cancelled             | Oil, Temporarily Abandoned       | PLSS First Division                         |
| Gas, New                   | Salt Water Injection, Active     | PLSS Townships                              |
| Gas, Plugged               | Salt Water Injection, Cancelled  |                                             |



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

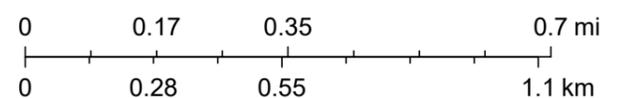
# OCD Well Locations



5/12/2022, 2:29:56 PM

- Areas
- PLSS First Division
  - Override 1
  - Override 2
  - Override 3
  - PLSS Second Division
  - PLSS Townships
  - Oil and Gas Leasing Restrictions
  - Oil and Gas Leases

1:18,056



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community, BLM

<u>Name</u>	<u>Address</u>	<u>City</u>	<u>State</u>	<u>Zip</u>	<u>Certified Mail Id</u>
Cross Border Resources Inc.	14282 Gillis Rd	Farmers	TX	75244-3715	7021 0350 0000 4936 7373
Chisos LTD	1331 Lamar St. Ste 1077	Houston	TX	77010-3135	7021 0350 0000 4936 7380
Apache Corporation	2000 Post Oak Blvd Ste 100	Houston	TX	77056-4400	7021 0350 0000 4936 7397
Bureau of Land Management	2909 W. 2nd St	Roswell	NM	88201-1287	7019 1640 0002 0377 9556
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:

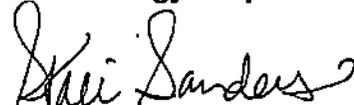
Mack Energy Corporation is a Chase Family owned entity. The following Chase individuals or companies are all affiliates of Mack Energy Corporation and usually own an interest in wells drilled and/or operated by Mack Energy Corporation.

- 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

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

List of Affected Parties

Sendero Energy LLC

Katz Resources LLC

M Squared Energy LLC

Chase Oil Corp

Robert C Chase

Broken Arrow Royalties LLC

Ventana Minerals LLC

DiaKan Minerals LLC

Bureau of Land Management



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

May 31, 2022

Via Certified Mail 7019 1640 0002 0377 9556  
Return Receipt Requested

Bureau of Land Management  
2909 W. 2<sup>nd</sup> St.  
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 10,985-11,525'. The Labrador SWD #1 located 1978 FSL & 1980 FEL, Sec. 23 T15S R29E, 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

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

May 31, 2022

Via Certified Mail 7021 0350 0000 4936 7373  
Return Receipt Requested

Cross Border Resources Inc.  
14282 Gillis Rd.  
Farmers, TX 75244-3715

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 10,985-11,525'. The Labrador SWD #1 located 1978 FSL & 1980 FEL, Sec. 23 T15S R29E, Chaves County.

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Mack Energy Corporation

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Deana Weaver  
Regulatory Technician II

DW/

Attachments



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

May 31, 2022

Via Certified Mail 7021 0350 0000 4936 7380  
Return Receipt Requested

Chisos LTD  
1331 Lamar St. Ste. 1077  
Houston, TX 77010-3135

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 10,985-11,525'. The Labrador SWD #1 located 1978 FSL & 1980 FEL, Sec. 23 T15S R29E, 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

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Deana Weaver  
Regulatory Technician II

DW/

Attachments



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

May 31, 2022

Via Certified Mail 7021 0350 0000 4936 7397  
Return Receipt Requested

Apache Corporation  
2000 Post Oak Blvd Ste 100  
Houston, TX 77056-4400

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 10,985-11,525'. The Labrador SWD #1 located 1978 FSL & 1980 FEL, Sec. 23 T15S R29E, 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

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

Deana Weaver  
Regulatory Technician II

DW/

Attachments

### 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 Labrador SWD #1 1978 FSL 1980 FEL of Section 23, T15S, R29E, NMPM, Chaves County, New Mexico. The water will be injected into the Devonian at a disposal depth of 10,985-11,525'. Water will be injected at a maximum surface pressure of 1440# and a maximum injection rate of 4000-6000 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.

# Place a Legal

## Thank you, your submission/order has been received

The following details were submitted:

### Ad Information

---

**Text**

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 Labrador SWD #1 1978 FSL 1980 FEL of Section 23, T15S, R29E, NMPM, Chaves County, New Mexico. The water will be injected into the Devonian at a disposal depth of 10,985-11,525'. Water will be injected at a maximum surface pressure of 1440# and a maximum injection rate of 4000-6000 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.

---

**Days to Run**

1

### Billing Information

---

**First Name**

Deana

**Last Name**

Weaver

**Address**

P.O. Box 960

**P.O. Box/Apt #****City**

Artesia

**State**

NM

**Zip Code**

88210

**Email**

dweaver@mec.com

**Phone**

(575) 748-1288

### Upload File:JPG, PDF or Word Doc

---

**File**

**Labrador SWD #1- Before**

**Operator: Mack Energy Corporation**

**Location: Sec. 23 T15S R29E**

**1978 FSL 1980 FEL**

**Objective:**

**GL Elevation: 3937.4'**

Depth	Hole Size & Cement				Casing Detail
472'	17 1/2" hole 13 3/8" Set in 9/9/61 400sx CMT Circ to Surface				Plug @ Surface w/ 10sx CMT Plug @ 500-400' w/ 30sx CMT
2888'	12 1/4" hole 9 5/8" Set in 9/16/61 1000sx CMT TOC @ 354'				
					Perf 1919-1936" CIBP 1972 w/ 2sx CMT
12,166'	8 3/4" hole				Plug @ 1893-1993
					Plug @ 2838-2938' w/35sx cmt  Plug @ 3995-4095 w/ 30sx cmt  Plug @ 6105-6205' w/ 30sx cmt  Plug @ 7445-7545 w/ 30sx cmt  Plug @ 8400-8600' w/ 30sx cmt  Plug @ 9639-9739' w/ 30sx cmt  Plug @ 10150-10250' w/ 30sx cmt  Plug @ 10935-11035' w/ 30sx cmt  Plug @ 11742-11842' w/ 30sx cmt
			TD- 12,166'		

Labrador SWD #1- After

Operator: Mack Energy Corporation

Location: Sec. 23 T15S R29E

1978 FSL 1980 FEL

Objective: Devonian

GL Elevation: 3937.4'

Depth	Hole Size & Cement					Casing Detail
472'	17 1/2" hole Set in 9/9/61 400sx CMT Circ to Surface					13 3/8" 48#, H-40 ST&C Set in 9/9/61
2888'	12 1/4" hole 9 5/8" Set in 9/16/61 1000sx CMT TOC @ 354'					9 5/8" 36#, J-55, ST&C Set in 9/16/61
10,985'	8 3/4" hole 960sx Class C Circ to Surface					5 1/2" 20#, L-80, LT&C
						2 7/8" tubing 0-10,885'  Compression Packer 10,885'
						Plug @ 11742-11842' w/ 30sx cmt
TD- 12,166'						

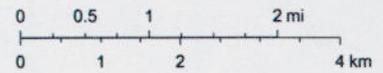
# OSE POD Locations Map



3/17/2022, 11:27:45 AM

-  Override 1
-  OSE District Boundary
- New Mexico State Trust Lands
  -  Subsurface Estate
  -  Both Estates
  -  Site Boundaries

1:72,224



Esri, HERE, Garmin, Esri, HERE, Earthstar Geographics, U.S. Department of Energy Office of Legacy Management

Unofficial Online Map  
These maps are distributed "as is" without warranty of any kind.



---

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

---

No PODs found.

PLSS Search:

**Section(s):** 25

**Township:** 15S

**Range:** 29E



---

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

---

No PODs found.

PLSS Search:

Section(s): 26

Township: 15S

Range: 29E



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

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

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



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### Water Analysis Report

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

<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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### 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

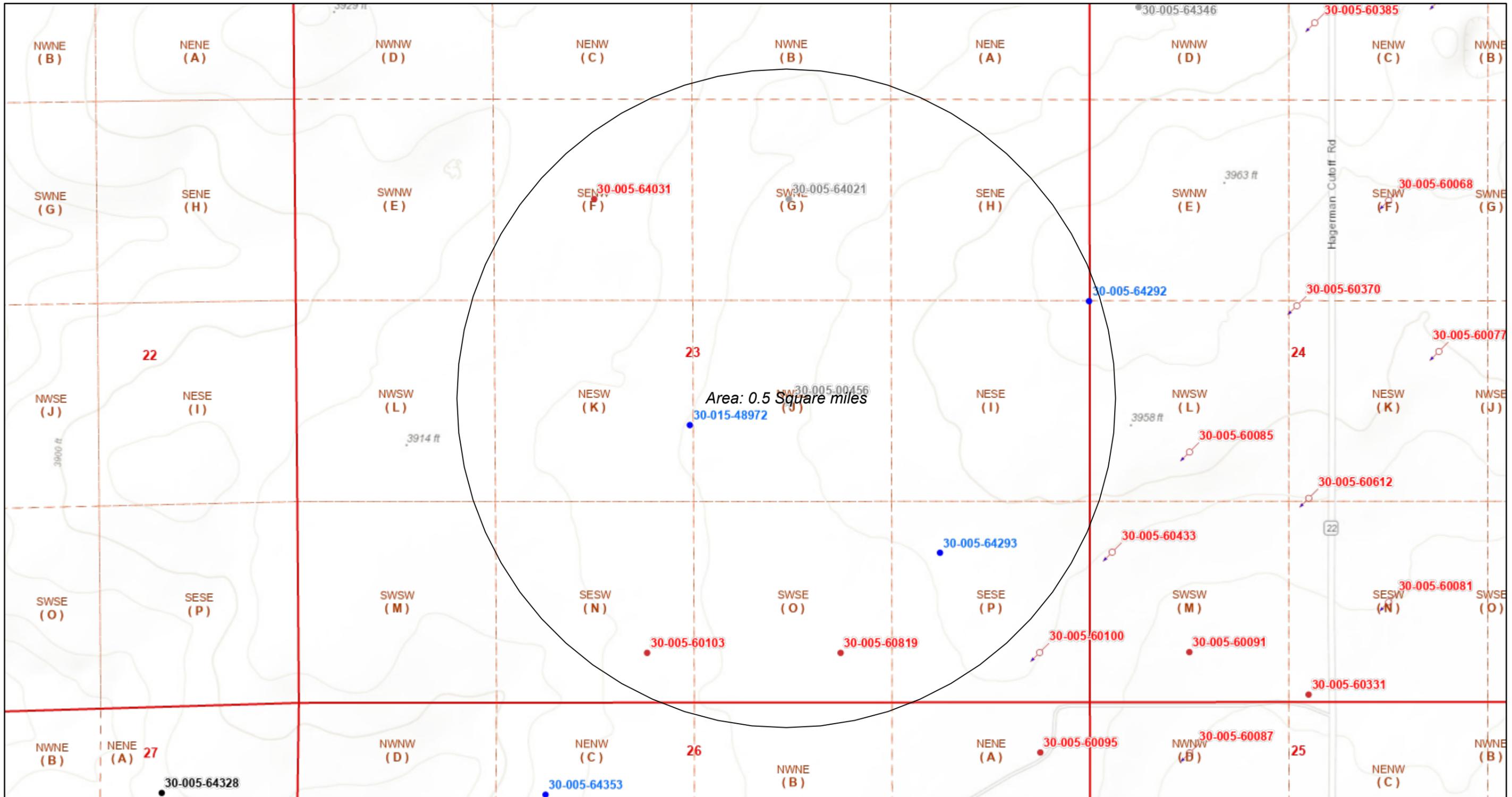
Customer: Mack Energy Corporation      Sample #: 81533  
 Area: Artesia      Analysis ID #: 80615  
 Lease: Saskatoon  
 Location: Fed Com 1H      0  
 Sample Point: Wellhead

<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
Hydrogen Sulfide:	4	<b>Borate*:</b>	144.3	0.91	<b>Strontium:</b>	60.1	1.37
Carbon Dioxide:	90	<b>Phosphate*</b>			<b>Barium:</b>	0.6	0.01
Comments:		*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



# OCD Well Locations

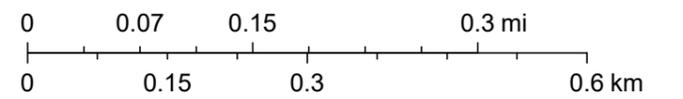


Area: 0.5 Square miles

5/12/2022, 11:46:50 AM

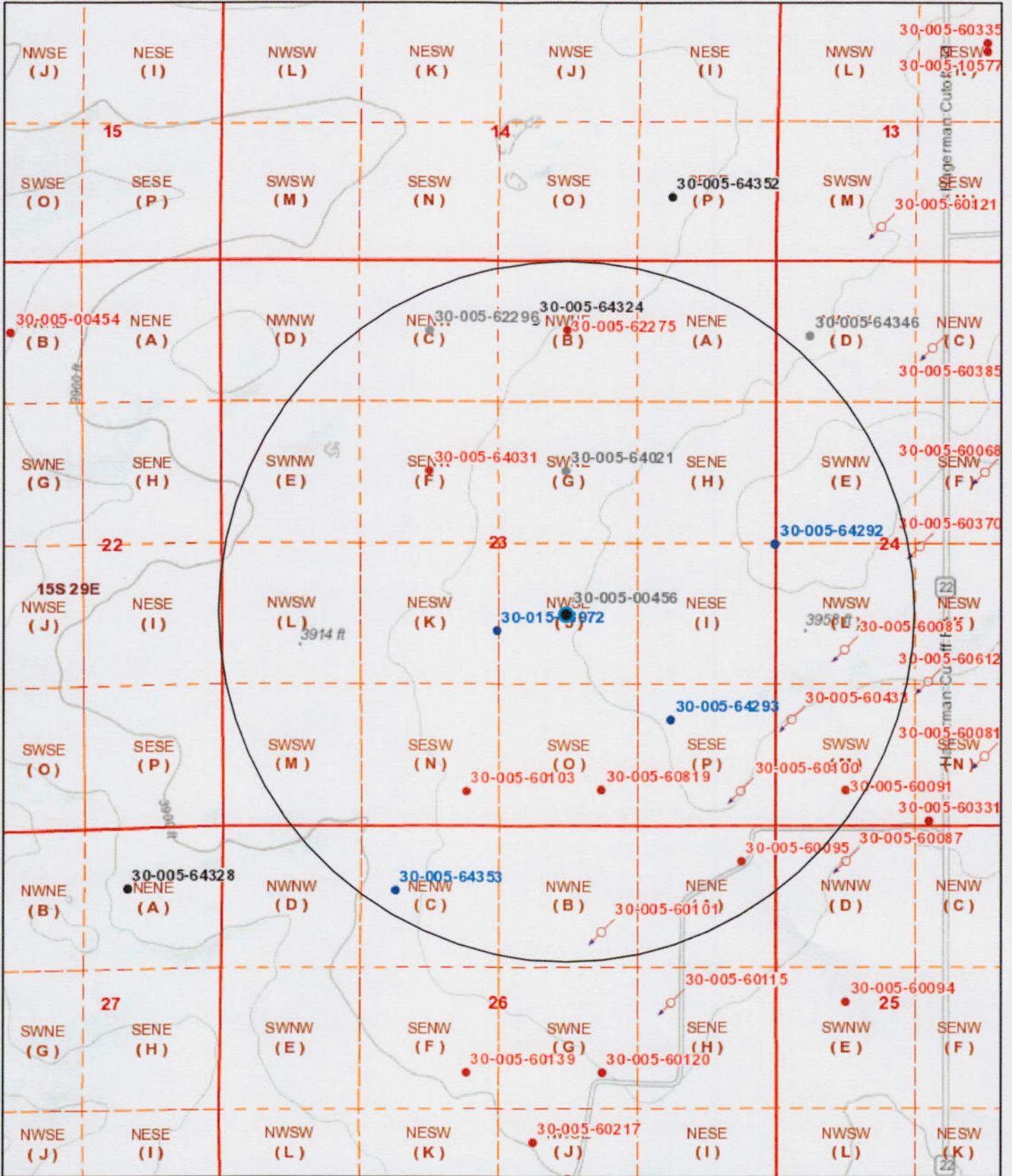
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- Override 1
- Oil, Active
- Oil, New
- Oil, Cancelled
- Oil, Plugged
- PLSS Second Division
- PLSS First Division
- ☆ Gas, Cancelled
- ↗ Injection, Plugged



Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department., Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the

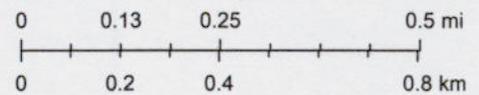
# OCD Well Locations



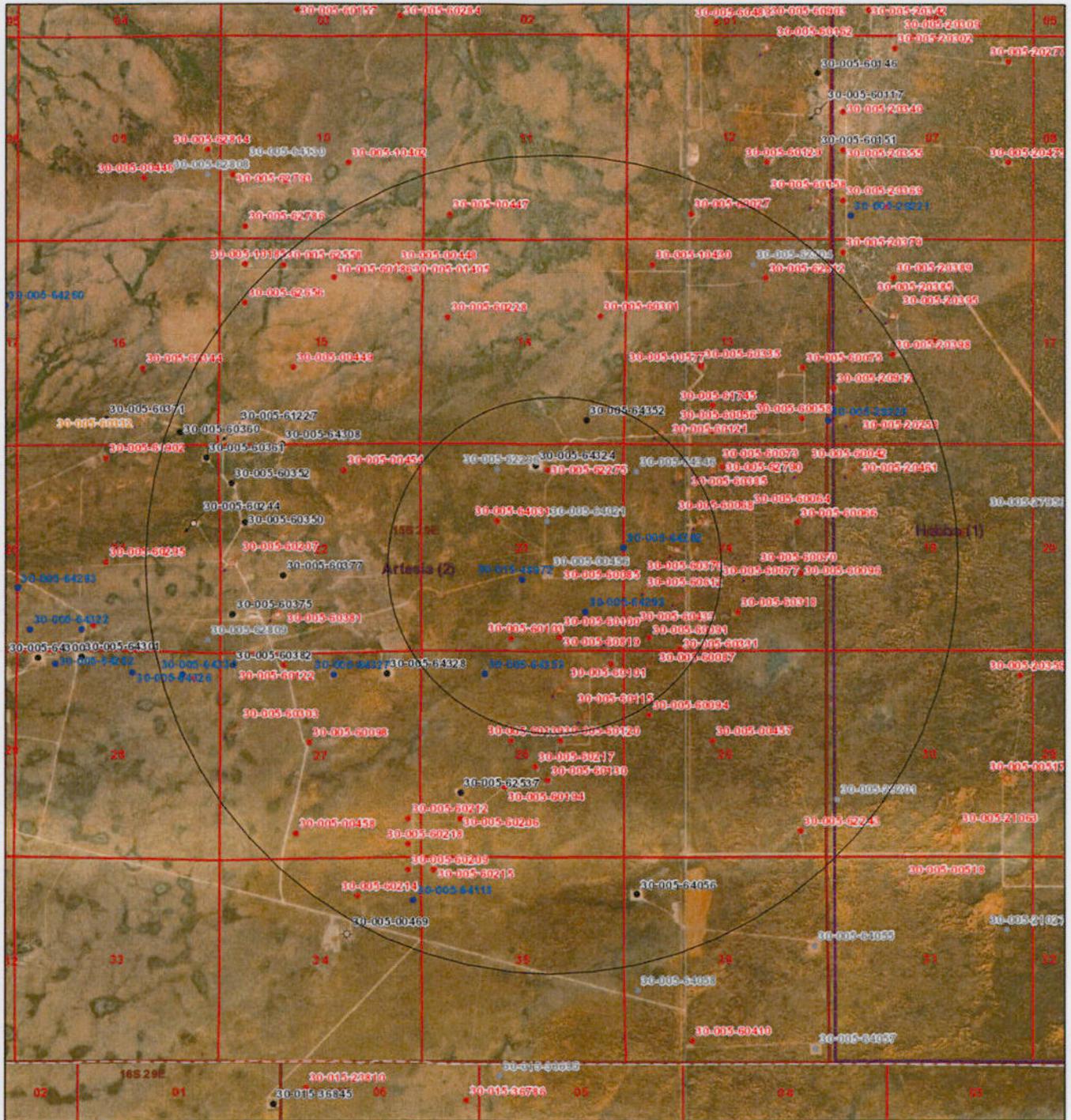
3/11/2022, 9:03:42 AM

1:18,056

- |  |                     |  |                            |  |                      |
|--|---------------------|--|----------------------------|--|----------------------|
|  | Override 1          |  | CO2, Plugged               |  | Injection, Active    |
|  | Wells - Large Scale |  | CO2, Temporarily Abandoned |  | Injection, Cancelled |
|  | undefined           |  | Gas, Active                |  | Injection, New       |
|  | Miscellaneous       |  | Gas, Cancelled             |  | Injection, Plugged   |
|  | CO2 Active          |  | Gas, New                   |  |                      |



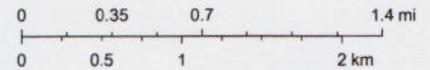
# OCD Well Locations



3/15/2022, 11:21:36 AM

1:36,112

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>☐ Override 1</li> <li>Wells - Large Scale</li> <li>↑ undefined</li> <li>● Miscellaneous</li> <li>✱ CO2, Active</li> <li>✱ CO2, Cancelled</li> <li>✱ CO2, New</li> <li>✱ CO2, Plugged</li> <li>✱ CO2, Temporarily Abandoned</li> <li>✱ Gas, Active</li> <li>✱ Gas, Cancelled</li> <li>✱ Gas, New</li> <li>✱ Gas, Plugged</li> <li>✱ Gas, Temporarily Abandoned</li> <li>✱ Injection, Active</li> <li>✱ Injection, Cancelled</li> <li>✱ Injection, New</li> <li>✱ Injection, Plugged</li> <li>✱ Injection, Temporarily Abandoned</li> <li>● Oil, Active</li> <li>● Oil, Cancelled</li> <li>● Oil, New</li> <li>● Oil, Plugged</li> <li>● Oil, Temporarily Abandoned</li> <li>△ Salt Water Injection, Active</li> <li>△ Salt Water Injection, Cancelled</li> <li>△ Salt Water Injection, New</li> <li>△ Salt Water Injection, Plugged</li> <li>△ Salt Water Injection, Temporarily Abandoned</li> <li>● Water, Active</li> <li>● Water, Cancelled</li> <li>● Water, New</li> <li>● Water, Plugged</li> <li>● Water, Temporarily Abandoned</li> </ul> | <ul style="list-style-type: none"> <li>☐ OCD Districts</li> <li>★ OCD District Offices</li> <li>☐ PLSS First Division</li> <li>☐ PLSS Townships</li> </ul> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|



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