AE Order Number Banner

Application Number: pMSG2411636136

SWD-2615

MACK ENERGY CORP [13837]

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: _____ **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

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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

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

_____ Date

_____ Print or Type Name

_____ Phone Number

Deana Weaver
_____ Signature

_____ e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance _XXX_Disposal _____Storage
Application qualifies for administrative approval? _XXX_Yes _____No

II. OPERATOR: Mack Energy Corporation

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

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

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes _X X X_No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Deana Weaver TITLE: Regulatory Tech II

SIGNATURE: Deana Weaver

E-MAIL ADDRESS: dweaver@mec.com DATE: 4/1/2024

* 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

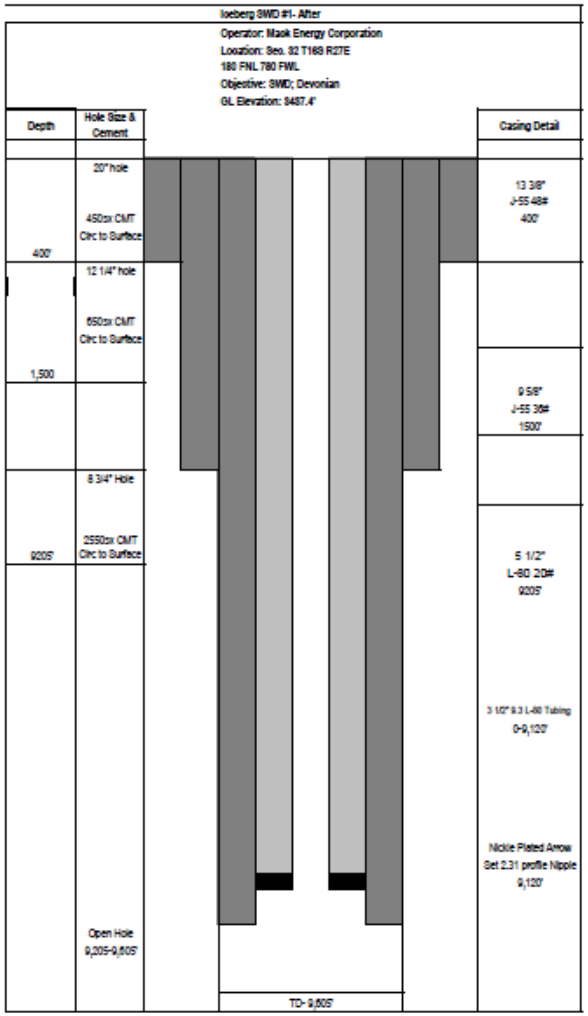
INJECTION WELL DATA SHEET

OPERATOR: Mack Energy Corporation

WELL NAME & NUMBER: Iceberg SWD #1

WELL LOCATION: 180 FNL 780 FWL (FOOTAGE LOCATION) D (UNIT LETTER) 32 (SECTION) 16S (TOWNSHIP) 27E (RANGE)

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

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

Cemented with: 450 sx. *or* _____ ft^3

Top of Cement: 0' Method Determined: Circ

Intermediate Casing

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

Cemented with: 650 sx. *or* _____ ft^3

Top of Cement: 0' Method Determined: Circ

Production Casing

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

Cemented with: 2,550 sx. *or* _____ ft^3

Top of Cement: 0 Method Determined: Circ

Total Depth: 9605'

Injection Interval

9205' feet to 9605' Open Hole

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 3 1/2" 9.3# L-80 Lining Material: 1850 Coating

Type of Packer: Nickle plated Arrow Set 2.31 profile nipple

Packer Setting Depth: 9120'

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

Additional Data

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

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

   N/A

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. N/A

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: L. Miss Oil/Gas 8840', Devonian Oil/Gas 9205', Montoya Oil/Gas 9605'

VII. DATA SHEET: PROPOSED OPERATIONS

1. Proposed average and maximum daily rate and volume of fluids to be injected;
Respectively, 15,000 BWPD and 20,000 BWPD
2. The system is closed or open;
Closed
3. Proposed average and maximum injection pressure;
1,000psi average-2083 psi maximum
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water;
We will be re-injecting produced water

5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water;
N/A
6. List of Aquifers- Artesian
7. Well Procedures- See atached

VIII. GEOLOGICAL DATA

1. Lithologic Detail; **Dolomite**
2. Geological Name; **SWD; Devonian**
3. Thickness; **400** **Openhole Completion (9205-9605')**
4. Depth; **9605' TD**

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

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: 10/30/23

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	[2] Pool Code	[3] Pool Name
	97803	SWD; Devonian

[4] Property Code	[5] Property Name	[6] Well Number
	ICEBERG SWD	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
13837	MACK ENERGY CORPORATION	3443.6

[10] Surface Location

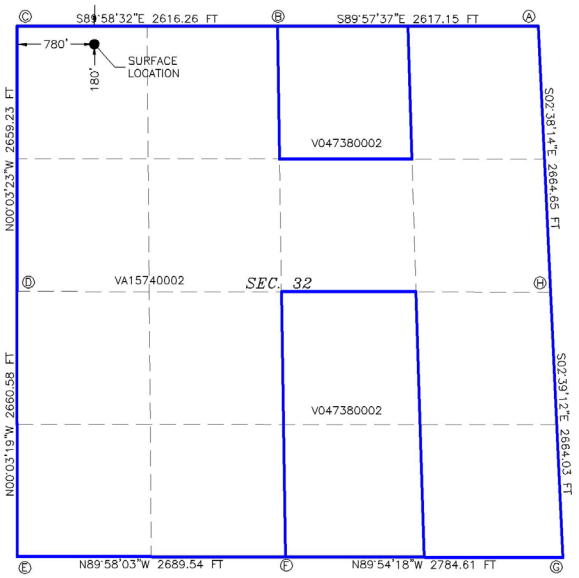
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	32	16 S	27 E		180	NORTH	780	WEST	EDDY

[11] Bottom Hole Location If Different From Surface

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

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



ICEBERG SWD 1
EL. = 3443.6

GEODETIC COORDINATES
NAD 83 NMSP EAST
SURFACE LOCATION
N.= 686026.87
E.= 549461.52
LAT. = 32.8859043°N
LONG. = 104.3068682°W

CORNER COORDINATES TABLE
NAD 83 NMSP EAST

A	N.= 686204.27	E.= 553913.64
B	N.= 686206.08	E.= 551297.14
C	N.= 686207.20	E.= 548681.53
D	N.= 683548.64	E.= 548684.15
E	N.= 680888.72	E.= 548686.72
F	N.= 680887.19	E.= 551375.59
G	N.= 680882.58	E.= 554159.51
H	N.= 683543.10	E.= 554036.21

LEGEND
SECTION LINE
QUARTER LINE
LEASE LINE
WELL PATH

[17] OPERATOR CERTIFICATION

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

Deana Weaver 4/1/2024
Signature Date

Deana Weaver
Printed Name

dweaver@mec.com
E-mail Address

[18] SURVEYOR CERTIFICATION

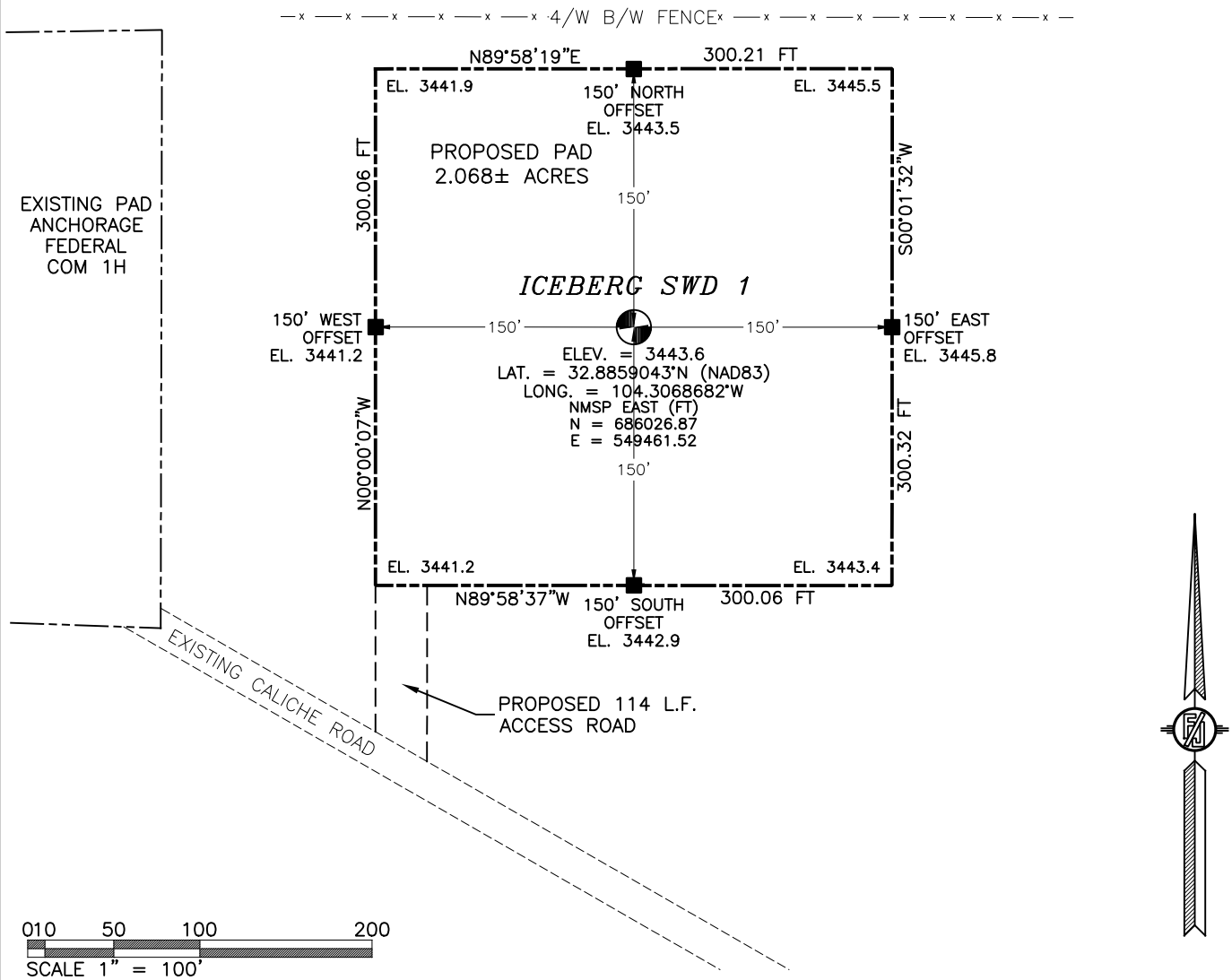
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

FEBRUARY 7, 2024
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: EDMUND F. JARAMILLO, PLS 12797
SURVEY NO. 9931A

SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF STATE HIGHWAY 82 & CO. RD. 200 (KARR RANCH), GO NORTHWEST ON CO. RD. 200 APPROX. 1.8 MILES, TURN RIGHT (NORTHEAST) ON 20' CALICHE ROAD (DOG CANYON RD.) AND GO APPROX. 1.2 MILES, TURN LEFT (NORTHWEST) ON 15' CALICHE ROAD AND GO APPROX. 0.35 MILES, CONTINUE NORTHWEST ON 12' CALICHE ROAD APPROX. 450', CONTINUE NORTHWEST APPROX. 772' TO ROAD PI, CONTINUE NORTHWEST APPROX. 4446' TO THE SOUTH EDGE OF PAD FOR THIS LOCATION.

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

FILIMON F. JARAMILLO PLS 17078

FILIMON F. JARAMILLO LLC NEW MEXICO 17078 PROFESSIONAL SURVEYOR

MACK ENERGY CORPORATION

ICEBERG SWD 1

LOCATED 180 FT. FROM THE NORTH LINE AND 780 FT. FROM THE WEST LINE OF SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO

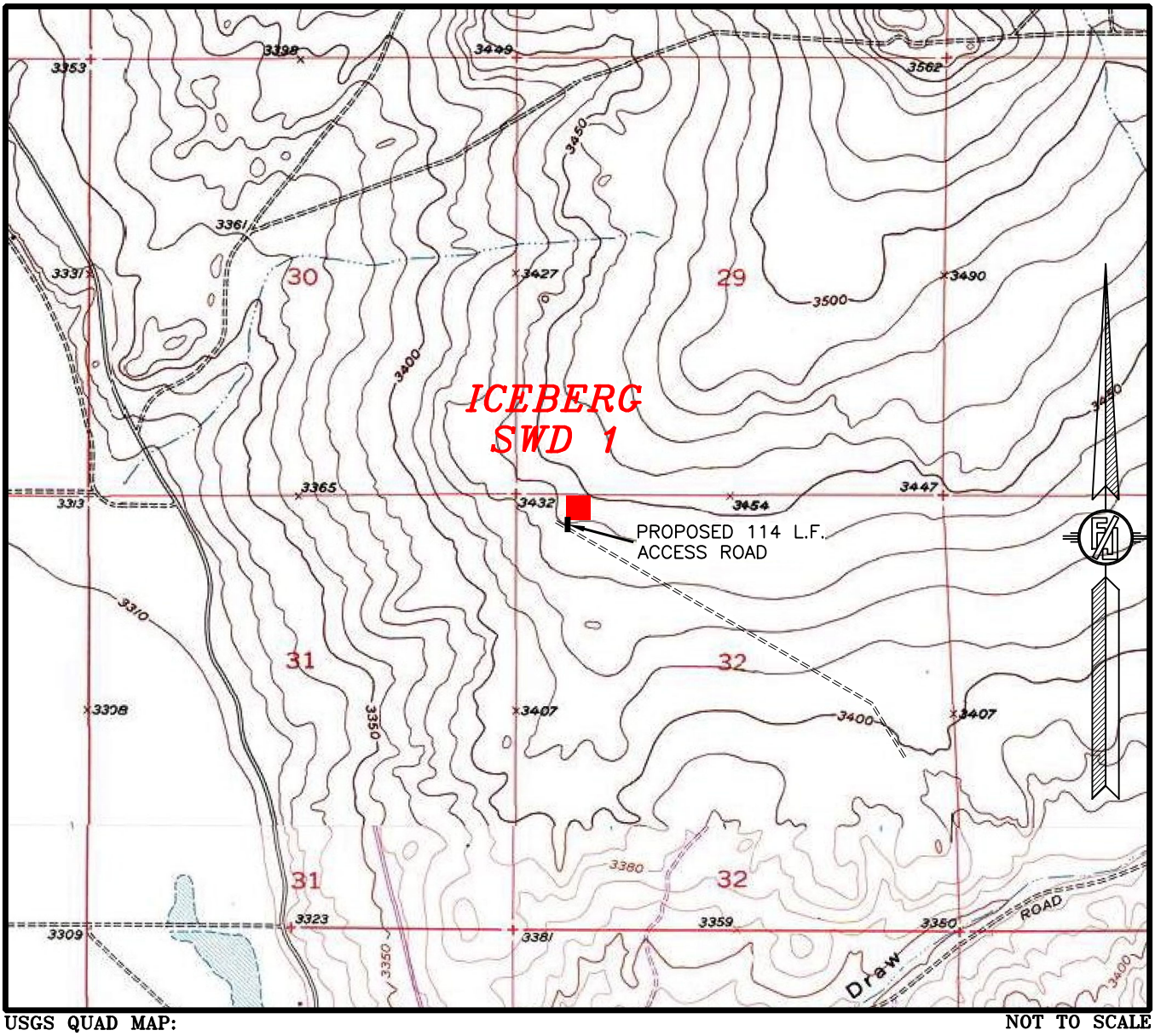
FEBRUARY 7, 2024

SURVEY NO. 9931A

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

SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



USGS QUAD MAP:
ARTESIA NE

NOT TO SCALE

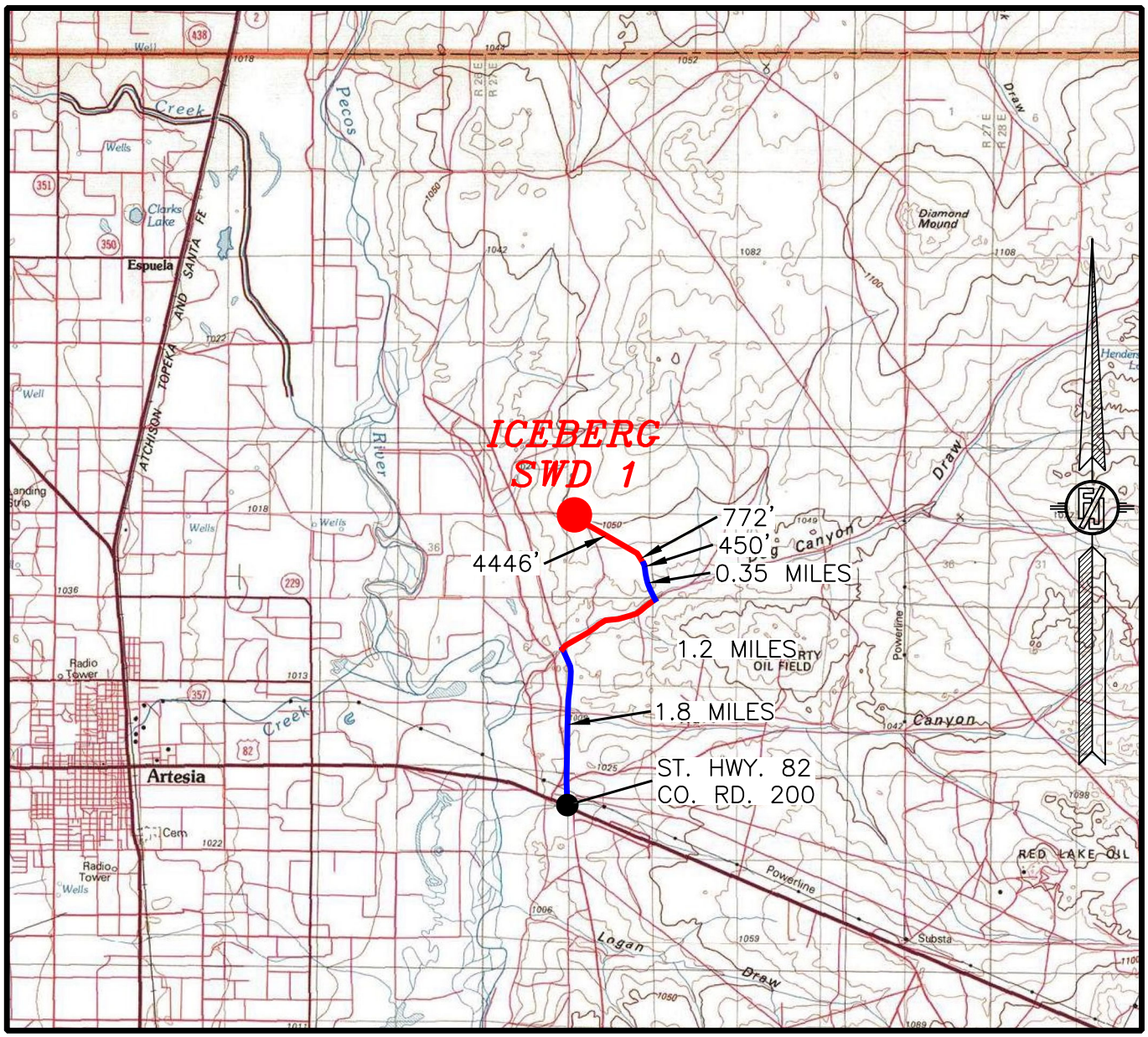
MACK ENERGY CORPORATION
ICEBERG SWD 1
LOCATED 180 FT. FROM THE NORTH LINE
AND 780 FT. FROM THE WEST LINE OF
SECTION 32, TOWNSHIP 16 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 7, 2024

SURVEY NO. 9931A

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

SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES NOT TO SCALE

DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF STATE HIGHWAY 82 & CO. RD. 200 (KARR RANCH), GO NORTHWEST ON CO. RD. 200 APPROX. 1.8 MILES, TURN RIGHT (NORTHEAST) ON 20' CALICHE ROAD (DOG CANYON RD.) AND GO APPROX. 1.2 MILES, TURN LEFT (NORTHWEST) ON 15' CALICHE ROAD AND GO APPROX. 0.35 MILES, CONTINUE NORTHWEST ON 12' CALICHE ROAD APPROX. 450', CONTINUE NORTHWEST APPROX. 772' TO ROAD PI, CONTINUE NORTHWEST APPROX. 4446' TO THE SOUTH EDGE OF PAD FOR THIS LOCATION.

MACK ENERGY CORPORATION
ICEBERG SWD 1
LOCATED 180 FT. FROM THE NORTH LINE AND 780 FT. FROM THE WEST LINE OF SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO

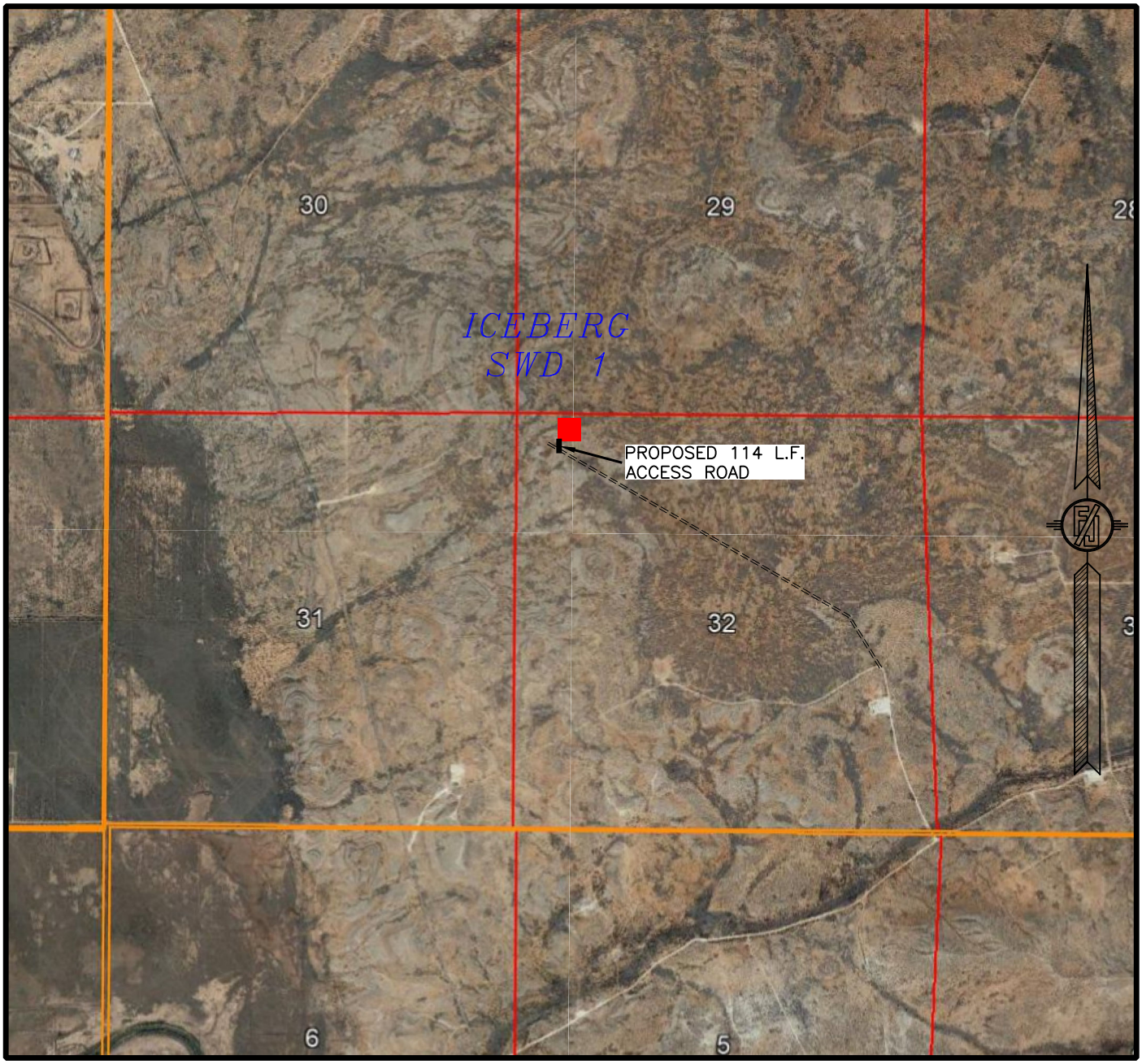
FEBRUARY 7, 2024

SURVEY NO. 9931A

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

SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2019

MACK ENERGY CORPORATION

ICEBERG SWD 1

LOCATED 180 FT. FROM THE NORTH LINE
AND 780 FT. FROM THE WEST LINE OF
SECTION 32, TOWNSHIP 16 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

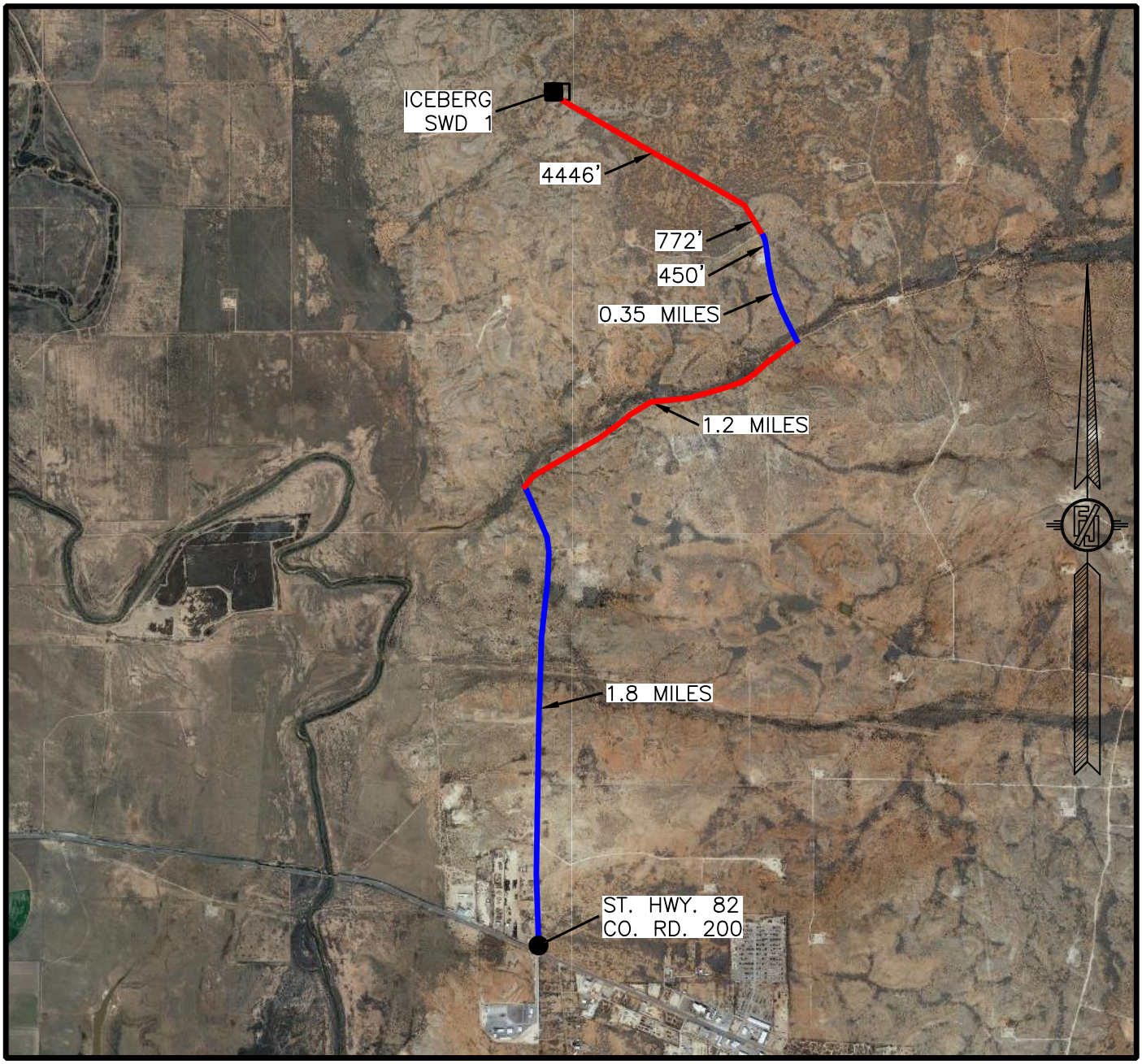
FEBRUARY 7, 2024

SURVEY NO. 9931A

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

SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2019

MACK ENERGY CORPORATION
ICEBERG SWD 1
LOCATED 180 FT. FROM THE NORTH LINE
AND 780 FT. FROM THE WEST LINE OF
SECTION 32, TOWNSHIP 16 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 7, 2024

SURVEY NO. 9931A

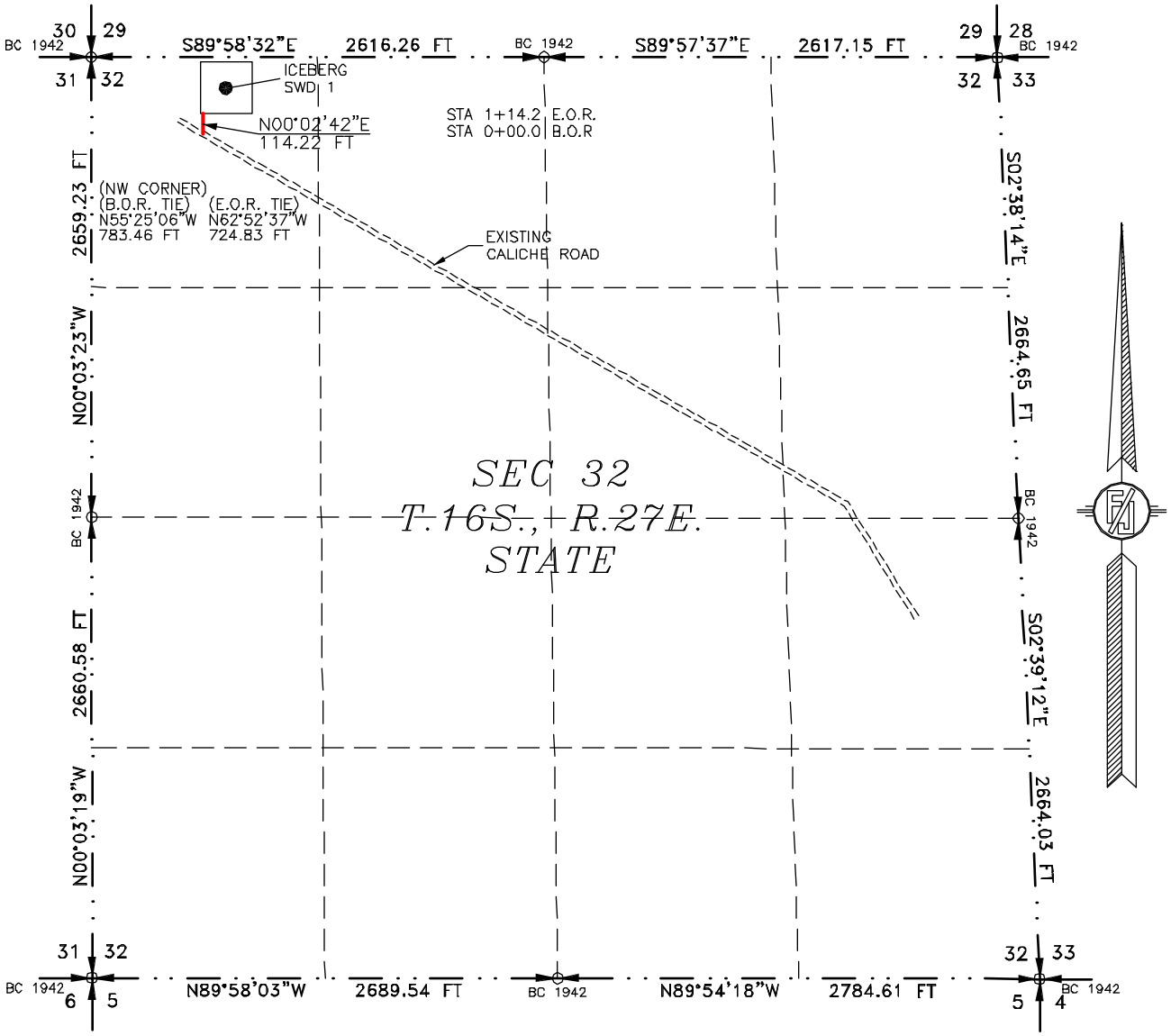
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR ICEBERG SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 7, 2024



SEE NEXT SHEET (2-2) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

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 29 DAY OF MARCH 2024

FILIMON F. JARAMILLO PLS 12797
301 SOUTH CANAL
(575) 234-3327

FILIMON F. JARAMILLO NEW MEXICO 12797 REGISTERED PROFESSIONAL SURVEYOR

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

SHEET: 1-2

SURVEY NO. 9931A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR ICEBERG SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 7, 2024

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M., EDDY 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 NW/4 OF SAID SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS N55°25'06"W, A DISTANCE OF 783.46 FEET;
THENCE N00°02'42"E A DISTANCE OF 114.22 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 32, TOWNSHIP 16 SOUTH, RANGE 27 EAST, N.M.P.M. BEARS N62°52'37"W, A DISTANCE OF 724.83 FEET;

SAID STRIP OF LAND BEING 114.22 FEET OR 6.92 RODS IN LENGTH, CONTAINING 0.079 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4	114.22 L.F.	6.92 RODS	0.079 ACRES

GENERAL NOTES

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

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

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 29TH DAY OF MARCH 2024.

FILIMON F. JARAMILLO PLS 12797
301 SOUTH CANAL
(575) 234-3327

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

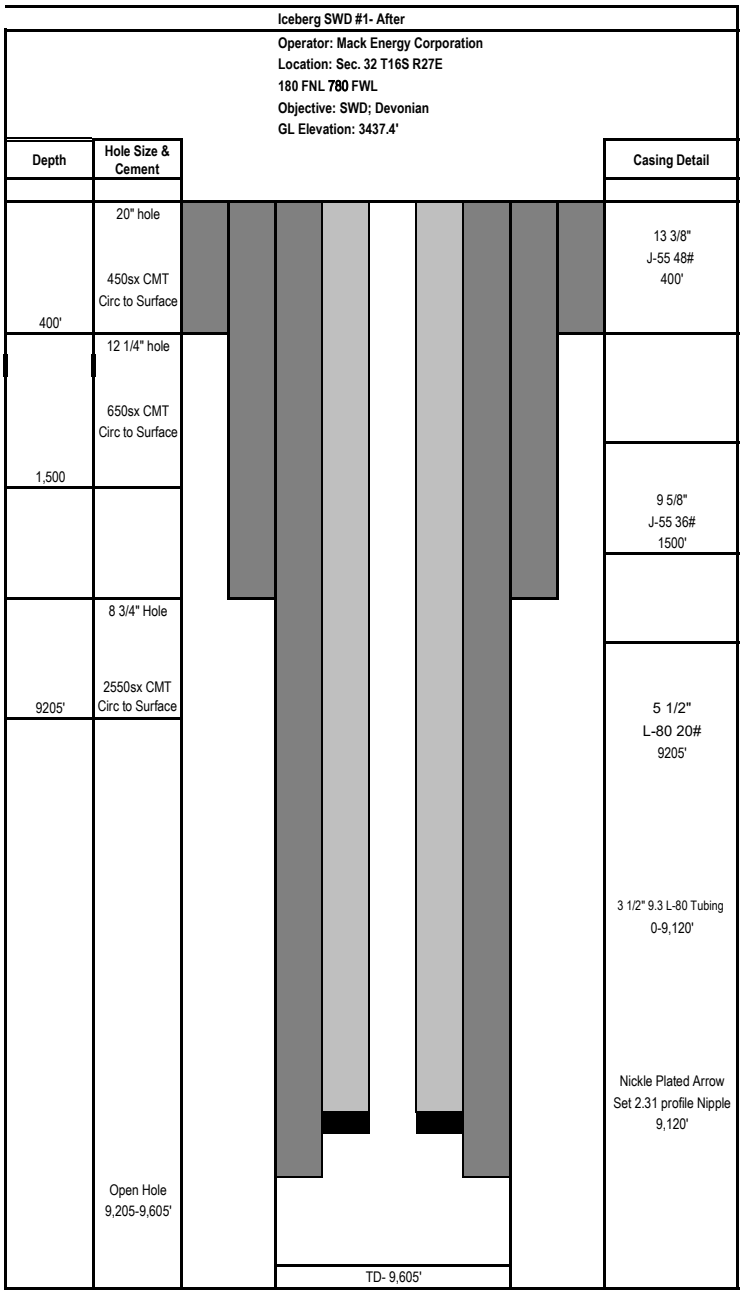
SHEET: 2-2

SURVEY NO. 9931A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

Iceberg SWD #1- After

Operator: Mack Energy Corporation
Location: Sec. 32 T16S R27E
180 FNL 780 FWL
Objective: SWD; Devonian
GL Elevation: 3437.4'



Legal Notice

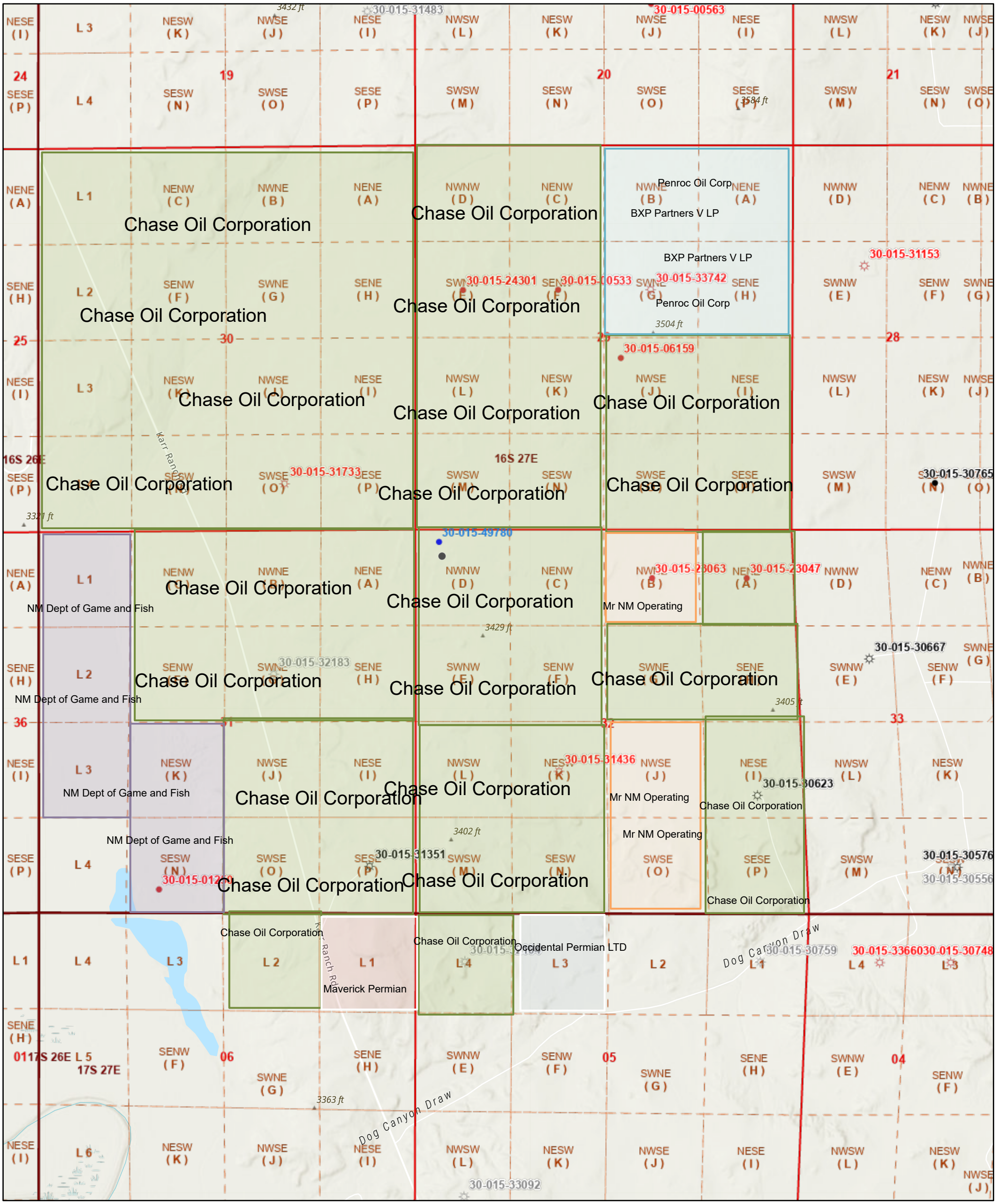
Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-1370, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Iceberg SWD #1 180 FNL 780 FWL of Section 32, T16S, R27E, NMPM, Eddy County, New Mexico. The water will be injected into the Devonian at a disposal depth of 9,205-9,605'. Water will be injected at a maximum surface pressure of 2083psi and a maximum injection rate of 15,000-20,000 BWPD. Any interest party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-1370 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.

Published in the Artesia Daily Press, Artesia, N.M., April 4, 2024 Legal No. 26816.

Legal Notice

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Iceberg SWD #1 180FNL 780FWL of Section 32, T16S, R27E, NMPM, Eddy County, New Mexico. The water will be injected into the Devonian at a disposal depth of 9,205-9,605'. Water will be injected at a maximum surface pressure of 2083psi and a maximum injection rate of 15,000-20,000 BWPD. Any interest party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-1370 or call 575-748-1288. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within fifteen days of the date of publication of this notice.

OCD Well Locations



11/8/2023, 11:05:37 AM

Areas
- Override 1
- Override 2
- Override 3
- Override 4
- Override 5
- Override 6

Wells - Large Scale
- Gas, Active
- Gas, Cancelled
- Gas, Plugged
- Oil, Active
- Oil, New
- Oil, Plugged

PLSS Second Division
PLSS First Division
PLSS Townships

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

New Mexico Oil Conservation Division

Name	Address	City	State	Zip	Certified Mail Id
New Mexico State Land Office	310 Old Santa Fe Trail	Santa Fe	NM	87501	9589 0710 5270 0130 1875 24
Bureau Of Land Management	620 E. Greene St	Carlsbad	NM	88220-6292	9589 0710 5270 0130 1875 31
Occidental Permian LTD	P.O. Box 4294	Houston	TX	77210-4294	9589 0710 5270 0130 1875 48
Mr. NM Operating LLC	5950 Berkshire Lane Suite 1000	Dallas	TX	75225	9589 0710 5270 0130 1875 55
Maverick Permian Agent Corp	1111 Bagby St Ste. 1800	Houston	TX	77002	9589 0710 5270 0130 1875 62
Penroc Oil Corp	1515 W. Calle Sur St. Ste 174	Hobbs	NM	88240-0998	9589 0710 5270 0130 1875 79
BXP Partners V LP	11757 Katy FWY Ste 475	Houston	TX	77079-1761	9589 0710 5270 0130 1875 86
NM Dept. Game and Fish	1 Wildlife Way	Santa Fe	NM	87507	9589 0710 5270 0130 1875 93

Col

MACK Energy Corporation

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

MACK Energy Corporation

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

April 2, 2024

Via Certified Mail 9589 0710 5270 0130 1875 24
Return Receipt Requested

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

To all Interest Owners:

Enclosed for you review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 9,205-9,605'. The Iceberg SWD #1 located 180 FNL & 780 FWL, Sec. 32 T16S R27E, Eddy County.

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

Sincerely,

Mack Energy Corporation

Deana Weaver

Deana Weaver
Regulatory Technician II

DW/

Attachments

MACK Energy Corporation

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

April 2, 2024

Via Certified Mail 9589 0710 5270 0130 1875 31
Return Receipt Requested

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

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April 2, 2024

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Occidental Permian LTD
P.O. Box 4294
Houston, TX 77210-4294

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Fax (575) 746-9539

April 2, 2024

Via Certified Mail 9589 0710 5270 0130 1875 55
Return Receipt Requested

Mr. NM Operating LLC
5950 Berkshire Lane Suite 1000
Dallas, TX 75225

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Fax (575) 746-9539

April 2, 2024

Via Certified Mail 9589 0710 5270 0130 1875 62
Return Receipt Requested

Maverick Permian Agent Corp
1111 Bagby St Ste. 1800
Houston, TX 77002

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Fax (575) 746-9539

April 2, 2024

Via Certified Mail 9589 0710 5270 0130 1875 79
Return Receipt Requested

Penroc Oil Corp
1515 W. Calle Sur St. Ste 174
Hobbs, NM 88240-0998

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Fax (575) 746-9539

April 2, 2024

Via Certified Mail 9589 0710 5270 0130 1875 86
Return Receipt Requested

BXP Partners V LP
11757 Katy FWY Ste 475
Houston, TX 77079-1761

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April 2, 2024

Via Certified Mail 9589 0710 5270 0130 1875 93
Return Receipt Requested

NM Department of Game and Fish
1 Wildlife Way
Santa Fe, NM 87507

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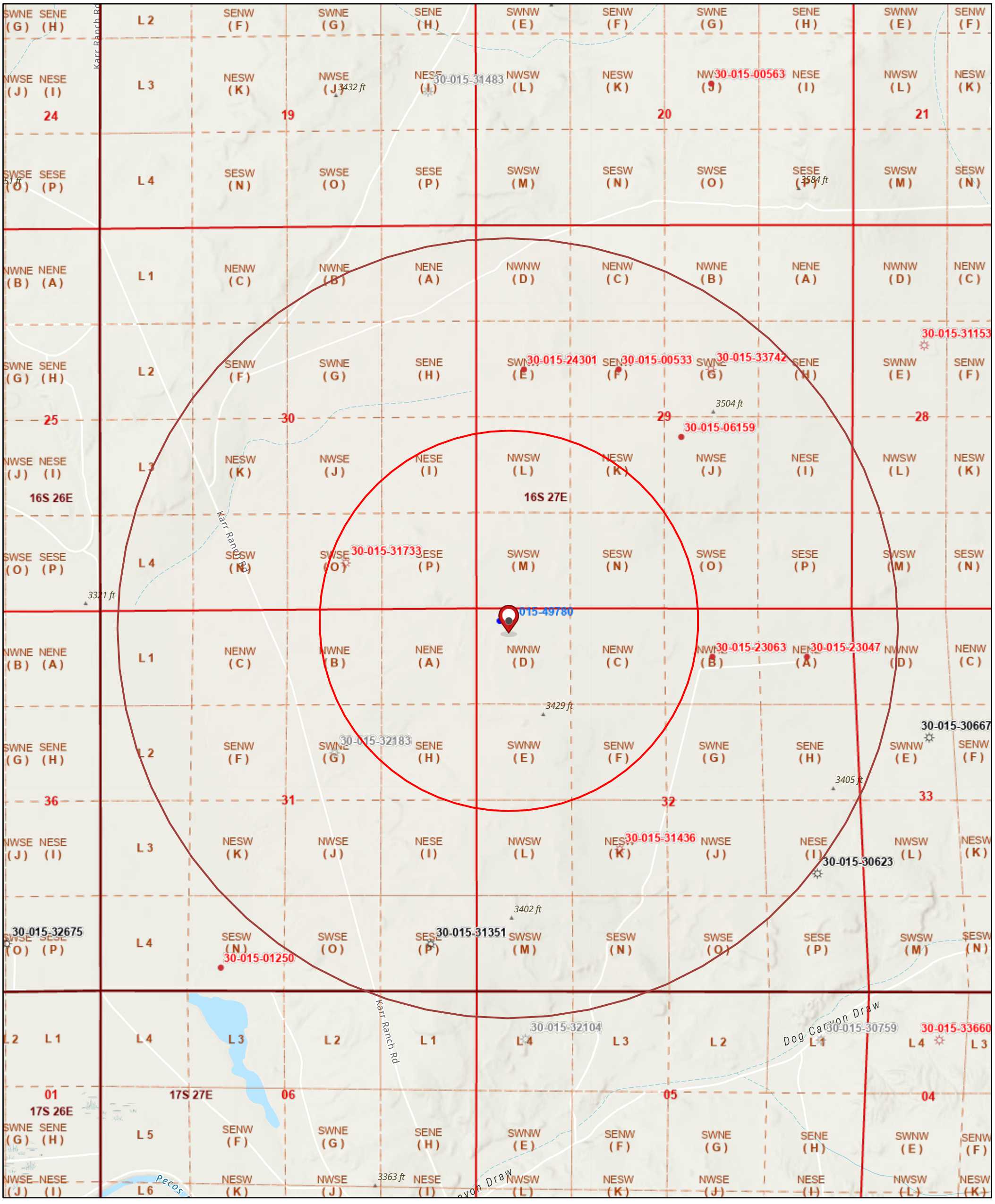
Attachments

Iceberg SWD #1
180 FNL 780 FWL
Sec. 32 T16S R27E
Formation Tops

Quaternary	Surface
Queen	523’
Grayburg	910’
San Andres	1236’
Glorieta	2765’
Tubb	3990’
Abo	4680’
Wolfcamp	5900’
Cisco	6970’
Strawn	7940’
Atoka	8250’
Morrow	8491’
U. Miss	8650’
L. Miss	8840’
Devonian	9205’
Montoya	9605’

OCD Well Locations



1/16/2024, 8:54:36 AM

Override 1

Wells - Large Scale

Gas, Active

Gas, Cancelled

Gas, Plugged

Oil, New

Oil, Plugged

PLSS Second Division

PLSS First Division

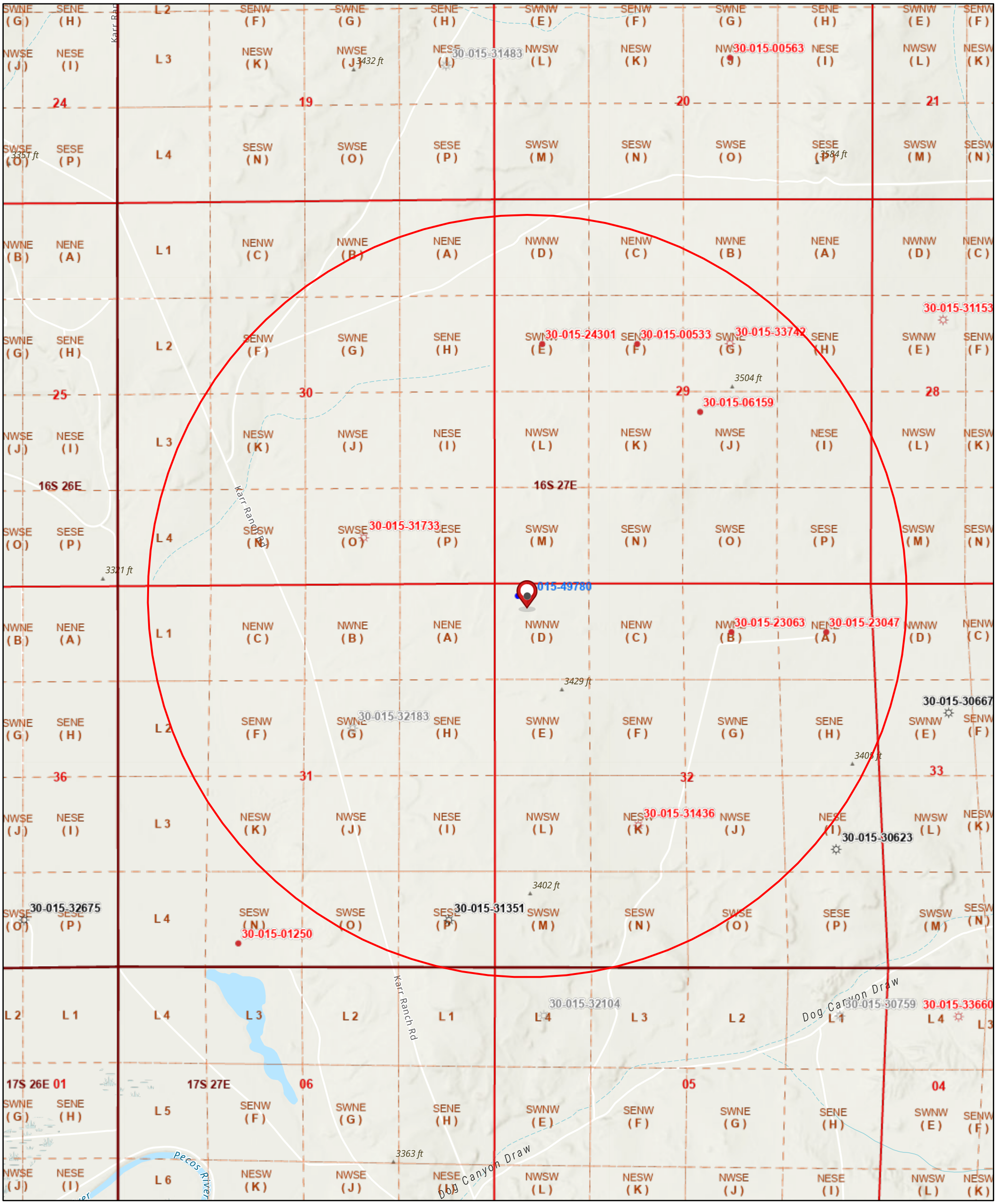
PLSS Townships

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

OCD Well Locations



1/16/2024, 8:50:32 AM

Wells - Large Scale

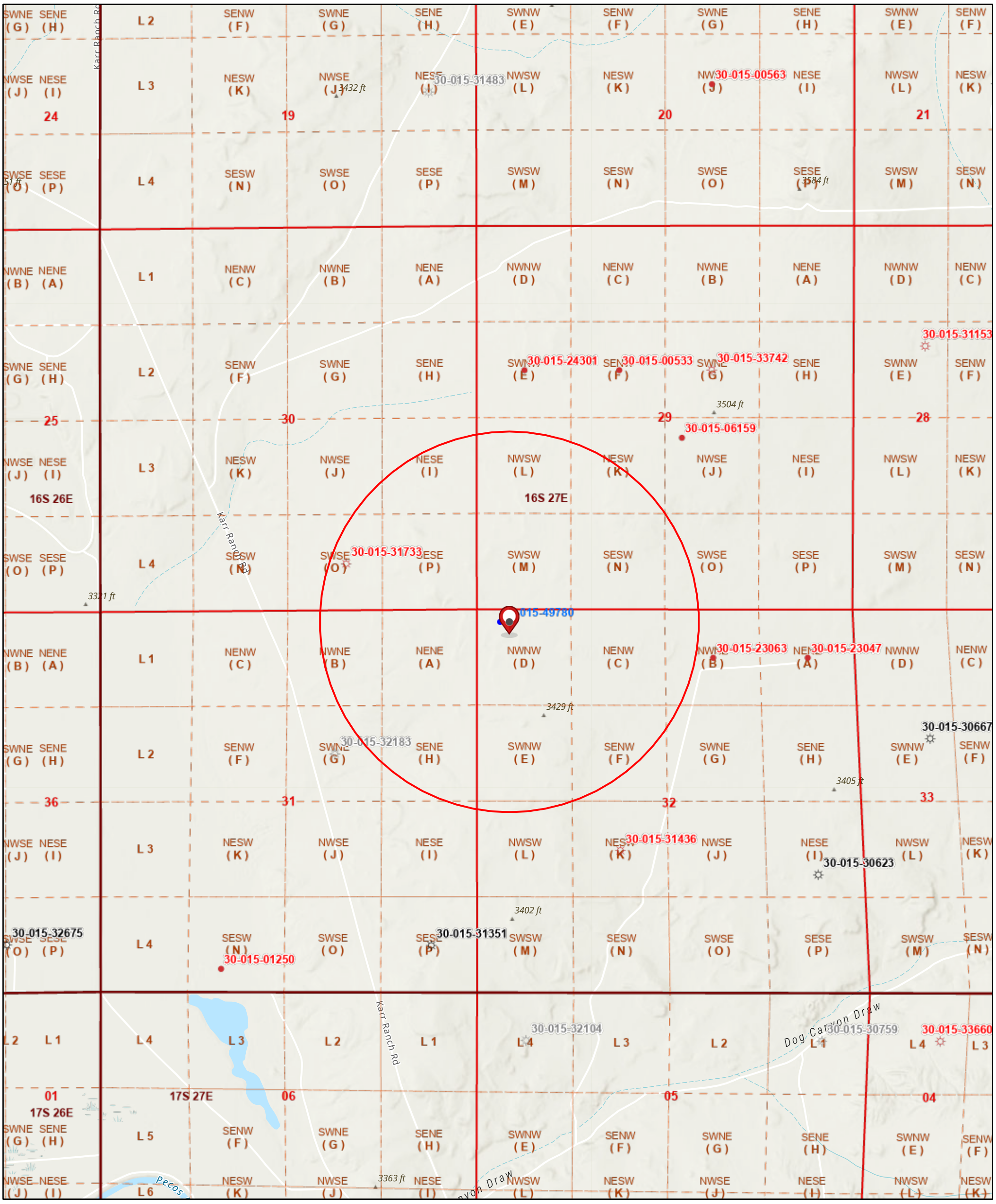
- Oil, Plugged
- Gas, Active
- PLSS Second Division
- Gas, Cancelled
- PLSS First Division
- Gas, Plugged
- PLSS Townships
- Oil, New

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

OCD Well Locations



1/16/2024, 8:52:33 AM

Wells - Large Scale

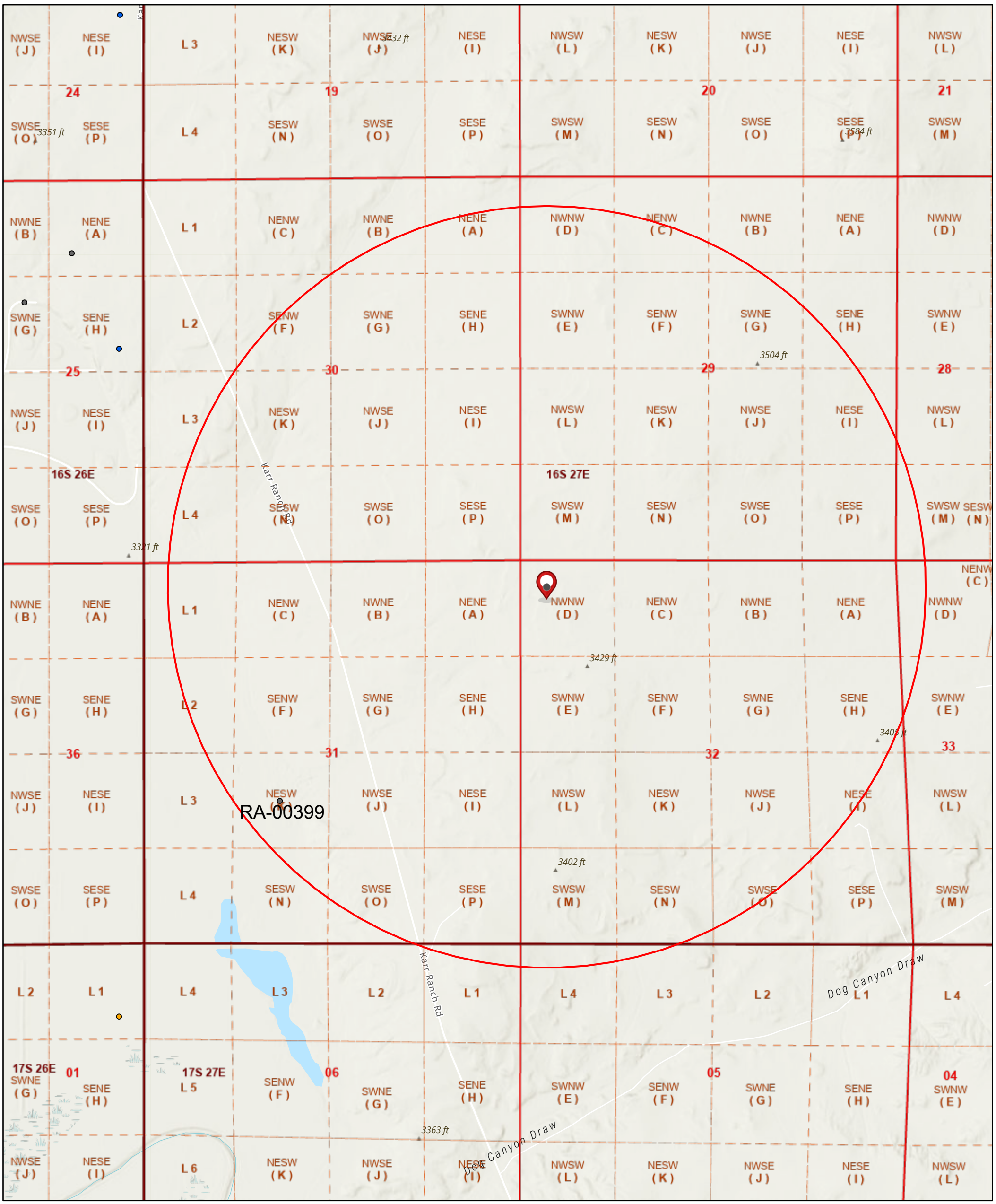
- Oil, Plugged
- Gas, Active
- Gas, Cancelled
- Gas, Plugged
- Oil, New
- PLSS Second Division
- PLSS First Division
- PLSS Townships

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

OSE Water PODS



11/15/2023, 10:06:38 AM

OSE Water PODs

- Active
- Plugged
- Unknown

PLSS Second Division

PLSS First Division

PLSS Townships

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

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

Operator	Well Name	API #	County	Footage	Sec	TWN	RNG	Type	Status	Spud Date	Comp Date	TD	PBTD	Comp Zone	Comp Interval	Hole Size	Casing Prog	Cement	Cmt Plug
Mack Energy Corporation	Iceberg SWD #1		Eddy	180 FNL 780 FWL	32	16S	27E	SWD	New			9605'		SWD; Devonian	9205-9605' Open Hole	20" @ 400'	13 3/8"	450sx	
																12 1/4" @ 1,500'	9 5/8"	650sx	
																8 3/4" @ 9605'	5 1/2"	2,550sx	
Mack Energy Corporation	Anchorage State #1	30-015-49780	Eddy	180 FNL 330 FWL	32	16S	27E	Oil	T&A	12/13/2022		2665'	2665'	WC 16S27W32; San Andres		12 1/4" @ 418'	9 5/8"	200sx Circ	50sx @ 1400'
																8 3/4" @2717'			195sx @ 754'
																			265sx @ 361'
Devon Operating INC	Riverside 30 Federal Com #1	30-015-31733	Eddy	660 FSL 1830 FEL	30	16S	27E	Gas	P&A	10/13/2001	11/11/2001	8675'		Riverside Morrow		12 1/4" @ 1402'	8 5/8"	830sx Class C	45sx 8227-8377'
																7 7/8" @ 8657'		TOC @ 285'	60sx 6803-6953'
																		Pumped 250sx, Circ 125sx	45sx 4480-4580'
																			40sx 2600-2700'
																			30sx 1352-1452'
																			60sx 150'- Surface
Mack Energy Corporation	Riverside 31 Federal Com #1	30-015-31351	Eddy	660 FSL 660 FEL	31	16S	27E	Gas	Producing	4/23/2001	5/26/2001	8740'	8618'	Riverside Morrow	8355-8408'	11" @ 1310'	8 5/8"	575 sx Class C Circ 110	
																7 7/8" @ 8732'	5 1/2"	870sx Class H TOC 5480'	
Devon Energy Production Co	Dorsey 32 State #1	30-015-31436	Eddy	1980 FSL 1980 FWL	32	16S	27E	Gas	P&A	3/25/2001		1381		Crow Flat Morrow		12 1/4" @ 1381'	8 5/8"	750sx 35/65 POZ C	NO Plugging Information
																		200sx Class C Circ 150sx	
Mr NM Operating LLC	Lucky Wolf ATB State Com #1	30-015-30623	Eddy	1650 FSL 660 FEL	32	16S	27E	Gas	Producing	9/26/2000	2/6/2001	8900	8750	S. Diamond Mound/Atoka	8384-8392 ; 8712-8720'	20" @ 40'	16"	Cmt to Surface	
																12 1/4" @ 1314'	8 5/8"	620sx Circ	
																7 7/8" @ 8900'	4 1/2"	775sx	
Merit Energy Company LLC	Lotsa Luck 29 Federal Com #3	30-015-33742	Eddy	1980 FNL 1980 FEL	29	16	27E	Gas	P&A	1/23/2005	2/25/2005	9000	8750	Crow Flat Morrow	8574-8584	12 1/4" @ 1,320'	8 5/8"	620sx	25sx 7294' TOC @ 7050'
																7 7/8" @ 8796'	5 1/2"	1565sx	25sx 4923' TOC @ 4671'
																			CIBP @ 2637' w/ 35' Cmt cap
																			CIBP @ 2000' w/ 35' Cmt cap
																			25sx 1420' TOC @ 1231'
																			30sx 250' to Surface
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-015-23063	Eddy	660 FNL 1980 FEL	32	16S	27E	Oil	P&A	11/13/1979	3/5/1980	8825		Atoka & Morrow	8619-8623'	17 1/2" @ 350'	13 3/4"	375sx Circ	Cut 4 1/2" csg @ 6700'
Texas Oil & Gas Co	Duffield State Com #1														8171-8178'	12 1/4" @ 1800'	8 5/8"	920sx Circ	35sx @ 6621
															8276-8288'	7 7/8" @ 8825'	4 1/2"	600sx TOC @ 6910'	35sx @ 2700'
																		CIBP @ 8550'	35sx @ 1850'
																		CIBP @ 8100'	35sx @ 1723'
																			35sx @ 400'
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-015-23047	Eddy	660 FNL 660 FEL	32	16S	27E	Oil	P&A	11/2/1979	1/9/1980	1950	1869	1774-1855'	San Andres	12" @ 102'	10 3/4"	50sx Circ	CIBP @ 1720' w/ 30' cmt cap
Garrett Energy Corp	Leon State #1															10" @ 1150'	7"	200sx Circ	25sx @ 1200'
																6 3/4" @ 1950'	4 1/2"	135sx TOC 450'	Cmt 500' to Surface
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-015-06159	Eddy		29	16S	27E	Oil	P&A	NO WELL RECORDS FOUND ON OCD									
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-015-00533	Eddy	1980 FNL 1980 FWL	29	16S	27E	Oil	P&A	5/20/1959	7/17/1959	8550					8 5/8"		25sx 8490-8550
Monterey Oil Co	Federal 22-29																		80sx 1650-1900
																			25sx 1300-1350
																			10sx to surface
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-015-24301	Eddy	1980 FNL 660 FWL	29	16S	27E	Oil	P&A	10/31/1982	12/6/1982	8650		Und. Riverside Morrow		15"	13 3/8"	400sx	40sx 8200-8350
TXO Production Corp	Hanson Fed Com #1															12 1/4"	8 5/8"	900sx	40sx 5800-5950
																			40sx 4600-4700
																			54sx 1950
																			10sx to Surface

30-015-49780

Anchorage State #1

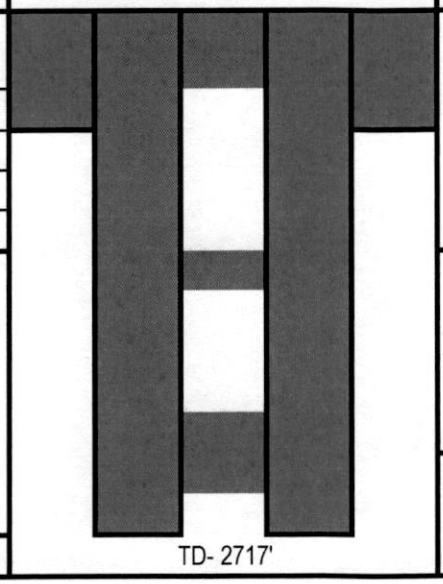
Operator: Mack Energy Corporation

Location: Sec. 32 T16S R27E

180 FNL 330 FWL

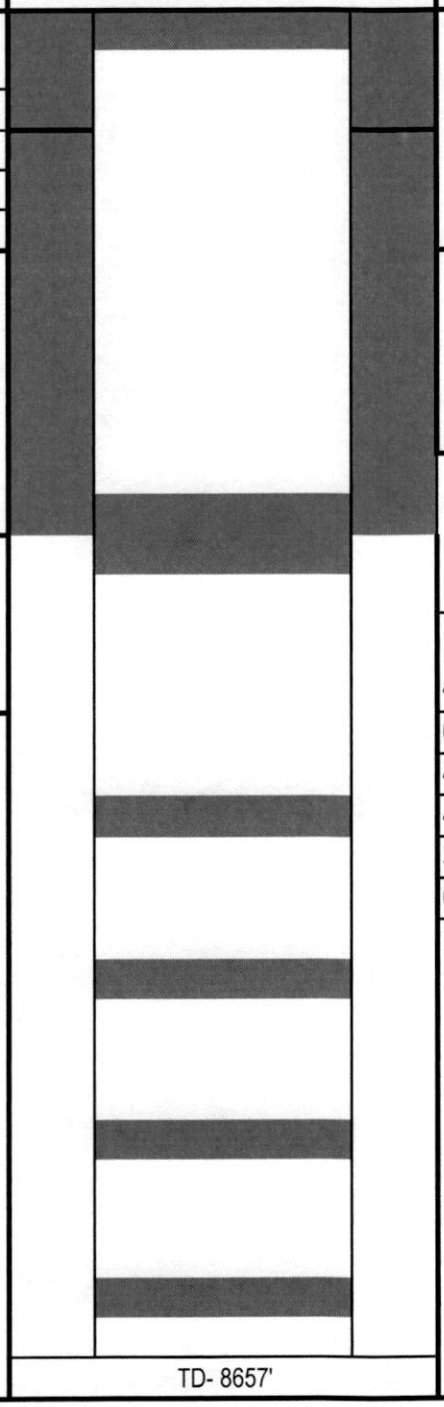
Objective: San Andres

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	9 5/8" J-55 32.0# 418'
250sx Class C		
418'		
	8 3/4"	50sx @ 1400' 195sx @ 754' 265sx @ 361'
2717'		



30-015-31733	Riverside 30 Federal Com #1
	Operator: Devon Operating Inc Location: Sec. 30 T16S R27E 660 FSL 1830 FEL Objective: Riverside Morrow

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	8 5/8" J-55 32.0# 1402'
830sx Class C		
TOC @ 285'		
Pumped 250sx, Circ 125sx		
1402'		
	7 7/8"	
8657'		
		45sx 8227-8377'
		60sx 6803-6953'
		45sx 4480-4580'
		40sx 2600-2700'
		30sx 1352-1452'
		60sx 150'- Surface



30-015-31351

Riverside 31 Federal Com #1

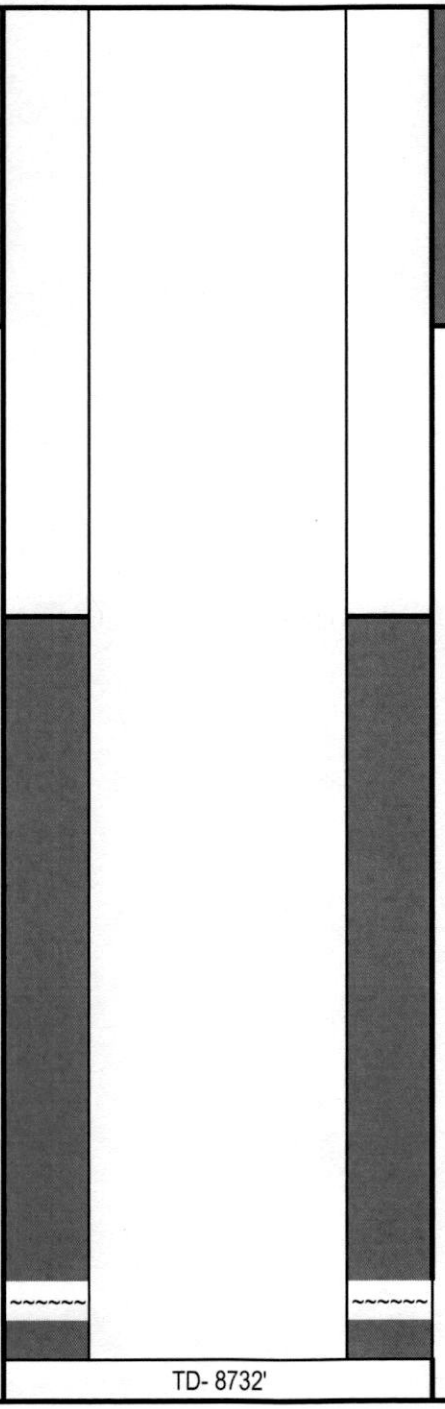
Operator: Mack Energy Corp

Location: Sec. 31 T16S R27E

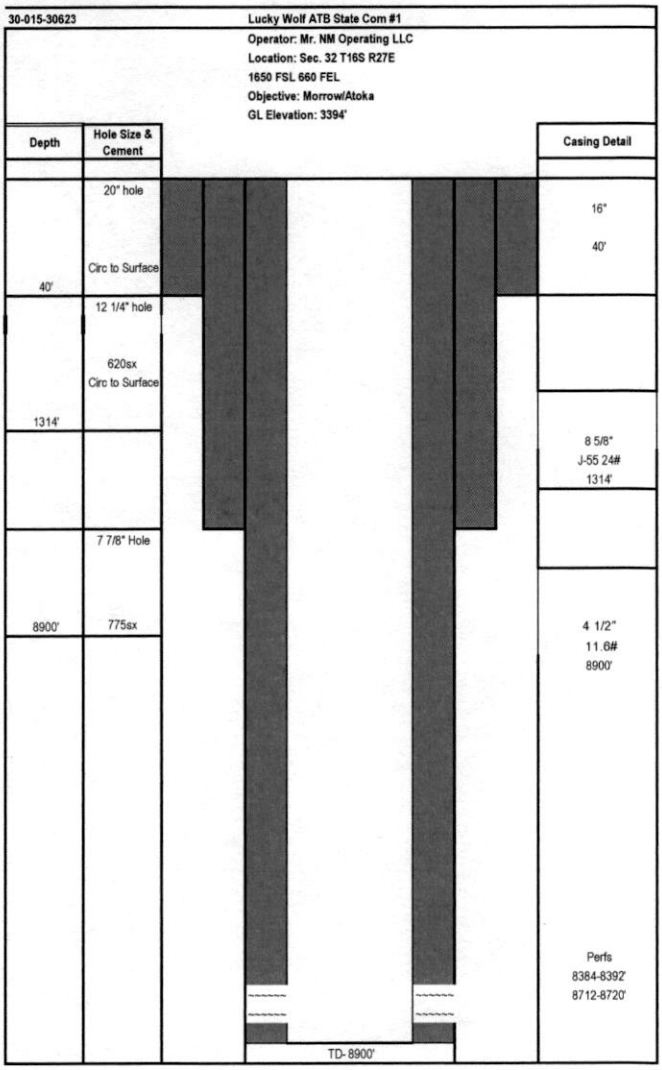
660 FSL 660 FEL

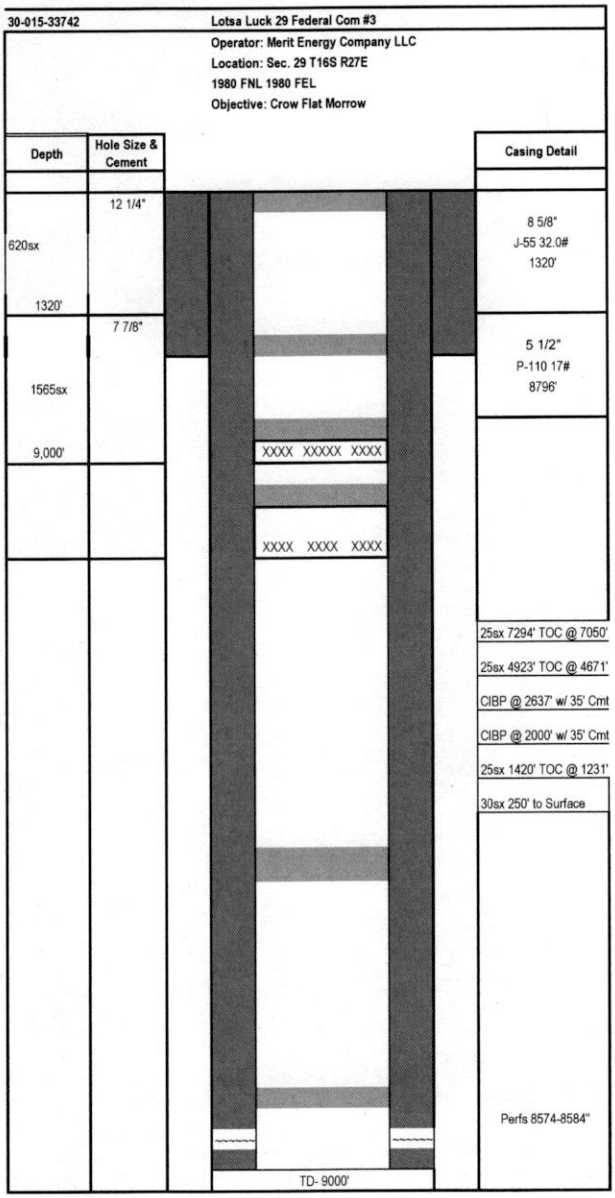
Objective: Riverside Morrow

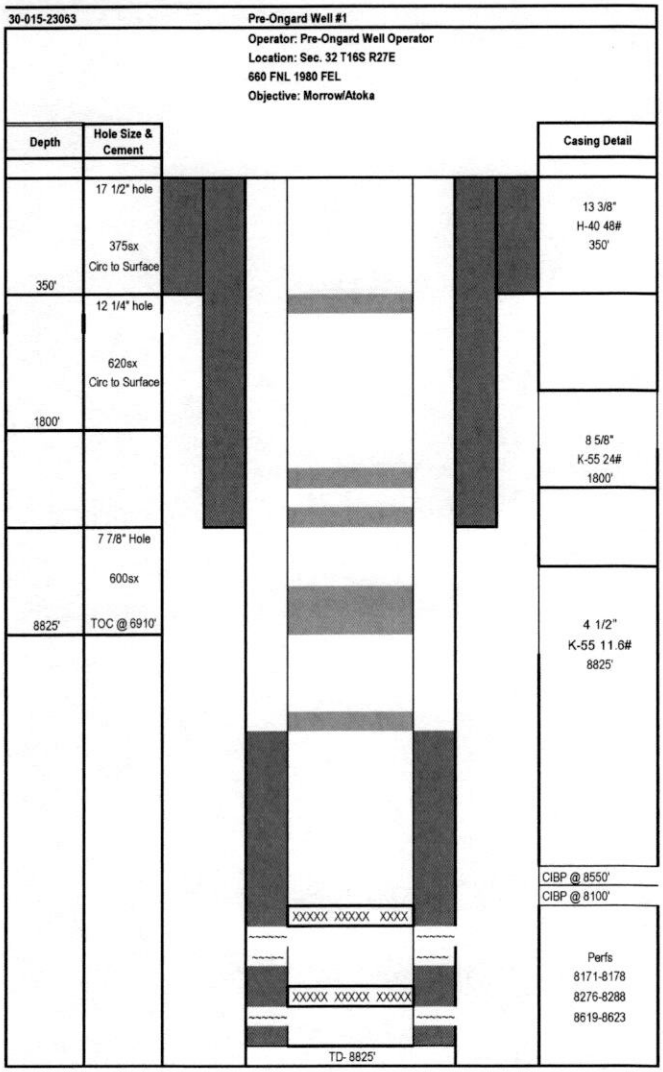
Depth	Hole Size & Cement	Casing Detail
	11'	8 5/8" K-55 32.0# 1402'
575sx C, Circ 110sx 1310'		
	7 7/8"	5 1/2" L-80 K-55 17# 8732'
870sx H TOC @ 5480' 8732'		
		Perfs 8355-8408'

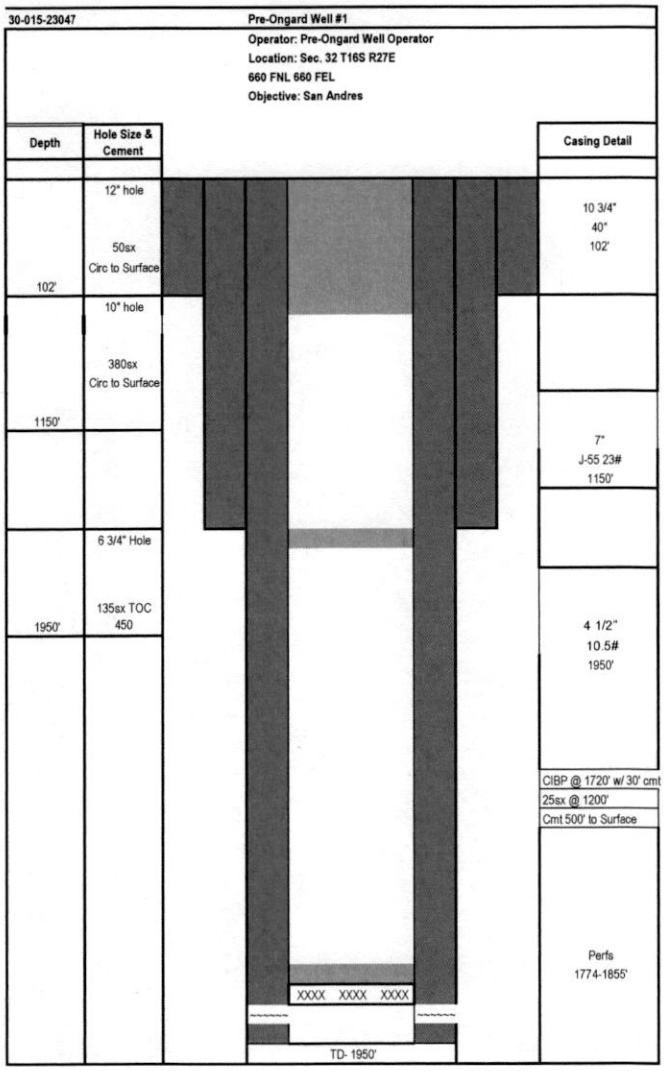


30-015-31436	Dorsey 32 State #1	
	Operator: Devon Operating Inc Location: Sec. 32 T16S R27E 1980 FSL 1980 FWL Objective: Crow Flat Morrow NO PLUGGING INFORMATION AVAILABLE	
Depth	**Hole Size & Cement**	**Casing Detail**
	12 1/4"	8 5/8" K-55 32.0# 1402'
750sx 35/65		
200sx C		
Circ		
1381'		1381'
		TD-1381'


30-015-30623
Lucky Wolf ATB State Com #1
Operator: Mr. NM Operating LLC
Location: Sec. 32 T16S R27E
1650 FSL 660 FEL
Objective: Morrow/Atoka
GL Elevation: 3394'
Depth
Hole Size & Cement
Casing Detail
20" hole
Circ to Surface
40'
16"
40'
12 1/4" hole
620sx
Circ to Surface
1314'
8 5/8"
J-55 24#
1314'
7 7/8" Hole
8900'
775sx
4 1/2"
11.6#
8900'
Perfs
8384-8392'
8712-8720'
TD- 8900'


30-015-33742
Lotsa Luck 29 Federal Com #3
Operator: Merit Energy Company LLC
Location: Sec. 29 T16S R27E
1980 FNL 1980 FEL
Objective: Crow Flat Morrow
Depth
Hole Size & Cement
Casing Detail
12 1/4"
620sx
1320'
8 5/8"
J-55 32.0#
1320'
7 7/8"
1565sx
9,000'
5 1/2"
P-110 17#
8796'
XXXX XXXXX XXXX
XXXX XXXX XXXX
25sx 7294' TOC @ 7050'
25sx 4923' TOC @ 4671'
CIBP @ 2637' w/ 35' Cmt
CIBP @ 2000' w/ 35' Cmt
25sx 1420' TOC @ 1231'
30sx 250' to Surface
Perfs 8574-8584"
TD- 9000'


30-015-23063
Pre-Ongard Well #1
Operator: Pre-Ongard Well Operator
Location: Sec. 32 T16S R27E
660 FNL 1980 FEL
Objective: Morrow/Atoka
Depth
Hole Size & Cement
Casing Detail
17 1/2" hole
375sx
Circ to Surface
350'
13 3/8"
H-40 48#
350'
12 1/4" hole
620sx
Circ to Surface
1800'
8 5/8"
K-55 24#
1800'
7 7/8" Hole
600sx
8825'
TOC @ 6910'
4 1/2"
K-55 11.6#
8825'
CIBP @ 8550'
CIBP @ 8100'
XXXXX XXXXX XXXX
XXXXX XXXXX XXXX
Perfs
8171-8178
8276-8288
8619-8623
TD- 8825'


30-015-23047
Pre-Ongard Well #1
Operator: Pre-Ongard Well Operator
Location: Sec. 32 T16S R27E
660 FNL 660 FEL
Objective: San Andres
Depth
Hole Size & Cement
Casing Detail
12" hole
50sx
Circ to Surface
102'
10 3/4"
40#
102'
10" hole
380sx
Circ to Surface
1150'
7"
J-55 23#
1150'
6 3/4" Hole
135sx TOC
450
1950'
4 1/2"
10.5#
1950'
CIBP @ 1720' w/ 30' cmt
25sx @ 1200'
Cmt 500' to Surface
Perfs
1774-1855'
XXXX XXXX XXXX
TD- 1950'

30-015-00533

Pre-Ongard Well #1

Operator: Pre-Ongard Well Operator

Location: Sec. 29 T16S R27E

1980 FNL 1980 FWL

Objective:

NO DRILLING INFORMATION AVAILABLE

Depth	Hole Size & Cement	Casing Detail
		8 5/8" 28.0# 1323'
8865'		
		25sx 8490-8550
		80sx 1650-1900
		25sx 1300-1350
		10sx to surface
		TD-8865'

30-015-24301

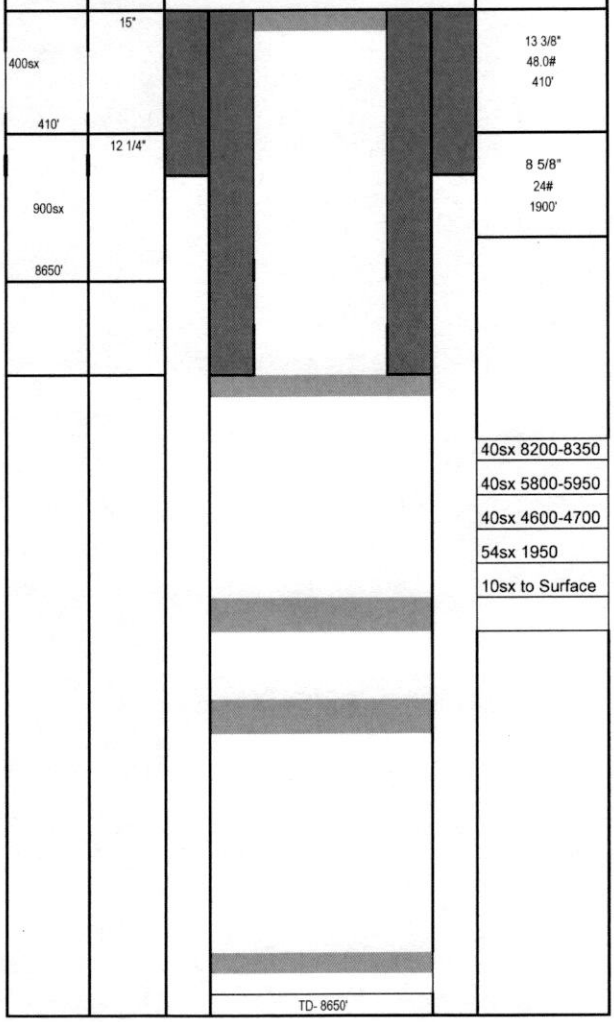
Pre-Ongard Well #1

Operator: Pre-Ongard Well Operator

Location: Sec. 29 T16S R27E

1980 FNL 660 FWL

Objective: Morrow



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 #:	228768
Area:	Artesia	Analysis ID #:	177464
Lease:	RA 00399		
Location:	Sec 31 T16s R27e 0		
Sample Point:	Wellhead		

Sampling Date:	1/11/2023
Analysis Date:	1/19/2023
Analyst:	Catalyst
TDS (mg/l or g/m3):	5570.1
Density (g/cm3):	1.006
Hydrogen Sulfide:	7.14
Carbon Dioxide:	115
Comments:	

Anions	mg/l	meq/l
Chloride:	**2292.6**	**64.67**
Bicarbonate:	**195.2**	**3.2**
Carbonate:		
Sulfate:	**1200.0**	**24.98**
Borate*:	**2.6**	**0.02**
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	7.55
pH at time of analysis:	
pH used in Calculation:	**7.55**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**1099.0**	**47.8**
Magnesium:	**194.9**	**16.03**
Calcium:	**578.4**	**28.86**
Potassium:	**6.6**	**0.17**
Strontium:	**0.4**	**0.01**
Barium:	**0.2**	**0.**
Iron:	**0.1**	**0.**
Manganese:	**0.123**	**0.**

Conductivity (micro-mhos/cm):	**8171**
Resistivity (ohm meter):	**1.2238**

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

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.66	11.15	-0.30	0.00	-0.37	0.00	-1.76	0.00	1.07	0.00
100	0.76	13.94	-0.31	0.00	-0.31	0.00	-1.75	0.00	0.92	0.00
120	0.86	17.08	-0.30	0.00	-0.22	0.00	-1.72	0.00	0.80	0.00
140	0.97	20.57	-0.28	0.00	-0.12	0.00	-1.69	0.00	0.70	0.00
160	1.08	24.05	-0.26	0.00	0.01	8.71	-1.65	0.00	0.63	0.00
180	1.20	27.89	-0.23	0.00	0.15	125.48	-1.61	0.00	0.57	0.00
200	1.32	31.72	-0.20	0.00	0.30	225.52	-1.56	0.00	0.53	0.00
220	1.45	35.21	-0.17	0.00	0.47	308.48	-1.51	0.00	0.51	0.00

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(acre ft per annum)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Twn	Rng	X	Y
RA 00399	RA	DOM	0	LOS GENTRY	ED	RA 00399				Shallow	2	3		31	16S	27E	563583	3637879*

Record Count: 1

PLSS Search:

Section(s): 31 **Township:** 16S **Range:** 27E

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Right Summary

WR File Number: RA 00399 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: DCL DECLARATION

Total Acres: 50 **Subfile:** - **Header:** -

Total Diversion: 0 **Cause/Case:** -

Owner: LOS GENTRY

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
200703	DCL	1927-08-04	DCL	PRC	RA 00399	T	50	0	

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
RA 00399		Shallow		2	3	31	16S	27E	563583	3637879*	NE CORNER NE SW

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

Place of Use

Q 256	Q 64	Q16	Q4	Sec	Tws	Rng	Acres	Diversion	CU	Use	Priority	Status	Other Location Desc
			3	31	16S	27E	50			IRR		DCL	

Source

Acres	Diversion	CU	Use	Priority	Source	Description
50	0		IRR		GW	

New Mexico Office of the State Engineer
Transaction Summary

DCL Declaration of a Water Right

Transaction Number: 200703 **Transaction Desc:** RA 00399 **File Date:** 08/04/1927

Primary Status: DCL Declared
Secondary Status: PRC Processed
Person Assigned: *******
Applicant: LOS GENTRY

Events

Date	Type	Description	Comment	Processed By
08/04/1927	APP	Application Received	*	*******
08/04/1927	FTN	Finalize non-published Trans.		*******

Water Right Information

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RA 00399	50	0		IRR IRRIGATION

****Point of Diversion**

RA 00399		563583	3637879*

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

****Place of Use**

Q 256	Q 64	Q 16	Q 4	Sec	Tws	Rng	Acres	Diversion	Consumptive	Use	Priority	Status	Other Loc Desc
			SW	31	16S	27E	50			IRR		DCL	

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 00399	2	3		31	16S	27E	563583	3637879*

Driller License:	225	**Driller Company:**	RODGERS & CO., INC.		
Driller Name:	RODGERS				
Drill Start Date:	03/04/1957	**Drill Finish Date:**	03/04/1957	**Plug Date:**	
Log File Date:	04/08/1957	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	150 GPM
Casing Size:		**Depth Well:**		**Depth Water:**	

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 30 **Township:** 16S **Range:** 27E

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 32 **Township:** 16S **Range:** 27E

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 29 **Township:** 16S **Range:** 27E

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
Analysis Date:	1/22/2019
Analyst:	Catalyst
TDS (mg/l or g/m3):	150968.6
Density (g/cm3):	1.102
Hydrogen Sulfide:	5
Carbon Dioxide:	97
Comments:	

Anions	mg/l	meq/l
Chloride:	**89383.7**	**2521.19**
Bicarbonate:	**175.7**	**2.88**
Carbonate:		
Sulfate:	**2800.0**	**58.3**
Borate*:	**190.4**	**1.2**
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	6.65
pH at time of analysis:	
pH used in Calculation:	**6.65**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**53970.0**	**2347.56**
Magnesium:	**1013.0**	**83.33**
Calcium:	**2725.0**	**135.98**
Potassium:	**644.4**	**16.48**
Strontium:	**55.6**	**1.27**
Barium:	**0.9**	**0.01**
Iron:	**9.0**	**0.32**
Manganese:	**0.857**	**0.03**

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 $CaSO_4*2H_2O$		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
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Fax: (432) 224-1038

Water Analysis Report

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

Sampling Date:	11/28/2018
Analysis Date:	12/3/2018
Analyst:	Catalyst
TDS (mg/l or g/m3):	175963.5
Density (g/cm3):	1.118
Hydrogen Sulfide:	4
Carbon Dioxide:	108
Comments:	

Anions	mg/l	meq/l
Chloride:	**104292.8**	**2941.72**
Bicarbonate:	**131.8**	**2.16**
Carbonate:		
Sulfate:	**3200.0**	**66.62**
Borate*:	**108.1**	**0.68**
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	6.95
pH at time of analysis:	
pH used in Calculation:	**6.95**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**63550.0**	**2764.27**
Magnesium:	**1027.0**	**84.49**
Calcium:	**2882.0**	**143.81**
Potassium:	**707.0**	**18.08**
Strontium:	**63.7**	**1.45**
Barium:	**0.8**	**0.01**
Iron:	**0.1**	**0.**
Manganese:	**0.189**	**0.01**

Conductivity (micro-ohms/cm):	**200381**
Resistivity (ohm meter):	**.0499**

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

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		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

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		

Sampling Date:	1/10/2019
Analysis Date:	1/23/2019
Analyst:	Catalyst
TDS (mg/l or g/m3):	151377.2
Density (g/cm3):	1.105
Hydrogen Sulfide:	4
Carbon Dioxide:	90
Comments:	

Anions	mg/l	meq/l
Chloride:	**91681.1**	**2585.99**
Bicarbonate:	**153.7**	**2.52**
Carbonate:		
Sulfate:	**700.0**	**14.57**
Borate*:	**144.3**	**0.91**
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	7.23
pH at time of analysis:	
pH used in Calculation:	**7.23**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**54050.0**	**2351.04**
Magnesium:	**1173.0**	**96.5**
Calcium:	**2767.0**	**138.07**
Potassium:	**647.0**	**16.55**
Strontium:	**60.1**	**1.37**
Barium:	**0.6**	**0.01**
Iron:	**0.0**	**0.**
Manganese:	**0.416**	**0.02**

Conductivity (micro-ohms/cm):	**197210**
Resistivity (ohm meter):	**.0507**

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

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		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

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
Analysis Date:	3/4/2020
Analyst:	Catalyst
TDS (mg/l or g/m3):	172020.9
Density (g/cm3):	1.116
Hydrogen Sulfide:	7.4
Carbon Dioxide:	102
Comments:	

Anions	mg/l	meq/l
Chloride:	101615.8	2866.21
Bicarbonate:	197.6	3.24
Carbonate:		
Sulfate:	3400.0	70.79
Borate*:	110.4	0.7
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	7.14
pH at time of analysis:	
pH used in Calculation:	**7.14**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	62440.0	2715.99
Magnesium:	965.3	79.41
Calcium:	2569.0	128.19
Potassium:	660.8	16.9
Strontium:	57.8	1.32
Barium:	3.4	0.05
Iron:	0.2	0.01
Manganese:	0.550	0.02

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 $CaSO_4 * 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	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

CATALYST
Oilfield Services

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
Analysis Date:	8/8/2019
Analyst:	Catalyst
TDS (mg/l or g/m3):	144232
Density (g/cm3):	1.097
Hydrogen Sulfide:	14
Carbon Dioxide:	162.8
Comments:	

Anions	mg/l	meq/l
Chloride:	84902.3	2394.79
Bicarbonate:	241.6	3.96
Carbonate:		
Sulfate:	3300.0	68.71
Borate*:	173.9	1.1
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	6.41
pH at time of analysis:	
pH used in Calculation:	**6.41**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	51250.0	2229.25
Magnesium:	1177.0	96.82
Calcium:	2566.0	128.04
Potassium:	564.2	14.43
Strontium:	53.5	1.22
Barium:	1.5	0.02
Iron:	1.5	0.05
Manganese:	0.460	0.02

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 $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	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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Gardendale, TX 79758
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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		

Sampling Date:	12/21/2017
Analysis Date:	1/6/2018
Analyst:	Catalyst
TDS (mg/l or g/m3):	161820.5
Density (g/cm3):	1.107
Hydrogen Sulfide:	11
Carbon Dioxide:	242
Comments:	

Anions	mg/l	meq/l
Chloride:	93901.4	2648.62
Bicarbonate:	241.6	3.96
Carbonate:		
Sulfate:	5000.0	104.1
Borate*:	229.5	1.45
Phosphate*		

***Calculated based on measured elemental boron and phosphorus.**

pH at time of sampling:	6.9
pH at time of analysis:	
pH used in Calculation:	**6.9**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	58100.0	2527.21
Magnesium:	969.6	79.76
Calcium:	2737.0	136.58
Potassium:	571.6	14.62
Strontium:	66.0	1.51
Barium:	0.0	0.
Iron:	3.8	0.14
Manganese:	0.000	0.

Conductivity (micro-ohms/cm):	**176042**
Resistivity (ohm meter):	**.0568**

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

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4 * 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	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

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 329332

CONDITIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 329332
	Action Type: [C-108] Fluid Injection Well (C-108)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	4/25/2024