AE Order Number Banner

Application Number: pEG2513254522

SWD-2654

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

Mack Energy Corporation
Lizzy SWD #1- C-108

III. Well Data

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name: Well No.; Location by Section, Township and Range; and footage location within the section.

Operator: Mack Energy Corporation (OGRID # 013837)
Lease/Well Name & Number: Lizzy SWD #1
Legal Location: 244 FNL & 750 FWL – Unit D – Section 21 T17S R33E – Lea County
Coordinates: 32.8267088, -103.6742714 (NAD 83)

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

Casing String	Hole Size (in)	Casing Size (in)	Casing Depth (ft)	Sacks Cement (sx)	Top of Cement (ft)	Method Determined
Surface	17 1/2	13 3/8	1,500'	1,010	0	Circulation
Intermediate	12 1/4	9 5/8	4,750'	1,045	0	Circulation
Production	8 3/4	7	15,980'	1,085	0	Circulation

DV Tool: @ 4700' on Production Casing string 575sx cement.
A wellbore diagram is included in ***Attachment 1***.

(3) A description of the tubing to be used including its size, lining material and setting depth.
2 7/8" 6.5 J-55 EUE IPC @ 14,765'

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.
Arrow Set 10K Nickel Plated Packer w/ 2.31 R Profile Nipple @ 14,765'

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

(1) The name of the injection formation and, if applicable, the field or pool name.
Injection Formation Name- Silurian
Pool Name- SWD; Silurian
Pool Code- 98249

(2) The injection interval and whether it is perforated or open-hole.
Perforated injection between 14,865-15,880'

(3) State if the well was drilled for injection or, if not, the original purpose of the well.
New Drill for Injection

(4) Give the depths of any other perforated intervals and details on the sacks of cement or bridge plugs used to seal off such perforations.
None

Mack Energy Corporation
Lizzy SWD #1- C-108

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

- **Overlying**
  San Andres (4645')
  Paddock (6062')
  Wolfcamp (9730')
  Morrow (13,140')
  L. Miss (14,130')
  Woodford (14,735')
- **Underlying**
  Montoya (15,880')

V. AOR Maps

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

The following figures are included in **Attachment 2**:

- 2-Mile Well Map
- 1-Mile Well Map
- 1-Mile AOR Well List
- 2-Mile Lease Map
- 1-Mile Surface Ownership Map
- 1-Mile Mineral Ownership Map

VI. AOR List

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

Details of the wells within the 1-mile AOR are included in **Attachment 2**.

VII. Operational Information

Attach data on the proposed operation, including:

(1) Proposed average and maximum daily rate and volume of fluids to be injected;
Maximum: 20,000 bwpd
Average: 15,000 bwpd

(2) **Whether the system is open or closed;**
The system is closed.

(3) Proposed average and maximum injection pressure;
Maximum: 2,973 psi
Average: 1,000 psi

Mack Energy Corporation
Lizzy SWD #1- C-108

(4) Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water;
It is anticipated that produced water from San Andres and Yeso production wells in the area will be injected into the proposed SWD. Therefore, water analyses from these formations was obtained and are included in **Attachment 3**.

(5) If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.)
N/A- There is not a Silurian well in the area to get a sample. We can provide the sample during completion. We can perf and swab the well to provide a sample.

VIII. Geologic Description

Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
The Lizzy SWD #1 injected fluid will be contained within the Devonian formation. Above the Devonian, the Woodford Shale and Mississippian Lime Formations are low porosity and low permeability and are in excess of 100 feet combined. Below the Devonian, the top 50 feet of the Montoya Formation is low porosity and low permeability and will be the bottom seal and contain the Devonian injected fluid.

- Lithologic Detail- Dolomite
- Geological Name- Silurian
- Thickness- 1015’
- TD- 15,980
- Injection Depth- 14,864-15,880’ perforated completion

The base of the lowermost Underground Source of Drinking Water (USDW), identified as the top of the first anhydrite, was determined to occur at the top of the Rustler formation at a depth of 1,475’. Water wells in the area for domestic/livestock use are drilled to the depth of approximately 190-250’.

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

Mack Energy Corporation
Lizzy SWD #1- C-108

IX. Proposed Stimulation Program

Describe the proposed stimulation program, if any.
Treated with 10,000 gallons 15% acid.

X. Logging and Test Data

Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
Logs will be run and submitted to the Division once the well is completed.

XI. Groundwater Wells

Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
Attachment 5 includes a 1-mile Water Well Map and Water Well Detail Table. Water wells in the area are shut-in, will send a water analysis when they are available to test.

XII. No Hydrologic Connection Statement

Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
A signed affirmative statement is included in **Attachment 6.**

XIII. Proof of Notice

Applicants must complete the "Proof of Notice" section on the reverse side of this form. All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.
A copy of the application was mailed to the Affected Persons, including the OCD District Office, surface owner, leasehold operators within the AOR and BLM/SLO if they own minerals within the AOR.
Attachment 7 includes a list and letters of the Affected Persons receiving notice of the application and the associated certified mailing receipts.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located.
A Public Notice was published in the Hobbs News Sun, a newspaper of general circulation in the area, and the associated affidavit is included in **Attachment 7.**

Attachment 1

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024 Submittal Type: ☑ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name
	98249	SWD; Silurian

Property Code	Property Name	Well Number
	LIZZY SWD	1

OGRID No.	Operator Name	Ground Level Elevation
13837	MACK ENERGY CORPORATION	4192.1

Surface Owner: ☐State ☑Fee ☐Tribal ☐Federal | Mineral Owner: ☐State ☐Fee ☐Tribal ☐Federal

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	21	17 S	33 E		244 NORTH	750 WEST	32.8267088°N	103.6742714°W	LEA

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
D	21	17 S	33 E		244 NORTH	750 WEST	32.8267088°N	103.6742714°W	LEA

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
40				

Order Numbers. | Well setbacks are under Common Ownership: ☐Yes ☐No

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County

Unitized Area or Area of Uniform Interest	Spacing Unit Type ☑Horizontal ☐Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

I hereby certify that the information contained herein is true and complete to the best ofmy knowledge and belief, and, if the well is a vertical or directional well, 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 a working interest run leased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order here to fore entered by the division.

If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.

Deana Weaver 2/7/2025

Signature Date

Deana Weaver

Printed Name

dweaver@mec.com

Email Address

SURVEYOR CERTIFICATIONS

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.

Signature and Seal of Professional Surveyor

FILIMON F. JARAMILLO

CertificateNumber	Dateof Survey
PLS 12797	DECEMBER 30, 2024 SURVEY NO. 10278A

Note: 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.

ACREAGE DEDICATION PLATS

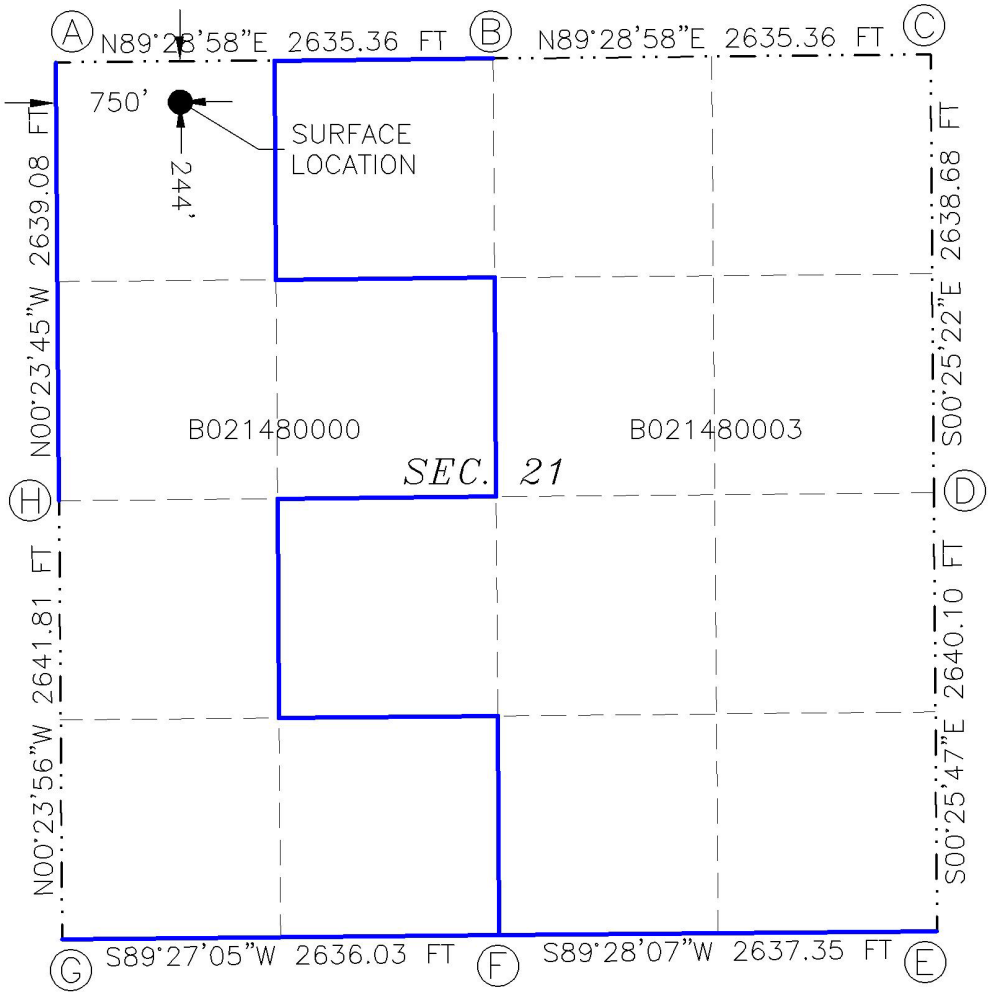
This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the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

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

LIZZY SWD 1
EL. = 4192.1

GEODETIC COORDINATES
NAD 83 NMSP EAST
SURFACE LOCATION
244' FNL, 750' FWL
N.=665120.74
E.=743786.35
LAT.=32.8267088°N
LONG.=103.6742714°W

BOTTOM OF HOLE
244' FNL, 750' FWL
N.=665120.74
E.=743786.35
LAT.=32.8267088°N
LONG.=103.6742714°W

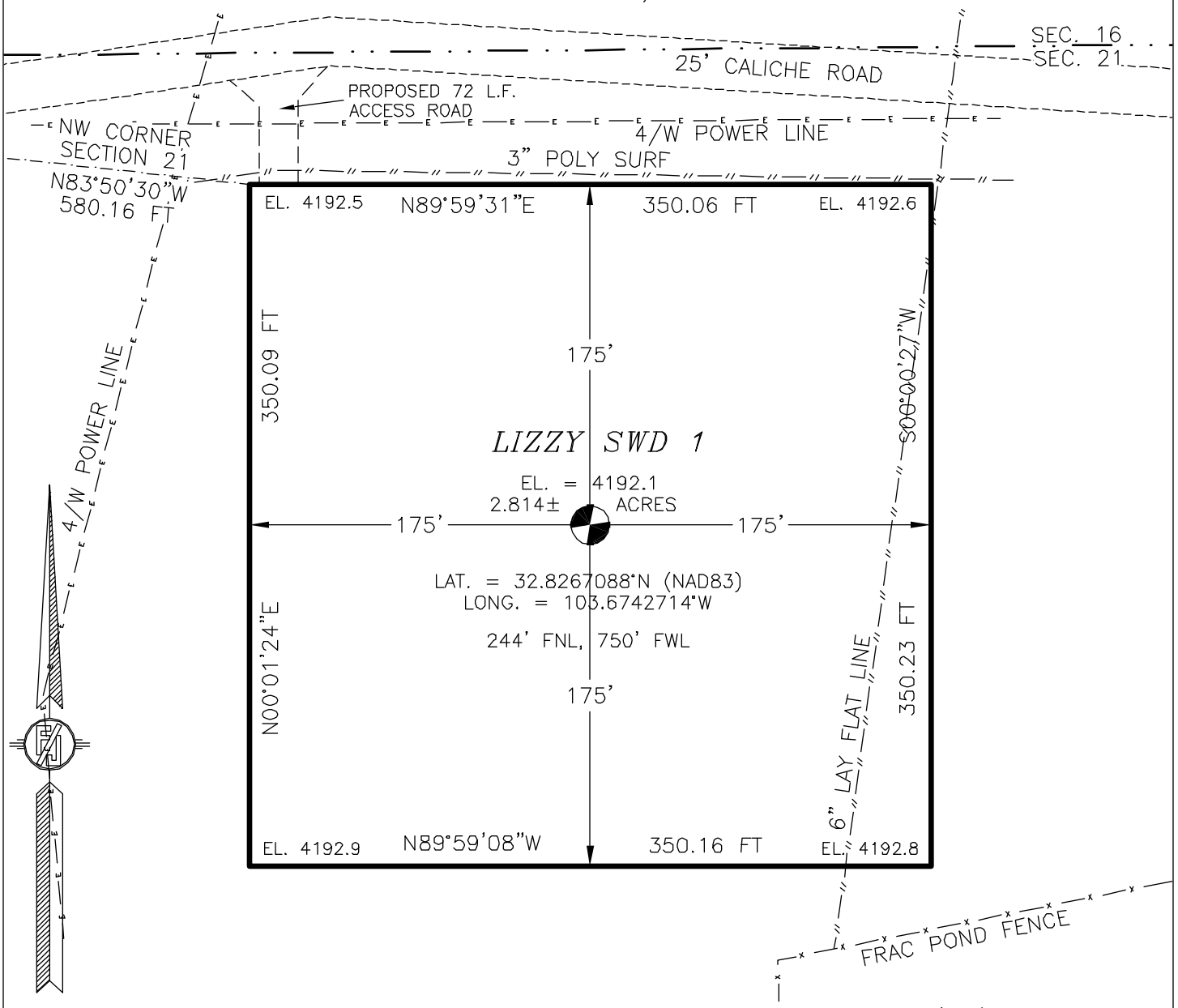


CORNER COORDINATES TABLE
NAD 83 NMSP EAST

A	N.=665357.96	E.=743034.79
B	N.=665381.74	E.=745669.42
C	N.=665405.52	E.=748304.04
D	N.=662767.54	E.=748323.50
E	N.=660128.15	E.=748343.29
F	N.=660103.69	E.=745706.69
G	N.=660078.46	E.=743071.41
H	N.=662719.57	E.=743053.02

LEGEND
SECTION LINE
QUARTER LINE
LEASE LINE
WELL PATH

LIZZY SWD 1
MACK ENERGY CORPORATION
IN THE N/2 NW/4 NW/4 OF
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
DECEMBER 30, 2024



SEE NEXT SHEET (2-7) FOR DESCRIPTION

GENERAL NOTES

1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A WELL PAD

2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE MODIFIED TO THE SURFACE (NAD83), COORDINATES ARE NAD 83, ELEVATIONS ARE NAVD 88

DRIVING DIRECTIONS: FROM THE INTERSECTION OF ST. HWY. 82 & HUMMINGBIRD ROAD, GO SOUTH ON HUMMINGBIRD ROAD APPROX. 4.45 MILES, TURN LEFT (EAST) ON 25' CALICHE ROAD AND GO EAST APPROX. 0.1 MILE TO A ROAD SURVEY ON RIGHT (SOUTH). FOLLOW ROAD SURVEY SOUTH APPROX 72' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

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 [illegible] DAY OF JANUARY 2025.

FILIMON F. JARAMILLO PLS 12797

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

SHEET: 1-7

SURVEY NO. 10278A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

LIZZY SWD 1
MACK ENERGY CORPORATION
IN THE N/2 NW/4 NW/4 OF
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
DECEMBER 30, 2024

DESCRIPTION

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN FEE LAND IN THE N/2 NW/4 NW/4 OF SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

BEGINNING AT THE NORTHWEST CORNER OF THE PARCEL, WHENCE THE NORTHWEST CORNER OF SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M. BEARS N83°50'30"W, A DISTANCE OF 580.16 FEET;
THENCE N89°59'31"E A DISTANCE OF 350.06 FEET TO THE NORTHEAST CORNER OF THE PARCEL;
THENCE S00°00'27"W A DISTANCE OF 350.23 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;
THENCE N89°59'08"W A DISTANCE OF 350.16 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;
THENCE N00°01'24"E A DISTANCE OF 350.09 FEET TO THE NORTHWEST CORNER OF THE PARCEL, THE POINT OF BEGINNING;
CONTAINING 1.931 ACRES MORE OR LESS.

GENERAL NOTES

1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE FOR THE PURPOSE OF BUILDING A WELL PAD

2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE MODIFIED TO THE SURFACE (NAD83), COORDINATES ARE NAD 83, ELEVATIONS ARE NAVD 88

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS [illegible] DAY OF JANUARY 2025.

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

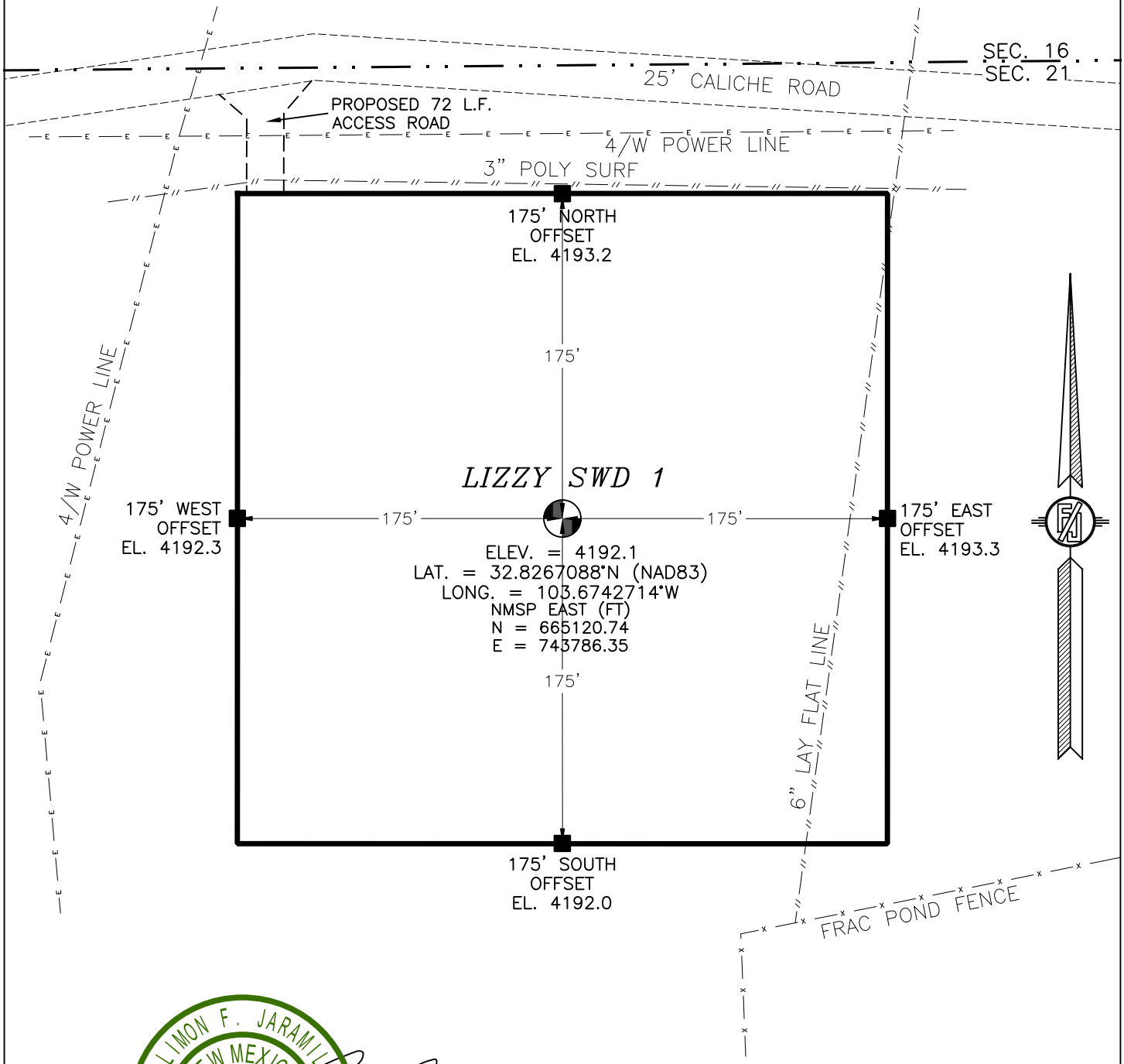
SHEET: 2-7

SURVEY NO. 10278A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

LIZZY SWD 1
MACK ENERGY CORPORATION
IN THE N/2 NW/4 NW/4 OF
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
DECEMBER 30, 2024

SITE MAP



I, FILIMON F. JARAMILLO, 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 MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, PLS# 17078

FILIMON F. JARAMILLO NEW MEXICO 17078 REGISTERED PROFESSIONAL SURVEYOR

0 8 40 80 160
SCALE 1" = 80'

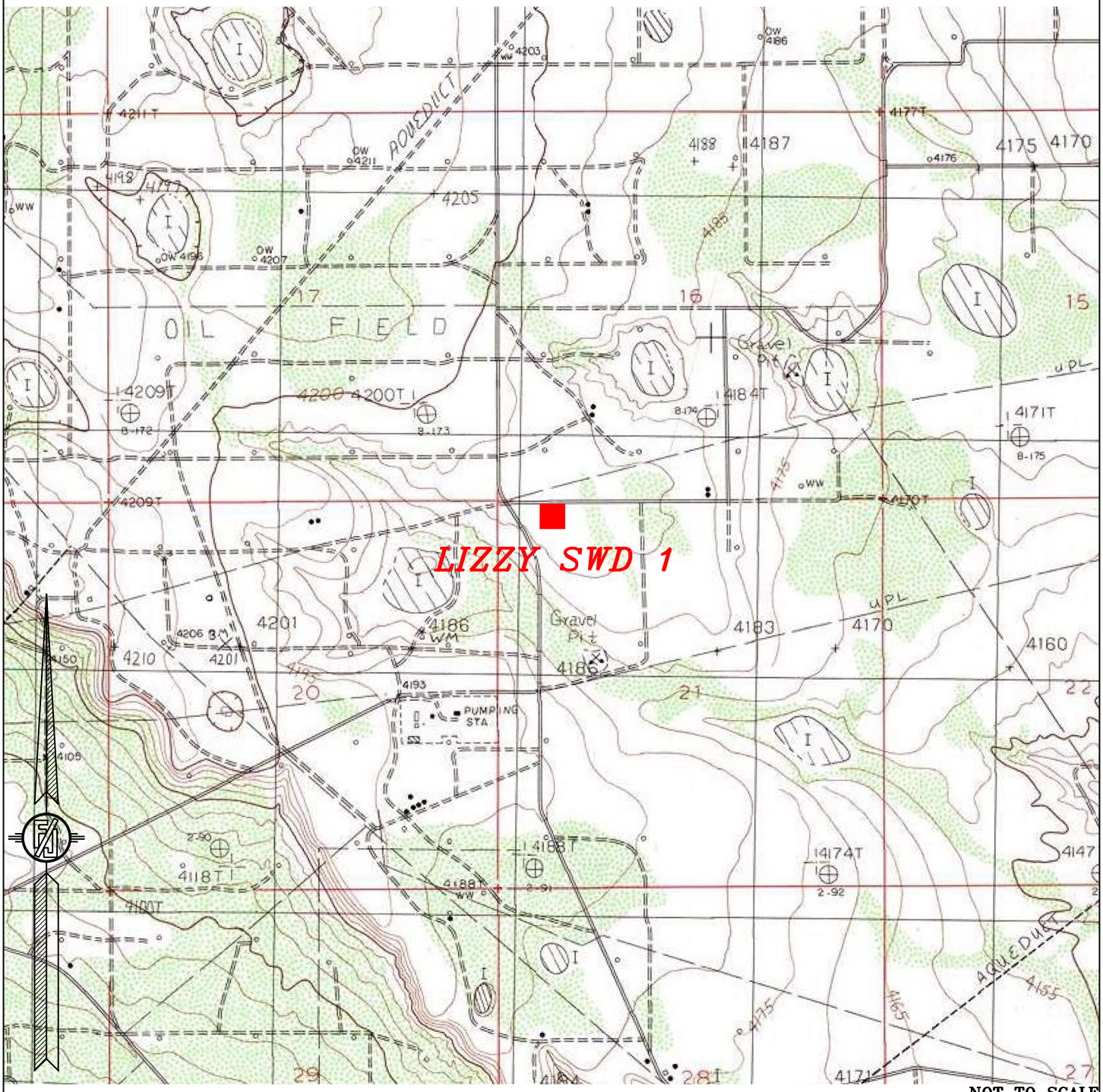
SHEET: 3 OF 5

SURVEY NO. 10278A

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

LIZZY SWD 1
MACK ENERGY CORPORATION
IN THE N/2 NW/4 NW/4 OF
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
DECEMBER 30, 2024

LOCATION VERIFICATION MAP



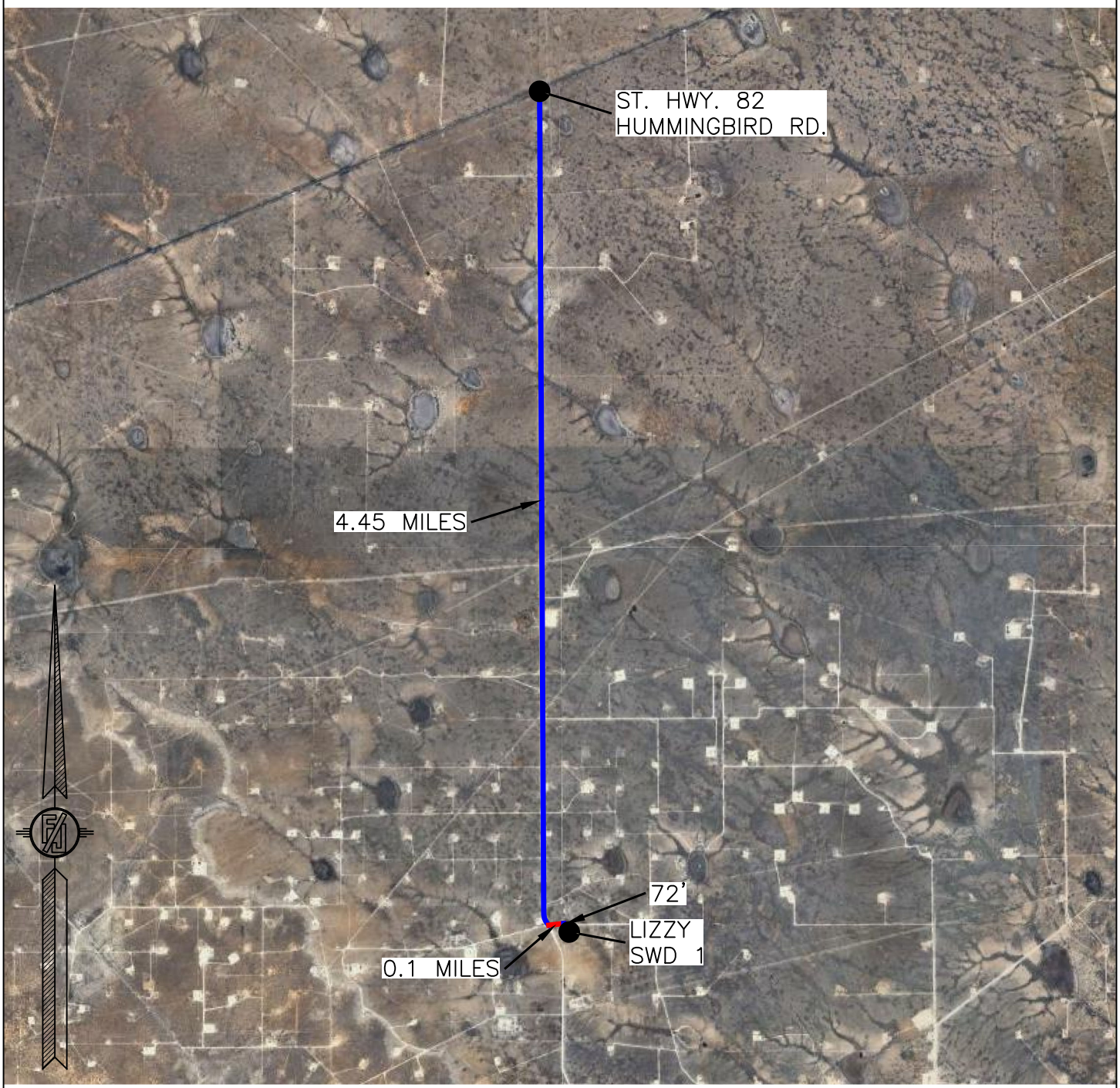
NOT TO SCALE

SHEET: 4-7 SURVEY NO. 10278A

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

LIZZY SWD 1
MACK ENERGY CORPORATION
IN THE N/2 NW/4 NW/4 OF
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
DECEMBER 30, 2024

AERIAL ACCESS ROUTE MAP



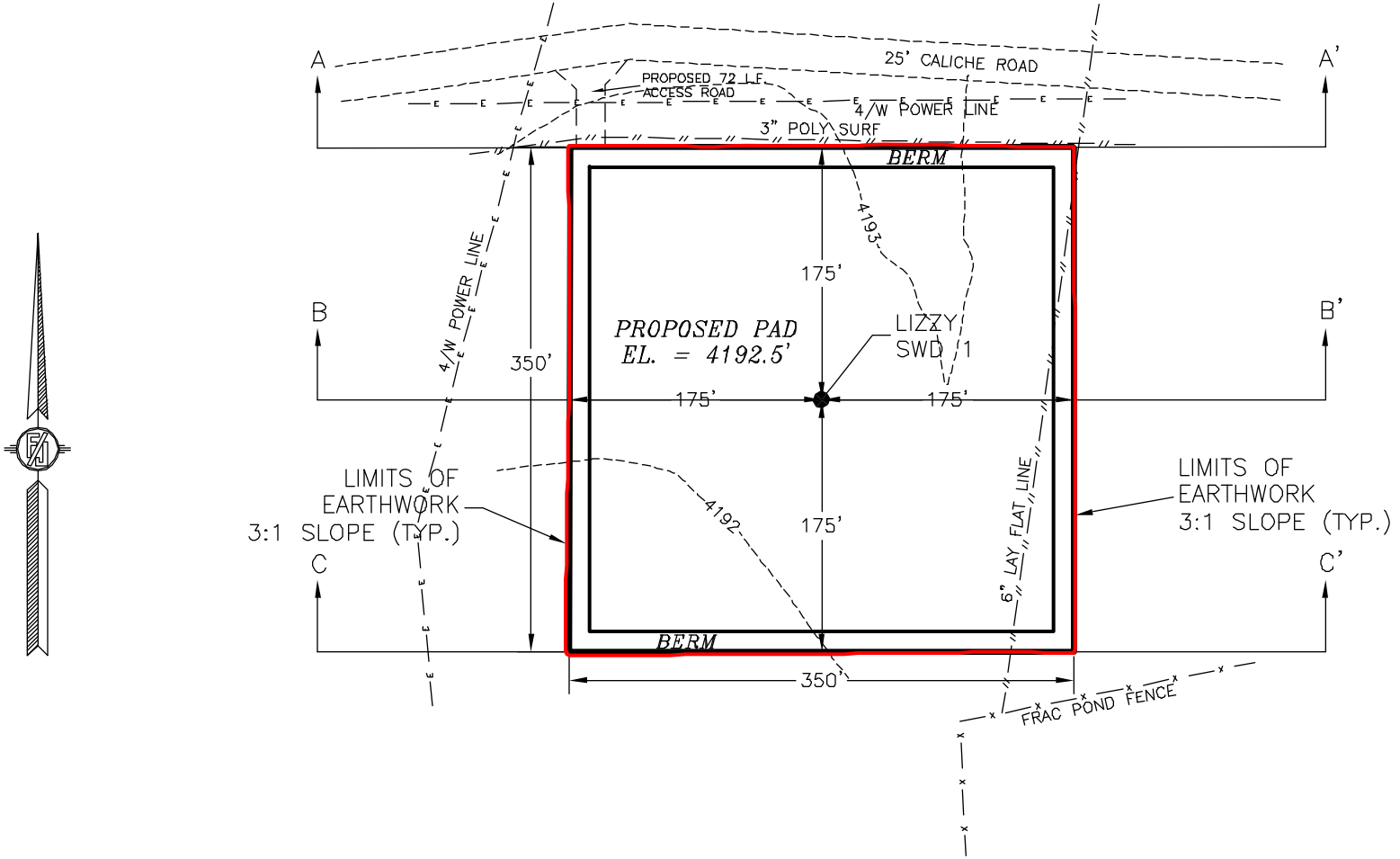
NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH

DRIVING DIRECTIONS: FROM THE INTERSECTION OF ST. HWY. 82 & HUMMINGBIRD ROAD, GO SOUTH ON HUMMINGBIRD ROAD APPROX. 4.45 MILES, TURN LEFT (EAST) ON 25' CALICHE ROAD AND GO EAST APPROX. 0.1 MILE TO A ROAD SURVEY ON RIGHT (SOUTH). FOLLOW ROAD SURVEY SOUTH APPROX 72' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

SHEET: 5-7 *SURVEY NO. 10278A*

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

PLAN VIEW



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 AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, NMPS 12797

FILIMON F. JARAMILLO 12797 REGISTERED PROFESSIONAL SURVEYOR

MACK ENERGY CORPORATION
PAD ELEVATIONS AND CROSS SECTIONS
FOR LIZZY SWD 1
SECTION 21, TOWNSHIP 17 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

DECEMBER 30, 2024

012 60 120 240
SCALE 1" = 120'

CUT	FILL	NET
649 CU. YD	1336 CU. YD	687 CU. YD (FILL)

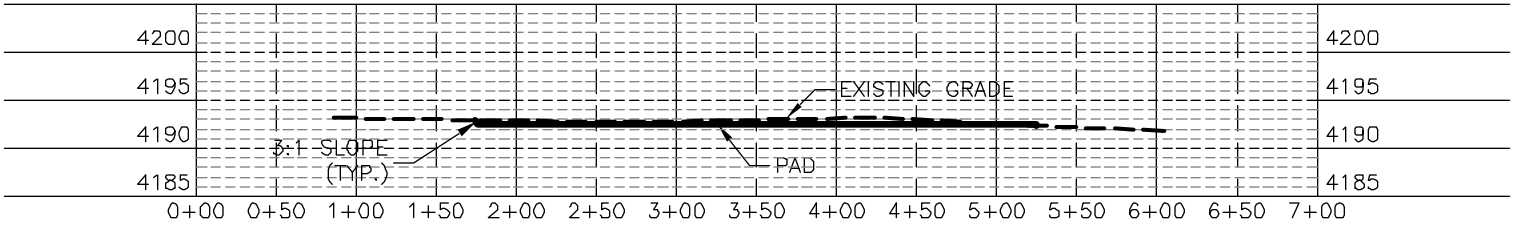
EARTHWORK QUANTITIES ARE ESTIMATED

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

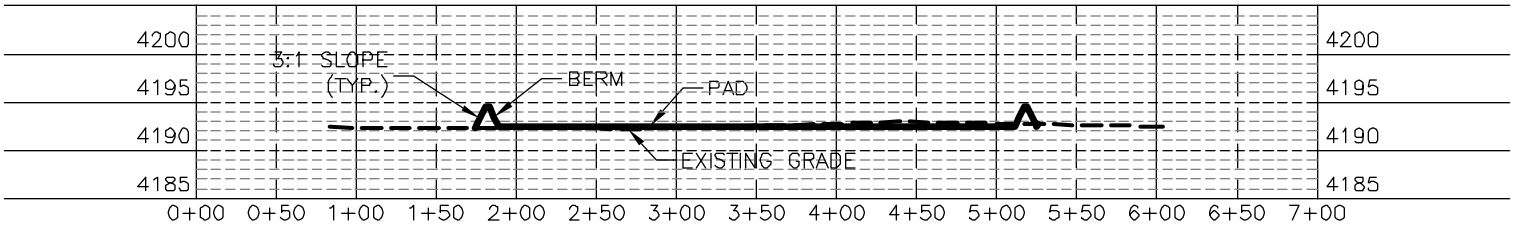
SHEET 6-7
SURVEY NO. 10278A

CROSS-SECTIONS

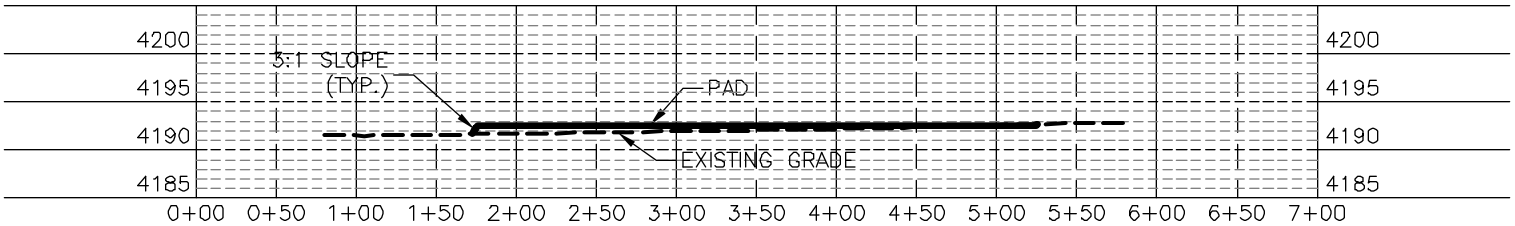
SECTION A-A'



SECTION B-B'



SECTION C-C'



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 AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, NMPS 12797

FILIMON F. JARAMILLO 12797 REGISTERED PROFESSIONAL SURVEYOR

MACK ENERGY CORPORATION
PAD ELEVATIONS AND CROSS SECTIONS
FOR LIZZY SWD 1
SECTION 21, TOWNSHIP 17 SOUTH,
RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

DECEMBER 30, 2024

0 12 60 120 240
SCALE 1" = 120' - 1" = 20' VER

CUT	FILL	NET
649 CU. YD	1336 CU. YD	687 CU. YD (FILL)

EARTHWORK QUANTITIES ARE ESTIMATED

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

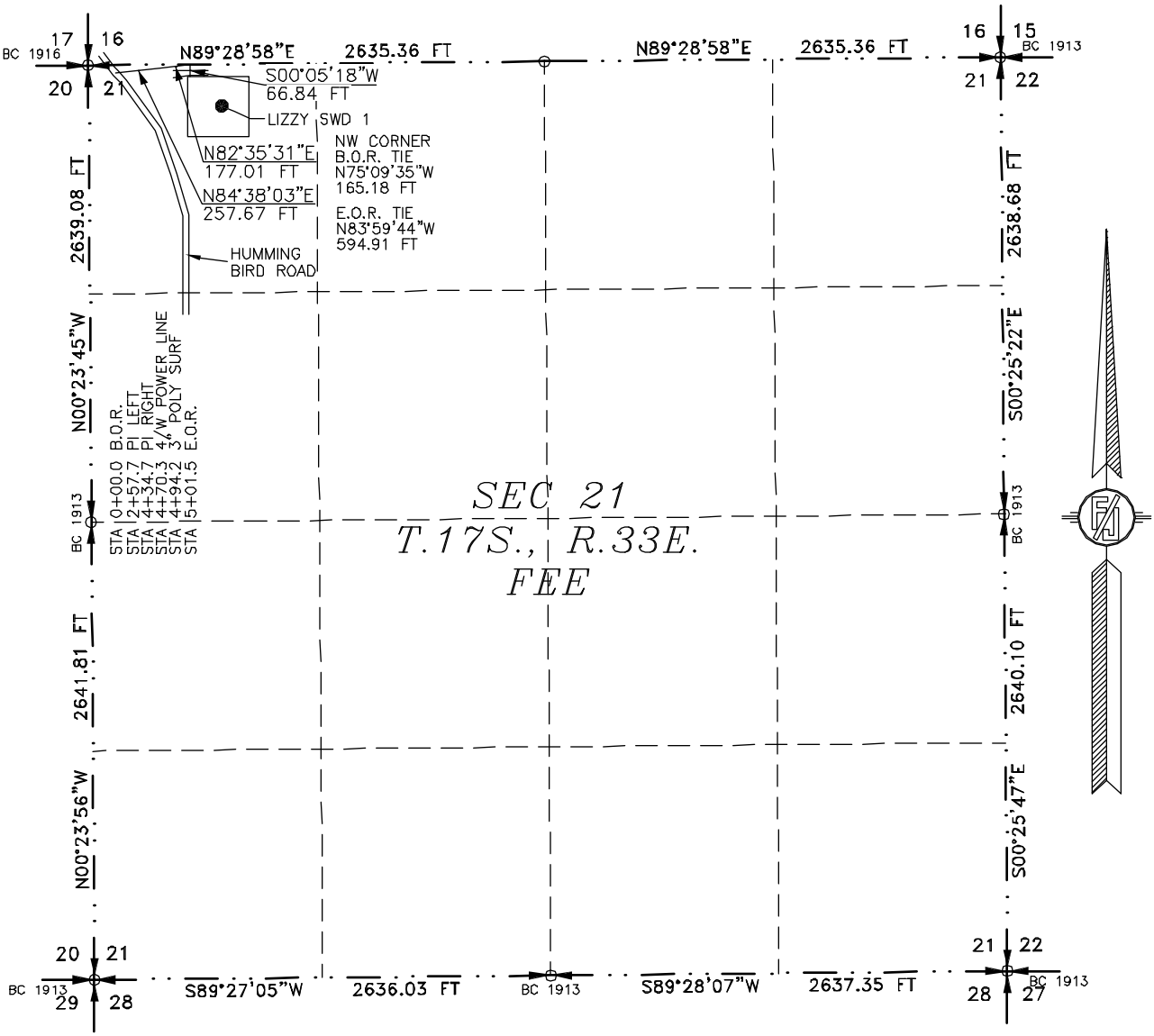
SHEET 7-7
SURVEY NO. 10278A

ACCESS ROAD PLAT

ACCESS ROAD FOR LIZZY SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
DECEMBER 30, 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 7TH DAY OF JANUARY 2025.

FILIMON F. JARAMILLO PLS 12797

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

SHEET: 1-2

SURVEY NO. 10278A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD FOR LIZZY SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
DECEMBER 30, 2024

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING FEE LAND IN SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE NW/4 NW/4 OF SAID SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M. BEARS N75°09'35"W, A DISTANCE OF 165.18 FEET;
THENCE N84°38'03"E A DISTANCE OF 257.67 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N82°35'31"E A DISTANCE OF 177.01 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S00°05'18"W A DISTANCE OF 66.84 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 21, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M. BEARS N83°59'44"W, A DISTANCE OF 594.91 FEET;

SAID STRIP OF LAND BEING 501.52 FEET OR 30.40 RODS IN LENGTH, CONTAINING 0.345 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4	501.52 L.F.	30.40 RODS	0.345 ACRES

GENERAL NOTES

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

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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 2ND DAY OF JANUARY 2025.

FILIMON F. JARAMILLO PLS 12797

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

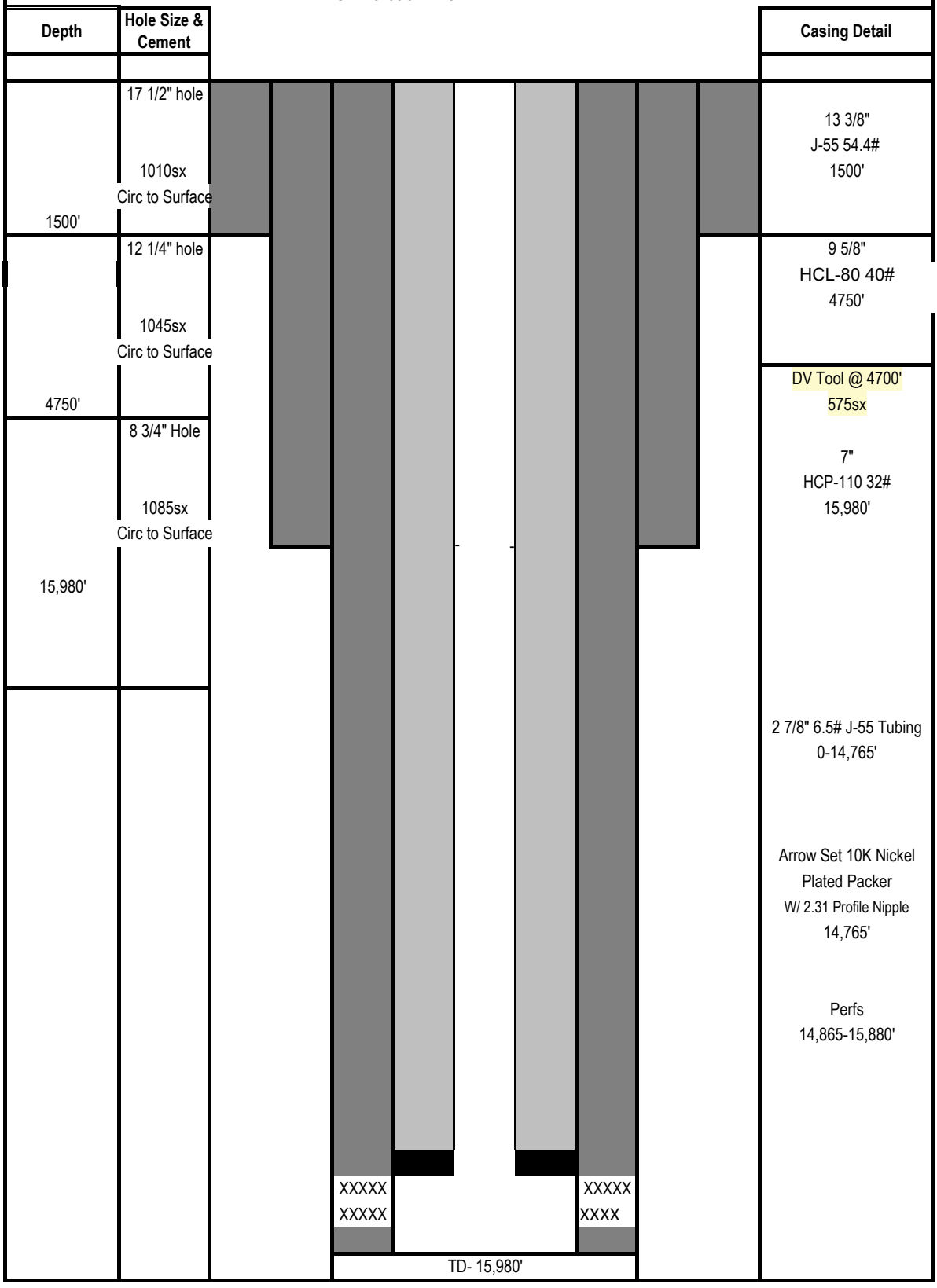
SHEET: 2-2

SURVEY NO. 10278A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

Lizzy SWD #1- After

Operator: Mack Energy Corporation
Location: Sec. 21 T17S R33E
244 FNL 750 FWL
Objective: SWD; Silurian
GL Elevation: 4192.1'



Lizzy SWD #1
275 FSL 275 FWL
SW/4 SW/4 Sec. 16 T17S R33E
Formation Tops

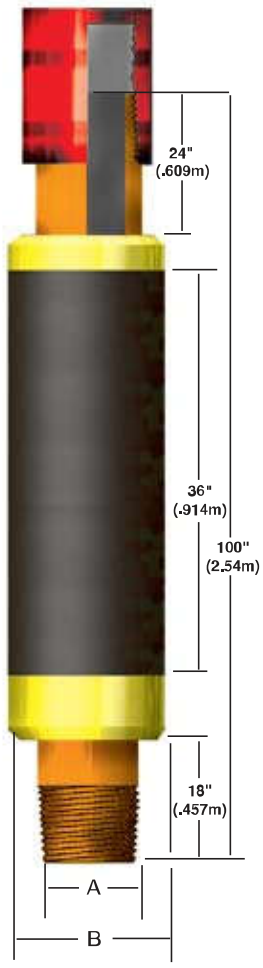
Rustler	1475’
Top Salt	1660’
Base Salt	2635’
Yates	2795’
Seven Rivers	3170’
Grayburg	4230’
San Andres	4645’
Glorieta	5968’
Paddock	6062’
Blinebry	6470’
Tubb	7395’
Abo	8081’
Wolfcamp	9730’
Cisco	11,095’
Canyon	12,050’
Strawn	12,400’
Atoka	12,590’
Morrow	13,140’
Chester	13,640’
Lower Miss	14,130’
Woodford	14,735’
Silurian	14,865’
Montoya	15,880’

Casing Size

Casing OD A		Product OD B	
in.	mm	in.	mm
1.90	48	3.06	78
2.38	60	3.50	89
2.88	73	4.00	102
3.50[1]	89	4.38	111
3.50	89	4.63	118
4.00	102	5.13	130
4.50	114	5.56	141
5.00	127	6.06	154
5.50	140	6.56	167
5.50[2]	140	7.50	191
6.63	168	7.69	195
6.63[2]	168	8.06	205
7.00	178	8.06	205
7.63	194	8.75	222
8.63	219	10.25	260
9.63	244	10.88	276
10.75	273	12.75	324
11.75	298	13.75	349
13.38	340	15.25	387
16.00	406	18.50	470
18.63	473	20.63	524
20.00	508	23.00	584

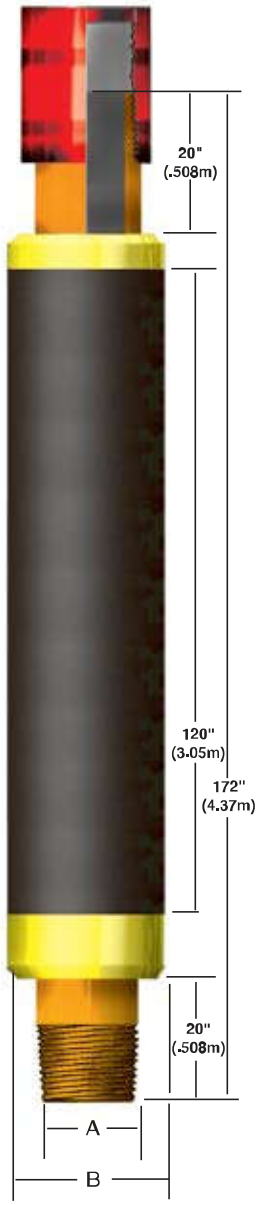
[1] *Ultra Slim*
[2] *Dual Layer*

TAMCAP



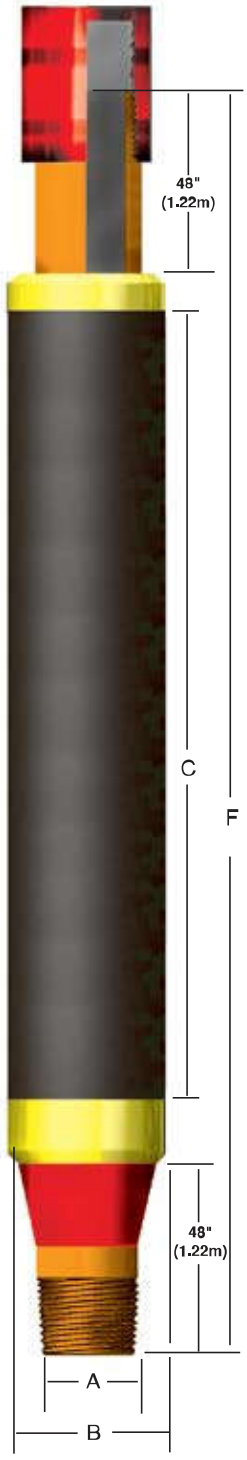
TAMCAP = TC
full steel reinforced
3 ft. inflation element

LONGCAP



LONGCAP = LC
full steel reinforced
10 ft. inflation element

XTRACAP



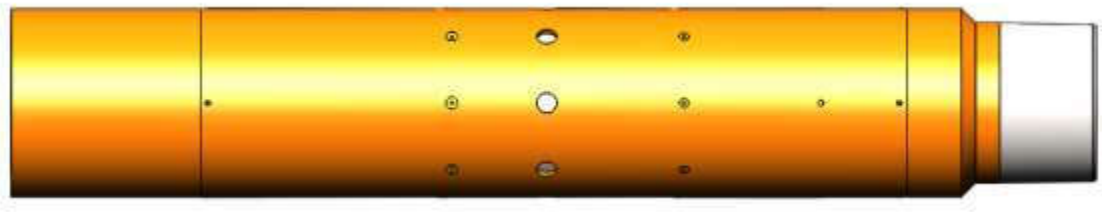
XTRACAP = XC partially reinforced 5, 10, or 20 ft. inflation element

Partially Reinforced XTRACAP

5' Seal	10' Seal	20' Seal
C=5' (1.5m)	C=10' (3.1m)	C=20' (6.1m)
F=15'(4.6m)	F=18' 6" (5.7m)	F=30' (9.2m)

TAM INTERNATIONAL

The Stage Mechanical DV tool is a device that provides a selective communication path inside the casing to the annulus. It contains an inner sleeve with a shifting profile operated by dropping a free fall device to seat. Once on seat pressure is applied, the sleeve shifts into the open position exposing ports to allow for stage cementing. A closing plug following the stage cement lands in the DV tool and closes the ports permanently. All components are PDC drillable. The Stage Mechanical DV Tool simple operation and reliability, combined with TAM's inflatable Casing Annulus Packer, make it the ideal choice stage cement jobs.



General Description	5 ½" DV Tool L80	5 ½" DV Tool P110	7" DV Tool L80	7" DV Tool P110
Casing Size	5.5 in	5.5 in	7.0 in	7.0 in
Casing Weight	17-23 ppf	17-23 ppf	26-32 ppf	26-32 ppf
Body OD	6.625 in	6.625 in	8.2 in	8.2 in
Material Grade	L80	P110	L80	P110
Burst Rating	9,240 psi	12,000 psi	8,300 psi	11,410psi
Collapse Rating	8,090 psi	9,540 psi	7,410 psi	9,140 psi
Drillout Diameter	4.777 in	4.777	6.161 in	6.161 in

TAM International, Inc. • 6505 FM 1788, Midland, Texas 79706 • Phone: 432.250.6024
E-Mail: info@tamintl.com • Web: www.tamintl.com
ISO 9001:2008 Certified Company

Attachment 7

Legal Notice

Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Lizzy SWD #1 244 FNL 750 FWL of Section 21, T17S, R33E, NMPM, Lea County, New Mexico. The water will be injected into the Silurian at a disposal depth of 14,865-15,880' (Perforated). Water will be injected at a maximum surface pressure of 2,973# and a maximum injection rate of 15,000-20,000 BWPD. Any interest party with questions or comments may contact Deana Weaver at Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960 or call 575-748-1288. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505, within fifteen days of the date of publication of this notice.

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 0175 5635 12
Bureau Of Land Management	620 E. Greene St	Carlsbad	NM	88220-6292	9589 0710 5270 0175 5635 43
Conoco Phillips Company	600 W. Illinois Ave	Midland	TX	79701	9589 0710 5270 0175 5635 29
Angell #2 Family LTD Partnership	P.O. Box 190	Lovington	NM	88260	9589 0710 5270 0175 5635 36
Maverick Permian LLC	1000 Main Street STE 2900	Houston	TX	77002-6342	9589 0710 5270 0130 1881 70
SEP Permiam LLC	9655 Katy Freeway Ste 500	Houston	TX	77024	9589 0710 5270 0175 5635 50
Rover Operating LLC	2024 W. 15th Street Ste F508	Plano	TX	75075	9589 0710 5270 0175 5635 81
Chevron USA INC and Penroc Oil Corp	P.O. Box 1635	Houston	TX	77251-1635	9589 0710 5270 0175 5635 67
EOG Resources Inc	5509 Champions Drive	Midland	TX	79706	9589 0710 5270 0175 5635 98
OXY USA WTP Limited Partnership	P.O. Box 4294	Houston	TX	77210-4294	9589 0710 5270 0175 5636 11
Devon Energy Production Co, LP	333 W. Sheridan Ave	Oklahoma City	OK	73103	9589 0710 5270 0175 5636 04
Wood McShane & Thams	P.O. Box 968	Monahans	TX	79756-0968	9589 0710 5270 0130 1879 75
XTO Energy Inc	15948 US Highway 77	Ardmore	OK	73401	9589 0710 5270 0130 1879 68
Cross Timbers Energy LLC	400 West 7th Street	Fort Worth	TX	76102	9589 0710 5270 0130 1879 51
Operators					
Linn Operating LLC	600 Travis Street Suite 1200	Houston	TX	77002	9589 0710 5270 0130 1881 56
Wiser Oil Co	8115 Preston Road Suite 400	Dallas	TX	75255	9589 0710 5270 0130 1881 63
Forest Oil Corporation	1600 Broadway Suite 2200	Denver	CO	80202	9589 0710 5270 0130 1882 00
Phillips Petroleum Co	4001 Penbrook	Odessa	TX	79762	9589 0710 5270 0130 1881 87
CML Exploration LLC	P.O. Box 890	Snyder	TX	79550	9589 0710 5270 0130 1879 99
J&J Investments LLC	P.O. Box 39	Loco Hills	NM	88255	9589 0710 5270 0130 1879 82
EnergyQuest II LLC	4526 Research Forest Dr. Suite 200	The Woodlands	TX	77396	9589 0710 5270 0130 1881 94
Flint Oak Energy LLC	21123 Eva Street Suite 200	Montgomery	TX	77356	9589 0710 5270 0130 1882 17
Aroc Texas Inc	110 Cypress Station Drive	Houston	TX	77090	9589 0710 5270 0130 1882 24
HK Energy Operation LLC	1000 Louisiana Ste 6700	Houston	TX	77002	9589 0710 5270 0130 1882 31
BXP Operating LLC	11757 Katy Freeway Suite 475	Houston	TX	77079	9589 0710 5270 0130 1880 02

MACK Energy Corporation

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

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5635 36
Return Receipt Requested

Angell #2 Family LTD Partnership
P.O. Box 190
Lovington, NM 88260

To all Interest Owners:

Enclosed for you review is a copy of Mack Energy Corporation's application for a Silurian SWD well. Produced water will be injected at a proposed depth of 14,865-15,880'. The Lizzy SWD #1 located 244 FNL & 750 FWL, Sec. 21 T17S R33E, Lea County.

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

Sincerely,

Mack Energy Corporation

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 3, 2025

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

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Fax (575) 746-9539

April 3, 2025

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Conoco Phillips Company
600 W. Illinois Ave
Midland, TX 79701

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Fax (575) 746-9539

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5635 43
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Bureau of Land Management
620 E. Greene Street
Carlsbad, NM 88220-6292

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

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5635 50
Return Receipt Requested

SEP Permian LLC
9655 Katy Freeway Suite 500
Houston, TX 77024

To all Interest Owners:

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

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5635 67
Return Receipt Requested

Chevron USA Inc. & Penroc Oil Corp
P.O. Box 1635
Houston, TX 77251-1635

To all Interest Owners:

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MACK Energy Corporation

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

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5635 81
Return Receipt Requested

Rover Operating LLC
318 West Adams Street
10th Floor
Chicago, IL 60606

To all Interest Owners:

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P.O. Box 960
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Office (575) 748-1288
Fax (575) 746-9539

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5635 98
Return Receipt Requested

EOG Resources Inc
5509 Champions Dr.
Midland, TX 79706

To all Interest Owners:

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

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5636 04
Return Receipt Requested

Devon Energy Production Co., LP
333 W. Sheridan Ave.
Oklahoma City, OK 73102

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Fax (575) 746-9539

April 3, 2025

Via Certified Mail 9589 0710 5270 0175 5636 11
Return Receipt Requested

Oxy USA WTP Limited Partnership
P.O. Box 4294
Houston, TX 77210-4294

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April 3, 2025

Via Certified Mail 9589 0710 5270 0130 1879 51
Return Receipt Requested

Cross Timbers Energy LLC
400 West 7th Street
Fort Worth, TX 76102

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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 3, 2025

Via Certified Mail 9589 0710 5270 0130 1879 68
Return Receipt Requested

XTO Energy Inc
15948 US Highway 77
Ardmore, OK 73401

To all Interest Owners:

Enclosed for you review is a copy of Mack Energy Corporation's application for a Silurian SWD well. Produced water will be injected at a proposed depth of 14,865-15,880'. The Lizzy SWD #1 located 244 FNL & 750 FWL, Sec. 21 T17S R33E, Lea County.

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

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April 3, 2025

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Wood McShane & Thams
P.O. Box 968
Monahan's, TX 79756-0968

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J & J Investments LLC
P.O. Box 39
Loco Hills, NM 88255

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April 3, 2025

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CML Exploration LLC
P.O. Box 890
Snyder, TX 79550

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April 3, 2025

Via Certified Mail 9589 0710 5270 0130 1880 02
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BXP Operating LLC
11757 Katy Freeway
Suite 475
Houston, TX 77079

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April 3, 2025

Via Certified Mail 9589 0710 5270 0130 1881 56
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Linn Operating LLC
600 Travis Street
Suite 1200
Houston, TX 77002

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April 3, 2025

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Wiser Oil Co.
8115 Preston Road
Suite 400
Dallas, TX 75255

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April 3, 2025

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Return Receipt Requested

Maverick Permian LLC
1000 Main Street
Suite 2900
Houston, TX 77002-6342

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April 3, 2025

Via Certified Mail 9589 0710 5270 0130 1882 00
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Forest Oil Corporation
1600 Broadway
Suite 2200
Denver, CO 80202

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April 3, 2025

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Phillips Petroleum CO
4001 Penbrook
Odessa TX 79762

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Fax (575) 746-9539

April 3, 2025

Via Certified Mail 9589 0710 5270 0130 1881 94
Return Receipt Requested

Energy Quest II LLC
4526 Research Forest Dr.
Suite 200
The Woodlands, TX 77396

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April 3, 2025

Via Certified Mail 9589 0710 5270 0130 1882 17
Return Receipt Requested

Flint Oak Energy LLC
21123 Eva Street
Suite 200
Montgomery, TX 77356

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Aroc Texas Inc
110 Cypress Station Drive
Houston, TX 77090

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HK Energy Operation LLC
1000 Louisiana Ste 6700
Houston, TX 77002

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Attachment 2

2 Mile Well Map

2/18/2025, 2:14:53 PM

Override 1

Wells - Large Scale

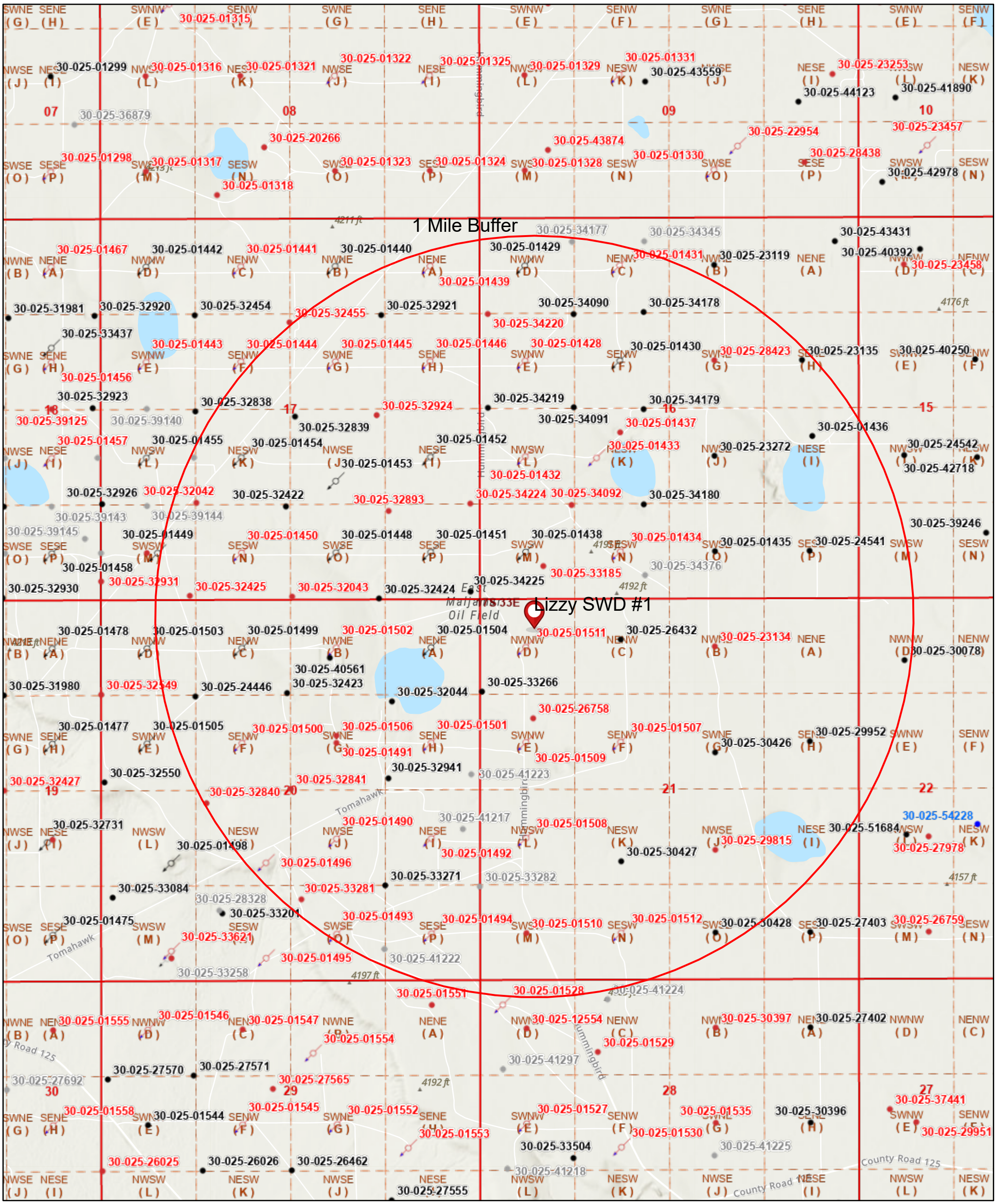
- Miscellaneous
- Gas, Active
- Gas, Cancelled
- Gas, Plugged
- Injection, Active
- Injection, Cancelled
- Injection, New
- Injection, Plugged
- Oil, Active
- Oil, Cancelled
- Oil, New
- Oil, Plugged
- Oil, Temporarily Abandoned
- Salt Water Injection, Active
- Salt Water Injection, Plugged
- OCD Districts
- PLSS First Division
- PLSS Townships

1:36,112

0 0.35 0.7 1.4 mi

0 0.5 1 2 km

1 Mile Well Map



2/18/2025, 2:18:40 PM

Wells - Large Scale

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

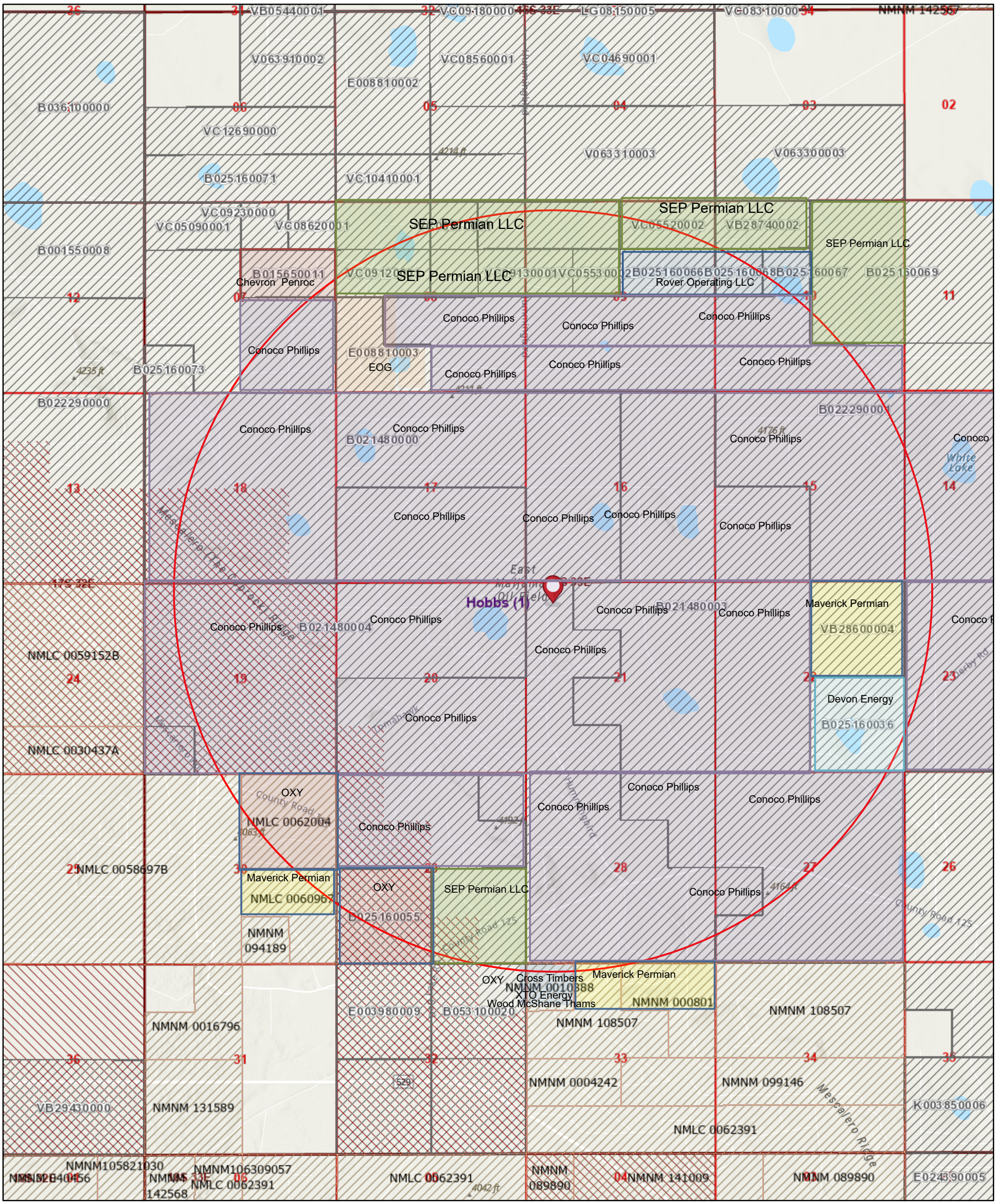
1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

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

2 Mile Leaseholder Map



2/19/2025, 9:19:21 AM

Areas
Override 1
Override 2
Override 3
Override 4
Override 5
Override 6
Override 7
Override 8
Override 9
Authorized
Oil and Gas Leasing Restrictions
Oil and Gas Leases
OCD Districts
PLSS First Division
PLSS Townships

1:36,112

0 0.35 0.7 1.4 mi

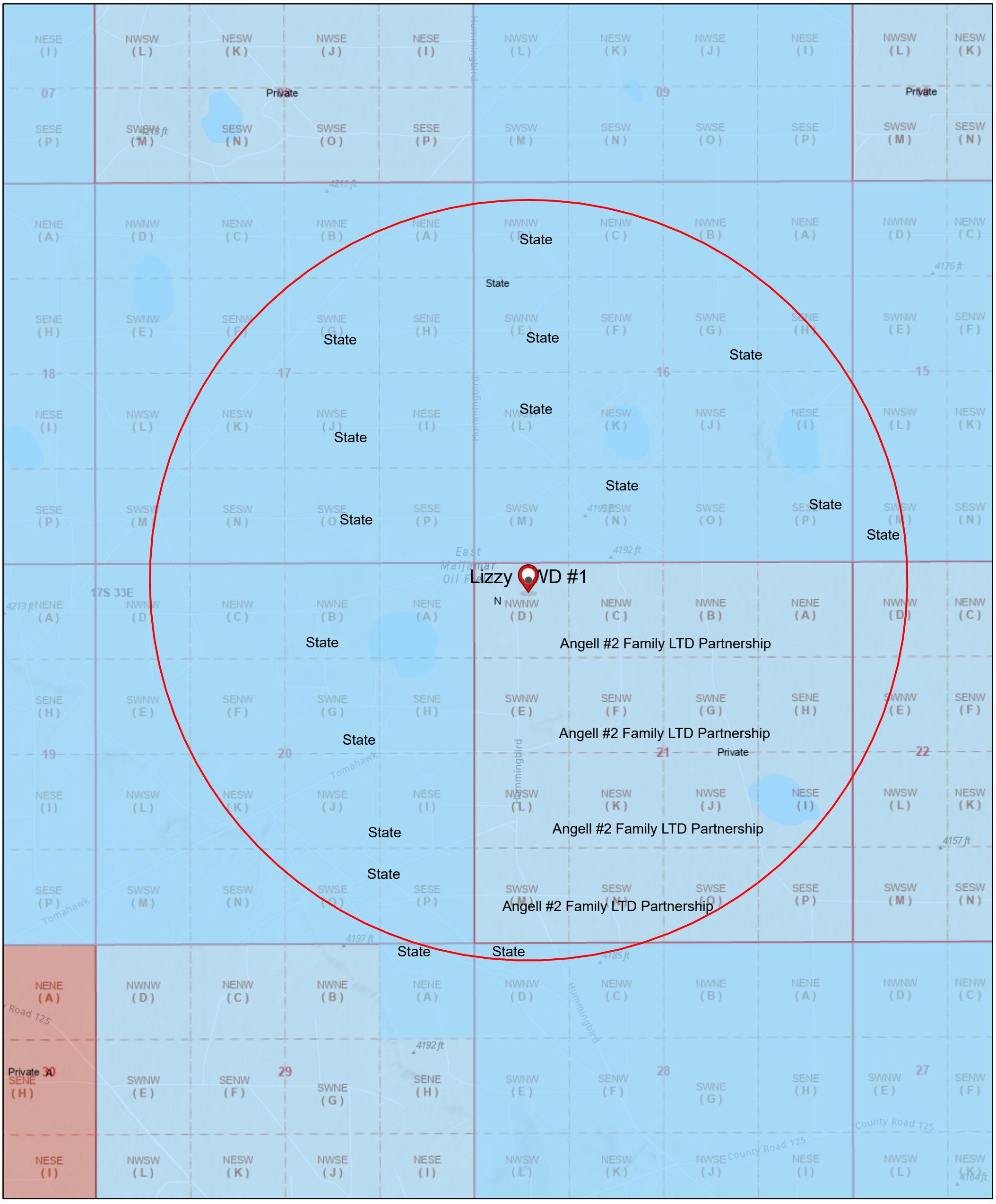
0 0.5 1 2 km

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

New Mexico Oil Conservation Division

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

1 Mile Surface Ownership



1/28/2025, 10:33:13 AM

Mineral Ownership

A-All minerals are owned by U.S.

N-No minerals are owned by the U.S.

Land Ownership

P

S

PLSS Second Division

PLSS First Division

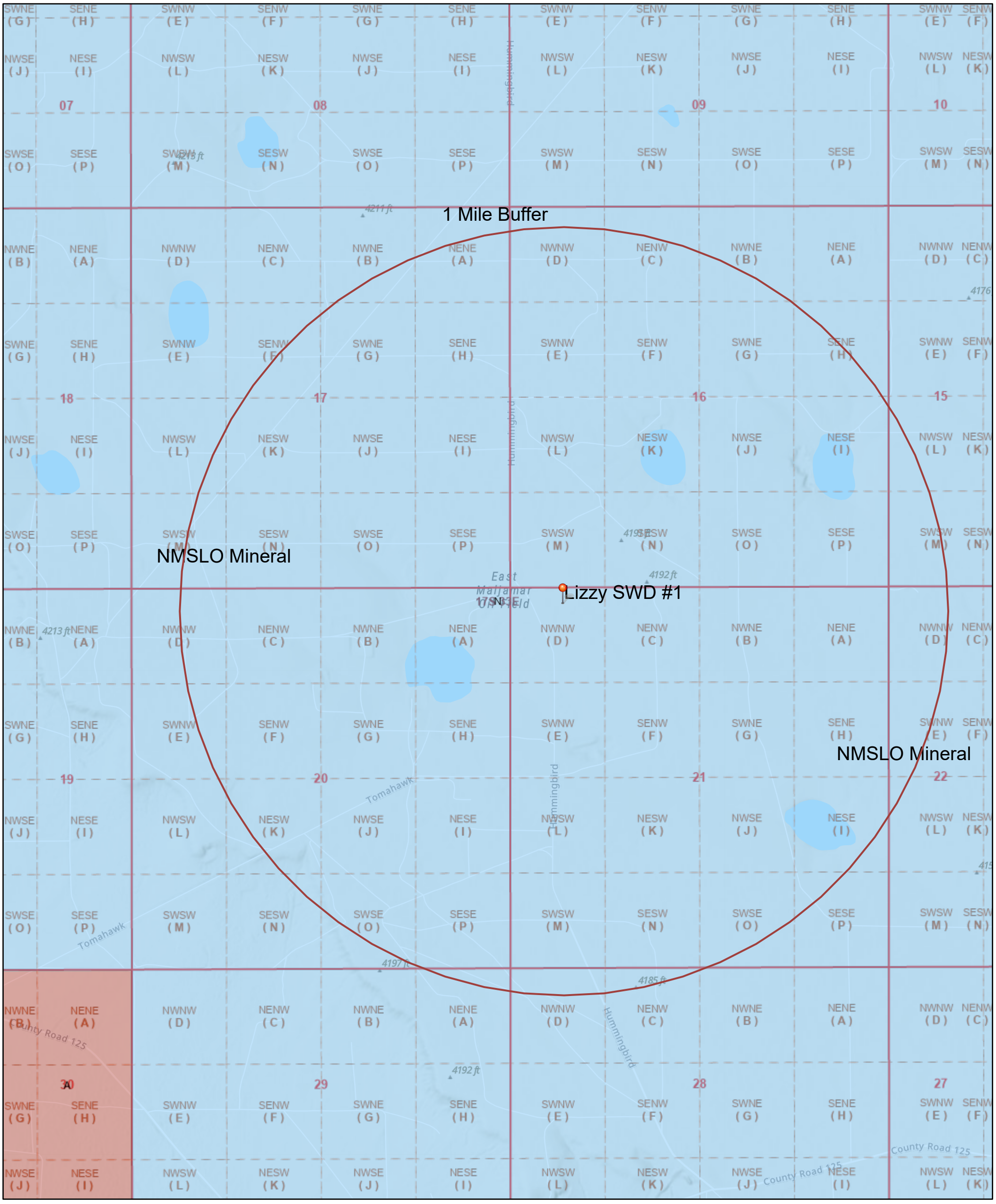
PLSS Townships

1:18,056

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

1 Mile Mineral Ownership Map



2/18/2025, 2:39:08 PM

Override 1

Override 1

Mineral Ownership

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N-No minerals are owned by the U.S.

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

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

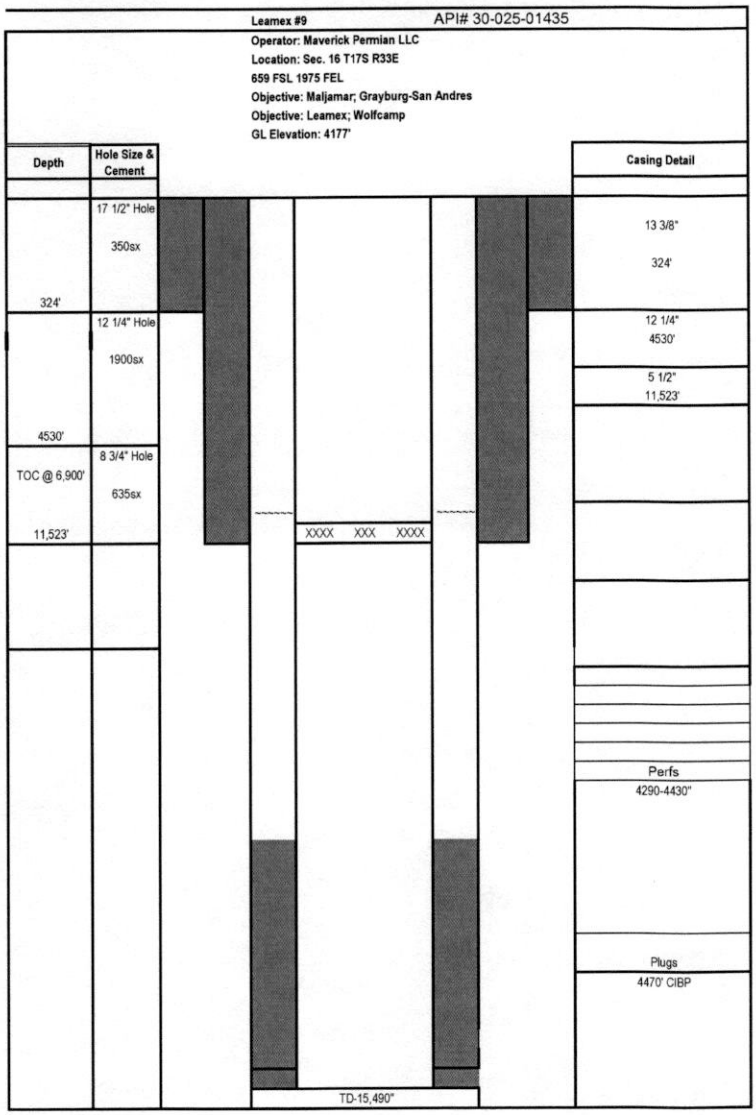
1-Mile Well List (Top of Injection Interval: 14,865')

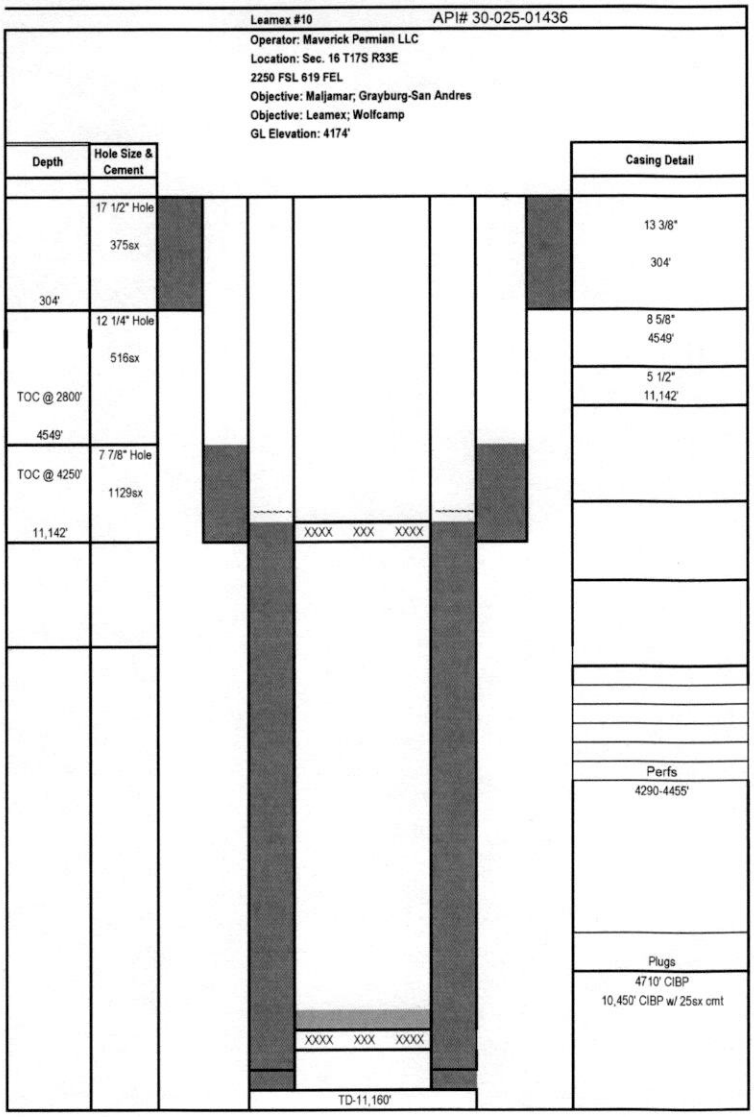
API	Well Name	Well Type	Well Status	ogrid	ogrid_name	PLSS Location (ULSTR)	SPUD Date	Measured Depth	Associated Pools	Effective Date	Last Produced	Plug Date
30-025-01428	SHAHARA STATE UNIT #001	Injection	Plugged (site released)	187940	AROC (TEXAS) INC	E-16-17S-33E	6/3/1959	4,490	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	5/22/2000	10/31/2005	10/18/2006
30-025-01432	SHAHARA STATE UNIT #005	Injection	Plugged (site released)	187940	AROC (TEXAS) INC	L-16-17S-33E	12/29/1957	4,460	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	5/22/2000	7/31/2001	10/22/2006
30-025-01445	CAPROCK MALJAMAR UNIT #011	Injection	Plugged (not released)	329487	BXP Operating, LLC	G-17-17S-33E	9/5/1957	4,435	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	11/30/2017	5/1/2022
30-025-01448	CAPROCK MALJAMAR UNIT #031	Injection	Active	329487	BXP Operating, LLC	O-17-17S-33E	9/12/1955	4,416	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-01451	CAPROCK MALJAMAR UNIT #032	Injection	Active	329487	BXP Operating, LLC	P-17-17S-33E	2/19/1956	4,426	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-01452	CAPROCK MALJAMAR UNIT #022	Injection	Active	329487	BXP Operating, LLC	I-17-17S-33E	3/28/1956	4,671	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-01453	CAPROCK MALJAMAR UNIT #021	Injection	Active	329487	BXP Operating, LLC	J-17-17S-33E	4/22/1956	4,435	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-01454	CAPROCK MALJAMAR UNIT #020	Injection	Active	329487	BXP Operating, LLC	K-17-17S-33E	1/19/1957	4,457	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-01492	CAPROCK MALJAMAR UNIT #071	Injection	Plugged (not released)	329487	BXP Operating, LLC	I-20-17S-33E	10/13/1954	4,382	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	6/30/2020	5/16/2022
30-025-01499	CAPROCK MALJAMAR UNIT #042	Injection	Active	329487	BXP Operating, LLC	C-20-17S-33E	5/9/1953	4,540	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	3/31/2018	12/30/9999
30-025-01504	CAPROCK MALJAMAR UNIT #044	Injection	Active	329487	BXP Operating, LLC	A-20-17S-33E	1/29/1956	4,500	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-24446	CAPROCK MALJAMAR UNIT #179	Oil	Active	329487	BXP Operating, LLC	F-20-17S-33E	4/23/1973	4,400	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-32042	CAPROCK MALJAMAR UNIT #152	Oil	Plugged (not released)	329487	BXP Operating, LLC	K-17-17S-33E	7/24/1993	5,500	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	2/28/2015	4/17/2022
30-025-32043	CAPROCK MALJAMAR UNIT #166	Oil	Plugged (not released)	329487	BXP Operating, LLC	O-17-17S-33E	8/5/1993	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	11/30/2015	4/26/2022
30-025-32044	CAPROCK MALJAMAR UNIT #181	Oil	Active	329487	BXP Operating, LLC	H-20-17S-33E	10/17/1994	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-32422	CAPROCK MALJAMAR UNIT #153	Oil	Active	329487	BXP Operating, LLC	N-17-17S-33E	9/15/1994	5,525	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-32423	CAPROCK MALJAMAR UNIT #180	Oil	Active	329487	BXP Operating, LLC	C-20-17S-33E	8/14/1994	5,525	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-32424	CAPROCK MALJAMAR UNIT #167	Oil	Active	329487	BXP Operating, LLC	O-17-17S-33E	9/26/1994	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-32839	CAPROCK MALJAMAR UNIT #142	Oil	Active	329487	BXP Operating, LLC	J-17-17S-33E	3/4/1995	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-32840	CAPROCK MALJAMAR UNIT #194	Oil	Plugged (site released)	329487	BXP Operating, LLC	K-20-17S-33E	3/28/1995	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/14/2020	1/31/2016	3/15/2021
30-025-32921	CAPROCK MALJAMAR UNIT #132	Oil	Active	329487	BXP Operating, LLC	G-17-17S-33E	12/4/1995	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-32924	CAPROCK MALJAMAR UNIT #143	Oil	Plugged (not released)	329487	BXP Operating, LLC	J-17-17S-33E	9/30/1995	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/14/2020	12/31/2014	4/10/2022
30-025-32941	CAPROCK MALJAMAR UNIT #196	Oil	Active	329487	BXP Operating, LLC	H-20-17S-33E	5/8/1995	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/14/2020	10/31/2024	12/30/9999
30-025-33266	CAPROCK MALJAMAR UNIT #182	Oil	Active	329487	BXP Operating, LLC	D-21-17S-33E	2/17/1996	4,850	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/14/2020	10/31/2024	12/30/9999
30-025-33271	CAPROCK MALJAMAR UNIT #211	Oil	Active	329487	BXP Operating, LLC	I-20-17S-33E	2/10/1996	4,850	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999
30-025-34225	CAPROCK MALJAMAR UNIT #401	Oil	Active	329487	BXP Operating, LLC	P-17-17S-33E	12/18/1997	4,925	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/12/2020	10/31/2024	12/30/9999

30-025-40561	PADDY 20 STATE #001	Oil	Active	256512	CML EXPLORATION, LLC	B-20-17S-33E	6/1/2012	7,550	[97727] WC-025 G-03 S173318N, YESO	5/9/2012	10/31/2024	12/30/9999
30-025-28423	LEAMEX #036	Oil	Plugged (site released)	217817	CONOCOPHILLIPS COMPANY	G-16-17S-33E	11/22/1983	4,800	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	12/31/2002	5/31/2015	2/10/2016
30-025-29815	LEAMEX #039	Oil	Plugged (site released)	217817	CONOCOPHILLIPS COMPANY	J-21-17S-33E	12/31/1986	4,805	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	12/31/2002	12/31/1999	6/13/2006
30-025-01434	SHAHARA STATE UNIT #007	Injection	Plugged (site released)	305911	ENERGYQUEST II, LLC	N-16-17S-33E	6/3/1958	4,500	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/16/2014	4/30/2015	12/21/2015
30-025-34092	SHAHARA STATE UNIT #011	Oil	Plugged (site released)	305911	ENERGYQUEST II, LLC	M-16-17S-33E	12/3/1997	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/16/2014	7/31/2006	8/22/2017
30-025-34220	SHAHARA STATE UNIT #100	Oil	Plugged (site released)	305911	ENERGYQUEST II, LLC	E-16-17S-33E	1/14/1998	4,900	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	1/16/2014	8/31/2014	8/10/2017
30-025-01433	SHAHARA STATE UNIT #006	Injection	Plugged (site released)	328733	Flint Oak Energy, LLC	K-16-17S-33E	4/19/1958	4,457	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	5/7/2019	5/31/2019	6/20/2022
30-025-01446	CAPROCK MALJAMAR UNIT #012	Injection	Plugged (site released)	8041	FOREST OIL CORPORATION	H-17-17S-33E	12/30/9999	4,570	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	11/30/2005	9/30/2005	8/8/2006
30-025-01500	CAPROCK MALJAMAR UNIT #055	Injection	Plugged (site released)	8041	FOREST OIL CORPORATION	F-20-17S-33E	11/9/1953	4,400	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	11/30/2005	4/30/2004	2/28/2005
30-025-01501	CAPROCK MALJAMAR UNIT #057	Injection	Plugged (site released)	8041	FOREST OIL CORPORATION	H-20-17S-33E	12/30/9999	4,488	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	10/17/2007	7/31/2004	9/7/2006
30-025-01431	SHAHARA STATE UNIT #004	Injection	Plugged (site released)	256523	HK ENERGY OPERATING, LLC	C-16-17S-33E	7/25/1959	4,439	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	10/31/2007	4/30/2009	8/19/2009
30-025-01429	SHAHARA STATE UNIT #002	Injection	Active	331241	J & J Investments, LLC	D-16-17S-33E	5/3/1959	4,498	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	8/31/2023	12/30/9999
30-025-01430	SHAHARA STATE UNIT #003	Injection	Active	331241	J & J Investments, LLC	F-16-17S-33E	6/25/1959	4,461	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	7/31/2023	12/30/9999
30-025-01438	SHAHARA STATE UNIT #008	Injection	Active	331241	J & J Investments, LLC	M-16-17S-33E	2/28/1949	4,574	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	8/31/2023	12/30/9999
30-025-34090	SHAHARA STATE UNIT #009	Oil	Active	331241	J & J Investments, LLC	F-16-17S-33E	11/24/1997	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	5/1/2022	7/31/2023	12/30/9999
30-025-34091	SHAHARA STATE UNIT #010	Oil	Active	331241	J & J Investments, LLC	F-16-17S-33E	12/5/1997	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	7/31/2023	12/30/9999
30-025-34178	SHAHARA STATE UNIT #013	Oil	Active	331241	J & J Investments, LLC	C-16-17S-33E	12/21/1997	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	7/31/2023	12/30/9999
30-025-34179	SHAHARA STATE UNIT #014	Oil	Active	331241	J & J Investments, LLC	K-16-17S-33E	11/30/1997	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	7/31/2023	12/30/9999
30-025-34180	SHAHARA STATE UNIT #015	Oil	Active	331241	J & J Investments, LLC	N-16-17S-33E	12/12/1997	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	1/31/2023	12/30/9999
30-025-34219	SHAHARA STATE UNIT #101	Oil	Active	331241	J & J Investments, LLC	E-16-17S-33E	1/2/1998	4,950	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	4/26/2022	1/31/2022	12/30/9999
30-025-01439	CAPROCK MALJAMAR UNIT #006	Injection	Plugged (site released)	269324	LINN OPERATING, LLC.	A-17-17S-33E	11/15/1957	4,474	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	12/31/2009	3/13/2012
30-025-01490	CAPROCK MALJAMAR UNIT #070	Injection	Plugged (site released)	269324	LINN OPERATING, LLC.	J-20-17S-33E	12/30/9999	4,506	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	9/30/2005	3/13/2012
30-025-01493	CAPROCK MALJAMAR UNIT #083	Injection	Plugged (site released)	269324	LINN OPERATING, LLC.	O-20-17S-33E	12/30/9999	4,544	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	1/31/2011	1/9/2012

30-025-01494	CAPROCK MALJAMAR UNIT #084	Injection	Plugged (site released)	269324	LINN OPERATING, LLC.	P-20-17S-33E	12/30/9999	4,409	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	11/30/2002	3/19/2012
30-025-01496	CAPROCK MALJAMAR UNIT #069	Injection	Plugged (site released)	269324	LINN OPERATING, LLC.	K-20-17S-33E	1/1/1956	4,535	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	2/28/2009	12/2/2013
30-025-01506	CAPROCK MALJAMAR UNIT #056	Oil	Plugged (site released)	269324	LINN OPERATING, LLC.	G-20-17S-33E	12/30/9999	4,450	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	2/28/2013	10/28/2013
30-025-01509	CAPROCK MALJAMAR UNIT #058	Injection	Plugged (site released)	269324	LINN OPERATING, LLC.	E-21-17S-33E	12/30/9999	4,452	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	2/28/2007	3/19/2012
30-025-32425	CAPROCK MALJAMAR UNIT #165	Oil	Plugged (site released)	269324	LINN OPERATING, LLC.	M-17-17S-33E	8/24/1994	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	12/31/2001	12/2/2013
30-025-32841	CAPROCK MALJAMAR UNIT #195	Oil	Plugged (site released)	269324	LINN OPERATING, LLC.	G-20-17S-33E	4/8/1995	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	1/31/2002	12/15/2013
30-025-32893	CAPROCK MALJAMAR UNIT #154	Oil	Plugged (site released)	269324	LINN OPERATING, LLC.	P-17-17S-33E	3/18/1995	5,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	5/31/2001	12/2/2013
30-025-33281	CAPROCK MALJAMAR UNIT #210	Oil	Plugged (site released)	269324	LINN OPERATING, LLC.	O-20-17S-33E	3/27/1996	4,800	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	3/31/2003	12/19/2013
30-025-34224	CAPROCK MALJAMAR UNIT #400	Oil	Plugged (site released)	269324	LINN OPERATING, LLC.	I-17-17S-33E	12/11/1997	4,900	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/25/2011	6/30/2010	12/19/2013
30-025-01435	LEAMEX #009	Oil	Active	331199	Maverick Permian LLC	O-16-17S-33E	8/6/2012	15,390	[37860] LEAMEX, WOLFCAMP; [43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/22/2022	10/31/2024	12/30/9999
30-025-01436	LEAMEX #010	Oil	Active	331199	Maverick Permian LLC	I-16-17S-33E	4/19/1961	11,160	[37860] LEAMEX, WOLFCAMP; [43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	10/31/2024	12/30/9999
30-025-23135	LEAMEX #015	Oil	Active	331199	Maverick Permian LLC	H-16-17S-33E	9/4/1969	4,515	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/22/2022	10/31/2023	12/30/9999
30-025-23272	LEAMEX #016	Oil	Active	331199	Maverick Permian LLC	J-16-17S-33E	9/16/1969	4,550	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	10/31/2023	12/30/9999
30-025-24541	LEAMEX #017	Oil	Active	331199	Maverick Permian LLC	P-16-17S-33E	11/20/1973	4,552	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	4/30/2023	12/30/9999
30-025-26432	LEAMEX #024	Oil	Active	331199	Maverick Permian LLC	C-21-17S-33E	10/24/1979	11,000	[37860] LEAMEX, WOLFCAMP	6/28/2022	4/30/2024	12/30/9999
30-025-29952	LEAMEX #040	Oil	Active	331199	Maverick Permian LLC	H-21-17S-33E	12/30/9999	4,800	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	10/31/2024	12/30/9999
30-025-30078	LEAMEX #041	Oil	Active	331199	Maverick Permian LLC	D-22-17S-33E	10/17/1987	4,800	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	10/31/2024	12/30/9999
30-025-30426	LEAMEX #049	Oil	Active	331199	Maverick Permian LLC	G-21-17S-33E	8/8/1988	4,700	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	10/31/2024	12/30/9999
30-025-30427	LEAMEX #050	Oil	Active	331199	Maverick Permian LLC	K-21-17S-33E	8/1/1988	4,700	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	10/31/2024	12/30/9999
30-025-30428	LEAMEX #051	Oil	Active	331199	Maverick Permian LLC	O-21-17S-33E	7/23/1988	4,800	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/28/2022	10/31/2024	12/30/9999
30-025-01437	LEAMEX #011	Oil	Plugged (site released)	17643	PHILLIPS PETROLEUM CO	K-16-17S-33E	12/31/1899	0	No Data	12/31/1899	12/30/9999	12/31/1899
30-025-23134	LEAMEX #014	Oil	Plugged (site released)	17643	PHILLIPS PETROLEUM CO	B-21-17S-33E	12/31/1899	0	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	12/31/1899	12/30/9999	12/31/1899
30-025-26758	LEAMEX #025	Oil	Plugged (site released)	17643	PHILLIPS PETROLEUM CO	E-21-17S-33E	12/31/1899	0	[37860] LEAMEX, WOLFCAMP	12/31/1899	12/30/9999	12/31/1899

30-025-33185	LEAMEX #057	Oil	Plugged (site released)	17643	PHILLIPS PETROLEUM CO	M-16-17S-33E	12/14/1995	15,200	No Data	3/7/1997	12/30/9999	3/7/1997
30-025-01491	PRE-ONGARD WELL #001	Oil	Plugged (site released)	214263	PRE-ONGARD WELL OPERATOR	G-20-17S-33E	12/31/1899	0	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	12/31/1899	12/30/9999	12/31/1899
30-025-01450	CAPROCK MALJAMAR UNIT #030	Injection	Plugged (site released)	22922	WISER OIL CO (THE)	N-17-17S-33E	12/30/9999	4,500	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	3/31/2003	2/28/2003	3/31/2003
30-025-01502	CAPROCK MALJAMAR UNIT #043	Injection	Plugged (site released)	22922	WISER OIL CO (THE)	B-20-17S-33E	6/6/1955	4,500	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/7/1994	12/31/1998	10/10/1999
30-025-01507	CAPROCK MALJAMAR UNIT #059	Injection	Plugged (site released)	22922	WISER OIL CO (THE)	F-21-17S-33E	10/5/1962	4,488	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	3/2/2000	4/30/1996	3/2/2000
30-025-01508	CAPROCK MALJAMAR UNIT #072	Injection	Plugged (site released)	22922	WISER OIL CO (THE)	L-21-17S-33E	12/30/9999	4,505	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/7/1994	11/30/1992	7/31/2001
30-025-01510	CAPROCK MALJAMAR UNIT #085	Oil	Plugged (site released)	22922	WISER OIL CO (THE)	M-21-17S-33E	12/30/9999	4,443	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/7/1994	7/31/1987	11/26/2000
30-025-01511	CAPROCK MALJAMAR UNIT #045	Injection	Plugged (site released)	22922	WISER OIL CO (THE)	D-21-17S-33E	12/30/9999	4,448	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	6/7/1994	2/28/2001	8/6/2001
30-025-01512	CAPROCK MALJAMAR UNIT #086	Injection	Plugged (site released)	22922	WISER OIL CO (THE)	N-21-17S-33E	12/30/9999	4,438	[43329] MALJAMAR, GRAYBURG-SAN ANDRES	8/19/2000	9/30/1995	8/19/2000


Leamex #9
API# 30-025-01435
Operator: Maverick Permian LLC
Location: Sec. 16 T17S R33E
659 FSL 1975 FEL
Objective: Maljamar; Grayburg-San Andres
Objective: Leamex; Wolfcamp
GL Elevation: 4177'
Depth
Hole Size & Cement
Casing Detail
17 1/2" Hole
350sx
324'
13 3/8"
324'
12 1/4" Hole
1900sx
4530'
12 1/4"
4530'
5 1/2"
11,523'
8 3/4" Hole
635sx
TOC @ 6,900'
11,523'
XXXX XXX XXXX
Perfs
4290-4430"
Plugs
4470' CIBP
TD-15,490"


Leamex #10
API# 30-025-01436
Operator: Maverick Permian LLC
Location: Sec. 16 T17S R33E
2250 FSL 619 FEL
Objective: Maljamar; Grayburg-San Andres
Objective: Leamex; Wolfcamp
GL Elevation: 4174'
Depth
Hole Size & Cement
Casing Detail
17 1/2" Hole
375sx
304'
13 3/8"
304'
12 1/4" Hole
516sx
TOC @ 2800'
4549'
8 5/8"
4549'
5 1/2"
11,142'
TOC @ 4250'
7 7/8" Hole
1129sx
11,142'
XXXX XXX XXXX
Perfs
4290-4455'
Plugs
4710' CIBP
10,450' CIBP w/ 25sx cmt
XXXX XXX XXXX
TD-11,160'

Shahara State Unit #4 API# 30-025-01431

Operator: HK Energy Operating, LLC
Location: Sec. 16 T17S R33E
660 FSL 16980 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4183'

Depth	Hole Size & Cement	Casing Detail
298'	12 1/4" Hole	8 5/8" 298'
4437'	7 7/8" Hole	5 1/2" 4437'
		Perfs 4270-4428'
		Plugs 40sx cmt @ 420-4428' 25sx cmt @ 2620-2800' Perf @ 1480' Sqz 25sx cmt 1350-1480' Perf @ 348' Sqz 25sx cmt 168-348' Perf @ 60' Sqz 60-0' Circ cmt to surface

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TD-4439'
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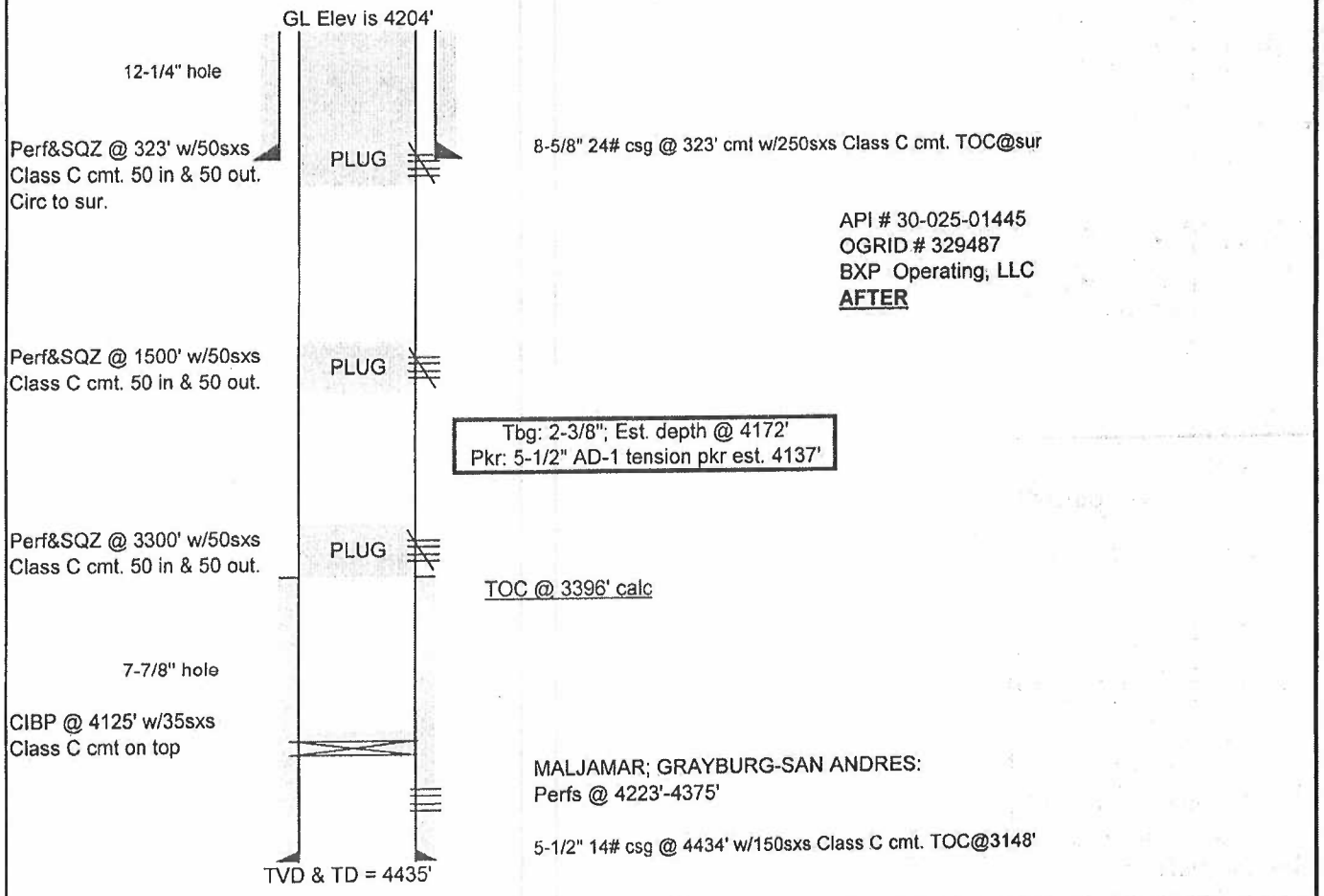
30-025-01445 P&A 5/2/2022

CAPROCK MALJAMAR UNIT #11

1980' FNL & 1980' FEL, UL G, Sec 17, T17S, R33E, Lea County, New Mexico



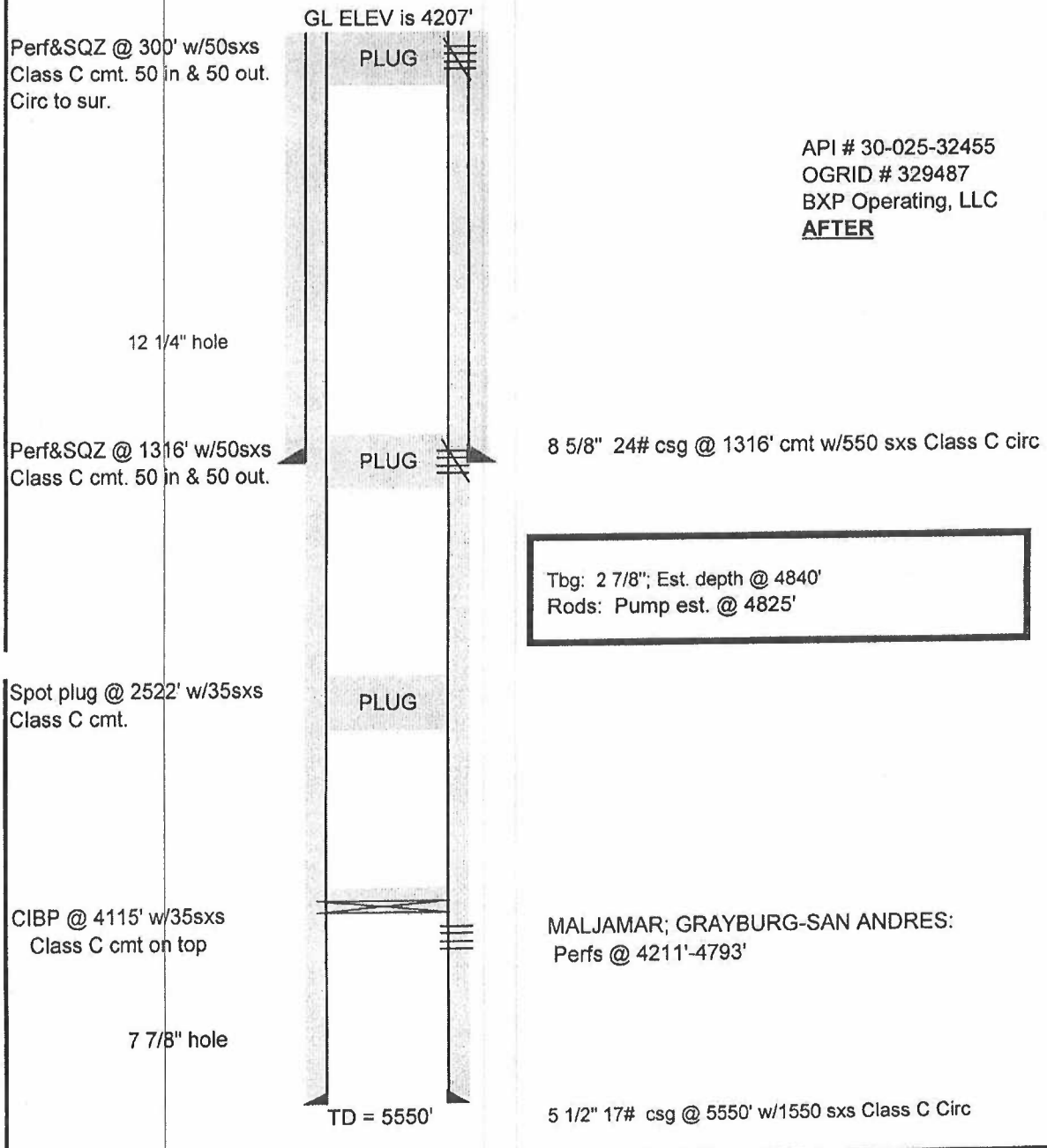
Drawn	BY
1/25/2022	Dillon
	Salas

BXP Operating, LLC
11757 Katy Freeway Suite 475
Houston, TX 77079

CAPROCK MALJAMAR UNIT #11
1980' FNL & 1980' FEL
UL G, Sec 17, T17S, R33E
Lea County, New Mexico

CAPROCK MALJAMAR UNIT #71

1980' FSL & 660' FEL, UL I Sec 20, T17S, R33E, Lea County, New Mexico



Drawn	BY
11/16/2021	Dillon
	Salas

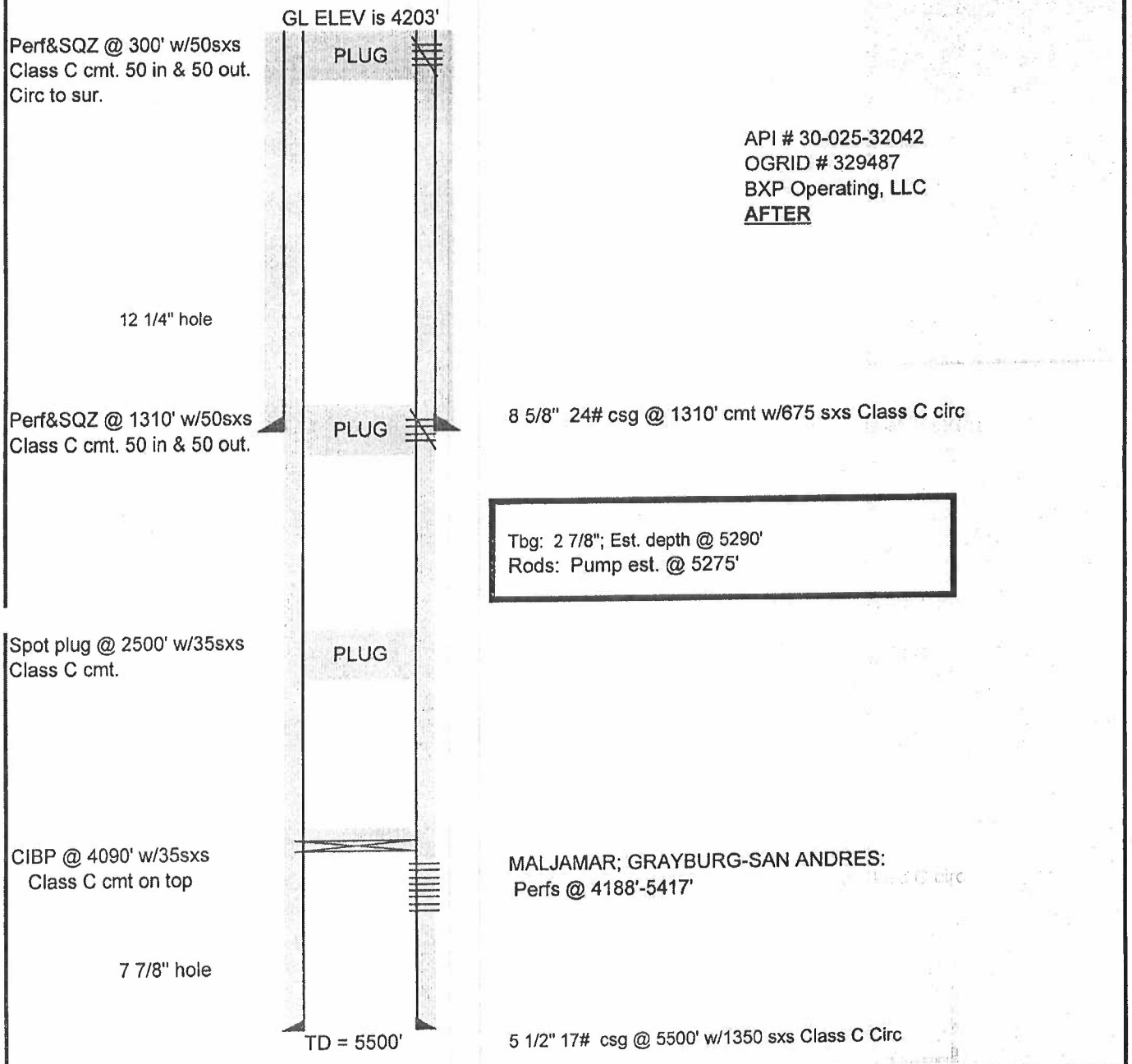
BXP Operating, LLC
11757 Katy Freeway Suite 475
Houston, Texas 77079

Caprock Maljamar Unit #71
1980' FSL & 660' FEL
UL I Sec 20, T17S, R33E
Lea County, New Mexico

API # 30-025-32042

CAPROCK MALJAMAR UNIT #152

1355' FSL & 1351' FWL, UL K Sec 17, T17S, R33E, Lea County, New Mexico



Drawn	BY
11/16/2021	Dillon
	Salas

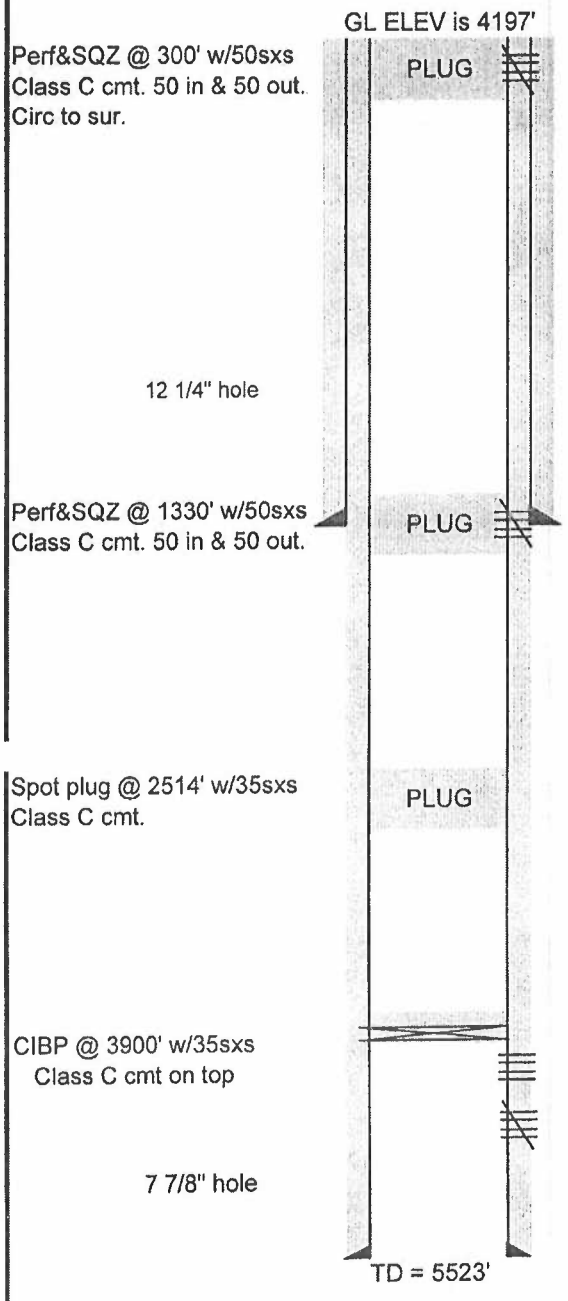
BXP Operating, LLC
11757 Katy Freeway Suite 475
Houston, Texas 77079

Caprock Maljamar Unit #152
1355' FSL & 1351' FWL
SEC 17, T17S, R33E
Lea County New Mexico

30-025-32043 P&A 4/27/2022

CAPROCK MALJAMAR UNIT #166

50' FSL & 2592' FEL, UL O Sec 17, T17S, R33E, Lea County, New Mexico



API # 30-025-32043
OGRID # 329487
BXP Operating, LLC
AFTER

8 5/8" 24# csg @ 1330' cmt w/670 sxs Class C circ

Tbg: 2 7/8"; Est. depth @ 5241'
Rods: Pump est. @ 5225'

MALJAMAR; GRAYBURG-SAN ANDRES:
Perfs @ 3997'-4630'
Squeezed perfs 4857'-5160' (1993)

5 1/2" 17# csg @ 5523' w/775 sxs Class C Circ

Drawn	BY
11/16/2021	Dillon
	Salas

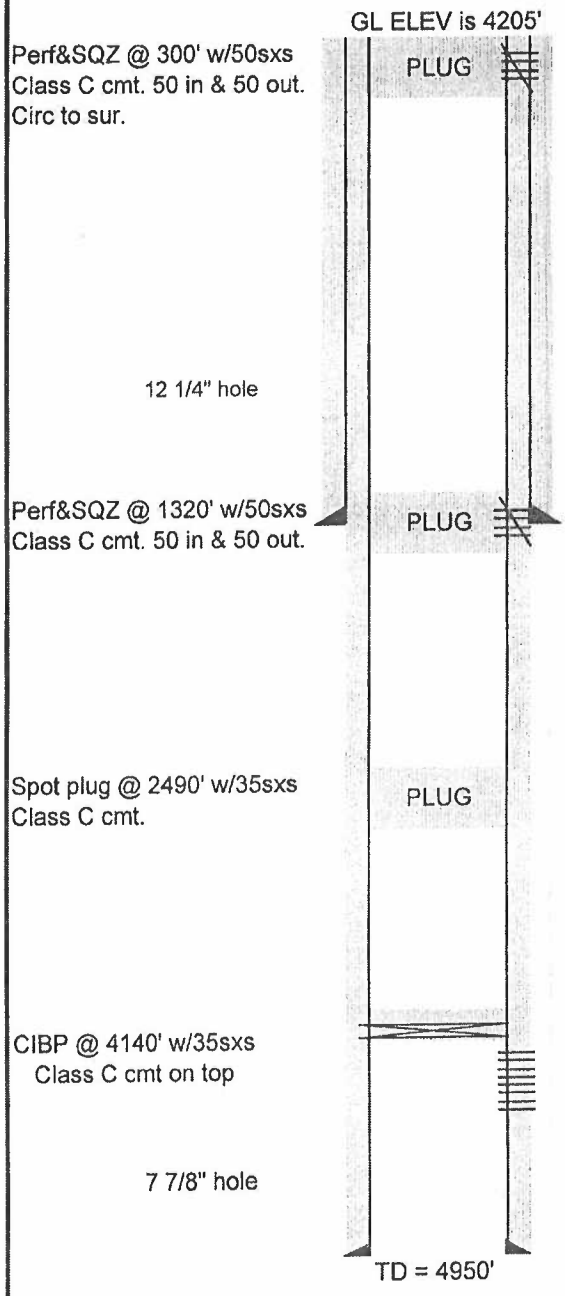
BXP Operating, LLC
11757 Katy Freeway Suite 475
Houston, Texas 77079

Caprock Maljamar Unit #166
50' FSL & 2592' FEL
UL O Sec 17, T17S, R33E
Lea County, New Mexico

30-025-32924 P&A 4/11/2022

CAPROCK MALJAMAR UNIT #143

2560' FSL & 1409' FEL, UL J Sec 17, T17S, R33E, Lea County, New Mexico



API # 30-025-32924
OGRID # 329487
BXP Operating, LLC
AFTER

8 5/8" 24# csg @ 1320' cmt w/600 sxs Class C circ to sur

Tbg: 2 7/8"; Est. depth @ 4252'
Rods: 161 - 3/4"; Pump est. @ 4238'

MALJAMAR; GRAYBURG-SAN ANDRES:
Perfs @ 4238'-4693'

5 1/2" 17# csg @ 4950' w/1450 sx s Class C circ to sur.

Drawn	BY
11/15/2021	Dillon
	Salas

BXP Operating, LLC
11757 Katy Freeway Suite 475
Houston, Texas 77079

Caprock Maljamar Unit #143
2560' FSL & 1409' FEL
SEC 17, T17S, R33E
Lea County New Mexico

P&A 10/18/2006

Shahara State Unit #1 API# 30-025-01428

Operator: Aroc (Texas) Inc
Location: Sec. 16 T17S R33E
1980 FNL 660 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4214'

Depth	Hole Size & Cement	Casing Detail
250'	11" hole 135sx	8 5/8" 250'
4475'	7 7/8" hole 170sx	5 1/2" 4475'
		Perfs 4210-4396'
		Plugs
		CIBP @ 4200' 25sx Cmt 25sx cmt @ 2610-2800' 25sxcmt @ 1343-1580' 25sx cmt @ 150-400' 10sx cmt @ surface

XXXX XXXX XXXX

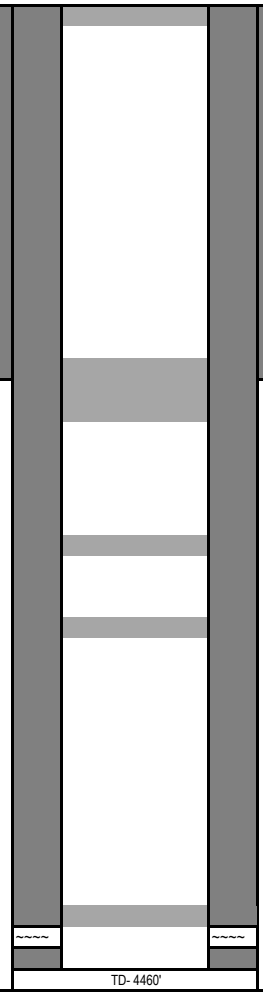
TD- 4490'

P&A 10/22/2006

Shahara State Unit #5 API# 30-025-01432

Operator: Aroc (Texas) Inc
Location: Sec. 16 T17S R33E
1980 FSL 660 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4214'

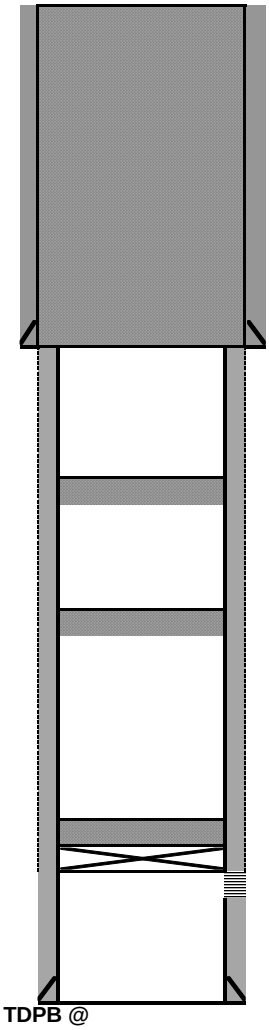
Depth	Hole Size & Cement	Casing Detail
	12 1/4" hole 200sx	8 5/8" 370'
370'		
	7 7/8" hole 200sx	5 1/2" 4460'
4460'		
		Perfs 4178-4380
		Plugs
		25sx cmt 3900-4128' 25sx cmt @ 2600-2800' 25sxcmt @ 1180-1580' 25sx cmt @ 400-410' 25sx cmt @ 200-400' 10sx cmt @ surface



Flint Oak Energy			**Plugged**
Author:	**Abby @ BCM**		
Well Name	**Shahara St Unit**	Well No.	**#6**
Field/Pool	**Maljamar;Grbg-SA**	API #:	**30-025-01433**
County	**Lea**	Location:	**Sec 16, T17S, 33E**
State	**NM**		**1960 FSL & 1650 FWL**
Spud Date	**4/20/1958**	GL:	**4183**

Description	O.D.	Grade	Weight	Depth	Hole	Cmt Sx	TOC
Surface Csg	**8 5/8**		**24#**	**310**	**12 1/4**	**225**	**0**
Prod Csg	**5 1/2**		**14#**	**4,454**	**7 7/8**	**200**	

Formation	Top
T/Salt	800
B/Salt	2775



P&A 6/21/2022

8 5/8 24# CSG @ 310
Hole Size: 12 1/4

4. Perf'd @ 360'. ND BOP, NU Flange. Sqz'd 110 sx class C cmt @ 360' to surface. WOC. Tagged plug @ 30'. Spotted 20 sx class C cmt @ 30' to surface.

3. Perf'd @ 1550'. Pressured up on perfs to 500 PSI. Spotted 25 sx class C cmt @ 1600-1359'. WOC & Tagged @ 1352'.

2. Perf'd @ 2600'. Pressured up on perfs to 500 PSI. Spotted 25 sx class C cmt @ 2650-2409'. WOC. Tagged plug @ 2432'.

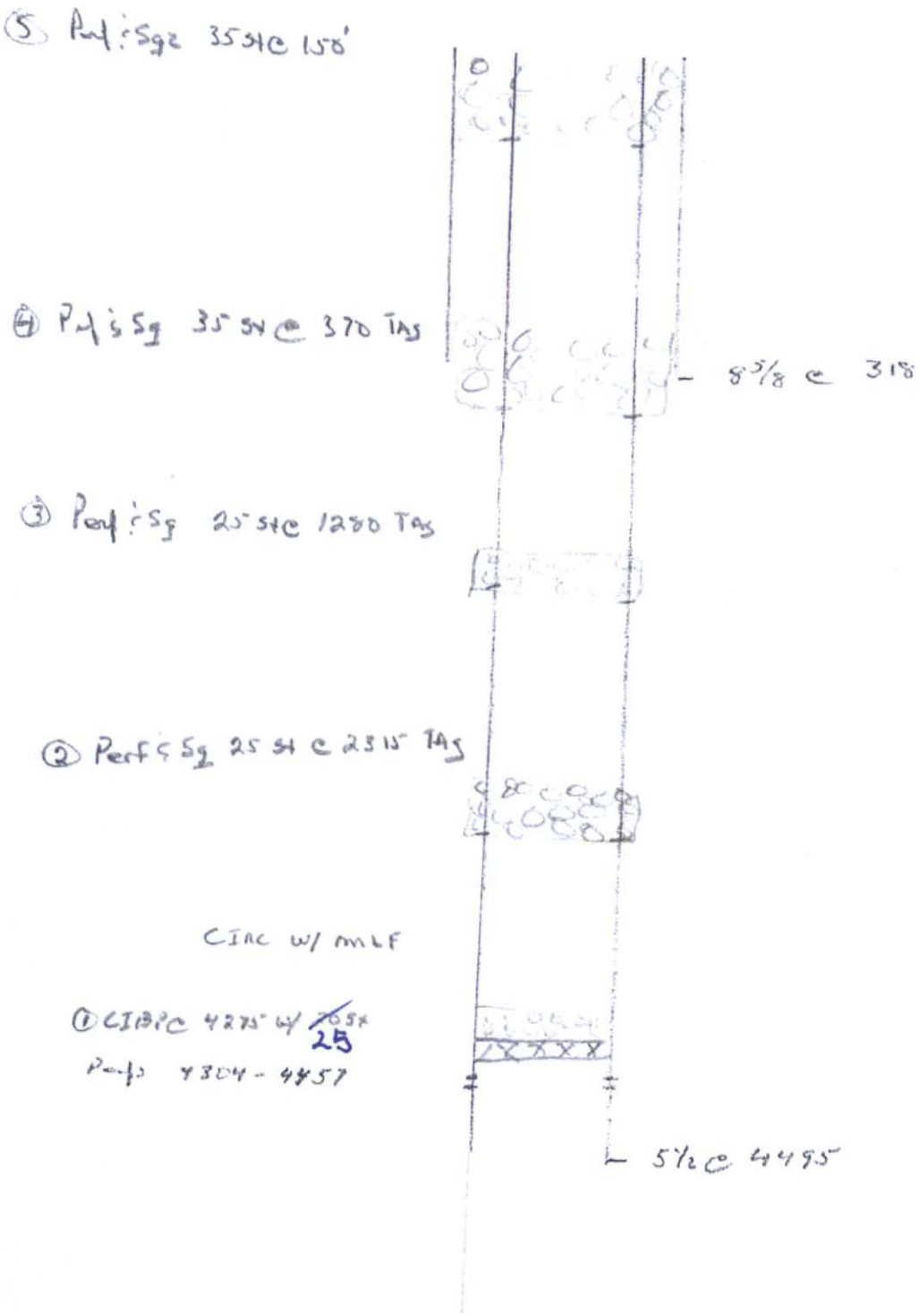
1. Set 5 ½ CIBP @ 4200'. Circ'd hole w/ MLF. Pressure tested csg, held 500 PSI. Spotted 25 sx class C cmt @ 4200-3959'.
Perfs @ 4278-4430'

5 1/2 14# CSG @ 4,454
Hole Size: 7 7/8

TDPB @
TD @ 4565

Shahara State #7
30-025-01434
16-17S-33E
1980FNL, 660 FEL

Shahara State Unit #7
30-025-01434
P&A 12/22/2015

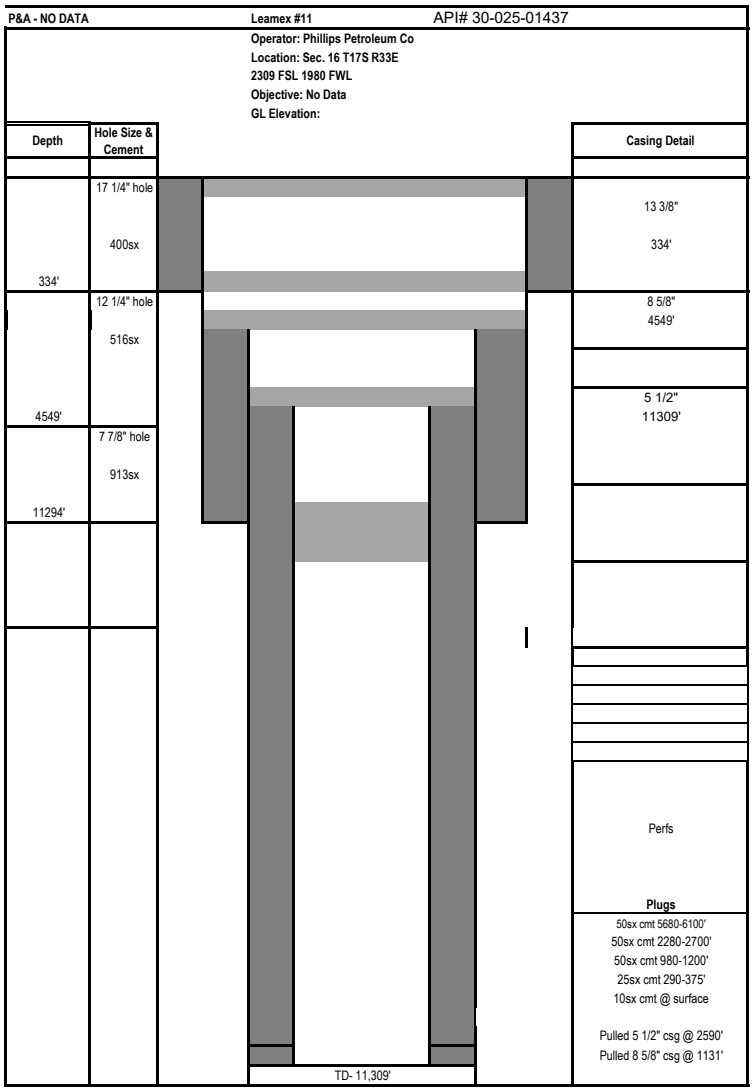


HOBBS OCD
NOV 16 2015
RECEIVED

P&A - NO DATA

Leamex #11 API# 30-025-01437

Operator: Phillips Petroleum Co
Location: Sec. 16 T17S R33E
2309 FSL 1980 FWL
Objective: No Data
GL Elevation:



Wellbore Diagram

Lease & Well No.	Caprock Maljamar Unit #06
Field Name	Maljamar (Grayburg San Andres)
Location	660' FNL & 660' FEL; T: 17S R: 33E Sec: 17
Former Name	
County & State	Lea County, New Mexico
API No.	30-025-01439
K.B. Elevation	
D.F. Elevation	
Ground Level	4,203'

Surface Casing					
Size (OD)	8 5/8"	Weight	24 0#	Depth	320'
Grade	J-55	Sx. Cmt.	250 sx	TOC @	Surface

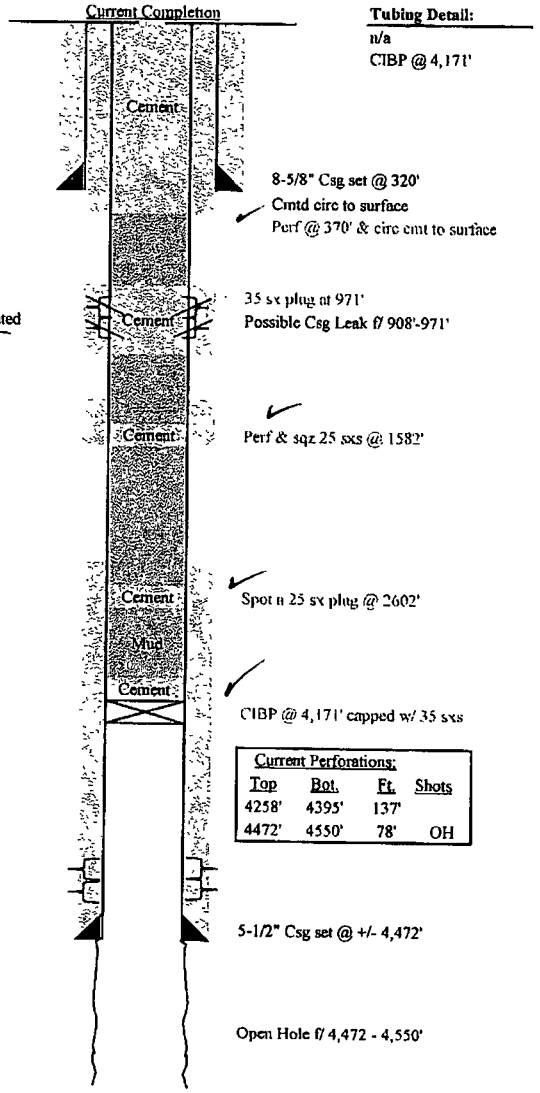
Intermediate Casing					
Size (OD)	n/a	Weight		Depth	
Grade		Sx. Cmt.		TOC @	

Production Casing					
Size (OD)	5 1/2"	Weight	14&15.5#	Depth	4,472'
Grade		Sx. Cmt.	300 sx	TOC @	2390' Calculated

P&A Proposal

MIRU Plugging Co.
RIH & tag CIBP at 4171' & cap w/ 35 sxs.
WOC.
Circ hole w/ mud laden fluid.
RIH & spot a 25 sx plug at 2602' (cover 50' above & below the base of the salt)
WOC & tag no lower than 2502'.
Perf & sqz 25 sxs at 1582' (covers 50' above & below the top of the salt).
WOC & tag no lower than 1482'.
RIH & land tbg at 971'. Pump 35 sxs @ 1.32 yd, pull tbg up to 480', flush tbg & close csg valve
Displace cmt w/ 2.4 bbl mud laden fluid (bullhead) down to 730'. → WOC-Tag
Perf the 5-1/2" csg at 370' & circ cmt to surface.
Install dryhole marker & clean up location.

Formation Record	Depth
Top of Salt	1532'
Base of Salt	2552'



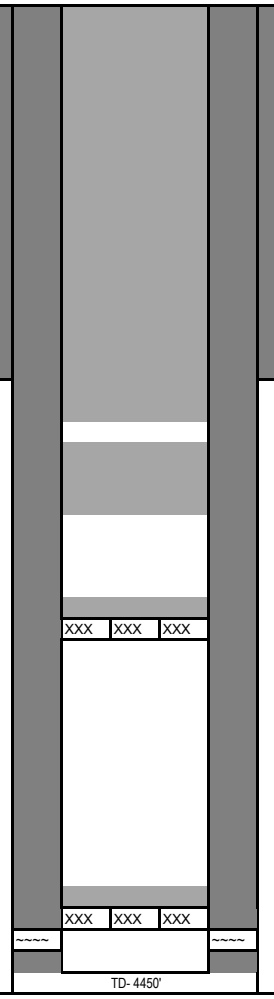
Plug Back Depth	4,171'
Total Depth	4,550'

P&A 08/09/2006

Caprock Maljamar Unit #12 API# 30-025-01446

Operator: Forest Oil Corporation
Location: Sec. 17 T17S R33E
1980 FNL 660 FEL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4209'

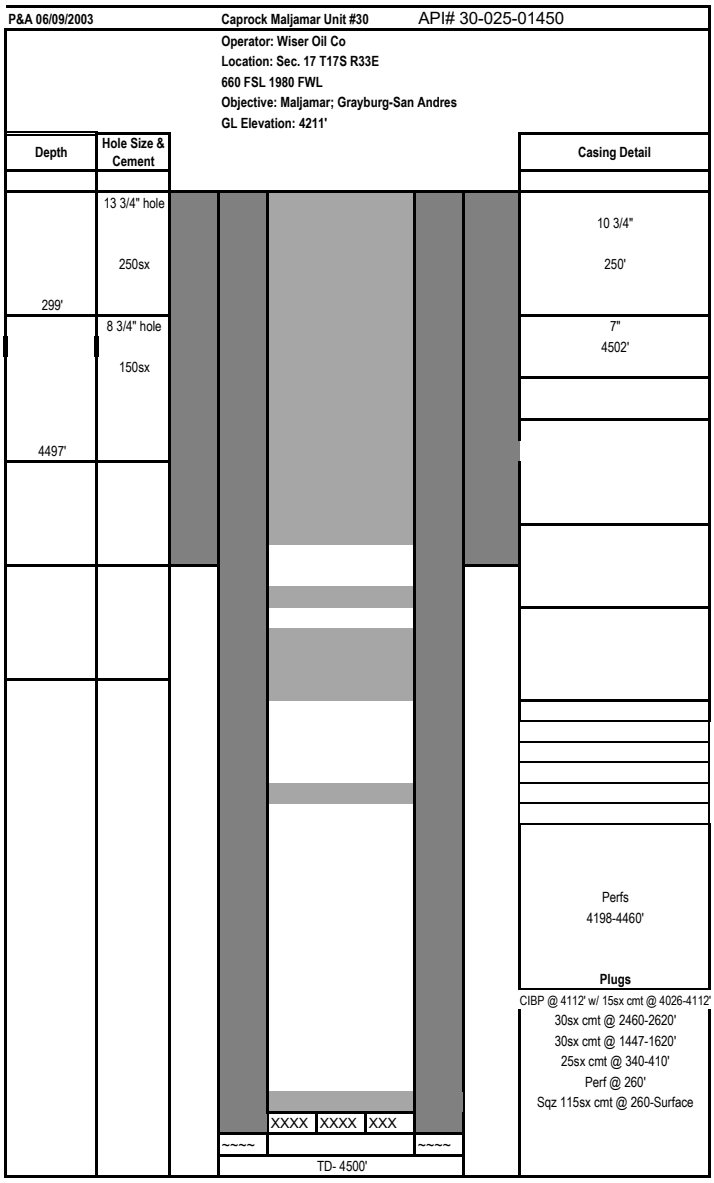
Depth	Hole Size & Cement	Casing Detail
313'	12 1/4" hole 250sx	8 5/8" 313'
4439'	7 7/8" hole 150sx	5 1/2" 4439'
		Perfs 4246-4408'
		Plugs
		CICR @ 4175', SQZ 65sx cmt 40sx and 35sx on top CICR CICR @ 1575' SQZ 50sx cmt 115sx cmt @ 475-1575' 50sx cmt @ 365- surface



P&A 06/09/2003

Caprock Maljamar Unit #30 API# 30-025-01450

Operator: Wiser Oil Co
Location: Sec. 17 T17S R33E
660 FSL 1980 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4211'



P&A 3/14/2012

Wellbore Diagram

Lease & Well No.	Caprock Maljamar Unit #70
Field Name	Maljamar (Grayburg San Andres)
Location	1980' FSL & 1980' FEL, T: 17S R. 33E Sec: 20
Former Name	
County & State	Lea County, New Mexico
API No.	30-025-01490

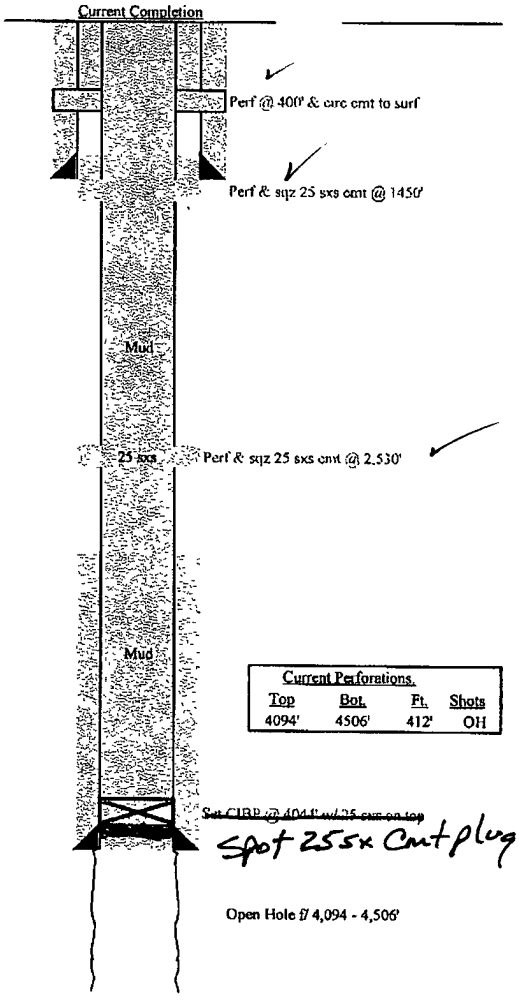
K.B. Elevation	
D.F. Elevation	
Ground Level	4,195'

Surface Casing					
Size (OD)	8 5/8"	Weight	24.0#	Depth	1,400'
Grade		Sx. Cmt.	50 sx	TOC @	

Intermediate Casing					
Size (OD)	n/a	Weight		Depth	
Grade		Sx. Cmt.		TOC @	

Production Casing					
Size (OD)	5 1/2"	Weight	20.0#	Depth	4,094'
Grade		Sx. Cmt.	100 sx	TOC @	

P&A Procedure:
MIRU plugging rig. tag plug @ 4080 - spot 25 sx Cmt
RIH & ~~drill out composite plug set @ 4080' & clean out to 4390' PBTD~~
~~Set CIBP & tag @ 4044'~~ w/ 25sx Cl C cmt on top
Circ the hole with mud laden fluid
Perf the 5-1/2" csg at 2530' and sqz 25 sx Cl C cmt in/out of csg (cover 50' above and below base of salt).
WOC and tag no lower than 2630'.
Perf the 5-1/2" csg at 1450' & sqz 25 sxs
WOC & tag no lower than 1350'.
Perf the 5-1/2" & 8-5/8" csg at 400' and circ Cl C cmt in/out of csg to surf.
WOC.
Set the dry hole marker and clean up location.



Formation Record	Depth
Anhydrite	1,353'
Top of Salt	1,540'
Base of Salt	2,480'
Yates	3,415'
Queen	3,640'
San Andres	4,362'

Plug Back Depth	4,380'
Total Depth	4,506'

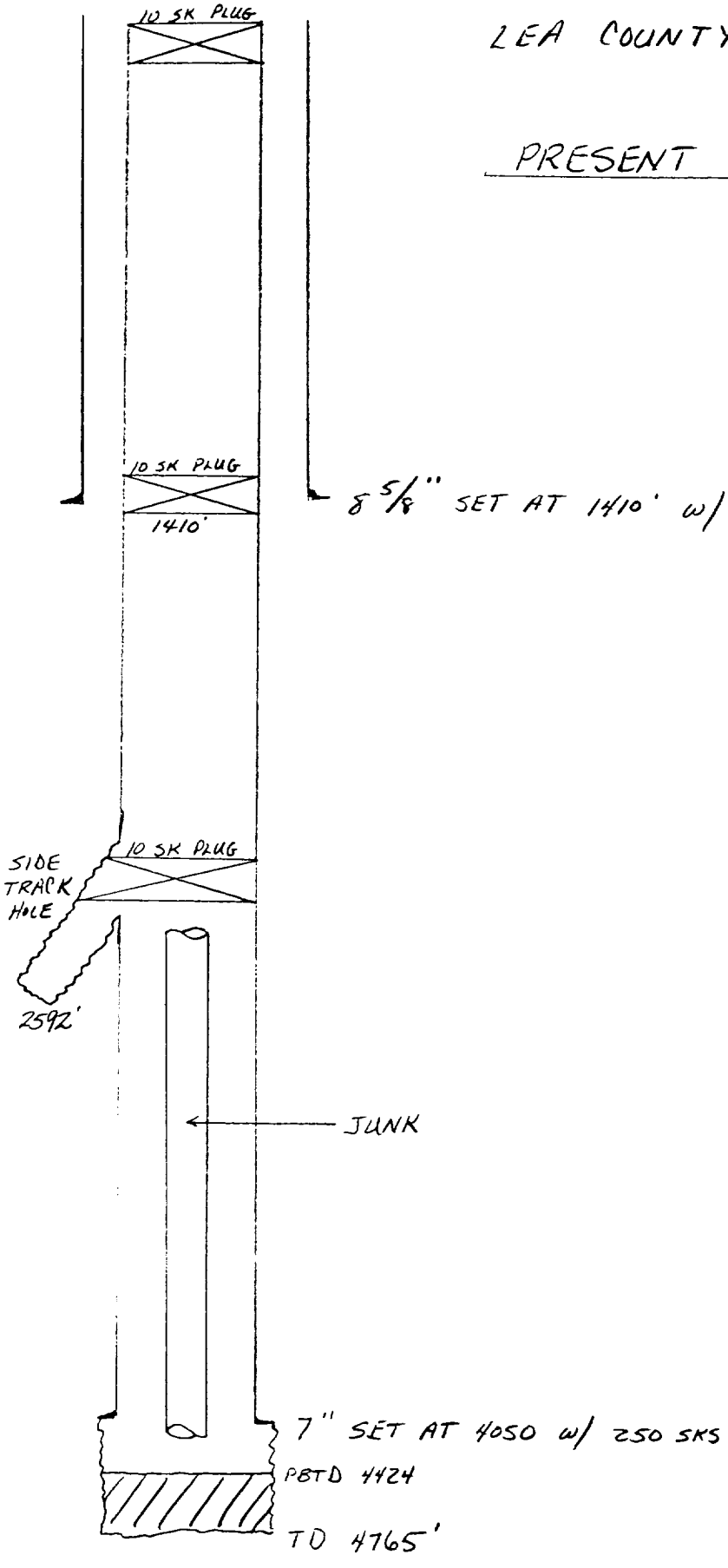
PHILLIPS STATE 1-G

WESTERN STATE (MALJAMAR UNIT)

LEA COUNTY, NEW MEXICO

API # 30-025-01491

PRESENT CONDITIONS



30-025-01493

Caprock Maljamar Unit #83

Wellbore Diagram

Lease & Well No	**Caprock Maljamar Unit #83**		Former Name	
Field Name	Maljamar (Grayburg San Andres)		County & State	Lea County, New Mexico
Location	660' FSL & 1980' FEL, T 17S R 33E Sec 20		API No	30-025-01493
K B Elevation	4198'	11'		
D F Elevation				
Ground Level	4187'			

Surface Casing					
Size (OD)	8 5/8"	Weight	28 0#	Depth	309'
Grade		Sx Cmt	200 sx	TOC @	Surface

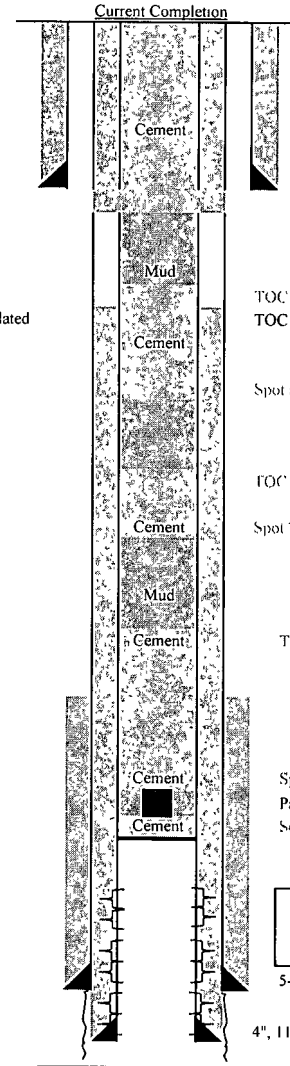
Production Casing					
Size (OD)	5 1/2"	Weight	14 0#	Depth	4,239'
Grade		Sx Cmt	150 sx	TOC @	Unk

Production Liner					
Size (OD)	4"	Weight	11 60#	Depth	4,500'
Grade		Sx Cmt	350 sx	TOC @	1,100' Calculated

P&A Procedure
MIRU plugging rig
POOH with inj tubing & pkr
RIH & set CIBP @ 4140' & cap with 35 sxs cmt

WOC
RIH & tag top of CIBP
Circ the hole with mud laden fluid
Spot a 25 sx plug at 2650' (covers 50' above and below base of salt)
WOC and tag no lower than 2550'
Spot a 25 sx plug at 1520 (covers 50' above and below top of salt)
WOC & tag no lower than 1420'
Perf the 4" csg at 359' and circ Cl C cmt in/out of csg to surf
WOC
Set the dry hole marker and clean up location

Formation Record	Depth
Anhydrite	1,360'
Top of Salt	1,470'
Base of Salt	2,600'
Yates	2,690'
Queen	3,620'
Grayburg	4,030'



POH w/ Pkr & filled 4-1/2" csg w/ cmt to surface

8-5/8" Csg @ 309'

Set Pkr @ 31' & Perf @ 359' & sqz 140 sxs & circ to

TOC for plug @ 1046'

TOC for liner @ ~ 1,100' (Calc)

Spot a 25 sx plug @ 1520'

TOC @ 2178'

Spot 30 sx plug @ 2650'

TOC @ 3622'

Spot 30 sxs on top of packer

Packer stuck @ 4130'

Sqz'ed 25 sxs @ 4140' & topped with another 50 sxs

Current Perforations			
Top	Bot	Ft	Shots
4194'	4541'	347'	39

5-1/2" Csg @ 4,239'

4", 11 6#/ft Liner @ 4,500'

Plug Back Depth	4,543'
Total Depth	4,544'

P&A 3/20/2012

30-025-01494

Caprock Maljamar Unit #84

Wellbore Diagram

Lease & Well No.	Caprock Maljamar Unit #84
Field Name	Maljamar (Grayburg San Andres)
Location	660' FSL & 660' FEL; T: 17S R: 33E Sec: 20
Former Name	State B #3
County & State	Lea County, New Mexico
API No.	30-025-01494
K.B. Elevation	
D.F. Elevation	
Ground Level	4,181'

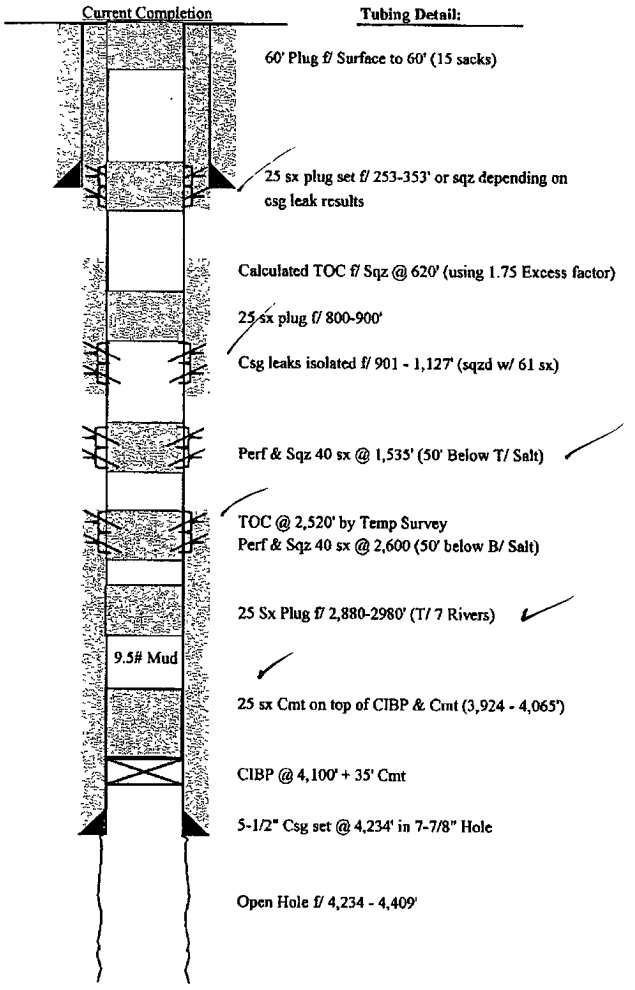
Surface Casing					
Size (OD)	8 5/8"	Weight	24.0#	Depth	303'
Grade		Sx. Cmt.	250 sx	TOC @	Surface

Intermediate Casing					
Size (OD)	n/a	Weight		Depth	
Grade		Sx. Cmt.		TOC @	

Production Casing					
Size (OD)	5 1/2"	Weight	14.0#	Depth	4,234'
Grade		Sx. Cmt	200 sx	TOC @	2,520'

P&A Procedure

1) MIRU Plugging Company
2) Cap CIBP + 35' Cmt (4,065') w/ 25 sx Cl 'C' cmt. WOC & tag
3) Circulate 9.5# mud laden fluid
4) Spot 25 sx plug f/ 2,980 - 2,880' (top of 7 Rivers) WOC & Tag
5) Perf 4 sqz holes @ 2,600' (50 below base of salt); Sqz w/ 40 sx; Top of plug @ 2,500'. WOC & Tag
6) Perf 4 sqz holes @ 1,535' (50 below top of salt); Sqz w/ 40 sx; Top of plug @ 1,435'. WOC & Tag
7) Attempt to establish circulation into csg leaks f/ 901 - 1,124', If possible circulate cement to surface via 5-1/2" x 8-5/8" csg annulus; If unable to pump into leaks, spot 25 sx plug f/ 800 - 900'; WOC & Tag
8) Perf @ 353'; Pump sufficient cement to circulate cement to surface via 5-1/2" x 8-5/8" csg annulus; Leave TOC @ 253' or above; WOC & Tag
9) Spot 60' cement plug f/ 60' to surface; WOC & tag
10) Cut off WH and anchors, Install dry hole marker, clean location



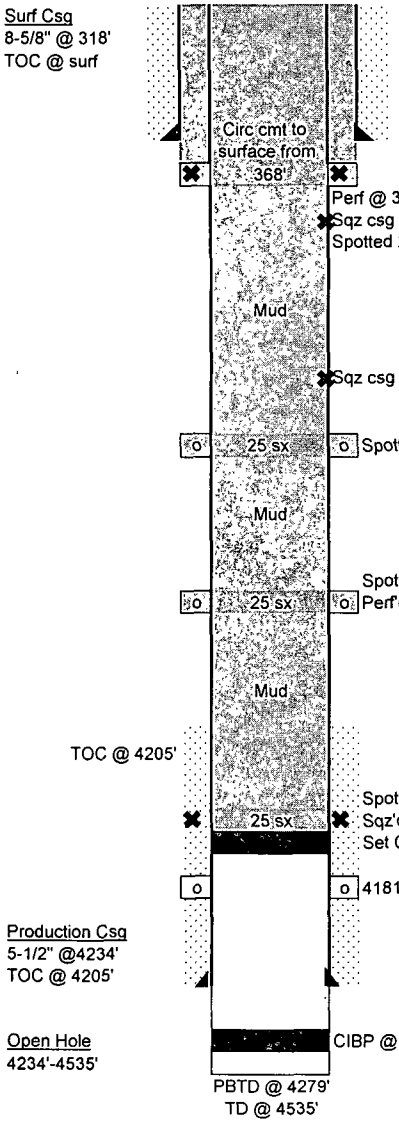
Formation Record	Depth
Anhydrite	1,375'
Top of Salt	1,485'
Base of Salt	2,550'
Yates	2,745'
7 Rivers	2,930'
Queen	3,700'
San Andres	4,095'

Plug Back Depth	4,065'
Total Depth	4,409'

P&A 12/3/2013
Caprock
Maljamar Unit
69
30-025-01496

Final P&A Wellbore Schematic

Well Name:	CAPROCK MALJAMAR UNIT #069		Date Prepared:	R. Van Howe 9/3/2013
Location:	K-20-17S-33E 1650 FSL 2310 FWL		Last Updated:	
	32.8173322192836 -103.686388847266		Spud Date:	2-Jan-56
API #:	30-025-01496		RR Date:	
			Spud Date to RR Date:	
Elevations:	GROUND:	4190.0	Completion Start Date:	
	KB:		Completion End Date:	
Depths (KB):	PBTD:		Completion Total Days:	
	TD:	4535.0	Co-ordinates:	



Hole Size 11"

Surface Casing:
8-5/8", 24# set at 318'
Cmt w/ 225 sxs regular cmt
TOC @ Surf

Production Casing:
Hole Size 7-7/8"
5-1/2", 15.5# set at 4234'
Cmt w/ 200 sxs
TOC @ 4205'

Tubing:

	Length (ft)
131 jts 2-3/8" IPC tbg	

Notes:
Converted to Inj 2/5/97
Top of salt: 1460'
Base of salt: 2510'

Perforations:
4181-93 - 13 holes (7/12/88)
OH 4234'-4565'

Final P&A Procedure:

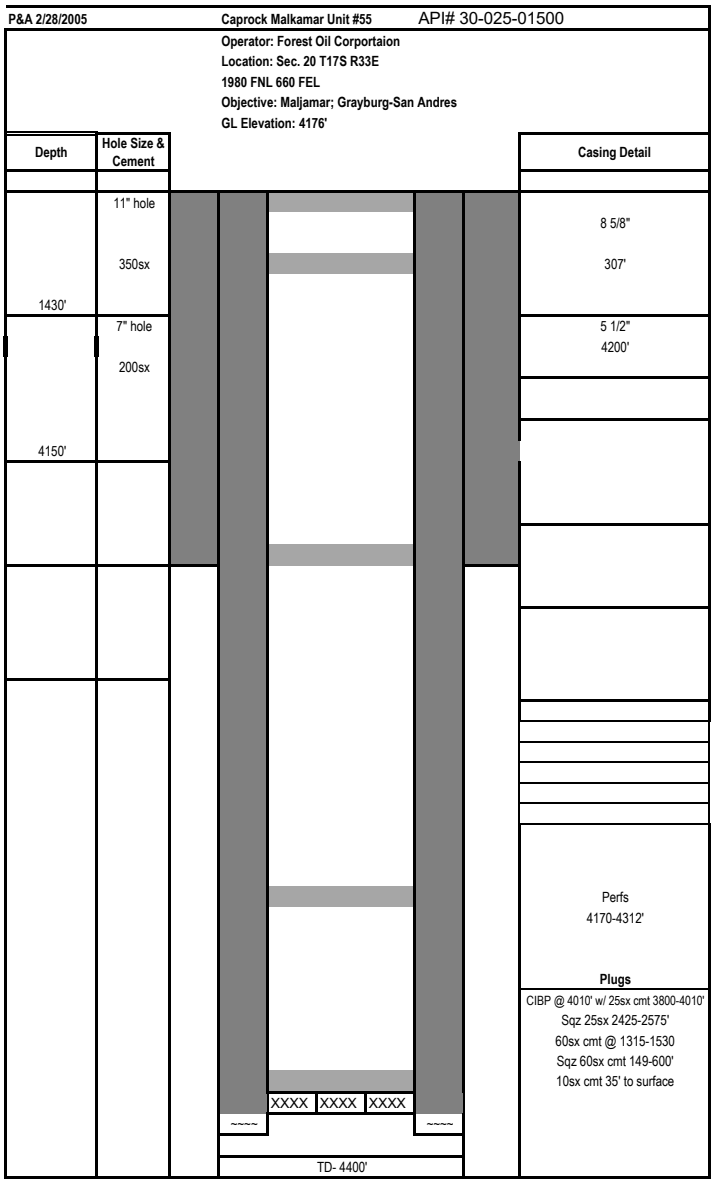
MIRU plugging equip. NU BOP
Sqz'd 25 sx cmt and displaced to 4150'
Set CIBP @ 4131
Spotted 25 sx cmt @3884-4131'
Perf'd csg @2520', RIH open ended to 2570'
Spotted 25 sx cmt @2323-2570'
Spotted 25 sx cmt @1173-1420'
Spotted 25 sx cmt @383-630'
Perf @ 368' & Spotted 40 sx cmt @372-surf
Cut off well head and weld on Dry Hole Marker

Perf @ 368' & Spotted 40 sx cmt @372-surf
Sqz csg @ 558'-590' w/ 150 sx
Spotted 25 sx cmt @383-630'
Sqz csg @ 1308-1429' w/ 200 sx
Spotted 25 sx cmt @1173-1420'
Spotted 25 sx cmt @2323-2570'
Perf'd csg @2520'
Spotted 25 sx cmt @3884-4131'
Sqz'd 25 sx cmt and displaced to 4150'
Set CIBP @ 4131'
4181'-4193'

P&A 2/28/2005

Caprock Malkamar Unit #55 API# 30-025-01500

Operator: Forest Oil Corportaion
Location: Sec. 20 T17S R33E
1980 FNL 660 FEL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4176'

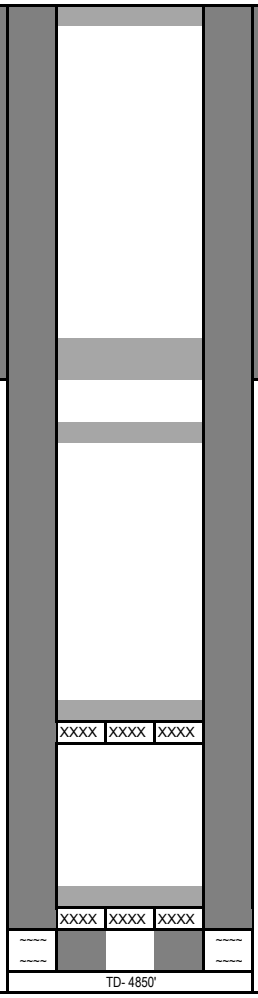


P&A 9/7/2006

Caprock Malkamar Unit #57 API# 30-025-01501

Operator: Forest Oil Corportaion
Location: Sec. 20 T17S R33E
1980 FNL 660 FEL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4187'

Depth	Hole Size & Cement	Casing Detail
287'	17" hole 300sx	12 3/4" 287'
4229'	8 3/4" hole 500sx	7" 4229'
3958-4850'	4 1/2" Liner 120sx	



Perfs
4219-4585'

Plugs

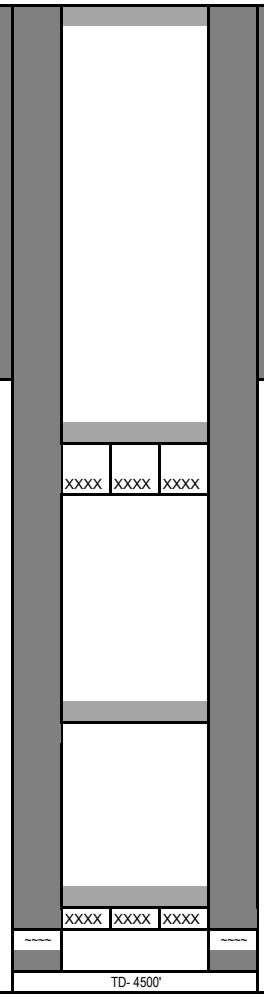
CICB @ 3650' 25sx cmt 3501-3650'
CICR @ 1480 Sqz 60sx cmt
20sx cmt 1361-1480'
Sqz 100sx cmt displace to 200'-165'
Cmt 60' to surface

P&A 10/10/1999

Caprock Malkamar Unit #43 API# 30-025-01502

Operator: Wiser Oil Co
Location: Sec. 20 T17S R33E
660 FNL 1980 FEL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4211'

Depth	Hole Size & Cement	Casing Detail
271'	13 3/4" hole 300sx	10 3/4" 271'
4493'	8 3/4" hole 1900sx	7" 4493'
		Perfs 4215-4428
		Plugs CIBP @ 4150' 10sx cmt cap 25sx cmt @ 1550' Tag @ 1360' 7" cmt retainer @ 432' w/ 250sx cmt tag @ 425' 65sx cmt to surface



Caprock Maljamar Unit #56
P&A 10/29/2013

Perf @ 326' - circ cmt to surface

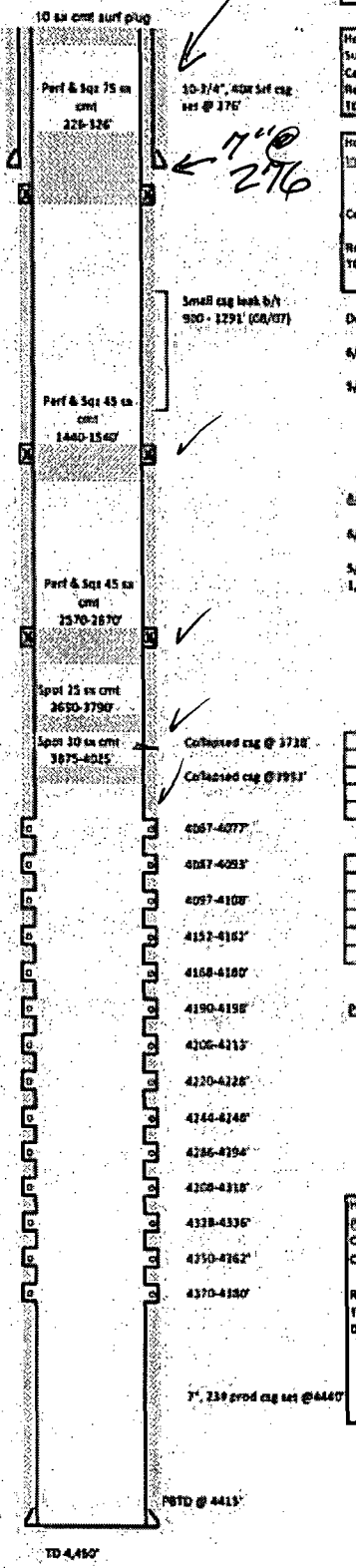
Well Name:	CMU #56

	Location:
Location	1880 FNL & 1980 FEL
Section:	G-30-17S-32E
Block:	
Survey:	
County:	Lea
Lat/Long:	
Field:	Maljamar Grayburg San Andres
	Elevations:
GL:	4174'
DF	
KB-GL Calc:	4185'
ck w/log?	

Logging Recommendation:

Date	
5/13/1955	Set 276 ft of 10 3/4" csg. Cemented w/220 sxs. Cmt circ'd to surf
6/6/1955	Drilled 4450'. 8-3/4" hole. Set 4440'. 7-1/2", 23# csg. Cemented w/500 sxs
6/8/1955	Perf'd 7" casing with 4 shots per ft: 4190-98, 4206-18, 4220-28, 4286-94, 4308-18, 4328-36, 4350-62,
3/7/1979	Bradenhead pressure survey performed
5/29/1979	Ran tubing & pressure tested w/pressure pump truck. Found one leaking collar & SN cut out
5/30/1979	Ran tubing & rods w/pump. Placed well on production
5/8/1986	Drilled & washed sand to 4413'. Spotted 391 gallons of converter and let set for 24 hrs.
5/13/1986	Added perf's: 4068-4077', 4087-4093', 4097-4108', 4152-4162', 4168-4180', and 4244-4248'. Treated
5/18/1986	Installed 1-2/4" tubing pump on 10-7/8" rods, 110-3/4" rods, 38-7/8" rods, and 16' of 7/8" rod subs.
1/19/1995	Drilled & milled out to 4415'. Acidized perfs 4068-4380 w/2500 gal 15% NeFe acid. Set 7" AD-1 tension
7/17/1995	SIT approved
12/4/2007	RU PU, NU BOP, pick tbg from pipe rack - 2-3/8 ipc RBIH w/96 jts w/retrieving tool latch on to RBP
12/5/2007	RU tbg tester, test tbg BIH w/7" AD-1 pkr, had trouble testing tbg had to lay down 8 jts, joints ipc coding
12/6/2007	NO BOP NU WH RDPU Put back on production
5/20/2008	POH w/44 jts, tbg parted, pin break on tbg 5 t. RDP tied csg to flow line. SION
6/21/2008	RIH latch to fish & unset pkr & POH w/tbg 2-3/8" tbg & lay down fish stool, & lay down 24 jts slimhole SI
6/22/2008	POH rest of tbg 26 strands, & LD pkr, repair pkr in loc, 2-3/8"x7" AD-1 pkr, RU tbg tester, start BIH w/tbg
6/25/2008	NO catch pan & RU pump trk & cir. To trk 150 bbls of pkr fluid, finish cir, set pkr@4830'
4/9/2013	Tag Fill @ 3615'
6/28/2013	Tagged up @ 3970', milled to 3990', RIH w/ bit, drill to 4300'
7/3/2013	POH w/ bit found a tight spot above perfs, ran impression block found collapsed csg @ 3991'
7/9/2013	RIH w/ 7" CIBP, couldn't get past 3738', POH, RIH w/ 5 3/4" gauge ring, couldn't get past 3738'

Proposed Wellbore Diagram



Well Name:	CMU #56
API No:	30-025-01506
Spud Date:	5/13/1955
WBD Update:	5/1/2013 B. Williams

Hole Size:	13-3/4"
Surf Csg:	10-3/4", 40#
Cement Blend:	220 sxs
Returns:	
TOC:	Circ to surf

Hole Size:	
Int Csg:	
Cement Blend:	
Returns:	
TOC:	

Details of Perforations

6/8/1955	4190-98, 4206-18, 4220-28, 4286-94, 4308-18, 4328-36, 4350-62, 4370-80 (4 holes/ft)
5/13/1986	Added perf's: 4068-4077', 4087-4093', 4097-4108', 4152-4162', 4168-4180', and 4244-4248'

Acid or Fracture Treatment Details

6/9/1955	Original perfs sand frac'd with 24K gals base crude and 24K sand.
5/13/1986	Treated add'd perfs w/8000 gal 15% NeFe acid, 600 lbs rock salt, and 600 lbs. benzoic acid flakes in 3
1/19/1995	Acidized perfs 4068-4380 w/2500 gal 15% NeFe acid

Tubing Detail 8/29/2008	
Joints	Description
122	2-3/8", 4.7#, J-55 8rd EUE
Pkr Depth	3,810

Rod Detail (top to bottom)	
Rods	Description

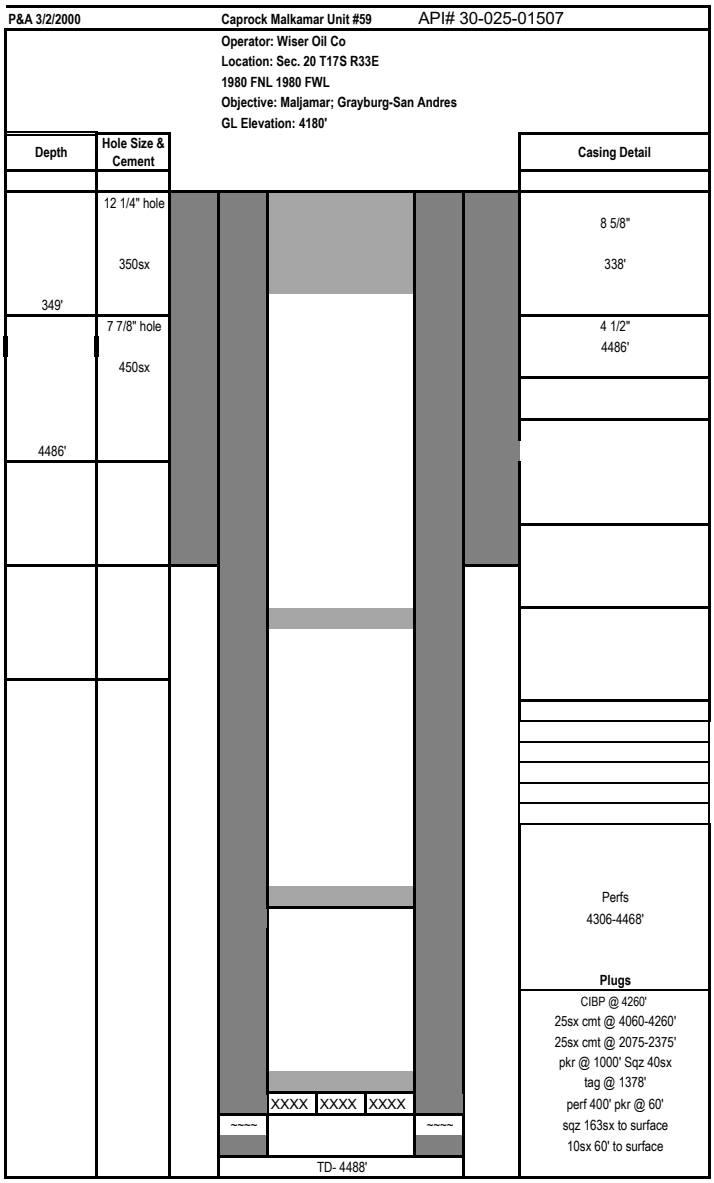
Pumping Unit:

Hole Size:	8-3/4"
Prod Csg:	7", 23#
Capacity (bbl/ft):	
Cement Blend:	700 sxs
Returns:	
TOC:	Calc. @ surface
Depth	4440'

P&A 3/2/2000

Caprock Malkamar Unit #59 API# 30-025-01507

Operator: Wiser Oil Co
Location: Sec. 20 T17S R33E
1980 FNL 1980 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4180'

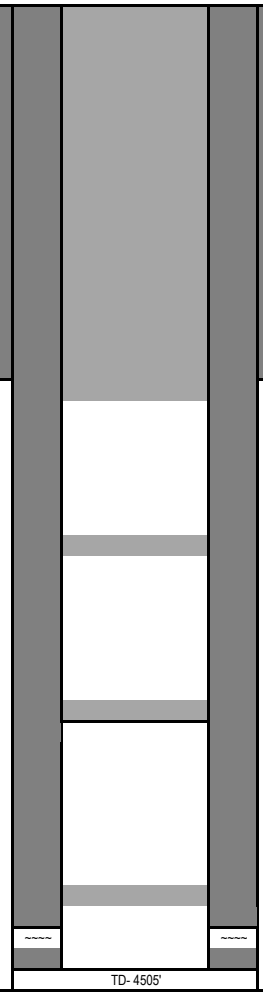


P&A 7/31/2001

Caprock Malkamar Unit #72 API# 30-025-01508

Operator: Wiser Oil Co
Location: Sec. 21 T17S R33E
1980 FSL 660 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4175'

Depth	Hole Size & Cement	Casing Detail
301'	11" hole 250sx	8 5/8" 301'
4505'	7 7/8" hole 275sx	5 1/2" 4505'
		Perfs 4236-4444'
		Plugs 35sx cmt 3836-4216' 25sx cmt 2242-2600' 25sx cmt 1164-1408' 118sx cmt 350-surface



P&A 3/20/12
Caprock Maljamar Unit #58
30-025-01509

Wellbore Diagram

Lease & Well No.	Caprock Maljamar Unit #58	Former Name	
Field Name	Maljamar (Grayburg San Andres)	County & State	Lea County, New Mexico
Location	1980' FNL & 660' FWL; T- 17S R: 33E Sec- 21	API No.	30-025-01509
K.B. Elevation	4,177'		
D.F. Elevation			
Ground Level	Not given		

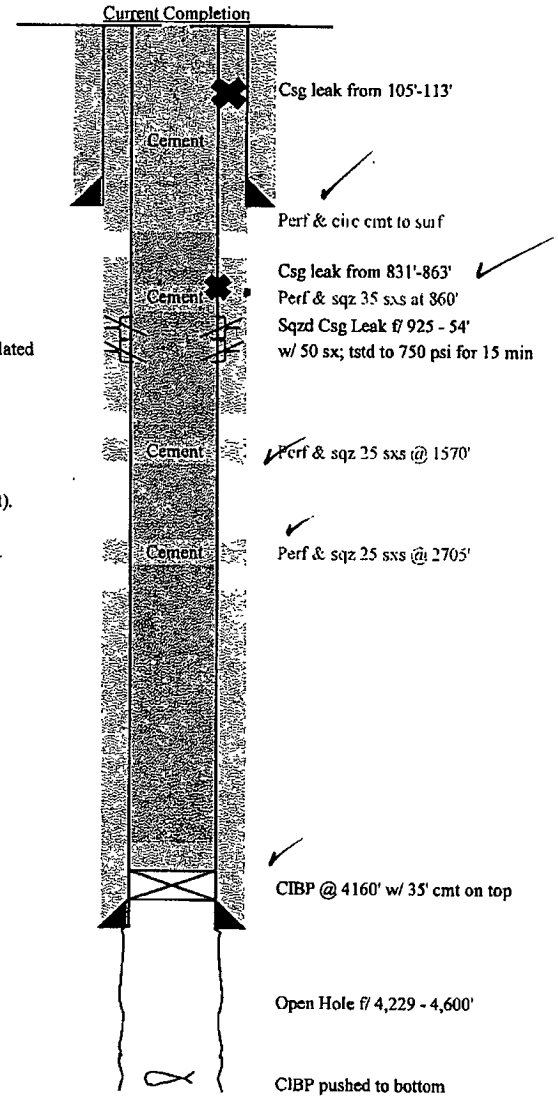
Surface Casing					
Size (OD)	8 5/8"	Weight	24 0#	Depth	301'
Grade		Sx. Cmt.	225 sx	TOC @	Surface

Intermediate Casing					
Size (OD)	n/a	Weight		Depth	
Grade		Sx. Cmt.		TOC @	

Production Casing					
Size (OD)	5 1/2"	Weight	15.5#	Depth	4,229'
Grade		Sx. Cmt.	200 sx	TOC @	3257' Calculated

P&A Procedure
MIRU Pluggin rig
RIH & tag top of CIBP
Circ the hole with mud laden fluid
Perf the 5-1/2" csg at 2705' and sqz 25 sx Cl C cmt in/out of csg (cover 50' above and below base of salt).
WOC and tag no lower than 2605'.
Perf the 5-1/2" csg at 1570' and sqz 25 sx Cl C cmt in/out of csg (cover 50' above and below top of salt).
WOC & tag no lower than 1470'.
Perf the 5-1/2" csg at 860'& sqz 35 sxs in/out of csg (25 sxs inside 5-1/2" & displace 10 sxs).
WOC & tag no lower than 760'
Perf the 5-1/2" csg at 351' and circ Cl C cmt in/out of csg to surf.
WOC.
Set the dry hole marker and clean up location.

Formation Record	Depth
Top of Salt	1520'
Base of Salt	2655'



Plug Back Depth	4,596'
Total Depth	4,600'

P&A 11/26/2000

Caprock Malkamar Unit #85 API# 30-025-01510

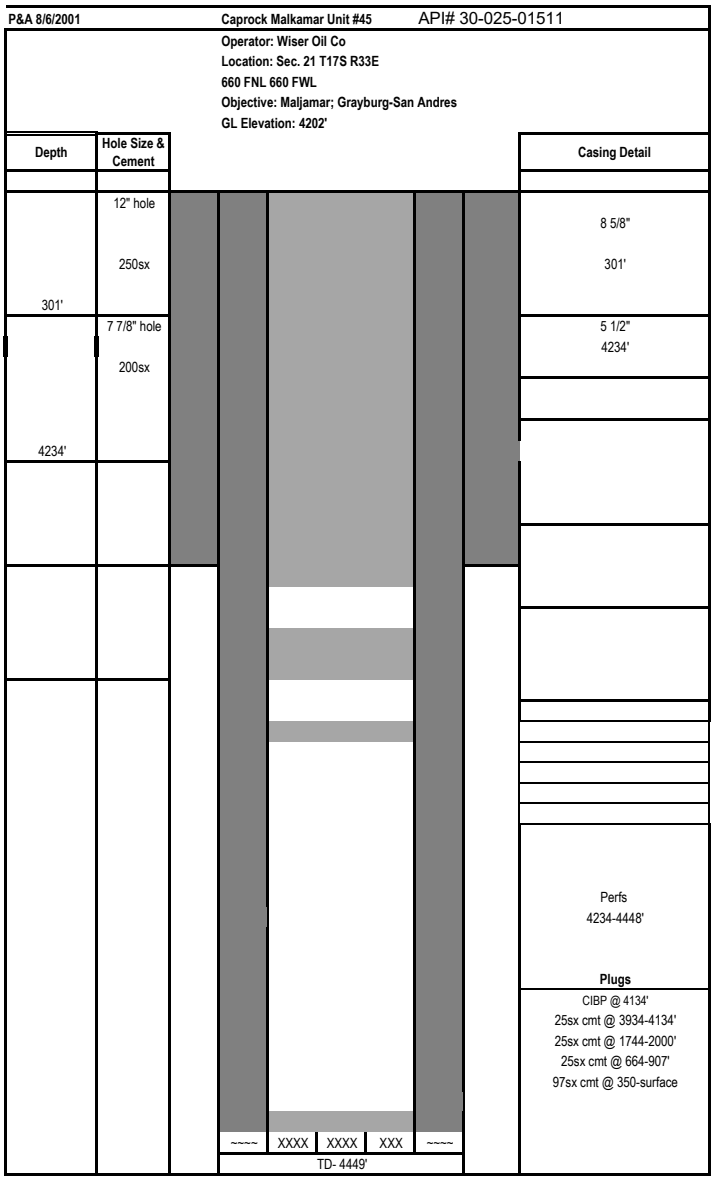
Operator: Wiser Oil Co
Location: Sec. 21 T17S R33E
660 FSL 660 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4189'

Depth	Hole Size & Cement	Casing Detail
	12" hole 200sx	8 5/8" 305
305'		
	7 7/8" hole 200sx	5 1/2" 4249'
4249'		
		Perfs ?
		Plugs 25sx cmt 3983-4200' 25sx cmt 1225-1425' 132sx cmt 357-Surface
		TD- 4445'

P&A 8/6/2001

Caprock Malkamar Unit #45 API# 30-025-01511

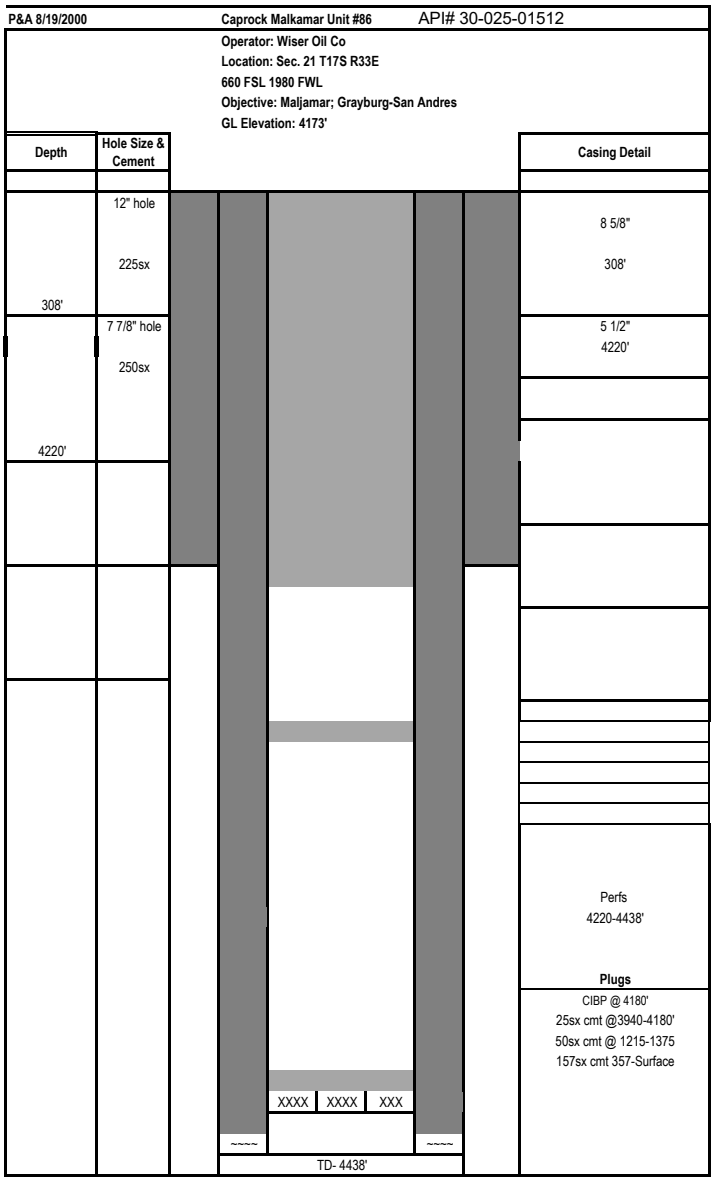
Operator: Wiser Oil Co
Location: Sec. 21 T17S R33E
660 FNL 660 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4202'



P&A 8/19/2000

Caprock Malkamar Unit #86 API# 30-025-01512

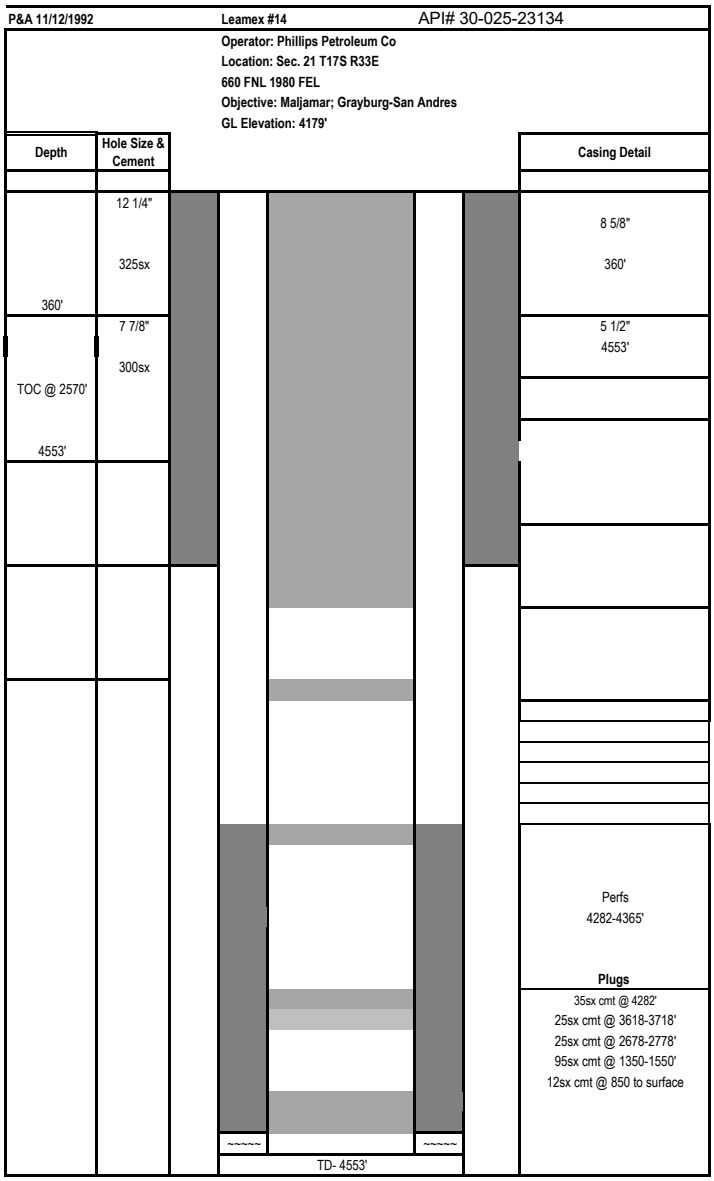
Operator: Wiser Oil Co
Location: Sec. 21 T17S R33E
660 FSL 1980 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4173'



P&A 11/12/1992

Leamex #14 API# 30-025-23134

Operator: Phillips Petroleum Co
Location: Sec. 21 T17S R33E
660 FNL 1980 FEL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4179'

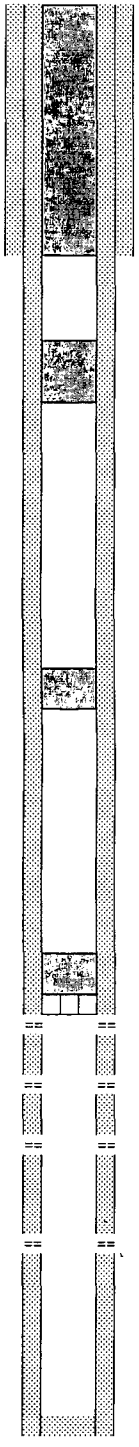


Leamex #36
30-025-28423
P&A 2/11/2016

WELLBORE SKETCH
ConocoPhillips Company - Lower 48 - Mid-Continent BU / Permian Operations

Date: June 22, 2015

RKB @ 4196'
DF @ 4194'
GL @ 4184'



12 1/4" Hole

Spot 30sx cmt @ 402'-3'

8 5/8" 24# K-55 @ 352'
Cmt'd w/ 400 sx, circ 100 sxs
TOC @ Surface

Top of Salt @ 876'

Spot 55sx cmt @ 1495'-825' - Tag

Spot 25sx cmt @ 2955'-2700' - Tag
Base of Salt @ 2905'

Spot 35sx cmt @ 4146'-3696'
Set CIBP @ 4146'
4246-4274'

4306-4394'

4400-4566'

4626-4675'

7-7/8" Hole
4 1/2" 11.6# N-80 @ 4800'
Cmt'd w/ 1250 sx; Circ 187 sxs
TOC @ Surface

PBTD: 4757'
TD: 4800'

Subarea : Buckeye
Lease & Well No. : Leamex 36
Legal Description : 1980 FNL & 1980 FEL, Sec. 16, T-17-S, R-33-E,

County : Lea State : New Mexico
Field : Maljamar (Grayburg/San Andres)
Date Spudded : 11/28/1983 Rig Released: 12/4/1983
API Number : 30-025-28423
Status: Producing

State Lease No. **B-2148**
OGRID No. **017643**

Stimulation History:

Interval	Date	Type	Gals	Lbs. Sand	Max Press	ISIP	Max Rate	Down
	3/6/1984	**Perf 4246-4250, 4261-4266, 4271-4274, 4306-4308, 4311-4313, 4316-4320, 4342-4344, 4347-4353, 4361-4364, 4377-4382, 4392-4394, 4400-4406, 4438-4444, 4451-4453, 4460-4462, 4464-4477, 4481-4486, 4491-4493, 4547-4550, 4554-4558, 4564-4566, 4626-4628, 4634-4642, 4646-4648, 4672-4675 w/ 2 JSPF**						
4246-4675	3/8/1984	15% NEFE	11,500					
4246-4675	3/12/1984	RO	31,000	34,500				
	6/18/1997	Tag Fill @ 4658'; CO to 4708'						
4246-4675	6/23/1997	15% HCL	6200					
4246-4675	3/3/2003	15% HCL	500					
4246-4675	9/16/2014	15% HCL	1500					

Formation Tops:

Santa Rosa	
Base Rustler	1445'
Salado	
Yates	2751'
Queen	3746'
Pemrose	
Grayburg	4199'
San Andres	4500'
Glorieta	
Abo	
Wolfcamp	

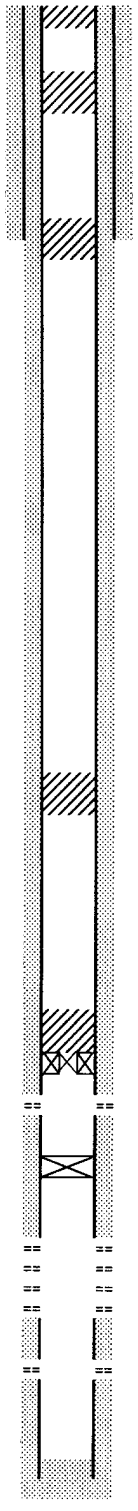
P&A 6/14/2006
Leamex #39
30-025-29815

PLUGGED WELLBORE SKETCH - LEAMEX #39

ConocoPhillips Company -- Permian Basin Area

Date: June 22, 2006

RKB @ 4177'
DF @ 4176'
GL @ 4166'



25 sx C cmt 50' to surface

25 sx C cmt 444 - 197'

12-1/4" Hole

8⅝" 24# K55 @ 1,538' cmt'd w/ 1,000 sx circulated 25 sx

25 sx C cmt 1,555 - 1,308' TAGGED

25 sx C cmt 2,698 - 2,451'
base of salt @ ~2,700'

25 sx C cmt 3,980 - 3,721'

Packer @ 3,980' w/ blanking plug

Queen
4059' - 4069' (3/00)

CIBP @ 4,120' (6/00)

Grayburg
4282' - 4286' 4' - 8 holes
4411' - 4415' 4' - 8 holes
4456' - 4463' 7' - 14 holes
4476' - 4480' 4' - 8 holes

San Andres
4532' - 4544' 12' - 24 holes

7-7/8" Production Hole

5-1/2" OD set @ 4805'
17# K-55 ST&C (117 jts)
Cmt'd 1st Stage: 1200 sx Class C
Tail: 400 sx Class C
Circ 304 sx
TOC @ Surface

PBTD: 4120'
TD: 4805'

Subarea : Maljamar
Lease & Well No. : Leamex **No. 39**
Legal Description : 1805' FSL & 1980' FEL, Sec. 21, T-17-S, R-33-E
County : Lea State : New Mexico
Field : Maljamar (Grayburg/San Andres)
Date Spudded : Jan. 1, 1987 Released Rig: Jan 12, 1987
API Number : 30-025-29815
Status: plugged 06/14/06

Stimulation History:

Interval	Date	Type	Gals	Lbs. Sand	Max Press	ISIP	Max Rate	Down
	2/13/87	**Perf Grayburg San Andres 4282-4544**						
4532-4544	2/14/87	15% NEFE	1,800	18 BS	4300	2800	3.1	
4282-4544	2/14/87	15% NEFE	1,900	31 BS	4200	2000	3.7	
4282-4544	2/19/87	X-Link 2% KCl gel	32,000	62,500		2600		
	3/25/87	IPP Pmp 40 BO, 18 BW, GOR 450						
4282-4544	2/12/88	15% HCl	2,000	95 BS	4001	700	2.0	2-3/8"
		Scale sqz 1 drum Techni-Hib 756 w/20 bbls wtr						
		Prod Before 25 BO GOR 705 15 BW						
	2/22/88	Prod After 17 BO GOR 705 25 BW						
4282-4544	7/11/92	15% NEFE HCl	1,500		1200	400	3.0	2-3/8"
		Prod Before 25 BO 1 Mcf 1 BW						
	7/17/92	Prod After 10 BO 10 Mcf 6 BW						
	3/20/00	**Perf Queen 4059-4069; set CIBP @ 4120'; TA GB/SA**						
4059-4069	3/21/00	Water Frac 20	2,000		2954		6.7	
		Delta Frac 20	6,000	14,000	3536	3535	8.2	
	3/24/00	**Run in w/blanking plug (1.875). Set plug at 3978.75' in F Profile Nipple.**						
	5/31/00	Shut-In						
	6/30/00	Well Shut-In						
		Tag fill @ 4059; clean out to 4120'. Shut-In						
	7/3/00	Pull tbg plug, got out w/center pin out of plug. COOH w/tbg plug						
	7/11/00	**Set tbg plug in pkr @ 3980'**, blow tbg down. 0 psi on tbg. RD JSI.						
		Release On/Off Tool and COOH laying down tbg on racks.						
		GIH w/10 stds of prod tbg.						
	4/24/04	performed MIT to 500 psi, held						

TRIPLE N SERVICES INC.
MIDLAND, TX

PLUGS SET 06/13/06 - 06/14/06

1) 25 sx C cmt 3,980 - 3,721'
2) 25 sx C cmt 2,698 - 2,451'
3) 25 sx C cmt 1,555 - 1,308' TAGGED
4) 25 sx C cmt 444 - 197'
5) 10 sx C cmt 50' to surface

Capacities

4½" 9.5# csg:	10.960 ft/ft3	0.0912 ft3/ft
5½" 14# csg:	7.299 ft/ft3	0.1370 ft3/ft
5½" 17# csg:	7.661 ft/ft3	0.1305 ft3/ft
7" 20# csg:	4.399 ft/ft3	0.2273 ft3/ft
7⅞" 26.4# csg:	3.775 ft/ft3	0.2648 ft3/ft
8⅝" 24# csg:	2.797 ft/ft3	0.3575 ft3/ft
8⅝" 28# csg:	2.853 ft/ft3	0.3505 ft3/ft
10¾" 40.5# csg:	1.815 ft/ft3	0.5508 ft3/ft
7⅞" openhole:	2.957 ft/ft3	0.3382 ft3/ft
8¾" openhole:	2.395 ft/ft3	0.4176 ft3/ft
12¼" openhole:	1.222 ft/ft3	0.8185 ft3/ft

Formation Tops:

Rustler	1413'
Yates	2730'
Queen	3710'
Grayburg	4074'
San Andres	4487'

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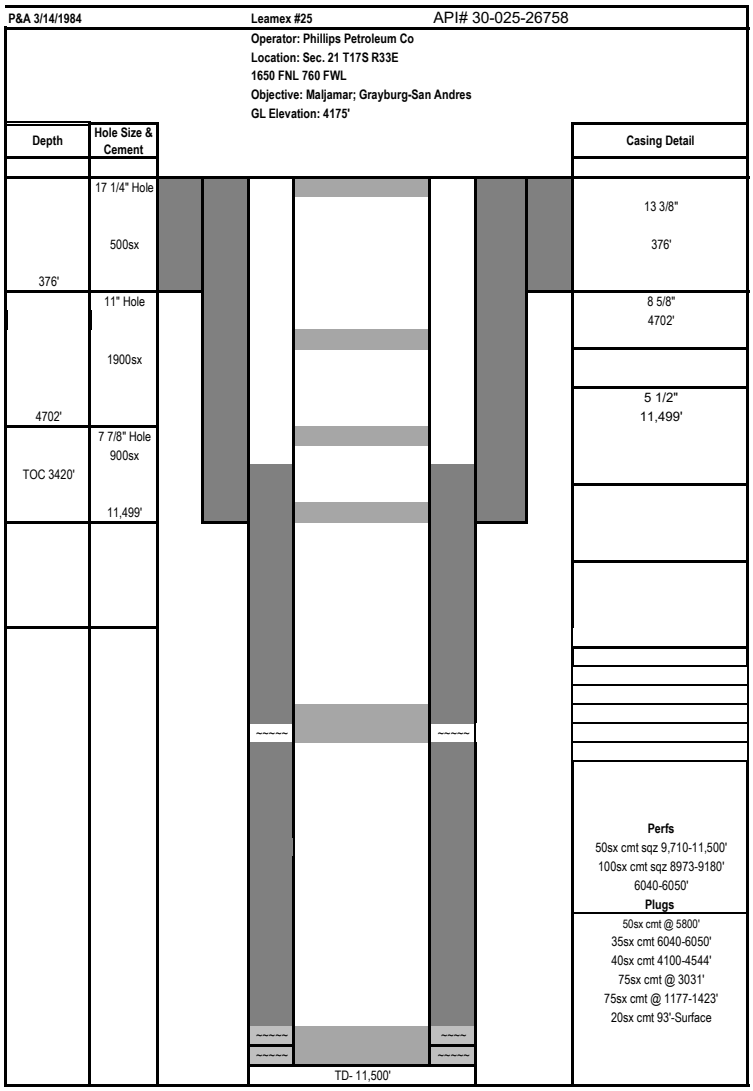
Jim Newman
Triple N Services


P&A 3/14/1984
Leamex #25
API# 30-025-26758
Operator: Phillips Petroleum Co
Location: Sec. 21 T17S R33E
1650 FNL 760 FWL
Objective: Maljamar; Grayburg-San Andres
GL Elevation: 4175'
Depth
Hole Size & Cement
Casing Detail
17 1/4" Hole
500sx
376'
13 3/8"
376'
11" Hole
1900sx
4702'
8 5/8"
4702'
5 1/2"
11,499'
7 7/8" Hole
900sx
TOC 3420'
11,499'
Perfs
50sx cmt sqz 9,710-11,500'
100sx cmt sqz 8973-9180'
6040-6050'
Plugs
50sx cmt @ 5800'
35sx cmt 6040-6050'
40sx cmt 4100-4544'
75sx cmt @ 3031'
75sx cmt @ 1177-1423'
20sx cmt 93'-Surface
TD- 11,500'

CMU #165
30-025-32425
P&A 12/3/2013

Final P&A Wellbore Diagram

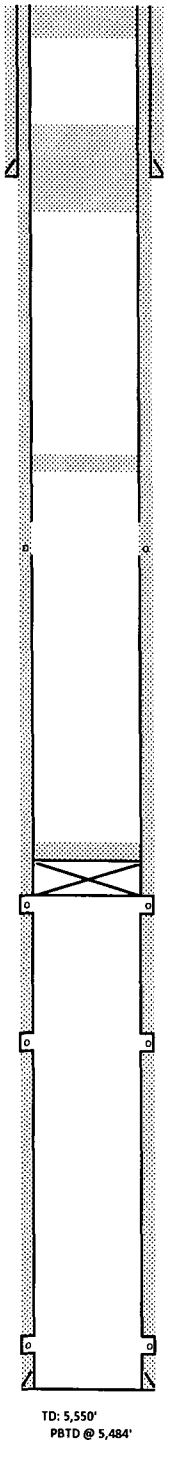
Well Name:	CMU #165

	Location:
Location	66' FSL 1256' FWL
Section:	T: 17S R: 33E Sec: 17
Block:	
Survey:	
County:	Lea
Lat/Long:	
Field:	Maljamar Grayburg San Andres
	Elevations:
GL:	4,205'
DF:	
KB-GL Calc:	
ck w/log?	

Logging Requirements:

Date	
8/26/1994	Spud 12-1/4" hole & drld to 1,290'; Set 8-5/8" csg @ 1,290' & cmtd w/ 600 sx; Circ 80 sx to surf
9/9/1994	Tagged PBTD @ 5,484'; Perf'd Slaughter zone f/ 5,325', 26', 31', 32', 33', 40', 5,404', 05', 16', 17', 18', 22',
9/14/1994	Perf'd Greyburg & Vacuum zones f/ 4,169', 71', 4,203', 04', 05', 06', 19', 20', 29', 30', 59', 61', 68', 86', 90',
9/19/1994	RIH w/ retrieving tool, picked up RBP and pkr and circulate hole clean to 5,488'. Perf'd f/4,725', 30', 31',
5/3/1996	POH w/ prod eqmt; RIH w/ RBP & set same @ 3,308'; Perf'd 7 River f/ 3,242'-44', 56'-60', 3,104', 07'-09',
5/7/1996	Release pkr and POH. GIH w/ RBP and pkr. Set RBP @ 3280'. Pkr set @ 2985'. Re-acidized 7 River f/ 3104' - 3260'. Swabbed and got nothing but water. Release pkr & retrieve RBP. POH.
5/13/1996	GIH w/retrieving head on tbg and retrieve RBP @ 3308'. POH. GIH w/CIBP and set @ 3304'. POH. GIH
5/14/1996	GIH w/4-3/4" bit & DCs on tbg. Drill cmt & CIRs f/2965'-3005'. Circ clean. Tag cmt @ 3050'. Drl cmt & CIR
12/14/2000	ND WH. POH w/prod equip & tbg. RIH and set 5-1/2" CIBP @ 4120'. Capped w/10 sxs cmt. RIH w/tbg to

FINAL
Wellbore Diagram



Well Name:	CMU #165
API No:	30-025-32425
Spud Date:	8/24/1994
WBD Update:	8/19/2013 R. Van Howe

Hole Size:	12 1/4
Surf Csg:	8-5/8", 24#, J-55
Cement Blend:	600 sx
Depth:	1290'
TOC:	Circ cmt to Surf

Hole Size:	
Int Csg:	
Cement Blend:	
Returns:	
TOC:	

Details of Perforations

9/9/1994	Perf'd 5325-5429'
9/14/1994	Perf'd 4,169' - 4,506'
9/19/1994	Perf'd 4,725 - 4,750'
5/3/1996	Perf'd 3,104'-3,260' (later squeezed)

Acid or Fracture Treatment Details

9/10/1994	
5,325' - 5,429'	Acidize/1500 gal 15% NEFE acid + 36 ball sealers
4,169' - 4,506'	Acidize/3000 gal 15% NEFE acid + 70 ball sealers
4,169' - 4,506'	Frac w/ 79,000 gals 35# gel + 95,000# (0.5-3#/gal) 20/40 + 44,000# 12/20 sd
5/3/1996	
3,104'-3,260'	Acidize/2000 gal 15% NEFE acid + 32 ball sealers
5/9/1996	
3,104'-3,119'	Acidize/1000 gal 15% HF acid + 1000 gal 15% RHF acid
3,242'-3,260'	Acidize/1000 gal 15% HF acid + 1000 gal 15% RHF acid

Tubing Detail	
Joints	Description
	2 7/8
Pkr Depth	

Rod Detail (top to bottom)	
Rods	Description

Pumping Unit:

Hole Size:	7 7/8
Prod Csg:	5-1/2", 17#, J-55
Capacity (bbl/ft):	
Cement Blend:	1675 sxs
Returns:	
TOC:	Circ cmt to surf
Depth	5550'

BXP Operating

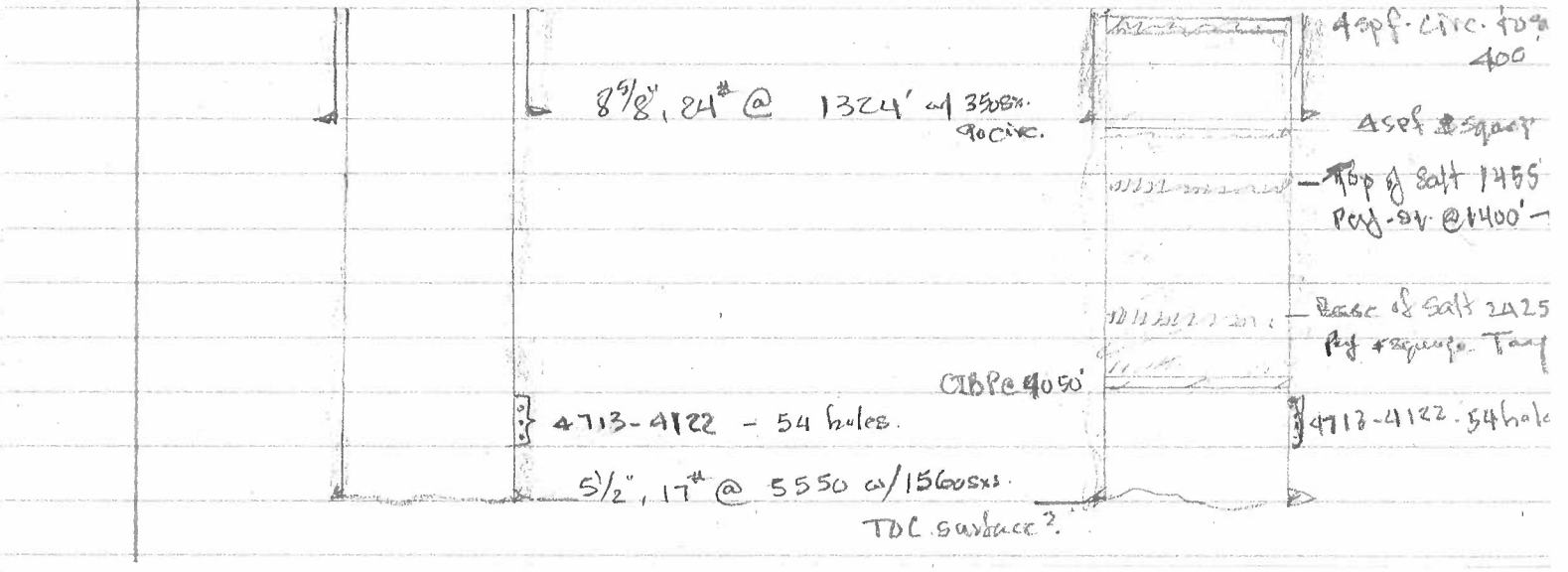
CARLSBAD MALJAMAR UNIT 194

K Sec. 20, T17S, R33E

Lea County, New Mex TD

30-025-32840

API # 30-025-32840



Final Wellbore Diagram

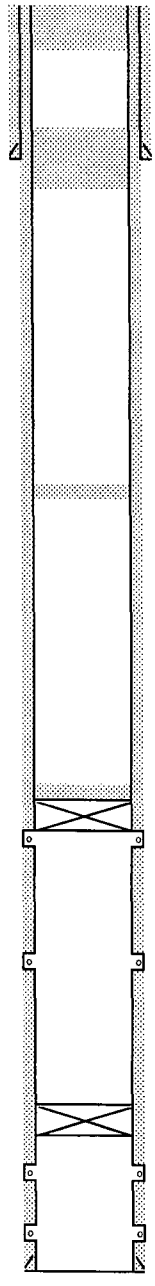
Well Name:	CMU #195

	Location:
Location	2614' FNL & 2618' FEL
Section:	T: 17S R: 33E Sec: 20
Block:	
Survey:	
County:	Lea
Lat/Long:	
Field:	Maljamar Grayburg San Andres
	Elevations:
GL:	4,196'
DF:	
KB-GL Calc:	
ck w/log?	

Logging Requirements:

Date	
4/8/1995	Spud 12-1/4" hole & drld to 1,324'; Set 8-5/8" csg @ 1,324' & cmtd w/ 600 sx; Circ 75 sx to surf
4/25/1995	Tagged PBTD @ 5,455'; Perf'd Slaughter zone f/ 5,421', 23', 25', 27', 29', 31', 32', 33', 34', 35', 41', 42', 43',
5/8/1995	Perf'd Vacuum zones f/ 4,382', 84', 86', 88', 98', 4,400', 01', 14', 19', 22', 34', 62', 72', 73', 82', 83', 91', 94'
6/22/1995	POH w/ prod eqmt; POH w/ RBP; Put well back on pump
1/12/1996	POH w/ prod eqmt; RIH w/ CIBP & set same @ 4,980'; Put well back on pump
3/14/2000	POH w/ prod eqmt; RIH w/ bit & scpr & tag @ 4,970'; Scpr activity through perfs; Perf'd f/ 4,124', 28', 29', 60', 61', 62', 63', 74', 75', 88', 4,221', 30', 49', 56', 57', 65', 67', 78', 79', 95', 4,306', 16', 22', 26', 82', 84', 86', 88', 98', 4,400', 01', 14', 19', 22', 34', 62', 72', 73', 82', 83', 91', 94' & 95' @ 4 spf; RIH w/ pkr & set @ 4,036. POH w/ pkr & put well on pump
3/6/2002	POH w/ prod eqmt; RIH w/ CIBP & set same @ 4,100'; Capped w/ 5 sx cmt; Circ 80. bbls pkr fluid; Leave

Final Wellbore Diagram



Spotted 50 sx cmt @ 368'- surface

8-5/8", 24#, 29 jts set @ 1,324'

Spotted 45 sx cmt @ 1,420'-946' (tagged)

Spotted 25 sx cmt @ 2,520'-2,267'

Spotted 25 sx cmt @ 4,095'-3,842' CIBP @4,095' (tagged)

4,124-4,326'

4,382-4,495'

CIBP @ 4980'

5,239-5,337'

5,421-5,445'

5-1/2", 17# set@ 5,552'

TD: 5,550'
PBTD @ 5,455'

Well Name:	CMU #195
API No:	30-025-32841
Spud Date:	4/8/1995
WBD Update:	8/6/2013 R. Van Howe

Hole Size:	12 1/4
Surf Csg:	8-5/8", 24#, J-55
Cement Blend:	600 sx
Depth:	1324'
TOC:	Circ cmt to Surf

Hole Size:	
Int Csg:	
Cement Blend:	
Returns:	
TOC:	

Details of Perforations

4/25/1995	Perf'd 5421-5445' and 5239-5337'
5/8/1995	Perf'd 4382-4395' and 4124-4326'
3/14/2000	Re-perf'd 4124-4495'

Acid or Fracture Treatment Details

	(4/25/1995)	
	5,421-5,445'	Acidize/2000 gal 15% NEFE acid
	5,239-5,337'	Acidize/2000 gal 15% NEFE acid
	4,124-4495'	Acidize/6000 gal 15% NEFE acid
		Frac w/ 74,000 gals 35# gel + 95,000# (0.5-3#/gal) 20/40 +
	4,124-4495'	42,000# 12/20 sd
		Frac'd w/ 41,500 gals 35# linear gel + 40,000# 20/40 sd +
	5,239-5445'	10,000 # 12/20 sd
	(3/14/2000)	
	4124'-4495'	Acidized w/ 4000 gal 15% HCL anti-sludge w/Toluene pad

Tubing Detail	
Joints	Description
	2 7/8
Pkr Depth	4641'

Rod Detail (top to bottom)	
Rods	Description

Pumping Unit:

Hole Size:	7 7/8
Prod Csg:	5-1/2", 17#, J-55
Capacity (bbl/ft):	
Cement Blend:	1650 sxs
Returns:	
TOC:	Circ cmt to surf
Depth	5552'

Final Wellbore Diagram

Lease & Well No.	**Caprock Maljamar Unit #154**	Former Name	
Field Name	Maljamar (Grayburg San Andres)	County & State	Lea County, New Mexico
Location	1980' FSL & 660' FWL; T: 17S R: 33E Sec: 28	API No.	30-025-32893

K.B. Elevation	4,213'
D.F. Elevation	4,241'
Ground Level	4,205'

Surface Casing					
Size (OD)	8 5/8"	Weight	24.0#	Depth	1,322'
Grade	J-55	Sx. Cmt.	600 sx	TOC @	Surface

Intermediate Casing					
Size (OD)	n/a	Weight		Depth	
Grade		Sx. Cmt.		TOC @	

Production Casing					
Size (OD)	5 1/2"	Weight	17.0#	Depth	5,550'
Grade	J-55	Sx. Cmt.	1480 sx	TOC @	Surface

Well History

3/21/95 - Spud 12-1/4" hole & drld to 1,322'; Set 8-5/8" csg @ 1,322' & cmtd w/ 600 sx; Circ 87 sx to surface

3/28/95 - TD 7-7/8" hole @ 5,550'; Set 5-1/2" csg @ 5,550' & cmt w/ 1,480 sx cmt; Circ 160 sx to surface

4/3/95 - Perf'd San Andres, Jackson, 3 Fingers zopne f/ 4,751', 59', 64', 68', 73', 76', 77', 78', 84' & 92' @ 1 spf (10 holes); Acdz same w/ 2,500 gals 15% NEFE HCl + 24 BS; Perf'd San Andres Vacuum f/ 4,493', 98', 4,505', 07', 18', 19', 21', 29', 42', 47', 53' & 60' @ 1 spf (13 holes); RIH w/ RBP & pkr & set same at 4,600 & 4,430', respectively; Acdz Vacuum w/ 3,000 gals 15% NEFE HCl + 30 BS; Perf'd Grayburg f/ 4,224', 29', 31', 61', 67', 68', 69', 80', 88', 4,309', 17', 18', 31', 32', 43', 44', 45', 53', 54', 58', 63', 75', 77', 78', 84', 91', 93', 99', 4,402', 04', 09' & 12' @ 1 spf (32 holes); RIH w/ RBP & Pkr & Acdz Grayburg w/ 3,000 gals 15% NEFE HCl + 70 BS; Frac'd Grayburg w/ 2,000 gals 15% NEFE HCl + 63,000 gals 35# linear gel + 89,600# 20/40 sd + 12,500# 12/20 sd; Put well on production, well IP'd @ 139 bopd, 170 bwpd & 56 mcfpd

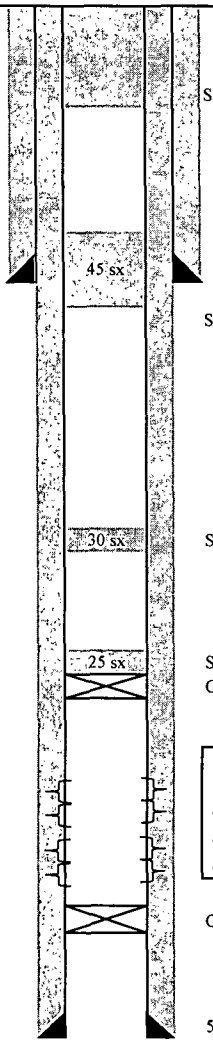
7/17/96 - Tbg stuck; Cut tbg @ 4,512'; POH w/ fish & put well back on production

9/2/98 - Tagged @ 4,532'; RIH w/ pkr & spotted scale converter; Set pkr & acdz Grayburg w/ 2,000 gals 15% anti sludge HCl + 60 BS; RIH w/ production equipment & put well on pump;

7/3/01 - Tag fill @ 4,100'; Clnd well out to 4,280' (metal & scale returns); Mill to 4,282 getting metal returns; Csg appears to be severely collapsed; RIH w/ RBP & set same @ 4,200' and swabbed well above RBP, did not swab any oil; POH w/ RBP & RIH w/ CIBP & set same at 4,190'; Tstd csg to 500 psi for 30 min, held ok; Well TA'd

Formation Record	Depth
Anhydrite	1,387'
T/ Salt	1,505'
B/ Salt	2,484'
Yates	2,704'
Seven Rivers	3,060'
Queen	3,682'
Grayburg	4,095'
San Andres	4,454'

Final



Tubing Detail:

Spotted 55 sx @ 350' to surface

8-5/8" Csg set @ 1,322'

Spotted 45 sx @ 1,250-1,600'

Spotted 30 sx @ 2,450-2,550'

Spotted 25 sx cmt @ 4189'
CIBP @ 4,189'

Current Perforations:				
Top	Bot.	Ft.	Shots	
4,224'	4,412'	188'	32	Grayburg
4,493'	4,560'	67'	13	Vacuum
4,751'	4,792'	41'	10	3 Fingers

CIBP @ 4,797'

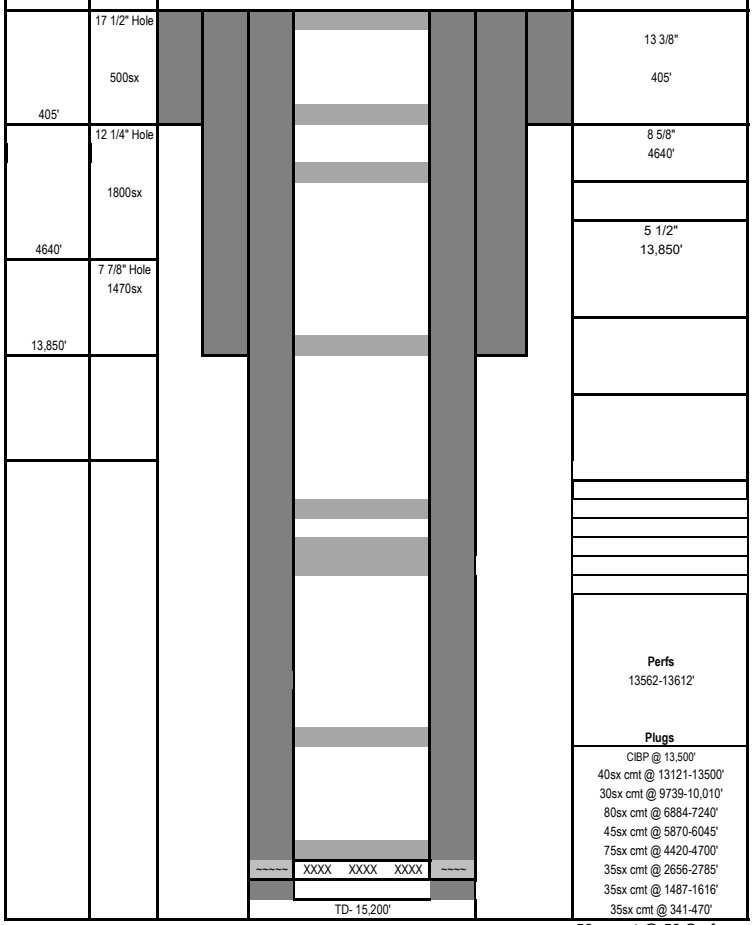
5-1/2" Csg set @ 5,550'

Plug Back Depth	4,189'
Total Depth	4,950'

P&A 3/08/1997

Leamex #57 API# 30-025-33185

Operator: Phillips Petroleum Co
Location: Sec. 16 T17S R33E
460 FSL 905 FWL
Objective:
GL Elevation: 4193'



50sx cmt @ 50-Surface

Caprock Maljamar Unit #210
Linn Operating LLC
30-025-33281
Sec. 20 T17S R33E
1141 FSL 2472 FEL

P&A 12/20/2013

Well Name:	CMU #210

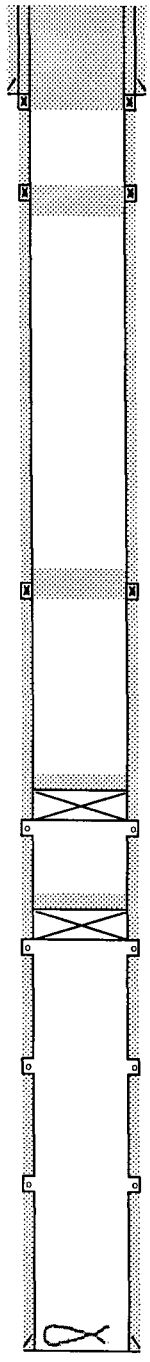
	Location:
Location	1141' FSL & 2472' FEL
Section:	T: 17S R: 33E Sec: 20
Block:	
Survey:	
County:	Lea
Lat/Long:	
Field:	Maljamar Grayburg San Andres
	Elevations:
GL:	4087'
DF:	
KB-GL Calc:	
ck w/log?	

Logging Requirements:

Date	
3/28/1996	Spud 12-1/4" hole & drld to 497'; Set 8-5/8" csg @ 497' & cmtd w/ 325 sx cmt; Circ 102 sx to pit
4/9/1996	TD 7-7/8" hole @ 4,800'; Set 5-1/2" csg @ 4,800'; Cmtd w/ 1,150 sx cmt; Did not circ
5/17/1996	Perf'd f/4,601 - 02' & 4,627 - 37', 4,436 - 42', 4,450 - 51' 4,519' - 23', @ 1 spf (27 holes) set pkr 4551' acdz 2000 gal 15% NEFE. POOH. RIH w/RBP and pkr. Set BP @ 4570' and set pkr @ 4345'. Acdz 2000 gal 15 %
9/15/1998	Spotted scale converter across perfs; RIH w/ pkr & set same @ 4,150', Acdz perfs w/ 2,000 gals 15% NEFE HCl + 20 BS; Put well back on production
1/12/2000	Perf'd Grayburg f/ 4,179 - 89', 96', 97', 4,200', 13', 4,309', 10', 28', 33', 34', 50', 62', 66' & 69', and Vacuum f/ 4,436 - 42', 50', 51' & 4,519 - 23' @ 4 spf; RIH w/ RBP & Pkr; Set same @ 4,550' & pkr @ 4,400'; Acdz straddled perfs w/ 2,000 gals 15% HCl + 1,500# Rock salt; Rls pkr & RBP & straddled Grayburg
9/27/2002	POH w/ rods; Tbg stuck; Freepoint @ 4,154' & Cut tbg @ 4,156'; Fish = 1/2 jt of 2-7/8" tbg, 2-7/8" collar & 2-7/8" bull plug; Left fish in hole & RIH w/ CIBP; Set same @ 4,100'; Circ pkr fluid & tested csg to 500 psi; held ok; Left well TA'd
7/11/2005	Perf'd Queen f/ 3,646 - 70' (48 holes); Acdz well and swabbed only H2O; Re-completion was unsuccessful, left well shut-in, Dumped cmt. on CIBP, perforated, RIH w/tbg.
7/15/2005	Made 1 swab run, FL @ 3400' TLTR 46 bbls. LD swab equipment. Released pkr., POH LD WS & pkr. ND BOP, NU WH, SI well. RDPU

Final Wellbore Diagram

Final
Wellbore Diagram



8-5/8", 23#
set @ 497'
Perf'd @550' & Spotted 65 sx cmt to surf

Perf'd @1420'
Spotted 25 sx cmt @1,470-1,223' (tagged)

Perf'd @2520' & Spotted 25 sx cmt @ 2,570'-2,322' (tagged)

Spotted 25 sx cmt @ 3,600'-3,341' (tagged)
CIBP @3,600'

3,646-3,670'

CIBP @4,100'
4,179-4,369'

4,436-4,523'

4,601-4,637'

5-1/2", 17#
set@ 4,800'

TD: 4,800'

PBTD @ 4,720'

Fish in hole:
1/2 jt of 2-7/8" tbg, 2-7/8" collar and 2-7/8" bull plug

Well Name:	CMU #210
API No:	30-025-33281
Spud Date:	3/28/1996
WBD Update:	8/7/2013 R. Van Howe

Hole Size:	12 1/4
Surf Csg:	8-5/8", 23#, J-55
Cement Blend:	325 sxs
Depth:	497'
TOC:	Cmt to Surf

Hole Size:	
Int Csg:	
Cement Blend:	
Returns:	
TOC:	

Details of Perforations

5/17/1996	Perf'd f/ 4,601 - 02' & 4,627 - 37', 4,436 - 42', 4,450 - 51' 4,519' - 23', @ 1 spf (27 holes)
1/12/2000	Perf'd Grayburg f/ 4,179', 80', 81', 82', 96', 97', 4,207', 13', 4,309', 10', 28', 33', 34', 50', 62', 66' & 69' @ 1 spf Re-Perf'd Grayburg f/ 4,179 - 89', 96', 97', 4,200', 13', 4,309', 10', 28', 33', 34', 50', 62', 66' & 69' and Vacuum f/ 4,436 - 42', 50', 51' & 4,519 - 23' @ 4 spf
7/11/2005	Perf'd Queen f/ 3,646 - 70' (48 holes)

Acid or Fracture Treatment Details

(5/17/1996)	
4601-4637'	Acidize/2000 gal 15% NEFE acid
4436-4523'	Acidize/2000 gal 15% NEFE acid
4179-4369'	Acidize/2500 gal 15% NEFE acid and frac/40000
9/16/1998	
4179-4637'	Acidize/2000 gal 15% NEFE acid
(1/14/2000)	
4436'-4523'	Acidize/2000 gal 15% HCL anti-sludge acid w/1500# rock salt
4179'-4369'	Acidize/2000 gal 15% HCL anti-sludge acid w/1750# rock salt
(7/11/2005)	
3646-3470'	Acidized well and swabbed only H2O

Tubing Detail	
Joints	Description
	2 7/8
Pkr Depth	

Rod Detail (top to bottom)	
Rods	Description

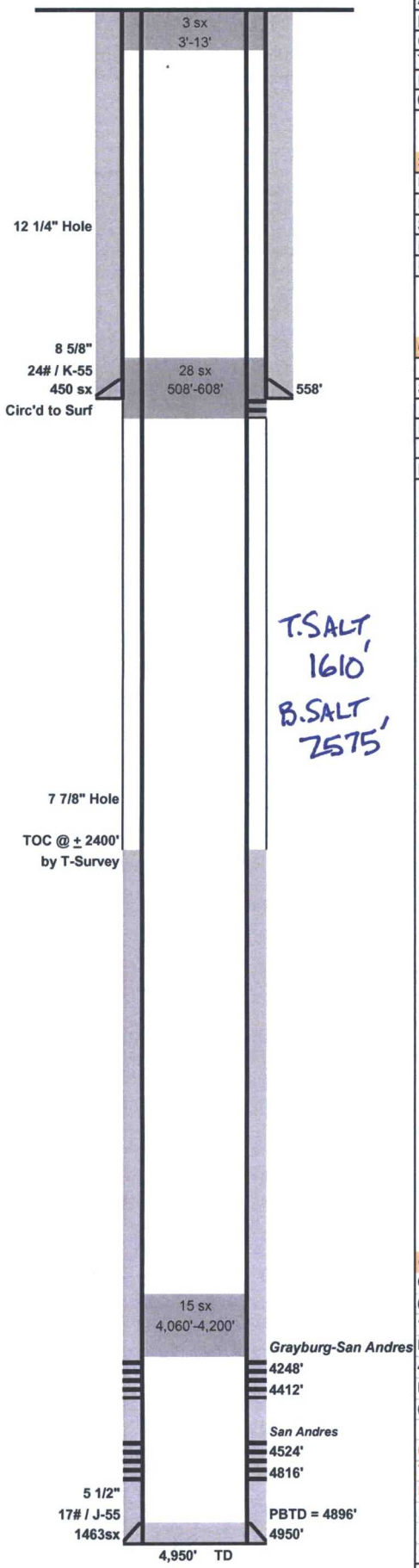
Pumping Unit:

Hole Size:	7 7/8
Prod Csg:	5-1/2", 17#, J-55
Capacity (bbl/ft):	
Cement Blend:	1150 sxs
Returns:	
TOC:	
Depth	4800'

P&A 8/23/2017

WELLBORE SCHEMATIC

Proposed



Lease:	SHAHARA STATE UNIT			Well No.	11
API No.	30-025-34092			Status	P&A
Location:	1305' FSL & 1301' FWL N.M.P.M. SRVY, UNIT M, Sec. 16, T-17SN, R-33E				
County:	Lea	State:	NM	Field:	Maljamar Grayburg San Andres
TD	4950'	GL	4189'	Spud Date:	12/4/1997
PBTD	4896'	KB	4204'	Comp Date:	1/22/1998
Current Perfs/OH:	4248' - 4816' (OA)	Current Zone:	Grayburg-San Andres		

Surface Equipment

Unit Make:		Unit Size:	
Unit S/N:		Unit Rotation:	
SPM:	Stroke Length:	Unit Sheave:	
Prime Mover:		Motor Sheave:	
Motor S/N:		Motor RPM:	

Casing Breakdown

	Size	Weight/Grade	Depth	Cement
Surface	8 5/8"	24# / K-55	558'	450 sx
Production	5 1/2"	17# / J-55	4950'	1463sx
Production				
Production				
Liner				

Completion Assembly (1/6/98)

Qty	Description	Footage
	KB correction	12.00'
	TOTAL	12.00'

Rod Detail (1/6/98)

Qty	Description	Footage
	TOTAL	0.00'

Comments

Originally drilled as Phillips State #11 by Shahara Oil, LLC

(12/97) Perf San Andres w/ 1 spf: 4524', 38', 58', 59', 4603', 06', 93', 4708', 17', 19', 28', 94', 95', 4804', 05' & 16' (16 holes). Acidize w/ 3000 gals 15% NEFe. Screened-out Frac after 14.8K gals 35# linear gel + 5000 lbs 20/40 sand. Perf Grayburg-San Andres w/ 1 spf: 4248', 55', 58', 59', 84', 90', 91', 92', 4302', 11', 32', 43 44', 66', 67', 78', 82', 97', 4402', 07' & 12' (21 holes). Acidize w/ 2500 gals 15% NEFe. Frac w/ 73K gals 35 linear gel + 75K lbs 20/40 + 25K lbs 16/30 sand.

(1/22/98) IPP: 26 BOPD + 9 MCFPD + 80 BWPD, GOR = 346, 36.1° API

(9/16) Attempt to pull and RTP: Pulled 47 - 7/8" rods (~1175') + PR & PRL. Failed attempt to fish rods. Tag @ ~1339' w/ SB on sand line. Tubing stuck w/ possible HIT. Casing loaded while pumping water. LD Rods in derrick & SI well pending further evaluation.

PREPARED BY:	JTT	UPDATED:	4/19/2017

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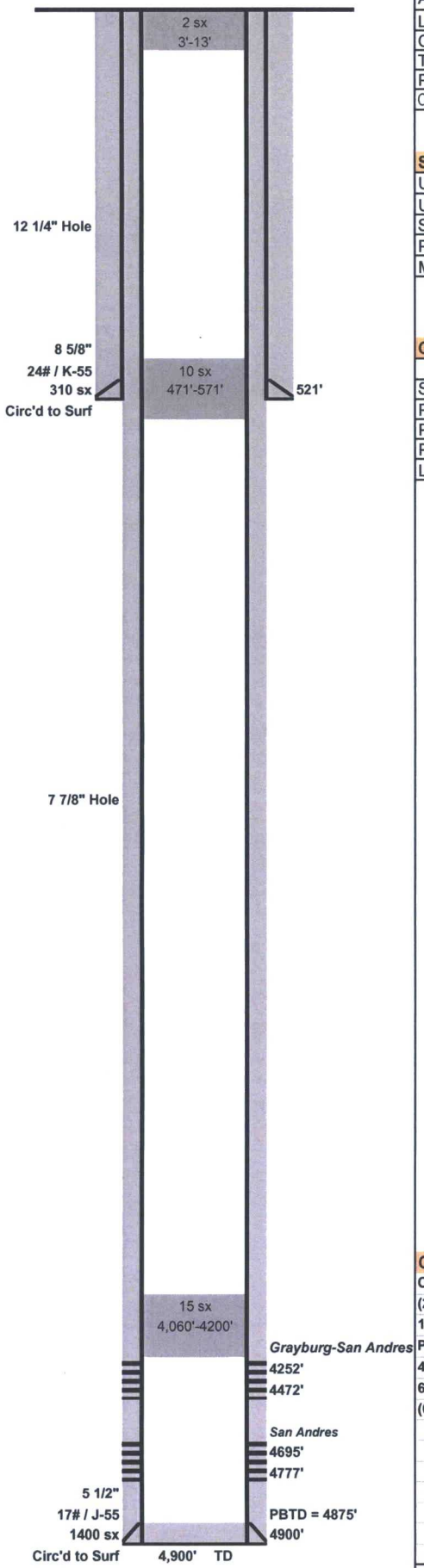
P&A 8/11/2017

WELLBORE SCHEMATIC

Current



Lease:	SHAHARA STATE UNIT		Well No. 100
API No.	30-025-34220		Status INACTIVE
Location:	1330' FNL & 140' FWL N.M.P.M. SRVY, UNIT E, Sec. 16, T-17SN, R-33E		
County:	Lea	State: NM	Field: Maljamar Grayburg San Andres
TD	4900'	GL 4198'	Spud Date: 1/15/1998
PBTD	4875'	KB	Comp Date: 6/15/1998
Current Perfs/OH:	4252' - 4777' (OA)	Current Zone:	Grayburg-San Andres

Surface Equipment

Unit Make:	Unit Size:	
Unit S/N:	Unit Rotation:	
SPM:	Stroke Length:	Unit Sheave:
Prime Mover:		Motor Sheave:
Motor S/N:		Motor RPM:

Casing Breakdown

	Size	Weight/Grade	Depth	Cement
Surface	8 5/8"	24# / K-55	521'	310 sx
Production	5 1/2"	17# / J-55	4900'	1400 sx
Production				
Production				
Liner				

Completion Assembly (5/4/00)

Qty	Description	Footage
	KB correction	
145 jts	2 7/8" tbg	4495.00'
1	2 7/8" SN	1.10'
	TOTAL	4496.10'

Rod Detail (5/4/00)

Qty	Description	Footage
1	PR w/ Liner	
189	*7/8" SR*	*4725.00'*
3	1 1/2" SB	75.00'
1	2 1/2" x 2" x 16' RWTC	16.00'
	TOTAL	4816.00'

Comments

Originally drilled as Phillips State #100 by Shahara Oil, LLC

(2/98) Perf San Andres w/ 1 spf: 4695', 4731', 32', 33', 36', 45', 46', 57', 65' & 77' (10 holes). Acidize w/ 1500 gals 15% Ferchk Acid & 24 BS. Attempt Frac but screened out after 12.5K gals + 1000 lbs 20/40 sn

Perf Grayburg-San Andres w/ 1 spf: 4252', 53', 78', 82', 83', 84', 95', 4322', 30', 31', 54', 61', 67', 68', 79', 88 4393', 95', 4406', 19', 20', 24', 31', 68', 69', 70', 71' & 72' (28 holes). Acidize w/ 3000 gals 15% NEFe HCl w/ 60 BS. Frac w/ 57K gals water frac + 75K lbs 20/40 + 25K lbs 16/30 sand.

(6/16/98) POP after waiting for approval of unorthodox location.

PREPARED BY:	JTT	UPDATED:	9/1/2016

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Geopock Maljamar Unit #400
30-025-34224 P&A 12/20/2013

Final Wellbore Diagram

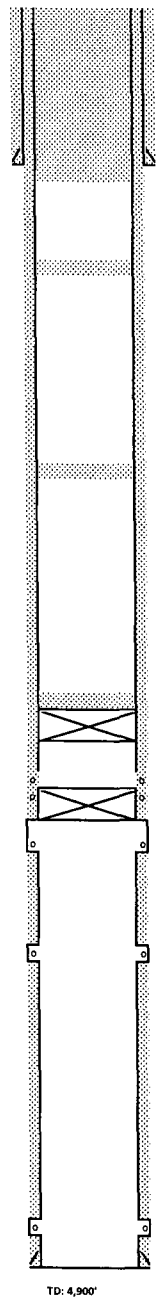
Well Name:	CMU #400

	Location:
Location	1330' FSL 110' FEL
Section:	T: 17S R: 33E Sec: 17
Block:	
Survey:	
County:	Lea
Lat/Long:	
Field:	Maljamar Grayburg San Andres
	Elevations:
GL:	4,197'
DF.	
KB-GL Calc:	
ck w/log?	

Logging Requirements:

Date	
12/12/1997	Spud 12-1/4" hole & drld to 388'; Set 8-5/8" csg @ 350' & cmtd w/ 300 sx; Circ 89 sx to surf. Tagged PBTD @
4/29/1998	Perf'd Three Fingers zone f/ 4,747', 57', 58', 72', 88' & 91'-4,802' w/ 1 spf (17 holes); Set pkr @ 4665'.
4/30/1998	Perf'd Vacuum zones f/ 4,526', 27', 28', 36', 37', 45', 46', 61', 82', 87', 89', 90', 91', 4600', 01', 08', 13', 15' &
5/4/1998	Swabbed. Release pkr, ran down and released RBP. Pulled up to 4498' & set RBP. POH w/pkr & tbg. Perf'd
5/5/1998	Swabbed & flowed dirty black water. Set pkr @ 4418'. Tbg dry, csg flowing water. Released pkr & POH. RIH
5/7/1998	RIH w/ CIBP & set @ 4330'. POH. RIH w/ CIR. Circ hole clean. Set retainer @ 4240'. Squeezed perfs @ 4268'-4304' w/ 150 sxs smt. Reversed out cmt. POH. WOC.
5/11/1998	Drilled cmt from 4234'-4383'. Drilled out CIBP @ 4383'. POH. RIH w/ RBP & set @ 4330'. Tested to 1000#.
5/18/1998	Tested in hole w/ inflatable pkr, 38' of 2-7/8" N-80 pkr #2 & 3-1/2" tbg. To 2688'. Tight spot @ 2497'.
5/20/1998	RIH w/ conventional shoe. Tag @ 2546'. Washed to 4386'. POH. Received rubber. RIH w/ retreiving head.
5/26/1998	Released pkrs and POH. RIH w/ retrieving tool. Released RBP and POH. RIH w/ CIBP and set @ 4500'. POH.
6/2/1998	TIH w/ pkr on 3-1/2" tbg. Set pkr @ 4408'. Fractured grayburg perfs @ 4424'-4455'. Flow back.
6/8/1998	RD flowback assembly and frac valve. POH w/ tbg and pkr. RIH w/ bit, scraper, sub, and tbg. Tagged sand @
1/25/2002	POH w/ prod equip and tbg. RIH w/ CIBP and set @ 4350'. Circulate pkr fluid. POH and LD tbg. Well is TA'd.

Final
Wellbore Diagram



8-5/8", 23#, 9 Jts set @ 350'
Spotted 50 sx cmt @ 400' to surface

Spotted 25 sx cmt @ 1420'-1,150' (tagged)

Spotted 25 sx cmt @ 2,520'-2,267'

Spotted 25 sx cmt @ 4,200'-3,947'

CIBP @4,200'

(4,268'-4,304' squeezed)
(4,345'-4,381' squeezed)
CIBP @4,350'
4,268' - 4,455' (4,389'-4,455' still open)

4,526'-4,620'

4,747'-4,802'

5-1/2", 17# set@ 4,900'

TD: 4,900'

Well Name:	CMU #400
API No:	30-025-34224
Spud Date:	12/12/1997
WBD Update:	12/26/2013 B. Williams

Hole Size:	12 1/4
Surf Csg:	8-5/8", 23#, ISW-42 ST&C
Cement Blend:	300 sx
Depth:	350'
TOC:	Circ cmt to Surf

Hole Size:	
Int Csg:	
Cement Blend:	
Returns:	
TOC:	

Details of Perforations

4/29/1998	Perf'd 4747-4802'
4/30/1998	Perf'd 4526-4620'
5/4/1998	Perf'd 4268-4455' (4268-4304 squeeze cemented later)
5/11/1998	Re-perf'd 4345-4381' (later squeezed)

Acid or Fracture Treatment Details

4/29/1998		
	4,747' - 4,802'	Acidize/2500 gal 15% NEFE acid + 34 ball sealers
	4,526'-4,620'	Acidize/2800 gal 15% NEFE acid + 38 ball sealers
	4,268'-4,455'	Acidize/2500 gal 15% NEFE acid + 44 ball sealers
	4,345'-4,381'	Acidize/3000 gal 15% NEFE acid + ball sealers
6/2/1998		
	4,424'-4,455'	Frac'd w/ 25000 gal gelled water, 10000 gal H2O Delta Frac + 50000# 16/30 sand

Tubing Detail	
Joints	Description
	2 7/8
Pkr Depth	

Rod Detail (top to bottom)	
Rods	Description

Pumping Unit:

Hole Size:	7 7/8
Prod Csg:	5-1/2", 17#, J-55 LT&C
Capacity (bbl/ft):	
Cement Blend:	1200 sxs
Returns:	
TOC:	Circ cmt to surf
Depth	4900'

Attachment 3

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 #:	130800
Area:	Artesia	Analysis ID #:	115868
Lease:	Partition		
Location:	13 Fed IL 6H 0		
Sample Point:	Wellhead		

Sampling Date:	6/11/2020
Analysis Date:	6/15/2020
Analyst:	Catalyst
TDS (mg/l or g/m3):	155995.3
Density (g/cm3):	1.104
Hydrogen Sulfide:	
Carbon Dioxide:	29
Comments:	

Anions	mg/l	meq/l
Chloride:	**91285.3**	**2574.82**
Bicarbonate:	**505.0**	**8.28**
Carbonate:		
Sulfate:	**3600.0**	**74.95**
Borate*:	**42.2**	**0.27**
Phosphate*		

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

pH at time of sampling:	6.93
pH at time of analysis:	
pH used in Calculation:	**6.93**
Temperature @ lab conditions (F):	**75**

Cations	mg/l	meq/l
Sodium:	**57370.0**	**2495.45**
Magnesium:	**465.8**	**38.32**
Calcium:	**2280.0**	**113.77**
Potassium:	**396.8**	**10.15**
Strontium:	**45.6**	**1.04**
Barium:	**4.4**	**0.06**
Iron:	**0.1**	**0.**
Manganese:	**0.102**	**0.**

Conductivity (micro-mhos/cm):	**204588**
Resistivity (ohm meter):	**.0489**

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	0.71	35.52	-0.11	0.00	-0.10	0.00	-0.09	0.00	2.01	2.41
100	0.77	41.23	-0.18	0.00	-0.10	0.00	-0.12	0.00	1.80	2.41
120	0.82	47.25	-0.24	0.00	-0.08	0.00	-0.14	0.00	1.63	2.41
140	0.86	53.57	-0.28	0.00	-0.04	0.00	-0.15	0.00	1.47	2.41
160	0.91	60.20	-0.32	0.00	0.02	49.36	-0.15	0.00	1.34	2.41
180	0.95	67.12	-0.36	0.00	0.10	216.10	-0.14	0.00	1.23	2.11
200	1.01	74.04	-0.39	0.00	0.19	390.67	-0.13	0.00	1.13	2.11
220	1.06	80.96	-0.41	0.00	0.29	563.13	-0.12	0.00	1.06	2.11

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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 San Andres		

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

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

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

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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 San Andres		

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

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

Water Analysis- San Andres

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Water Analysis Report

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

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

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Water Analysis Report

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

Sampling Date:	2/13/2020
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

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Water Analysis Report

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

Sampling Date:	7/29/2019
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.

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

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

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

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

Water Analysis- San Andres

CATALYST Oilfield Services

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Water Analysis Report

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

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

Attachment 4

ALL CONSULTING
GOVERNMENT RELATIONS · ENERGY · PLANNING · TECHNOLOGY
ENGINEERING · ENVIRONMENTAL

April 1, 2025

PN 1904.SEIS.00

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

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

Dear Mr. Goetze,

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

Geologic Evaluation

The Lizzy SWD #1 is requesting a permit to inject into the Devonian-Silurian Formation at a depth of 14,865-15,880 feet below ground surface (bgs). The Devonian-Silurian Formation consists of limestones, shales, and dolomites and is overlain by approximately 130 feet of low porosity and permeability Woodford Shale, which would prevent the upward migration of injection fluid and serve as the upper confining layer (see **Attachment 1**). Additionally, the Devonian-Silurian Formation is underlain by various low porosity and permeability zones within the Montoya and Simpson Groups, which consist of limestones, dolomites, and interbedded shale zones. No geophysical logs penetrating the Montoya Group were identified within 10 miles of the Lizzy SWD #1. A stratigraphic chart depicting the geologic setting is included as **Figure 1**.[1]

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

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

Seismic Events and Fault Data

A review of United States Geological Survey (USGS) and New Mexico Tech Seismological Observatory (NMTSO) earthquake catalogues determined that the closest recorded seismic event was a M1.62 that occurred on March 14th, 2024, and was located approximately 1.66 miles west of the Lizzy SWD #1 (see **Attachment 2**). Per the NMTSO seismic catalog, the event was recorded at 15.59 km (51,148 feet) depth, which is deep into the Precambrian basement. **Per the USGS earthquake catalog, zero (0) seismic events M2.5 or greater have been recorded within 10 miles of the Lizzy SWD #1.**[2]

Fault data from United States Geological Survey (USGS) and the Texas Bureau of Economic Geology (BEG)[3] indicates that the closest known fault is located approximately 4.14 miles west of the Lizzy SWD #1 (see **Attachment 2**). This identified fault is within the Precambrian basement, which is approximately 920 feet below the proposed injection interval. A map of the seismic events and faults within 10 miles of the Lizzy SWD #1 is included as **Attachment 2.**

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

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

Seismic Potential Evaluation

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

Injection into either the Precambrian basement rock or its overlying formations that are hydraulically connected to the basement rock through faulting or fracture networks can increase the pore pressure and may lead to the fault slipping, resulting in a seismic event.[4] As such, the vertical distance between the injection formation and Precambrian basement rock and the

[2] *USGS Earthquake Catalog*. U.S. Geological Survey. (n.d.). https://earthquake.usgs.gov/earthquakes/search/

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

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

presence or lack of faulting within the injection interval are major considerations when determining the risk of injection-induced seismicity.

Depth to Precambrian Basement

Geophysical data from nearby well records, aeromagnetic surveys, and gravity surveys indicates the top of the Precambrian basement to be approximately 16,800 feet bgs at the Lizzy SWD #1, or approximately 920 feet below the proposed injection interval.[3] **There are insufficient Precambrian basement penetrations and/or public well data regarding Precambrian basement depth to generate an accurate structural contour map of the Precambrian basement in the vicinity of the Lizzy SWD #1.**

Formation Parting Pressure

Class II SWDs in New Mexico are administratively permitted with a maximum pressure gradient of 0.2 psi/ft. Review of New Mexico Oil Conservation Division (NMOCD) Order IPI-537 from the Mack Energy Round Tank SWD #1, which is located approximately 26 miles west of the proposed Lizzy SWD #1, determined the fracture gradient of the Devonian Formation in the region is 0.41 psi/ft from an approved step-rate test. Typical SWD permitting standards in New Mexico would indicate that formation parting pressure would not be exceeded by the Lizzy SWD #1.

Conclusion

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

Sincerely,
ALL Consulting

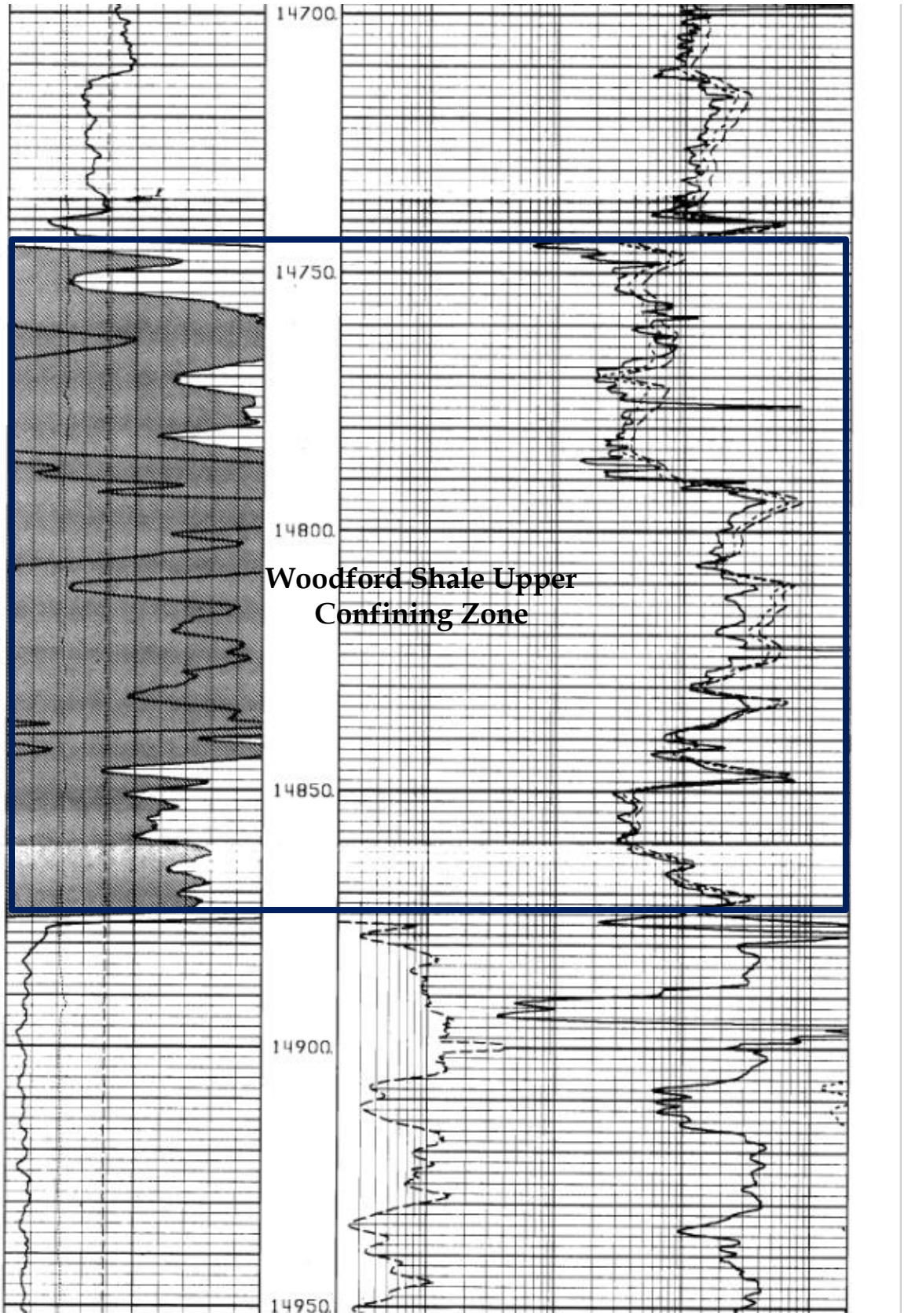
Reed Davis
Geophysicist

Tom Tomastik
Chief Geologist

Attachment 1
Upper Confining Zone

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

Woodford Shale Upper Confining Zone from API No. 30-025-33185

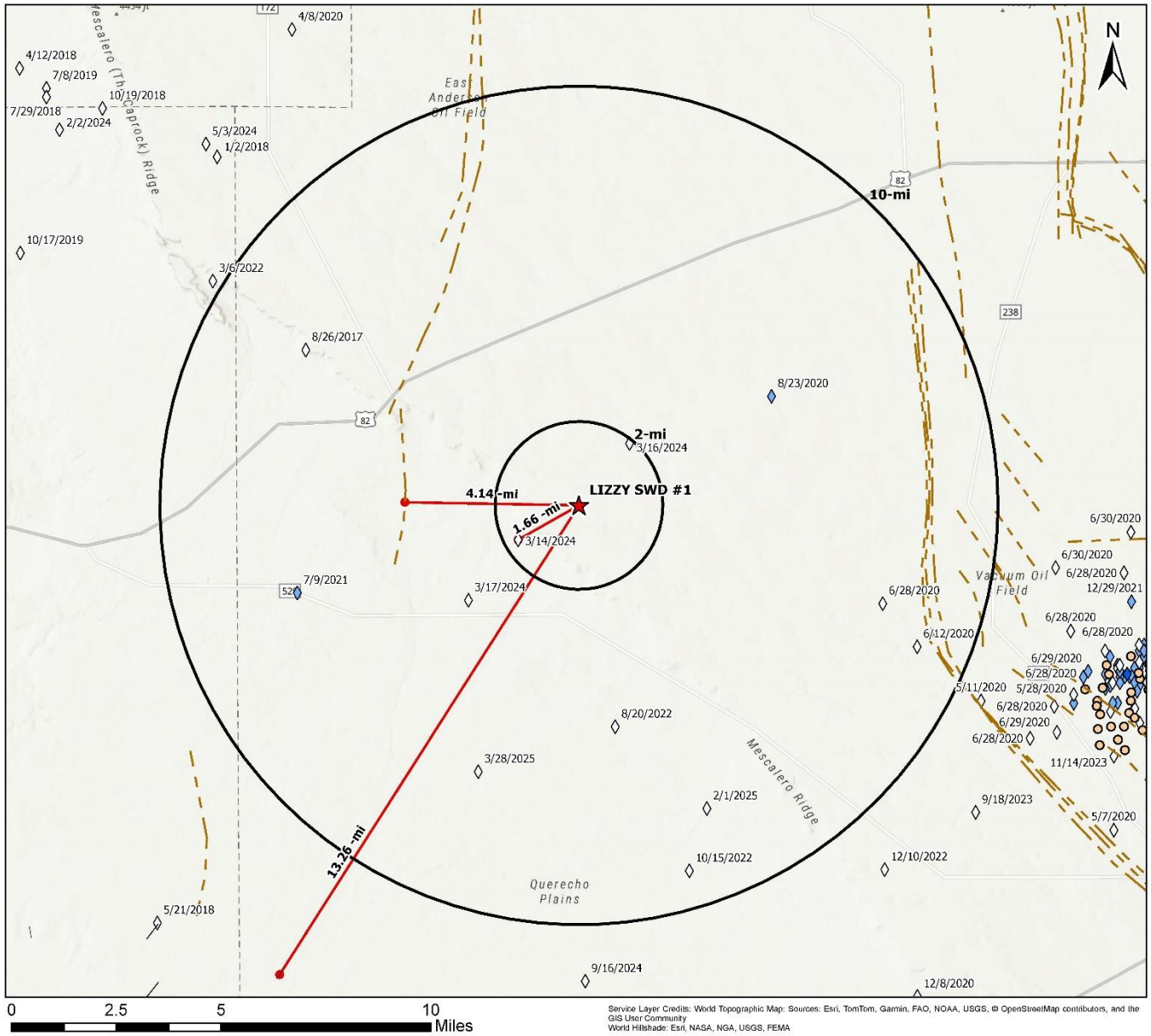


Mack Energy Corporation
Lizzy SWD #1 Seismic Potential Letter
April 1, 2025

Attachment 2
Seismic Analysis Map

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

Lizzy SWD #1 Nearby Seismic Events and Faults



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

Legend

- Proposed SWD
- Shallow Faults
- Deep Faults

Stress Orientations (Lund, Snee, Zoback 2020)
Indicator, Quality
- Wellbore, B (2)
- Wellbore, C (2)

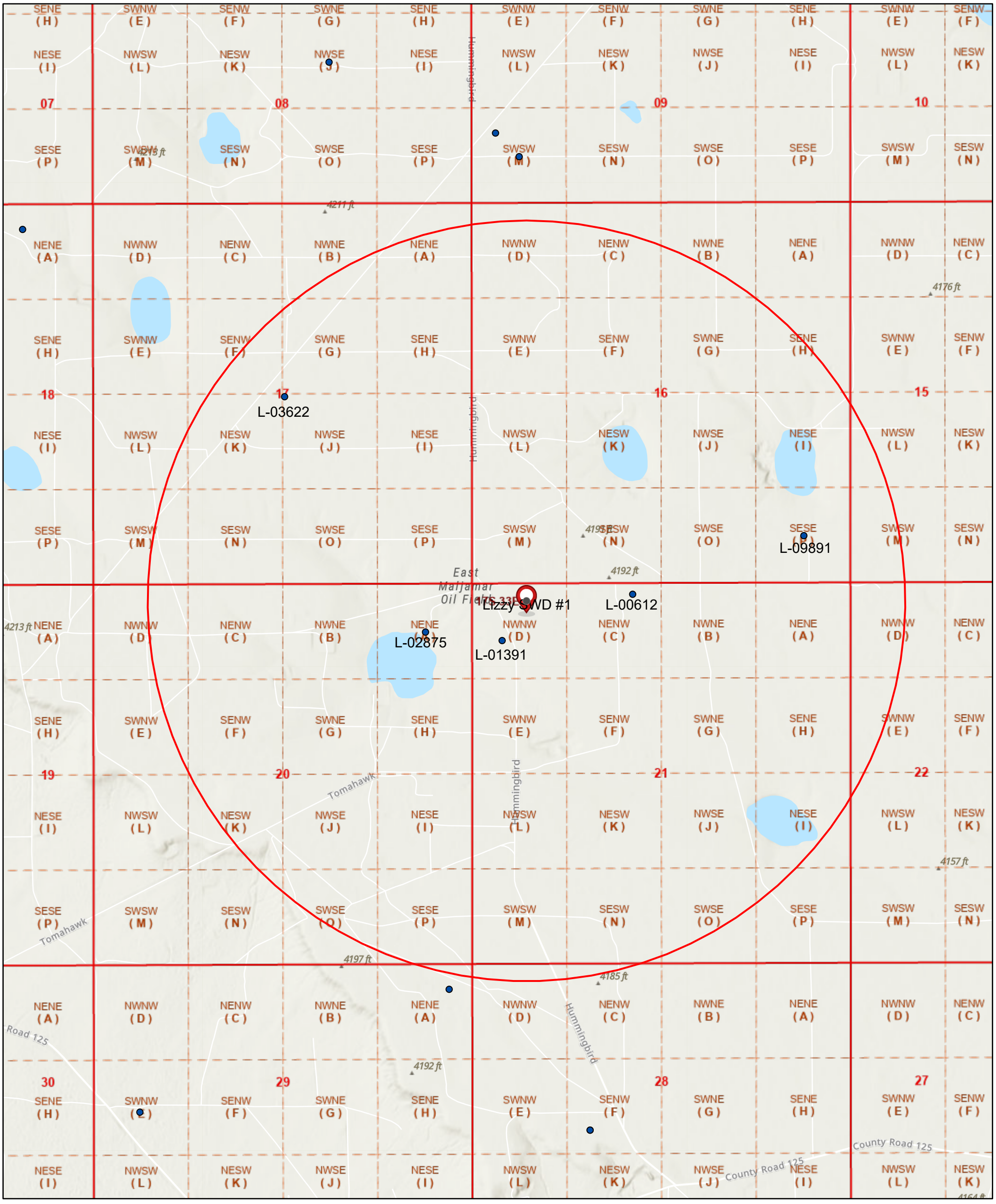
NMTSO Seismic Events - 3/31/2025
Magnitude
- 0 - 2.0 (52)
- 2.1 - 3.0 (38)
- 3.1 - 4.0 (1)
- 4.1 - 4.5 (0)

USGS Seismic Events - 3/31/2025
Magnitude
- 0.8 - 2.0 (0)
- 2.1 - 3.0 (22)
- 3.1 - 4.0 (0)
- 4.1 - 4.6 (0)

Seismic Analysis Map		
LIZZY SWD #1 LEA COUNTY, NEW MEXICO		
Proj Mgr: Reed Davis	March 31, 2025	Mapped by: Ben Bockelmann
Prepared for: MACK Energy Corporation		Prepared by: ALL CONSULTING

Attachment 5

1 Mile POD Map



2/19/2025, 12:20:50 PM

- OSE Water PODs
- 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

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 03622				17	17S	33E	623053.0	3633703.0 *	

* UTM location was derived from PLSS - see Help

Driller License:	183	**Driller Company:**	CAYTON WATER WELL DRILLING CO		
Driller Name:	JACK CLAYTON				
Drill Start Date:	1957-07-22	**Drill Finish Date:**	1957-07-25	**Plug Date:**	
Log File Date:	1957-08-01	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	226	**Depth Water:**	180

Water Bearing Stratifications:

Top	Bottom	Description
180	200	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
180	226

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 09891		SE	SE	16	17S	33E	625264.0	3633144.0 *	

* UTM location was derived from PLSS - see Help

Driller License: 122 **Driller Company:** UNKNOWN

Driller Name: UNKNOWN

Drill Start Date: **Drill Finish Date:** **Plug Date:**

Log File Date: **PCW Rcv Date:** **Source:** Shallow

Pump Type: SUBMER **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 8.63 **Depth Well:** 190 **Depth Water:**

Meter Information

Meter Number: 4621 **Meter Make:** MASTER

Meter Serial Number: 1746628 **Meter Multiplier:** 100.0000

Number of Dials: 6 **Meter Type:** Diversion

Unit of Measure: Gallons **Reading Frequency:** Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2000-11-16	2001	114752.000	A	mb	Initial reading Trn# 198628	0.000	
2001-02-06	2001	123702.000	A	mb	Final reading Trn# 198628	2.747	

YTD Meter Amounts:

Year	Amount
2001	2.747

2/19/25 11:54 AM MST Point of Diversion Summary

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 00612 POD5		SE	SE	35	15S	37E	671598.4	3649088.1	

* UTM location was derived from PLSS - see Help

Driller License:	1044	**Driller Company:**	EADES WELL DRILLING & PUMP SERVICE		
Driller Name:	EADES, ALAN G.L.G. HAYDENAS				
Drill Start Date:	2023-10-26	**Drill Finish Date:**	2023-10-28	**Plug Date:**	
Log File Date:	2023-11-03	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	10.00	**Depth Well:**	235	**Depth Water:**	80

Water Bearing Stratifications:

Top	Bottom	Description
80	148	Sandstone/Gravel/Conglomerate
148	180	Sandstone/Gravel/Conglomerate
180	235	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
95	235

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 00612 POD6		SW	SW	36	15S	37E	671909.5	3649118.2	

* UTM location was derived from PLSS - see Help

Driller License:	1044	**Driller Company:**	EADES WELL DRILLING & PUMP SERVICE		
Driller Name:	EADES, ALAN G.L.G. HAYDENAS				
Drill Start Date:	2023-08-27	**Drill Finish Date:**	2023-08-29	**Plug Date:**	
Log File Date:	2023-09-28	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	10.00	**Depth Well:**	236	**Depth Water:**	80

Water Bearing Stratifications:

Top	Bottom	Description
80	120	Sandstone/Gravel/Conglomerate
120	150	Sandstone/Gravel/Conglomerate
150	180	Sandstone/Gravel/Conglomerate
180	234	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
96	236

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
NA	L 00612 POD8		NE	NW	21	17S	33E	626231.8	3632907.7	

* UTM location was derived from PLSS - see Help

Driller License:	1755	**Driller Company:**	HUNGRY HORSE, LLC.		
Driller Name:	NORRIS, JOHN D.ONTE JESSEW.				
Drill Start Date:	2019-01-09	**Drill Finish Date:**	2019-01-15	**Plug Date:**	
Log File Date:	2023-09-27	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	10.00	**Depth Well:**	226	**Depth Water:**	165

Water Bearing Stratifications:

Top	Bottom	Description
48	200	Sandstone/Gravel/Conglomerate
200	221	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
186	226

Meter Information

Meter Number:	20656	**Meter Make:**	ARAD NETAFIM
Meter Serial Number:	222011221	**Meter Multiplier:**	1.0000
Number of Dials:	9	**Meter Type:**	Diversion
Unit of Measure:	Acre-Feet	**Reading Frequency:**	Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2023-08-02	2023	0.000	A	jb	INSTALL DATE	0.000	
2023-08-15	2023	551735.400	A	jb		1.693	
2023-08-22	2023	600356.000	A	jb		0.149	
2023-08-22	2023	52.256	A	jb		52.256	
2023-08-22	2023	0.000	A	jb		0.000	
2024-05-30	2024	73.245	A	WEB		20.989	X
2024-07-05	2024	73.908	A	WEB		0.663	X
2024-07-31	2024	73.908	A	WEB		0.000	X
2024-09-04	2024	73.908	A	WEB		0.000	X
2024-09-29	2024	73.908	A	WEB		0.000	X
2024-12-02	2024	73.908	A	WEB		0.000	X
2025-02-04	2025	73.908	A	WEB		0.000	X

YTD Meter Amounts:

Year	Amount
2023	54.098
2024	21.652
2025	0.000

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
NA	L 00612 POD9		NW	NE	21	17S	33E	624541.7	3632886.3	

* UTM location was derived from PLSS - see Help

Driller License:	1755	**Driller Company:**	HUNGRY HORSE, LLC.		
Driller Name:	NORRIS, JOHN D.ONTE JESSEW.				
Drill Start Date:	2019-01-22	**Drill Finish Date:**	2019-01-29	**Plug Date:**	
Log File Date:	2023-09-27	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	10.00	**Depth Well:**	246	**Depth Water:**	165

Water Bearing Stratifications:

Top	Bottom	Description
51	242	Sandstone/Gravel/Conglomerate
242	246	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
206	246

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 01391 POD5	NW	NW	NW	33	16S	33E	623810.7	3639336.3	

* UTM location was derived from PLSS - see Help

Driller License:	79	**Driller Company:**	ALDREDGE, D.O.		
Driller Name:	ALDREDGE, C.O.				
Drill Start Date:	2013-02-06	**Drill Finish Date:**	2013-02-07	**Plug Date:**	
Log File Date:	2024-07-08	**PCW Rcv Date:**	2024-07-08	**Source:**	Shallow
Pump Type:	SUBMER	**Pipe Discharge Size:**		**Estimated Yield:**	150
Casing Size:	8.50	**Depth Well:**	260	**Depth Water:**	62

Water Bearing Stratifications:

Top	Bottom	Description
138	200	Sandstone/Gravel/Conglomerate
200	208	Other/Unknown
208	256	Sandstone/Gravel/Conglomerate
256	260	Other/Unknown

Casing Perforations:

Top	Bottom
140	260

Meter Information

Meter Number:	20663	**Meter Make:**	ARAD
Meter Serial Number:	222011223	**Meter Multiplier:**	1.0000
Number of Dials:	9	**Meter Type:**	Diversion
Unit of Measure:	Acre-Feet	**Reading Frequency:**	Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2022-10-01	2023	0.000	A	jb	install date	0.000	
2022-11-02	2022	12.009	A	jb		12.009	
2022-11-30	2022	22.108	A	jb		10.099	
2023-01-02	2023	23.204	A	jb		1.096	
2023-01-31	2023	28.880	A	jb		5.676	
2023-02-27	2023	43.308	A	jb		14.428	
2023-05-01	2023	43.308	A	jb		0.000	
2023-06-10	2023	57.040	A	jb		13.732	
2023-07-11	2023	61.284	A	jb		4.244	
2023-08-11	2023	61.284	A	jb		0.000	

YTD Meter Amounts:

Year	Amount
2022	22.108
2023	39.176

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 01391 POD6	SW	NW	NW	21	17S	33E	623990.3	3632685.3	

* UTM location was derived from PLSS - see Help

Driller License:	1682	**Driller Company:**	HUNGRY HORSE, LLC.		
Driller Name:	NORRIS, JOHN D.OTTR.L.L W.				
Drill Start Date:	2013-01-16	**Drill Finish Date:**	2013-01-18	**Plug Date:**	
Log File Date:	2023-10-03	**PCW Rcv Date:**	2024-07-02	**Source:**	Shallow
Pump Type:	SUBMER	**Pipe Discharge Size:**		**Estimated Yield:**	50
Casing Size:	6.63	**Depth Well:**	205	**Depth Water:**	

Water Bearing Stratifications:

Top	Bottom	Description
38	82	Sandstone/Gravel/Conglomerate
85	133	Sandstone/Gravel/Conglomerate
138	200	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
0	205

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 01391 POD7	NW	NE	NE	08	17S	33E	623669.9	3636047.9	

* UTM location was derived from PLSS - see Help

Driller License:	1755	**Driller Company:**	HUNGRY HORSE, LLC.		
Driller Name:	NORRIS, JOHN				
Drill Start Date:	2016-06-28	**Drill Finish Date:**	2016-06-30	**Plug Date:**	
Log File Date:	2016-08-29	**PCW Rcv Date:**	2024-07-02	**Source:**	Shallow
Pump Type:	SUBMER	**Pipe Discharge Size:**		**Estimated Yield:**	150
Casing Size:	8.63	**Depth Well:**	280	**Depth Water:**	172

Casing Perforations:

Top	Bottom
220	280

Meter Information

Meter Number:	20664	**Meter Make:**	ARAD NETAFIM
Meter Serial Number:	222011214	**Meter Multiplier:**	1.0000
Number of Dials:	9	**Meter Type:**	Diversion
Unit of Measure:	Acre-Feet	**Reading Frequency:**	Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2022-07-15	2022	0.000	A	jb	install date	0.000	
2022-11-02	2022	17.034	A	jb		17.034	
2022-12-01	2022	33.428	A	jb		16.394	
2023-01-02	2023	35.351	A	jb		1.923	
2023-01-31	2023	45.980	A	jb		10.629	

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2023-02-27	2023	62.281	A	jb		16.301	
2023-05-30	2023	85.412	A	jb		23.131	
2023-06-10	2023	91.866	A	jb		6.454	
2023-07-09	2023	91.866	A	jb		0.000	
2023-08-11	2023	91.866	A	jb		0.000	

YTD Meter Amounts:

Year	Amount
2022	33.428
2023	58.438

2/19/25 12:00 PM MST **Point of Diversion Summary**

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 01391 POD8	NE	NE	NW	08	17S	33E	622915.1	3636122.6	

* UTM location was derived from PLSS - see Help

Driller License:	1755	**Driller Company:**	HUNGRY HORSE, LLC.		
Driller Name:	NORRIS, JOHN				
Drill Start Date:	2017-11-08	**Drill Finish Date:**	2017-11-14	**Plug Date:**	
Log File Date:	2017-12-07	**PCW Rcv Date:**	2024-07-02	**Source:**	Shallow
Pump Type:	SUBMER	**Pipe Discharge Size:**		**Estimated Yield:**	135
Casing Size:	8.63	**Depth Well:**	274	**Depth Water:**	145

Water Bearing Stratifications:

Top	Bottom	Description
128	213	Sandstone/Gravel/Conglomerate
213	241	Sandstone/Gravel/Conglomerate
241	268	Sandstone/Gravel/Conglomerate
268	274	Other/Unknown

Casing Perforations:

Top	Bottom
214	274

Meter Information

Meter Number:	20665	**Meter Make:**	ARAD
Meter Serial Number:	222011225	**Meter Multiplier:**	1.0000
Number of Dials:	9	**Meter Type:**	Diversion
Unit of Measure:	Acre-Feet	**Reading Frequency:**	Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2022-07-15	2022	0.000	A	jb	install date	0.000	
2022-11-02	2022	12.934	A	jb		12.934	
2022-12-01	2022	25.732	A	jb		12.798	
2023-01-02	2023	27.258	A	jb		1.526	
2023-01-31	2023	35.138	A	jb		7.880	
2023-02-27	2023	47.993	A	jb		12.855	
2023-04-04	2023	47.993	A	jb		0.000	
2023-05-01	2023	47.993	A	jb		0.000	
2023-06-10	2023	65.745	A	jb		17.752	
2023-07-11	2023	65.745	A	jb		0.000	
2023-08-11	2023	65.745	A	jb		0.000	

YTD Meter Amounts:

Year	Amount
2022	25.732
2023	40.013

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
20769	L 01391 POD9		NW	SW	27	16S	33E	625570.0	3639990.0	

* UTM location was derived from PLSS - see Help

Driller License: 1755 **Driller Company:** HUNGRY HORSE, LLC.

Driller Name: NORRIS, JOHN D.ONTE JESSEW.

Drill Start Date: 2019-01-11 **Drill Finish Date:** 2019-01-15 **Plug Date:**

Log File Date: 2023-10-13 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 12.25 **Depth Well:** 280 **Depth Water:** 173

Water Bearing Stratifications:

Top	Bottom	Description
61	274	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
260	280

Meter Information

Meter Number: 20666 **Meter Make:**

Meter Serial Number: 222041582 **Meter Multiplier:** 1.0000

Number of Dials: 9 **Meter Type:** Diversion

Unit of Measure: Acre-Feet **Reading Frequency:** Monthly

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2023-03-05	2023	0.000	A	jb	Install date	0.000	

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount	Online
2023-04-05	2023	0.451	A	jb		0.451	
2023-05-01	2023	2.989	A	jb		2.538	
2023-06-01	2023	6.064	A	jb		3.075	
2023-07-03	2023	8.917	A	jb		2.853	
2023-08-11	2023	11.777	A	jb		2.860	

YTD Meter Amounts:

Year	Amount
2023	11.777

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 01391 S		NW	SW	11	15S	34E	641209.0	3655590.0 *	

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

Driller License:	79	**Driller Company:**	ALDREDGE, D.O.		
Driller Name:	ALDREDGE, C.O.				
Drill Start Date:	1959-11-05	**Drill Finish Date:**	1959-11-09	**Plug Date:**	
Log File Date:	1960-06-06	**PCW Rcv Date:**	1960-05-19	**Source:**	Shallow
Pump Type:	TURBIN	**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	16.00	**Depth Well:**	100	**Depth Water:**	62

Water Bearing Stratifications:

Top	Bottom	Description
62	76	Sandstone/Gravel/Conglomerate
76	102	Sandstone/Gravel/Conglomerate

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 Nbr	Q64	Q16	Q4	Sec	Tws	Rng	X	Y	Map
	L 02875		NE	NE	20	17S	33E	623662.0	3632717.0 *	

* UTM location was derived from PLSS - see Help

Driller License:	46	**Driller Company:**	ABBOTT BROTHERS COMPANY		
Driller Name:	MURRELL ABBOTT				
Drill Start Date:	1955-05-18	**Drill Finish Date:**	1955-05-20	**Plug Date:**	
Log File Date:	1955-05-26	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	250	**Depth Water:**	190

Water Bearing Stratifications:

Top	Bottom	Description
190	235	Sandstone/Gravel/Conglomerate

Casing Perforations:

Top	Bottom
190	250

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are smallest to largest)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Well Depth	Depth Water	Water Column
L 02875		L	LE		NE	NE	20	17S	33E	623662.0	3632717.0 *		250	190	60

Average Depth to Water: **190 feet**

Minimum Depth: **190 feet**

Maximum Depth: **190 feet**

Record Count: 1

PLSS Search:
Range: 33E
Township: 17S
Section: 20

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

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are smallest to largest)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Well Depth	Depth Water	Water Column
L 09891		L	LE		SE	SE	16	17S	33E	625264.0	3633144.0 *		190		

Average Depth to Water: **0 feet**

Minimum Depth: **0 feet**

Maximum Depth: **0 feet**

Record Count: 1

PLSS Search:

Range: 33E

Township: 17S

Section: 16

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

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are smallest to largest)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Well Depth	Depth Water	Water Column
L 03622		L	LE				17	17S	33E	623053.0	3633703.0 *		226	180	46

Average Depth to Water: **180 feet**

Minimum Depth: **180 feet**

Maximum Depth: **180 feet**

Record Count: 1

PLSS Search:
Range: 33E
Township: 17S
Section: 17

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

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are smallest to largest)

(In feet)

POD Number	Code	Sub basin	County	Q64	Q16	Q4	Sec	Tws	Range	X	Y	Map	Well Depth	Depth Water	Water Column
L 00612 POD8		L	LE		NE	NW	21	17S	33E	626231.8	3632907.7		226	165	61
L 00612 POD9		L	LE		NW	NE	21	17S	33E	624541.7	3632886.3		246	165	81
L 01391 POD6		L	LE	SW	NW	NW	21	17S	33E	623990.3	3632685.3		205		

Average Depth to Water: **165 feet**

Minimum Depth: **165 feet**

Maximum Depth: **165 feet**

Record Count: 3

PLSS Search:
Range: 33E
Township: 17S
Section: 21

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

Attachment 6

XII. AFFIRMATIVE STATEMENT

RE: Lizzy 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: 10/7/2024

Charles Sadler, Geologist

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 448359
	Action Type: [C-108] Fluid Injection Well (C-108)

CONDITIONS

Created By	Condition	Condition Date
erica.gordan	None	5/12/2025