Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

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

Applicant: _____ **OGRID Number:** _____
Well Name: _____ **API:** _____
Pool: _____ **Pool Code:** _____

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

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP(PROJECT AREA) ☐ NSP(PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

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

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

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

_____ Date

_____ Print or Type Name

_____ Phone Number

Deana Weaver
_____ Signature

_____ e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance XXX Disposal _____Storage
Application qualifies for administrative approval? XXXX Yes _____No

II. OPERATOR: Mack Energy Corporation

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

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

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

IV. Is this an expansion of an existing project? _____Yes XXXX No
If yes, give the Division order number authorizing the project: _____

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

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

NAME: Deana Weaver TITLE: Regulatory Tech II

SIGNATURE: Deana Weaver DATE: 8/8/2024

E-MAIL ADDRESS: dweaver@mec,com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

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

Side 2

III. WELL DATA

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

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

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

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

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

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

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

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

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

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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

Side 1

INJECTION WELL DATA SHEET

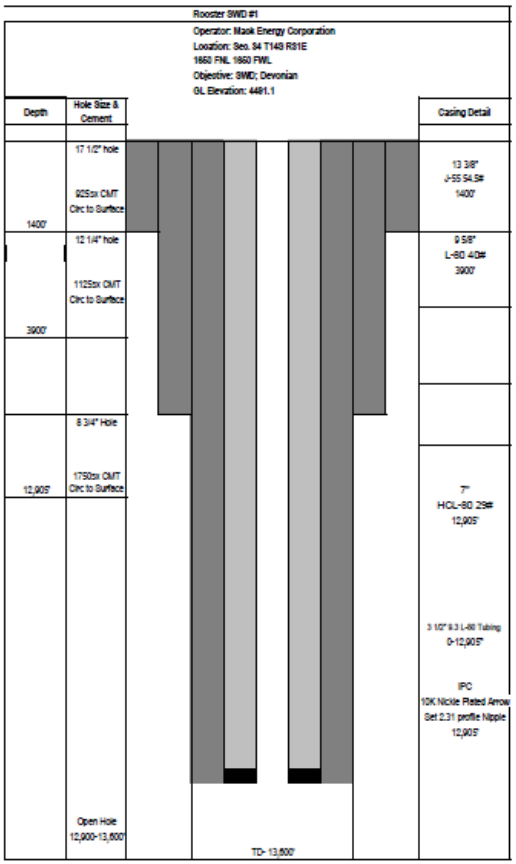
OPERATOR: Mack Energy Corporation

WELL NAME & NUMBER: Rooster SWD #1

WELL LOCATION: 1650 FNL 1650 FWL | F | 34 | T14S | R31E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

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

Cemented with: 925 sx. ***or*** _____ ft^3

Top of Cement: 0 Method Determined: Circ

Intermediate Casing

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

Cemented with: 1125 sx. ***or*** _____ ft^3

Top of Cement: 0 Method Determined: Circ

Production Casing

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

Cemented with: 1750 sx. ***or*** _____ ft^3

Top of Cement: 0 Method Determined: Circ

Total Depth: 13,600'

Injection Interval

12,900' feet to 13,600' Open Hole

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 3 1/2" Lining Material: IPC

Type of Packer: 10K Arrowset Nickel Coated

Packer Setting Depth: 12,905'

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

Additional Data

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

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

2. Name of the Injection Formation: Devonian

3. Name of Field or Pool (if applicable): SWD; Devonian 96101

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. N/A

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: _____

   Overlying- Woodford Oil/Gas @ 12,835', Underlying- Montoya @ 13,600'

   Tops- Yates @ 2330', Sever Rivers @ 2545', Queen @ 3080', Grayburg @ 3455', San Andres @ 3775'

   Glorieta @ 5300', Tubb @ 6615', Abo @ 7390', Wolfcamp @ 8710', Cisco @ 9590', Atoka @ 11,150', Miss @ 11,840'

VII. DATA SHEET: PROPOSED OPERATIONS

1. Proposed average and maximum daily rate and volume of fluids to be injected;
Respectively, 15,000 BWPD and 20,000 BWPD
2. The system is closed or open;
Closed
3. Proposed average and maximum injection pressure;
1,000psi average-2,580psi maximum
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than re-injected produced water;
We will be re-injecting produced water

5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water;
N/A
6. List of Aquifers- Artesian, wells on POD are Shut-In unable to test fresh water.
7. Well Procedures- See attached
8. Seismic- Attached

VIII. GEOLOGICAL DATA

1. Lithologic Detail; Dolomite
2. Geological Name; SWD; Devonian
3. Thickness; **700' – Openhole Completion (12,900-13,600')**
4. Depth; **TD 13,600'**

IX. PROPOSED STIMULATION PROGRAM

1. To be treated with 10000 gallons 15% acid

X. LOGS AND TEST DATA

1. Well data will be filed with the OCD.

XI. ANALYSIS OF FRESHWATER WELLS

See attached
Additional Information
Waters Injected:
San Andres

XII. AFFIRMATIVE STATEMENT

RE: Rooster 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: 4/9/2024

Charles Sadler, Geologist

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	96101	SWD; Devonian

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

[7] OGRID No.	[8] Operator Name	[9] Elevation
13837	MACK ENERGY CORPORATION	4491.1

[10] Surface Location

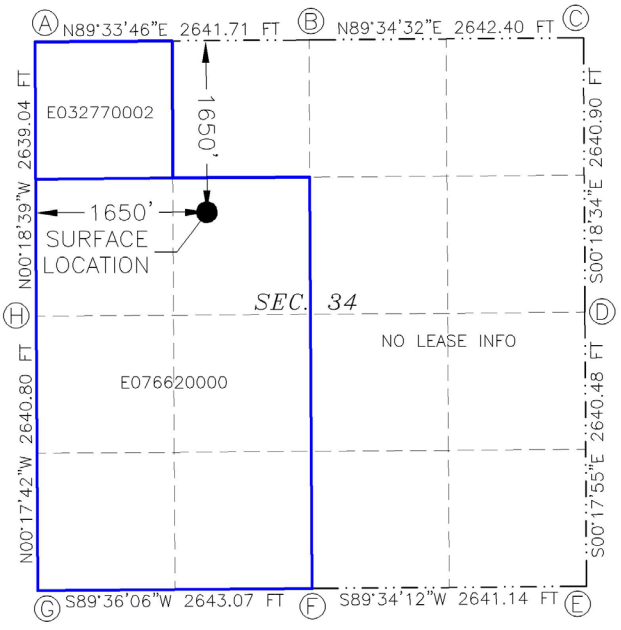
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	34	14 S	31 E		1650	NORTH	1650	WEST	CHAVES

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	34	14 S	31 E		1650	NORTH	1650	WEST	CHAVES

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40			

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



ROOSTER SWD 1
EL. = 4491.1

GEODETIC COORDINATES
NAD 83 NMSP EAST
SURFACE LOCATION
N.= 750580.21
E.= 700805.70
LAT. = 33.0622508°N
LONG. = 103.8128126°W

BOTTOM OF HOLE
1650' FNL, 1650' FWL
N.= 750580.21
E.= 700805.70
LAT. = 33.0622508°N
LONG. = 103.8128126°W

CORNER COORDINATES TABLE
NAD 83 NMSP EAST

A	N.= 752217.18	E.= 699147.23
B	N.= 752237.34	E.= 701788.14
C	N.= 752256.90	E.= 704429.74
D	N.= 749616.77	E.= 704443.99
E	N.= 746977.04	E.= 704457.75
F	N.= 746957.23	E.= 701817.41
G	N.= 746938.86	E.= 699175.13
H	N.= 749578.90	E.= 699161.54

LEGEND
SECTION LINE
QUARTER LINE
LEASE LINE
WELL PATH

[17] OPERATOR CERTIFICATION

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

Deana Weaver 8/9/2024
Signature Date

Deana Weaver
Printed Name

dweaver@mec.com
E-mail Address

[18] SURVEYOR CERTIFICATION

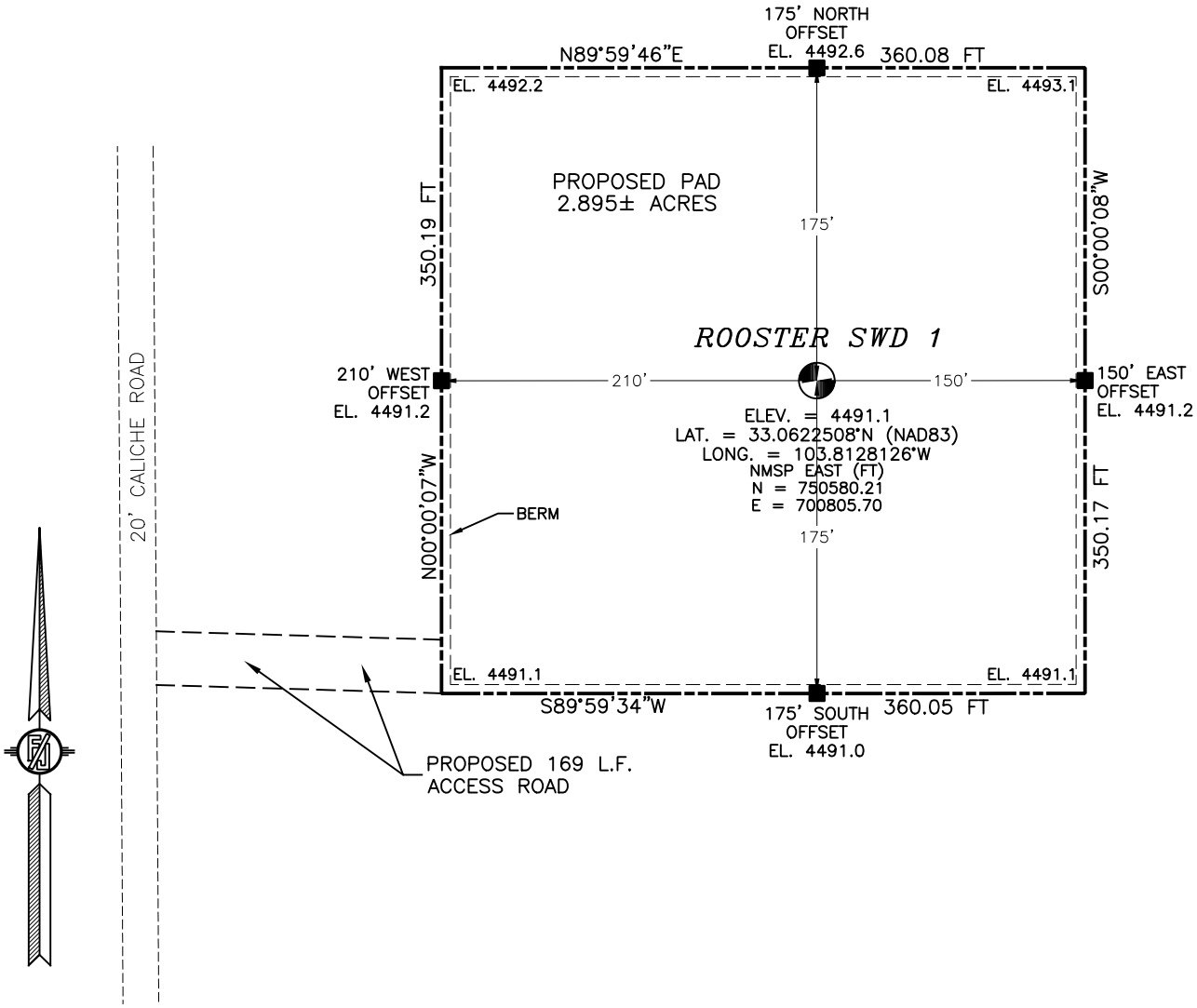
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APRIL 15, 2024
Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: EDMUNDO F. JARAMILLO, LS 12797

SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO
SITE MAP



010 50 100 200
SCALE 1" = 100'

DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF STATE HWY. 172 & CO. RD. 153 (VENUS), GO EAST ON CO. RD. 153 APPROX. 0.77 MILES, TURN RIGHT (NORTH) ON 20' CALICHE ROAD AND GO APPROX. 0.65 MILES TO A ROAD SURVEY ON RIGHT (EAST), FOLLOW ROAD SURVEY EAST APPROX. 169' TO THE SOUTHWEST PAD CORNER FOR THIS LOCATION.

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

FILIMON F. JARAMILLO PLS 17078

FILIMON F. JARAMILLO 17078 NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR

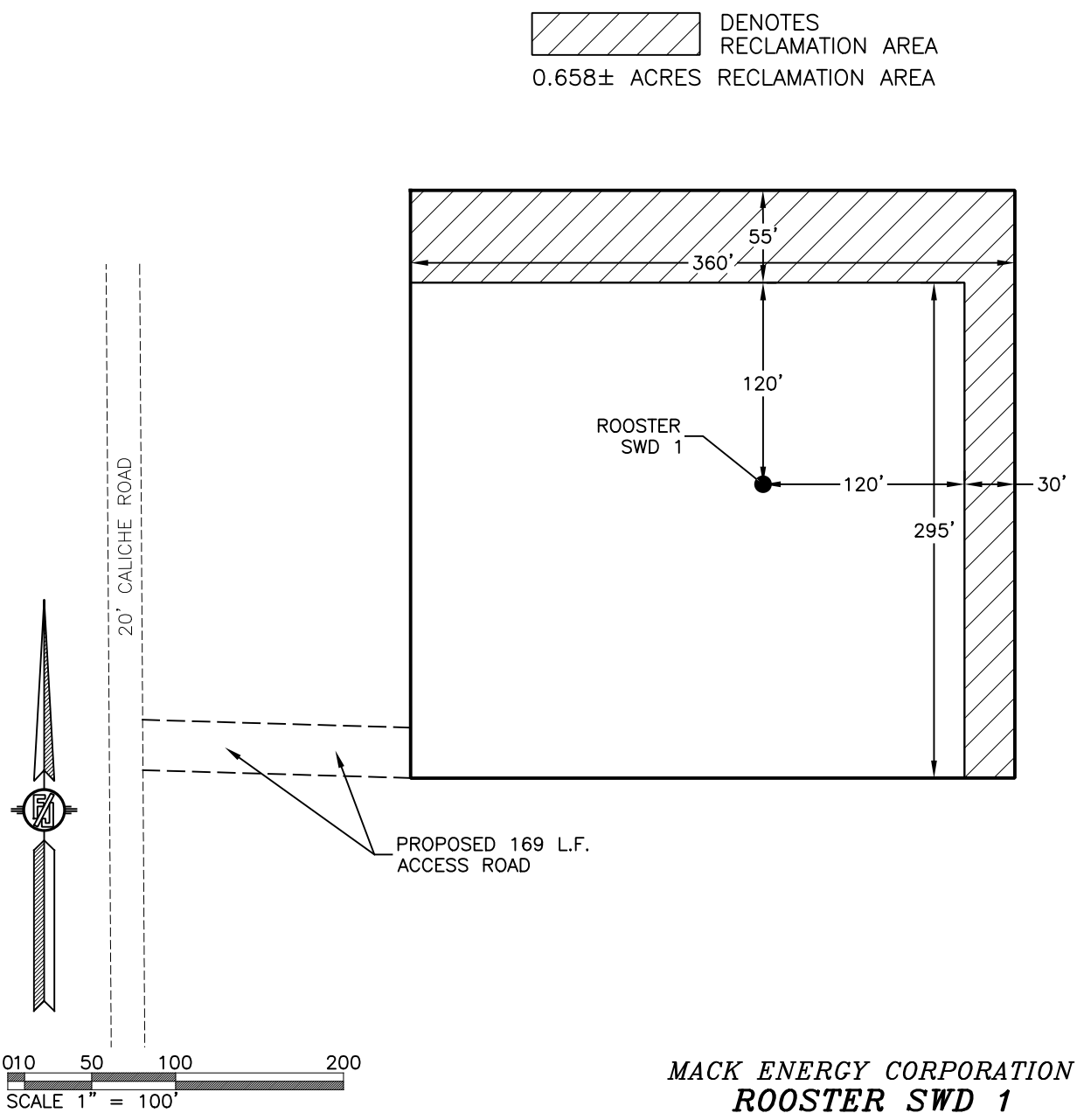
MACK ENERGY CORPORATION
ROOSTER SWD 1
LOCATED 1650 FT. FROM THE NORTH LINE AND 1650 FT. FROM THE WEST LINE OF SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M. CHAVES COUNTY, STATE OF NEW MEXICO

APRIL 15, 2024

SURVEY NO. 10108

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

SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO
INTERIM SITE RECLAMATION



MACK ENERGY CORPORATION

ROOSTER SWD 1

LOCATED 1650 FT. FROM THE NORTH LINE
AND 1650 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 14 SOUTH,
RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

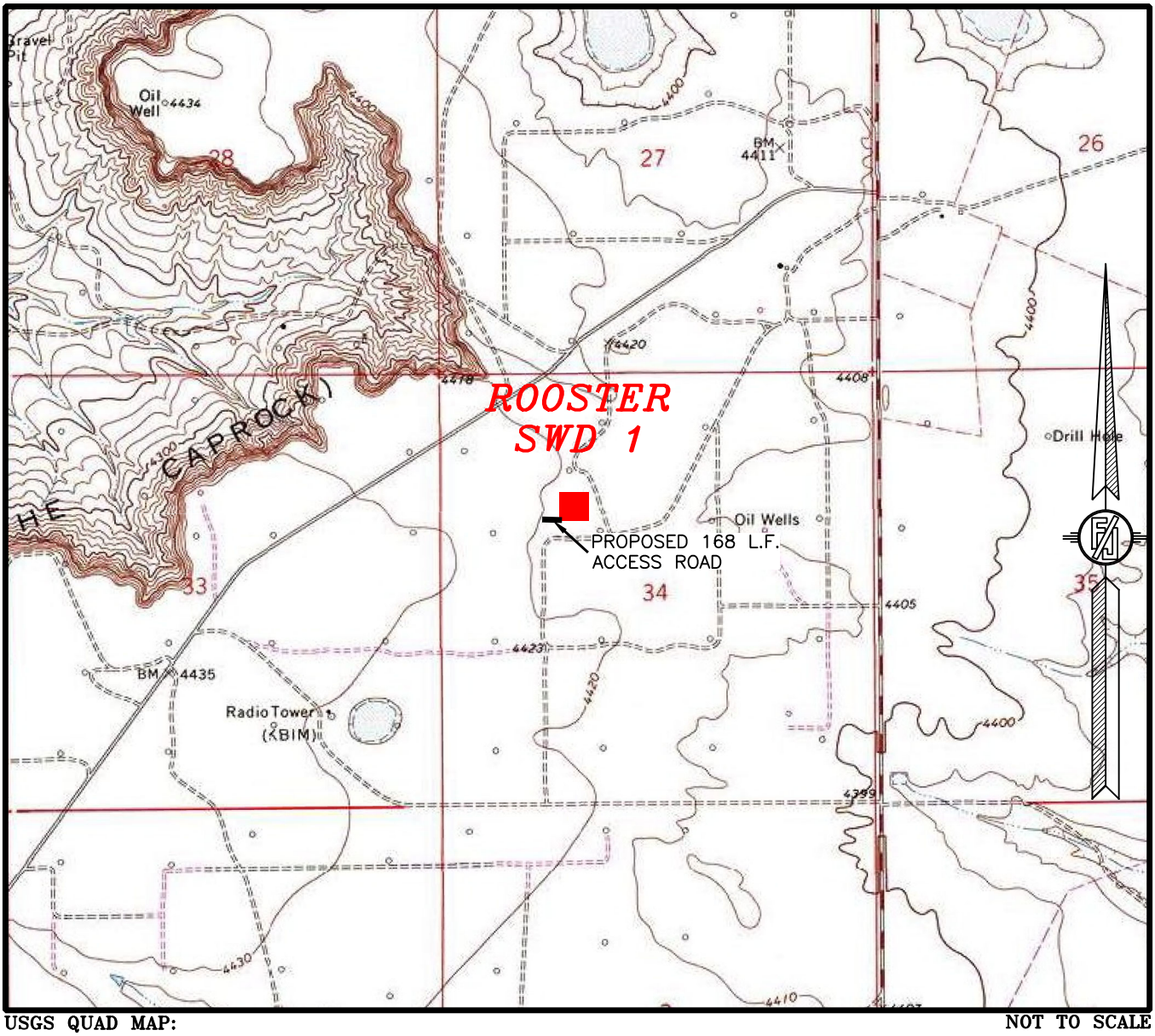
APRIL 15, 2024

SURVEY NO. 10108

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

SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



USGS QUAD MAP:
CEDAR POINT

NOT TO SCALE

MACK ENERGY CORPORATION
ROOSTER SWD 1
LOCATED 1650 FT. FROM THE NORTH LINE
AND 1650 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 14 SOUTH,
RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

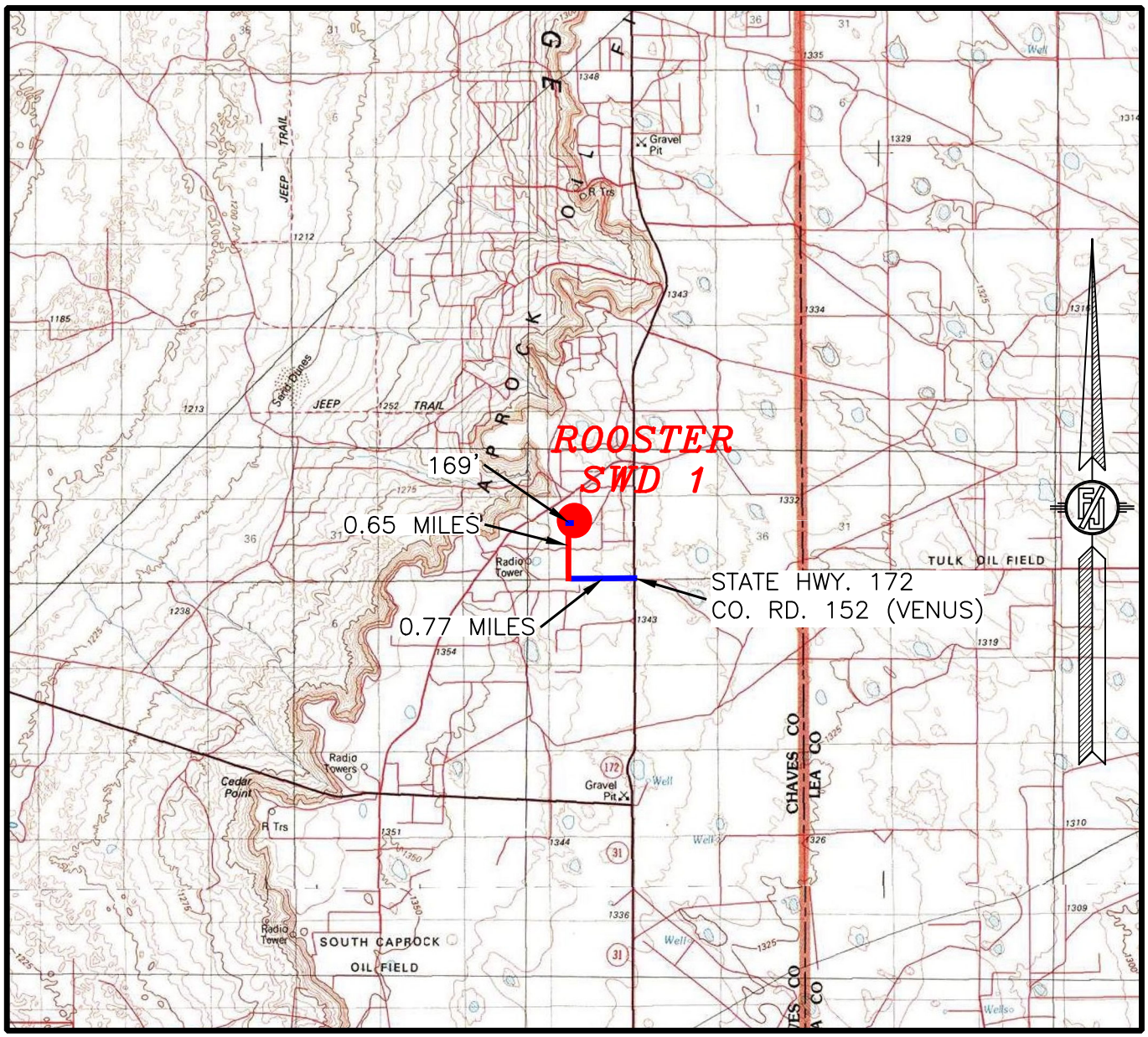
APRIL 15, 2024

SURVEY NO. 10108

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

SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

VICINITY MAP



DISTANCES IN MILES NOT TO SCALE

DIRECTIONS TO LOCATION
FROM THE INTERSECTION OF STATE HWY. 172 & CO. RD. 153 (VENUS), GO EAST ON CO. RD. 153 APPROX. 0.77 MILES, TURN RIGHT (NORTH) ON 20' CALICHE ROAD AND GO APPROX. 0.65 MILES TO A ROAD SURVEY ON RIGHT (EAST), FOLLOW ROAD SURVEY EAST APPROX. 169' TO THE SOUTHWEST PAD CORNER FOR THIS LOCATION.

MACK ENERGY CORPORATION
ROOSTER SWD 1
LOCATED 1650 FT. FROM THE NORTH LINE AND 1650 FT. FROM THE WEST LINE OF SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

APRIL 15, 2024

SURVEY NO. 10108

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

SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO

NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
JAN. 2023

MACK ENERGY CORPORATION
ROOSTER SWD 1
LOCATED 1650 FT. FROM THE NORTH LINE
AND 1650 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 14 SOUTH,
RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

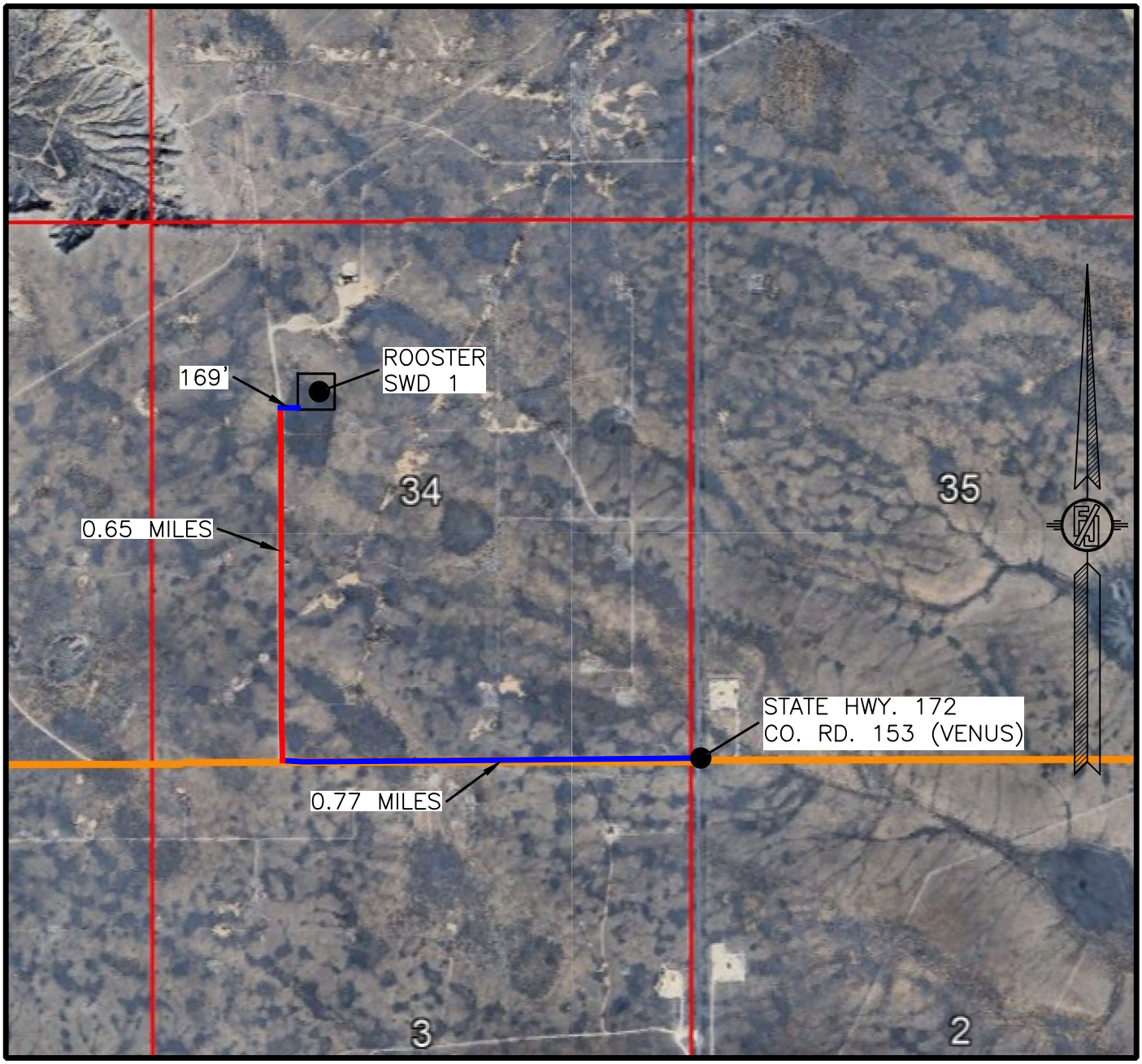
APRIL 15, 2024

SURVEY NO. 10108

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

SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
JAN. 2023

MACK ENERGY CORPORATION

ROOSTER SWD 1

LOCATED 1650 FT. FROM THE NORTH LINE
AND 1650 FT. FROM THE WEST LINE OF
SECTION 34, TOWNSHIP 14 SOUTH,
RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

APRIL 15, 2024

SURVEY NO. 10108

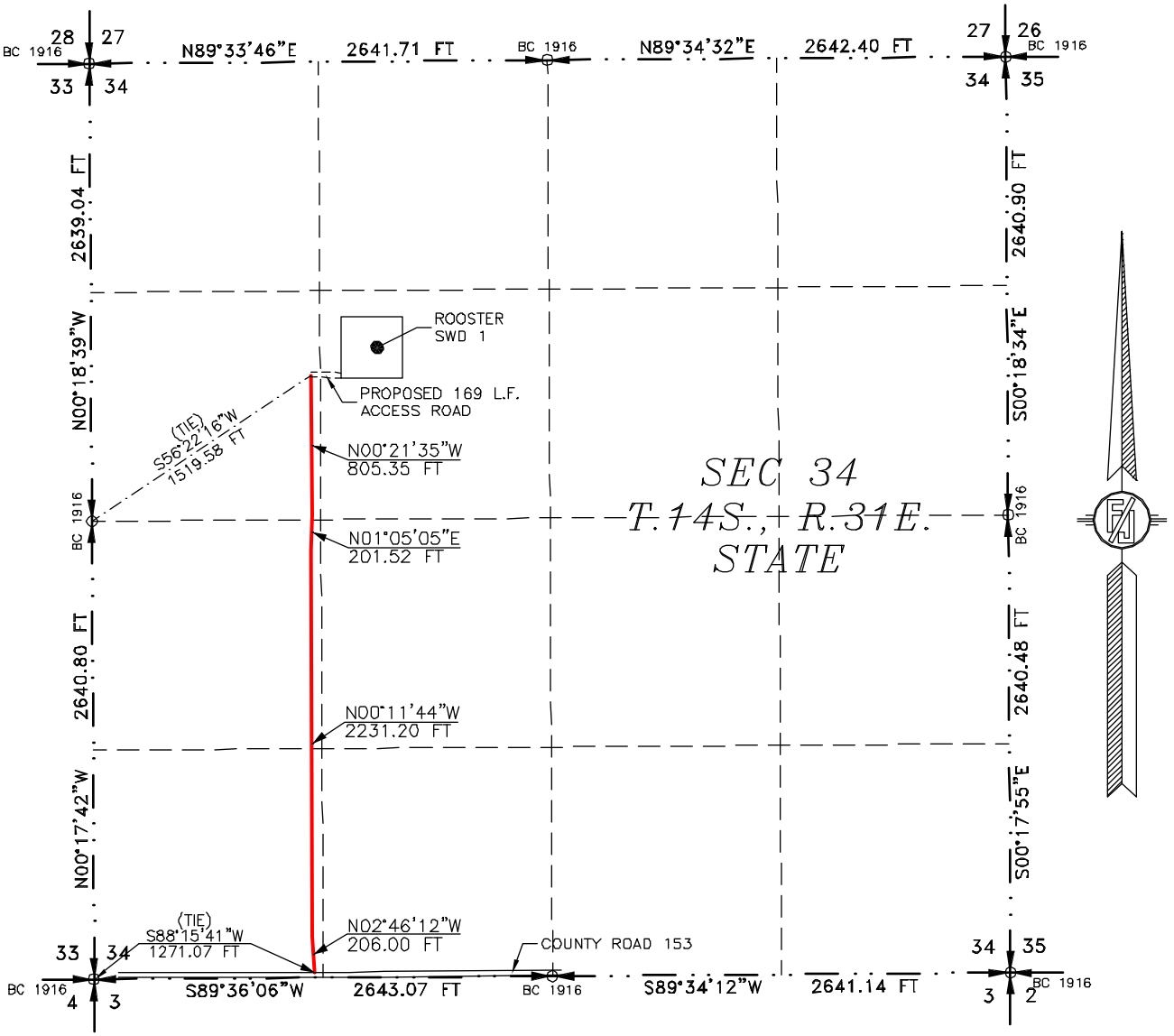
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3327 CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO ROOSTER SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO
APRIL 15, 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 8 DAY OF JULY 2024

FILIMON F. JARAMILLO PLS 12797

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

SHEET: 1-2

SURVEY NO. 10108

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

EXISTING CALICHE ROAD FOR ACCESS TO ROOSTER SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO
APRIL 15, 2024

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M., CHAVES COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S88°15'41"W, A DISTANCE OF 1271.07 FEET;
THENCE N02°46'12"W A DISTANCE OF 206.00 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N00°11'44"W A DISTANCE OF 2231.20 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N01°05'05"E A DISTANCE OF 201.52 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE N00°21'35"W A DISTANCE OF 805.35 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE EAST QUARTER CORNER OF SAID SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S56°22'16"W, A DISTANCE OF 1519.58 FEET;

SAID STRIP OF LAND BEING 3444.07 FEET OR 208.73 RODS IN LENGTH, CONTAINING 2.372 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4	1291.16 L.F.	78.25 RODS	0.889 ACRES
NW/4 SW/4	1320.43 L.F.	80.03 RODS	0.909 ACRES
SW/4 NW/4	832.48 L.F.	50.45 RODS	0.574 ACRES

GENERAL NOTES

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

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

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 18 DAY OF JULY 2024

FILIMON F. JARAMILLO PLS 12797

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

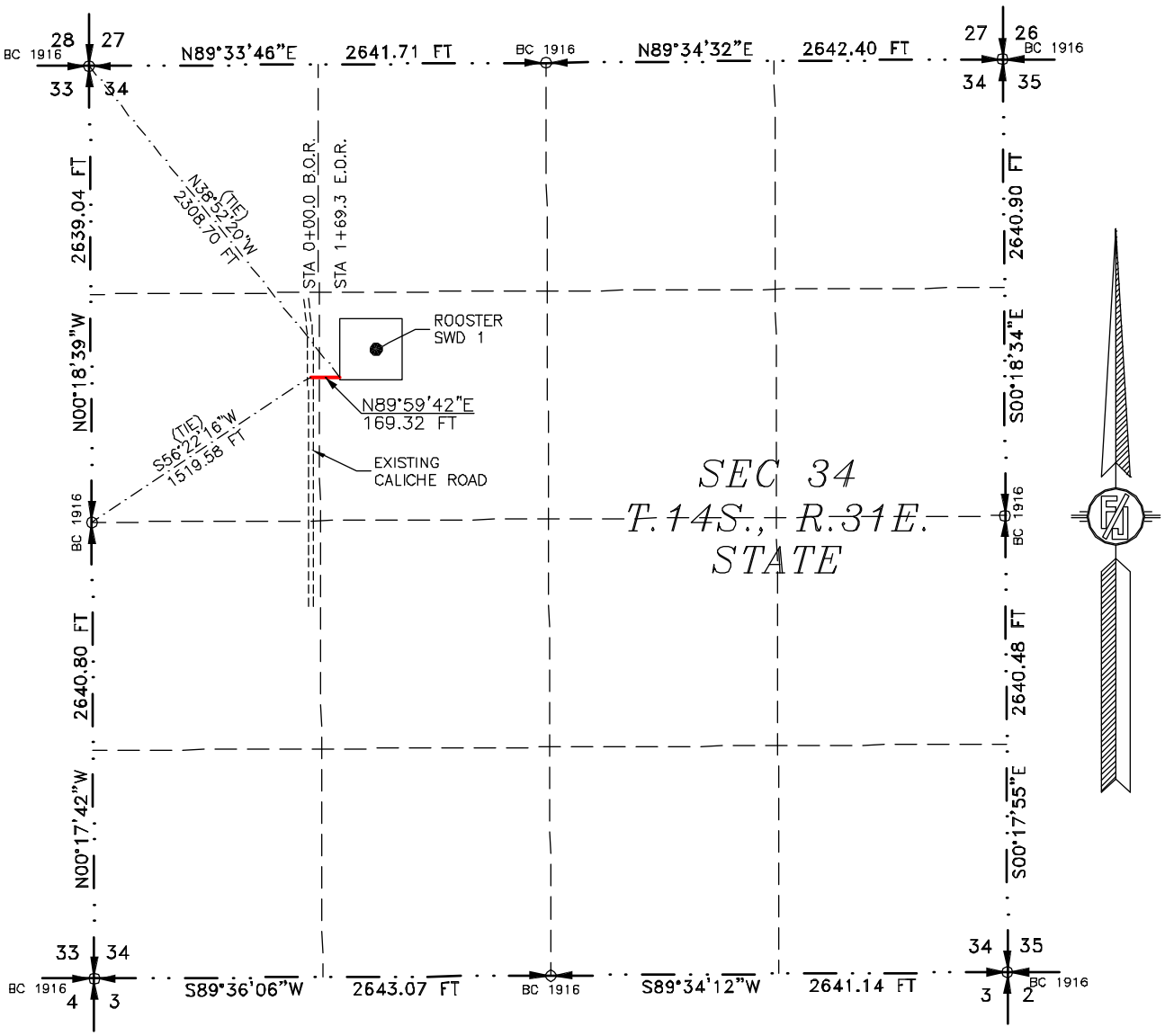
FILIMON F. JARAMILLO NEW MEXICO 12797 REGISTERED PROFESSIONAL SURVEYOR

ACCESS ROAD PLAT

PROPOSED ACCESS ROAD FOR ROOSTER SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO
APRIL 15, 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 16 DAY OF JULY 2024

FILIMON F. JARAMILLO PLS 12797

301 SOUTH CANAL
(575) 234-3327

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

SHEET: 1-2

SURVEY NO. 10108

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

PROPOSED ACCESS ROAD FOR ROOSTER SWD 1

MACK ENERGY CORPORATION

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO
APRIL 15, 2024

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M., CHAVES COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 NW/4 OF SAID SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M., WHENCE THE WEST QUARTER CORNER OF SAID SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS S56°22'16"W, A DISTANCE OF 1519.58 FEET;
THENCE N89°59'42"E A DISTANCE OF 169.32 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N38°52'20"W, A DISTANCE OF 2308.70 FEET;

SAID STRIP OF LAND BEING 169.32 FEET OR 10.26 RODS IN LENGTH, CONTAINING 0.117 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 NW/4	51.02 L.F.	3.09 RODS	0.036 ACRES
SE/4 NW/4	118.30 L.F.	7.17 RODS	0.081 ACRES

GENERAL NOTES

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

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

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 18 DAY OF JULY 2024

FILIMON F. JARAMILLO PLS 12797

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

SHEET: 2-2

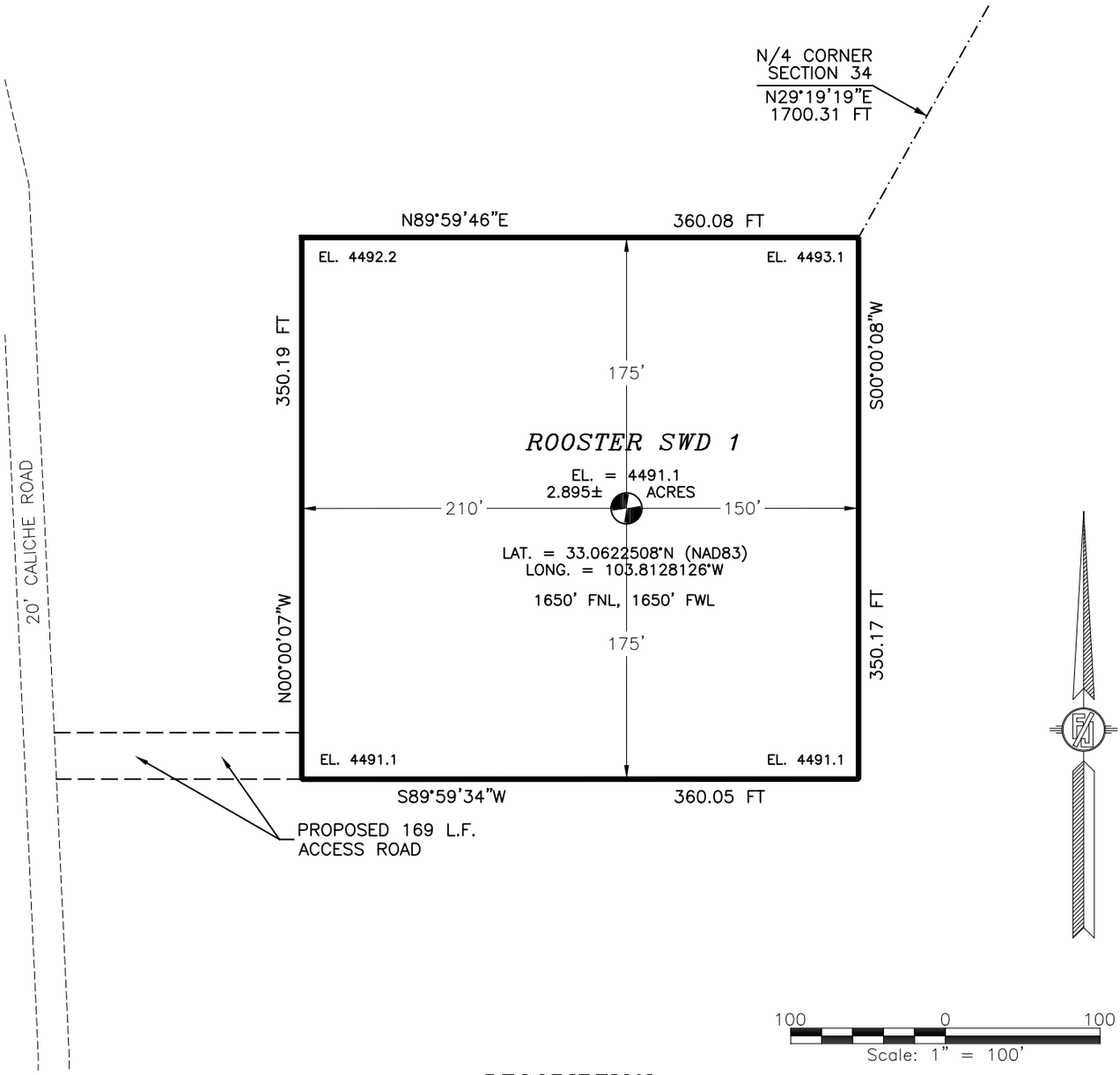
SURVEY NO. 10108

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ROOSTER SWD 1

MACK ENERGY CORPORATION
IN THE NW/4 SE/4 NW4 OF
SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

APRIL 15, 2024



DESCRIPTION

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN STATE OF NEW MEXICO LAND IN THE NW/4 SE/4 NW4 OF SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M., CHAVES COUNTY, NEW MEXICO.

BEGINNING AT THE NORTHEAST CORNER OF THE PARCEL, WHENCE THE NORTH QUARTER CORNER OF SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M. BEARS N29°19'19"E, A DISTANCE OF 1700.31 FEET;
THENCE S00°00'08"W A DISTANCE OF 350.17 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;
THENCE S89°59'34"W A DISTANCE OF 360.05 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;
THENCE N00°00'07"W A DISTANCE OF 350.19 FEET TO THE NORTHWEST CORNER OF THE PARCEL;
THENCE N89°59'46"E A DISTANCE OF 360.08 FEET TO THE NORTHEAST CORNER OF THE PARCEL, THE POINT OF BEGINNING;
CONTAINING 2.895 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

DRIVING DIRECTIONS: FROM THE INTERSECTION OF STATE HWY. 172 & CO. RD. 153 (VENUS), GO EAST ON CO. RD. 153 APPROX. 0.77 MILES, TURN RIGHT (NORTH) ON 20' CALICHE ROAD AND GO APPROX. 0.65 MILES TO A ROAD SURVEY ON RIGHT (EAST), FOLLOW ROAD SURVEY EAST APPROX. 169' TO THE SOUTHWEST 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 16 DAY OF JULY 2024

FILIMON F. JARAMILLO PLS 12797

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

SHEET: 1-3 SURVEY NO. 10108

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

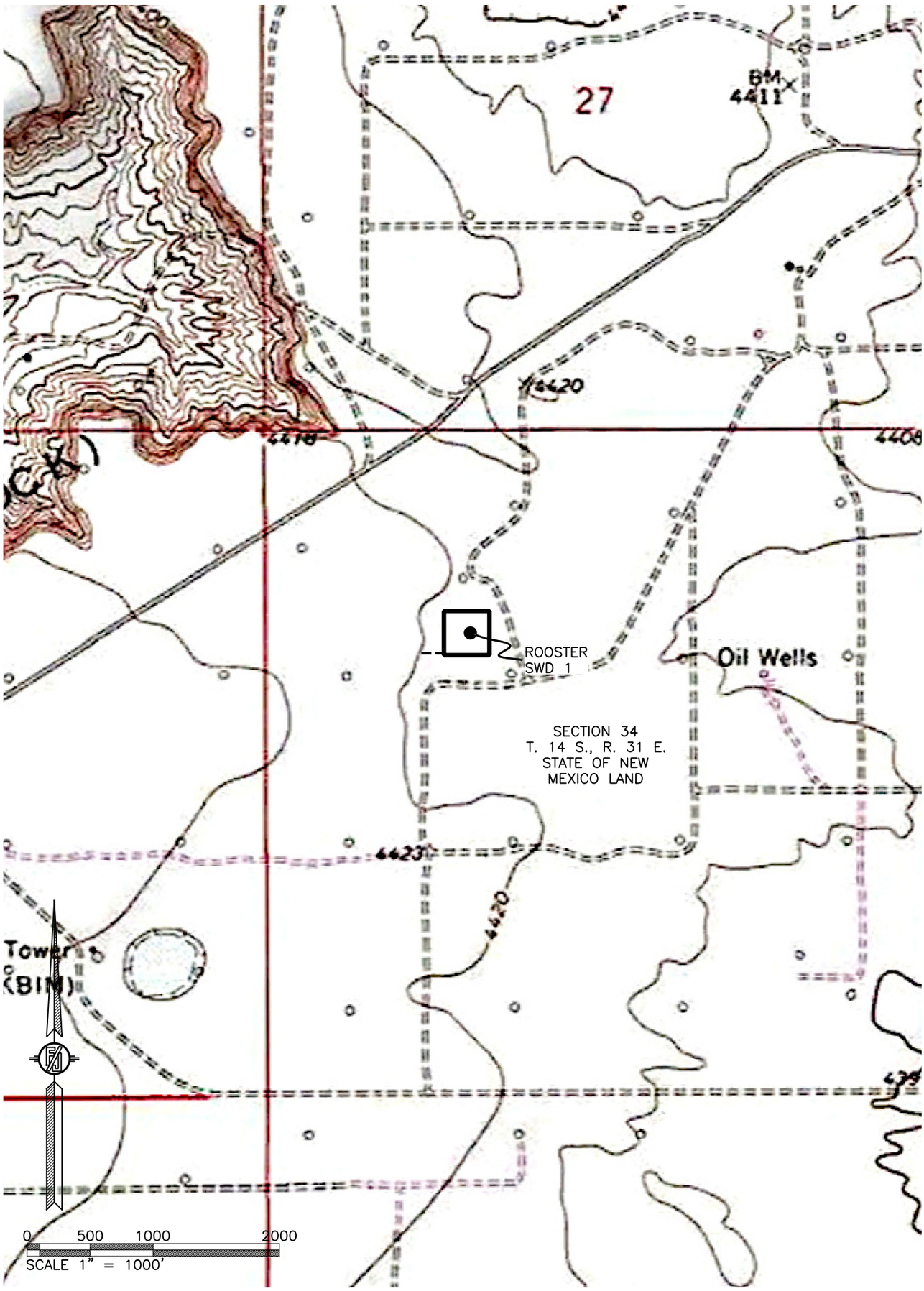
ROOSTER SWD 1

MACK ENERGY CORPORATION

IN THE NW/4 SE/4 NW4 OF
SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

APRIL 15, 2024

QUAD MAP



SHEET: 2-3 SURVEY NO. 10108

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

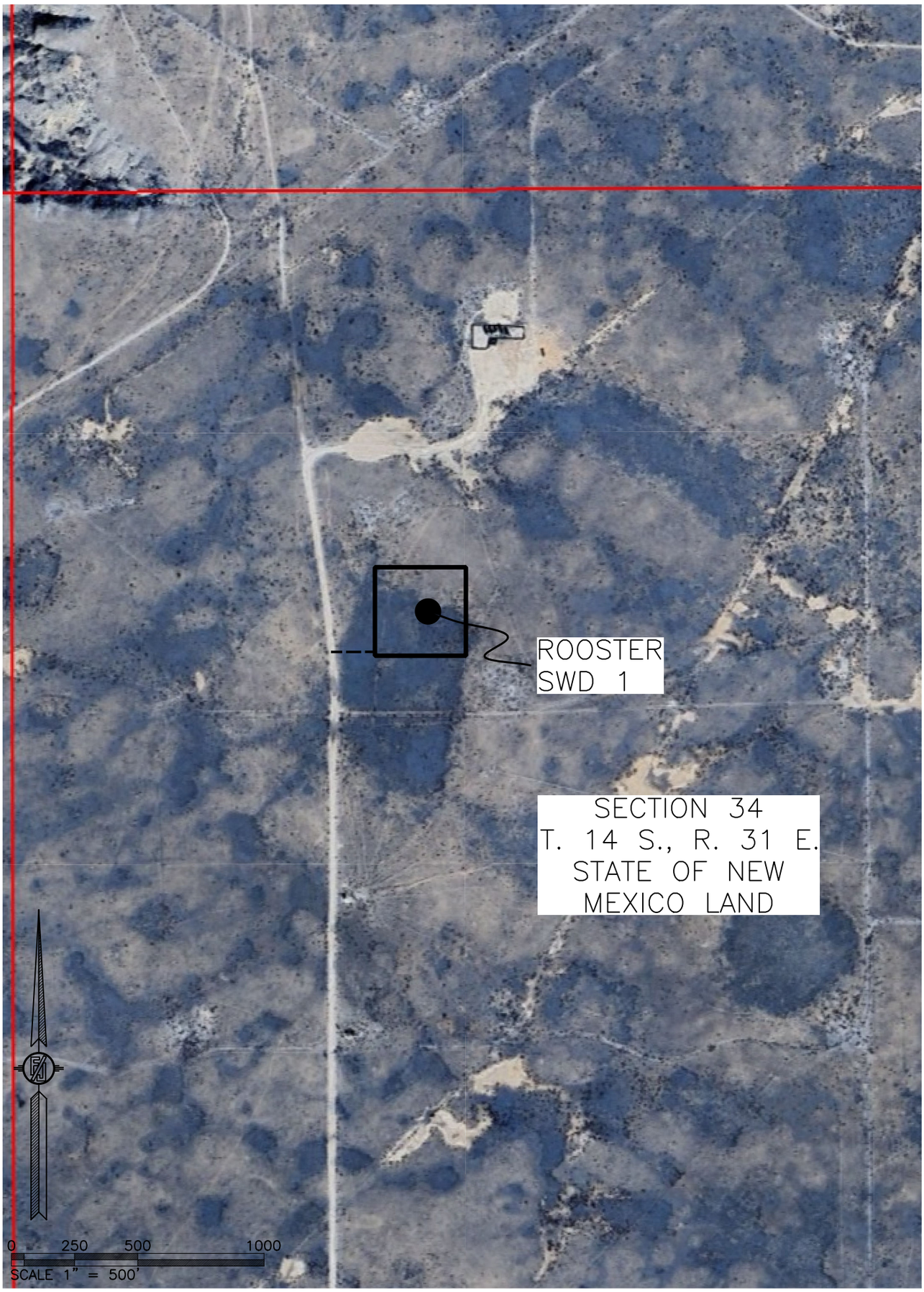
ROOSTER SWD 1

MACK ENERGY CORPORATION

IN THE NW/4 SE/4 NW4 OF
SECTION 34, TOWNSHIP 14 SOUTH, RANGE 31 EAST, N.M.P.M.
CHAVES COUNTY, STATE OF NEW MEXICO

APRIL 15, 2024

AERIAL PHOTO



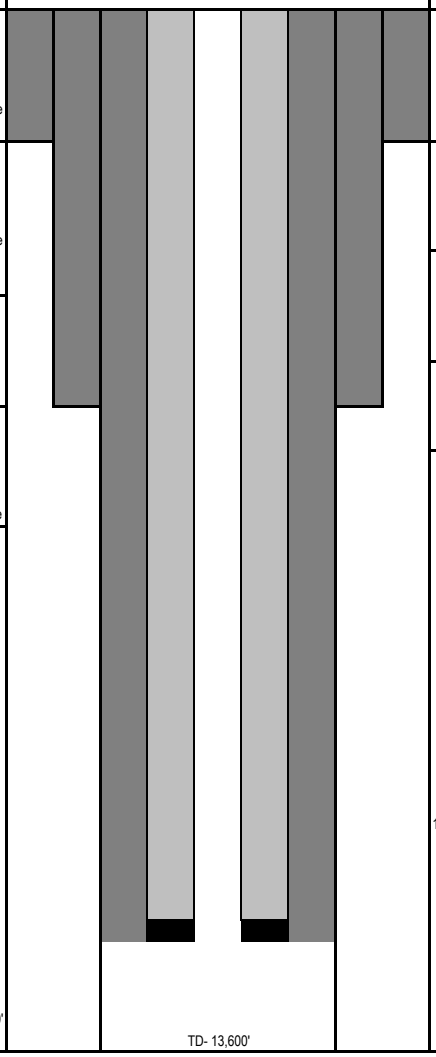
SHEET: 3-3 SURVEY NO. 10108

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

Rooster SWD #1

Operator: Mack Energy Corporation
Location: Sec. 34 T14S R31E
1650 FNL 1650 FWL
Objective: SWD; Devonian
GL Elevation: 4491.1

Depth	Hole Size & Cement	Casing Detail
1400'	17 1/2" hole 925sx CMT Circ to Surface	13 3/8" J-55 54.5# 1400'
3900'	12 1/4" hole 1125sx CMT Circ to Surface	9 5/8" L-80 40# 3900'
12,905'	8 3/4" Hole 1750sx CMT Circ to Surface	7" HCL-80 29# 12,905'
		3 1/2" 9.3 L-80 Tubing 0-12,905"
		IPC 10K Nickle Plated Arrow Set 2.31 profile Nipple 12,905'
	Open Hole 12,900-13,600'	



AFFIDAVIT OF PUBLICATION
STATE OF NEW MEXICO

I, Merle Alexander
Legals Clerk

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

One time with the issue dated

July 14th, 2023

Clerk

Sworn and subscribed to before me

this 18th day of July, 2024

Notary Public

CLAUDIA MARTINEZ
NOTARY PUBLIC
COMM # 1095094
EXPIRES 5-13-2026
STATE OF NEW MEXICO

Public Notice...

Publish July 14, 2024

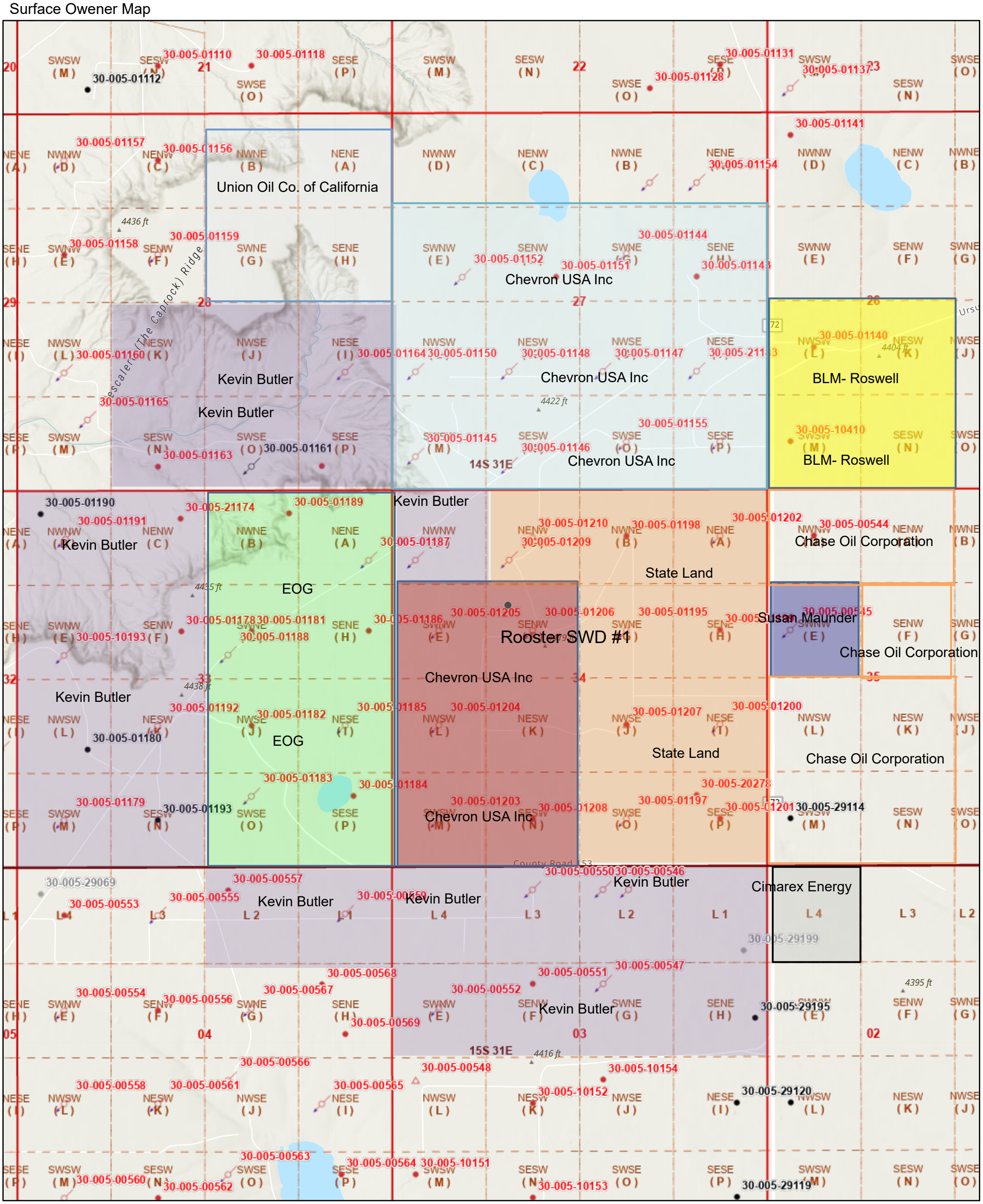
Mack Energy Corporation, Post Office Box 960, Artesia, NM 88211-0960, has filed an Application with the New Mexico Oil Conservation Division seeking authorization to inject produced water into the Rooster SWD #1 1650 FNL 1650 FWL of Section 34, T14S, R31E, NMPM, Chaves County, New Mexico. The water will be injected into the Devonian at a disposal depth of 12,900-13,600'. Water will be injected at a maximum surface pressure of 2,580# 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.

Publish July 14, 2024

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 Rooster SWD #1 1650 FNL 1650 FWL of Section 34, T14S, R31E, NMPM, Chaves County, New Mexico. The water will be injected into the Devonian at a disposal depth of 12,900-13,600'. Water will be injected at a maximum surface pressure of 2,580# 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.

Rooster SWD #1
Sec. 34 T14S R31E
1650 FNL 1650 FWL
Surface Owener Map

OCD Well Locations



4/23/2024, 2:26:32 PM

Areas
- Override 1
- Override 2
- Override 3
- Override 4
- Override 5
- Override 6
- Override 7
- Override 8
- Override 9
- Override 10
- Override 11

Wells - Large Scale
- Injection, Active
- Injection, Plugged
- Oil, Active
- Oil, Cancelled
- Oil, Plugged
- Salt Water Injection, 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

Rooster SWD #1
Sec. 34 T14S R31E
1650 FNL 1650 FWL
Chaves, NM

Proof of Notice
Mineral / Surface Owner List

Name		Address	City	State	Zip	Certified Mail Id
New Mexico State Land Office	Mineral / Surface Owner	310 Old Santa Fe Trail	Santa Fe	NM	87501	9589 0710 5270 0175 5638 95
Bureau Of Land Management	Mineral / Surface Owner	2909 W. Second Street	Roswell	NM	88201	9589 0710 5270 0175 5639 01
Union of California	Surface Owner	6301 Deauville Blvd	Midland	TX	79706-2964	9589 0710 5270 0175 5639 18
Chevron USA Inc	Surface Owner	6301 Deauville Blvd	Midland	TX	79706-2964	9589 0710 5270 0175 5639 25
Kevin Butler & Asso. Inc	Surface Owner	P.O. Box 1171	Midland	TX	79702	9589 0710 5270 0175 5639 32
Susan Maunder	Surface Owner	600 W. Illinois Ave	Midland	TX	79701	9589 0710 5270 0175 5638 33
Cimarex Energy Co.	Surface Owner	6001 Deauville Suite 300	Midland	TX	79701	9589 0710 5270 0175 5638 40
EOG Resouces Inc	Surface Owner	1111 Bagby St. Sky Lobby 2	Houston	TX	77002	9589 0710 5270 0175 5638 57

MACK Energy Corporation

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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5639 01
Return Receipt Requested

Bureau of Land Management
2909 W. Second Street
Roswell, NM 88201

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 12,900-13,600'. The Rooster SWD #1 located 1650 FNL & 1650 FWL, Sec. 34 T14S R31E, Chaves County.

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

Sincerely,

Mack Energy Corporation

Deana Weaver

Deana Weaver
Regulatory Technician II

DW/

Attachments

MACK Energy Corporation

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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5638 95
Return Receipt Requested

Commissioner of Public Lands
New Mexico State Land Office
P.O. Box 1148
Santa Fe, NM 87504-1148

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 12,900-13,600'. The Rooster SWD #1 located 1650 FNL & 1650 FWL, Sec. 34 T14S R31E, Chaves County.

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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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5639 18
Return Receipt Requested

Union of California
6301 Deauville Blvd
Midland, TX 79706-2964

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 12,900-13,600'. The Rooster SWD #1 located 1650 FNL & 1650 FWL, Sec. 34 T14S R31E, Chaves County.

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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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5639 25
Return Receipt Requested

Chevron USA INC
6301 Deauville Blvd
Midland, TX 79706-2964

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 12,900-13,600'. The Rooster SWD #1 located 1650 FNL & 1650 FWL, Sec. 34 T14S R31E, Chaves County.

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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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5639 32
Return Receipt Requested

Kevin Butler & Associates Inc.
P.O. Box 1171
Midland, TX 79702

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 12,900-13,600'. The Rooster SWD #1 located 1650 FNL & 1650 FWL, Sec. 34 T14S R31E, Chaves County.

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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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5638 33
Return Receipt Requested

Susan Maunder
600 W. Illinois Ave
Midland, TX 79701

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 12,900-13,600'. The Rooster SWD #1 located 1650 FNL & 1650 FWL, Sec. 34 T14S R31E, Chaves County.

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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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5638 40
Return Receipt Requested

Cimarex Energy Co.
6001 Deauville Suite 300
Midland, TX 79701

To all Interest Owners:

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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

August 9, 2024

Via Certified Mail 9589 0710 5270 0175 5638 57
Return Receipt Requested

EGO Resources INC
1111 Bagby St. Sky Lobby 2
Houston, TX 77002

To all Interest Owners:

Enclosed for your review is a copy of Mack Energy Corporation's application for a Devonian SWD well. Produced water will be injected at a proposed depth of 12,900-13,600'. The Rooster SWD #1 located 1650 FNL & 1650 FWL, Sec. 34 T14S R31E, Chaves County.

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Sincerely,

Mack Energy Corporation

Deana Weaver

Deana Weaver
Regulatory Technician II

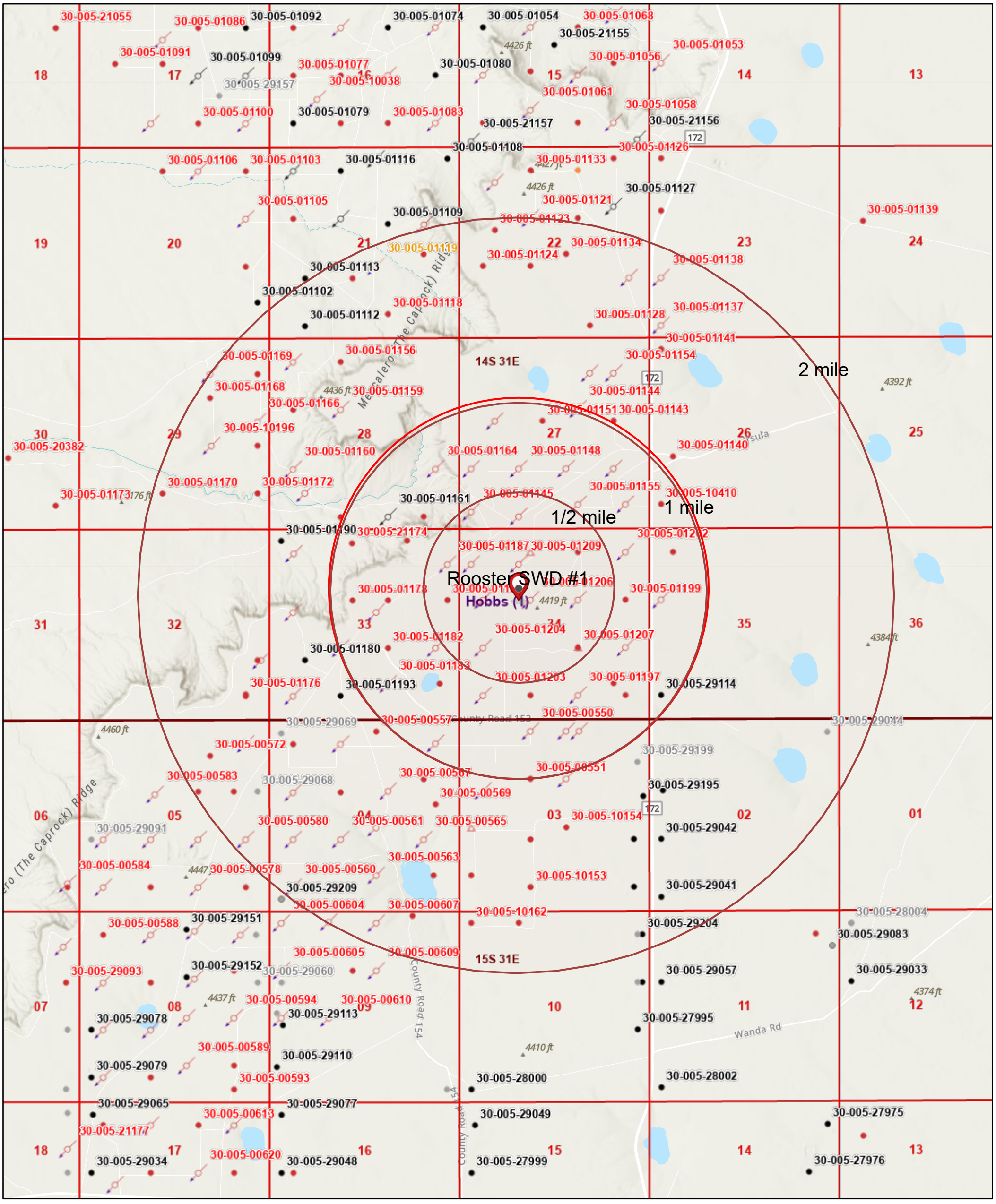
DW/

Attachments

Rooster SWD #1
1650 FNL 1650 FWL
Sec. 34 T14S R31E
Formation Tops

Quaternary	Surface
Rustler	1360’
Top Salt	1450’
Base Salt	2020’
Yates	2330’
Seven Rivers	2545’
Queen	3080’
Grayburg	3455’
San Andres	3775’
Glorieta	5300’
Tubb	6615’
Abo	7390’
Wolfcamp	8710’
Cisco	9590’
Atoka	11,150’
Miss	11,840’
Woodford	12,835
Devonian	12,900’
Montoya	13,600’

OCD Well Locations

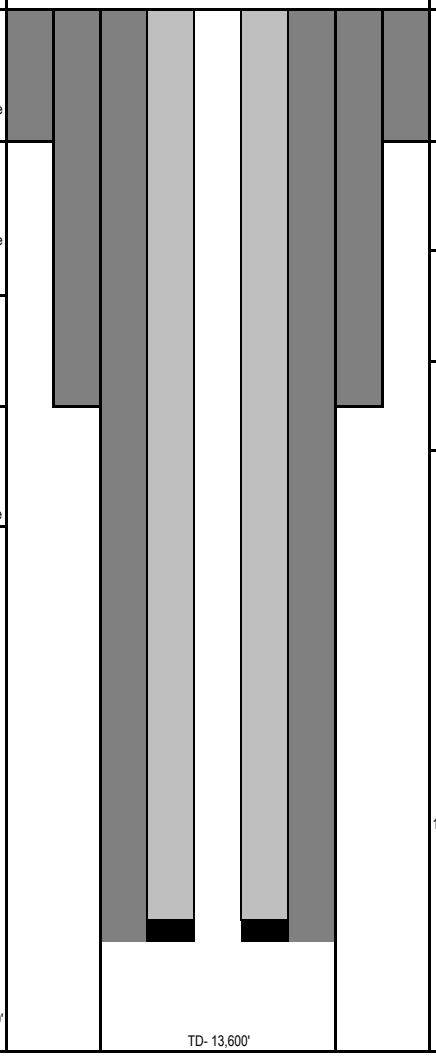


7/9/2024, 9:19:55 AM

Rooster SWD #1

Operator: Mack Energy Corporation
Location: Sec. 34 T14S R31E
1650 FNL 1650 FWL
Objective: SWD; Devonian
GL Elevation: 4491.1

Depth	Hole Size & Cement	Casing Detail
1400'	17 1/2" hole 925sx CMT Circ to Surface	13 3/8" J-55 54.5# 1400'
3900'	12 1/4" hole 1125sx CMT Circ to Surface	9 5/8" L-80 40# 3900'
12,905'	8 3/4" Hole 1750sx CMT Circ to Surface	7" HCL-80 29# 12,905'
		3 1/2" 9.3 L-80 Tubing 0-12,905"
		IPC 10K Nickle Plated Arrow Set 2.31 profile Nipple 12,905'
	Open Hole 12,900-13,600'	



Rooster SWD #1

Bit Size
17 1/2"

Surface- 1400' 13 3/8" 54.5# J55

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	Class C +4%PF20+1% PF1+ 0.125#/skPF29+.4%PF45	13.5	2.31	9.166	725	100	Surface
Tail	Class C+1%PF1	14.8	1.32	6.307	200	100	200'

Comments	20bbls Gelled Water. 50 sacks of 11# Scavenger cement.	Cu./Ft Per Lin./ Ft.	973

Bit Size
12 ¼"

Intermediate- 3,900' 9 5/8 40# J55

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	Class C +4%PF20+1% PF1+ 0.125#/skPF29+.4%PF45	13.5	1.72	9.123	925	50	Surface
Tail	Class C + 1% PF1	14.8	1.34	6.307	200	50	200'

Comments	20bbls Gelled Water. 50 sacks of 11# Scavenger cement.	Cu./Ft Per Lin./ Ft.	1222

Bit size
8 ¾"

Production- 12,905'
7"-29# HCL-80

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	Class "C" 4% PF20+4 pps PF45+125pps PF29	13.2	1.84	9.914	350	0	Surface
Tail	PVL+1.3 (BWOW) PF44+5% PF174+.5%PF606+.1%PF153+.4 ppsPF44	13	1.48	7.577	1400	50	3800'

Comments	20bbls Gelled Water. 20bbls Chemical wash. 50 sacks of 11# Scavenger cement.

Rooster SWD #1

Stage 2	Slurry	Density	Yield	# of sacks	% Excess	Slurry Top
Lead						
Tail						

Cu./Ft Per Lin./ Ft.
1940

Comments:	

Prior to any cement job it is Mack Energy policy to circulate bottoms up 1 time before commencing with cement operations. On wells where hole conditions have been an issue during the drilling and reaming process the number or circulations needs to increase to a minimum of 2 times around.

All production cement figured with an additional 10% for washout unless otherwise noted. Flush is figured with a 40' shoe joint. Do not displace more than 2bbls over calculated flush without prior approval.

Casing Design **Well:** Rooster SWD #1

String Size & Function: 13 3/8 in surface x intermediate

Total Depth: 1400 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 9.6 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 9.6 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 9.6 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 698.88 psi Burst: 698.88 psi, joint strength: 698.88 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 500 psi

1st segment	1400 ft to 0 ft			Make up Torque ft-lbs			Total ft = 1400
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
13.375 inches	**54.5** #/ft	**J-55**	**ST&C**	**5,140**	**3,860**	**6,430**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
1,130	**2,730** psi	**514** ,000 #		**853** ,000 #		**12.459**	

2nd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

3rd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

4th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

5th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

6th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

Select 1st segment bottom 1400

1400 ft to 0 ft
13.375 0 J-55 ST&C

S.F.	Actual		Desire
collapse	1.616873	>=	1.125
burst-b	5.15951	>=	1.25
burst-t	5.46		

Top of segment 1 (ft) 0

Select 2nd segment from bottom

0 ft to 0 ft
0 0 0 0

S.F.	Actual		Desire
collapse	#DIV/0!	>=	1.125
burst-b	0	>=	1.25
burst-t	0		
jnt strngth	7.896388	>=	1.8

Casing Design **Well:** Rooster SWD #1

String Size & Function: 9 5/8 in surface intermediate x

Total Depth: 3900 ft **TVD:** 3900 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 10.3 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 10.3 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 10.3 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 2088.84 psi Burst: 2088.84 psi, joint strength: 2088.84 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 500 psi

1st segment	3900 ft to 0 ft			Make up Torque ft-lbs			Total ft = 3900
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
9.625 inches	**40** #/ft	**L-80**	**LT&C**	**7,270**	**5,450**	**9,090**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,090 psi	**5,750** psi	**727** ,000 #		**916** ,000 #		**8.75-SD**	

2nd segment	ft to ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

3rd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

4th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

5th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

6th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

Select 1st segment bottom 1200

3900 ft to 0 ft

9.625 0 L-80 LT&C

	S.F.	Actual		Desire
collapse		1.47929	>=	1.125
burst-b		13.09318	>=	1.25
burst-t		11.5		

Top of segment 1 (ft) 0

Select 2nd segment from bottom

0 ft to 0 ft

0 0 0 0

	S.F.	Actual		Desire
collapse		#DIV/0!	>=	1.125
burst-b		0	>=	1.25
burst-t		0		
jnt strngth		5.532053	>=	1.8

Casing Design **Well:** Rooster SWD #1

String Size & Function: 7 in Production x

Total Depth: 12905 ft **TVD:** 12905 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 10.3 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 10.3 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 10.3 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 6911.918 psi Burst: 6911.918 psi, joint strength: 6911.918 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 3000 psi

1st segment	12905 ft to 0 ft			Make up Torque ft-lbs			Total ft = 12905
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	**29** #/ft	**HCL-80**	**Buttress**	**5970**	**4480**	**7460**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
9,200 psi	**8,160** psi	**780** ,000 #		**676** ,000 #		**6.059**	

2nd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	**26** #/ft	**HCP-110**	**Buttress**	**6,930**	**5,200**	**8,660**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
7,800 psi	**9,950** psi-lrcr	**853** ,000 #		**830** ,000 #		**6.151**	

3rd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	**26** #/ft	**HCP-110**	**LT&C**	**6930**	**5200**	**8660**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
7,800 psi	**9,950** psi	**693** ,000 #		**830** ,000 #		**6.151**	

4th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

5th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

6th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

Select 1st segment bottom				12905	**S.F.**	Actual		Desire
					collapse	1.331034	>=	1.125
12905 ft	to	0 ft			burst-b	2.915658	>=	1.25
7	0	HCL-80	Buttress		burst-t	2.72		
Top of segment 1 (ft)				0	**S.F.**	Actual		Desire
Select 2nd segment from bottom					collapse	#DIV/0!	>=	1.125
					burst-b	3.316667	>=	1.25
0 ft	to	0 ft			burst-t	3.316667		
7	26	HCP-110	Buttress		jnt strngth	2.474088	>=	1.8

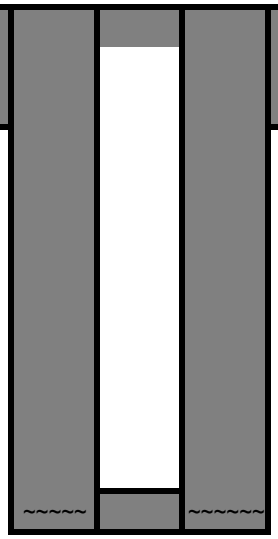
Rooster SWD #1
C-108
Well Tabulation Penetrating Injection Zone in Review Area
Mack Energy Corporation
Proposed Disposal Well

Operator	Well Name	API #	County	Footage	Sec	TWN	RNG	Type	Status	Spud Date	Comp Date	TD	PBTD	Comp Zone	Comp Interval	Hole Size	Casing Prog	Cement	Cmt Plug	
Mack Energy Corporation	Rooster SWD #1		Chaves	1650 FNL 1650 FWL	34	14S	31W	SWD	New			13600	13600	SWD; Devonian	12,900-13600' Open Hole	17 1/2"	13 3/8" @ 1,400'	925sx		
																12 1/4"	9 5/8" @ 3,900'	1125sx		
																8 3/4"	7" @ 12,905'	1750sx		
Pre-Ongard Well Operator	Pre-Ongard Well #3	30-005-01152	Chaves	2310 FNL 990 FWL	27	14S	31E	Oil	P&A	5/31/1957	6/11/1957	3125	3125	Caprock Queen	3114-3125' Open Hole	11"	8 5/8" @ 268'	175sx	CIBP @ 3010' w/ 35' cmt cap	
Lewis Burleson Inc	State D #3								5/15/1986							7 7/8"	4 1/2" @ 3114'	75sx	CIBP @ 280'	
																			Perf @ 268' w/ 55sx	
																			95sx @ 0-268'	
Pre-Ongard Well Operator	Pre-Ongard Well #2	30-005-01151	Chaves	2310 FNL 2310 FWL	27	14S	31E	Oil	P&A	5/15/1957	5/24/1957	3100'	3093'	Caprock Queen	3093-3112' Open Hole	11"	8 5/8" @ 258'	175sx	CIBP @ 2985' w/ 35' cmt cap	
Lewis Burleson Inc	State D #2								9/9/1987							7 7/8"	4 1/2" @ 3093'	75sx	CIBP @ 260'	
																			Perf Sqz @ 252'	
																			Circ Cmt w/ 128sx in & out of pipe	
Pre-Ongard Well Operator	Pre-Ongard Well #8	30-005-01144	Chaves	1980 FNL 1980 FEL	27	14S	31E	Oil	P&A	1/21/1957	1/29/1957	3111'		Caprock Queen	3094-3096'	10 3/4"	8 5/8" @ 328'	175sx	CIBP @ 3094' w/ 35' cmt cap	
Miller & Miller Auctioneers Inc	Eastcap Queen #8								2/4/1975							7 7/8"	5 1/2" @ 3111'	100sx	Perf @ 245'	
																			100' Cmt Plug w/ 10sx	
Pre-Ongard Well Operator	Pre-Ongard Well #7	30-005-01143	Chaves	2310 FNL 990 FEL	27	14S	31E	Oil	P&A	8/21/1957	8/28/1957	3124'		Caprock Queen	3097-3100'	11"	8 5/8" @ 313'	175sx	CIBP @ 3097' w/ 35' cmt cap	
Miller & Miller Auctioneers Inc	Eastcap Queen #7								2/4/1975							7 7/8"	5 1/2" @ 3124'	100sx	Perf @ 1134' w/ 100' cmt plug	
																			100' cmt @ 313'	
																			Cap w/ 10sx Cmt	
Union Oil Company of Californ	South Caprock Queen Unit #9	30-005-01164	Chaves	1650 FSL 660 FEL	28	14S	31E	Oil	P&A	6/3/1957	6/8/1957	3037'		Caprock Queen	3013-3016'	11"	8 5/8" @ 199'	125sx	50sx cmt ply @ 2832-3016'	
									2/28/1969							7 7/8"	5 1/2" @ 3037'	175sx	150sx cmt plug @0-1300'	
																			5sx cmt plug @ 0-20'	
Pre-Ongard Well Operator	Pre-Ongard Well #11	30-005-01150	Chaves	1650 FSL 330 FWL	27	14S	31E	Oil	P&A	2/6/1957	2/14/1957	3125'		Caprock Queen	3106-3125'	11"	8 5/8" @ 242'	150sx	CIBP @ 3008' w/ 5sx cmt cap	
Miller & Miller Auctioneers Inc	Eastcap Queen Pool Unit #11								1/24/1974							7 7/8"	4 1/2" @ 3113'	75sx	40sx cmt plug @ 792'	
																			40sx cmt plug @ 280'	
																			10sx cmt plug @ surface	
Pre-Ongard Well Operator	Pre-Ongard Well #4	30-005-01148	Chaves	1650 FSL 1650 FWL	27	14S	31E	Oil	P&A	12/7/1956	12/14/1956	3120'		East Caprock Queen	3106-3113'	11"	8 5/8" @ 253'	150sx	CIBP @ 3010' w/ 35' cmt cap	
Lewis Burleson Inc	State D #4								5/15/1986							7 7/8"	4 1/2" @ 3120'	75sx	CIBP @ 268'	
																			Perf @ 258' Cmt 25sx	
																			100sx cmt to surface	
Pre-Ongard Well Operator	Pre-Ongard Well #13	30-005-01147	Chaves	1650 FSL 2310 FEL	27	14S	31E	Oil	P&A	10/30/1956	11/11/1956	3110'		Caprock Queen	3086-3110'	11"	8 5/8" @ 271'	150sx	CIBP @ 3006' w/5sx cmt cap	
Miller & Miller Auctioneers Inc	Eastcap Queen Pool Unit #13								1/17/1974							7 7/8"	4 1/2" @ 3094'	75sx	50sx cmt plug @ 1514'	
																			40sx cmt plug @ 290'	
																			10sx cmt plug @ surface	
Pre-Ongard Well Operator	Pre-Ongard Well #14	30-005-21183	Chaves	1650 FSL 990 FEL	27	14S	31E	Oil	P&A	1/25/1957	2/3/1957	3106'		Caprock Queen		11"	8 5/8" @ 256'	150sx	25sx cmt plug @ 3106-2858'	
Gulf Oil Corporation	Eastcap Queen Pool Unit #14								10/16/1968							7 7/8"	4 1/2" @ 3088'	75sx	75sx cmt plug @ 0-400'	
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-005-01140	Chaves	1980 FSL 660 FWL	26	14S	31E	Oil	P&A	10/19/1956	10/26/1957	3123'		Undesignated	3107-3112'	11"	8 5/8" @ 323'	175sx	Cmt plug @ 3126-2700'	
Donnelly Drilling Company Inc	Medlin #1								11/4/1956							7 7/8"	5 1/2" @ 3123'	100sx	20sx Cmt plug @ 2260'	
																			20sx Cmt plug @ 1600'	
																			10sx Cmt plug @ Surface	
Kevin O Butler & Assoc Inc	South Caprock Queen Unit #14	30-005-01163	Chaves	330 FSL 1980 FWL	28	14S	31E	Oil	P&A	6/10/1957	6/15/1957	2980'	2979'	Caprock Queen	2930-2936'	11"	8 5/8" @ 323'	100sx	NO plugging Information	
									3/1/2006							7 7/8"	5 1/2" @ 3123'	200sx		
Kevin O Butler & Assoc Inc	South Caprock Queen Unit #15	30-005-01161	Chaves	330 FSL 1980 FEL	28	14S	31E	Oil		5/31/1956				Caprock Queen						
Pre-Ongard Well Operator	Pre-Ongard Well #5	30-005-01145	Chaves	460 FSL 330 FWL	27	14S	31E	Oil	P&A	8/9/1956	8/17/1956	3108'		Caprock Queen	3085-3092'	11"	8 5/8" @ 262'	175sx	30sx cmt plug @ 300-550'	
Lewis B Burleson Inc.	State D #5								5/20/1986							7 7/8"	4 1/2" @ 3100'	75sx	102sx cmt plug @ 0-320'	
Pre-Ongard Well Operator	Pre-Ongard Well #17	30-005-01146	Chaves	330 FSL 1650 FWL	27	14S	31E	Oil	P&A	8/25/1956	9/2/1956	3108'		Caprock Queen	3080-3108'	11"	8 5/8" @ 252'	175sx	CIBP @ 3080 w/ 35' Cmt	
Miller & Miller Auctioneers Inc	Eastcap Queen Pool Unit #17								2/4/1975							7 7/8"	4 1/2" @ 3072'	75sx	100' cmt plug @ 252'	
																			10sx cmt cap to surface	
Pre-Ongard Well Operator	Pre-Ongard Well #16	30-005-01155	Chaves	660 FSL 1980 FEL	27	14S	31E	Oil	P&A	6/9/1956	7/8/1956	3120'		Caprock Queen	3096-3101'	11"	8 5/8" @ 203'	150sx	CIBP @ 3096 w/ 35' Cmt	
Miller & Miller Auctioneers Inc	Eastcap Queen #16								2/4/1975							7 7/8"	5 1/2" @ 3120'	100sx	100' cmt plug @ 465'	
																			100' cmt plug @ 203'	
																			10sx cmt cap to surface	
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-005-10410	Chaves	660 FSL 330 FWL	26	14S	31E	Oil	P&A	12/18/1965	1/27/1966	3150'		Caprock Queen	3102-3110'	11"	8 5/8" @ 307'	100sx	15sx Cmt plug @ 3136'	
Kersey & Grandberry	Federal C #1								6/17/1966							7 7/8"	4 1/2" @ 3136'	100sx	100' cmt plug @ 1400' (below)	
																			100' cmt plug @ 1400' (above)	
																			100' cmt plug @ 307'	
C W Trainer	Williams #1	30-005-21174	Chaves	400 FNL 2300 FWL	33	14S	31E	Oil	P&A	7/27/2002		5200'		Wildcat; Paddock		11"	9 5/8" @ 170'	175sx	15sx Cmt plug @ 3346' tag @ 3150'	
									3/10/2004							8 3/4"	7 5/8" @ 2970'	500sx	35sx Cmt plug @ 3110'	
																6"	4 1/2" @ 5200'	1000sx	25sx Cmt plug @ 2988'. Tag @ 2938'	
																			30sx Cmt plug @ 2300, tag @ 2087'	
																			30sx Cmt plug @ 229', tag TOC @ 72'	
																			10sx Surface Plug	
Union Oil Co of California	South Caprock Queen Unit #2	30-005-01189	Chaves	330FNL 1450 FEL	33	14S	31E	Oil	P&A	1/8/1956	1/21/1956	3123'	3115'	Caprock Queen	3099-3112'	12 1/4"	8 5/8" @ 316'	150sx	25sx Cmt Plug @ 3000'	
									8/11/1971							8 3/4"	6" @ 3123	100sx	5sx Cmt Plug @ 0'	
Union Oil Co of California	South Caprock Queen Unit #1	30-005-01187	Chaves	990 FNL 330 FEL	33	14S	31E	Oil	P&A	8/18/1955	9/1/1955	3120'	3118'	Caprock Queen	3097-3102'	12 1/4"	8 5/8" @ 305'	140sx	100' cmt plug @ 3097'	
									8/12/1971							7 7/8"	5 1/2" @ 3120'	100sx	100' cmt plug @	

																		100' cmt plug @ 305'	
																		20' cmt plug @ surface	
Crain Hot Oil Service, LLC	Gulf Deep #1	30-005-01210	Chaves	660 FNL 1980 FWL	34	14S	31E	Oil	P&A	11/7/1958	4/3/1959	13,258'		SWD; San Andres	13,221-13,246'	17 1/2"	13 3/8" @ 428'	550sx	CIBP @ 12,150' w/ 25sx 12,150-11,952'
									3/11/2024					SWD; Devonian		12 1/4"	9 5/8" @ 3817'	1950sx	25sx cmt plug @ 9700-9502'
																7 7/8"	5 1/2" @ 13,258'	1900sx	50sx cmt plug @ 8660-8263'
																			25sx cmt plug @ 7450-7203'
																			25sx cmt plug @ 5400-5153'
																			Perf @ 4210' Sqz 25sx @ 4210-4090'
																			Tag 4075'
																			Perf @ 3870' Sqz 125sx @ 3870-3400
																			Tag 3350'
																			Perf @ 3130' Sqz 25sx @ 3130-2980'
																			Tag @ 2940'
																			Perf @ 2380' Sqz 25sx @ 2380-2230
																			Tag @ 2190'
																			Perf @ 500' Sqz 180sx @ 500', Circ to Surface
Pre-Ongard Well Operator	Pre-Ongard Well #19	30-005-01209	Chaves	990 FNL 1650 FWL	34	14S	31E	Water Injectio	P&A	5/17/1956	6/7/1956	3089'		Eastcap Queen	3077-3089' open hole	17"	13 3/8" @ 300'	300sx	CIBP @ 3077 w/ 35' cmt cap
Miller & Miller Auctioneers Inc	Eastcap Queen #19								2/4/1975							11"	8 5/8" @ 1370'		100' cmt plug @ 335'
																7"	5 1/2" @ 3077'	100sx	Cap w/ 10sx cmt
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-005-01198	Chaves	660 FNL 1980 FEL	34	14S	31E	Oil	P&A	6/21/1956	6/28/1956	3110'		Caprock; Queen	3090-3105'	12 1/4"	7 5/8" @ 305'	175sx	CIBP @ 2950' w/ 35' cmt cap
Rapid Company Inc	State C #1								7/17/1975							7 7/8"	4 1/2" @ 3084'	800sx	Cut 4 1/2"csg from 700'
																			35sx cmt plug @ 750'-650'
																			40sx cmt plug @ 375-275'
																			10sx cmt plug @ 20-0'
Pre-Ongard Well Operator	Pre-Ongard Well #21	30-005-01202	Chaves	660 FNL 660 FEL	34	14S	31E	Water Injectio	P&A	7/20/1956	7/27/1956	3115		Caprock; Queen	3102-3115'	12 1/4"	7 5/8" @ 323'	150sx	CIBP @ 3102' w/ 35' cmt cap
Miller & Miller Auctioneers Inc	Eastcap Queen #21								2/4/1975							7 7/8"	4 1/2" @ 3097'	800sx	100' cmt plug @ 221'
																			Cap w/ 10sx cmt
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-005-00544	Chaves	660 FNL 660 FWL	35	14S	31E	Oil	P&A	9/26/1956	10/6/1956	3142'	3124'	Caprock; Queen	3105-3115'	12 1/4"	8 5/8" @ 311'	175sx	CIBP @ 2950' w/ 35' cmt cap
Rapid Company Inc	State B#1								7/1/1974							7 7/8"	5 1/2: @ 3137'	200sx	Pulled 5 1/2" csg from 370'
																			100' cmt plug 320-420'
																			100' cmt plug 220-320'
																			10sx cmt plug to Surface
Union Oil Co Of California	South Caprock Queen Unit #6	30-005-01178	Chaves	1980 FNL 2310 FWL	33	14S	31E	Oil	P&A	1/8/1955	1/25/1955	3100'		Caprock; Queen	3086-3100'	15"	10 3/4" @ 315'	200sx	30sx cmt plug @ 3100'
									5/8/1972							8 3/4"	7" @ 3087'	100sx	5sx cmt plug @ surface
Union of Co of California	South Caprock Queen Unit #7	30-005-01188	Chaves	2310 FNL 2310 FEL	33	14S	31E	Water Injectio	P&A	9/1/1955	9/8/1955	3113'	3106'	Caprock; Queen	3093-3098'	12 1/4"	8 5/8" @ 340'	140sx	125sx cmt plug @ 0-800'
									2/26/1969							7 7/8"	5 1/2: @ 3112'	100sx	75sx ccmt plug @ 2750-3098'
																			5sx cmt plug @ 0-30'
Pre-Ongard Well Operator	Pre-Ongard Well #1	30-005-01181	Chaves	1980 FNL 1980 FEL	33	14S	31E		P&A					Caprock; Queen	3063.5-3079'		9 5/8" @ 318'	175sx	25sx cmt plug @ 3084'
Morris R Antweil	Yates Bros #1								9/10/1955								6" @ 3084"	100sx	20sx cmt plug @ 2284
																	4 1/2" @ 3097'	20sx	15sx cmt plug @ 2145'
																			10sx cmt plug @ 318'
																			10sx cmt plug @ surface
Union of Co of California	South Caprock Queen Unit #8	30-005-01186	Chaves	1980 FNL 330 FEL	33	14S	31E	Oil	P&A	6/10/1955	7/1/1955	3114'		Caprock; Queen	3094-3100'	12 1/4"	9 & 9 5/8" @ 304'	140sx	150sx cmt @ 0-1300'
									2/28/1969							7 7/8"	5 1/2" @ 3114'	100sx	50sx cmt plug @ 2816-3094'
																			5sx cmt plug @ 0-30'
Pre-Ongard Well Operator	PreOngard Well #27	30-005-01205	Chaves	1980 FNL 660 FWL	34	14S	31E	Water Injectio	P&A	11/8/1955	11/17/1955	3113'		Caprock; Queen	3092-3113'	11"	8 5/8" @ 295'	175sx	CIBP @ 547' w/ 35' cmt cap
Miller & Miller Auctioneers Inc	Eastcap Queen #27								2/4/1975							7 7/8"	5 1/2" @ 3092'	75sx	100' cmt plug @ 295'
																			Cap with 10sx Cmt
Pre-Ongard Well Operator	PreOngard Well #26	30-005-01206	Chaves	1980 FNL 1980 FWL	34	14S	31E	Water Injectio	P&A	2/28/1956	3/10/1956	3103'		Caprock; Queen	3082-3103'	11"	8 5/8" @ 263'	150sx	CIBP @ 3082' w/ 35' cmt cap
Miller & Miller Auctioneers Inc	Eastcap Queen #26								2/4/4975							7 7/8"	4 1/2" @ 3082'	75sx	100' cmt plug @ 221'
																			Cap w/ 10sx cmt
Pre-Ongard Well Operator	PreOngard Well #25	30-005-01195	Chaves	1980 FNL 1980 FEL	33	14S	31E	Water Injectio	P&A	5/18/1659	5/27/1956	3108'		Caprock; Queen	3094-3108'	12 1/4"	7 5/8" @ 307'	200sx	CIBP @ 3094' w/ 35' cmt cap
Miller & Miller Auctioneers Inc	Eastcap Queen #25								2/4/1975							7 7/8"	4 1/2" @ 3090'	710 sx	100' cmt plug @ 934'
																			100' cmt plug @ 307'
																			Cap w/ 10sx cmt
Pre-Ongard Well Operator	PreOngard Well #24	30-005-01199	Chaves	1980 FNL 660 FEL	34	14S	31E	Oil	P&A	6/29/1956	7/6/1956	3113'		Caprock; Queen	3090-3113'	12 1/4"	7 5/8" @ 300'	150sx	CIBP @ 3090' w/ 35' cmt cap
Miller & Miller Auctioneers Inc	Eastcap Queen #24								2/4/1975							7 7/8"	4 1/2" @ 3090'	800sx	100' cmt plug @ 623'
																			100' cmt plug @ 300'
																			Cap w/ 10sx cmt
Pre-Ongard Well Operator	PreOngard Well #23	30-005-00545	Chaves	1980 FNL 330 FWL	35	14S	31E	Oil	P&A	8/15/1957	8/23/1957	3128'	3120'	Caprock; Queen	3106-3109'	11"	8 5/8" @ 322'	150sx	CIBP @ 3000' w/ 35" cmt cap
Rapid Company, Inc	East Cap Queen Unit #23								2/20/1975							7 7/8"	5 1/2" @ 3128'	125sx	100' cmt plug @ 1276'
																			100' cmt plug @ 322'
																			Cap w/ 10sx cmt
Union Oil Co of California	South Caprock Queen Unit #11	30-005-01192	Chaves	1980 FSL 1980 FWL	33	14S	31E	Oil	P&A	3/25/1955	4/2/1955	3120'		Caprock; Queen	3104-3116'	11"	8 5/8" @ 313'	275sx	25sx cmt plug @ 3100'
									5/8/1972							7 7/8"	5 1/2" @ 3130'	175sx	5sx cmt plug @ surface
Union Oil Co of California	South Caprock Queen Unit #10	30-005-01182	Chaves	1980 FSL 1980 Fel	33	14S	31E	Oil	P&A	4/7/1955	4/24/1955	3122'	3120'	Caprock; Queen	3104-3109'	12 1/4"	9 1/2" @ 314'	150sx	50sx cmt plug @ 2607-3027'
									2/27/1969							7 7/8"	5 1/2" @ 3122'	100sx	150sx cmt plug @ 1000' to surface
																			5sx cmt plug @ 0-30'
Union Oil Co of California	South Caprock Queen Unit #9	30-005-01185	Chaves	1980 FSL 660 FEL	33	14S	31E	Water Injectio	P&A	5/21/1955	6/4/1955	3125'		Caprock; Queen	3099-3104'	11"	8 5/8" @ 317	140sx	25sx cmt plug @ 3100'
									8/12/1971							7 7/8"	5 1/2" @ 3125'	150sx	5sx cmt plug @ surface
Burleson Petroleum, Inc	State A #1	30-005-01204	Chaves	1980 FSL 660 FWL	34	14S	31E	Water Injectio	P&A	10/28/1955	11/6/1955	3103'		Caprock; Queen	3092-3103'	11"	8 5/8" @ 280'	150sx	CIBP @ 2994' w/ 35sx cmt cap
									9/9/1987							7 7/8"	5 1/2" @ 3092"	75sx	CIBP @ 285'
																			Perf Sqz @ 280', 25sx cmt plug
																			Circ 115sx in and out

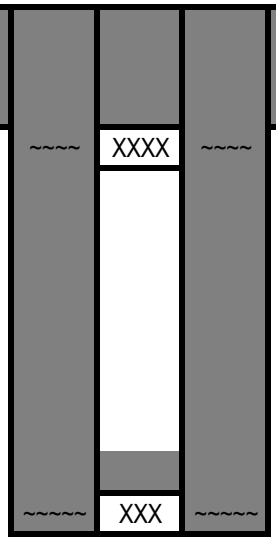
Burleson Petroleum, Inc	State A #3	30-005-01207	Chaves	1980 FSL 1980 FEL	34	14S	31E	Water Injectio	P&A	3/24/1956	4/1/1956	3101'		SWD; San Andres	3075-3101	11"	8 5/8" @ 269'	150sx	CIBP @ 2975' w/ 35' cmt cap	
									9/9/1987							7 7/8"	5 1/2" @ 3084"	75sx	CIBP @ 260'	
																			Perf 267' w/ 72sx cmp plug	
																			Circ 64sx in and out	
Pre-Ongard Well Operator	Pre-Ongard Well #31	30-005-01200	Chaves	1980 FSL 660 FEL	34	14S	31E	Water Injectio	P&A	7/8/1956	7/22/1956	3122'		Caprock Queen	3108-3122'	12 1/4"	7 5/8" @ 310'	200sx	CIBP @ 3092' w/ 35' cmt cap	
Miller & Miller Auctioneers Inc	Eastcap Queen #31								2/4/1975							7 7/8"	4 1/2" @ 3107'	800sx	100' cmt plug @ 354'	
																			Cap w/ 10sx cmt	
Union Oil Co of California	South Caprock Queen Unit #15	30-005-01183	Chaves	990 FSL 1980 FEL	33	14S	31E	Oil	P&A	5/11/1955	5/22/1955	3128'		Caprock Queen	3110-3116'	11"	8 5/8" @ 330'	145sx	25sx cmt plug @ 3100'	
									8/12/1971							7 7/8"	5 1/2" @ 3128'	100sx	6sx cmt plug @ surface	
Union Oil Co of California	South Caprock Queen Unit #16	30-005-01184	Chaves	990 FSL 545 FEL	33	14S	31E	Oil	P&A	5/28/1955	6/4/1955	3124'		Caprock Queen	3100-3106'	12 1/4"	9 5/8" @ 338'	145sx	100' cmt plug @ 3100'	
									7/8/1971							7 7/8"	5 1/2" @ 3124'	100sx	100' cmt plug @ 3124'	
																			100' cmt plug in and out surface	
																			20' cmt plug @ surface	
Pre-Ongard Well Operator	Pre-Ongard Well #35	30-005-01203	Chaves	660 FSL 660 FWL	34	14S	31E	Water Injectio	P&A	10/20/1955	10/27/1955	3119'		Caprock Queen	3097-3119' Open hole	11"	8 5/8" @ 281'	150sx	CIBP @ 3097' w/ 35' Cmt Cap	
Miller & Miller Auctioneers Inc	Eastcap Queen #35								2/4/1975							7 7/8"	5 1/2" @ 3097'	75sx	100' cmt plug @ 500'	
																			100' cmt plug @ 281'	
																			Cap w/ 10sx cmt	
Burleson Petroleum Inc	State A #2	30-005-01208	Chaves	660 FSL 1980 FWL	34	14S	31E	Oil	P&A	4/5/1956	4/14/1956	3114'		Caprock Queen	3097-3114'	11"	8 5/8" @ 265'	150sx	25sx cmt plug @ 3077'	
									9/9/1987							7 7/8"	4 1/2" @ 3097'	75sx	CIBP @ 270'	
																			Sqz Perfs @ 265'	
																			131sx cmt plug in and out	
Pre-Ongard Well Operator	Pre-Ongard Well #33	30-005-01197	Chaves	660 FSL 1980 FEL	34	14S	31E	Water Injectio	P&A	6/9/1956	6/18/1956	3122'		Caprock Queen	3091-3122' Open Hole	11"	7 5/8" @ 325'	150sx	CIBP @ 3091' w/ 35' Cmt cap	
Miller & Miller Auctioneers Inc	Eastcap Queen #33								2/4/1975							7 7/8"	4 1/2" @ 3090'	800sx	100' cmt plug @ 225'	
																			10sx cmt cap @ surface	
Pre-Ongard Well Operator	Pre-Ongard Well #2	30-005-20278	Chaves	990 FSL 990 FEL	34	14S	31E	Oil	P&A	1/24/1969	1/27/1969	3160'		Caprock Queen	3114.5-3118.5'	12 1/4"	8 5/8" @ 325'	150sx	CIBP @ 3000' w/ 35' cmt cap	
Rapid Company Inc	State C #2								7/14/1975							7 7/8"	5 1/2" @ 3160'	610sx	30sx cmt plug 1330-1230'	
																			40sx cmt plug 375-275'	
																			10sx cmt plug 10'-0	
Pre-Ongard Well Operator	Pre-Ongard Well #32	30-005-01201	Chaves	660 FSL 660 FEL	34	14S	31E	Dry Hole	P&A	7/28/1956	8/5/1956	3133'		Caprock Queen	3107-3193" Open Hole	11"	7 5/8" @ 313'	150sx	12sx cmt plug @ 3012-3133'	
Continental Oil Company	Eastcap Queen #32								4/21/1957							7 7/8"	4 1/2" @ 3107'	800sx	20sx cmt plug @ 800-900'	
																			30sx Cmt Plug 263-363'	
																			15sx cmt plug 0-50'	
Mack Energy Corp	Caprock 35 State #1H	30-005-29114	Chaves	660 FSL 330 FWL	35	14S	31E	Oil	Producing	12/18/2011	2/14/2012	14301	13950	ABO Wolfcamp	9015-13940'	17 1/2"	13 3/8" @ 358'	500sx		
																12 1/4"	9 5/8" @ 3878'	1095sx		
																8 3/4"	7" @ 9105'	1050sx		
																	4 1/2" Liner @ 7751-14054'	975sx		
Union Oil Co of California	South Caprock Queen Unit #1	30-005-00559	Chaves	660 FNL 660 FEL	4	15S	31E	Oil	P&A	6/27/1955	7/6/1955	3153'		Caprock Queen	3132-3153'	12 1/4"	8 5/8" @ 339'	275sx	100' cmt plug @ 3132'	
									6/22/1971							7 7/8"	5 1/2" @ 3132'	300sx	100' cmt plug stub of 5 1/2"	
																			100' cmt plug in and out of surface	
																			20' cmt plug @ surface	
Union Oil Co of California	South Caprock Queen Unit #3	30-005-00550	Chaves	330 FNL 1980 FWL	3	15S	31E	Oil	P&A	6/27/1956	7/1/1956	3140'	3138'	Caprock Queen	3102-3127'	12 1/4"	8 5/8" @ 306'	175sx	Cant Read P&A Paperwork on OCD	
									6/14/1971							7 7/8"	5 1/2" @ 3139'	200sx		
Pre-Ongard Well Operator	Pre-Ongard Well #2	30-005-00546	Chaves	330 FNL 2310 FEL	3	15S	31E	Water Injectio	P&A	8/3/1956	8/8/1956	3233'	3131'	Caprock Queen	3114-3133'	12 1/4"	9 5/8" @ 306'	300sx	CIBP @ 3114' w/ 35' cmt cap	
Miller & Miller Auctioneers Inc	Eastcap Queen #2								2/4/1975							7 7/8"	7" @ 3131'	175sx	100' cmt plug @ 940'	
																			100' cmt plug 306'	
																			10sx cmt cap	
Kevin O Butler & Assoc Inc	South Caprock Queen Unit #14X	30-005-01193	Chaves	660 FSL 1980 FWL	3	14S	31E	Oil	Producing	4/4/1955	4/10/1955	3145'		Caprock Queen	3108-3118'	11"	8 5/8" @ 320'	250sx		
																7 7/8"	5 1/2" @ 3144'	175sx		
Union Oil Co of California	South Caprock Queen Unit #2	30-005-00557	Chaves	330 FNL 2310 FEL	4	15S	31E	Oil	P&A	4/13/1955	4/21/1955	3180'		Caprock Queen	3126-3133'	11"	8 5/8" @ 320'	225sx	100' cmt plug @ 3126'	
									6/7/1971							7 7/8"	5 1/2" @ 3180'	175sx	20' cmt plug @ Surface	
Union Oil Co of California	South Caprock Queen Unit #6	30-005-00551	Chaves	1650 FNL 1980 FEL	3	15S	31E	Oil	P&A	11/1/1956	11/18/1956	3162'	3161'	Caprock Queen	3140-3143'	11"	8 5/8" @ 286'	175sx	Cant Read P&A Paperwork on OCD	
									6/17/1971							7 7/8"	5 1/2" @ 3149'	400sx		
Union Oil Co of California	South Caprock Queen Unit #7	30-005-00547	Chaves	1650 FNL 2310 FEL	3	15S	31E	Oil	P&A	8/27/1956	9/2/1956	3158'		Caprock Queen	3140-3148'	12 1/4"	9 5/8" @ 294'	200sx	100' cmt plug @ 3140'	
									6/22/1971							7 7/8"	7" @ 3155'	175sx	20' cmt plug @ Surface	

30-005-00547	South Caprock Queen Unit #7	
P&A 6/22/1971	Operator: Union Oil Co of California Location: Sec. 3 T15S R31E 1650 FNL 2310 FEL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	12 1/4"	9 5/8" @ 294'
200sx		
294'		
	7 7/8"	7" @ 3155'
175sx		100' cmt plug @ 3140'
		20' cmt plug @ Surface
3155'		
Perfs 3140-3148'	TD-3180'	

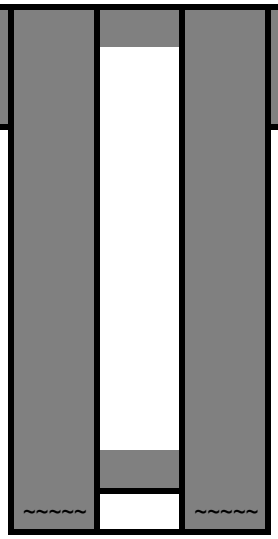


30-005-01207	State A #3
P&A 9/9/1987	**Operator: Burleson Petroleum Inc** **Location: Sec. 34 T14S R31E** **1980 FSL 1980 FEL** **Objective: Caprock Queen**

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 269'
150sx		
269'		
	7 7/8"	5 1/2" @ 3084'
75sx		CIBP @ 2975' w/ 35' cmt cap
		CIBP @ 260'
		Perf 267' w/ 72sx cmp plug
		Circ 64sx in and out
3084'		
Perfs 3075-3101'		

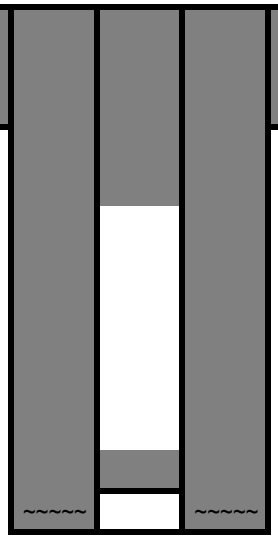


30-005-01185	South Caprock Queen Unit #9	
P&A 8/12/1971	Operator: Union Oil CO of California Location: Sec. 33 T14S R31E 1980 FSL 660 FEL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	11"	8 5/8" @ 317'
140sx		
317'		
	7 7/8"	5 1/2" @ 3125'
150sx		25sx cmt plug @ 3100'
		5sx cmt plug @ surface
3125'		
Perfs 3099-3104'	TD-3125'	



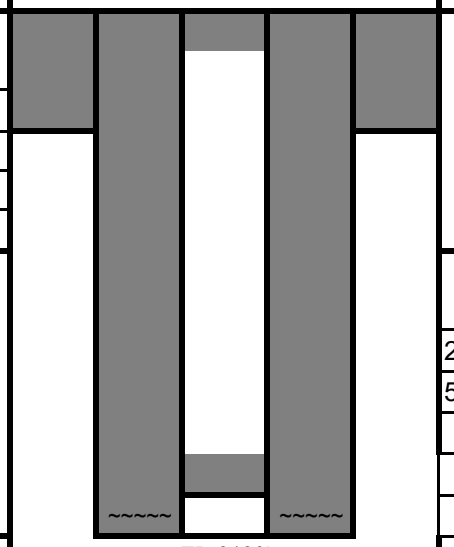
30-005-01182	South Caprock Queen Unit #10
P&A 2/27/1969	Operator: Union Oil CO of California Location: Sec. 33 T14S R31E 1980 FSL 1980 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	9 1/2" @ 314'
150sx		
314'		
	7 7/8"	5 1/2" @ 3122'
100sx		50sx cmt plug @ 2607-3027'
		150sx cmt plug @ 1000' to surface
		5sx cmt pluh @ 0-30'
3122'		
Perfs 3104-3109'	TD-3122'	



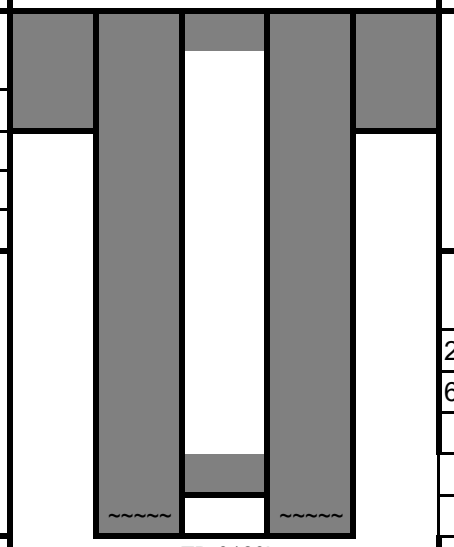
30-005-01192	South Caprock Queen Unit #11
P&A 5/8/1972	Operator: Union Oil CO of California Location: Sec. 33 T14S R31E 1980 FSL 1980 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 313'
275sx		
313'		
	7 7/8"	5 1/2" @ 3130'
175sx		25sx cmt plug @ 3100'
		5sx cmt plug @ surface
3130'		
Perfs 3104-3116'		

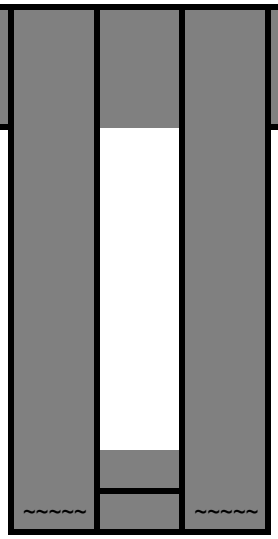


30-005-01183	South Caprock Queen Unit #15
P&A 8/12/1971	Operator: Union Oil CO of California Location: Sec. 33 T14S R31E 900 FSL 1980 FEL Objective: Caprock Queen

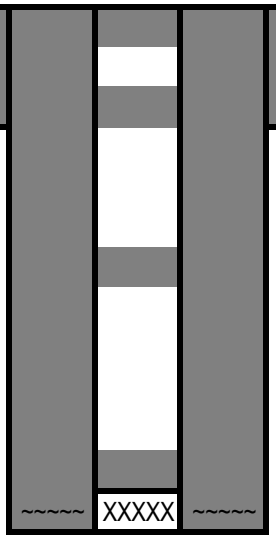
Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 330'
145sx		
330'		
	7 7/8"	5 1/2" @ 3128'
100sx		25sx cmt plug @ 3100'
		6sx cmt plug @ surface
3128'		
Perfs 3110-3116'		



30-005-01184	South Caprock Queen Unit #16	
P&A 7/8/1971	Operator: Union Oil CO of California Location: Sec. 33 T14S R31E 900 FSL 545 FEL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	12 1/4"	8 5/8" @ 338'
145sx		
338'		
	7 7/8"	5 1/2" @ 3124'
100sx		100' cmt plug @ 3100'
		100' cmt plug @ 3124'
		100' cmt plug in and out surface
		20' cmt plug @ surface
3124'		
Perfs 3100-3106'	TD-3124'	

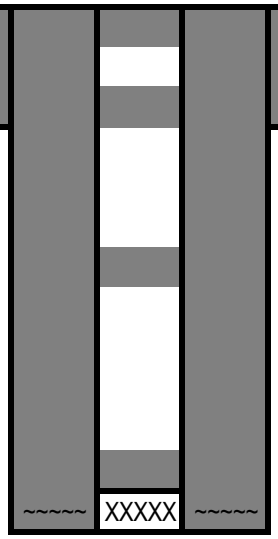


30-005-00545	Pre-Ongard Well #1 (Eastcap Queen #23)	
P&A 2/20/1975	Operator: Pre-Ongard Well Operator (Rapid Company Inc) Location: Sec. 35 T14S R31E 1980 FNL 330 FWL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	11"	8 5/8" @ 322'
150sx		
322'		
	7 7/8"	5 1/2" @ 3128'
125sx		CIBP @ 3000' w/ 35' cmt cap
		100' cmt plug @ 1276'
		100' cmt plug @ 322'
		Cap w/ 10sx cmt
3128'		
Perfs 3106-3109'	TD-3128'	

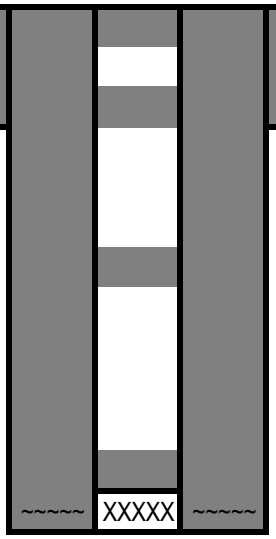


30-005-01199	Pre-Ongard Well #1 (Eastcap Queen #24)
P&A 2/4/1975	**Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers)** **Location: Sec. 34 T14S R31E** **1980 FNL 660 FEL** **Objective: Caprock Queen**

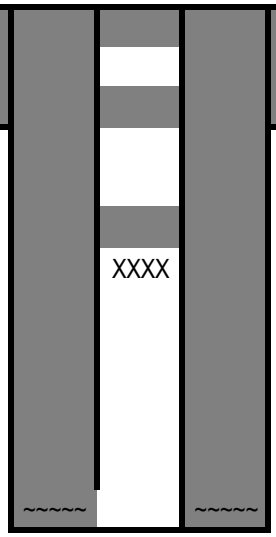
Depth	Hole Size & Cement	Casing Detail
	12 1/4"	7 5/8" @ 300'
150sx		
300'		
	7 7/8"	4 1/2" @ 3090'
800sx		CIBP @ 3090' w/ 35' cmt cap
		100' cmt plug @ 623'
		100' cmt plug @ 300'
		Cap w/ 10sx cmt
3090'		
Perfs 3094-3108'		



30-005-01195	Pre-Ongard Well #1 (Eastcap Queen #25)	
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 33 T14S R31E 1980 FNL 1980 FEL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	12 1/4"	7 5/8" @ 307'
200sx		
307'		
	7 7/8"	4 1/2" @ 3090'
710sx		CIBP @ 3094' w/ 35' cmt cap
		100' cmt plug @ 934'
		100' cmt plug @ 307'
		Cap w/ 10sx cmt
3090'		
Perfs 3094-3108'		

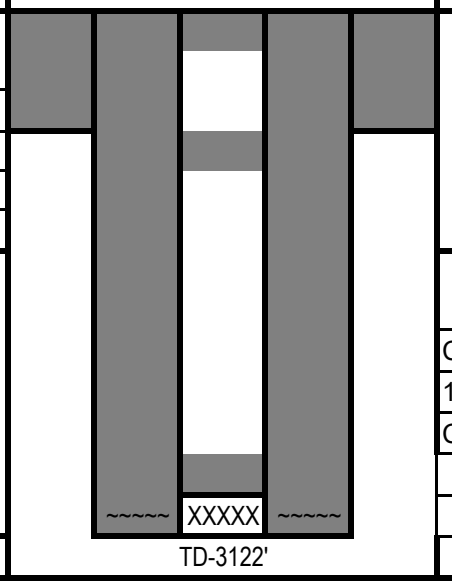


30-005-01205	Pre-Ongard Well #1 (Eastcap Queen #27)	
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 34 T14S R31E 1980 FNL 660 FWL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	11"	8 5/8" @ 295'
175sx		
295'		
	7 7/8"	5 1/2" @ 3092'
75sx		CIBP @ 547' w/ 35' cmt cap
		100' cmt plug @ 295'
		Cap w/ 10sx cmt
3092'		
Perfs 3092-3113'	TD- 3115'	



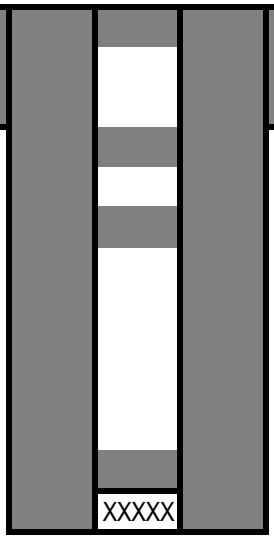
30-005-01200	Pre-Ongard Well #31 (Eastcap Queen #31)
P&A 2/4/1975	**Operator: Pre-Ongard Well Operator (Miller Miller Auctioneer)** **Location: Sec. 34 T14S R31E** **1980 FSL 660 FEL** **Objective: Caprock Queen**

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	7 5/8" @ 310
200sx		
310'		
	7 7/8"	4 1/2" @ 3107'
800sx		CIBP @ 3092' w/ 35' cmt cap
		100' cmt plug @ 354'
		Cap w/ 10sx cmt
3107'		
Perfs 3108-3122'		



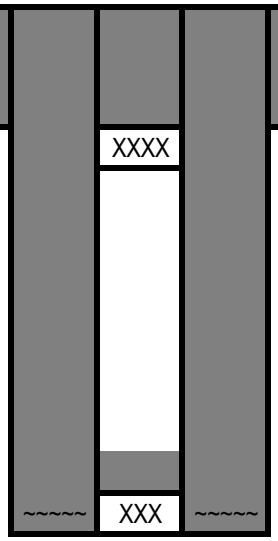
30-005-01203	Pre-Ongard Well #35 (Eastcap Queen #35)
P&A 2/4/1975	**Operator: Pre-Ongard Well Operator (Miller Miller Auctioneer)** **Location: Sec. 34 T14S R31E** **660 FSL 660 FWL** **Objective: Caprock Queen**

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 281'
150sx		
281'		
	7 7/8"	5 1/2" @ 3097'
75sx		CIBP @ 3097' w/ 35' Cmt Cap
		100' cmt plug @ 500'
		100' cmt plug @ 281'
		Cap w/ 10sx cmt
3097'		
Open Hole 3097-3119'		



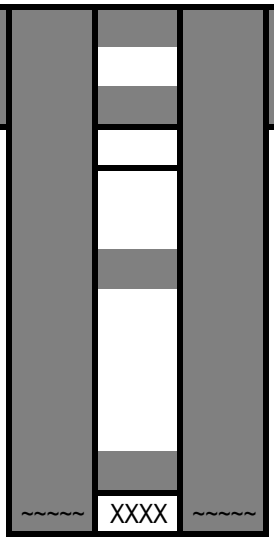
30-005-01204	State A #1
P&A 9/9/1987	**Operator: Burleson Petroleum Inc** **Location: Sec. 34 T14S R31E** **1980 FSL 660 FWL** **Objective: Caprock Queen**

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 280'
150sx		
280'		
	7 7/8"	5 1/2" @ 3092'
75sx		CIBP @ 2994' w/ 35sx cmt cap
		CIBP @ 285'
		Perf Sqz @ 280', 25sx cmt plug
		Circ 115sx in and out
3092'		
Perfs 3092-3103'		



30-005-20278	Pre-Ongard Well #2 (State C #2)
P&A 7/14/1975	**Operator: Pre-Ongard Well Operator (Rapid Company Inc)** **Location: Sec. 34 T14S R31E** **9900 FSL 990 FEL** **Objective: Caprock Queen**

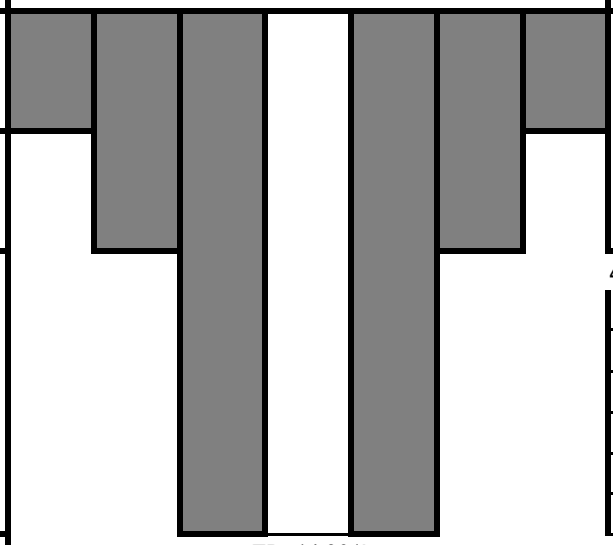
Depth	Hole Size & Cement	Casing Detail
	12 1/4"	8 5/8" @ 325'
150sx		
325'		
	7 7/8"	5 1/2" @ 3160'
610sx		CIBP @ 3000' w/ 35' cmt cap
		30sx cmt plug 1330-1230'
		40sx cmt plug 375-275'
		10sx cmt plug 10'-0
3160'		
Perfs 3114.5-3118.5		



30-005-29114 **Caprock 35 State #1H**

Operator: Mack Energy Corporation
Location: Sec. 35 T14S R31E
660 FSL 330 FWL
Objective: ABO Wolfcamp

Depth	Hole Size & Cement	Casing Detail
358'	17 1/2" 500sx	13 3/8" @ 358'
3878'	12 1/4" 1095sx	9 5/8" @ 3878'
9105'	8 3/4" 1050sx	7" @ 9105'
		4 1/2" Liner @ 7751-14054' w/ 975sx

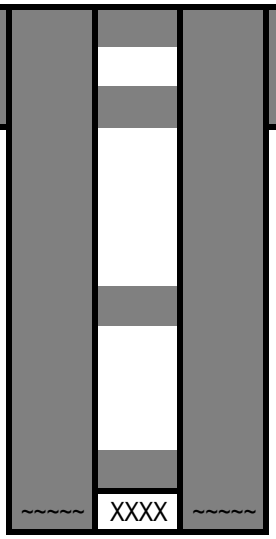


Perfs- 9,015-13,940'

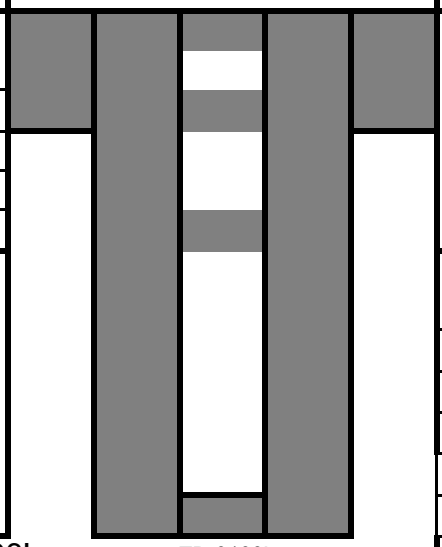
TD- 14,301'

30-005-00546	Pre-Ongard Well #2 (Eastcap Queen #2)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 3 T15S R31E 330 FNL 2310 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	9 5/8" @ 306'
300sx		
306'		
	7 7/8"	7" @ 3131'
175sx		CIBP @ 3114' w/ 35' cmt cap
		100' cmt plug @ 940'
		100' cmt plug 306'
		10sx cmt cap
3131'		
Perfs 3114-3133'		

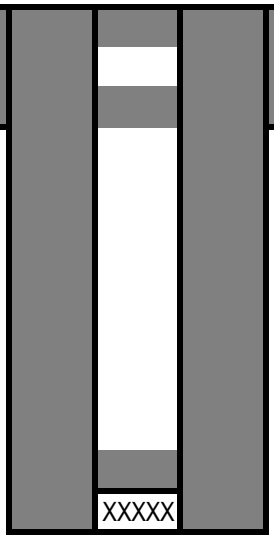


30-005-01201	Pre-Ongard Well #32 (Eastcap Queen #32)	
P&A 4/21/1957	**Operator: Pre-Ongard Well Operator (Continental Oil Company)** **Location: Sec. 34 T14S R31E** **660 FSL 660 FEL** **Objective: Caprock Queen**	
Depth	**Hole Size & Cement**	**Casing Detail**
	11"	7 5/8" @ 313'
150sx		
313'		
	7 7/8"	4 1/2" @ 3107'
800sx		12sx cmt plug @ 3012-3133'
		20sx cmt plug @ 800-900'
		30sx Cmt Plug 263-363'
		15sx cmt plug 0-50'
3107'		
Open Hole 3107-3193'	TD-3133'	

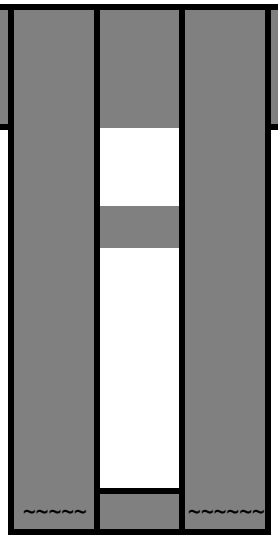


30-005-01197	Pre-Ongard Well #33 (Eastcap Queen #33)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneer) Location: Sec. 34 T14S R31E 660 FSL 1980 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	7 5/8" @ 325
150sx		
325'		
	7 7/8"	4 1/2" @ 3090'
800sx		CIBP @ 3091' w/ 35' Cmt cap
		100' cmt plug @ 225'
		10sx cmt cap @ surface
3090'		
Open Hole 3091-3122'		

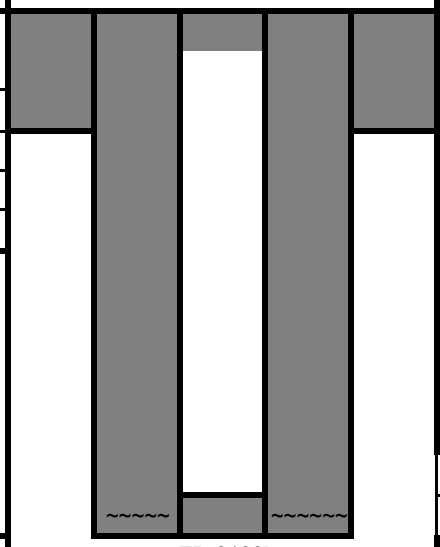


30-005-00559	South Caprock Queen Unit #1	
P&A 6/27/1971	Operator: Union Oil Co of California Location: Sec. 4 T15S R31E 660 FNL 660 FEL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	12 1/4"	8 5/8" @ 339'
275sx		
339'		
	7 7/8"	5 1/2" @ 3132'
300sx		100' cmt plug @ 3132'
		100' cmt plug stub of 5 1/2"
		100' cmt plug in and out of surface
		20' cmt plug @ surface
3132'		
Perfs 3132-3153'	TD-3153'	



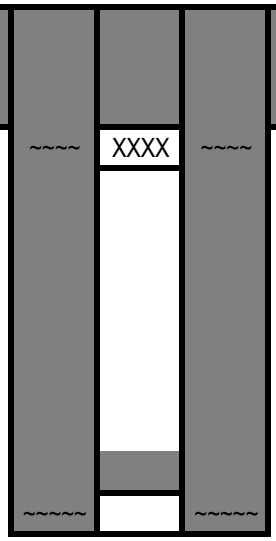
30-005-00557	South Caprock Queen Unit #2
P&A 6/7/1971	Operator: Union Oil Co of California Location: Sec. 4 T15S R31E 330 FNL 2310 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 320'
225sx		
320'		
	7 7/8"	5 1/2" @ 3180'
175sx		100' cmt plug @ 3126'
		20' cmt plug @ Surface
3180'		
Perfs 3126-3133'		



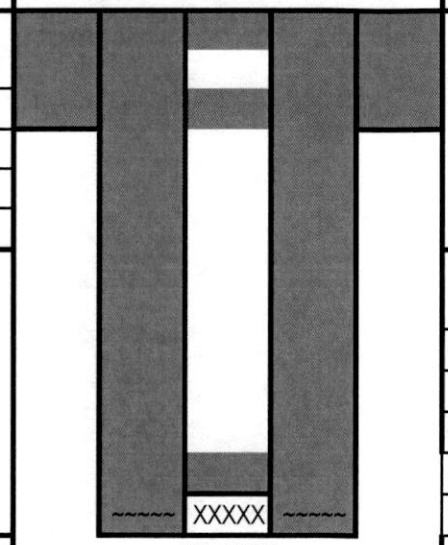
30-005-01193	South Caprock Queen Unit #14X	
	Operator: Kevin O Butler & Assoc Inc Location: Sec. 3 T15S R31E 660 FSL 1980 FWL Objective: Caprock Queen	
Depth	**Hole Size & Cement**	**Casing Detail**
	11"	8 5/8" @ 320'
250sx		
320'		
	7 7/8"	5 1/2" @ 3144'
175sx		
3144'		
Perfs 3108-3118'	TD-3145'	

30-005-01208	State A #2	
P&A 9/9/1987	**Operator: Burleson Petroleum Inc** **Location: Sec. 34 T14S R31E** **660 FSL 1980 FWL** **Objective: Caprock Queen**	
Depth	**Hole Size & Cement**	**Casing Detail**
	11"	8 5/8" @ 265'
150sx		
265'		
	7 7/8"	5 1/2" @ 3097'
75sx		25sx cmt plug @ 3077'
		CIBP @ 270'
		Sqz Perfs @ 265'
		131sx cmt plug in and out
3097'		
Perfs 3097-3114'		



30-005-01206	Pre-Ongard Well #1 (Eastcap Queen #26)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 34 T14S R31E 1980 FNL 1980 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 263'
150sx		
263'		
	7 7/8"	4 1/2" @ 3082'
75sx		CIBP @ 3082' w/ 35' cmt cap
		100' cmt plug @ 221'
		Cap w/ 10sx cmt
3082'		
Perfs 3082-3103'		

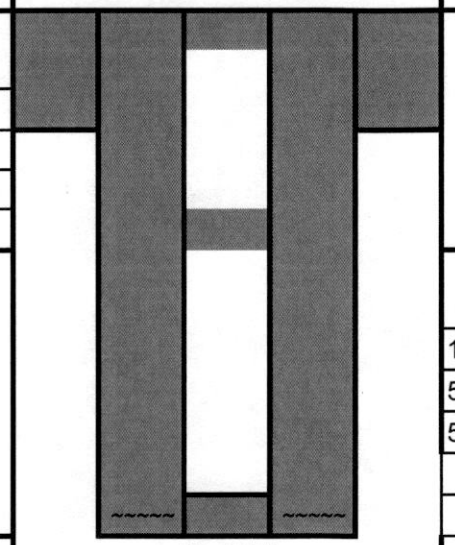


30-005-01181	Pre-Ongard Well #1 (Yates Bros #1)
P&A 9/10/1955	Operator: Pre-Ongard Well Operator (Morris R Antwell) Location: Sec. 33 T14S R31E 1980 FNL 1980 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	175sx	9 5/8" @ 318'
	100sx	6" @ 3084'
	20sx	4 1/2" @ 3097'
		25sx cmt plug @ 3084'
		20sx cmt plug @ 2284
		15sx cmt plug @ 2145'
		10sx cmt plug @ 318'
		10sx cmt plug @ surface
Perfs 3063.5-3079'	TD- 3089'	

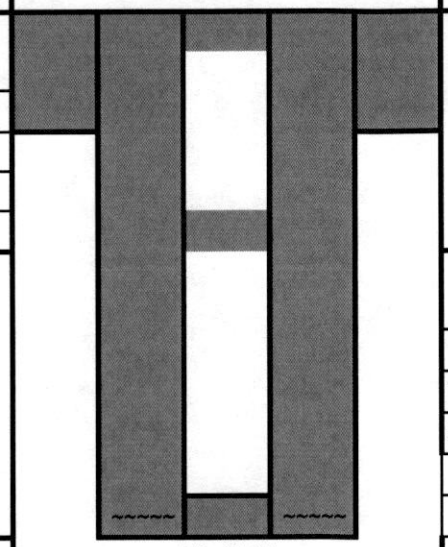
30-005-01186	South Caprock Queen Unit #8
P&A 2/28/1969	Operator: Union Oil Co of California Location: Sec. 33 T14S R31E 1980 FNL 330 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	9 5/8" @ 304'
140sx		
304'		
	7 7/8"	5 1/2" @ 3114'
100sx		150sx cmt plug @ 0-1300'
		50sx cmt plug @ 2816-3094'
		5sx cmt plug @ 0-30'
3114'		
Perfs 3094-3100'		



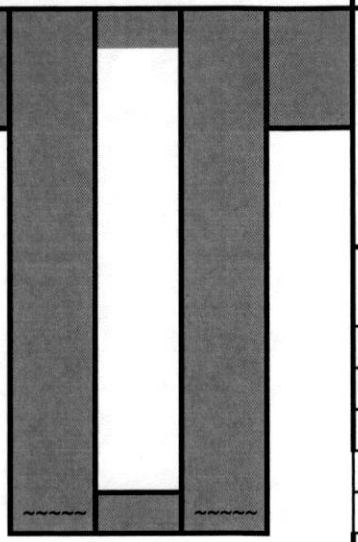
30-005-01188	South Caprock Queen Unit #7
P&A 2/26/1969	Operator: Union Oil Co of California Location: Sec. 33 T14S R31E 2310 FNL 2310 FeL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	8 5/8" @ 340'
140sx		
340'		
	7 7/8"	5 1/2" @ 3112'
100sx		125sx cmt plug @ 0-800'
		75sx cmt plug @ 2750-3098'
		5sx cmt plug @ 0-30'
3112'		
Perfs 3093-3098'		



30-005-01178	South Caprock Queen Unit #6
P&A 5/8/1972	Operator: Union Oil Co of California Location: Sec. 33 T14S R31E 1980 FNL 2310 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	15'	10 3/4" @ 315'
200sx		
315'		
	8 3/4"	7" @ 3087
100sx		30sx cmt plug @ 3100'
		5sx cmt plug @ surface
3087'		
Perfs 3086-3100'	TD- 3100'	

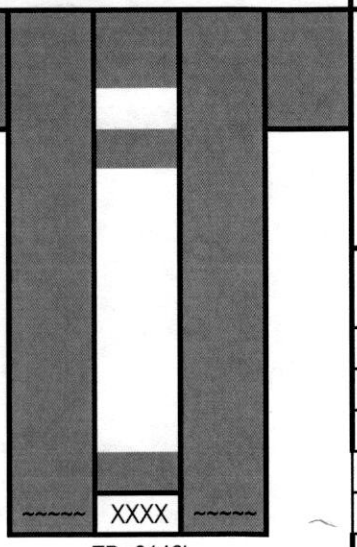


30-005-00544 — **Pre-Ongard Well #1 (State B #1)**

P&A 7/1/1974

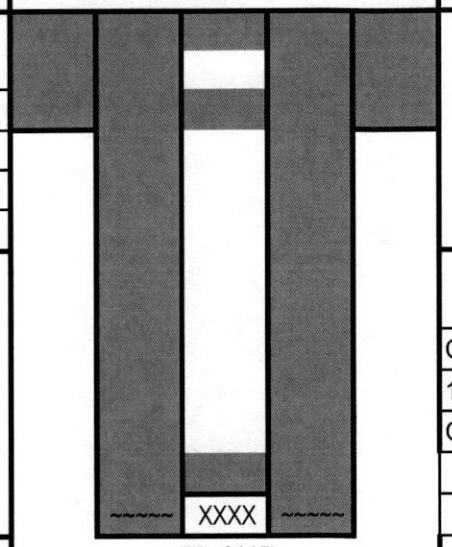
Operator: Pre-Ongard Well Operator (Rapid Company Inc)
Location: Sec. 35 T14S R31E
660 FNL 660 FWL
Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	8 5/8" @ 311'
175sx		
311'		
	7 7/8"	5 1/2" @ 3137'
200sx		CIBP @ 2950' w/ 35' cmt cap
		Pulled 5 1/2" csg from 370'
		100' cmt plug 320-420'
		100' cmt plug 220-320'
3137'		10sx cmt plug to Surface
Perfs 3105-3115"		



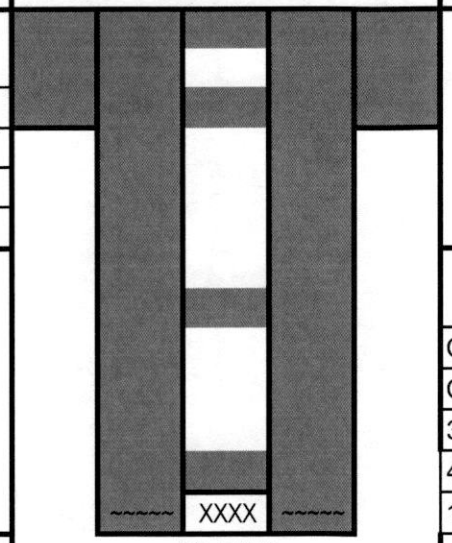
30-005-01202	Pre-Ongard Well #1 (Eastcap Queen #21)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 34 T14S R31E 660 FNL 1980 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	7 5/8" @ 323'
150sx		
323'		
	7 7/8"	4 1/2" @ 3097'
800sx		CIBP @ 3102' w/ 35' cmt cap
		100' cmt plug @ 221'
		Cap w/ 10sx cmt
3097'		
Perfs 3102-3115'		

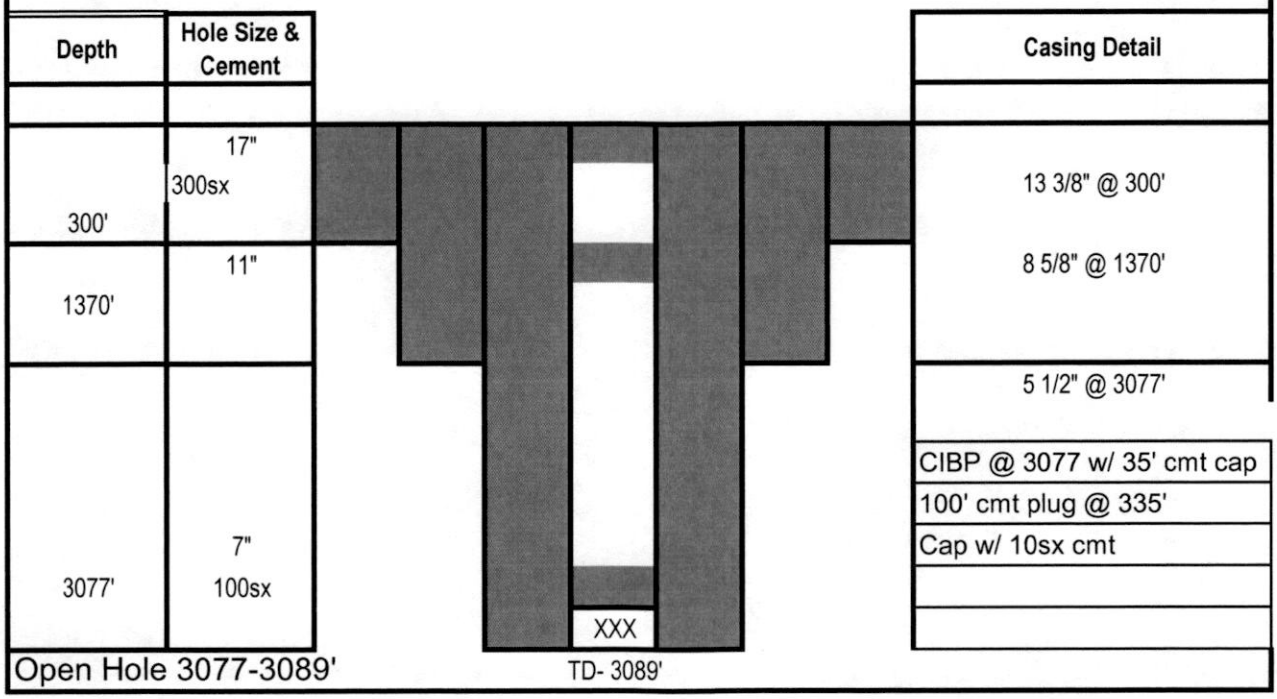


30-005-01198	Pre-Ongard Well #1 (State C #1)
P&A 7/17/1975	Operator: Pre-Ongard Well Operator (Rapid Company Inc) Location: Sec. 34 T14S R31E 660 FNL 1980 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	7 5/8" @ 305'
150sx		
305'		
	7 7/8"	4 1/2" @ 3084'
800sx		CIBP @ 2950' w/ 35' cmt cap
		Cut 4 1/2"csg from 700'
		35sx cmt plug @ 750'-650'
		40sx cmt plug @ 375-275'
3084'		10sx cmt plug @ 20-0'
Perfs 3090-3105'	TD- 3110'	

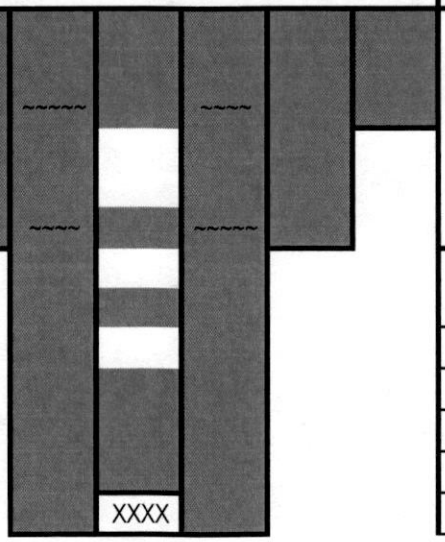


30-005-01209	Pre-Ongard Well #19 (Eastcap Queen #19)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 34 T14S R31E 990 FNL 1650 FWL Objective: Eastcap Queen



30-005-01210	Gulf Deep #1
P&A 3/11/2004	Operator: Crain Hot Oil Service LLC Location: Sec. 34 T14S R31E 660 FNL 1980 FWL Objective: SWD; San Andres & Devonian

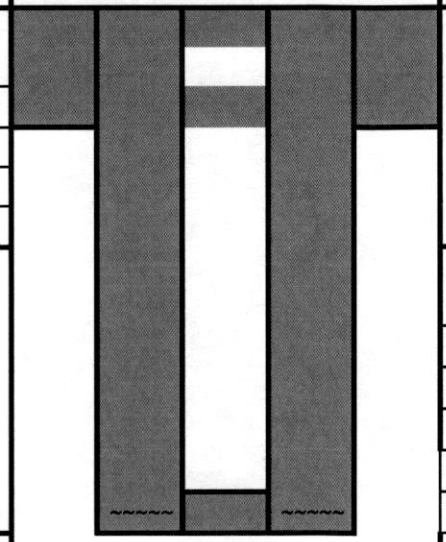
Depth	Hole Size & Cement	Casing Detail
428'	17 1/2 550sx	13 3/8" @ 428'
3817'	12 1/4" 1950sx	9 5/8" @ 3817'
13,258'	7 7/8" 1900sx	5 1/2" @ 13,258'
Perfs 13,221-13,246'		



CIBP @ 12,150' w/ 25sx 12,150-11,952'
25sx cmt plug @ 9700-9502'
50sx cmt plug @ 8660-8263'
25sx cmt plug @ 7450-7203'
25sx cmt plug @ 5400-5153'
Perf @ 4210' Sqz 25sx @ 4210-4090'
Tag 4075'
Perf @ 3870' Sqz 125sx @ 3870-3400
Tag 3350'
Perf @ 3130' Sqz 25sx @ 3130-2980'
Tag @ 2940'
Perf @ 2380' Sqz 25sx @ 2380-2230
Tag @ 2190'
Perf @ 500' Sqz 180sx @ 500', Circ to Surface

30-005-01187	South Caprock Queen Unit #1
P&A 8/12/1971	Operator: Union Oil Co of California Location: Sec. 33 T14S R31E 990 FNL 330 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	8 5/8" @ 305'
140sx		
305'		
	7 7/8"	5 1/2" @ 3120'
100sx		100' cmt plug @ 3097'
		100' cmt plug @
		100' cmt plug @ 305'
		20' cmt plug @ surface
3120'		
Perfs 3097-3102'		

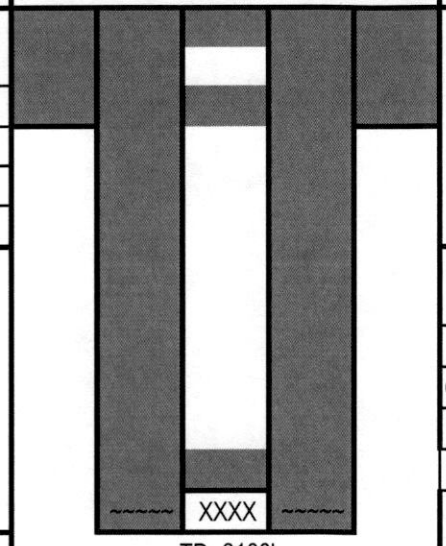


30-005-01145	Pre-Ongard Well #5 (State D #5)
P&A 5/20/1986	Operator: Pre-Ongard Well Operator (Lewis Burleson Inc) Location: Sec. 27 T14S R31E 460 FSL 330 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 262'
175sx		
262'		
	7 7/8"	4 1/2" @ 3110'
75sx		
		30sx cmt plug @ 300-550'
		102sx cmt plug @ 0-320'
3100'		
Perfs 3085-3092'	TD- 3108'	

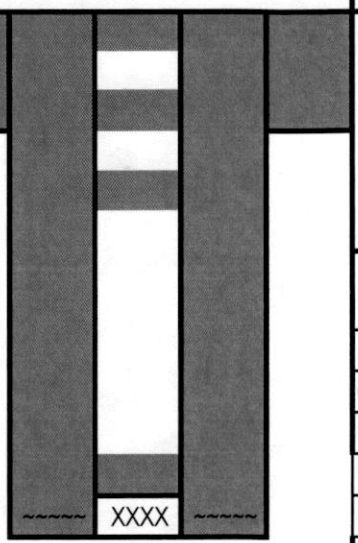
30-005-01146	Pre-Ongard Well #17 (Eastcap Queen Pool Unit #17)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 27 T14S R31E 330 FSL 1650 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 252'
175sx		
252'		
	7 7/8"	4 1/2" @ 3072'
75sx		
		CIBP @ 3080 w/ 35' Cmt
		100' cmt plug @ 252'
		10sx cmt cap to surface
3072		
Perfs 3080-3108'		



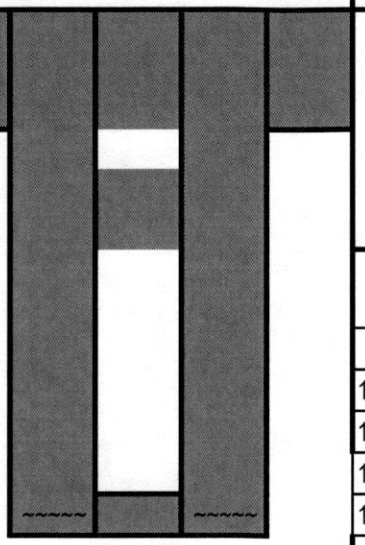
30-005-01155	Pre-Ongard Well #16 (Eastcap Queen Pool Unit #16)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers) Location: Sec. 27 T14S R31E 660 FSL 1980 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 203'
150sx		
203'		
	7 7/8"	5 1/2" @ 3120'
100sx		
		CIBP @ 3096 w/ 35' Cmt
		100' cmt plug @ 465'
		100' cmt plug @ 203'
3120'		10sx cmt cap to surface
Perfs 3096-3101'		



30-005-10410	Pre-Ongard Well #1 (Federal C #1)
P&A 6/17/1966	Operator: Pre-Ongard Well Operator (Kersey Grandberry) Location: Sec. 26 T14S R31E 660 FSL 330 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 307'
100sx		
307'		
	7 7/8"	5 1/2" @ 3120'
100sx		
		15sx Cmt plug @ 3136'
		100' cmt plug @ 1400' (below)
		100' cmt plug @ 1400' (above)
3136'		100' cmt plug @ 307'
Perfs 3102-3110'	TD- 3150'	



30-005-21174	Williams #1
P&A 3/10/2004	Operator: CW Trainer Location: Sec. 33 T14S R31E 400 FNL 2300 FWL Objective: Wildcat; Paddock

Depth	Hole Size & Cement	Casing Detail
170'	11" 175sx	9 5/8" @ 170'
		7 5/8" @ 2970'
2970'	8 3/4" 500sx	4 1/2" @ 5200"
		15sx Cmt plug @ 3346' tag @ 3150'
		35sx Cmt plug @ 3110'
5200'	6" 1000sx	25sx Cmt plug @ 2988'. Tag @ 293
		30sx Cmt plug @ 2300, tag @ 2087'
	TD- 5200'	30sx Cmt plug @ 229', tag TOC @ 7
		10sx Surface Plug

30-005-01189	South Caprock Queen Unit #2
P&A 8/11/1971	Operator: Union Oil Co of California Location: Sec. 33 T14S R31E 330 FNL 1450 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	12 1/4"	8 5/8" @ 316'
150sx		
316'		
	8 3/4""	6" @ 3123'
100sx		25sx Cmt Plug @ 3000'
		5sx Cmt Plug @ 0'
3123'		
Perfs 3099-3112'	TD- 3123'	

30-005-01152 — **Pre-Ongard Well #3 (State D #3)**

P&A 5/15/1986

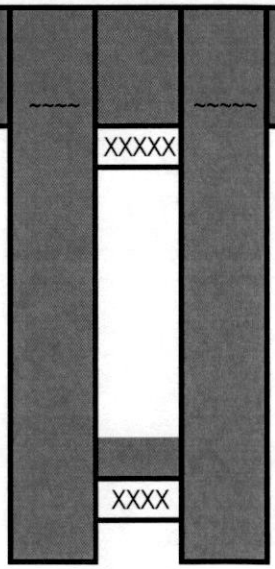
Operator: Pre-Ongard Well Operator (Lewis Burleson Inc)

Location: Sec. 27 T14S R31E

2310 FNL 990 FWL

Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 268'
175sx		
268'		
	7 7/8"	4 1/2" @ 3114'
		CIBP @ 3010' w/ 35' cmt cap
75sx		CIBP @ 280'
		Perf @ 268' w/ 55sx
		95sx @ 0-268'
3114'		



Open Hole 3114-3125'

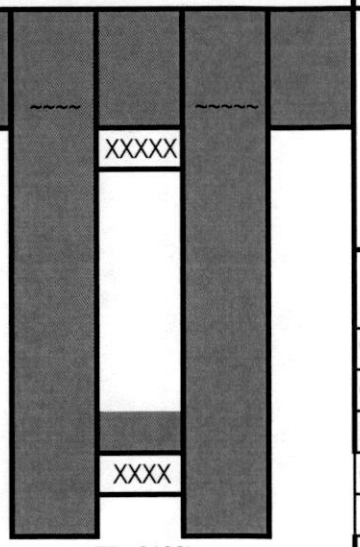
TD- 3125'

30-005-01151 — **Pre-Ongard Well #2 (State D #2)**

P&A 9/9/1987

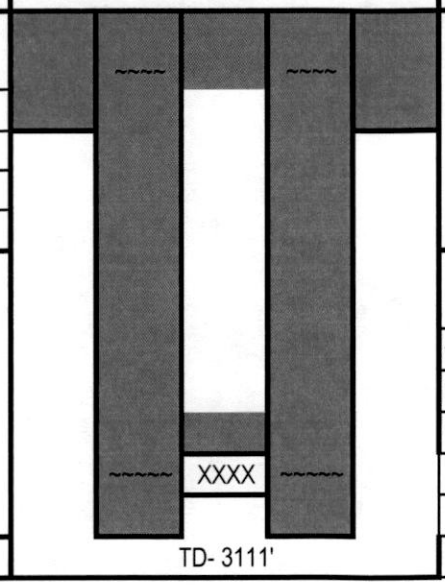
Operator: Pre-Ongard Well Operator (Lewis Burleson Inc)
Location: Sec. 27 T14S R31E
2310 FNL 2310 FWL
Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 258'
175sx		
258'		
	7 7/8"	4 1/2" @ 3093'
75sx		CIBP @ 2985' w/ 35' cmt cap
		CIBP @ 260'
		Perf Sqz @ 252'
		Circ Cmt w/ 128sx in & out of pipe
3093'		
Open Hole 3093-3112'	TD- 3100'	



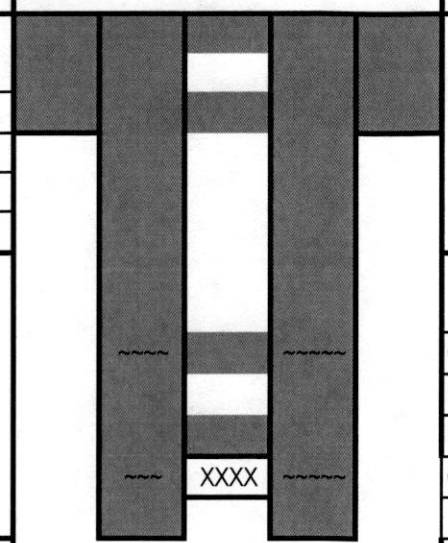
30-005-01144	Pre-Ongard Well #8 (Eastcap Queen #8)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers Inc) Location: Sec. 27 T14S R31E 1980 FNL 1980 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	10 3/4"	8 5/8" @ 328'
175sx		
328'		
	7 7/8"	5 1/2" @ 3111'
100sx		CIBP @ 3094' w/ 35' cmt cap
		Perf @ 245'
		100' Cmt Plug w/ 10sx
3111'		
Perfs 3094-3096'		



30-005-01143	Pre-Ongard Well #7 (Eastcap Queen #7)
P&A 2/4/1975	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers Inc) Location: Sec. 27 T14S R31E 2310 FNL 990 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 313'
175sx		
313'		
	7 7/8"	5 1/2" @ 3124'
100sx		CIBP @ 3097' w/ 35' cmt cap
		Perf @ 1134' w/ 100' cmt plug
		100' cmt @ 313'
		Cap w/ 10sx Cmt
3124'		
Perfs 3097-3100'		

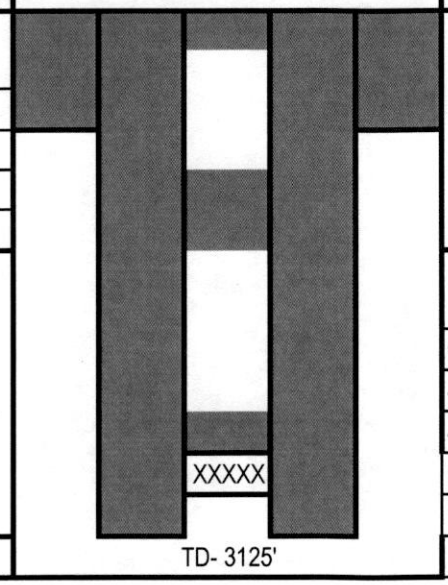


30-005-01164	South Caprock Queen Unit #9
P&A 2/28/1969	Operator: Union Oil Company of California Location: Sec. 28 T14S R31E 1650 FSL 660 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 199'
125sx		
199'		
	7 7/8"	5 1/2" @ 3037'
175sx		50sx cmt ply @ 2832-3016'
		150sx cmt plug @0-1300'
		5sx cmt plug @ 0-20'
3037'		
Perfs 3013-3016'	TD- 3037'	

30-005-01150	Pre-Ongard Well #11 (Eastcap Queen Pool Unit #11)
P&A 1/24/1974	Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers Inc) Location: Sec. 27 T14S R31E 1650 FSL 330 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 242'
150sx		
242'		
	7 7/8"	5 1/2" @ 3113'
75sx		CIBP @ 3008' w/ 5sx cmt cap
		40sx cmt plug @ 792'
		40sx cmt plug @ 280'
		10sx cmt plug @ surface
3113'		
Perfs 3106-3125'		



30-005-01148	Pre-Ongard Well #4 (State D #4)
P&A 5/15/1986	Operator: Pre-Ongard Well Operator (Lewis Burleson Inc) Location: Sec. 27 T14S R31E 1650 FSL 1650 FWL Objective: Caprock Queen

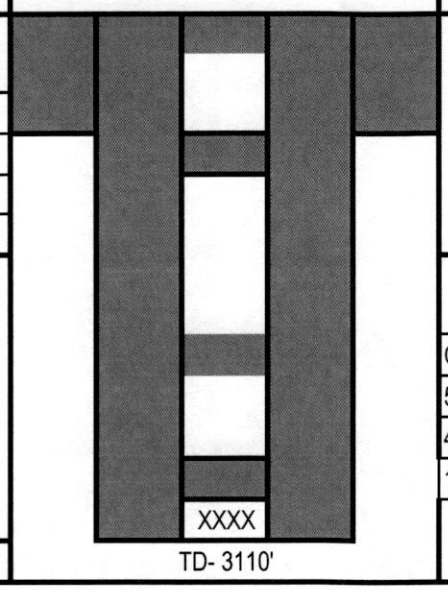
Depth	Hole Size & Cement		Casing Detail
	11"		8 5/8" @ 242'
150sx			
		XXXXX	
253'			
	7 7/8"		4 1/2" @ 3113'
75sx			CIBP @ 3010' w/ 35' cmt cap
			CIBP @ 268'
			Perf @ 258' Cmt 25sx
			100sx cmt to surface
3120'		XXXX	
Perf 3106-3113'		TD- 3120'	

30-005-01147 — **Pre-Ongard Well #13 (Eastcap Queen Pool Unit #13)**

P&A 1/17/1974

Operator: Pre-Ongard Well Operator (Miller Miller Auctioneers)
Location: Sec. 27 T14S R31E
1650 FSL 2310 FEL
Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 271'
150sx		
256'		
	7 7/8"	4 1/2" @ 3094'
75sx		CIBP @ 3006' w/5sx cmt cap
		50sx cmt plug @ 1514'
		40sx cmt plug @ 290'
		10sx cmt plug @ surface
3094'		
Perf 3086-3110'		

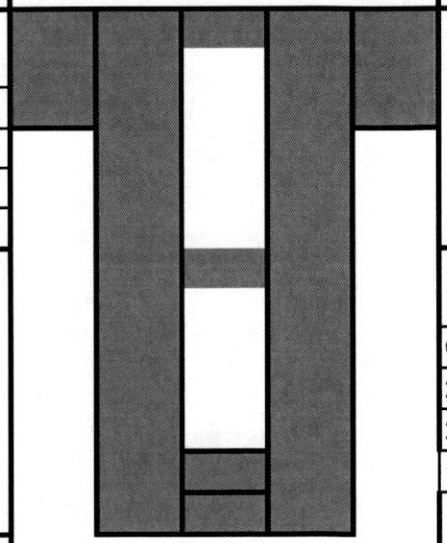


30-005-21183	Pre-Ongard Well #14 (Eastcap Queen Pool Unit #14)
P&A 10/16/1968	Operator: Pre-Ongard Well Operator (Gulf Oil Corporation) Location: Sec. 27 T14S R31E 1650 FSL 990 FEL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 256'
150sx		
256'		
	7 7/8"	4 1/2" @ 3088'
75sx		25sx cmt plug @ 3106-2858'
		75sx cmt plug @ 0-400'
3088'		
	TD- 3106'	

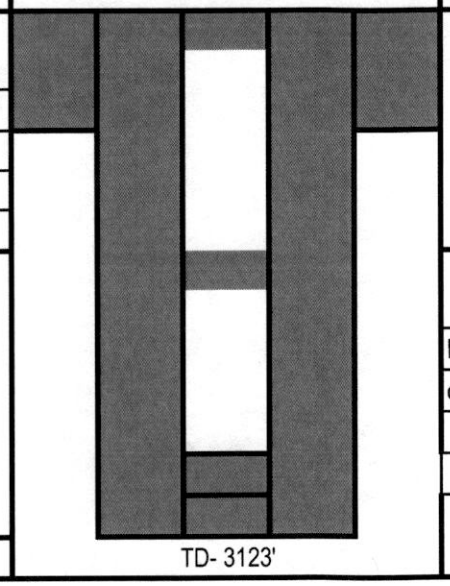
30-005-01140	Pre-Ongard Well #1 (Medlin #1)
P&A 11/4/1956	Operator: Pre-Ongard Well Operator (Donnelly Drilling Company Inc) Location: Sec. 26 T14S R31E 1980 FSL 660 FWL Objective: Undesignated

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 323"
175sx		
323'		
	7 7/8"	4 1/2" @ 3123'
100sx		Cmt plug @ 3126-2700'
		20sx Cmt plug @ 2260'
		20sx Cmt plug @ 1600'
		10sx Cmt plug @ Surface
3123'		
Perfs 3107-3112'		TD- 3123'



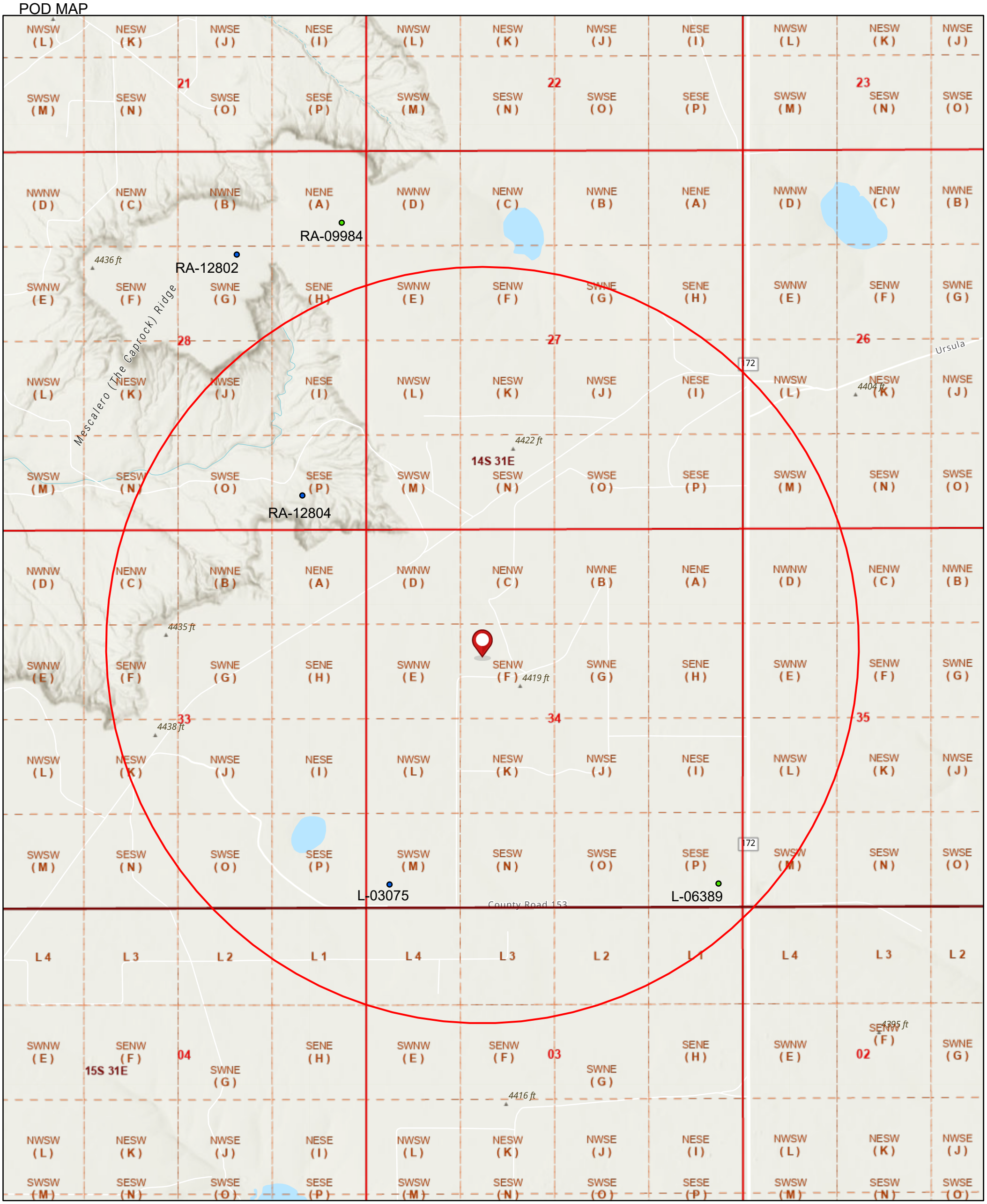
30-005-01163	South Caprock Queen Unit #14
P&A 3/1/2006	Operator: Kevin O Butler & Assoc, Inc Location: Sec. 28 T14S R31E 330 FSL 1980 FWL Objective: Caprock Queen

Depth	Hole Size & Cement	Casing Detail
	11"	8 5/8" @ 323"
100sx		
323'		
	7 7/8"	5 1/2" @ 3123'
200sx		No Plugging Information on OCD
3123'		
Perfs 2930-2936'		



Sec. 34 T14S R31E
1650 FNL 1650 FWL
POD MAP

OCD Well Locations



4/24/2024, 10:06:09 AM

OSE Water PODs

- Active
- Pending
- 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 Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y
L 03075	L	DOM	3	JOSEPH I O'NEILL	LE	L 03075				Shallow	3	3	3	34	14S	31E	610436	3657805*
L 03204	L	PRO	0	CYNTHIA E MEDLIN	LE	L 03204				Shallow		3	2	34	14S	31E	611333	3652772
L 06389	L	DOL	3	MEDLIN-TAYLOR	CH	L 06389					4	4	4	34	14S	31E	611843	3657822*
L 12445	L	PRO	0	M & W INC	LE	L 03204				Shallow		3	2	34	14S	31E	611333	3652772

Record Count: 4

PLSS Search:

Section(s): 34 **Township:** 14S **Range:** 31E

Sorted by: File Number

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

New Mexico Office of the State Engineer
Transaction Summary

UWL Update Well Location

Transaction Number: 685933 **Transaction Desc:** L 03075 **File Date:** 12/11/2020

Primary Status: UWL Update Well Location
Secondary Status: ACC Accepted
Person Assigned: *******

Events

	Date	Type	Description	Comment	Processed By
get images	12/11/2020	APP	Application Received	*	*******
	12/11/2020	UWL	Update Well Location	WELL NOT FOUND	*******
	02/02/2021	QAT	Quality Assurance Completed	DATA	*******
	03/04/2021	QAT	Quality Assurance Completed	IMAGE	*******
	03/09/2021	ARW	WRAB Main File Rm Arch Sect	L 03075 Archived	*******

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
L 03075		0		DOM 72-12-1 DOMESTIC ONE HOUSEHOLD
Point of Diversion				
L 03075		610436	3657805*	

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

Remarks

ABSTRACTOR NOTE: PER LORI GREEN & ANDY MORLEY ON 12/11/20 NO WELL WAS FOUND. FIELD INVESTIGATION COMPLETED ON SAID WELL. WELL NOT FOUND IN SECTION

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: L 03204 **Subbasin:** L **Cross Reference:** -

Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE

Primary Status: PMT PERMIT

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

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

Owner: CYNTHIA E MEDLIN

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	487566	CLW	2009-11-09	APP	WDR	L-7157 INTO L-3204	T	0	0	
get images	487502	COWNF	1960-06-13	CHG	PRC	L 03204	T		3	
get images	487501	72121	1956-06-01	PMT	LOG	L-3204	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
L 03204		Shallow	3	2		34	14S	31E	611333	3652772	

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: L 06389 **Subbasin:** L **Cross Reference:** -

Primary Purpose: DOL 72-12-1 DOMESTIC AND LIVESTOCK WATERING

Primary Status: PMT PERMIT

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

Total Diversion: 3 **Cause/Case:** -

Owner: MEDLIN-TAYLOR

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	507865	72121	1968-10-17	PMT	APR	L 06389	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
L 06389			4	4	4	34	14S	31E	611843	3657822*	

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

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: L 12445 **Subbasin:** L **Cross Reference:** -

Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE

Primary Status: PMT PERMIT

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

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

Owner: M & W INC

Contact: MIKE STAPLETON

Documents on File

Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images 487792	72121	2009-07-13	PMT	APR	L 12445	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
L 03204		Shallow	3	2		34	14S	31E	611333	3652772	

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

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

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

(quarters are smallest to largest)

(acre ft per annum)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Well Tag	Code	Grant	Source	q 64	q 16	q 4	Sec	Tws	Rng	X	Y
RA 09984	RA	STK	0	BOGLE LTD.	CH	RA 09984					4	2	2	28	14S	31E	610201	3660615*
RA 12802	RA	STK	3	BOGLE LTD CO	CH	RA 12802 POD1	2249B			Shallow	2	3	2	28	14S	31E	609751	3660474
RA 12804	RA	STK	3	BOGLE LTD CO	CH	RA 12804 POD1	2249C			Shallow	3	4	4	28	14S	31E	610042	3659452

Record Count: 3

PLSS Search:

Section(s): 28 **Township:** 14S **Range:** 31E

Sorted by: File Number

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

New Mexico Office of the State Engineer
Transaction Summary

72121 All Applications Under Statute 72-12-1

Transaction Number: 194781 **Transaction Desc:** RA 09984 **File Date:** 10/25/2000

Primary Status: EXP Expired Permit
Secondary Status: EXP Expired
Person Assigned: *******
Applicant: BOGLE LTD.
Contact: STUART BOGLE

Events

Date	Type	Description	Comment	Processed By
10/25/2000	APP	Application Received		*******
10/26/2000	FIN	Final Action on application		*******
10/26/2000	WAP	General Approval Letter		*******
10/26/2001	EXP	Expired Permit (well log late)		*******

Change To:

WR File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RA 09984		3		STK 72-12-1 LIVESTOCK WATERING

****Point of Diversion**

RA 09984		610201	3660615*

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

Conditions

1A Depth of the well shall not exceed the thickness of the valley fill.

4 Use shall be limited to household, non-commercial trees, lawn and garden not to exceed one acre and/or stock use.

Action of the State Engineer

**** See Image For Any Additional Conditions of Approval ****

Approval Code: A - Approved
Action Date: 10/26/2000
Log Due Date: 10/26/2001
State Engineer: Thomas C. Turney

New Mexico Office of the State Engineer

Point of Diversion Summary

Well Tag	POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twn	Rng	(NAD83 UTM in meters) X	Y
	RA 09984	4	2	2	28	14S	31E	610201	3660615*

Driller License: 1400 **Driller Company:** SOUTHEAST DRILLING COMPANY

Driller Name:

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

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

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

Casing Size: 7.00 **Depth Well:** 350 feet **Depth Water:**

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

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: RA 12802 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

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

Total Diversion: 3 **Cause/Case:** -

Owner: BOGLE LTD CO

Contact: CHRIS CORTEZ

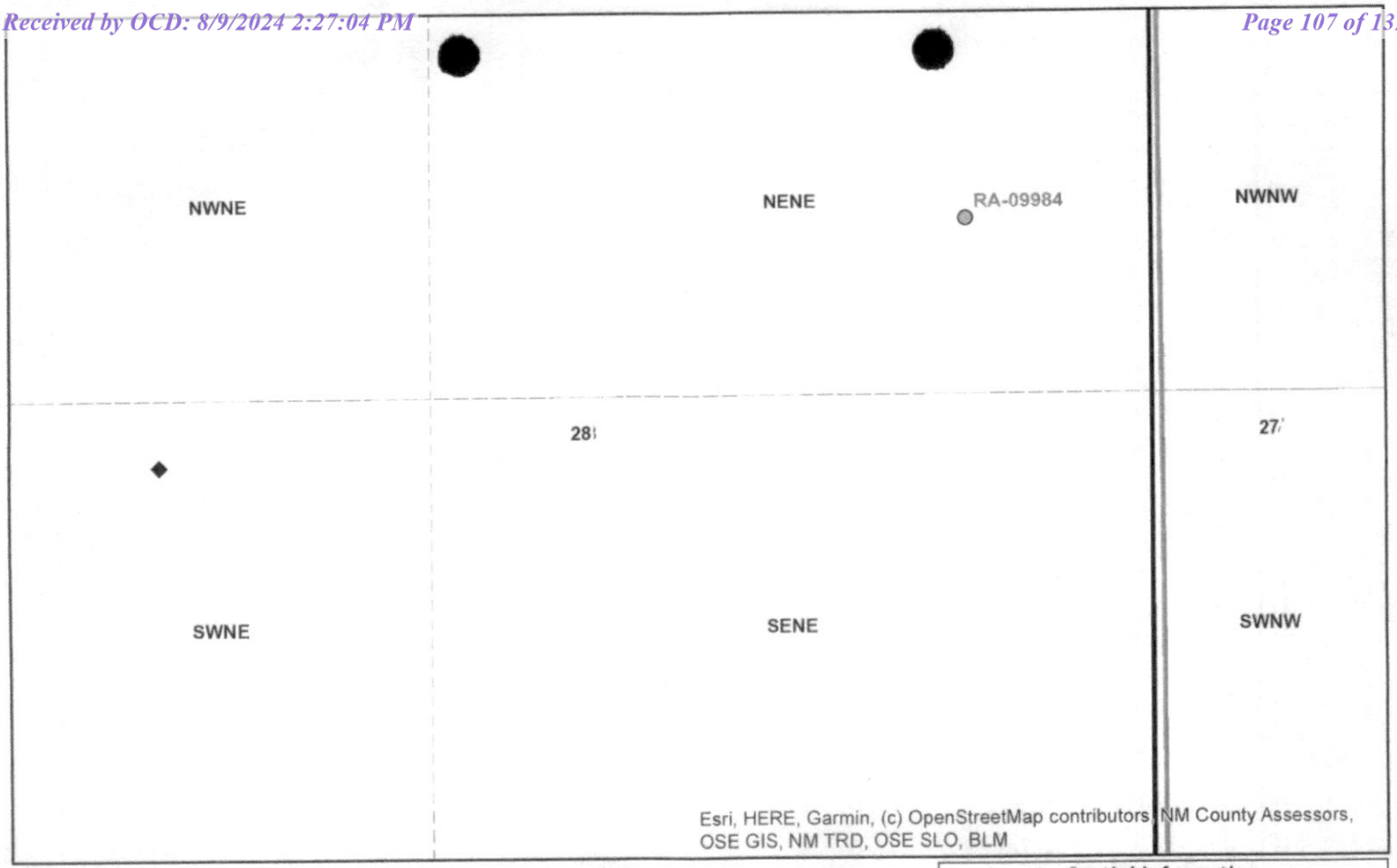
Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	661034	72121	2019-10-18	PMT	LOG	RA 12802 POD1	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Twn	Rng	X	Y	Other Location Desc
RA 12802 POD1	2249B	Shallow	2	3	2	28	14S	31E	609751	3660474	



Coordinates

UTM - NAD 83 (m) - Zone 13

Easting 609752.129

Northing 3660474.276

State Plane - NAD 83 (f) - Zone E

Easting 697311.925

Northing 756048.801

Degrees Minutes Seconds

Latitude 33 : 4 : 38.400000

Longitude -103 : 49 : 26.900000

Location pulled from Coordinate Search

NEW MEXICO OFFICE OF THE STATE ENGINEER

1:4,514

ft

0 90 180 360

N

MA 10/18/2019

Spatial Information

County: Chaves

Groundwater Basin: Roswell

Abstract Area:Roswell Artesian

Land Grant:
Not in Land Grant

Restrictions:

Lea County Critical Management Area

PLSS Description

NWNESWNE Qtr of Sec 28 of 014S 031E

Derived from CADNSDI- Qtr Sec. locations are calculated and are only approximations

Parcel Information

UPC/DocNum: 4176084326253000000

Parcel Owner: Bogle Ltd. Co.

Address:

Legal: ALL LESS N2NW4

POD Information

Owner: BOGLE LTD

File Number:

POD Status: NoData

Permit Status: NoData

Permit Use: NoData

Purpose: LIVESTOCK

- Coord Search Location
- Chaves County Parcels 2018
- Sections
- GIS WATERS PODs
- BLM Land Grant
- PEN
- PLSSTownship
- OSE District Boundary
- PLSSFirstDiv...
- PLSSSecond...

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: RA 12804 **Subbasin:** RA **Cross Reference:** -

Primary Purpose: STK 72-12-1 LIVESTOCK WATERING

Primary Status: PMT PERMIT

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

Total Diversion: 3 **Cause/Case:** -

Owner: BOGLE LTD CO

Contact: CHRIS CORTEZ

Documents on File

	Trn #	Doc	File/Act	Status 1	Status 2	Transaction Desc.	From/ To	Acres	Diversion	Consumptive
get images	661041	72121	2019-10-18	PMT	LOG	RA 12804 POD1	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Well Tag	Source	Q 64	Q16	Q4	Sec	Tws	Rng	X	Y	Other Location Desc
RA 12804 POD1	2249C	Shallow	3	4	4	28	14S	31E	610043	3659452	

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 27 **Township:** 14S **Range:** 31E

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 26 **Township:** 14S **Range:** 31E

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 03 **Township:** 14S **Range:** 31E

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 33 **Township:** 14S **Range:** 31E

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 35 **Township:** 14S **Range:** 31E

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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		

Sampling Date:	1/10/2019
Analysis Date:	1/22/2019
Analyst:	Catalyst
TDS (mg/l or g/m3):	150968.6
Density (g/cm3):	1.102
Hydrogen Sulfide:	5
Carbon Dioxide:	97
Comments:	

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

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

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

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

Conductivity (micro-ohms/cm):	**200079**
Resistivity (ohm meter):	**.0500**

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

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4*2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.05	0.91	-0.13	0.00	-0.13	0.00	-0.11	0.00	1.22	0.60
100	0.13	2.72	-0.20	0.00	-0.13	0.00	-0.13	0.00	1.02	0.30
120	0.22	4.84	-0.26	0.00	-0.11	0.00	-0.15	0.00	0.84	0.30
140	0.30	7.26	-0.30	0.00	-0.06	0.00	-0.15	0.00	0.69	0.30
160	0.37	9.68	-0.34	0.00	0.00	6.96	-0.15	0.00	0.56	0.30
180	0.45	12.70	-0.37	0.00	0.08	166.07	-0.14	0.00	0.45	0.30
200	0.52	15.73	-0.40	0.00	0.18	328.81	-0.13	0.00	0.36	0.30
220	0.60	18.75	-0.42	0.00	0.28	485.19	-0.11	0.00	0.28	0.30

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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		

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

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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		

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		

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		

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

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Water Analysis Report

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

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

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

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

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

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

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

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

Temp	Calcite $CaCO_3$		Gypsum $CaSO_4 * 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$	
°F	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount
80	0.43	9.88	0.10	359.72	0.11	305.55	0.18	14.96	0.00	0.00
100	0.49	12.27	0.03	111.03	0.10	296.88	0.16	13.17	0.00	0.00
120	0.55	14.96	-0.03	0.00	0.13	355.53	0.14	11.97	0.00	0.00
140	0.60	17.96	-0.08	0.00	0.17	467.16	0.13	11.67	0.00	0.00
160	0.64	20.95	-0.12	0.00	0.23	615.30	0.14	11.67	0.00	0.00
180	0.69	24.54	-0.15	0.00	0.31	784.69	0.14	12.27	0.00	0.00
200	0.75	28.13	-0.18	0.00	0.40	962.15	0.15	12.87	0.00	0.00
220	0.80	31.72	-0.20	0.00	0.51	1137.23	0.17	13.77	0.00	0.00

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July 19, 2024

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**
Rooster SWD #1 - Seismic Potential Letter

Dear Mr. Goetze,

At the request of Mack Energy Corporation (Mack Energy), ALL Consulting, LLC (ALL) has assessed the potential injection-induced seismicity risks in the vicinity of Mack Energy's Rooster SWD #1, a proposed saltwater disposal (SWD) facility in Chaves 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 Rooster SWD #1 to contribute to seismic activity in the area.

Geologic Evaluation

The Rooster SWD #1 is requesting a permit to inject into the Devonian Formation at a depth of 12,900-13,600 feet below ground surface (bgs). The Devonian Formation consists of cherty limestone and dolomites and is overlain by approximately 28 feet of low porosity and permeability Mississippian Lime, which would prevent the upward migration of injection fluid and serve as the upper confining layer (see **Attachment 1**). Additionally, the Devonian Formation is underlain by various low porosity and permeability zones within the Silurian and Montoya Groups, both of which consist of limestones, dolomites, and interbedded shale zones. No geophysical logs penetrating the Silurian and Montoya Groups were available within 10 miles of the Rooster SWD #1. A stratigraphic chart depicting the geologic setting is included as **Figure 1**.[1]

Seismic Events and Fault Data

A review of United States Geological Survey (USGS) and New Mexico Tech Seismological Observatory (NMTSO) earthquake catalogues determined that four (4) seismic events have been recorded within a 100 square mile area [9.08-kilometer (km) radius] around the Rooster SWD

[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

#1. The closest recorded seismic event was a M1.44 that occurred on May 16, 2021, and was located approximately 3.52 miles southeast of the Rooster SWD #1 (see **Attachment 2**).

Fault data from United States Geological Survey (USGS) and the Texas Bureau of Economic Geology (BEG)[2] indicates that the closest known fault is located approximately 7.13 miles southeast of the Rooster SWD #1 (see **Attachment 2**). This identified fault is within the Precambrian basement, which is approximately 2,400 feet below the proposed injection interval.[3] A map of the seismic events and faults within 9.08 km of the Rooster 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	KINDERHOOK
DEVONIAN		WOODFORD DEVONIAN	WOODFORD 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 presence or lack of faulting within the injection interval are major considerations when determining the risk of injection-induced seismicity.

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[2] 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.

[3] G. Randy Keller, J. M. Hills &; Rabah Djeddi, A regional geological and geophysical study of the Delaware Basin, New Mexico and West Texas, Trans Pecos Region (West Texas) (1980).

[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.

Geophysical data from nearby well records, aeromagnetic surveys, and gravity surveys indicates the top of the Precambrian basement to be approximately 16,000 feet bgs at the Rooster SWD #1, or approximately 2,400 feet below the proposed injection interval.[3] In addition, publicly available fault data does not indicate any transmissive faulting is present above the Precambrian basement around the Rooster SWD #1.

Class II SWDs in New Mexico are permitted with a maximum pressure gradient of 0.2 psi/ft. Review of New Mexico Oil Conservation Division (OCD) Order IP-537 from the Mack Energy Round Tank SWD #1, which is located approximately 15.5 miles southwest of the Rooster SWD #1, determined the maximum allowable surface pressure for a Devonian SWD 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 Rooster SWD #1.

Conclusion

As an expert on the issue of induced seismicity, seismic monitoring, and mitigation, it is my opinion that the potential for the Rooster SWD #1 to cause injection-induced seismicity is expected to be minimal, at best. This conclusion assumes the Rooster SWD #1 will be operated at or under the maximum allowable surface injection pressure based on the regulatory requirement of 0.2 psi/ft and is based on (1) the presence of numerous confining layers above and below the injection interval, (2) the significant vertical distance between the injection zone and Precambrian basement rock in which the nearest fault has been identified, and (3) the lack of mapped faults in the vicinity of the Rooster SWD #1.

Sincerely,
ALL Consulting

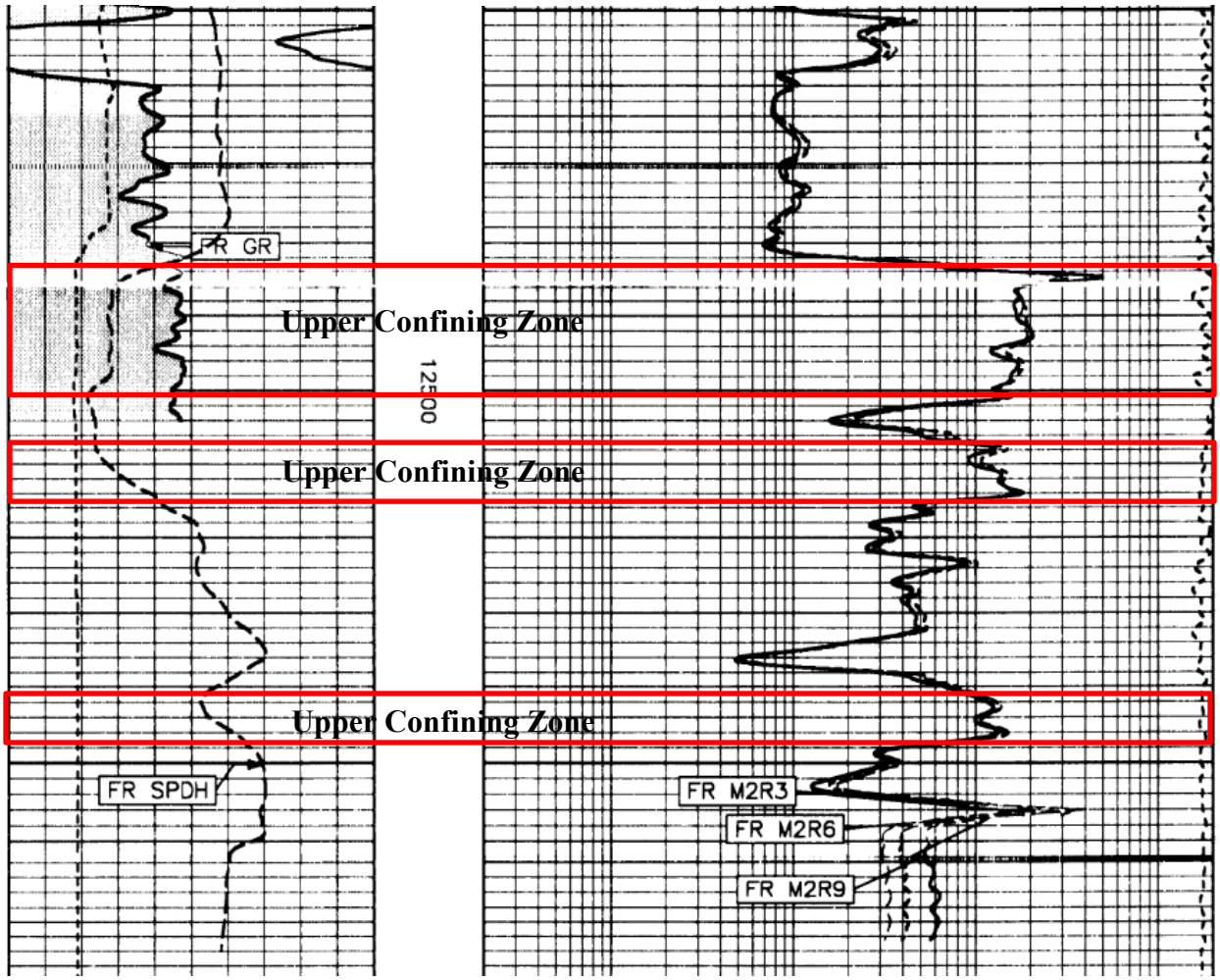
Reed Davis
Geophysicist

Mack Energy Corporation
Rooster SWD #1 Seismic Information
July 19, 2024

Attachment 1
Mississippian Lime Upper Confining Zone

Mack Energy Corporation
Rooster SWD #1 Seismic Information
July 19, 2024

Mississippian Lime Upper Confining Zone from API No. 025-36220

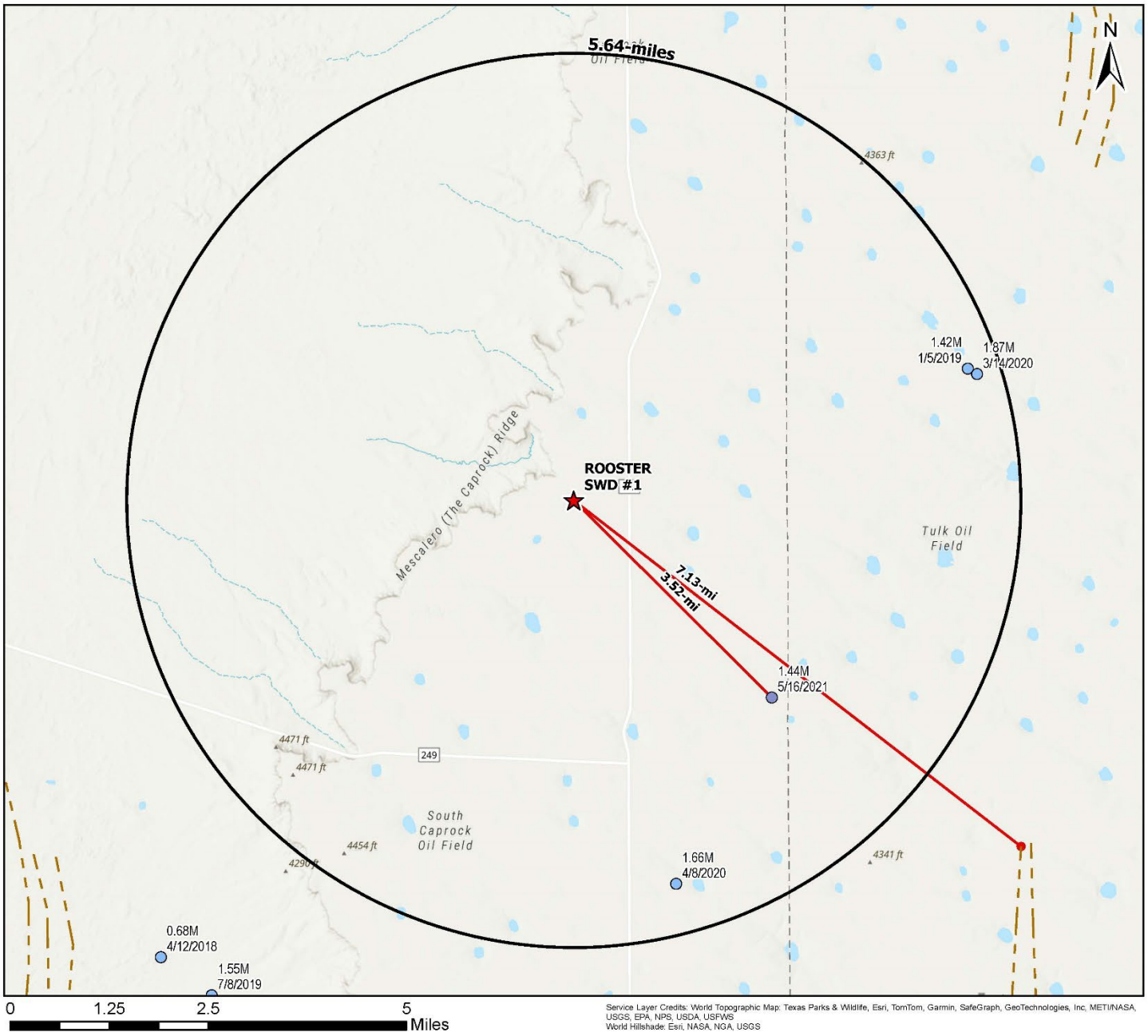


Mack Energy Corporation
Rooster SWD #1 Seismic Information
July 19, 2024

Attachment 2
Seismic Event Map

Mack Energy Corporation
Rooster SWD #1 Seismic Information
July 19, 2024

Rooster SWD #1 Nearby Seismic Events and Faults



Legend

- Proposed SWD
- NMTSO Seismic Events - 7/9/24 (6)
- Deep Faults

Induced Seismicity Buffers

distance

- 0 - 3 mi
- 3 - 6 mi
- 6 - 10 mi

Seismic Analysis Map

ROOSTER SWD #1
CHAVES COUNTY, NEW MEXICO

Proj Mgr: Oliver Seekins	July 09, 2024	Mapped by: Ben Bockelmann

Prepared for: MACK Energy Corporation

Prepared by: ALL CONSULTING

Rooster SWD #1

Bit Size
17 1/2"

Surface- 1400' 13 3/8" 54.5# J55

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	Class C +4%PF20+1% PF1+ 0.125#/skPF29+.4%PF45	13.5	2.31	9.166	725	100	Surface
Tail	Class C+1%PF1	14.8	1.32	6.307	200	100	200'

Comments	20bbls Gelled Water. 50 sacks of 11# Scavenger cement.

Cu./Ft Per Lin./ Ft. 973

Bit Size
12 ¼"

Intermediate- 3,900' 9 5/8 40# J55

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	Class C +4%PF20+1% PF1+ 0.125#/skPF29+.4%PF45	13.5	1.72	9.123	925	50	Surface
Tail	Class C + 1% PF1	14.8	1.34	6.307	200	50	200'

Comments	20bbls Gelled Water. 50 sacks of 11# Scavenger cement.

Cu./Ft Per Lin./ Ft. 1222

Bit size
8 ¾"

Production- 12,905'
7"-29# HCL-80

Stage 1	Slurry	Density	Yield	Mix H2O Gals./sk	# of Sacks	% Excess	Slurry Top
Lead	Class "C" 4% PF20+4 pps PF45+125pps PF29	13.2	1.84	9.914	350	0	Surface
Tail	PVL+1.3 (BWOW) PF44+5% PF174+.5%PF606+.1%PF153+.4 ppsPF44	13	1.48	7.577	1400	50	3800'

Comments	20bbls Gelled Water. 20bbls Chemical wash. 50 sacks of 11# Scavenger cement.

Rooster SWD #1

Stage 2	Slurry	Density	Yield	# of sacks	% Excess	Slurry Top
Lead						
Tail						

Cu./Ft Per Lin./ Ft.
1940

Comments:	

Prior to any cement job it is Mack Energy policy to circulate bottoms up 1 time before commencing with cement operations. On wells where hole conditions have been an issue during the drilling and reaming process the number or circulations needs to increase to a minimum of 2 times around.

All production cement figured with an additional 10% for washout unless otherwise noted. Flush is figured with a 40' shoe joint. Do not displace more than 2bbls over calculated flush without prior approval.

Casing Design **Well:** Rooster SWD #1

String Size & Function: 13 3/8 in surface x intermediate

Total Depth: 1400 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 9.6 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 9.6 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 9.6 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 698.88 psi Burst: 698.88 psi, joint strength: 698.88 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 500 psi

1st segment	1400 ft to 0 ft		Make up Torque ft-lbs			Total ft = 1400
O.D.	Weight	Grade	Threads	opt.	min.	mx.
13.375 inches	**54.5** #/ft	**J-55**	**ST&C**	**5,140**	**3,860**	**6,430**
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
1,130	**2,730** psi	**514** ,000 #		**853** ,000 #		**12.459**

2nd segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

3rd segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

4th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

5th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

6th segment	0 ft to 0 ft		Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.
inches	#/ft					
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift
psi	psi	,000 #		,000 #		

Select 1st segment bottom 1400

1400 ft to 0 ft
13.375 0 J-55 ST&C

	S.F.	Actual		Desire
	collapse	1.616873	>=	1.125
	burst-b	5.15951	>=	1.25
	burst-t	5.46		

Top of segment 1 (ft) 0

Select 2nd segment from bottom

0 ft to 0 ft
0 0 0 0

	S.F.	Actual		Desire
	collapse	#DIV/0!	>=	1.125
	burst-b	0	>=	1.25
	burst-t	0		
	jnt strngth	7.896388	>=	1.8

Casing Design **Well:** Rooster SWD #1

String Size & Function: 9 5/8 in surface intermediate x

Total Depth: 3900 ft **TVD:** 3900 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 10.3 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 10.3 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 10.3 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 2088.84 psi Burst: 2088.84 psi, joint strength: 2088.84 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 500 psi

1st segment	3900 ft to 0 ft			Make up Torque ft-lbs			Total ft = 3900
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
9.625 inches	**40** #/ft	**L-80**	**LT&C**	**7,270**	**5,450**	**9,090**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
3,090 psi	**5,750** psi	**727** ,000 #		**916** ,000 #		**8.75-SD**	

2nd segment	ft to ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

3rd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

4th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

5th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

6th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

Select 1st segment bottom 1200

3900 ft to 0 ft
9.625 0 L-80 LT&C

S.F.	Actual		Desire
collapse	1.47929	>=	1.125
burst-b	13.09318	>=	1.25
burst-t	11.5		

Top of segment 1 (ft) 0

Select 2nd segment from bottom

0 ft to 0 ft
0 0 0 0

S.F.	Actual		Desire
collapse	#DIV/0!	>=	1.125
burst-b	0	>=	1.25
burst-t	0		
jnt strngth	5.532053	>=	1.8

Casing Design **Well:** Rooster SWD #1

String Size & Function: 7 in Production x

Total Depth: 12905 ft **TVD:** 12905 ft

Pressure Gradient for Calculations **(While drilling)**

Mud weight, collapse: 10.3 #/gal Safety Factor Collapse: 1.125

Mud weight, burst: 10.3 #/gal Safety Factor Burst: 1.25

Mud weight for joint strength: 10.3 #/gal Safety Factor Joint Strength 1.8

BHP @ TD for: collapse: 6911.918 psi Burst: 6911.918 psi, joint strength: 6911.918 psi

Partially evacuated hole? Pressure gradient remaining: 10 #/gal

Max. Shut in surface pressure: 3000 psi

1st segment	12905 ft to 0 ft			Make up Torque ft-lbs			Total ft = 12905
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	**29** #/ft	**HCL-80**	**Buttress**	**5970**	**4480**	**7460**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
9,200 psi	**8,160** psi	**780** ,000 #		**676** ,000 #		**6.059**	

2nd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	**26** #/ft	**HCP-110**	**Buttress**	**6,930**	**5,200**	**8,660**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
7,800 psi	**9,950** psi-lrcr	**853** ,000 #		**830** ,000 #		**6.151**	

3rd segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
7 inches	**26** #/ft	**HCP-110**	**LT&C**	**6930**	**5200**	**8660**	
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
7,800 psi	**9,950** psi	**693** ,000 #		**830** ,000 #		**6.151**	

4th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

5th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

6th segment	0 ft to 0 ft			Make up Torque ft-lbs			Total ft = 0
O.D.	Weight	Grade	Threads	opt.	min.	mx.	
inches	#/ft						
Collapse Resistance	Internal Yield	Joint Strength		Body Yield		Drift	
psi	psi	,000 #		,000 #			

Select 1st segment bottom				12905	**S.F.**	Actual		Desire
					collapse	1.331034	>=	1.125
12905 ft	to	0 ft			burst-b	2.915658	>=	1.25
7	0	HCL-80	Buttress		burst-t	2.72		
Top of segment 1 (ft)				0	**S.F.**	Actual		Desire
Select 2nd segment from bottom					collapse	#DIV/0!	>=	1.125
					burst-b	3.316667	>=	1.25
0 ft	to	0 ft			burst-t	3.316667		
7	26	HCP-110	Buttress		jnt strngth	2.474088	>=	1.8

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 372182

CONDITIONS

Operator: MACK ENERGY CORP P.O. Box 960 Artesia, NM 882110960	OGRID: 13837
	Action Number: 372182
	Action Type: [C-108] Fluid Injection Well (C-108)

CONDITIONS

Created By	Condition	Condition Date
mgebremichael	None	9/16/2024