

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM132945
2. Name of Operator CAZA OPERATING LLC		6. If Indian, Allottee or Tribe Name
3a. Address 200 NORTH LORRAINE SUITE 1550 MIDLAND, TX 79701		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 505-466-8120		8. Well Name and No. EAGLECLAW FEDERAL 1H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 5 T20S R35E Lot 4 190FNL 467FWL		9. API Well No. 30-025-42988-00-X1
		10. Field and Pool or Exploratory Area WC-025 G08 S2035
		11. County or Parish, State LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☒ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed 0 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Will change goal from Wolfcamp to Bone Spring (3rd).
Must spud before 8-31-17 to honor farmout agreement.

Following changes result:

Will communitize with NMNM 007484 & NMNM 004786;
New BHL= 1677 FSL and 570 FWL 8-20S-35E;
TVD@BHL will change from 11250' to 11243';
MD@BHL will change from 15778' to 19835';
Production lead cement will change from 900 sx (2259 cu ft.) to 1200 sx (3012 cu ft.);
Production tail cement will change from 1520 sx (1425 cu ft.) to 1200 sx (1900 cu ft.);
See attached C-102, well bore diagrams, & planning report.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL***WILL REQUIRE A
NSP BEFORE WELL
CAN PRODUCE*

14. I hereby certify that the foregoing is true and correct. Electronic Submission #378329 verified by the BLM Well Information System For CAZA OPERATING LLC, sent to the Hobbs Committed to AFMSS for processing by DEBORAH MCKINNEY on 06/13/2017 (17DLM1281SE)	
Name (Printed/Typed) BRIAN WOOD	Title CONSULTANT
Signature (Electronic Submission)	Date 06/08/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

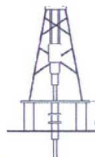
Approved By <u>CHARLES NIMMER</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>07/28/2017</u>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		
Office Hobbs		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

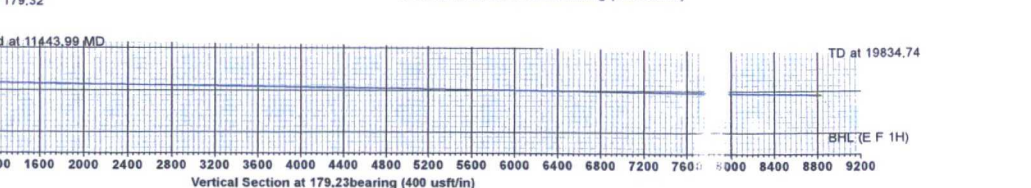
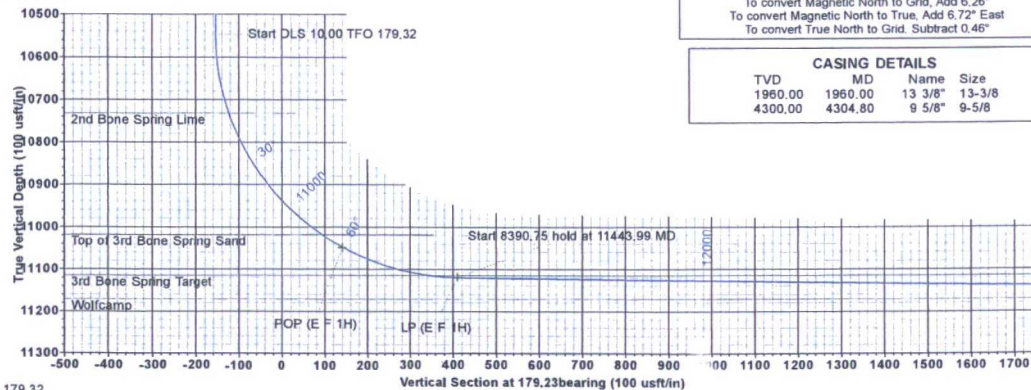
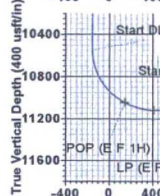
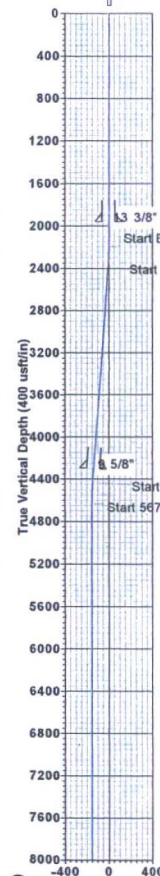
(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED *****Ka*

Eagleclaw Federal #1H
Lea County, NM (NAD 83 NME)
Northing: (Y) 586346.00
Easting: (X) 802083.00
Plan #2



KB=27' @ 3723.00usft
Ground Level: 3696.00



WELL DETAILS:

Ground Level: 3696.00
+N/-S 0.00 +E/-W 0.00
Northing 586346.00 Easting 802083.00
Latitude 32° 36' 32.624 N Longitude 103° 29' 11.595 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	0.00	
2400.00	4.00	4.48	2399.84	6.96	0.55	2.00	4.48	-6.95	
4637.00	4.00	4.48	4631.88	148.82	11.84	0.00	0.00	-148.45	
4637.00	0.00	0.00	4631.71	155.57	12.19	2.00	180.00	-155.40	
10312.00	0.00	0.00	10306.71	155.57	12.19	0.00	0.00	-155.40	
10552.39	0.00	0.00	10547.10	155.57	12.19	0.00	0.00	-155.40	
11443.99	88.16	179.32	1120.00	-408.94	18.87	10.00	179.32	408.16	
19834.74	89.16	179.32	1243.00	-8798.21	118.12	0.00	0.00	8799.00	BHL (E F 1H)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
POP (E F 1H)	11049.59	-140.00	1.00	586206.00	802084.00
LP (E F 1H)	11120.00	-408.94	18.87	585937.06	802101.87
BHL (E F 1H)	11243.00	-8798.21	118.12	577547.79	802201.12

SITE DETAILS: Eagleclaw Federal

Site Centre Northing: 586346.00
Easting: 802083.00

Positional Uncertainty: 0.00
Convergence: 0.46
Local North: Grid

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1910.00	1910.00	Rustler
2106.00	2106.00	Top of Salt
3584.00	3587.05	Base of Salt
3812.00	3815.61	Yates
4180.00	4184.51	Capitan
5567.00	5572.29	Delaware
5817.00	5822.29	Cherry Canyon
6476.00	6481.29	Brushy Canyon
8144.00	8149.29	Bone Spring/Glorieta
8595.00	9600.29	1st Bone Spring Sand
10201.00	10206.29	2nd Bone Spring Sand
10732.00	10740.66	2nd Bone Spring Lime
11018.00	11105.12	Top of 3rd Bone Spring Sand
11115.00	11376.20	3rd Bone Spring Target
11172.00	14991.45	Wolfcamp

Map System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone Name: New Mexico Eastern Zone

Local Origin: Well #1H, Grid North

Latitude: 32° 36' 32.624 N
Longitude: 103° 29' 11.595 W

Grid East: 802083.00
Grid North: 586346.00
Scale Factor: 1.000

Geomagnetic Model: HDGM
Sample Date: 19-Apr-17
Magnetic Declination: 6.72°
Dip Angle from Horizontal: 60.63°
Magnetic Field Strength: 48311

To convert Magnetic North to Grid, Add 6.26°
To convert Magnetic North to True, Add 6.72° East
To convert True North to Grid, Subtract 0.46°

CASING DETAILS

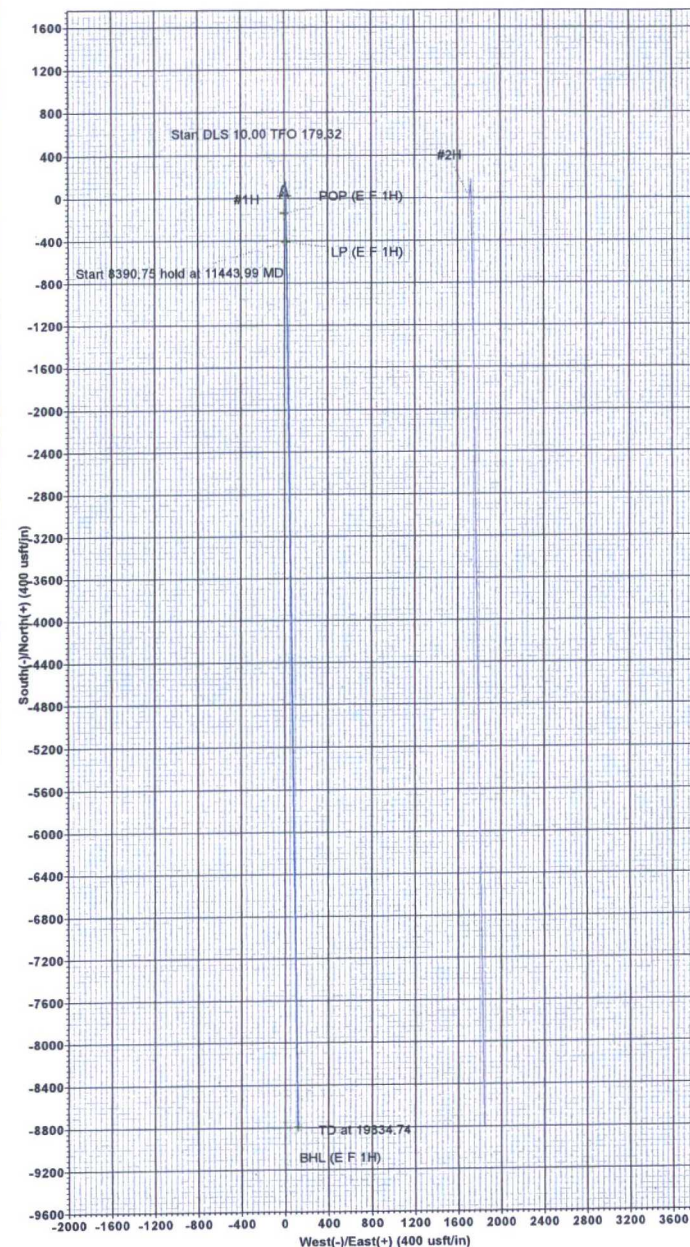
TVD	MD	Name	Size
1960.00	1960.00	13 3/8"	13-3/8
4300.00	4304.80	9 5/8"	9-5/8



Azimuths to Grid North
True North: -0.46°
Magnetic North: 6.26°

Magnetic Field
Strength: 48310.6nT
Dip Angle: 60.63°
Date: 4/19/2017
Model: HDGM

To convert Magnetic North to Grid, Add 6.26°
To convert True North to Grid, Subtract 0.46°





Caza Operating, LLC

Lea County, NM (NAD 83 NME)
Eagleclaw Federal
#1H

OH

Plan: Plan #2

Standard Planning Report

30 May, 2017



www.scientificdrilling.com

Database: Midland District
Company: Caza Operating, LLC
Project: Lea County, NM (NAD 83 NME)
Site: Eagleclaw Federal
Well: #1H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #1H
TVD Reference: KB=27' @ 3723.00usft
MD Reference: KB=27' @ 3723.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Eagleclaw Federal			
Site Position:		Northing:	586,346.00 usft	Latitude:	32° 36' 32.624 N
From:	Map	Easting:	802,083.00 usft	Longitude:	103° 29' 11.595 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.46 °

Well	#1H					
Well Position	+N/-S	0.00 usft	Northing:	586,346.00 usft	Latitude:	32° 36' 32.624 N
	+E/-W	0.00 usft	Easting:	802,083.00 usft	Longitude:	103° 29' 11.595 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,696.00 usft

Wellbore	OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	HDGM	4/19/2017	6.72	60.63	48,311	

Design	Plan #2				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (bearing)	
	0.00	0.00	0.00	179.23	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	4.00	4.48	2,399.84	6.96	0.55	2.00	2.00	0.00	4.48	
4,437.00	4.00	4.48	4,431.88	148.62	11.64	0.00	0.00	0.00	0.00	
4,637.00	0.00	0.00	4,631.71	155.57	12.19	2.00	-2.00	0.00	180.00	
10,312.00	0.00	0.00	10,306.71	155.57	12.19	0.00	0.00	0.00	0.00	
10,552.39	0.00	0.00	10,547.10	155.57	12.19	0.00	0.00	0.00	0.00	
11,443.99	89.16	179.32	11,120.00	-408.94	18.87	10.00	10.00	20.11	179.32	
19,834.74	89.16	179.32	11,243.00	-8,798.21	118.12	0.00	0.00	0.00	0.00	BHL (E F 1H)

Database: Midland District
Company: Caza Operating, LLC
Project: Lea County, NM (NAD 83 NME)
Site: Eagleclaw Federal
Well: #1H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #1H
TVD Reference: KB=27' @ 3723.00usft
MD Reference: KB=27' @ 3723.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,910.00	0.00	0.00	1,910.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,960.00	0.00	0.00	1,960.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,106.00	0.00	0.00	2,106.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	2.00	4.48	2,299.98	1.74	0.14	-1.74	2.00	2.00	0.00
2,400.00	4.00	4.48	2,399.84	6.96	0.55	-6.95	2.00	2.00	0.00
2,500.00	4.00	4.48	2,499.59	13.91	1.09	-13.90	0.00	0.00	0.00
2,600.00	4.00	4.48	2,599.35	20.87	1.63	-20.84	0.00	0.00	0.00
2,700.00	4.00	4.48	2,699.11	27.82	2.18	-27.79	0.00	0.00	0.00
2,800.00	4.00	4.48	2,798.86	34.77	2.72	-34.73	0.00	0.00	0.00
2,900.00	4.00	4.48	2,898.62	41.73	3.27	-41.68	0.00	0.00	0.00
3,000.00	4.00	4.48	2,998.38	48.68	3.81	-48.63	0.00	0.00	0.00
3,100.00	4.00	4.48	3,098.13	55.64	4.36	-55.57	0.00	0.00	0.00
3,200.00	4.00	4.48	3,197.89	62.59	4.90	-62.52	0.00	0.00	0.00
3,300.00	4.00	4.48	3,297.65	69.55	5.45	-69.47	0.00	0.00	0.00
3,400.00	4.00	4.48	3,397.40	76.50	5.99	-76.41	0.00	0.00	0.00
3,500.00	4.00	4.48	3,497.16	83.45	6.54	-83.36	0.00	0.00	0.00
3,587.05	4.00	4.48	3,584.00	89.51	7.01	-89.41	0.00	0.00	0.00
Base of Salt									
3,600.00	4.00	4.48	3,596.91	90.41	7.08	-90.31	0.00	0.00	0.00
3,700.00	4.00	4.48	3,696.67	97.36	7.63	-97.25	0.00	0.00	0.00
3,800.00	4.00	4.48	3,796.43	104.32	8.17	-104.20	0.00	0.00	0.00
3,815.61	4.00	4.48	3,812.00	105.40	8.26	-105.28	0.00	0.00	0.00
Yates									
3,900.00	4.00	4.48	3,896.18	111.27	8.72	-111.15	0.00	0.00	0.00
4,000.00	4.00	4.48	3,995.94	118.23	9.26	-118.09	0.00	0.00	0.00
4,100.00	4.00	4.48	4,095.70	125.18	9.81	-125.04	0.00	0.00	0.00
4,184.51	4.00	4.48	4,180.00	131.06	10.27	-130.91	0.00	0.00	0.00

Database: Midland District
Company: Caza Operating, LLC
Project: Lea County, NM (NAD 83 NME)
Site: Eagleclaw Federal
Well: #1H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #1H
TVD Reference: KB=27' @ 3723.00usft
MD Reference: KB=27' @ 3723.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Capitan									
4,200.00	4.00	4.48	4,195.45	132.14	10.35	-131.98	0.00	0.00	0.00
4,300.00	4.00	4.48	4,295.21	139.09	10.90	-138.93	0.00	0.00	0.00
4,304.80	4.00	4.48	4,300.00	139.42	10.92	-139.26	0.00	0.00	0.00
9 5/8"									
4,400.00	4.00	4.48	4,394.97	146.04	11.44	-145.88	0.00	0.00	0.00
4,437.00	4.00	4.48	4,431.88	148.62	11.64	-148.45	0.00	0.00	0.00
4,500.00	2.74	4.48	4,494.77	152.31	11.93	-152.14	2.00	-2.00	0.00
4,600.00	0.74	4.48	4,594.71	155.34	12.17	-155.16	2.00	-2.00	0.00
4,637.00	0.00	0.00	4,631.71	155.57	12.19	-155.40	2.00	-2.00	0.00
4,700.00	0.00	0.00	4,694.71	155.57	12.19	-155.40	0.00	0.00	0.00
4,800.00	0.00	0.00	4,794.71	155.57	12.19	-155.40	0.00	0.00	0.00
4,900.00	0.00	0.00	4,894.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,000.00	0.00	0.00	4,994.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,100.00	0.00	0.00	5,094.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,200.00	0.00	0.00	5,194.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,300.00	0.00	0.00	5,294.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,400.00	0.00	0.00	5,394.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,500.00	0.00	0.00	5,494.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,572.29	0.00	0.00	5,567.00	155.57	12.19	-155.40	0.00	0.00	0.00
Delaware									
5,600.00	0.00	0.00	5,594.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,700.00	0.00	0.00	5,694.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,800.00	0.00	0.00	5,794.71	155.57	12.19	-155.40	0.00	0.00	0.00
5,822.29	0.00	0.00	5,817.00	155.57	12.19	-155.40	0.00	0.00	0.00
Cherry Canyon									
5,900.00	0.00	0.00	5,894.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,000.00	0.00	0.00	5,994.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,100.00	0.00	0.00	6,094.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,200.00	0.00	0.00	6,194.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,300.00	0.00	0.00	6,294.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,400.00	0.00	0.00	6,394.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,481.29	0.00	0.00	6,476.00	155.57	12.19	-155.40	0.00	0.00	0.00
Brushy Canyon									
6,500.00	0.00	0.00	6,494.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,600.00	0.00	0.00	6,594.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,700.00	0.00	0.00	6,694.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,800.00	0.00	0.00	6,794.71	155.57	12.19	-155.40	0.00	0.00	0.00
6,900.00	0.00	0.00	6,894.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,000.00	0.00	0.00	6,994.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,100.00	0.00	0.00	7,094.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,200.00	0.00	0.00	7,194.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,300.00	0.00	0.00	7,294.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,400.00	0.00	0.00	7,394.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,500.00	0.00	0.00	7,494.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,600.00	0.00	0.00	7,594.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,700.00	0.00	0.00	7,694.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,800.00	0.00	0.00	7,794.71	155.57	12.19	-155.40	0.00	0.00	0.00
7,900.00	0.00	0.00	7,894.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,000.00	0.00	0.00	7,994.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,100.00	0.00	0.00	8,094.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,149.29	0.00	0.00	8,144.00	155.57	12.19	-155.40	0.00	0.00	0.00
Bone Spring/Glorieta									

Database: Midland District
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TVD Reference: KB=27' @ 3723.00usft
MD Reference: KB=27' @ 3723.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,200.00	0.00	0.00	8,194.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,300.00	0.00	0.00	8,294.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,400.00	0.00	0.00	8,394.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,500.00	0.00	0.00	8,494.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,600.00	0.00	0.00	8,594.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,700.00	0.00	0.00	8,694.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,800.00	0.00	0.00	8,794.71	155.57	12.19	-155.40	0.00	0.00	0.00
8,900.00	0.00	0.00	8,894.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,000.00	0.00	0.00	8,994.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,100.00	0.00	0.00	9,094.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,200.00	0.00	0.00	9,194.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,300.00	0.00	0.00	9,294.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,400.00	0.00	0.00	9,394.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,500.00	0.00	0.00	9,494.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,600.00	0.00	0.00	9,594.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,600.29	0.00	0.00	9,595.00	155.57	12.19	-155.40	0.00	0.00	0.00
1st Bone Spring Sand									
9,700.00	0.00	0.00	9,694.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,800.00	0.00	0.00	9,794.71	155.57	12.19	-155.40	0.00	0.00	0.00
9,900.00	0.00	0.00	9,894.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,000.00	0.00	0.00	9,994.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,100.00	0.00	0.00	10,094.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,200.00	0.00	0.00	10,194.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,206.29	0.00	0.00	10,201.00	155.57	12.19	-155.40	0.00	0.00	0.00
2nd Bone Spring Sand									
10,300.00	0.00	0.00	10,294.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,312.00	0.00	0.00	10,306.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,400.00	0.00	0.00	10,394.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,500.00	0.00	0.00	10,494.71	155.57	12.19	-155.40	0.00	0.00	0.00
10,552.39	0.00	0.00	10,547.10	155.57	12.19	-155.40	0.00	0.00	0.00
10,600.00	4.76	179.32	10,594.66	153.60	12.21	-153.42	10.00	10.00	0.00
10,650.00	9.76	179.32	10,644.24	147.28	12.29	-147.10	10.00	10.00	0.00
10,700.00	14.76	179.32	10,693.09	136.67	12.41	-136.49	10.00	10.00	0.00
10,740.66	18.83	179.32	10,732.00	124.92	12.55	-124.74	10.00	10.00	0.00
2nd Bone Spring Lime									
10,750.00	19.76	179.32	10,740.82	121.83	12.59	-121.65	10.00	10.00	0.00
10,800.00	24.76	179.32	10,787.08	102.90	12.81	-102.72	10.00	10.00	0.00
10,850.00	29.76	179.32	10,831.51	80.01	13.08	-79.82	10.00	10.00	0.00
10,900.00	34.76	179.32	10,873.78	53.33	13.40	-53.14	10.00	10.00	0.00
10,950.00	39.76	179.32	10,913.56	23.07	13.76	-22.88	10.00	10.00	0.00
11,000.00	44.76	179.32	10,950.55	-10.55	14.15	10.73	10.00	10.00	0.00
11,050.00	49.76	179.32	10,984.47	-47.25	14.59	47.45	10.00	10.00	0.00
11,100.00	54.76	179.32	11,015.07	-86.78	15.06	86.97	10.00	10.00	0.00
11,105.12	55.27	179.32	11,018.00	-90.97	15.11	91.17	10.00	10.00	0.00
Top of 3rd Bone Spring Sand									
11,150.00	59.76	179.32	11,042.10	-128.82	15.55	129.02	10.00	10.00	0.00
11,200.00	64.76	179.32	11,065.36	-173.06	16.08	173.26	10.00	10.00	0.00
11,250.00	69.76	179.32	11,084.68	-219.15	16.62	219.36	10.00	10.00	0.00
11,300.00	74.76	179.32	11,099.91	-266.76	17.19	266.96	10.00	10.00	0.00
11,350.00	79.76	179.32	11,110.93	-315.51	17.76	315.72	10.00	10.00	0.00
11,376.20	82.38	179.32	11,115.00	-341.39	18.07	341.60	10.00	10.00	0.00
3rd Bone Spring Target									
11,400.00	84.76	179.32	11,117.66	-365.03	18.35	365.25	10.00	10.00	0.00
11,443.99	89.16	179.32	11,120.00	-408.94	18.87	409.16	10.00	10.00	0.00

Database: Midland District
Company: Caza Operating, LLC
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Well: #1H
Wellbore: OH
Design: Plan #2

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TVD Reference: KB=27' @ 3723.00usft
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North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,500.00	89.16	179.32	11,120.82	-464.95	19.53	465.17	0.00	0.00	0.00
11,600.00	89.16	179.32	11,122.28	-564.93	20.71	565.16	0.00	0.00	0.00
11,700.00	89.16	179.32	11,123.75	-664.91	21.90	665.15	0.00	0.00	0.00
11,800.00	89.16	179.32	11,125.22	-764.89	23.08	765.14	0.00	0.00	0.00
11,900.00	89.16	179.32	11,126.68	-864.88	24.26	865.12	0.00	0.00	0.00
12,000.00	89.16	179.32	11,128.15	-964.86	25.44	965.11	0.00	0.00	0.00
12,100.00	89.16	179.32	11,129.61	-1,064.84	26.63	1,065.10	0.00	0.00	0.00
12,200.00	89.16	179.32	11,131.08	-1,164.82	27.81	1,165.09	0.00	0.00	0.00
12,300.00	89.16	179.32	11,132.55	-1,264.81	28.99	1,265.08	0.00	0.00	0.00
12,400.00	89.16	179.32	11,134.01	-1,364.79	30.18	1,365.07	0.00	0.00	0.00
12,500.00	89.16	179.32	11,135.48	-1,464.77	31.36	1,465.06	0.00	0.00	0.00
12,600.00	89.16	179.32	11,136.94	-1,564.75	32.54	1,565.05	0.00	0.00	0.00
12,700.00	89.16	179.32	11,138.41	-1,664.73	33.73	1,665.04	0.00	0.00	0.00
12,800.00	89.16	179.32	11,139.87	-1,764.72	34.91	1,765.03	0.00	0.00	0.00
12,900.00	89.16	179.32	11,141.34	-1,864.70	36.09	1,865.02	0.00	0.00	0.00
13,000.00	89.16	179.32	11,142.81	-1,964.68	37.27	1,965.00	0.00	0.00	0.00
13,100.00	89.16	179.32	11,144.27	-2,064.66	38.46	2,064.99	0.00	0.00	0.00
13,200.00	89.16	179.32	11,145.74	-2,164.65	39.64	2,164.98	0.00	0.00	0.00
13,300.00	89.16	179.32	11,147.20	-2,264.63	40.82	2,264.97	0.00	0.00	0.00
13,400.00	89.16	179.32	11,148.67	-2,364.61	42.01	2,364.96	0.00	0.00	0.00
13,500.00	89.16	179.32	11,150.14	-2,464.59	43.19	2,464.95	0.00	0.00	0.00
13,600.00	89.16	179.32	11,151.60	-2,564.58	44.37	2,564.94	0.00	0.00	0.00
13,700.00	89.16	179.32	11,153.07	-2,664.56	45.55	2,664.93	0.00	0.00	0.00
13,800.00	89.16	179.32	11,154.53	-2,764.54	46.74	2,764.92	0.00	0.00	0.00
13,900.00	89.16	179.32	11,156.00	-2,864.52	47.92	2,864.91	0.00	0.00	0.00
14,000.00	89.16	179.32	11,157.47	-2,964.50	49.10	2,964.90	0.00	0.00	0.00
14,100.00	89.16	179.32	11,158.93	-3,064.49	50.29	3,064.89	0.00	0.00	0.00
14,200.00	89.16	179.32	11,160.40	-3,164.47	51.47	3,164.87	0.00	0.00	0.00
14,300.00	89.16	179.32	11,161.86	-3,264.45	52.65	3,264.86	0.00	0.00	0.00
14,400.00	89.16	179.32	11,163.33	-3,364.43	53.83	3,364.85	0.00	0.00	0.00
14,500.00	89.16	179.32	11,164.80	-3,464.42	55.02	3,464.84	0.00	0.00	0.00
14,600.00	89.16	179.32	11,166.26	-3,564.40	56.20	3,564.83	0.00	0.00	0.00
14,700.00	89.16	179.32	11,167.73	-3,664.38	57.38	3,664.82	0.00	0.00	0.00
14,800.00	89.16	179.32	11,169.19	-3,764.36	58.57	3,764.81	0.00	0.00	0.00
14,900.00	89.16	179.32	11,170.66	-3,864.34	59.75	3,864.80	0.00	0.00	0.00
14,991.45	89.16	179.32	11,172.00	-3,955.77	60.83	3,956.23	0.00	0.00	0.00
Wolfcamp									
15,000.00	89.16	179.32	11,172.13	-3,964.33	60.93	3,964.79	0.00	0.00	0.00
15,100.00	89.16	179.32	11,173.59	-4,064.31	62.11	4,064.78	0.00	0.00	0.00
15,200.00	89.16	179.32	11,175.06	-4,164.29	63.30	4,164.77	0.00	0.00	0.00
15,300.00	89.16	179.32	11,176.52	-4,264.27	64.48	4,264.75	0.00	0.00	0.00
15,400.00	89.16	179.32	11,177.99	-4,364.26	65.66	4,364.74	0.00	0.00	0.00
15,500.00	89.16	179.32	11,179.46	-4,464.24	66.85	4,464.73	0.00	0.00	0.00
15,600.00	89.16	179.32	11,180.92	-4,564.22	68.03	4,564.72	0.00	0.00	0.00
15,700.00	89.16	179.32	11,182.39	-4,664.20	69.21	4,664.71	0.00	0.00	0.00
15,800.00	89.16	179.32	11,183.85	-4,764.18	70.39	4,764.70	0.00	0.00	0.00
15,900.00	89.16	179.32	11,185.32	-4,864.17	71.58	4,864.69	0.00	0.00	0.00
16,000.00	89.16	179.32	11,186.79	-4,964.15	72.76	4,964.68	0.00	0.00	0.00
16,100.00	89.16	179.32	11,188.25	-5,064.13	73.94	5,064.67	0.00	0.00	0.00
16,200.00	89.16	179.32	11,189.72	-5,164.11	75.13	5,164.66	0.00	0.00	0.00
16,300.00	89.16	179.32	11,191.18	-5,264.10	76.31	5,264.65	0.00	0.00	0.00
16,400.00	89.16	179.32	11,192.65	-5,364.08	77.49	5,364.64	0.00	0.00	0.00
16,500.00	89.16	179.32	11,194.11	-5,464.06	78.67	5,464.62	0.00	0.00	0.00

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16,600.00	89.16	179.32	11,195.58	-5,564.04	79.86	5,564.61	0.00	0.00	0.00
16,700.00	89.16	179.32	11,197.05	-5,664.03	81.04	5,664.60	0.00	0.00	0.00
16,800.00	89.16	179.32	11,198.51	-5,764.01	82.22	5,764.59	0.00	0.00	0.00
16,900.00	89.16	179.32	11,199.98	-5,863.99	83.41	5,864.58	0.00	0.00	0.00
17,000.00	89.16	179.32	11,201.44	-5,963.97	84.59	5,964.57	0.00	0.00	0.00
17,100.00	89.16	179.32	11,202.91	-6,063.95	85.77	6,064.56	0.00	0.00	0.00
17,200.00	89.16	179.32	11,204.38	-6,163.94	86.95	6,164.55	0.00	0.00	0.00
17,300.00	89.16	179.32	11,205.84	-6,263.92	88.14	6,264.54	0.00	0.00	0.00
17,400.00	89.16	179.32	11,207.31	-6,363.90	89.32	6,364.53	0.00	0.00	0.00
17,500.00	89.16	179.32	11,208.77	-6,463.88	90.50	6,464.52	0.00	0.00	0.00
17,600.00	89.16	179.32	11,210.24	-6,563.87	91.69	6,564.50	0.00	0.00	0.00
17,700.00	89.16	179.32	11,211.71	-6,663.85	92.87	6,664.49	0.00	0.00	0.00
17,800.00	89.16	179.32	11,213.17	-6,763.83	94.05	6,764.48	0.00	0.00	0.00
17,900.00	89.16	179.32	11,214.64	-6,863.81	95.23	6,864.47	0.00	0.00	0.00
18,000.00	89.16	179.32	11,216.10	-6,963.79	96.42	6,964.46	0.00	0.00	0.00
18,100.00	89.16	179.32	11,217.57	-7,063.78	97.60	7,064.45	0.00	0.00	0.00
18,200.00	89.16	179.32	11,219.04	-7,163.76	98.78	7,164.44	0.00	0.00	0.00
18,300.00	89.16	179.32	11,220.50	-7,263.74	99.97	7,264.43	0.00	0.00	0.00
18,400.00	89.16	179.32	11,221.97	-7,363.72	101.15	7,364.42	0.00	0.00	0.00
18,500.00	89.16	179.32	11,223.43	-7,463.71	102.33	7,464.41	0.00	0.00	0.00
18,600.00	89.16	179.32	11,224.90	-7,563.69	103.51	7,564.40	0.00	0.00	0.00
18,700.00	89.16	179.32	11,226.37	-7,663.67	104.70	7,664.39	0.00	0.00	0.00
18,800.00	89.16	179.32	11,227.83	-7,763.65	105.88	7,764.37	0.00	0.00	0.00
18,900.00	89.16	179.32	11,229.30	-7,863.63	107.06	7,864.36	0.00	0.00	0.00
19,000.00	89.16	179.32	11,230.76	-7,963.62	108.25	7,964.35	0.00	0.00	0.00
19,100.00	89.16	179.32	11,232.23	-8,063.60	109.43	8,064.34	0.00	0.00	0.00
19,200.00	89.16	179.32	11,233.70	-8,163.58	110.61	8,164.33	0.00	0.00	0.00
19,300.00	89.16	179.32	11,235.16	-8,263.56	111.79	8,264.32	0.00	0.00	0.00
19,400.00	89.16	179.32	11,236.63	-8,363.55	112.98	8,364.31	0.00	0.00	0.00
19,500.00	89.16	179.32	11,238.09	-8,463.53	114.16	8,464.30	0.00	0.00	0.00
19,600.00	89.16	179.32	11,239.56	-8,563.51	115.34	8,564.29	0.00	0.00	0.00
19,700.00	89.16	179.32	11,241.03	-8,663.49	116.53	8,664.28	0.00	0.00	0.00
19,800.00	89.16	179.32	11,242.49	-8,763.48	117.71	8,764.27	0.00	0.00	0.00
19,834.74	89.16	179.32	11,243.00	-8,798.21	118.12	8,799.00	0.00	0.00	0.00

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (bearing)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
POP (E F 1H)	0.00	0.00	11,049.59	-140.00	1.00	586,206.00	802,084.00	32° 36' 31.239 N	103° 29' 11.596 W
- plan misses target center by 14.73usft at 11163.23usft MD (11048.63 TVD, -140.33 N, 15.69 E)									
- Point									
LP (E F 1H)	0.00	0.00	11,120.00	-408.94	18.87	585,937.06	802,101.87	32° 36' 28.576 N	103° 29' 11.412 W
- plan hits target center									
- Point									
BHL (E F 1H)	0.00	0.00	11,243.00	-8,798.21	118.12	577,547.79	802,201.12	32° 35' 5.562 N	103° 29' 11.033 W
- plan hits target center									
- Point									

Database: Midland District
Company: Caza Operating, LLC
Project: Lea County, NM (NAD 83 NME)
Site: Eagleclaw Federal
Well: #1H
Wellbore: OH
Design: Plan #2

Local Co-ordinate Reference: Well #1H
TVD Reference: KB=27' @ 3723.00usft
MD Reference: KB=27' @ 3723.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,960.00	1,960.00	13 3/8"	13-3/8	17-1/2
4,304.80	4,300.00	9 5/8"	9-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (bearing)
1,910.00	1,910.00	Rustler			
2,106.00	2,106.00	Top of Salt			
3,587.05	3,584.00	Base of Salt			
3,815.61	3,812.00	Yates			
4,184.51	4,180.00	Capitan			
5,572.29	5,567.00	Delaware			
5,822.29	5,817.00	Cherry Canyon			
6,481.29	6,476.00	Brushy Canyon			
8,149.29	8,144.00	Bone Spring/Glorieta			
9,600.29	9,595.00	1st Bone Spring Sand			
10,206.29	10,201.00	2nd Bone Spring Sand			
10,740.66	10,732.00	2nd Bone Spring Lime			
11,105.12	11,018.00	Top of 3rd Bone Spring Sand			
11,376.20	11,115.00	3rd Bone Spring Target			
14,991.45	11,172.00	Wolfcamp			

Conditions of Approval

VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. Operator has stated that they will have monitoring equipment in place prior to drilling out of the surface shoe. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Rustler, Red Beds, and Delaware.

Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

1. The 13-3/8 inch surface casing shall be set at approximately 1960 feet (in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing, which shall be set at approximately 4100 feet (**top of the Seven Rivers formation**), is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess calculates to 22% - Additional cement may be required.**

Note: If lost circulation is encountered after setting the intermediate casing, switch to fresh water.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

The pilot hole plugging procedure is approved as written. Note plug top on Subsequent Report sundry of drilling activities.

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

☒ Cement as proposed by operator. Operator shall provide method of verification.

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
2. **In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).**
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) psi.**
4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 intermediate casing shoe shall be

5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
 - g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.