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

Revised August 1, 2011
 Submit one copy to appropriate
 District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION AS-DRILLED PLAT

¹ API Number 30-025-46411	² Pool Code 37570	³ Pool Name LEA; BONE SPRING
⁴ Property Code 313780	Property Name IGLOO 19-24 STATE FED COM	⁶ Well Number 12H
⁷ OGRID No. 299049	⁸ Operator Name CAZA OPERATING, LLC	⁹ Elevation 3695'

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
0	19	20S	35E		401	SOUTH	2514	EAST	LEA
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
M	24	20S	34E		383	SOUTH	316	WEST	LEA
¹² Dedicated Acres 240	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

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.

¹⁶ SEC. 14 SEC. 13 SEC. 23 SEC. 24 CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 791217.69' / Y: 566581.81' B - X: 799143.70' / Y: 566653.49' C - X: 799154.08' / Y: 565333.74' D - X: 791226.95' / Y: 565264.59' CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 750036.42' / Y: 566519.37' B - X: 757962.33' / Y: 566591.02' C - X: 757972.68' / Y: 565271.31' D - X: 750045.65' / Y: 565202.20' LAST TAKE POINT/BHL NEAREST FROM THE LEASE MD=18,035' LAST TAKE POINT/BOTTOM HOLE LOCATION 18,660' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X:791540.37' / Y:565649.90' LAT:32.55240564N / LON:103.52130146W NAD 27, SPCS NM EAST X:750359.07' / Y:565587.49' LAT:32.55228202N / LON:103.52081323W		SEC. 13 SEC. 24 SEC. 18 SEC. 19 SURFACE HOLE LOCATION 401' FSL 2514' FEL SECTION 19 NAD 83, SPCS NM EAST X:799275.49' / Y:565735.86' LAT:32.55247726N / LON:103.49619726W NAD 27, SPCS NM EAST X:758094.09' / Y:565673.42' LAT:32.55235346N / LON:103.49570993W T-20-S, R-34-E T-20-S, R-35-E FARTEST FROM THE LEASE MD=12,305' KOP/FIRST TAKE POINT 157' SHL 2514' KICK OFF POINT/FIRST TAKE POINT 11,190' MEASURED DEPTH IN FEET NAD 83, SPCS NM EAST X:798994.52' / Y:565719.35' LAT:32.55243795N / LON:103.49710948W NAD 27, SPCS NM EAST X:757813.13' / Y:565656.91' LAT:32.55231415N / LON:103.49662211W	
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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.

05/01/2020

Signature _____ Date _____

Printed Name **Steve Morris**

E-mail Address **steve.morris@morcoreengineering.com**

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well surface location shown on this plat was plotted from field notes of the as-staked surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Data used for underground measurements were provided by others for reference only and does not constitute field measurements performed by R. Squared Global.

JANUARY 24, 2020

Date of Survey _____

Signature and Seal of Professional Surveyor _____

Certificate Number **DAVID W. MYERS 11403**

DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 0.99981205
 CONVERGENCE ANGLE: 0.44922778; NOTE: ALL DIMENSIONS ARE IN U.S. FEET
 AND BASED ON GRID DATA.

1	01/23/2020	DEF
REV.	DATE	BY

SHEET 1 OF 1
 R4021_007



Caza Operating, LLC

Lea County, New Mexico (NAD83)

Igloo 19-24 State Fed Com

12H

OH / 65460

Survey: Phoenix MWD Surveys

Standard Survey Report

20 November, 2019





Survey Report



Company:	Caza Operating, LLC	Local Co-ordinate Reference:	Well 12H
Project:	Lea County, New Mexico (NAD83)	TVD Reference:	RKB @ 3715.00usft (Nabors M51)
Site:	Igloo 19-24 State Fed Com	MD Reference:	RKB @ 3715.00usft (Nabors M51)
Well:	12H	North Reference:	Grid
Wellbore:	OH / 65460	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors M51)	Database:	USA Compass

Project	Lea County, New Mexico (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Igloo 19-24 State Fed Com		
Site Position:		Northing:	565,735.77 usft
From:	Map	Easting:	799,276.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 33' 8.917176 N
		Longitude:	103° 29' 46.298362 W
		Grid Convergence:	0.45 °

Well	12H		
Well Position	+N/-S	0.00 usft	Northing: 565,735.77 usft
	+E/-W	0.00 usft	Easting: 799,276.50 usft
Position Uncertainty	1.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 33' 8.917176 N
		Longitude:	103° 29' 46.298362 W
		Ground Level:	3,693.00 usft

Wellbore	OH / 65460		
Magnetics	Model Name	Sample Date	Declination (°)
	MVHD	10/31/2019	6.57
			Dip Angle (°)
			60.45
			Field Strength (nT)
			48,066.89665690

Design	Surveys (Nabors M51)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			269.48

Survey Program	Date	11/20/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
62.10	5,198.00	VES Gyro Surveys (OH / 65460)	NS-GYRO-MS	North sensing gyrocompassing m/s
5,375.00	18,660.00	Phoenix MWD Surveys (OH / 65460)	MWD+HDGM	OWSG Rev.2 MWD + HDGM

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,198.00	2.12	176.36	5,195.99	-62.70	11.99	-11.42	0.00	0.00	0.00	
Tie In										
5,375.00	1.97	168.85	5,372.88	-68.95	12.78	-12.16	0.17	-0.08	-4.24	
First Phoenix MWD Survey										
5,469.00	2.04	164.03	5,466.82	-72.15	13.56	-12.90	0.19	0.07	-5.13	
5,564.00	1.54	147.18	5,561.77	-74.85	14.71	-14.03	0.76	-0.53	-17.74	
5,658.00	0.47	88.77	5,655.76	-75.90	15.78	-15.10	1.44	-1.14	-62.14	
5,752.00	2.01	58.50	5,749.73	-75.03	17.58	-16.89	1.72	1.64	-32.20	
5,846.00	1.82	53.33	5,843.68	-73.28	20.18	-19.51	0.27	-0.20	-5.50	



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Well:	12H	North Reference:	Grid
Wellbore:	OH / 65460	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors M51)	Database:	USA Compass

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,941.00	2.90	60.19	5,938.60	-71.18	23.47	-22.83	1.17	1.14	7.22	
6,035.00	3.44	62.26	6,032.46	-68.69	28.03	-27.41	0.59	0.57	2.20	
6,128.00	3.23	59.74	6,125.30	-66.07	32.77	-32.16	0.28	-0.23	-2.71	
6,222.00	3.28	62.55	6,219.15	-63.49	37.44	-36.86	0.18	0.05	2.99	
6,316.00	3.00	61.75	6,313.01	-61.09	41.99	-41.44	0.30	-0.30	-0.85	
6,411.00	2.90	59.20	6,407.88	-58.68	46.25	-45.71	0.17	-0.11	-2.68	
6,505.00	4.18	66.66	6,501.70	-56.11	51.44	-50.92	1.44	1.36	7.94	
6,599.00	4.04	66.14	6,595.46	-53.41	57.61	-57.12	0.15	-0.15	-0.55	
6,693.00	3.74	63.50	6,689.24	-50.70	63.38	-62.92	0.37	-0.32	-2.81	
6,788.00	3.26	62.83	6,784.06	-48.09	68.56	-68.12	0.51	-0.51	-0.71	
6,882.00	3.26	60.44	6,877.91	-45.55	73.26	-72.84	0.14	0.00	-2.54	
6,977.00	3.82	73.78	6,972.73	-43.33	78.65	-78.25	1.04	0.59	14.04	
7,071.00	3.84	74.09	7,066.52	-41.59	84.68	-84.30	0.03	0.02	0.33	
7,165.00	3.48	75.98	7,160.33	-40.04	90.48	-90.11	0.40	-0.38	2.01	
7,259.00	4.74	75.14	7,254.09	-38.35	97.00	-96.65	1.34	1.34	-0.89	
7,353.00	6.40	76.08	7,347.64	-36.10	105.84	-105.51	1.77	1.77	1.00	
7,448.00	6.05	78.02	7,442.08	-33.78	115.87	-115.56	0.43	-0.37	2.04	
7,542.00	5.90	77.36	7,535.57	-31.70	125.43	-125.14	0.18	-0.16	-0.70	
7,636.00	5.46	78.23	7,629.11	-29.73	134.53	-134.25	0.48	-0.47	0.93	
7,730.00	6.15	79.25	7,722.62	-27.88	143.85	-143.59	0.74	0.73	1.09	
7,824.00	6.36	78.61	7,816.06	-25.91	153.90	-153.66	0.24	0.22	-0.68	
7,918.00	5.78	78.41	7,909.54	-23.93	163.64	-163.42	0.62	-0.62	-0.21	
8,012.00	6.51	79.58	8,003.00	-22.02	173.52	-173.31	0.79	0.78	1.24	
8,106.00	6.40	78.38	8,096.40	-20.00	183.89	-183.70	0.19	-0.12	-1.28	
8,201.00	6.27	79.16	8,190.82	-17.95	194.18	-194.00	0.16	-0.14	0.82	
8,295.00	5.81	78.61	8,284.30	-16.05	203.88	-203.73	0.49	-0.49	-0.59	
8,390.00	6.36	77.97	8,378.76	-14.00	213.74	-213.60	0.58	0.58	-0.67	
8,483.00	6.30	77.09	8,471.19	-11.79	223.75	-223.64	0.12	-0.06	-0.95	
8,578.00	5.77	79.10	8,565.67	-9.72	233.52	-233.42	0.60	-0.56	2.12	
8,672.00	6.33	78.12	8,659.14	-7.76	243.23	-243.15	0.61	0.60	-1.04	
8,766.00	5.98	78.09	8,752.60	-5.68	253.10	-253.03	0.37	-0.37	-0.03	
8,860.00	4.69	79.09	8,846.19	-3.95	261.66	-261.61	1.38	-1.37	1.06	
8,955.00	4.12	82.81	8,940.91	-2.78	268.86	-268.82	0.67	-0.60	3.92	
9,049.00	3.65	82.04	9,034.70	-1.95	275.17	-275.14	0.50	-0.50	-0.82	
9,144.00	3.34	81.00	9,129.52	-1.10	280.90	-280.88	0.33	-0.33	-1.09	
9,238.00	2.94	76.63	9,223.38	-0.11	285.95	-285.94	0.50	-0.43	-4.65	
9,333.00	2.63	75.46	9,318.27	1.00	290.43	-290.43	0.33	-0.33	-1.23	
9,427.00	2.66	77.42	9,412.17	2.02	294.65	-294.65	0.10	0.03	2.09	
9,544.00	1.98	82.88	9,529.07	2.86	299.30	-299.32	0.61	-0.58	4.67	
9,639.00	1.58	83.02	9,624.02	3.22	302.23	-302.25	0.42	-0.42	0.15	
9,733.00	1.13	119.26	9,718.00	2.93	304.33	-304.34	1.01	-0.48	38.55	
9,827.00	1.23	174.76	9,811.98	1.47	305.23	-305.23	1.17	0.11	59.04	
9,921.00	1.44	190.00	9,905.96	-0.70	305.11	-305.10	0.44	0.22	16.21	



Survey Report



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Site:	Igloo 19-24 State Fed Com	MD Reference:	RKB @ 3715.00usft (Nabors M51)
Well:	12H	North Reference:	Grid
Wellbore:	OH / 65460	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors M51)	Database:	USA Compass

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,014.00	0.97	157.11	9,998.94	-2.58	305.22	-305.18	0.88	-0.51	-35.37	
10,109.00	0.78	158.27	10,093.92	-3.92	305.77	-305.72	0.20	-0.20	1.22	
10,203.00	1.09	243.47	10,187.92	-4.91	305.21	-305.15	1.37	0.33	90.64	
10,297.00	3.32	261.59	10,281.84	-5.71	301.71	-301.65	2.46	2.37	19.28	
10,328.00	6.42	267.58	10,312.73	-5.91	299.09	-299.03	10.12	10.00	19.32	
10,359.00	9.92	267.76	10,343.41	-6.09	294.69	-294.63	11.29	11.29	0.58	
10,390.00	12.63	268.19	10,373.81	-6.30	288.64	-288.57	8.75	8.74	1.39	
10,437.00	17.09	266.17	10,419.22	-6.93	276.60	-276.53	9.55	9.49	-4.30	
10,483.00	19.27	265.05	10,462.92	-8.03	262.30	-262.21	4.80	4.74	-2.43	
10,530.00	21.89	263.02	10,506.92	-9.77	245.87	-245.77	5.78	5.57	-4.32	
10,577.00	26.47	265.23	10,549.79	-11.70	226.72	-226.61	9.93	9.74	4.70	
10,624.00	31.09	267.66	10,590.97	-13.07	204.15	-204.02	10.14	9.83	5.17	
10,672.00	36.92	270.71	10,630.75	-13.40	177.32	-177.20	12.65	12.15	6.35	
10,719.00	42.04	269.77	10,667.01	-13.29	147.45	-147.33	10.97	10.89	-2.00	
10,766.00	48.79	269.82	10,699.99	-13.41	114.00	-113.87	14.36	14.36	0.11	
10,813.00	55.75	269.13	10,728.73	-13.76	76.85	-76.72	14.85	14.81	-1.47	
10,861.00	62.91	268.91	10,753.20	-14.47	35.60	-35.46	14.92	14.92	-0.46	
10,908.00	68.28	269.04	10,772.61	-15.23	-7.18	7.32	11.43	11.43	0.28	
10,955.00	72.19	269.08	10,788.50	-15.95	-51.40	51.54	8.32	8.32	0.09	
11,002.00	74.73	269.18	10,801.88	-16.64	-96.44	96.59	5.41	5.40	0.21	
11,050.00	75.94	269.42	10,814.03	-17.21	-142.88	143.03	2.57	2.52	0.50	
11,097.00	79.01	270.15	10,824.22	-17.38	-188.75	188.90	6.71	6.53	1.55	
11,143.00	83.18	270.70	10,831.34	-17.04	-234.18	234.33	9.14	9.07	1.20	
11,190.00	85.85	270.63	10,835.84	-16.50	-280.96	281.10	5.68	5.68	-0.15	
11,238.00	90.28	269.34	10,837.46	-16.51	-328.92	329.06	9.61	9.23	-2.69	
11,332.00	94.17	269.64	10,833.81	-17.34	-422.83	422.97	4.15	4.14	0.32	
11,367.00	94.60	269.20	10,831.13	-17.70	-457.72	457.87	1.76	1.23	-1.26	
11,461.00	96.18	269.96	10,822.30	-18.38	-551.30	551.45	1.86	1.68	0.81	
11,555.00	96.26	270.41	10,812.12	-18.08	-644.75	644.89	0.48	0.09	0.48	
11,647.00	95.19	271.55	10,802.94	-16.52	-736.27	736.39	1.69	-1.16	1.24	
11,660.00	94.28	269.96	10,801.87	-16.35	-749.23	749.35	14.06	-7.00	-12.23	
11,741.00	93.95	271.37	10,796.05	-15.41	-830.01	830.12	1.78	-0.41	1.74	
11,835.00	92.80	271.71	10,790.52	-12.89	-923.81	923.89	1.28	-1.22	0.36	
11,928.00	93.53	272.90	10,785.39	-9.15	-1,016.59	1,016.63	1.50	0.78	1.28	
12,023.00	94.90	273.91	10,778.40	-3.53	-1,111.17	1,111.15	1.79	1.44	1.06	
12,117.00	95.30	273.18	10,770.05	2.26	-1,204.61	1,204.54	0.88	0.43	-0.78	
12,211.00	92.38	270.98	10,763.75	5.66	-1,298.32	1,298.22	3.89	-3.11	-2.34	
12,305.00	92.33	269.15	10,759.89	5.77	-1,392.24	1,392.13	1.95	-0.05	-1.95	
12,399.00	93.17	268.18	10,755.38	3.58	-1,486.11	1,486.01	1.36	0.89	-1.03	
12,492.00	94.71	268.55	10,748.99	0.94	-1,578.85	1,578.77	1.70	1.66	0.40	
12,587.00	94.41	268.31	10,741.44	-1.66	-1,673.51	1,673.45	0.40	-0.32	-0.25	
12,681.00	94.01	269.70	10,734.53	-3.29	-1,767.24	1,767.20	1.53	-0.43	1.48	
12,775.00	95.27	269.75	10,726.93	-3.74	-1,860.93	1,860.88	1.34	1.34	0.05	
12,869.00	95.78	267.56	10,717.88	-5.93	-1,954.46	1,954.43	2.38	0.54	-2.33	



Survey Report



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12,964.00	94.90	266.54	10,709.04	-10.80	-2,048.92	2,048.93	1.41	-0.93	-1.07	
13,058.00	93.59	267.40	10,702.08	-15.75	-2,142.53	2,142.58	1.67	-1.39	0.91	
13,152.00	93.05	268.92	10,696.64	-18.77	-2,236.32	2,236.40	1.71	-0.57	1.62	
13,246.00	93.19	268.71	10,691.52	-20.71	-2,330.16	2,330.25	0.27	0.15	-0.22	
13,340.00	94.60	268.71	10,685.13	-22.82	-2,423.92	2,424.02	1.50	1.50	0.00	
13,434.00	93.95	268.87	10,678.13	-24.80	-2,517.63	2,517.75	0.71	-0.69	0.17	
13,528.00	93.53	269.90	10,672.00	-25.80	-2,611.43	2,611.55	1.18	-0.45	1.10	
13,623.00	92.88	270.32	10,666.68	-25.62	-2,706.28	2,706.40	0.81	-0.68	0.44	
13,718.00	94.52	270.48	10,660.55	-24.96	-2,801.07	2,801.18	1.73	1.73	0.17	
13,813.00	96.11	271.40	10,651.75	-23.41	-2,895.65	2,895.74	1.93	1.67	0.97	
13,907.00	95.10	271.28	10,642.57	-21.22	-2,989.17	2,989.24	1.08	-1.07	-0.13	
14,001.00	94.17	271.77	10,634.98	-18.73	-3,082.83	3,082.87	1.12	-0.99	0.52	
14,096.00	93.03	270.69	10,629.01	-16.69	-3,177.62	3,177.64	1.65	-1.20	-1.14	
14,191.00	94.12	269.30	10,623.09	-16.70	-3,272.43	3,272.44	1.86	1.15	-1.46	
14,284.00	94.86	268.77	10,615.81	-18.26	-3,365.13	3,365.16	0.98	0.80	-0.57	
14,379.00	95.13	268.56	10,607.54	-20.47	-3,459.74	3,459.78	0.36	0.28	-0.22	
14,472.00	93.61	268.37	10,600.45	-22.95	-3,552.44	3,552.50	1.65	-1.63	-0.20	
14,566.00	94.04	268.27	10,594.18	-25.70	-3,646.19	3,646.27	0.47	0.46	-0.11	
14,659.00	95.81	268.69	10,586.20	-28.16	-3,738.81	3,738.91	1.96	1.90	0.45	
14,753.00	95.19	269.30	10,577.19	-29.80	-3,832.36	3,832.47	0.92	-0.66	0.65	
14,847.00	93.00	270.88	10,570.47	-29.65	-3,926.11	3,926.22	2.87	-2.33	1.68	
14,941.00	92.24	271.32	10,566.18	-27.85	-4,019.99	4,020.08	0.93	-0.81	0.47	
15,035.00	90.70	268.45	10,563.76	-28.04	-4,113.95	4,114.03	3.46	-1.64	-3.05	
15,119.00	91.59	267.82	10,562.09	-30.77	-4,197.89	4,197.99	1.30	1.06	-0.75	
15,213.00	90.31	268.83	10,560.53	-33.52	-4,291.83	4,291.96	1.73	-1.36	1.07	
15,308.00	89.78	269.98	10,560.45	-34.50	-4,386.82	4,386.95	1.33	-0.56	1.21	
15,403.00	90.84	271.40	10,559.94	-33.36	-4,481.81	4,481.93	1.87	1.12	1.49	
15,497.00	91.32	270.26	10,558.17	-32.00	-4,575.78	4,575.88	1.32	0.51	-1.21	
15,591.00	92.69	270.52	10,554.88	-31.36	-4,669.72	4,669.81	1.48	1.46	0.28	
15,686.00	92.55	269.80	10,550.54	-31.10	-4,764.62	4,764.71	0.77	-0.15	-0.76	
15,781.00	91.51	270.30	10,547.17	-31.01	-4,859.56	4,859.64	1.21	-1.09	0.53	
15,875.00	90.17	270.55	10,545.79	-30.32	-4,953.54	4,953.61	1.45	-1.43	0.27	
15,969.00	90.17	269.16	10,545.51	-30.55	-5,047.54	5,047.61	1.48	0.00	-1.48	
16,064.00	91.32	269.21	10,544.28	-31.90	-5,142.52	5,142.60	1.21	1.21	0.05	
16,159.00	90.95	269.08	10,542.40	-33.32	-5,237.49	5,237.58	0.41	-0.39	-0.14	
16,253.00	91.65	268.58	10,540.26	-35.24	-5,331.45	5,331.55	0.92	0.74	-0.53	
16,347.00	92.97	269.50	10,536.48	-36.81	-5,425.35	5,425.47	1.71	1.40	0.98	
16,440.00	91.93	268.77	10,532.50	-38.22	-5,518.26	5,518.38	1.37	-1.12	-0.78	
16,535.00	91.26	267.57	10,529.86	-41.25	-5,613.17	5,613.31	1.45	-0.71	-1.26	
16,629.00	90.76	268.00	10,528.20	-44.88	-5,707.08	5,707.26	0.70	-0.53	0.46	
16,724.00	91.76	268.31	10,526.11	-47.94	-5,802.01	5,802.21	1.10	1.05	0.33	
16,819.00	92.86	268.33	10,522.28	-50.72	-5,896.89	5,897.11	1.16	1.16	0.02	
16,913.00	94.20	268.24	10,516.49	-53.53	-5,990.67	5,990.91	1.43	1.43	-0.10	



Survey Report



Company:	Caza Operating, LLC	Local Co-ordinate Reference:	Well 12H
Project:	Lea County, New Mexico (NAD83)	TVD Reference:	RKB @ 3715.00usft (Nabors M51)
Site:	Igloo 19-24 State Fed Com	MD Reference:	RKB @ 3715.00usft (Nabors M51)
Well:	12H	North Reference:	Grid
Wellbore:	OH / 65460	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Nabors M51)	Database:	USA Compass

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
17,007.00	92.83	268.02	10,510.73	-56.59	-6,084.44	6,084.70	1.48	-1.46	-0.23	
17,101.00	93.33	267.70	10,505.68	-60.10	-6,178.24	6,178.53	0.63	0.53	-0.34	
17,196.00	94.62	266.46	10,499.09	-64.92	-6,272.88	6,273.21	1.88	1.36	-1.31	
17,290.00	95.24	267.61	10,491.02	-69.77	-6,366.41	6,366.78	1.39	0.66	1.22	
17,384.00	93.75	268.36	10,483.65	-73.06	-6,460.06	6,460.45	1.77	-1.59	0.80	
17,477.00	91.99	268.63	10,478.99	-75.50	-6,552.90	6,553.32	1.91	-1.89	0.29	
17,572.00	90.95	269.02	10,476.56	-77.45	-6,647.85	6,648.28	1.17	-1.09	0.41	
17,666.00	91.12	269.34	10,474.86	-78.79	-6,741.83	6,742.26	0.39	0.18	0.34	
17,751.00	91.03	268.60	10,473.26	-80.32	-6,826.80	6,827.25	0.88	-0.11	-0.87	
17,846.00	90.70	269.04	10,471.83	-82.28	-6,921.77	6,922.23	0.58	-0.35	0.46	
17,940.00	91.96	268.18	10,469.65	-84.56	-7,015.71	7,016.19	1.62	1.34	-0.91	
18,035.00	91.48	269.54	10,466.79	-86.45	-7,110.65	7,111.14	1.52	-0.51	1.43	
18,129.00	90.20	270.19	10,465.42	-86.67	-7,204.63	7,205.12	1.53	-1.36	0.69	
18,222.00	90.48	269.98	10,464.87	-86.53	-7,297.63	7,298.12	0.38	0.30	-0.23	
18,317.00	91.09	270.14	10,463.56	-86.43	-7,392.62	7,393.10	0.66	0.64	0.17	
18,411.00	91.99	270.16	10,461.04	-86.18	-7,486.59	7,487.06	0.96	0.96	0.02	
18,506.00	93.22	270.12	10,456.72	-85.95	-7,581.49	7,581.95	1.30	1.29	-0.04	
18,588.00	94.28	269.96	10,451.36	-85.90	-7,663.31	7,663.77	1.31	1.29	-0.20	
Final Phoenix MWD Survey										
18,660.00	94.28	269.96	10,445.98	-85.95	-7,735.11	7,735.57	0.00	0.00	0.00	
Projection to TD										

Survey Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
5,198.00	5,195.99	-62.70	11.99	Tie In	
5,375.00	5,372.88	-68.95	12.78	First Phoenix MWD Survey	
18,588.00	10,451.36	-85.90	-7,663.31	Final Phoenix MWD Survey	
18,660.00	10,445.98	-85.95	-7,735.11	Projection to TD	

Submit a Copy To Appropriate District Office
District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-025-46411
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Igloo 19-24 State Fed Com
8. Well Number 12H
9. OGRID Number 249099
10. Pool name or Wildcat
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3595'GR

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐	
2. Name of Operator Caza Oil and Gas, Inc	
3. Address of Operator 200 N. Lorraine St #1550., Midland, TX 79701	
4. Well Location Unit Letter O : 401 feet from the South line and 2514 feet from the East line Section 19 Township 20S Range 35E NMPM County Lea	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3595'GR	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☒		OTHER: ☒	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

2/11/2021 - Production casing was perf'd from 11,238'MD - 18,673'MD with 0.42" perf size and 8 shots per foot. The well was fracked with 21,297,090lbs of sand.

Spud Date:

10/5/2020

Rig Release Date:

11/22/2020

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE **Engineer** DATE **5/18/2021**

Type or print name **Steve Morris** E-mail address: **steve.morris@morcoreengineering.com** PHONE: **985-415-9729**

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505		State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505			Form C-105 Revised August 1, 2011					
1. WELL API NO. 30-025-46411								2. Type of Lease ☒ STATE ☐ FEE ☐ FED/INDIAN		
3. State Oil & Gas Lease No.								5. Lease Name or Unit Agreement Name Igloo 19-24 State Fed Com		
WELL COMPLETION OR RECOMPLETION REPORT AND LOG								6. Well Number: 12H		
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)								7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER _____		
8. Name of Operator Caza Operating LLC						9. OGRID 249099				
10. Address of Operator 200 N. Lorraine St. #1550, Midland, TX 79701						11. Pool name or Wildcat Lea; Bone Spring				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	O	19	20S	35E		401	South	2514	East	Lea
BH:	M	24	20S	35E		383	South	316	West	Lea
13. Date Spudded 10/5/2020	14. Date T.D. Reached 11/19/2020		15. Date Rig Released 11/22/2020		16. Date Completed (Ready to Produce) 2/11/2021			17. Elevations (DF and RKB, RT, GR, etc.) 3695' GR		
18. Total Measured Depth of Well 18673			19. Plug Back Measured Depth 18673		20. Was Directional Survey Made? yes			21. Type Electric and Other Logs Run gamma ray		
22. Producing Interval(s), of this completion - Top, Bottom, Name 10,445' - 10,826'TVD, 2nd Bone Spring										
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13.375		54.5		1886		17.5		1300sx		
9.625		40		5214		12.25		4000sx		
5.5		20		18659		8.75		2577sx		
24. LINER RECORD										
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN		24. TUBING RECORD		SIZE		DEPTH SET
								2.875		10317
										10311
26. Perforation record (interval, size, and number) 11,238' - 18,673', 0.42, 8 shots per foot										
27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED 11,238 - 18,673 21,297,090bs sand										
28. PRODUCTION										
Date First Production 2/10/2021		Production Method (Flowing, gas lift, pumping - Size and type pump) gas lift				Well Status (Prod. or Shut-in) producing				
Date of Test 2/22/2021	Hours Tested 24	Choke Size 64	Prod'n For Test Period	Oil - Bbl 708	Gas - MCF 1253	Water - Bbl. 453	Gas - Oil Ratio 1.76:1			
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl. 708	Gas - MCF 1253	Water - Bbl. 453	Oil Gravity - API - (Corr.) 37.6				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) sold								30. Test Witnessed By Kevin Garrett		
31. List Attachments gamma ray										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.										
33. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude _____ Longitude _____ NAD 1927 1983										
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature			Printed Name Steve Morris			Title Contract Engineer			Date 2/25/2021	
E-mail Address steve.morris@morcoreengineering.com										

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn A"
T. Salt	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers	T. Devonian	T. Cliff House	T. Leadville
T. Queen	T. Silurian	T. Menefee	T. Madison
T. Grayburg	T. Montoya	T. Point Lookout	T. Elbert
T. San Andres	T. Simpson	T. Mancos	T. McCracken
T. Glorieta	T. McKee	T. Gallup	T. Ignacio Otzte
T. Paddock	T. Ellenburger	Base Greenhorn	T. Granite
T. Blinebry	T. Gr. Wash	T. Dakota	
T. Tubb	T. Delaware Sand	T. Morrison	
T. Drinkard	T. Bone Springs	T. Todilto	
T. Abo	T.	T. Entrada	
T. Wolfcamp	T.	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

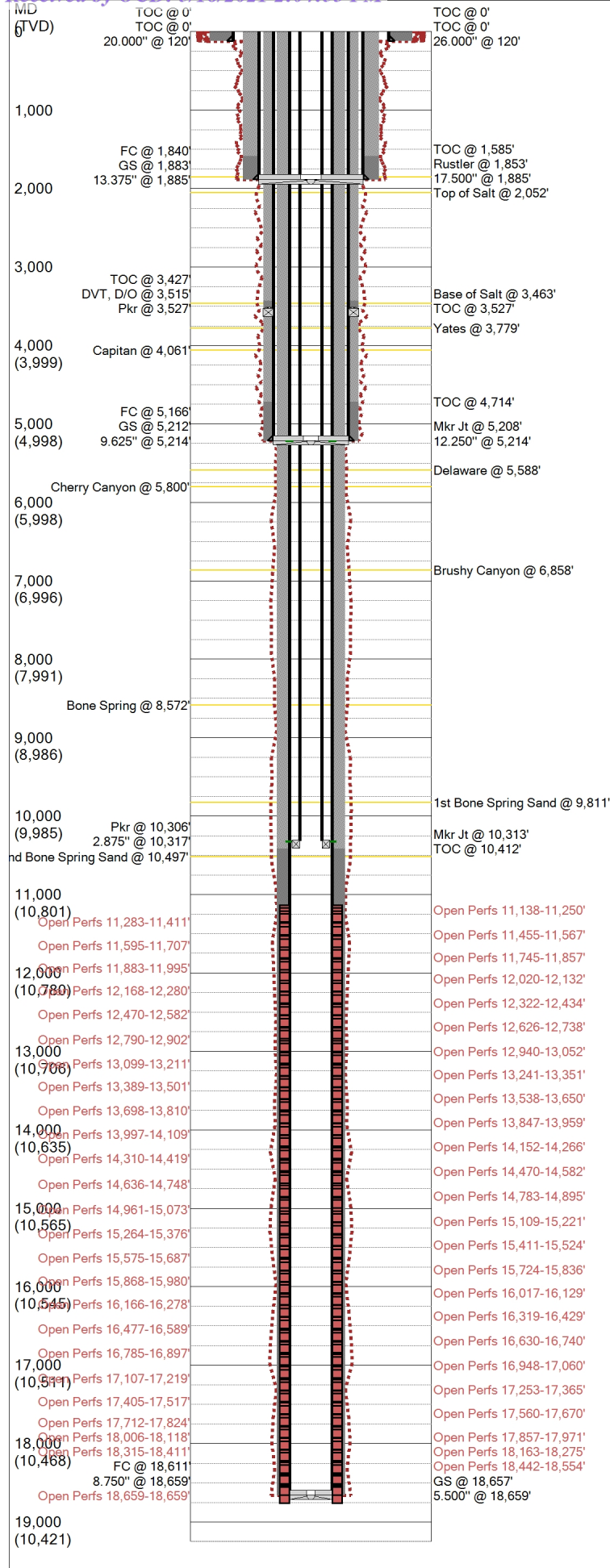
No. 1, from.....to.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology



Last Updated: 3/5/2021 06:38 AM

Field Name				Lease Name			Well No.	
Antelope Ridge				Igloo 19-24 State Fed Com			12H	
County				State			API No.	
Lea				New Mexico			30-025-46412	
Version		Version Tag						
1		Completed						
GL (ft)	KB (ft)	Section	Township/Block			Range/Survey		
3,693.0	3,715.0	19	20S			35E		
Operator			Well Status		Latitude		Longitude	
Caza Operating			Completed		32.552477		-103.496194	
Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line		Footage From			
400	FSL	2541	FEL		SECTION			
Prop Num				Spud Date		Comp. Date		
313780				10/6/2019		1/30/2021		
Additional Information								
From Hwy 62-180 go south on Marathon Rd 5.5 miles to the lease road and then go east 1.7 miles then south 0.25 miles.								
OGRID		Pool Name and Code		Well Type		Dedicated Acres		
299049		Lea; Bone Spring		Hz, Oil		240		
Prepared By		Updated By			Last Updated			
Steve Morris		Steve Morris			3/5/2021 6:38 AM			
Hole Summary								
Date	Diam. (in)	Top (MD ft)	Bottom (MD ft)	Comments				
	26.000	0	120					
	17.500	120	1,885					
	12.250	1,885	5,214					
	8.750	5,214	18,659					
Tubular Summary								
Date	Description		O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)	
	Conductor Casing		20.000	94.00	H40	0	120	
	Surface Casing		13.375	54.50	J55	0	1,885	
	Intermediate Casing		9.625	40.00	HCL80	0	5,214	
	Production Casing		5.500	20.00	P110	0	18,659	
	Tubing		2.875	6.50	L80	0	10,317	
Casing Cement Summary								
C	Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments		
		105	20.000	0	120			
		990	13.375	0	1,585	Circ 242sx (85bbbls) to surface		
		310	13.375	1,585	1,885			
		2,930	9.625	0	3,427			
		150	9.625	3,427	3,527			
		520	9.625	3,527	4,714			
		250	9.625	4,714	5,214			
		1,539	5.500	0	10,412			
		2,554	5.500	10,412	18,659			
Tools/Problems Summary								
Date	Tool Type		O.D. (in)	I.D. (in)	Top (MD ft)		Bottom (MD ft)	
	FC		13.375	0.000	1,840		0	
	GS		13.375	0.000	1,883		0	
	DVT, D/O		9.625	0.000	3,515		0	
	Pkr		12.250	9.625	3,527		0	

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Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)
	FC	9.625	0.000	5,166	0
	Mkr Jt	5.500	0.000	5,208	5,230
	GS	9.625	0.000	5,212	0
	Pkr	4.778	2.875	10,306	0
	Mkr Jt	5.500	0.000	10,313	10,335
	FC	5.500	0.000	18,611	0
	GS	5.500	0.000	18,657	0

Perforation Summary

C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)
	12/22/2020	Open	2nd Bone Spring	11138	11,250
	12/22/2020	Open	2nd Bone Spring	11283	11,411
	12/22/2020	Open	2nd Bone Spring	11455	11,567
	12/22/2020	Open	2nd Bone Spring	11595	11,707
	12/22/2020	Open	2nd Bone Spring	11745	11,857
	12/21/2020	Open	2nd Bone Spring	11883	11,995
	12/21/2020	Open	2nd Bone Spring	12020	12,132
	12/21/2020	Open	2nd Bone Spring	12168	12,280
	12/21/2020	Open	2nd Bone Spring	12322	12,434
	12/21/2020	Open	2nd Bone Spring	12470	12,582
	12/21/2020	Open	2nd Bone Spring	12626	12,738
	12/21/2020	Open	2nd Bone Spring	12790	12,902
	12/21/2020	Open	2nd Bone Spring	12940	13,052
	12/20/2020	Open	2nd Bone Spring	13099	13,211
	12/20/2020	Open	2nd Bone Spring	13241	13,351
	12/20/2020	Open	2nd Bone Spring	13389	13,501
	12/20/2020	Open	2nd Bone Spring	13538	13,650
	12/20/2020	Open	2nd Bone Spring	13698	13,810
	12/20/2020	Open	2nd Bone Spring	13847	13,959
	12/20/2020	Open	2nd Bone Spring	13997	14,109
	12/19/2020	Open	2nd Bone Spring	14152	14,266
	12/19/2020	Open	2nd Bone Spring	14310	14,419
	12/19/2020	Open	2nd Bone Spring	14470	14,582
	12/19/2020	Open	2nd Bone Spring	14636	14,748
	12/19/2020	Open	2nd Bone Spring	14783	14,895
	12/19/2020	Open	2nd Bone Spring	14961	15,073
	12/19/2020	Open	2nd Bone Spring	15109	15,221
	12/18/2020	Open	2nd Bone Spring	15264	15,376
	12/18/2020	Open	2nd Bone Spring	15411	15,524
	12/18/2020	Open	2nd Bone Spring	15575	15,687
	12/18/2020	Open	2nd Bone Spring	15724	15,836
	12/18/2020	Open	2nd Bone Spring	15868	15,980
	12/18/2020	Open	2nd Bone Spring	16017	16,129
	12/18/2020	Open	2nd Bone Spring	16166	16,278
	12/18/2020	Open	2nd Bone Spring	16319	16,429
	12/17/2020	Open	2nd Bone Spring	16477	16,589
	12/17/2020	Open	2nd Bone Spring	16630	16,740
	12/17/2020	Open	2nd Bone Spring	16785	16,897
	12/17/2020	Open	2nd Bone Spring	16948	17,060
	12/17/2020	Open	2nd Bone Spring	17107	17,219
	12/17/2020	Open	2nd Bone Spring	17253	17,365
	12/16/2020	Open	2nd Bone Spring	17405	17,517
	12/16/2020	Open	2nd Bone Spring	17560	17,670
	12/16/2020	Open	2nd Bone Spring	17712	17,824

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C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)
	12/16/2020	Open	2nd Bone Spring	17857	17,971
	12/15/2020	Open	2nd Bone Spring	18006	18,118
	12/15/2020	Open	2nd Bone Spring	18163	18,275
	12/15/2020	Open	2nd Bone Spring	18315	18,411
	12/15/2020	Open	2nd Bone Spring	18442	18,554
		Open	2nd Bone Spring	18659	18,659

Formation Tops Summary

Formation	Top (TVD ft)	Comments
Rustler	1,853	
Top of Salt	2,052	
Base of Salt	3,463	
Yates	3,779	
Capitan	4,061	
Delaware	5,588	
Cherry Canyon	5,800	
Brushy Canyon	6,858	
Bone Spring	8,572	
1st Bone Spring Sand	9,811	
2nd Bone Spring Sand	10,497	

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Field Name		Lease Name		Well No.	County	State	API No.			
Antelope Ridge		Igloo 19-24 State Fed Com		12H	Lea	New Mexico	30025464120000			
Version	Version Tag				Spud Date	Comp. Date	GL (ft)	KB (ft)		
1	Completed				10/6/2019	1/30/2021	3,693.0	3,715.0		
Section	Township/Block	Range/Survey	Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From			
19	20S	35E	400	FSL	2,541	FEL	SECTION			
Operator			Well Status		Latitude	Longitude	Prop Num			
Caza Operating			Completed		32.552477	-103.496194	313780			
OGRID		Pool Name and Code		Well Type			Dedicated Acres			
299049		Lea; Bone Spring		Hz, Oil			240			
Last Updated		Prepared By			Updated By					
03/05/2021 6:38 AM		Steve Morris			Steve Morris					
Additional Information										
From Hwy 62-180 go south on Marathon Rd 5.5 miles to the lease road and then go east 1.7 miles then south 0.25 miles.										
Hole Summary										
Date	Diam. (in)	Top (MD ft)	Bottom (MD ft)	Comments						
	26.000	0	120							
	17.500	120	1,885							
	12.250	1,885	5,214							
	8.750	5,214	18,659							
Tubular Summary										
Date	Description		No. Jts	O.D. (in)	Wt (lb/ft)	Grade	Coupling	Top (MD ft)	Bottom (MD ft)	Comments
	Conductor Casing		3	20.000	94.00	H40		0	120	
	Surface Casing		50	13.375	54.50	J55	STC	0	1,885	
	Intermediate Casing			9.625	40.00	HCL80	BTC	0	5,214	
	Production Casing		451	5.500	20.00	P110	HTQCDC	0	18,659	
	Tubing			2.875	6.50	L80		0	10,317	
Casing Cement Summary										
C	Date	No. Sx	Yield (ft3/sk)	Vol. (ft3)	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments	
		105	1.35	142	20.000	0	120			
		990	1.97	1,950	13.375	0	1,585	12.9ppg Class C + 4%PF20 Gel + 2%PF1 CaCl2 + 0.125# celloflake + 0.4# Defoamer	Circ 242sx (85bbls) to surface	
		310	1.32	381	13.375	1,585	1,885	14.8ppg Class C Neat		
		2,930	2.36	1,348	9.625	0	3,427	11.9ppg Class C 50/50 POZ + 5% Salt + 10% Gel + 0.2% Chemical Extender + 3# Extender + 0.4# Defoamer + 3# KolSeal + 0.125# Celloflake		
		150	1.32	198	9.625	3,427	3,527	14.8ppg Class C Neat		
		520	2.36	3,351	9.625	3,527	4,714	11.9ppg Class C 50/50 POZ+ 5% Salt + 10% Gel + 0.2% Chemical Extender + 3# Extender + 0.4# Defoamer + 3# KolSeal + 0.125# Celloflake		
		250	1.32	313	9.625	4,714	5,214	14.8ppg Class C + 0.1% retarder		
		1,539	3.33	5,125	5.500	0	10,412	11ppg Class H 50/50 POZ+ 5% Salt + 12% Gel + 0.4% Anti-Settling + 0.8% Chemical Extender + 0.4% Retarder + 3# Extender + 3# KolSeal + 0.4# Defoamer + 0.125# Celloflake		
		2,554	1.26	3,218	5.500	10,412	18,659	14.2ppg Class H 50/50 POZ+ 5% Salt + 2% Gel + 0.1% Chemical Extender + 0.3% Fluid Loss + 0.3% Fluid Loss606 + 0.4% Retarder + 1# Extender + 0.4# Defoamer		
Tools/Problems Summary										

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	Float Collar	13.375	0.000	1,840	0		
	Guide Shoe	13.375	0.000	1,883	0		
	DV tool (drilled out)	9.625	0.000	3,515	0		
	Packer	12.250	9.625	3,527	0	External Casing Packer	
	Float Collar	9.625	0.000	5,166	0		
	Marker Joint	5.500	0.000	5,208	5,230		
	Guide Shoe	9.625	0.000	5,212	0		
	Packer	4.778	2.875	10,306	0		
	Marker Joint	5.500	0.000	10,313	10,335		
	Float Collar	5.500	0.000	18,611	0		
	Guide Shoe	5.500	0.000	18,657	0		

Perforation Summary

C	Date	Perf. Status	Formation	Closed Date	Comments
		Open	2nd Bone Spring		Stage 1 - 425lbs sand
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
18659	18,659	1	1	0	
C	Date	Perf. Status	Formation	Closed Date	Comments
	12/15/2020	Open	2nd Bone Spring		Stage 5 - 425640lbs sand
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
18117	18,118	8	8	60	
18080	18,081	8	8	60	
18043	18,044	8	8	60	
18006	18,007	8	8	60	
C	Date	Perf. Status	Formation	Closed Date	Comments
	12/15/2020	Open	2nd Bone Spring		Stage 4 - 431305lbs sand
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
18274	18,275	8	8	60	
18237	18,238	8	8	60	
18200	18,201	8	8	60	
18163	18,164	8	8	60	
C	Date	Perf. Status	Formation	Closed Date	Comments
	12/15/2020	Open	2nd Bone Spring		Stage 3 - 428157lbs sand
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
18410	18,411	8	8	60	
18389	18,390	8	8	60	
18352	18,353	8	8	60	
18315	18,316	8	8	60	
C	Date	Perf. Status	Formation	Closed Date	Comments
	12/15/2020	Open	2nd Bone Spring		Stage 2 - 425538lbs sand
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
18553	18,554	8	8	60	
18536	18,537	8	8	60	
18479	18,480	8	8	60	
18442	18,443	8	8	60	
C	Date	Perf. Status	Formation	Closed Date	Comments
	12/16/2020	Open	2nd Bone Spring		Stage 9 - 430880lbs sand
Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17516	17,517	8	8	60	
17479	17,480	8	8	60	
17442	17,443	8	8	60	

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C	Date	Perf. Status	Formation		Closed Date	Comments
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17405		17,406	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/16/2020	Open	2nd Bone Spring			Stage 8 - 425660lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17669		17,670	8	8	60	
17632		17,633	8	8	60	
17595		17,596	8	8	60	
17560		17,561	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/16/2020	Open	2nd Bone Spring			Stage 7 - 426459lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17823		17,824	8	8	60	
17786		17,787	8	8	60	
17749		17,750	8	8	60	
17712		17,713	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/16/2020	Open	2nd Bone Spring			Stage 6 - 425961lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17970		17,971	8	8	60	
17933		17,934	8	8	60	
17896		17,897	8	8	60	
17857		17,858	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/17/2020	Open	2nd Bone Spring			Stage 15 - 427860lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
16588		16,589	8	8	60	
16551		16,552	8	8	60	
16514		16,515	8	8	60	
16477		16,478	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/17/2020	Open	2nd Bone Spring			Stage 14 -427860lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
16739		16,740	8	8	60	
16702		16,703	8	8	60	
16665		16,666	8	8	60	
16630		16,631	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/17/2020	Open	2nd Bone Spring			Stage 13 - 426050lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
16896		16,897	8	8	60	
16859		16,860	8	8	60	
16822		16,823	8	8	60	
16785		16,786	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/17/2020	Open	2nd Bone Spring			Stage 12 - 428190lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17059		17,060	8	8	60	
17022		17,023	8	8	60	
16985		16,986	8	8	60	

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C	Date	Perf. Status	Formation		Closed Date	Comments
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
16948		16,949	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/17/2020	Open	2nd Bone Spring			Stage 11 - 422420lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17218		17,219	8	8	60	
17181		17,182	8	8	60	
17144		17,145	8	8	60	
17107		17,108	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/17/2020	Open	2nd Bone Spring			Stage 10 - 433560lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
17364		17,365	8	8	60	
17327		17,328	8	8	60	
17288		17,289	8	8	60	
17253		17,254	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 23 - 421750lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
15375		15,376	8	8	60	
15338		15,339	8	8	60	
15301		15,302	8	8	60	
15264		15,265	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 22 - 421750lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
15523		15,524	8	8	60	
15485		15,486	8	8	60	
15448		15,449	8	8	60	
15411		15,412	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 21 - 419750lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
15686		15,687	8	8	60	
15649		15,650	8	8	60	
15612		15,613	8	8	60	
15575		15,576	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 20 - 423290lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
15835		15,836	8	8	60	
15798		15,799	8	8	60	
15761		15,762	8	8	60	
15724		15,725	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 19 - 417830lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
15979		15,980	8	8	60	
15942		15,943	8	8	60	
15905		15,906	8	8	60	

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C	Date	Perf. Status	Formation		Closed Date	Comments
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15868	15,869	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 18 - 422270lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	16128	16,129	8	8	60	
	16091	16,092	8	8	60	
	16054	16,055	8	8	60	
	16017	16,018	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 17 - 440690lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	16277	16,278	8	8	60	
	16240	16,241	8	8	60	
	16203	16,204	8	8	60	
	16166	16,167	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/18/2020	Open	2nd Bone Spring			Stage 16 - 428580lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	16428	16,429	8	8	60	
	16391	16,392	8	8	60	
	16354	16,355	8	8	60	
	16319	16,320	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/19/2020	Open	2nd Bone Spring			Stage 30 - 421750lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14265	14,266	8	8	60	
	14228	14,229	8	8	60	
	14191	14,192	8	8	60	
	14152	14,153	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/19/2020	Open	2nd Bone Spring			Stage 29 - 421750lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14418	14,419	8	8	60	
	14384	14,385	8	8	60	
	14347	14,348	8	8	60	
	14310	14,311	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/19/2020	Open	2nd Bone Spring			Stage 28 - 421779lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14581	14,582	8	8	60	
	14544	14,545	8	8	60	
	14505	14,506	8	8	60	
	14470	14,471	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/19/2020	Open	2nd Bone Spring			Stage 27 - 421750lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14747	14,748	8	8	60	
	14710	14,711	8	8	60	
	14673	14,674	8	8	60	

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C	Date	Perf. Status	Formation		Closed Date	Comments
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14636	14,637	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/19/2020	Open	2nd Bone Spring			Stage 26 - 421741lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14894	14,895	8	8	60	
	14863	14,864	8	8	60	
	14822	14,823	8	8	60	
	14783	14,784	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/19/2020	Open	2nd Bone Spring			Stage 25 - 421550lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15072	15,073	8	8	60	
	15035	15,036	8	8	60	
	14998	14,999	8	8	60	
	14961	14,962	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/19/2020	Open	2nd Bone Spring			Stage 24 - 421750lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15220	15,221	8	8	60	
	15183	15,184	8	8	60	
	15146	15,147	8	8	60	
	15109	15,110	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/20/2020	Open	2nd Bone Spring			Stage 37 - 429640lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13210	13,211	8	8	60	
	13173	13,174	8	8	60	
	13136	13,137	8	8	60	
	13099	13,100	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/20/2020	Open	2nd Bone Spring			Stage 36 - 428700lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13350	13,351	8	8	60	
	13315	13,316	8	8	60	
	13278	13,279	8	8	60	
	13241	13,242	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/20/2020	Open	2nd Bone Spring			Stage 35 - 428260lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13500	13,501	8	8	60	
	13463	13,464	8	8	60	
	13426	13,427	8	8	60	
	13389	13,390	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/20/2020	Open	2nd Bone Spring			Stage 34 - 430400lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13649	13,650	8	8	60	
	13612	13,613	8	8	60	
	13573	13,574	8	8	60	

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C	Date	Perf. Status	Formation		Closed Date	Comments
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13538	13,539	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/20/2020	Open	2nd Bone Spring			Stage 33 - 434130lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13809	13,810	8	8	60	
	13772	13,773	8	8	60	
	13735	13,736	8	8	60	
	13698	13,699	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/20/2020	Open	2nd Bone Spring			Stage 32 - 420910lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13958	13,959	8	8	60	
	13921	13,922	8	8	60	
	13884	13,885	8	8	60	
	13847	13,848	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/20/2020	Open	2nd Bone Spring			Stage 31 - 424340lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14108	14,109	8	8	60	
	14071	14,072	8	8	60	
	14034	14,035	8	8	60	
	13997	13,998	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 45 - 425940lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	11994	11,995	8	8	60	
	11957	11,958	8	8	60	
	11920	11,921	8	8	60	
	11883	11,884	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 44 - 426960lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12131	12,132	8	8	60	
	12094	12,095	8	8	60	
	12057	12,058	8	8	60	
	12020	12,021	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 43 - 426100lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12279	12,280	8	8	60	
	12242	12,243	8	8	60	
	12205	12,206	8	8	60	
	12168	12,169	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 42 - 425750lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12433	12,434	8	8	60	
	12396	12,397	8	8	60	
	12359	12,360	8	8	60	

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C	Date	Perf. Status	Formation		Closed Date	Comments
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12322	12,323	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 41 - 425750lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12581	12,582	8	8	60	
	12544	12,545	8	8	60	
	12507	12,508	8	8	60	
	12470	12,471	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 40 - 427120lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12737	12,738	8	8	60	
	12700	12,701	8	8	60	
	12663	12,664	8	8	60	
	12626	12,627	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 39 - 427930lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12901	12,902	8	8	60	
	12864	12,865	8	8	60	
	12827	12,828	8	8	60	
	12790	12,791	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/21/2020	Open	2nd Bone Spring			Stage 38 - 429440lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13051	13,052	8	8	60	
	13014	13,015	8	8	60	
	12977	12,978	8	8	60	
	12940	12,941	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/22/2020	Open	2nd Bone Spring			Stage 50 - 426430lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	11249	11,250	8	8	60	
	11212	11,213	8	8	60	
	11173	11,174	8	8	60	
	11138	11,139	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/22/2020	Open	2nd Bone Spring			Stage 49 - 427700lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	11410	11,411	8	8	60	
	11365	11,366	8	8	60	
	11320	11,321	8	8	60	
	11283	11,284	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/22/2020	Open	2nd Bone Spring			Stage 48 - 425560lbs sand
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	11566	11,567	8	8	60	
	11529	11,530	8	8	60	
	11494	11,495	8	8	60	

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C	Date	Perf. Status	Formation		Closed Date	Comments
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
11455		11,456	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/22/2020	Open	2nd Bone Spring			Stage 47 - 425560lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
11706		11,707	8	8	60	
11667		11,668	8	8	60	
11627		11,628	8	8	60	
11595		11,596	8	8	60	
C	Date	Perf. Status	Formation		Closed Date	Comments
	12/22/2020	Open	2nd Bone Spring			Stage 46 - 425020lbs sand
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
11856		11,857	8	8	60	
11819		11,820	8	8	60	
11782		11,783	8	8	60	
11745		11,746	8	8	60	

Formation Top Summary

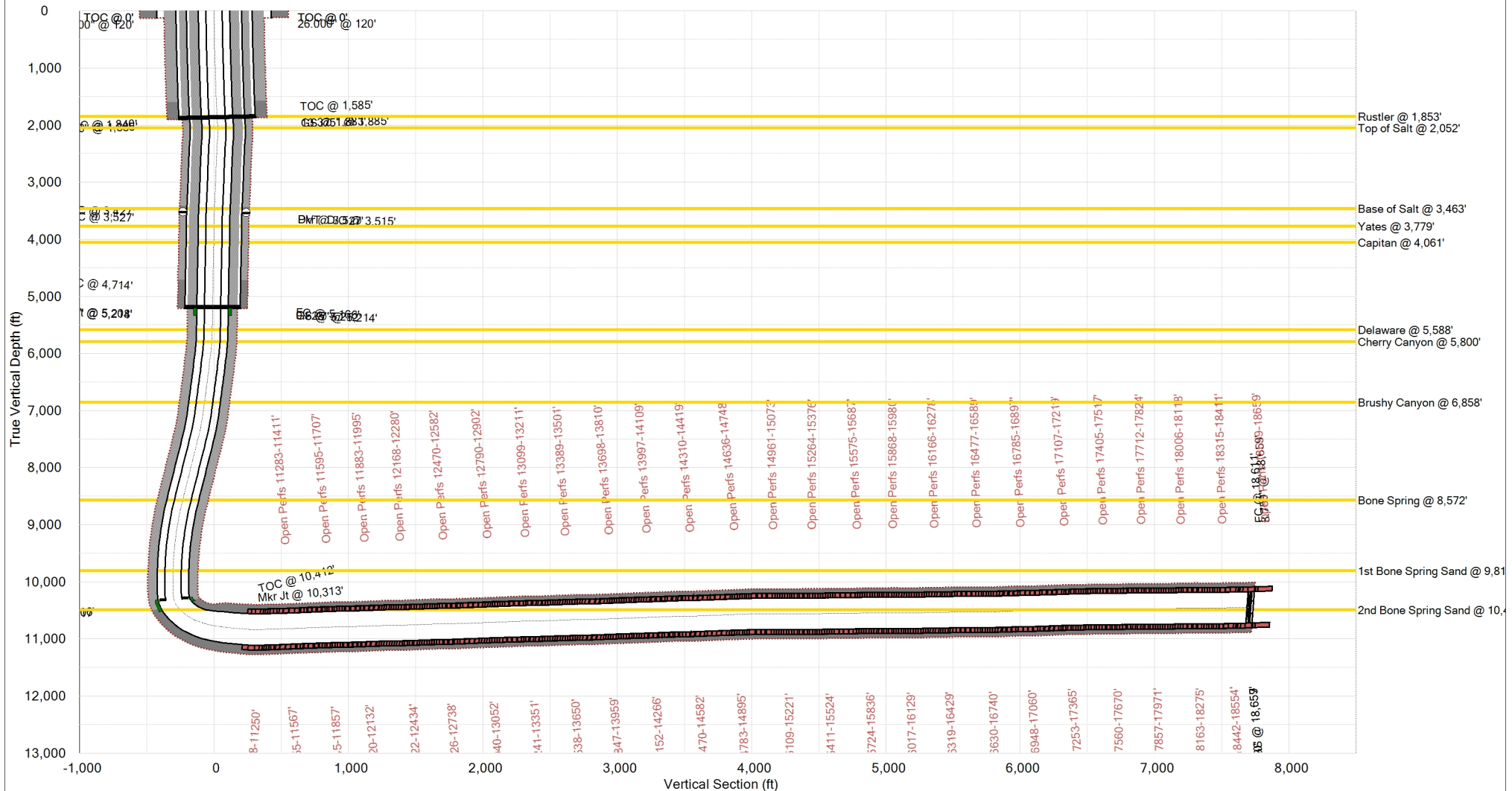
Formation Name	Top(TVD ft)	Comments
Rustler	1,853	
Top of Salt	2,052	
Base of Salt	3,463	
Yates	3,779	
Capitan	4,061	
Delaware	5,588	
Cherry Canyon	5,800	
Brushy Canyon	6,858	
Bone Spring	8,572	
1st Bone Spring Sand	9,811	
2nd Bone Spring Sand	10,497	

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Field Name			Lease Name				Well No.		County		State		API No.	
Antelope Ridge			Igloo 19-24 State Fed Com				12H		Lea		New Mexico		30025464120000	
Version	Version Tag						Spud Date		Comp. Date		G.L. (ft)		K.B. (ft)	
1	Completed						10/6/2019		1/30/2021		3,693.0		3,715.0	
Sec.	Township/Block		Range/Survey		Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From		Latitude		Longitude	
19	20S		35E		400	FSL	2541	FEL			32.552477		-103.496194	
Well Status		PropNum		Operator		Last Updated				Prepared By		Updated By		
Completed		313780		Caza Operating		3/5/2021 6:38:05 AM				Steve Morris		Steve Morris		

Additional Information

From Hwy 62-180 go south on Marathon Rd 5.5 miles to the lease road and then go east 1.7 miles then south 0.25 miles.



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Field Name		Lease Name	Well No.	API No.	Version	Version Tag	
Antelope Ridge		Igloo 19-24 State Fed Com	12H	30025464120000	1	Completed	
Section	Township/Block	Range/Survey	County		State	GL (ft)	KB (ft)
19	20S	35E	Lea		New Mexico	3,693.0	3,715.0
Target N (-S) (ft)		Target E (-W) (ft)	Latitude	Longitude	Operator	Well Status	
0		0	32.552477	-103.496194	Caza Operating	Completed	
Additional Information							
From Hwy 62-180 go south on Marathon Rd 5.5 miles to the lease road and then go east 1.7 miles then south 0.25 miles.							

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	Coordinate N (-S) (ft)	Coordinate E (-W) (ft)	DLS (deg/100 ft)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
62.1	0.3	216.8	62.1	0.1	-0.1	-0.1	0.45
155.5	0.3	273.2	155.5	0.5	-0.3	-0.5	0.29
248.9	0.4	278.0	248.9	1.0	-0.2	-1.0	0.08
342.2	0.3	286.2	342.2	1.6	-0.1	-1.6	0.07
435.6	0.3	283.0	435.6	2.1	0.0	-2.1	0.02
529.0	0.4	287.1	529.0	2.7	0.2	-2.7	0.06
622.4	0.6	291.8	622.4	3.4	0.4	-3.4	0.18
715.8	0.6	314.2	715.7	4.2	1.0	-4.2	0.26
809.1	1.0	304.6	809.1	5.2	1.8	-5.2	0.39
902.5	1.1	311.3	902.5	6.5	2.8	-6.6	0.18
995.9	0.8	291.2	995.9	7.8	3.6	-7.8	0.50
1,089.3	0.9	303.6	1,089.2	8.9	4.3	-9.0	0.21
1,182.7	0.8	295.0	1,182.6	10.1	4.9	-10.2	0.14
1,276.0	1.0	293.8	1,276.0	11.5	5.5	-11.5	0.18
1,369.4	1.0	292.2	1,369.3	13.0	6.2	-13.0	0.03
1,462.8	0.9	289.5	1,462.7	14.4	6.7	-14.5	0.15
1,556.2	1.1	290.6	1,556.1	15.9	7.3	-16.0	0.22
1,649.6	1.2	296.5	1,649.4	17.6	8.0	-17.7	0.16
1,742.9	1.5	291.0	1,742.8	19.5	8.9	-19.6	0.35
1,836.3	1.4	292.8	1,836.1	21.7	9.8	-21.8	0.06
1,929.7	1.5	293.5	1,929.5	23.9	10.7	-24.0	0.03
2,023.1	1.0	304.8	2,022.8	25.6	11.6	-25.7	0.57
2,116.5	0.6	5.1	2,116.2	26.2	12.6	-26.3	0.91
2,209.8	1.3	40.3	2,209.6	25.4	13.9	-25.6	0.96
2,303.2	1.5	71.2	2,302.9	23.5	15.1	-23.7	0.85
2,396.6	1.5	81.5	2,396.3	21.1	15.7	-21.3	0.29
2,490.0	1.3	96.3	2,489.6	18.8	15.8	-18.9	0.46
2,583.4	1.1	118.2	2,583.0	17.0	15.2	-17.1	0.55
2,676.7	1.1	145.0	2,676.3	15.6	14.1	-15.8	0.56
2,770.1	1.6	147.8	2,769.7	14.4	12.2	-14.5	0.51
2,863.5	0.9	150.4	2,863.1	13.4	10.5	-13.5	0.81
2,956.9	1.3	147.4	2,956.4	12.5	9.0	-12.6	0.43
3,050.3	1.1	115.9	3,049.8	11.2	7.8	-11.3	0.71
3,143.6	1.6	104.8	3,143.1	9.2	7.0	-9.2	0.68
3,237.0	2.1	126.1	3,236.5	6.5	5.7	-6.6	0.87
3,330.4	1.6	143.2	3,329.8	4.4	3.7	-4.4	0.75
3,423.8	1.2	140.7	3,423.2	3.0	1.8	-3.0	0.45
3,517.2	1.4	132.9	3,516.5	1.6	0.3	-1.6	0.25
3,610.5	1.1	161.1	3,609.9	0.5	-1.3	-0.5	0.71
3,703.9	1.2	150.5	3,703.2	-0.3	-2.9	0.3	0.25
3,797.3	1.5	162.0	3,796.6	-1.1	-4.9	1.1	0.47
3,890.7	1.8	169.0	3,889.9	-1.7	-7.5	1.8	0.39
3,984.1	1.6	165.6	3,983.3	-2.3	-10.3	2.4	0.27
4,077.4	1.9	167.4	4,076.6	-2.9	-13.0	3.1	0.32
4,170.8	2.1	160.7	4,169.9	-3.8	-16.1	4.0	0.33
4,264.2	2.5	163.2	4,263.2	-4.9	-19.6	5.1	0.42
4,357.6	2.0	165.4	4,356.5	-5.9	-23.1	6.1	0.50
4,451.0	2.6	175.7	4,449.8	-6.4	-26.8	6.7	0.75
4,544.3	3.0	177.4	4,543.1	-6.6	-31.3	6.9	0.46
4,637.7	3.2	176.4	4,636.4	-6.9	-36.3	7.2	0.18
4,731.1	3.0	170.9	4,729.6	-7.4	-41.3	7.7	0.35
4,824.5	2.8	167.9	4,822.9	-8.2	-45.9	8.6	0.30
4,917.9	2.9	164.1	4,916.1	-9.3	-50.3	9.7	0.23

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	Coordinate N (-S) (ft)	Coordinate E (-W) (ft)	DLS (deg/100 ft)
5,011.2	2.7	168.0	5,009.4	-10.3	-54.7	10.8	0.26
5,104.6	2.5	171.6	5,102.7	-11.0	-58.9	11.6	0.27
5,198.0	2.1	176.4	5,196.0	-11.4	-62.7	12.0	0.48
5,375.0	2.0	168.9	5,372.9	-12.2	-69.0	12.8	0.17
5,469.0	2.0	164.0	5,466.8	-12.9	-72.2	13.6	0.19
5,564.0	1.5	147.2	5,561.8	-14.0	-74.9	14.7	0.76
5,658.0	0.5	88.8	5,655.8	-15.1	-75.9	15.8	1.44
5,752.0	2.0	58.5	5,749.7	-16.9	-75.0	17.6	1.72
5,846.0	1.8	53.3	5,843.7	-19.5	-73.3	20.2	0.27
5,941.0	2.9	60.2	5,938.6	-22.8	-71.2	23.5	1.17
6,035.0	3.4	62.3	6,032.5	-27.4	-68.7	28.0	0.59
6,128.0	3.2	59.7	6,125.3	-32.2	-66.1	32.8	0.28
6,222.0	3.3	62.6	6,219.2	-36.9	-63.5	37.4	0.18
6,316.0	3.0	61.8	6,313.0	-41.4	-61.1	42.0	0.30
6,411.0	2.9	59.2	6,407.9	-45.7	-58.7	46.3	0.17
6,505.0	4.2	66.7	6,501.7	-50.9	-56.1	51.4	1.44
6,599.0	4.0	66.1	6,595.5	-57.1	-53.4	57.6	0.15
6,693.0	3.7	63.5	6,689.2	-62.9	-50.7	63.4	0.37
6,788.0	3.3	62.8	6,784.1	-68.1	-48.1	68.6	0.51
6,882.0	3.3	60.4	6,877.9	-72.8	-45.6	73.3	0.14
6,977.0	3.8	73.8	6,972.7	-78.3	-43.3	78.7	1.04
7,071.0	3.8	74.1	7,066.5	-84.3	-41.6	84.7	0.03
7,165.0	3.5	76.0	7,160.3	-90.1	-40.0	90.5	0.40
7,259.0	4.7	75.1	7,254.1	-96.7	-38.4	97.0	1.34
7,353.0	6.4	76.1	7,347.6	-105.5	-36.1	105.8	1.77
7,448.0	6.1	78.0	7,442.1	-115.6	-33.8	115.9	0.43
7,542.0	5.9	77.4	7,535.6	-125.1	-31.7	125.4	0.18
7,636.0	5.5	78.2	7,629.1	-134.3	-29.7	134.5	0.48
7,730.0	6.2	79.3	7,722.6	-143.6	-27.9	143.9	0.74
7,824.0	6.4	78.6	7,816.1	-153.7	-25.9	153.9	0.24
7,918.0	5.8	78.4	7,909.5	-163.4	-23.9	163.6	0.62
8,012.0	6.5	79.6	8,003.0	-173.3	-22.0	173.5	0.79
8,106.0	6.4	78.4	8,096.4	-183.7	-20.0	183.9	0.19
8,201.0	6.3	79.2	8,190.8	-194.0	-18.0	194.2	0.16
8,295.0	5.8	78.6	8,284.3	-203.7	-16.1	203.9	0.49
8,390.0	6.4	78.0	8,378.8	-213.6	-14.0	213.7	0.58
8,483.0	6.3	77.1	8,471.2	-223.6	-11.8	223.8	0.12
8,578.0	5.8	79.1	8,565.7	-233.4	-9.7	233.5	0.60
8,672.0	6.3	78.1	8,659.1	-243.2	-7.8	243.2	0.61
8,766.0	6.0	78.1	8,752.6	-253.0	-5.7	253.1	0.37
8,860.0	4.7	79.1	8,846.2	-261.6	-4.0	261.7	1.38
8,955.0	4.1	82.8	8,940.9	-268.8	-2.8	268.9	0.67
9,049.0	3.7	82.0	9,034.7	-275.1	-2.0	275.2	0.50
9,144.0	3.3	81.0	9,129.5	-280.9	-1.1	280.9	0.33
9,238.0	2.9	76.6	9,223.4	-285.9	-0.1	286.0	0.50
9,333.0	2.6	75.5	9,318.3	-290.4	1.0	290.4	0.33
9,427.0	2.7	77.4	9,412.2	-294.7	2.0	294.7	0.10
9,544.0	2.0	82.9	9,529.1	-299.3	2.9	299.3	0.61
9,639.0	1.6	83.0	9,624.0	-302.3	3.2	302.2	0.42
9,733.0	1.1	119.3	9,718.0	-304.3	2.9	304.3	1.01
9,827.0	1.2	174.8	9,812.0	-305.2	1.5	305.2	1.17
9,921.0	1.4	190.0	9,906.0	-305.1	-0.7	305.1	0.44
10,014.0	1.0	157.1	9,998.9	-305.2	-2.6	305.2	0.88
10,109.0	0.8	158.3	10,093.9	-305.7	-3.9	305.8	0.20
10,203.0	1.1	243.5	10,187.9	-305.2	-4.9	305.2	1.37
10,297.0	3.3	261.6	10,281.8	-301.7	-5.7	301.7	2.46
10,328.0	6.4	267.6	10,312.7	-299.0	-5.9	299.1	10.12
10,359.0	9.9	267.8	10,343.4	-294.6	-6.1	294.7	11.29
10,390.0	12.6	268.2	10,373.8	-288.6	-6.3	288.6	8.75
10,437.0	17.1	266.2	10,419.2	-276.5	-6.9	276.6	9.55
10,483.0	19.3	265.1	10,462.9	-262.2	-8.0	262.3	4.80
10,530.0	21.9	263.0	10,506.9	-245.8	-9.8	245.9	5.78
10,577.0	26.5	265.2	10,549.8	-226.6	-11.7	226.7	9.93
10,624.0	31.1	267.7	10,591.0	-204.0	-13.1	204.2	10.14
10,672.0	36.9	270.7	10,630.8	-177.2	-13.4	177.3	12.65
10,719.0	42.0	269.8	10,667.0	-147.3	-13.3	147.5	10.97

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	Coordinate N (-S) (ft)	Coordinate E (-W) (ft)	DLS (deg/100 ft)
10,766.0	48.8	269.8	10,700.0	-113.9	-13.4	114.0	14.36
10,813.0	55.8	269.1	10,728.7	-76.7	-13.8	76.9	14.85
10,861.0	62.9	268.9	10,753.2	-35.5	-14.5	35.6	14.92
10,908.0	68.3	269.0	10,772.6	7.3	-15.2	-7.2	11.43
10,955.0	72.2	269.1	10,788.5	51.5	-16.0	-51.4	8.32
11,002.0	74.7	269.2	10,801.9	96.6	-16.6	-96.4	5.41
11,050.0	75.9	269.4	10,814.0	143.0	-17.2	-142.9	2.57
11,097.0	79.0	270.2	10,824.2	188.9	-17.4	-188.8	6.71
11,143.0	83.2	270.7	10,831.3	234.3	-17.0	-234.2	9.14
11,190.0	85.9	270.6	10,835.8	281.1	-16.5	-281.0	5.68
11,238.0	90.3	269.3	10,837.5	329.1	-16.5	-328.9	9.61
11,332.0	94.2	269.6	10,833.8	423.0	-17.3	-422.8	4.15
11,367.0	94.6	269.2	10,831.1	457.9	-17.7	-457.7	1.76
11,461.0	96.2	270.0	10,822.3	551.5	-18.4	-551.3	1.86
11,555.0	96.3	270.4	10,812.1	644.9	-18.1	-644.8	0.48
11,647.0	95.2	271.6	10,802.9	736.4	-16.5	-736.3	1.69
11,660.0	94.3	270.0	10,801.9	749.4	-16.4	-749.2	14.06
11,741.0	94.0	271.4	10,796.1	830.1	-15.4	-830.0	1.78
11,835.0	92.8	271.7	10,790.5	923.9	-12.9	-923.8	1.28
11,928.0	93.5	272.9	10,785.4	1,016.6	-9.2	-1,016.6	1.50
12,023.0	94.9	273.9	10,778.4	1,111.2	-3.5	-1,111.2	1.79
12,117.0	95.3	273.2	10,770.1	1,204.5	2.3	-1,204.6	0.88
12,211.0	92.4	271.0	10,763.8	1,298.2	5.7	-1,298.3	3.89
12,305.0	92.3	269.2	10,759.9	1,392.1	5.8	-1,392.2	1.95
12,399.0	93.2	268.2	10,755.4	1,486.0	3.6	-1,486.1	1.36
12,492.0	94.7	268.6	10,749.0	1,578.8	0.9	-1,578.9	1.70
12,587.0	94.4	268.3	10,741.4	1,673.5	-1.7	-1,673.5	0.40
12,681.0	94.0	269.7	10,734.5	1,767.2	-3.3	-1,767.2	1.53
12,775.0	95.3	269.8	10,726.9	1,860.9	-3.7	-1,860.9	1.34
12,869.0	95.8	267.6	10,717.9	1,954.4	-5.9	-1,954.5	2.38
12,964.0	94.9	266.5	10,709.0	2,048.9	-10.8	-2,048.9	1.41
13,058.0	93.6	267.4	10,702.1	2,142.6	-15.8	-2,142.5	1.67
13,152.0	93.1	268.9	10,696.6	2,236.4	-18.8	-2,236.3	1.71
13,246.0	93.2	268.7	10,691.5	2,330.3	-20.7	-2,330.2	0.27
13,340.0	94.6	268.7	10,685.1	2,424.0	-22.8	-2,423.9	1.50
13,434.0	94.0	268.9	10,678.1	2,517.8	-24.8	-2,517.6	0.71
13,528.0	93.5	269.9	10,672.0	2,611.6	-25.8	-2,611.4	1.18
13,623.0	92.9	270.3	10,666.7	2,706.4	-25.6	-2,706.3	0.81
13,718.0	94.5	270.5	10,660.6	2,801.2	-25.0	-2,801.1	1.73
13,813.0	96.1	271.4	10,651.8	2,895.7	-23.4	-2,895.7	1.93
13,907.0	95.1	271.3	10,642.6	2,989.2	-21.2	-2,989.2	1.08
14,001.0	94.2	271.8	10,635.0	3,082.9	-18.7	-3,082.8	1.12
14,096.0	93.0	270.7	10,629.0	3,177.6	-16.7	-3,177.6	1.65
14,191.0	94.1	269.3	10,623.1	3,272.4	-16.7	-3,272.4	1.86
14,284.0	94.9	268.8	10,615.8	3,365.2	-18.3	-3,365.1	0.98
14,379.0	95.1	268.6	10,607.5	3,459.8	-20.5	-3,459.7	0.36
14,472.0	93.6	268.4	10,600.5	3,552.5	-23.0	-3,552.4	1.65
14,566.0	94.0	268.3	10,594.2	3,646.3	-25.7	-3,646.2	0.47
14,659.0	95.8	268.7	10,586.2	3,738.9	-28.2	-3,738.8	1.96
14,753.0	95.2	269.3	10,577.2	3,832.5	-29.8	-3,832.4	0.92
14,847.0	93.0	270.9	10,570.5	3,926.2	-29.7	-3,926.1	2.87
14,941.0	92.2	271.3	10,566.2	4,020.1	-27.9	-4,020.0	0.93
15,035.0	90.7	268.5	10,563.8	4,114.0	-28.0	-4,114.0	3.46
15,119.0	91.6	267.8	10,562.1	4,198.0	-30.8	-4,197.9	1.30
15,213.0	90.3	268.8	10,560.5	4,292.0	-33.5	-4,291.8	1.73
15,308.0	89.8	270.0	10,560.5	4,387.0	-34.5	-4,386.8	1.33
15,403.0	90.8	271.4	10,559.9	4,481.9	-33.4	-4,481.8	1.87
15,497.0	91.3	270.3	10,558.2	4,575.9	-32.0	-4,575.8	1.32
15,591.0	92.7	270.5	10,554.9	4,669.8	-31.4	-4,669.7	1.48
15,686.0	92.6	269.8	10,550.5	4,764.7	-31.1	-4,764.6	0.77
15,781.0	91.5	270.3	10,547.2	4,859.6	-31.0	-4,859.6	1.21
15,875.0	90.2	270.6	10,545.8	4,953.6	-30.3	-4,953.5	1.45
15,969.0	90.2	269.2	10,545.5	5,047.6	-30.6	-5,047.5	1.48
16,064.0	91.3	269.2	10,544.3	5,142.6	-31.9	-5,142.5	1.21
16,159.0	91.0	269.1	10,542.4	5,237.6	-33.3	-5,237.5	0.41
16,253.0	91.7	268.6	10,540.3	5,331.6	-35.2	-5,331.5	0.92

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	Coordinate N (-S) (ft)	Coordinate E (-W) (ft)	DLS (deg/100 ft)
16,347.0	93.0	269.5	10,536.5	5,425.5	-36.8	-5,425.4	1.71
16,440.0	91.9	268.8	10,532.5	5,518.4	-38.2	-5,518.3	1.37
16,535.0	91.3	267.6	10,529.9	5,613.3	-41.3	-5,613.2	1.45
16,629.0	90.8	268.0	10,528.2	5,707.3	-44.9	-5,707.1	0.70
16,724.0	91.8	268.3	10,526.1	5,802.2	-47.9	-5,802.0	1.10
16,819.0	92.9	268.3	10,522.3	5,897.1	-50.7	-5,896.9	1.16
16,913.0	94.2	268.2	10,516.5	5,990.9	-53.5	-5,990.7	1.43
17,007.0	92.8	268.0	10,510.7	6,084.7	-56.6	-6,084.4	1.48
17,101.0	93.3	267.7	10,505.7	6,178.5	-60.1	-6,178.2	0.63
17,196.0	94.6	266.5	10,499.1	6,273.2	-64.9	-6,272.9	1.88
17,290.0	95.2	267.6	10,491.0	6,366.8	-69.8	-6,366.4	1.39
17,384.0	93.8	268.4	10,483.7	6,460.5	-73.1	-6,460.1	1.77
17,477.0	92.0	268.6	10,479.0	6,553.3	-75.5	-6,552.9	1.91
17,572.0	91.0	269.0	10,476.6	6,648.3	-77.5	-6,647.9	1.17
17,666.0	91.1	269.3	10,474.9	6,742.3	-78.8	-6,741.8	0.39
17,751.0	91.0	268.6	10,473.3	6,827.3	-80.3	-6,826.8	0.88
17,846.0	90.7	269.0	10,471.8	6,922.2	-82.3	-6,921.8	0.58
17,940.0	92.0	268.2	10,469.7	7,016.2	-84.6	-7,015.7	1.62
18,035.0	91.5	269.5	10,466.8	7,111.1	-86.5	-7,110.7	1.52
18,129.0	90.2	270.2	10,465.4	7,205.1	-86.7	-7,204.6	1.53
18,222.0	90.5	270.0	10,464.9	7,298.1	-86.5	-7,297.6	0.38
18,317.0	91.1	270.1	10,463.6	7,393.1	-86.4	-7,392.6	0.66
18,411.0	92.0	270.2	10,461.0	7,487.1	-86.2	-7,486.6	0.96
18,506.0	93.2	270.1	10,456.7	7,582.0	-86.0	-7,581.5	1.30
18,588.0	94.3	270.0	10,451.4	7,663.8	-85.9	-7,663.3	1.31
18,660.0	94.3	270.0	10,446.0	7,735.6	-86.0	-7,735.1	0.00

District I

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District IV

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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

ACKNOWLEDGMENTS

Action 28637

ACKNOWLEDGMENTS

Operator: CAZA OPERATING, LLC 200 N Loraine St Midland, TX 79701	OGRID: 249099
	Action Number: 28637
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☐	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☐	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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CONDITIONS

Action 28637

CONDITIONS

Operator: CAZA OPERATING, LLC 200 N Loraine St Midland, TX 79701	OGRID: 249099
	Action Number: 28637
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
ksimmons	None	7/20/2021