

Caza Operating LLC

Eagleclaw 5-8 Fed Com 8H

Eagleclaw 5-8 Fed Com 8H

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Plan: 181112 Eagleclaw 5-8 Fed Com 8H

Morcor Standard Plan

12 November, 2018

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 8H
Project:	Eagleclaw 5-8 Fed Com 8H	TVD Reference:	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 8H	MD Reference:	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 8H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
Design:	181112 Eagleclaw 5-8 Fed Com 8H	Database:	EDM 5000.1 Single User Db

Project	Eagleclaw 5-8 Fed Com 8H		
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 5-8 Fed Com 8H		
Site Position:		Northing:	586,222.74 usft
From:	Lat/Long	Easting:	803,787.92 usft
Position Uncertainty:	1.0 usft	Slot Radius:	17-1/2 "
		Latitude:	32° 36' 31.270 N
		Longitude:	103° 28' 51.676 W
		Grid Convergence:	0.46 °

Well	Eagleclaw 5-8 Fed Com 8H					
Well Position	+N/-S	0.0 usft	Northing:	586,222.74 usft	Latitude:	32° 36' 31.270 N
	+E/-W	0.0 usft	Easting:	803,787.92 usft	Longitude:	103° 28' 51.676 W
Position Uncertainty		1.0 usft	Wellhead Elevation:	usft	Ground Level:	3,694.0 usft

Wellbore	Eagleclaw 5-8 Fed Com 8H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/12/2018	6.65	60.36	48,111

Design	181112 Eagleclaw 5-8 Fed Com 8H			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	180.93

Survey Tool Program	Date	11/12/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	19,100.0	181112 Eagleclaw 5-8 Fed Com 8H (Eagle	MWD	MWD - Standard

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Planned Survey

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0.0	0.00	0.00	0.0	-3,716.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
100.0	0.00	318.50	100.0	-3,616.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
120.0	0.00	318.50	120.0	-3,596.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
20" Conductor										
200.0	0.00	318.50	200.0	-3,516.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
300.0	0.00	318.50	300.0	-3,416.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
400.0	0.00	318.50	400.0	-3,316.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
500.0	0.00	318.50	500.0	-3,216.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
600.0	0.00	318.50	600.0	-3,116.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
700.0	0.00	318.50	700.0	-3,016.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
800.0	0.00	318.50	800.0	-2,916.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
900.0	0.00	318.50	900.0	-2,816.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,000.0	0.00	318.50	1,000.0	-2,716.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,100.0	0.00	318.50	1,100.0	-2,616.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,200.0	0.00	318.50	1,200.0	-2,516.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,300.0	0.00	318.50	1,300.0	-2,416.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,400.0	0.00	318.50	1,400.0	-2,316.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,500.0	0.00	318.50	1,500.0	-2,216.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,600.0	0.00	318.50	1,600.0	-2,116.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,700.0	0.00	318.50	1,700.0	-2,016.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,800.0	0.00	318.50	1,800.0	-1,916.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,900.0	0.00	318.50	1,900.0	-1,816.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
1,912.0	0.00	318.50	1,912.0	-1,804.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
Rustler										
1,937.0	0.00	318.50	1,937.0	-1,779.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
13 3/8" Surface Casing										
2,000.0	0.00	318.50	2,000.0	-1,716.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,100.0	0.00	318.50	2,100.0	-1,616.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00

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Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
2,112.0	0.00	318.50	2,112.0	-1,604.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
Top of Salt										
2,200.0	0.00	318.50	2,200.0	-1,516.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,300.0	0.00	318.50	2,300.0	-1,416.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,400.0	0.00	318.50	2,400.0	-1,316.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,500.0	0.00	318.50	2,500.0	-1,216.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,600.0	0.00	318.50	2,600.0	-1,116.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,700.0	0.00	318.50	2,700.0	-1,016.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,800.0	0.00	318.50	2,800.0	-916.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
2,900.0	0.00	318.50	2,900.0	-816.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,000.0	0.00	318.50	3,000.0	-716.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,100.0	0.00	318.50	3,100.0	-616.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,200.0	0.00	318.50	3,200.0	-516.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,300.0	0.00	318.50	3,300.0	-416.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,400.0	0.00	318.50	3,400.0	-316.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,462.0	0.00	318.50	3,462.0	-254.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
Base of Salt										
3,500.0	0.00	318.50	3,500.0	-216.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,600.0	0.00	318.50	3,600.0	-116.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,700.0	0.00	318.50	3,700.0	-16.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,747.0	0.00	318.50	3,747.0	31.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
Yates										
3,800.0	0.00	318.50	3,800.0	84.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
3,900.0	0.00	318.50	3,900.0	184.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,000.0	0.00	318.50	4,000.0	284.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,100.0	0.00	318.50	4,100.0	384.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,200.0	0.00	318.50	4,200.0	484.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00

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Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
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4,237.0	0.00	318.50	4,237.0	521.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
Capitan										
4,300.0	0.00	318.50	4,300.0	584.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,400.0	0.00	318.50	4,400.0	684.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,500.0	0.00	318.50	4,500.0	784.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,600.0	0.00	318.50	4,600.0	884.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,700.0	0.00	318.50	4,700.0	984.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,800.0	0.00	318.50	4,800.0	1,084.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
4,900.0	0.00	318.50	4,900.0	1,184.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,000.0	0.00	318.50	5,000.0	1,284.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,100.0	0.00	318.50	5,100.0	1,384.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,200.0	0.00	318.50	5,200.0	1,484.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,300.0	0.00	318.50	5,300.0	1,584.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,400.0	0.00	318.50	5,400.0	1,684.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,442.0	0.00	318.50	5,442.0	1,726.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
9 5/8" Intermediate Casing										
5,467.0	0.00	318.50	5,467.0	1,751.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
Delaware										
5,500.0	0.00	318.50	5,500.0	1,784.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,600.0	0.00	318.50	5,600.0	1,884.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,662.0	0.00	318.50	5,662.0	1,946.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
Cherry Canyon										
5,700.0	0.00	318.50	5,700.0	1,984.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,800.0	0.00	318.50	5,800.0	2,084.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
5,900.0	0.00	318.50	5,900.0	2,184.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
6,000.0	0.00	318.50	6,000.0	2,284.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00
6,100.0	0.00	318.50	6,100.0	2,384.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00

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6,200.0	0.00	318.50	6,200.0	2,484.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00	
6,300.0	0.00	318.50	6,300.0	2,584.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00	
6,337.0	0.00	318.50	6,337.0	2,621.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00	
Brushy Canyon											
6,400.0	0.00	318.50	6,400.0	2,684.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00	
6,470.0	0.00	318.50	6,470.0	2,754.0	0.0	0.0	803,787.92	586,222.74	0.00	0.00	
Start Build 3.00											
6,500.0	0.90	318.50	6,500.0	2,784.0	0.2	-0.2	803,787.76	586,222.92	-0.17	3.00	
6,600.0	3.90	318.50	6,599.9	2,883.9	3.3	-2.9	803,784.99	586,226.06	-3.26	3.00	
6,670.0	6.00	318.50	6,669.6	2,953.6	7.8	-6.9	803,780.98	586,230.58	-7.72	3.00	
Start 3980.0 hold at 6670.0 MD											
6,700.0	6.00	318.50	6,699.5	2,983.5	10.2	-9.0	803,778.91	586,232.93	-10.04	0.00	
6,800.0	6.00	318.50	6,798.9	3,082.9	18.0	-15.9	803,771.98	586,240.76	-17.75	0.00	
6,900.0	6.00	318.50	6,898.4	3,182.4	25.8	-22.9	803,765.05	586,248.59	-25.47	0.00	
7,000.0	6.00	318.50	6,997.8	3,281.8	33.7	-29.8	803,758.13	586,256.41	-33.18	0.00	
7,100.0	6.00	318.50	7,097.3	3,381.3	41.5	-36.7	803,751.20	586,264.24	-40.90	0.00	
7,200.0	6.00	318.50	7,196.7	3,480.7	49.3	-43.6	803,744.28	586,272.07	-48.62	0.00	
7,300.0	6.00	318.50	7,296.2	3,580.2	57.2	-50.6	803,737.35	586,279.90	-56.33	0.00	
7,400.0	6.00	318.50	7,395.6	3,679.6	65.0	-57.5	803,730.42	586,287.73	-64.05	0.00	
7,500.0	6.00	318.50	7,495.1	3,779.1	72.8	-64.4	803,723.50	586,295.56	-71.76	0.00	
7,600.0	6.00	318.50	7,594.5	3,878.5	80.6	-71.3	803,716.57	586,303.39	-79.48	0.00	
7,700.0	6.00	318.50	7,694.0	3,978.0	88.5	-78.3	803,709.64	586,311.22	-87.19	0.00	
7,800.0	6.00	318.50	7,793.4	4,077.4	96.3	-85.2	803,702.72	586,319.04	-94.91	0.00	
7,900.0	6.00	318.50	7,892.9	4,176.9	104.1	-92.1	803,695.79	586,326.87	-102.62	0.00	
8,000.0	6.00	318.50	7,992.3	4,276.3	112.0	-99.1	803,688.87	586,334.70	-110.34	0.00	
8,100.0	6.00	318.50	8,091.8	4,375.8	119.8	-106.0	803,681.94	586,342.53	-118.06	0.00	

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8,115.3	6.00	318.50	8,107.0	4,391.0	121.0	-107.0	803,680.88	586,343.73	-119.23	0.00
Bone Spring										
8,200.0	6.00	318.50	8,191.3	4,475.3	127.6	-112.9	803,675.01	586,350.36	-125.77	0.00
8,246.0	6.00	318.50	8,237.0	4,521.0	131.2	-116.1	803,671.83	586,353.96	-129.32	0.00
Avalon										
8,300.0	6.00	318.50	8,290.7	4,574.7	135.4	-119.8	803,668.09	586,358.19	-133.49	0.00
8,400.0	6.00	318.50	8,390.2	4,674.2	143.3	-126.8	803,661.16	586,366.02	-141.20	0.00
8,500.0	6.00	318.50	8,489.6	4,773.6	151.1	-133.7	803,654.23	586,373.85	-148.92	0.00
8,600.0	6.00	318.50	8,589.1	4,873.1	158.9	-140.6	803,647.31	586,381.67	-156.63	0.00
8,700.0	6.00	318.50	8,688.5	4,972.5	166.8	-147.5	803,640.38	586,389.50	-164.35	0.00
8,800.0	6.00	318.50	8,788.0	5,072.0	174.6	-154.5	803,633.46	586,397.33	-172.06	0.00
8,900.0	6.00	318.50	8,887.4	5,171.4	182.4	-161.4	803,626.53	586,405.16	-179.78	0.00
9,000.0	6.00	318.50	8,986.9	5,270.9	190.2	-168.3	803,619.60	586,412.99	-187.50	0.00
9,100.0	6.00	318.50	9,086.3	5,370.3	198.1	-175.2	803,612.68	586,420.82	-195.21	0.00
9,200.0	6.00	318.50	9,185.8	5,469.8	205.9	-182.2	803,605.75	586,428.65	-202.93	0.00
9,300.0	6.00	318.50	9,285.2	5,569.2	213.7	-189.1	803,598.82	586,436.47	-210.64	0.00
9,400.0	6.00	318.50	9,384.7	5,668.7	221.6	-196.0	803,591.90	586,444.30	-218.36	0.00
9,500.0	6.00	318.50	9,484.1	5,768.1	229.4	-202.9	803,584.97	586,452.13	-226.07	0.00
9,563.2	6.00	318.50	9,547.0	5,831.0	234.3	-207.3	803,580.59	586,457.08	-230.95	0.00
1st Bone Spring										
9,600.0	6.00	318.50	9,583.6	5,867.6	237.2	-209.9	803,578.05	586,459.96	-233.79	0.00
9,700.0	6.00	318.50	9,683.0	5,967.0	245.0	-216.8	803,571.12	586,467.79	-241.50	0.00
9,800.0	6.00	318.50	9,782.5	6,066.5	252.9	-223.7	803,564.19	586,475.62	-249.22	0.00
9,900.0	6.00	318.50	9,881.9	6,165.9	260.7	-230.7	803,557.27	586,483.45	-256.94	0.00
10,000.0	6.00	318.50	9,981.4	6,265.4	268.5	-237.6	803,550.34	586,491.28	-264.65	0.00
10,100.0	6.00	318.50	10,080.8	6,364.8	276.4	-244.5	803,543.41	586,499.10	-272.37	0.00
10,200.0	6.00	318.50	10,180.3	6,464.3	284.2	-251.4	803,536.49	586,506.93	-280.08	0.00

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 8H
Project:	Eagleclaw 5-8 Fed Com 8H	TVD Reference:	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 8H	MD Reference:	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 8H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
Design:	181112 Eagleclaw 5-8 Fed Com 8H	Database:	EDM 5000.1 Single User Db

Planned Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)	
10,236.9	6.00	318.50	10,217.0	6,501.0	287.1	-254.0	803,533.93	586,509.82	-282.93	0.00	
2nd Bone Spring											
10,300.0	6.00	318.50	10,279.7	6,563.7	292.0	-258.4	803,529.56	586,514.76	-287.80	0.00	
10,400.0	6.00	318.50	10,379.2	6,663.2	299.8	-265.3	803,522.64	586,522.59	-295.51	0.00	
10,500.0	6.00	318.50	10,478.7	6,762.7	307.7	-272.2	803,515.71	586,530.42	-303.23	0.00	
10,600.0	6.00	318.50	10,578.1	6,862.1	315.5	-279.1	803,508.78	586,538.25	-310.94	0.00	
10,650.0	6.00	318.50	10,627.8	6,911.8	319.4	-282.6	803,505.32	586,542.16	-314.80	0.00	
Start Drop -3.00											
10,700.0	4.50	318.50	10,677.6	6,961.6	322.8	-285.6	803,502.29	586,545.59	-318.18	3.00	
10,800.0	1.50	318.50	10,777.5	7,061.5	326.8	-289.1	803,498.82	586,549.51	-322.04	3.00	
10,850.0	0.00	0.00	10,827.5	7,111.5	327.3	-289.5	803,498.39	586,550.00	-322.52	3.00	
Start 25.0 hold at 10850.0 MD											
10,875.0	0.00	179.50	10,852.5	7,136.5	327.3	-289.5	803,498.39	586,550.00	-322.52	0.00	
Start Build 11.19											
10,900.0	2.80	179.50	10,877.5	7,161.5	326.6	-289.5	803,498.39	586,549.39	-321.91	11.19	
11,000.0	13.99	179.50	10,976.2	7,260.2	312.1	-289.4	803,498.52	586,534.81	-307.34	11.19	
11,100.0	25.18	179.50	11,070.3	7,354.3	278.6	-289.1	803,498.81	586,501.34	-273.88	11.19	
11,107.4	26.02	179.50	11,077.0	7,361.0	275.4	-289.1	803,498.84	586,498.13	-270.67	11.19	
3rd Bone Spring											
11,200.0	36.38	179.50	11,156.1	7,440.1	227.5	-288.7	803,499.26	586,450.25	-222.81	11.19	
11,233.0	40.07	179.50	11,182.0	7,466.0	207.1	-288.5	803,499.44	586,429.83	-202.39	11.19	
Wolfcamp											
11,300.0	47.57	179.50	11,230.3	7,514.3	160.7	-288.1	803,499.84	586,383.49	-156.06	11.19	
11,400.0	58.76	179.50	11,290.2	7,574.2	80.8	-287.4	803,500.54	586,303.58	-76.18	11.19	
11,500.0	69.95	179.50	11,333.4	7,617.4	-9.2	-286.6	803,501.32	586,213.58	13.80	11.19	
11,600.0	81.15	179.50	11,358.3	7,642.3	-105.8	-285.8	803,502.17	586,116.90	110.46	11.19	
11,670.0	88.98	179.50	11,364.3	7,648.3	-175.5	-285.1	803,502.77	586,047.22	180.12	11.19	
Start Turn -0.02											

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 8H
Project:	Eagleclaw 5-8 Fed Com 8H	TVD Reference:	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 8H	MD Reference:	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 8H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
Design:	181112 Eagleclaw 5-8 Fed Com 8H	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
11,700.0	88.98	179.49	11,364.8	7,648.8	-205.5	-284.9	803,503.04	586,017.22	210.11	0.02
11,800.0	88.98	179.47	11,366.6	7,650.6	-305.5	-284.0	803,503.94	585,917.24	310.06	0.02
11,900.0	88.98	179.45	11,368.4	7,652.4	-405.5	-283.0	803,504.87	585,817.26	410.01	0.02
12,000.0	88.98	179.43	11,370.2	7,654.2	-505.5	-282.1	803,505.85	585,717.28	509.96	0.02
12,100.0	88.98	179.41	11,372.0	7,656.0	-605.4	-281.1	803,506.85	585,617.30	609.91	0.02
12,200.0	88.98	179.39	11,373.7	7,657.7	-705.4	-280.0	803,507.89	585,517.32	709.86	0.02
12,300.0	88.98	179.37	11,375.5	7,659.5	-805.4	-278.9	803,508.97	585,417.35	809.81	0.02
12,400.0	88.98	179.35	11,377.3	7,661.3	-905.4	-277.8	803,510.08	585,317.37	909.75	0.02
12,500.0	88.98	179.33	11,379.1	7,663.1	-1,005.4	-276.7	803,511.23	585,217.39	1,009.70	0.02
12,600.0	88.98	179.31	11,380.9	7,664.9	-1,105.3	-275.5	803,512.41	585,117.41	1,109.65	0.02
12,700.0	88.98	179.29	11,382.6	7,666.6	-1,205.3	-274.3	803,513.63	585,017.44	1,209.59	0.02
12,800.0	88.98	179.27	11,384.4	7,668.4	-1,305.3	-273.0	803,514.88	584,917.46	1,309.53	0.02
12,900.0	88.98	179.25	11,386.2	7,670.2	-1,405.3	-271.7	803,516.17	584,817.48	1,409.47	0.02
13,000.0	88.98	179.23	11,388.0	7,672.0	-1,505.2	-270.4	803,517.49	584,717.51	1,509.41	0.02
13,100.0	88.98	179.21	11,389.8	7,673.8	-1,605.2	-269.1	803,518.85	584,617.53	1,609.35	0.02
13,200.0	88.98	179.19	11,391.5	7,675.5	-1,705.2	-267.7	803,520.25	584,517.56	1,709.29	0.02
13,300.0	88.98	179.17	11,393.3	7,677.3	-1,805.2	-266.2	803,521.68	584,417.59	1,809.23	0.02
13,400.0	88.98	179.15	11,395.1	7,679.1	-1,905.1	-264.8	803,523.14	584,317.61	1,909.17	0.02
13,500.0	88.98	179.13	11,396.9	7,680.9	-2,005.1	-263.3	803,524.64	584,217.64	2,009.10	0.02
13,600.0	88.98	179.11	11,398.7	7,682.7	-2,105.1	-261.7	803,526.18	584,117.67	2,109.04	0.02
13,700.0	88.98	179.09	11,400.4	7,684.4	-2,205.0	-260.2	803,527.75	584,017.70	2,208.97	0.02
13,800.0	88.98	179.07	11,402.2	7,686.2	-2,305.0	-258.6	803,529.35	583,917.72	2,308.90	0.02
13,900.0	88.98	179.05	11,404.0	7,688.0	-2,405.0	-256.9	803,530.99	583,817.75	2,408.83	0.02
14,000.0	88.98	179.03	11,405.8	7,689.8	-2,505.0	-255.3	803,532.67	583,717.78	2,508.76	0.02
14,100.0	88.98	179.01	11,407.6	7,691.6	-2,604.9	-253.5	803,534.38	583,617.81	2,608.69	0.02
14,200.0	88.98	178.99	11,409.3	7,693.3	-2,704.9	-251.8	803,536.12	583,517.85	2,708.62	0.02
14,300.0	88.98	178.97	11,411.1	7,695.1	-2,804.9	-250.0	803,537.90	583,417.88	2,808.55	0.02

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 8H
Project:	Eagleclaw 5-8 Fed Com 8H	TVD Reference:	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 8H	MD Reference:	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 8H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
Design:	181112 Eagleclaw 5-8 Fed Com 8H	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
14,400.0	88.98	178.95	11,412.9	7,696.9	-2,904.8	-248.2	803,539.72	583,317.91	2,908.47	0.02
14,500.0	88.98	178.93	11,414.7	7,698.7	-3,004.8	-246.3	803,541.57	583,217.94	3,008.40	0.02
14,600.0	88.98	178.91	11,416.5	7,700.5	-3,104.8	-244.5	803,543.46	583,117.98	3,108.32	0.02
14,700.0	88.98	178.89	11,418.2	7,702.2	-3,204.7	-242.5	803,545.38	583,018.01	3,208.24	0.02
14,800.0	88.98	178.87	11,420.0	7,704.0	-3,304.7	-240.6	803,547.34	582,918.05	3,308.16	0.02
14,900.0	88.98	178.85	11,421.8	7,705.8	-3,404.7	-238.6	803,549.33	582,818.08	3,408.08	0.02
15,000.0	88.98	178.83	11,423.6	7,707.6	-3,504.6	-236.6	803,551.36	582,718.12	3,508.00	0.02
15,100.0	88.98	178.81	11,425.4	7,709.4	-3,604.6	-234.5	803,553.42	582,618.15	3,607.91	0.02
15,200.0	88.98	178.79	11,427.1	7,711.1	-3,704.6	-232.4	803,555.52	582,518.19	3,707.83	0.02
15,300.0	88.98	178.77	11,428.9	7,712.9	-3,804.5	-230.3	803,557.66	582,418.23	3,807.74	0.02
15,400.0	88.98	178.75	11,430.7	7,714.7	-3,904.5	-228.1	803,559.82	582,318.27	3,907.65	0.02
15,500.0	88.98	178.73	11,432.5	7,716.5	-4,004.4	-225.9	803,562.03	582,218.31	4,007.57	0.02
15,600.0	88.98	178.71	11,434.3	7,718.3	-4,104.4	-223.6	803,564.27	582,118.35	4,107.48	0.02
15,700.0	88.98	178.69	11,436.0	7,720.0	-4,204.4	-221.4	803,566.54	582,018.39	4,207.38	0.02
15,800.0	88.98	178.67	11,437.8	7,721.8	-4,304.3	-219.1	803,568.85	581,918.44	4,307.29	0.02
15,900.0	88.98	178.65	11,439.6	7,723.6	-4,404.3	-216.7	803,571.20	581,818.48	4,407.20	0.02
16,000.0	88.98	178.63	11,441.4	7,725.4	-4,504.2	-214.3	803,573.58	581,718.52	4,507.10	0.02
16,100.0	88.98	178.61	11,443.2	7,727.2	-4,604.2	-211.9	803,575.99	581,618.57	4,607.00	0.02
16,200.0	88.98	178.59	11,444.9	7,728.9	-4,704.1	-209.5	803,578.44	581,518.61	4,706.90	0.02
16,300.0	88.98	178.57	11,446.7	7,730.7	-4,804.1	-207.0	803,580.93	581,418.66	4,806.80	0.02
16,400.0	88.98	178.55	11,448.5	7,732.5	-4,904.0	-204.5	803,583.45	581,318.71	4,906.70	0.02
16,500.0	88.98	178.52	11,450.3	7,734.3	-5,004.0	-201.9	803,586.01	581,218.76	5,006.60	0.02
16,600.0	88.98	178.50	11,452.1	7,736.1	-5,103.9	-199.3	803,588.60	581,118.81	5,106.50	0.02
16,700.0	88.98	178.48	11,453.8	7,737.8	-5,203.9	-196.7	803,591.22	581,018.86	5,206.39	0.02
16,800.0	88.98	178.46	11,455.6	7,739.6	-5,303.8	-194.0	803,593.89	580,918.91	5,306.28	0.02
16,900.0	88.98	178.44	11,457.4	7,741.4	-5,403.8	-191.3	803,596.58	580,818.96	5,406.17	0.02
17,000.0	88.98	178.42	11,459.2	7,743.2	-5,503.7	-188.6	803,599.32	580,719.01	5,506.06	0.02

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 8H
Project:	Eagleclaw 5-8 Fed Com 8H	TVD Reference:	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 8H	MD Reference:	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 8H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
Design:	181112 Eagleclaw 5-8 Fed Com 8H	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
17,100.0	88.98	178.40	11,461.0	7,745.0	-5,603.7	-185.8	803,602.08	580,619.07	5,605.95	0.02
17,200.0	88.98	178.38	11,462.7	7,746.7	-5,703.6	-183.0	803,604.89	580,519.12	5,705.84	0.02
17,300.0	88.98	178.36	11,464.5	7,748.5	-5,803.6	-180.2	803,607.72	580,419.18	5,805.72	0.02
17,400.0	88.98	178.34	11,466.3	7,750.3	-5,903.5	-177.3	803,610.60	580,319.24	5,905.60	0.02
17,500.0	88.98	178.32	11,468.1	7,752.1	-6,003.4	-174.4	803,613.51	580,219.29	6,005.49	0.02
17,600.0	88.98	178.30	11,469.9	7,753.9	-6,103.4	-171.5	803,616.45	580,119.35	6,105.37	0.02
17,700.0	88.98	178.28	11,471.6	7,755.6	-6,203.3	-168.5	803,619.43	580,019.41	6,205.24	0.02
17,800.0	88.98	178.26	11,473.4	7,757.4	-6,303.3	-165.5	803,622.44	579,919.47	6,305.12	0.02
17,900.0	88.98	178.24	11,475.2	7,759.2	-6,403.2	-162.4	803,625.49	579,819.54	6,405.00	0.02
18,000.0	88.98	178.22	11,477.0	7,761.0	-6,503.1	-159.3	803,628.58	579,719.60	6,504.87	0.02
18,100.0	88.98	178.20	11,478.8	7,762.8	-6,603.1	-156.2	803,631.70	579,619.67	6,604.74	0.02
18,200.0	88.98	178.18	11,480.6	7,764.6	-6,703.0	-153.1	803,634.85	579,519.73	6,704.61	0.02
18,300.0	88.98	178.16	11,482.3	7,766.3	-6,802.9	-149.9	803,638.04	579,419.80	6,804.48	0.02
18,400.0	88.98	178.14	11,484.1	7,768.1	-6,902.9	-146.7	803,641.27	579,319.87	6,904.35	0.02
18,500.0	88.98	178.12	11,485.9	7,769.9	-7,002.8	-143.4	803,644.53	579,219.93	7,004.21	0.02
18,600.0	88.98	178.10	11,487.7	7,771.7	-7,102.7	-140.1	803,647.82	579,120.00	7,104.08	0.02
18,700.0	88.98	178.08	11,489.5	7,773.5	-7,202.7	-136.8	803,651.15	579,020.08	7,203.94	0.02
18,800.0	88.98	178.06	11,491.2	7,775.2	-7,302.6	-133.4	803,654.52	578,920.15	7,303.80	0.02
18,900.0	88.98	178.04	11,493.0	7,777.0	-7,402.5	-130.0	803,657.92	578,820.22	7,403.66	0.02
19,000.0	88.98	178.02	11,494.8	7,778.8	-7,502.4	-126.6	803,661.36	578,720.30	7,503.51	0.02
19,100.0	88.98	178.00	11,496.6	7,780.6	-7,602.4	-123.1	803,664.83	578,620.37	7,603.37	0.02

TD at 19100.0 - 5 1/2" Production Casing

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 8H
Project:	Eagleclaw 5-8 Fed Com 8H	TVD Reference:	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 8H	MD Reference:	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 8H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
Design:	181112 Eagleclaw 5-8 Fed Com 8H	Database:	EDM 5000.1 Single User Db

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
19,100.0	11,496.6	5 1/2" Production Casing	5-1/2	8-3/4	
120.0	120.0	20" Conductor	20	26	
5,442.0	5,442.0	9 5/8" Intermediate Casing	9-5/8	12-1/4	
1,937.0	1,937.0	13 3/8" Surface Casing	13-3/8	17-1/2	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,467.0	5,467.0	Delaware		0.00	
8,115.3	8,107.0	Bone Spring		0.00	
9,563.2	9,547.0	1st Bone Spring		0.00	
3,747.0	3,747.0	Yates		0.00	
11,107.4	11,077.0	3rd Bone Spring		0.00	
10,236.9	10,217.0	2nd Bone Spring		0.00	
1,912.0	1,912.0	Rustler		0.00	
6,337.0	6,337.0	Brushy Canyon		0.00	
4,237.0	4,237.0	Capitan		0.00	
11,233.0	11,182.0	Wolfcamp		0.00	
2,112.0	2,112.0	Top of Salt		0.00	
3,462.0	3,462.0	Base of Salt		0.00	
8,246.0	8,237.0	Avalon		0.00	
5,662.0	5,662.0	Cherry Canyon		0.00	

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 8H
Project:	Eagleclaw 5-8 Fed Com 8H	TVD Reference:	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 8H	MD Reference:	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 8H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 8H	Survey Calculation Method:	Minimum Curvature
Design:	181112 Eagleclaw 5-8 Fed Com 8H	Database:	EDM 5000.1 Single User Db

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
6,470.0	6,470.0	0.0	0.0	Start Build 3.00	
6,670.0	6,669.6	7.8	-6.9	Start 3980.0 hold at 6670.0 MD	
10,650.0	10,627.8	319.4	-282.6	Start Drop -3.00	
10,850.0	10,827.5	327.3	-289.5	Start 25.0 hold at 10850.0 MD	
10,875.0	10,852.5	327.3	-289.5	Start Build 11.19	
11,670.0	11,364.3	-175.5	-285.1	Start Turn -0.02	
19,100.0	11,496.6	-7,602.4	-123.1	TD at 19100.0	

Checked By: _____ Approved By: _____ Date: _____