

Project: Rio Blanco County, CO
Site: ELU A18 495 Pad
Well: ELU A18 FED 11B-18 495
Wellbore: Wellbore #1
Design: Design #4
Latitude: 39.708994
Longitude: -108.103897
Ground Level: 8029.0
WELL @ 8059.0usft (30')

PROJECT DETAILS: Rio Blanco County, CO

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 - Western US
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
System Datum: Mean Sea Level

REFERENCE INFORMATION

Vertical (TVD) Reference: WELL @ 8059.0usft (30')
Section (VS) Reference: Slot - 11B-18(0.0N, 0.0E)
Measured Depth Reference: WELL @ 8059.0usft (30')
Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3359.0	3439.9	Wasatch
6560.0	6732.2	Wasatch G
6860.0	7040.8	Fort Union
8720.0	8949.4	Ohio Creek
9312.0	9537.5	Williams Fork
12453.0	12679.2	Cameo
13160.0	13386.4	Rollins

SECTION DETAILS

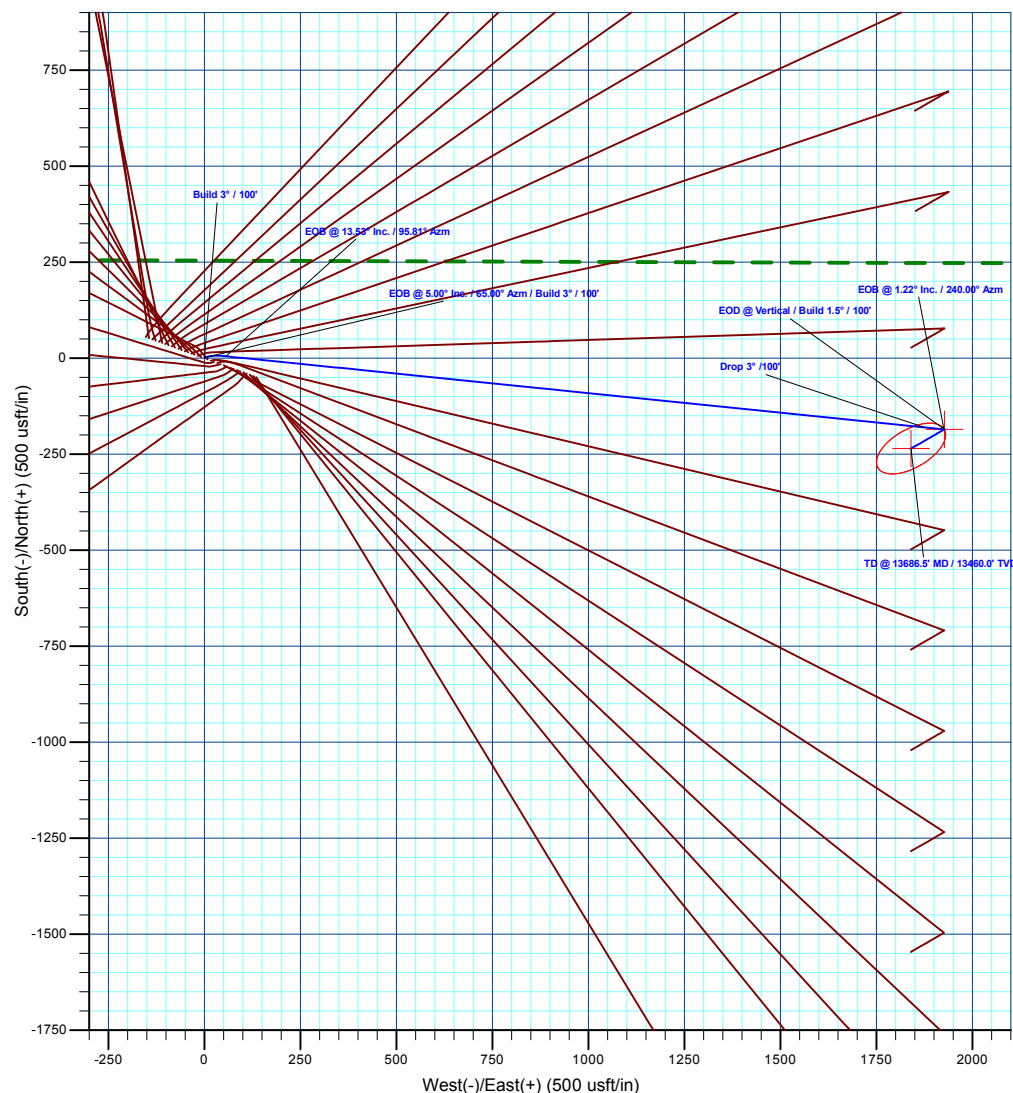
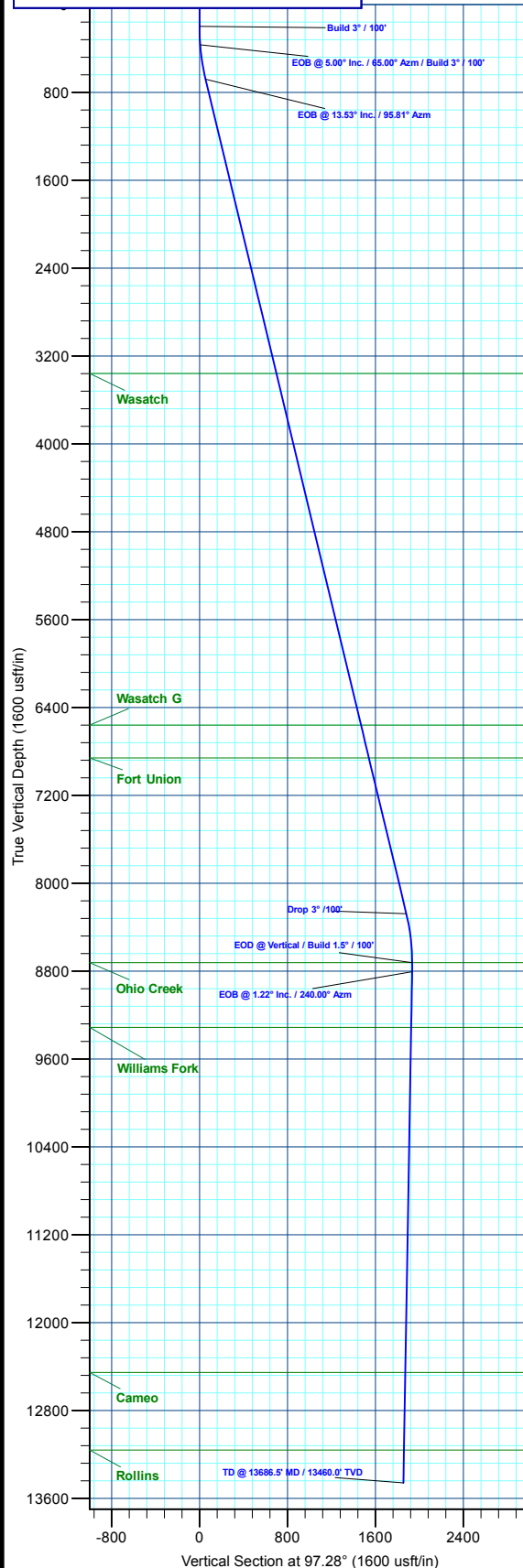
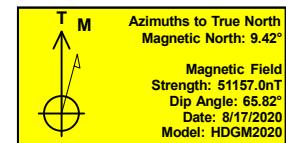
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
366.7	5.00	65.00	366.5	3.1	6.6	3.00	65.00	6.1	EOB @ 5.00° Inc. / 65.00° Azm / Build 3° / 100'
685.8	13.53	95.81	681.3	5.2	56.4	3.00	46.08	55.3	EOB @ 13.53° Inc. / 95.81° Azm
8498.5	13.53	95.81	8277.3	-179.8	1874.4	0.00	0.00	1882.0	Drop 3° / 100'
8949.4	0.00	0.00	8724.0	-185.2	1927.1	3.00	180.00	1935.0	EOD @ Vertical / Build 1.5° / 100'
9030.7	1.22	240.00	8805.3	-185.6	1926.3	1.50	240.00	1934.3	EOB @ 1.22° Inc. / 240.00° Azm
13686.5	1.22	240.00	13460.0	-235.2	1840.5	0.00	0.00	1855.4	TD @ 13686.5' MD / 13460.0' TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
11B-18 - OHCR	8724.0	-185.2	1927.1	14433118.17	2456923.14	39.708486	-108.097050
11B-18 - PBHL	13460.0	-235.2	1840.5	14433065.40	2456838.20	39.708349	-108.097358

WELL DETAILS: ELU A18 FED 11B-18 495

Ground Level : 8029.0							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
0.0	0.0	14433241.00	2454991.10	39.708994	-108.103897	11B-18	



Plan: Design #4 (ELU A18 FED 11B-18 495/Wellbore #1)

Created By: Will Jircik

Date: 4:28, October 05 2023



Caerus Oil & Gas

Rio Blanco County, CO

ELU A18 495 Pad

ELU A18 FED 11B-18 495 - Slot 11B-18

Wellbore #1

Plan: Design #4

KLX Well Planning Report

04 October, 2023



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 11B-18 495 - Slot 11B-18
Company:	Caerus Oil & Gas	TVD Reference:	WELL @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 11B-18 495	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #4		

Project	Rio Blanco County, CO		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	Zone 12N (114 W to 108 W)		

Site		ELU A18 495 Pad				
Site Position:		Northing:	14,433,279.80 usft	Latitude:	39.709109	
From:	Map	Easting:	2,454,904.40 usft	Longitude:	-108.104201	
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.85 °

Well	ELU A18 FED 11B-18 495 - Slot 11B-18					
Well Position	+N/-S	-41.6 usft	Northing:	14,433,241.00 usft	Latitude:	39.708995
	+E/-W	85.4 usft	Easting:	2,454,991.10 usft	Longitude:	-108.103897
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	8,029.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	8/17/2020	9.42	65.82	51,157.00000000

Design	Design #4			
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	97.28

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
366.7	5.00	65.00	366.5	3.1	6.6	3.00	3.00	0.00	65.00	
685.8	13.53	95.81	681.3	5.2	56.4	3.00	2.67	9.65	46.08	
8,498.5	13.53	95.81	8,277.3	-179.8	1,874.4	0.00	0.00	0.00	0.00	
8,949.4	0.00	0.00	8,724.0	-185.2	1,927.1	3.00	-3.00	0.00	180.00	11B-18 - OHCR
9,030.7	1.22	240.00	8,805.3	-185.6	1,926.3	1.50	1.50	-147.53	240.00	
13,686.5	1.22	240.00	13,460.0	-235.2	1,840.5	0.00	0.00	0.00	0.00	11B-18 - PBHL

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 11B-18 495 - Slot 11B-18
Company:	Caerus Oil & Gas	TVD Reference:	WELL @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 11B-18 495	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #4		

Planned 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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 3° / 100'									
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	3.00	65.00	300.0	1.1	2.4	2.2	3.00	3.00	0.00
EOB @ 5.00° Inc. / 65.00° Azm / Build 3° / 100'									
366.7	5.00	65.00	366.5	3.1	6.6	6.1	3.00	3.00	0.00
400.0	5.74	72.22	399.6	4.2	9.5	8.9	3.00	2.22	21.67
500.0	8.29	85.39	498.9	6.3	21.4	20.5	3.00	2.55	13.17
600.0	11.07	92.21	597.5	6.5	38.2	37.1	3.00	2.78	6.82
EOB @ 13.53° Inc. / 95.81° Azm									
685.8	13.53	95.81	681.3	5.2	56.4	55.3	3.00	2.87	4.20
700.0	13.53	95.81	695.1	4.8	59.7	58.6	0.00	0.00	0.00
800.0	13.53	95.81	792.3	2.5	83.0	82.0	0.00	0.00	0.00
900.0	13.53	95.81	889.5	0.1	106.3	105.4	0.00	0.00	0.00
1,000.0	13.53	95.81	986.8	-2.3	129.5	128.8	0.00	0.00	0.00
1,100.0	13.53	95.81	1,084.0	-4.6	152.8	152.2	0.00	0.00	0.00
1,200.0	13.53	95.81	1,181.2	-7.0	176.1	175.6	0.00	0.00	0.00
1,300.0	13.53	95.81	1,278.5	-9.4	199.4	198.9	0.00	0.00	0.00
1,400.0	13.53	95.81	1,375.7	-11.7	222.6	222.3	0.00	0.00	0.00
1,500.0	13.53	95.81	1,472.9	-14.1	245.9	245.7	0.00	0.00	0.00
1,600.0	13.53	95.81	1,570.1	-16.5	269.2	269.1	0.00	0.00	0.00
1,700.0	13.53	95.81	1,667.4	-18.8	292.4	292.5	0.00	0.00	0.00
1,800.0	13.53	95.81	1,764.6	-21.2	315.7	315.8	0.00	0.00	0.00
1,900.0	13.53	95.81	1,861.8	-23.6	339.0	339.2	0.00	0.00	0.00
2,000.0	13.53	95.81	1,959.0	-25.9	362.2	362.6	0.00	0.00	0.00
2,100.0	13.53	95.81	2,056.3	-28.3	385.5	386.0	0.00	0.00	0.00
2,200.0	13.53	95.81	2,153.5	-30.7	408.8	409.4	0.00	0.00	0.00
2,300.0	13.53	95.81	2,250.7	-33.0	432.0	432.7	0.00	0.00	0.00
2,400.0	13.53	95.81	2,347.9	-35.4	455.3	456.1	0.00	0.00	0.00
2,500.0	13.53	95.81	2,445.2	-37.8	478.6	479.5	0.00	0.00	0.00
2,600.0	13.53	95.81	2,542.4	-40.2	501.8	502.9	0.00	0.00	0.00
2,700.0	13.53	95.81	2,639.6	-42.5	525.1	526.3	0.00	0.00	0.00
2,800.0	13.53	95.81	2,736.8	-44.9	548.4	549.7	0.00	0.00	0.00
2,900.0	13.53	95.81	2,834.1	-47.3	571.7	573.0	0.00	0.00	0.00
3,000.0	13.53	95.81	2,931.3	-49.6	594.9	596.4	0.00	0.00	0.00
3,100.0	13.53	95.81	3,028.5	-52.0	618.2	619.8	0.00	0.00	0.00
3,200.0	13.53	95.81	3,125.8	-54.4	641.5	643.2	0.00	0.00	0.00
3,300.0	13.53	95.81	3,223.0	-56.7	664.7	666.6	0.00	0.00	0.00
3,400.0	13.53	95.81	3,320.2	-59.1	688.0	689.9	0.00	0.00	0.00
Wasatch									
3,439.9	13.53	95.81	3,359.0	-60.0	697.3	699.3	0.00	0.00	0.00
3,500.0	13.53	95.81	3,417.4	-61.5	711.3	713.3	0.00	0.00	0.00
3,600.0	13.53	95.81	3,514.7	-63.8	734.5	736.7	0.00	0.00	0.00
3,700.0	13.53	95.81	3,611.9	-66.2	757.8	760.1	0.00	0.00	0.00
3,800.0	13.53	95.81	3,709.1	-68.6	781.1	783.5	0.00	0.00	0.00
3,900.0	13.53	95.81	3,806.3	-70.9	804.3	806.8	0.00	0.00	0.00
4,000.0	13.53	95.81	3,903.6	-73.3	827.6	830.2	0.00	0.00	0.00
4,100.0	13.53	95.81	4,000.8	-75.7	850.9	853.6	0.00	0.00	0.00
4,200.0	13.53	95.81	4,098.0	-78.0	874.1	877.0	0.00	0.00	0.00
4,300.0	13.53	95.81	4,195.2	-80.4	897.4	900.4	0.00	0.00	0.00
4,400.0	13.53	95.81	4,292.5	-82.8	920.7	923.8	0.00	0.00	0.00
4,500.0	13.53	95.81	4,389.7	-85.1	944.0	947.1	0.00	0.00	0.00
4,600.0	13.53	95.81	4,486.9	-87.5	967.2	970.5	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 11B-18 495 - Slot 11B-18
Company:	Caerus Oil & Gas	TVD Reference:	WELL @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 11B-18 495	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #4		

Planned 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)
4,700.0	13.53	95.81	4,584.1	-89.9	990.5	993.9	0.00	0.00	0.00
4,800.0	13.53	95.81	4,681.4	-92.2	1,013.8	1,017.3	0.00	0.00	0.00
4,900.0	13.53	95.81	4,778.6	-94.6	1,037.0	1,040.7	0.00	0.00	0.00
5,000.0	13.53	95.81	4,875.8	-97.0	1,060.3	1,064.0	0.00	0.00	0.00
5,100.0	13.53	95.81	4,973.1	-99.3	1,083.6	1,087.4	0.00	0.00	0.00
5,200.0	13.53	95.81	5,070.3	-101.7	1,106.8	1,110.8	0.00	0.00	0.00
5,300.0	13.53	95.81	5,167.5	-104.1	1,130.1	1,134.2	0.00	0.00	0.00
5,400.0	13.53	95.81	5,264.7	-106.5	1,153.4	1,157.6	0.00	0.00	0.00
5,500.0	13.53	95.81	5,362.0	-108.8	1,176.6	1,180.9	0.00	0.00	0.00
5,600.0	13.53	95.81	5,459.2	-111.2	1,199.9	1,204.3	0.00	0.00	0.00
5,700.0	13.53	95.81	5,556.4	-113.6	1,223.2	1,227.7	0.00	0.00	0.00
5,800.0	13.53	95.81	5,653.6	-115.9	1,246.5	1,251.1	0.00	0.00	0.00
5,900.0	13.53	95.81	5,750.9	-118.3	1,269.7	1,274.5	0.00	0.00	0.00
6,000.0	13.53	95.81	5,848.1	-120.7	1,293.0	1,297.9	0.00	0.00	0.00
6,100.0	13.53	95.81	5,945.3	-123.0	1,316.3	1,321.2	0.00	0.00	0.00
6,200.0	13.53	95.81	6,042.5	-125.4	1,339.5	1,344.6	0.00	0.00	0.00
6,300.0	13.53	95.81	6,139.8	-127.8	1,362.8	1,368.0	0.00	0.00	0.00
6,400.0	13.53	95.81	6,237.0	-130.1	1,386.1	1,391.4	0.00	0.00	0.00
6,500.0	13.53	95.81	6,334.2	-132.5	1,409.3	1,414.8	0.00	0.00	0.00
6,600.0	13.53	95.81	6,431.4	-134.9	1,432.6	1,438.1	0.00	0.00	0.00
6,700.0	13.53	95.81	6,528.7	-137.2	1,455.9	1,461.5	0.00	0.00	0.00
Wasatch G									
6,732.2	13.53	95.81	6,560.0	-138.0	1,463.4	1,469.1	0.00	0.00	0.00
6,800.0	13.53	95.81	6,625.9	-139.6	1,479.1	1,484.9	0.00	0.00	0.00
6,900.0	13.53	95.81	6,723.1	-142.0	1,502.4	1,508.3	0.00	0.00	0.00
7,000.0	13.53	95.81	6,820.4	-144.3	1,525.7	1,531.7	0.00	0.00	0.00
Fort Union									
7,040.8	13.53	95.81	6,860.0	-145.3	1,535.2	1,541.2	0.00	0.00	0.00
7,100.0	13.53	95.81	6,917.6	-146.7	1,548.9	1,555.0	0.00	0.00	0.00
7,200.0	13.53	95.81	7,014.8	-149.1	1,572.2	1,578.4	0.00	0.00	0.00
7,300.0	13.53	95.81	7,112.0	-151.4	1,595.5	1,601.8	0.00	0.00	0.00
7,400.0	13.53	95.81	7,209.3	-153.8	1,618.8	1,625.2	0.00	0.00	0.00
7,500.0	13.53	95.81	7,306.5	-156.2	1,642.0	1,648.6	0.00	0.00	0.00
7,600.0	13.53	95.81	7,403.7	-158.5	1,665.3	1,672.0	0.00	0.00	0.00
7,700.0	13.53	95.81	7,500.9	-160.9	1,688.6	1,695.3	0.00	0.00	0.00
7,800.0	13.53	95.81	7,598.2	-163.3	1,711.8	1,718.7	0.00	0.00	0.00
7,900.0	13.53	95.81	7,695.4	-165.6	1,735.1	1,742.1	0.00	0.00	0.00
8,000.0	13.53	95.81	7,792.6	-168.0	1,758.4	1,765.5	0.00	0.00	0.00
8,100.0	13.53	95.81	7,889.8	-170.4	1,781.6	1,788.9	0.00	0.00	0.00
8,200.0	13.53	95.81	7,987.1	-172.8	1,804.9	1,812.2	0.00	0.00	0.00
8,300.0	13.53	95.81	8,084.3	-175.1	1,828.2	1,835.6	0.00	0.00	0.00
8,400.0	13.53	95.81	8,181.5	-177.5	1,851.4	1,859.0	0.00	0.00	0.00
Drop 3° /100'									
8,498.5	13.53	95.81	8,277.3	-179.8	1,874.4	1,882.0	0.00	0.00	0.00
8,500.0	13.48	95.81	8,278.7	-179.9	1,874.7	1,882.4	3.00	-3.00	0.00
8,600.0	10.48	95.81	8,376.6	-182.0	1,895.4	1,903.1	3.00	-3.00	0.00
8,700.0	7.48	95.81	8,475.3	-183.5	1,910.9	1,918.7	3.00	-3.00	0.00
8,800.0	4.48	95.81	8,574.8	-184.6	1,921.3	1,929.2	3.00	-3.00	0.00
8,900.0	1.48	95.81	8,674.6	-185.1	1,926.4	1,934.4	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek									
8,949.4	0.00	0.00	8,724.0	-185.2	1,927.1	1,935.0	3.00	-3.00	0.00
9,000.0	0.76	240.00	8,774.6	-185.4	1,926.8	1,934.7	1.50	1.50	0.00
EOB @ 1.22° Inc. / 240.00° Azm									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 11B-18 495 - Slot 11B-18
Company:	Caerus Oil & Gas	TVD Reference:	WELL @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 11B-18 495	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #4		

Planned 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)
9,030.7	1.22	240.00	8,805.3	-185.6	1,926.3	1,934.3	1.50	1.50	0.00
9,100.0	1.22	240.00	8,874.6	-186.4	1,925.0	1,933.1	0.00	0.00	0.00
9,200.0	1.22	240.00	8,974.6	-187.4	1,923.2	1,931.4	0.00	0.00	0.00
9,300.0	1.22	240.00	9,074.5	-188.5	1,921.4	1,929.7	0.00	0.00	0.00
9,400.0	1.22	240.00	9,174.5	-189.5	1,919.5	1,928.1	0.00	0.00	0.00
9,500.0	1.22	240.00	9,274.5	-190.6	1,917.7	1,926.4	0.00	0.00	0.00
Williams Fork									
9,537.5	1.22	240.00	9,312.0	-191.0	1,917.0	1,925.7	0.00	0.00	0.00
9,600.0	1.22	240.00	9,374.5	-191.7	1,915.8	1,924.7	0.00	0.00	0.00
9,700.0	1.22	240.00	9,474.5	-192.7	1,914.0	1,923.0	0.00	0.00	0.00
9,800.0	1.22	240.00	9,574.4	-193.8	1,912.1	1,921.3	0.00	0.00	0.00
9,900.0	1.22	240.00	9,674.4	-194.9	1,910.3	1,919.6	0.00	0.00	0.00
10,000.0	1.22	240.00	9,774.4	-195.9	1,908.4	1,917.9	0.00	0.00	0.00
10,100.0	1.22	240.00	9,874.4	-197.0	1,906.6	1,916.2	0.00	0.00	0.00
10,200.0	1.22	240.00	9,974.3	-198.1	1,904.8	1,914.5	0.00	0.00	0.00
10,300.0	1.22	240.00	10,074.3	-199.1	1,902.9	1,912.8	0.00	0.00	0.00
10,400.0	1.22	240.00	10,174.3	-200.2	1,901.1	1,911.1	0.00	0.00	0.00
10,500.0	1.22	240.00	10,274.3	-201.3	1,899.2	1,909.4	0.00	0.00	0.00
10,600.0	1.22	240.00	10,374.2	-202.3	1,897.4	1,907.7	0.00	0.00	0.00
10,700.0	1.22	240.00	10,474.2	-203.4	1,895.5	1,906.0	0.00	0.00	0.00
10,800.0	1.22	240.00	10,574.2	-204.5	1,893.7	1,904.3	0.00	0.00	0.00
10,900.0	1.22	240.00	10,674.2	-205.5	1,891.8	1,902.6	0.00	0.00	0.00
11,000.0	1.22	240.00	10,774.2	-206.6	1,890.0	1,900.9	0.00	0.00	0.00
11,100.0	1.22	240.00	10,874.1	-207.6	1,888.2	1,899.2	0.00	0.00	0.00
11,200.0	1.22	240.00	10,974.1	-208.7	1,886.3	1,897.6	0.00	0.00	0.00
11,300.0	1.22	240.00	11,074.1	-209.8	1,884.5	1,895.9	0.00	0.00	0.00
11,400.0	1.22	240.00	11,174.1	-210.8	1,882.6	1,894.2	0.00	0.00	0.00
11,500.0	1.22	240.00	11,274.0	-211.9	1,880.8	1,892.5	0.00	0.00	0.00
11,600.0	1.22	240.00	11,374.0	-213.0	1,878.9	1,890.8	0.00	0.00	0.00
11,700.0	1.22	240.00	11,474.0	-214.0	1,877.1	1,889.1	0.00	0.00	0.00
11,800.0	1.22	240.00	11,574.0	-215.1	1,875.2	1,887.4	0.00	0.00	0.00
11,900.0	1.22	240.00	11,674.0	-216.2	1,873.4	1,885.7	0.00	0.00	0.00
12,000.0	1.22	240.00	11,773.9	-217.2	1,871.6	1,884.0	0.00	0.00	0.00
12,100.0	1.22	240.00	11,873.9	-218.3	1,869.7	1,882.3	0.00	0.00	0.00
12,200.0	1.22	240.00	11,973.9	-219.4	1,867.9	1,880.6	0.00	0.00	0.00
12,300.0	1.22	240.00	12,073.9	-220.4	1,866.0	1,878.9	0.00	0.00	0.00
12,400.0	1.22	240.00	12,173.8	-221.5	1,864.2	1,877.2	0.00	0.00	0.00
12,500.0	1.22	240.00	12,273.8	-222.6	1,862.3	1,875.5	0.00	0.00	0.00
12,600.0	1.22	240.00	12,373.8	-223.6	1,860.5	1,873.8	0.00	0.00	0.00
Cameo									
12,679.2	1.22	240.00	12,453.0	-224.5	1,859.0	1,872.5	0.00	0.00	0.00
12,700.0	1.22	240.00	12,473.8	-224.7	1,858.7	1,872.1	0.00	0.00	0.00
12,800.0	1.22	240.00	12,573.7	-225.7	1,856.8	1,870.4	0.00	0.00	0.00
12,900.0	1.22	240.00	12,673.7	-226.8	1,855.0	1,868.8	0.00	0.00	0.00
13,000.0	1.22	240.00	12,773.7	-227.9	1,853.1	1,867.1	0.00	0.00	0.00
13,100.0	1.22	240.00	12,873.7	-228.9	1,851.3	1,865.4	0.00	0.00	0.00
13,200.0	1.22	240.00	12,973.7	-230.0	1,849.4	1,863.7	0.00	0.00	0.00
13,300.0	1.22	240.00	13,073.6	-231.1	1,847.6	1,862.0	0.00	0.00	0.00
Rollins									
13,386.4	1.22	240.00	13,160.0	-232.0	1,846.0	1,860.5	0.00	0.00	0.00
13,400.0	1.22	240.00	13,173.6	-232.1	1,845.7	1,860.3	0.00	0.00	0.00
13,500.0	1.22	240.00	13,273.6	-233.2	1,843.9	1,858.6	0.00	0.00	0.00
13,600.0	1.22	240.00	13,373.6	-234.3	1,842.1	1,856.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 11B-18 495 - Slot 11B-18
Company:	Caerus Oil & Gas	TVD Reference:	WELL @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 11B-18 495	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #4		

Planned 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)
TD @ 13686.5' MD / 13460.0' TVD									
13,686.5	1.22	240.00	13,460.0	-235.2	1,840.5	1,855.4	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
11B-18 - OHCR - hit/miss target - Shape - Point	0.00	0.00	8,724.0	-185.2	1,927.1	14,433,118.17	2,456,923.15	39.708486	-108.097051
11B-18 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 240.00 azi)	0.00	0.00	13,460.0	-235.2	1,840.5	14,433,065.40	2,456,838.20	39.708349	-108.097358

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,439.9	3,359.0	Wasatch				
6,732.2	6,560.0	Wasatch G				
7,040.8	6,860.0	Fort Union				
8,949.4	8,724.0	Ohio Creek				
9,537.5	9,312.0	Williams Fork				
12,679.2	12,453.0	Cameo				
13,386.4	13,160.0	Rollins				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
200.0	200.0	0.0	0.0	Build 3° / 100'
366.7	366.5	3.1	6.6	EOB @ 5.00° Inc. / 65.00° Azm / Build 3° / 100'
685.8	681.3	5.2	56.4	EOB @ 13.53° Inc. / 95.81° Azm
8,498.5	8,277.3	-179.8	1,874.4	Drop 3° / 100'
8,949.4	8,724.0	-185.2	1,927.1	EOD @ Vertical / Build 1.5° / 100'
9,030.7	8,805.3	-185.6	1,926.3	EOB @ 1.22° Inc. / 240.00° Azm
13,686.5	13,460.0	-235.2	1,840.5	TD @ 13686.5' MD / 13460.0' TVD