

Project: Rio Blanco County, CO
Site: ELU A18 495 Pad
Well: ELU A18 FED 12A-18 495
Wellbore: Wellbore #1
Design: Design #4
Latitude: 39.708944
Longitude: -108.103717
Ground Level: 8029.0
RKB @ 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: RKB @ 8059.0usft (30')
Section (VS) Reference: Slot - 12A-18(0.0N, 0.0E)
Measured Depth Reference: RKB @ 8059.0usft (30')
Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3334.0	3426.4	Wasatch
6549.0	6756.9	Wasatch G
6849.0	7067.7	Fort Union
8712.0	8985.5	Ohio Creek
9297.0	9570.6	Williams Fork
12415.0	12689.3	Cameo
13153.0	13427.5	Rollins

SECTION DETAILS

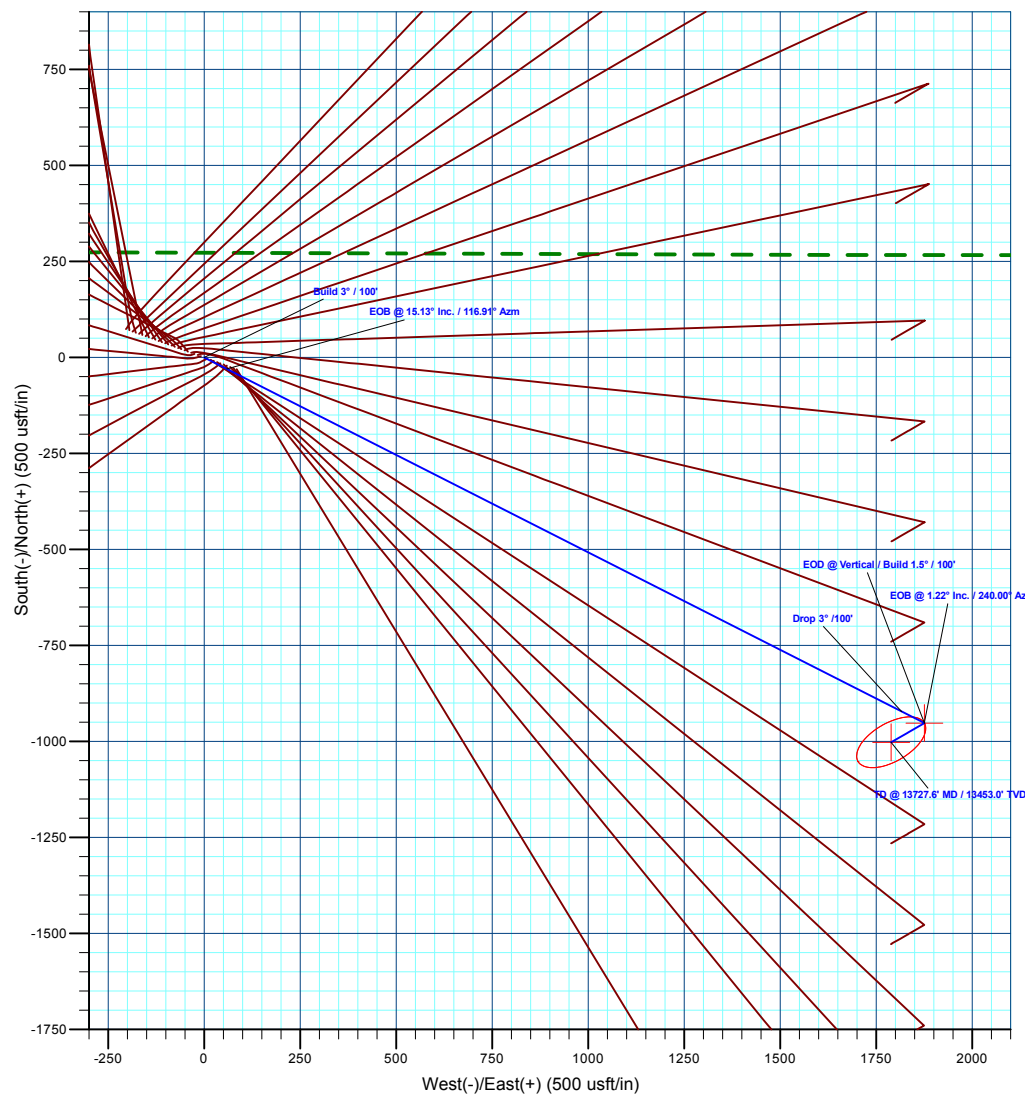
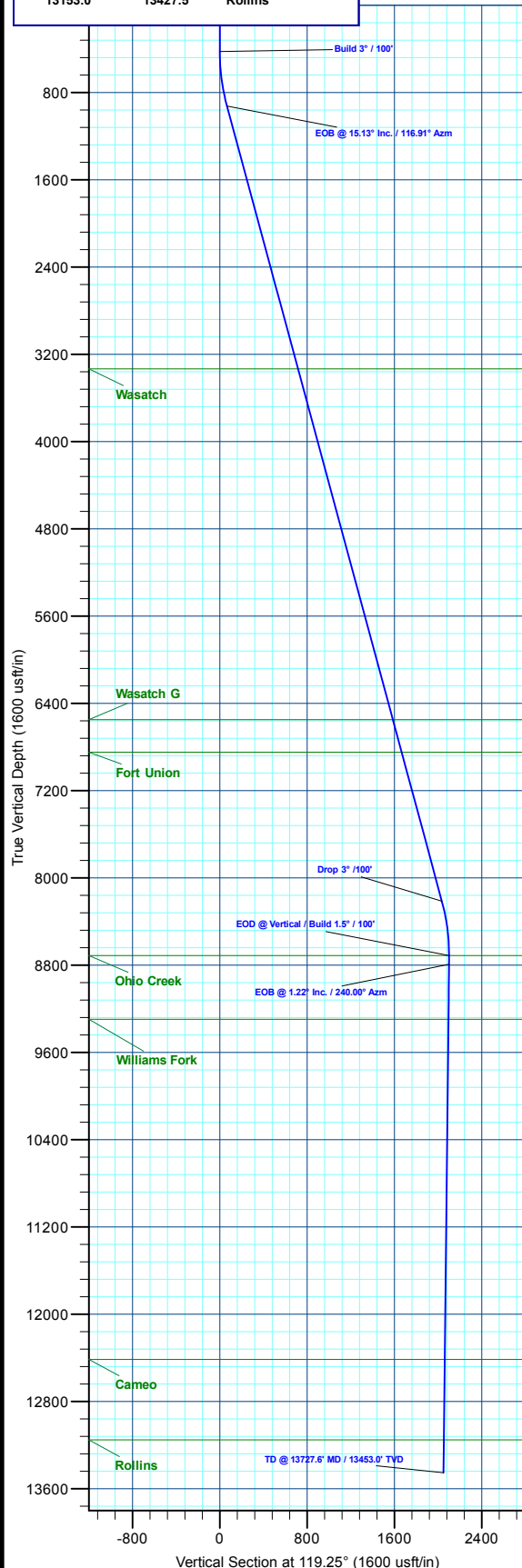
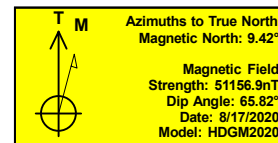
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
425.0	0.00	0.00	425.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
929.4	15.13	116.91	923.6	-30.0	59.0	3.00	116.91	66.2	EOB @ 15.13° Inc. / 116.91° Azm
8481.1	15.13	116.91	8213.4	-922.2	1816.9	0.00	0.00	2035.8	Drop 3° / 100'
8985.5	0.00	0.00	8712.0	-952.1	1876.0	3.00	180.00	2102.0	EOD @ Vertical / Build 1.5° / 100'
9066.8	1.22	240.00	8793.2	-952.6	1875.2	1.50	240.00	2101.6	EOB @ 1.22° Inc. / 240.00° Azm
13727.6	1.22	240.00	13453.0	-1002.1	1789.4	0.00	0.00	2050.9	TD @ 13727.6° MD / 13453.0° TVD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
12A-18 - OHCR	8712.0	-952.1	1876.0	14432333.17	2456948.14	39.706331	-108.097052
12A-18 - PBHL	13453.0	-1002.1	1789.4	14432280.40	2456863.20	39.706193	-108.097360

WELL DETAILS: ELU A18 FED 12A-18 495

Ground Level : 8029.0							
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
0.0	0.0	14433224.20	2455042.40	39.708944	-108.103717	12A-18	



Plan: Design #4 (ELU A18 FED 12A-18 495/Wellbore #1)

Created By: Will Jircik

Date: 4:22, October 05 2023



Caerus Oil & Gas

Rio Blanco County, CO

ELU A18 495 Pad

ELU A18 FED 12A-18 495 - Slot 12A-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 12A-18 495 - Slot 12A-18
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 12A-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 12A-18 495 - Slot 12A-18					
Well Position	+N/-S	-60.0 usft	Northing:	14,433,224.20 usft	Latitude:	39.708944
	+E/-W	136.1 usft	Easting:	2,455,042.40 usft	Longitude:	-108.103717
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	51,156.90000000

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	119.25

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	
425.0	0.00	0.00	425.0	0.0	0.0	0.00	0.00	0.00	0.00	
929.4	15.13	116.91	923.6	-30.0	59.0	3.00	3.00	0.00	116.91	
8,481.1	15.13	116.91	8,213.4	-922.2	1,816.9	0.00	0.00	0.00	0.00	
8,985.5	0.00	0.00	8,712.0	-952.1	1,876.0	3.00	-3.00	0.00	180.00	12A-18 - OHCR
9,066.8	1.22	240.00	8,793.2	-952.6	1,875.2	1.50	1.50	-147.69	240.00	
13,727.6	1.22	240.00	13,453.0	-1,002.1	1,789.4	0.00	0.00	0.00	0.00	12A-18 - PBHL

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 12A-18 495 - Slot 12A-18
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 12A-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
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 3° / 100'									
425.0	0.00	0.00	425.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	2.25	116.91	500.0	-0.7	1.3	1.5	3.00	3.00	0.00
600.0	5.25	116.91	599.8	-3.6	7.1	8.0	3.00	3.00	0.00
700.0	8.25	116.91	699.1	-8.9	17.6	19.7	3.00	3.00	0.00
800.0	11.25	116.91	797.6	-16.6	32.7	36.7	3.00	3.00	0.00
900.0	14.25	116.91	895.1	-26.6	52.4	58.7	3.00	3.00	0.00
EOB @ 15.13° Inc. / 116.91° Azm									
929.4	15.13	116.91	923.6	-30.0	59.0	66.2	3.00	3.00	0.00
1,000.0	15.13	116.91	991.7	-38.3	75.5	84.6	0.00	0.00	0.00
1,100.0	15.13	116.91	1,088.2	-50.1	98.8	110.7	0.00	0.00	0.00
1,200.0	15.13	116.91	1,184.8	-61.9	122.0	136.7	0.00	0.00	0.00
1,300.0	15.13	116.91	1,281.3	-73.8	145.3	162.8	0.00	0.00	0.00
1,400.0	15.13	116.91	1,377.8	-85.6	168.6	188.9	0.00	0.00	0.00
1,500.0	15.13	116.91	1,474.4	-97.4	191.9	215.0	0.00	0.00	0.00
1,600.0	15.13	116.91	1,570.9	-109.2	215.1	241.1	0.00	0.00	0.00
1,700.0	15.13	116.91	1,667.4	-121.0	238.4	267.2	0.00	0.00	0.00
1,800.0	15.13	116.91	1,764.0	-132.8	261.7	293.2	0.00	0.00	0.00
1,900.0	15.13	116.91	1,860.5	-144.6	285.0	319.3	0.00	0.00	0.00
2,000.0	15.13	116.91	1,957.0	-156.5	308.3	345.4	0.00	0.00	0.00
2,100.0	15.13	116.91	2,053.6	-168.3	331.5	371.5	0.00	0.00	0.00
2,200.0	15.13	116.91	2,150.1	-180.1	354.8	397.6	0.00	0.00	0.00
2,300.0	15.13	116.91	2,246.6	-191.9	378.1	423.7	0.00	0.00	0.00
2,400.0	15.13	116.91	2,343.2	-203.7	401.4	449.7	0.00	0.00	0.00
2,500.0	15.13	116.91	2,439.7	-215.5	424.6	475.8	0.00	0.00	0.00
2,600.0	15.13	116.91	2,536.2	-227.3	447.9	501.9	0.00	0.00	0.00
2,700.0	15.13	116.91	2,632.8	-239.2	471.2	528.0	0.00	0.00	0.00
2,800.0	15.13	116.91	2,729.3	-251.0	494.5	554.1	0.00	0.00	0.00
2,900.0	15.13	116.91	2,825.8	-262.8	517.8	580.1	0.00	0.00	0.00
3,000.0	15.13	116.91	2,922.4	-274.6	541.0	606.2	0.00	0.00	0.00
3,100.0	15.13	116.91	3,018.9	-286.4	564.3	632.3	0.00	0.00	0.00
3,200.0	15.13	116.91	3,115.4	-298.2	587.6	658.4	0.00	0.00	0.00
3,300.0	15.13	116.91	3,212.0	-310.0	610.9	684.5	0.00	0.00	0.00
3,400.0	15.13	116.91	3,308.5	-321.9	634.1	710.6	0.00	0.00	0.00
Wasatch									
3,426.4	15.13	116.91	3,334.0	-325.0	640.3	717.4	0.00	0.00	0.00
3,500.0	15.13	116.91	3,405.0	-333.7	657.4	736.6	0.00	0.00	0.00
3,600.0	15.13	116.91	3,501.6	-345.5	680.7	762.7	0.00	0.00	0.00
3,700.0	15.13	116.91	3,598.1	-357.3	704.0	788.8	0.00	0.00	0.00
3,800.0	15.13	116.91	3,694.6	-369.1	727.3	814.9	0.00	0.00	0.00
3,900.0	15.13	116.91	3,791.2	-380.9	750.5	841.0	0.00	0.00	0.00
4,000.0	15.13	116.91	3,887.7	-392.7	773.8	867.1	0.00	0.00	0.00
4,100.0	15.13	116.91	3,984.2	-404.6	797.1	893.1	0.00	0.00	0.00
4,200.0	15.13	116.91	4,080.8	-416.4	820.4	919.2	0.00	0.00	0.00
4,300.0	15.13	116.91	4,177.3	-428.2	843.6	945.3	0.00	0.00	0.00
4,400.0	15.13	116.91	4,273.8	-440.0	866.9	971.4	0.00	0.00	0.00
4,500.0	15.13	116.91	4,370.4	-451.8	890.2	997.5	0.00	0.00	0.00
4,600.0	15.13	116.91	4,466.9	-463.6	913.5	1,023.5	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 12A-18 495 - Slot 12A-18
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 12A-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	15.13	116.91	4,563.4	-475.4	936.8	1,049.6	0.00	0.00	0.00
4,800.0	15.13	116.91	4,660.0	-487.3	960.0	1,075.7	0.00	0.00	0.00
4,900.0	15.13	116.91	4,756.5	-499.1	983.3	1,101.8	0.00	0.00	0.00
5,000.0	15.13	116.91	4,853.0	-510.9	1,006.6	1,127.9	0.00	0.00	0.00
5,100.0	15.13	116.91	4,949.6	-522.7	1,029.9	1,154.0	0.00	0.00	0.00
5,200.0	15.13	116.91	5,046.1	-534.5	1,053.1	1,180.0	0.00	0.00	0.00
5,300.0	15.13	116.91	5,142.6	-546.3	1,076.4	1,206.1	0.00	0.00	0.00
5,400.0	15.13	116.91	5,239.1	-558.1	1,099.7	1,232.2	0.00	0.00	0.00
5,500.0	15.13	116.91	5,335.7	-570.0	1,123.0	1,258.3	0.00	0.00	0.00
5,600.0	15.13	116.91	5,432.2	-581.8	1,146.3	1,284.4	0.00	0.00	0.00
5,700.0	15.13	116.91	5,528.7	-593.6	1,169.5	1,310.5	0.00	0.00	0.00
5,800.0	15.13	116.91	5,625.3	-605.4	1,192.8	1,336.5	0.00	0.00	0.00
5,900.0	15.13	116.91	5,721.8	-617.2	1,216.1	1,362.6	0.00	0.00	0.00
6,000.0	15.13	116.91	5,818.3	-629.0	1,239.4	1,388.7	0.00	0.00	0.00
6,100.0	15.13	116.91	5,914.9	-640.8	1,262.6	1,414.8	0.00	0.00	0.00
6,200.0	15.13	116.91	6,011.4	-652.7	1,285.9	1,440.9	0.00	0.00	0.00
6,300.0	15.13	116.91	6,107.9	-664.5	1,309.2	1,466.9	0.00	0.00	0.00
6,400.0	15.13	116.91	6,204.5	-676.3	1,332.5	1,493.0	0.00	0.00	0.00
6,500.0	15.13	116.91	6,301.0	-688.1	1,355.8	1,519.1	0.00	0.00	0.00
6,600.0	15.13	116.91	6,397.5	-699.9	1,379.0	1,545.2	0.00	0.00	0.00
6,700.0	15.13	116.91	6,494.1	-711.7	1,402.3	1,571.3	0.00	0.00	0.00
Wasatch G									
6,756.9	15.13	116.91	6,549.0	-718.5	1,415.6	1,586.1	0.00	0.00	0.00
6,800.0	15.13	116.91	6,590.6	-723.6	1,425.6	1,597.4	0.00	0.00	0.00
6,900.0	15.13	116.91	6,687.1	-735.4	1,448.9	1,623.4	0.00	0.00	0.00
7,000.0	15.13	116.91	6,783.7	-747.2	1,472.1	1,649.5	0.00	0.00	0.00
Fort Union									
7,067.7	15.13	116.91	6,849.0	-755.2	1,487.9	1,667.2	0.00	0.00	0.00
7,100.0	15.13	116.91	6,880.2	-759.0	1,495.4	1,675.6	0.00	0.00	0.00
7,200.0	15.13	116.91	6,976.7	-770.8	1,518.7	1,701.7	0.00	0.00	0.00
7,300.0	15.13	116.91	7,073.3	-782.6	1,542.0	1,727.8	0.00	0.00	0.00
7,400.0	15.13	116.91	7,169.8	-794.4	1,565.3	1,753.9	0.00	0.00	0.00
7,500.0	15.13	116.91	7,266.3	-806.3	1,588.5	1,779.9	0.00	0.00	0.00
7,600.0	15.13	116.91	7,362.9	-818.1	1,611.8	1,806.0	0.00	0.00	0.00
7,700.0	15.13	116.91	7,459.4	-829.9	1,635.1	1,832.1	0.00	0.00	0.00
7,800.0	15.13	116.91	7,555.9	-841.7	1,658.4	1,858.2	0.00	0.00	0.00
7,900.0	15.13	116.91	7,652.5	-853.5	1,681.6	1,884.3	0.00	0.00	0.00
8,000.0	15.13	116.91	7,749.0	-865.3	1,704.9	1,910.3	0.00	0.00	0.00
8,100.0	15.13	116.91	7,845.5	-877.1	1,728.2	1,936.4	0.00	0.00	0.00
8,200.0	15.13	116.91	7,942.1	-889.0	1,751.5	1,962.5	0.00	0.00	0.00
8,300.0	15.13	116.91	8,038.6	-900.8	1,774.7	1,988.6	0.00	0.00	0.00
8,400.0	15.13	116.91	8,135.1	-912.6	1,798.0	2,014.7	0.00	0.00	0.00
Drop 3° /100'									
8,481.1	15.13	116.91	8,213.4	-922.2	1,816.9	2,035.8	0.00	0.00	0.00
8,500.0	14.57	116.91	8,231.7	-924.4	1,821.2	2,040.7	3.00	-3.00	0.00
8,600.0	11.57	116.91	8,329.1	-934.6	1,841.4	2,063.3	3.00	-3.00	0.00
8,700.0	8.57	116.91	8,427.5	-942.5	1,857.0	2,080.7	3.00	-3.00	0.00
8,800.0	5.57	116.91	8,526.8	-948.1	1,867.9	2,093.0	3.00	-3.00	0.00
8,900.0	2.57	116.91	8,626.5	-951.3	1,874.3	2,100.1	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek									
8,985.5	0.00	0.00	8,712.0	-952.1	1,876.0	2,102.0	3.00	-3.00	0.00
9,000.0	0.22	240.00	8,726.5	-952.2	1,875.9	2,102.0	1.50	1.50	0.00
EOB @ 1.22° Inc. / 240.00° Azm									
9,066.8	1.22	240.00	8,793.2	-952.6	1,875.2	2,101.6	1.50	1.50	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 12A-18 495 - Slot 12A-18
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 12A-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)
9,100.0	1.22	240.00	8,826.5	-952.9	1,874.6	2,101.2	0.00	0.00	0.00
9,200.0	1.22	240.00	8,926.4	-954.0	1,872.8	2,100.1	0.00	0.00	0.00
9,300.0	1.22	240.00	9,026.4	-955.0	1,870.9	2,099.0	0.00	0.00	0.00
9,400.0	1.22	240.00	9,126.4	-956.1	1,869.1	2,097.9	0.00	0.00	0.00
9,500.0	1.22	240.00	9,226.4	-957.2	1,867.2	2,096.8	0.00	0.00	0.00
Williams Fork									
9,570.6	1.22	240.00	9,297.0	-957.9	1,865.9	2,096.1	0.00	0.00	0.00
9,600.0	1.22	240.00	9,326.3	-958.2	1,865.4	2,095.8	0.00	0.00	0.00
9,700.0	1.22	240.00	9,426.3	-959.3	1,863.5	2,094.7	0.00	0.00	0.00
9,800.0	1.22	240.00	9,526.3	-960.4	1,861.7	2,093.6	0.00	0.00	0.00
9,900.0	1.22	240.00	9,626.3	-961.4	1,859.9	2,092.5	0.00	0.00	0.00
10,000.0	1.22	240.00	9,726.3	-962.5	1,858.0	2,091.4	0.00	0.00	0.00
10,100.0	1.22	240.00	9,826.2	-963.6	1,856.2	2,090.3	0.00	0.00	0.00
10,200.0	1.22	240.00	9,926.2	-964.6	1,854.3	2,089.2	0.00	0.00	0.00
10,300.0	1.22	240.00	10,026.2	-965.7	1,852.5	2,088.1	0.00	0.00	0.00
10,400.0	1.22	240.00	10,126.2	-966.7	1,850.7	2,087.1	0.00	0.00	0.00
10,500.0	1.22	240.00	10,226.1	-967.8	1,848.8	2,086.0	0.00	0.00	0.00
10,600.0	1.22	240.00	10,326.1	-968.9	1,847.0	2,084.9	0.00	0.00	0.00
10,700.0	1.22	240.00	10,426.1	-969.9	1,845.1	2,083.8	0.00	0.00	0.00
10,800.0	1.22	240.00	10,526.1	-971.0	1,843.3	2,082.7	0.00	0.00	0.00
10,900.0	1.22	240.00	10,626.1	-972.1	1,841.4	2,081.6	0.00	0.00	0.00
11,000.0	1.22	240.00	10,726.0	-973.1	1,839.6	2,080.5	0.00	0.00	0.00
11,100.0	1.22	240.00	10,826.0	-974.2	1,837.8	2,079.4	0.00	0.00	0.00
11,200.0	1.22	240.00	10,926.0	-975.3	1,835.9	2,078.4	0.00	0.00	0.00
11,300.0	1.22	240.00	11,026.0	-976.3	1,834.1	2,077.3	0.00	0.00	0.00
11,400.0	1.22	240.00	11,125.9	-977.4	1,832.2	2,076.2	0.00	0.00	0.00
11,500.0	1.22	240.00	11,225.9	-978.4	1,830.4	2,075.1	0.00	0.00	0.00
11,600.0	1.22	240.00	11,325.9	-979.5	1,828.5	2,074.0	0.00	0.00	0.00
11,700.0	1.22	240.00	11,425.9	-980.6	1,826.7	2,072.9	0.00	0.00	0.00
11,800.0	1.22	240.00	11,525.9	-981.6	1,824.9	2,071.8	0.00	0.00	0.00
11,900.0	1.22	240.00	11,625.8	-982.7	1,823.0	2,070.7	0.00	0.00	0.00
12,000.0	1.22	240.00	11,725.8	-983.8	1,821.2	2,069.7	0.00	0.00	0.00
12,100.0	1.22	240.00	11,825.8	-984.8	1,819.3	2,068.6	0.00	0.00	0.00
12,200.0	1.22	240.00	11,925.8	-985.9	1,817.5	2,067.5	0.00	0.00	0.00
12,300.0	1.22	240.00	12,025.7	-987.0	1,815.7	2,066.4	0.00	0.00	0.00
12,400.0	1.22	240.00	12,125.7	-988.0	1,813.8	2,065.3	0.00	0.00	0.00
12,500.0	1.22	240.00	12,225.7	-989.1	1,812.0	2,064.2	0.00	0.00	0.00
12,600.0	1.22	240.00	12,325.7	-990.1	1,810.1	2,063.1	0.00	0.00	0.00
Cameo									
12,689.3	1.22	240.00	12,415.0	-991.1	1,808.5	2,062.2	0.00	0.00	0.00
12,700.0	1.22	240.00	12,425.6	-991.2	1,808.3	2,062.0	0.00	0.00	0.00
12,800.0	1.22	240.00	12,525.6	-992.3	1,806.4	2,061.0	0.00	0.00	0.00
12,900.0	1.22	240.00	12,625.6	-993.3	1,804.6	2,059.9	0.00	0.00	0.00
13,000.0	1.22	240.00	12,725.6	-994.4	1,802.8	2,058.8	0.00	0.00	0.00
13,100.0	1.22	240.00	12,825.6	-995.5	1,800.9	2,057.7	0.00	0.00	0.00
13,200.0	1.22	240.00	12,925.5	-996.5	1,799.1	2,056.6	0.00	0.00	0.00
13,300.0	1.22	240.00	13,025.5	-997.6	1,797.2	2,055.5	0.00	0.00	0.00
13,400.0	1.22	240.00	13,125.5	-998.7	1,795.4	2,054.4	0.00	0.00	0.00
Rollins									
13,427.5	1.22	240.00	13,153.0	-998.9	1,794.9	2,054.1	0.00	0.00	0.00
13,500.0	1.22	240.00	13,225.5	-999.7	1,793.5	2,053.3	0.00	0.00	0.00
13,600.0	1.22	240.00	13,325.4	-1,000.8	1,791.7	2,052.3	0.00	0.00	0.00
13,700.0	1.22	240.00	13,425.4	-1,001.8	1,789.9	2,051.2	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well ELU A18 FED 12A-18 495 - Slot 12A-18
Company:	Caerus Oil & Gas	TVD Reference:	RKB @ 8059.0usft (30')
Project:	Rio Blanco County, CO	MD Reference:	RKB @ 8059.0usft (30')
Site:	ELU A18 495 Pad	North Reference:	True
Well:	ELU A18 FED 12A-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 @ 13727.6' MD / 13453.0' TVD									
13,727.6	1.22	240.00	13,453.0	-1,002.1	1,789.4	2,050.9	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
- hit/miss target									
- Shape									
12A-18 - OHCR	0.00	0.00	8,712.0	-952.1	1,876.0	14,432,333.17	2,456,948.15	39.706331	-108.097052
- plan hits target center									
- Point									
12A-18 - PBHL	0.00	0.00	13,453.0	-1,002.1	1,789.4	14,432,280.40	2,456,863.20	39.706194	-108.097360
- plan hits target center									
- Ellipse (radii L100.0 W50.0 on 240.00 azi)									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,426.4	3,334.0	Wasatch				
6,756.9	6,549.0	Wasatch G				
7,067.7	6,849.0	Fort Union				
8,985.5	8,712.0	Ohio Creek				
9,570.6	9,297.0	Williams Fork				
12,689.3	12,415.0	Cameo				
13,427.5	13,153.0	Rollins				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
425.0	425.0	0.0	0.0	Build 3° / 100'
929.4	923.6	-30.0	59.0	EOB @ 15.13° Inc. / 116.91° Azm
8,481.1	8,213.4	-922.2	1,816.9	Drop 3° / 100'
8,985.5	8,712.0	-952.1	1,876.0	EOD @ Vertical / Build 1.5° / 100'
9,066.8	8,793.2	-952.6	1,875.2	EOB @ 1.22° Inc. / 240.00° Azm
13,727.6	13,453.0	-1,002.1	1,789.4	TD @ 13727.6' MD / 13453.0' TVD