Project: Rio Blanco County, CO
Site: ELU A18 495 Pad
Well: ELU A18 FED 12D-18 495
Wellbore: Wellbore #1
Design: Design #4
Latitude: 39.708893
Longitude: -108.103536
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 - 12D-18(0.0N, 0.0E)
Measured Depth Reference: RKB @ 8059.0usft (30')
Calculation Method: Minimum Curvature

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3315.0	3447.3	Wasatch
6511.0	6807.2	Wasatch G
6811.0	7122.5	Fort Union
8673.0	9059.6	Ohio Creek
9248.0	9634.7	Williams Fork
12373.0	12760.4	Cameo
13109.0	13496.6	Rollins
13409.0	13796.6	TD

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	
335.0	0.00	0.00	335.0	0.0	0.0	0.00	0.00	0.0	Build 3° / 100'
933.9	17.97	133.35	924.1	-63.9	67.7	3.00	133.35	93.1	EOB @ 17.97° Inc. / 133.35° Azm
8460.7	17.97	133.35	8083.9	-1657.6	1756.0	0.00	0.00	2413.0	Drop 3° /100'
9059.6	0.00	0.00	8673.0	-1721.6	1823.8	3.00	180.00	2506.1	EOD @ Vertical / Build 1.5° / 100'
9140.9	1.22	240.00	8754.3	-1722.0	1823.0	1.50	240.00	2505.9	EOB @ 1.22° Inc. / 240.00° Azm
13796.6	1.22	240.00	13409.0	-1771.6	1737.2	0.00	0.00	2481.2	TD @ 13796.6' MD / 13409.0' TVD

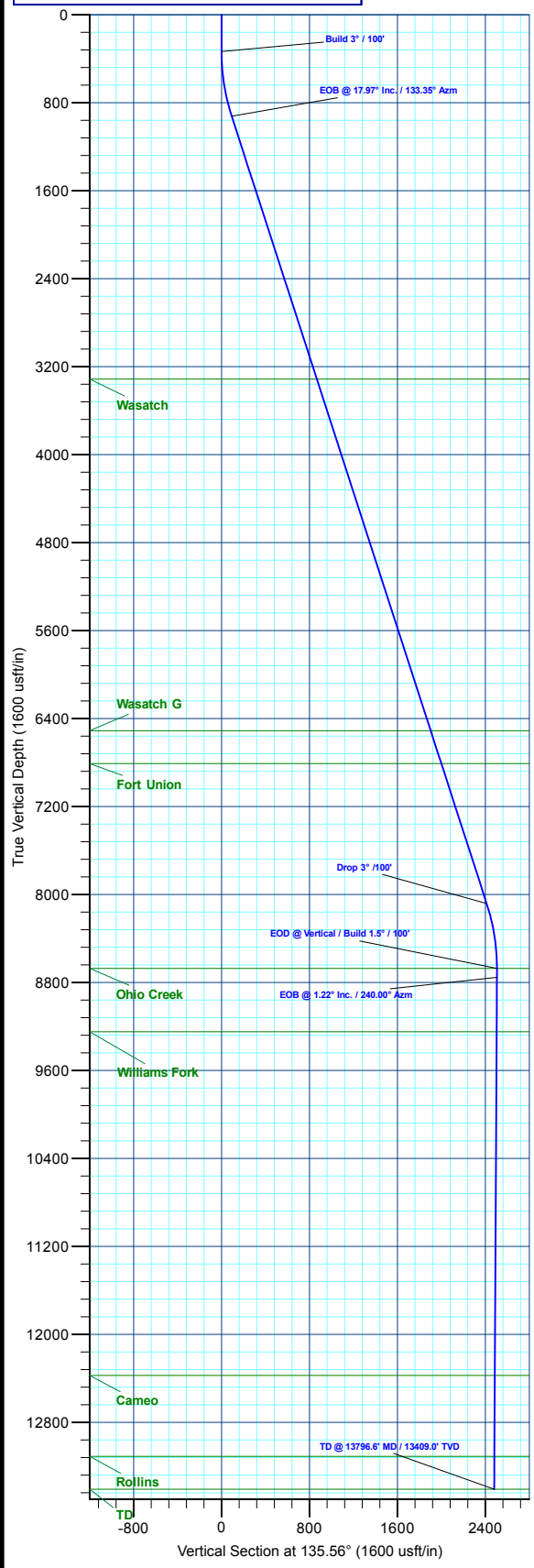
DESIGN TARGET DETAILS

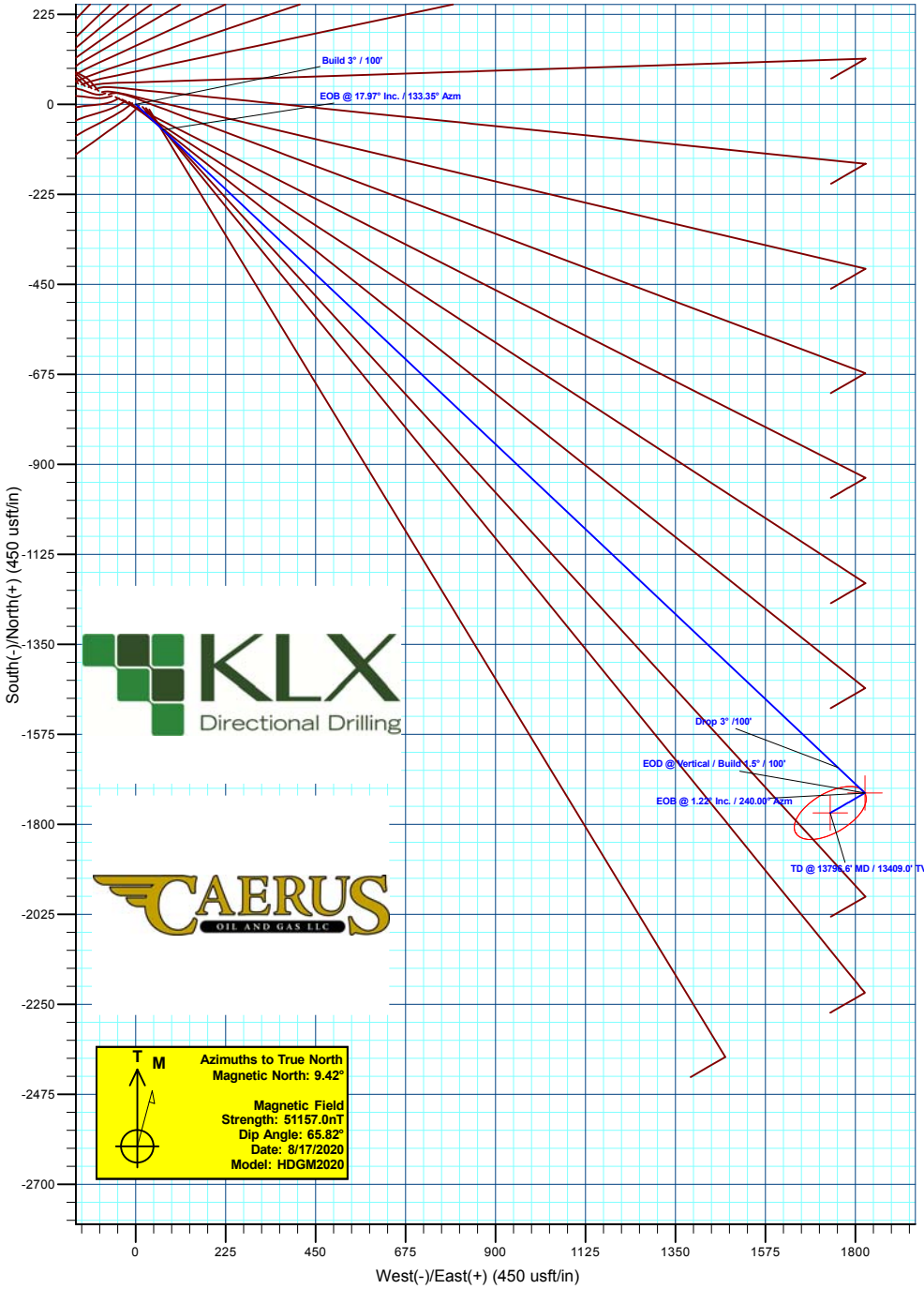
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
12D-18 - OHCR	8673.0	-1721.6	1823.8	14431545.77	2456972.24	39.704169	-108.097057
12D-18 - PBHL	13409.0	-1771.6	1737.2	14431493.00	2456887.30	39.704032	-108.097365

WELL DETAILS: ELU A18 FED 12D-18 495

Ground Level : 8029.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	
0.0	0.0	14433207.50	2455093.80	39.708893	-108.103536	12D-18





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

Created By: Will Jircik **Date: 4:16, October 05 2023**

Caerus Oil & Gas

Rio Blanco County, CO
ELU A18 495 Pad
ELU A18 FED 12D-18 495 - Slot 12D-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 12D-18 495 - Slot 12D-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 12D-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 12D-18 495 - Slot 12D-18

Well Position	**+N/-S**	-78.4 usft	**Northing:**	14,433,207.50 usft	**Latitude:**	39.708894
	+E/-W	187.0 usft	**Easting:**	2,455,093.80 usft	**Longitude:**	-108.103537
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	135.56

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	
335.0	0.00	0.00	335.0	0.0	0.0	0.00	0.00	0.00	0.00	
933.9	17.97	133.35	924.1	-63.9	67.7	3.00	3.00	0.00	133.35	
8,460.7	17.97	133.35	8,083.9	-1,657.6	1,756.0	0.00	0.00	0.00	0.00	
9,059.6	0.00	0.00	8,673.0	-1,721.6	1,823.8	3.00	-3.00	0.00	180.00	12D-18 - OHCR
9,140.9	1.22	240.00	8,754.3	-1,722.0	1,823.0	1.50	1.50	-147.53	240.00	
13,796.6	1.22	240.00	13,409.0	-1,771.6	1,737.2	0.00	0.00	0.00	0.00	12D-18 - PBHL

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well ELU A18 FED 12D-18 495 - Slot 12D-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 12D-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
Build 3° / 100'									
335.0	0.00	0.00	335.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	1.95	133.35	400.0	-0.8	0.8	1.1	3.00	3.00	0.00
500.0	4.95	133.35	499.8	-4.9	5.2	7.1	3.00	3.00	0.00
600.0	7.95	133.35	599.2	-12.6	13.3	18.3	3.00	3.00	0.00
700.0	10.95	133.35	697.8	-23.9	25.3	34.7	3.00	3.00	0.00
800.0	13.95	133.35	795.4	-38.7	41.0	56.3	3.00	3.00	0.00
900.0	16.95	133.35	891.8	-57.0	60.3	82.9	3.00	3.00	0.00
EOB @ 17.97° Inc. / 133.35° Azm									
933.9	17.97	133.35	924.1	-63.9	67.7	93.1	3.00	3.00	0.00
1,000.0	17.97	133.35	987.0	-77.9	82.6	113.4	0.00	0.00	0.00
1,100.0	17.97	133.35	1,082.1	-99.1	105.0	144.3	0.00	0.00	0.00
1,200.0	17.97	133.35	1,177.3	-120.3	127.4	175.1	0.00	0.00	0.00
1,300.0	17.97	133.35	1,272.4	-141.4	149.8	205.9	0.00	0.00	0.00
1,400.0	17.97	133.35	1,367.5	-162.6	172.3	236.7	0.00	0.00	0.00
1,500.0	17.97	133.35	1,462.6	-183.8	194.7	267.6	0.00	0.00	0.00
1,600.0	17.97	133.35	1,557.8	-205.0	217.1	298.4	0.00	0.00	0.00
1,700.0	17.97	133.35	1,652.9	-226.1	239.6	329.2	0.00	0.00	0.00
1,800.0	17.97	133.35	1,748.0	-247.3	262.0	360.0	0.00	0.00	0.00
1,900.0	17.97	133.35	1,843.1	-268.5	284.4	390.8	0.00	0.00	0.00
2,000.0	17.97	133.35	1,938.2	-289.7	306.9	421.7	0.00	0.00	0.00
2,100.0	17.97	133.35	2,033.4	-310.8	329.3	452.5	0.00	0.00	0.00
2,200.0	17.97	133.35	2,128.5	-332.0	351.7	483.3	0.00	0.00	0.00
2,300.0	17.97	133.35	2,223.6	-353.2	374.2	514.1	0.00	0.00	0.00
2,400.0	17.97	133.35	2,318.7	-374.4	396.6	545.0	0.00	0.00	0.00
2,500.0	17.97	133.35	2,413.9	-395.5	419.0	575.8	0.00	0.00	0.00
2,600.0	17.97	133.35	2,509.0	-416.7	441.4	606.6	0.00	0.00	0.00
2,700.0	17.97	133.35	2,604.1	-437.9	463.9	637.4	0.00	0.00	0.00
2,800.0	17.97	133.35	2,699.2	-459.1	486.3	668.3	0.00	0.00	0.00
2,900.0	17.97	133.35	2,794.4	-480.2	508.7	699.1	0.00	0.00	0.00
3,000.0	17.97	133.35	2,889.5	-501.4	531.2	729.9	0.00	0.00	0.00
3,100.0	17.97	133.35	2,984.6	-522.6	553.6	760.7	0.00	0.00	0.00
3,200.0	17.97	133.35	3,079.7	-543.7	576.0	791.5	0.00	0.00	0.00
3,300.0	17.97	133.35	3,174.9	-564.9	598.5	822.4	0.00	0.00	0.00
3,400.0	17.97	133.35	3,270.0	-586.1	620.9	853.2	0.00	0.00	0.00
Wasatch									
3,447.3	17.97	133.35	3,315.0	-596.1	631.5	867.8	0.00	0.00	0.00
3,500.0	17.97	133.35	3,365.1	-607.3	643.3	884.0	0.00	0.00	0.00
3,600.0	17.97	133.35	3,460.2	-628.4	665.8	914.8	0.00	0.00	0.00
3,700.0	17.97	133.35	3,555.4	-649.6	688.2	945.7	0.00	0.00	0.00
3,800.0	17.97	133.35	3,650.5	-670.8	710.6	976.5	0.00	0.00	0.00
3,900.0	17.97	133.35	3,745.6	-692.0	733.0	1,007.3	0.00	0.00	0.00
4,000.0	17.97	133.35	3,840.7	-713.1	755.5	1,038.1	0.00	0.00	0.00
4,100.0	17.97	133.35	3,935.8	-734.3	777.9	1,068.9	0.00	0.00	0.00
4,200.0	17.97	133.35	4,031.0	-755.5	800.3	1,099.8	0.00	0.00	0.00
4,300.0	17.97	133.35	4,126.1	-776.7	822.8	1,130.6	0.00	0.00	0.00
4,400.0	17.97	133.35	4,221.2	-797.8	845.2	1,161.4	0.00	0.00	0.00
4,500.0	17.97	133.35	4,316.3	-819.0	867.6	1,192.2	0.00	0.00	0.00
4,600.0	17.97	133.35	4,411.5	-840.2	890.1	1,223.1	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well ELU A18 FED 12D-18 495 - Slot 12D-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 12D-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	17.97	133.35	4,506.6	-861.4	912.5	1,253.9	0.00	0.00	0.00
4,800.0	17.97	133.35	4,601.7	-882.5	934.9	1,284.7	0.00	0.00	0.00
4,900.0	17.97	133.35	4,696.8	-903.7	957.4	1,315.5	0.00	0.00	0.00
5,000.0	17.97	133.35	4,792.0	-924.9	979.8	1,346.4	0.00	0.00	0.00
5,100.0	17.97	133.35	4,887.1	-946.0	1,002.2	1,377.2	0.00	0.00	0.00
5,200.0	17.97	133.35	4,982.2	-967.2	1,024.7	1,408.0	0.00	0.00	0.00
5,300.0	17.97	133.35	5,077.3	-988.4	1,047.1	1,438.8	0.00	0.00	0.00
5,400.0	17.97	133.35	5,172.5	-1,009.6	1,069.5	1,469.6	0.00	0.00	0.00
5,500.0	17.97	133.35	5,267.6	-1,030.7	1,091.9	1,500.5	0.00	0.00	0.00
5,600.0	17.97	133.35	5,362.7	-1,051.9	1,114.4	1,531.3	0.00	0.00	0.00
5,700.0	17.97	133.35	5,457.8	-1,073.1	1,136.8	1,562.1	0.00	0.00	0.00
5,800.0	17.97	133.35	5,553.0	-1,094.3	1,159.2	1,592.9	0.00	0.00	0.00
5,900.0	17.97	133.35	5,648.1	-1,115.4	1,181.7	1,623.8	0.00	0.00	0.00
6,000.0	17.97	133.35	5,743.2	-1,136.6	1,204.1	1,654.6	0.00	0.00	0.00
6,100.0	17.97	133.35	5,838.3	-1,157.8	1,226.5	1,685.4	0.00	0.00	0.00
6,200.0	17.97	133.35	5,933.4	-1,179.0	1,249.0	1,716.2	0.00	0.00	0.00
6,300.0	17.97	133.35	6,028.6	-1,200.1	1,271.4	1,747.1	0.00	0.00	0.00
6,400.0	17.97	133.35	6,123.7	-1,221.3	1,293.8	1,777.9	0.00	0.00	0.00
6,500.0	17.97	133.35	6,218.8	-1,242.5	1,316.3	1,808.7	0.00	0.00	0.00
6,600.0	17.97	133.35	6,313.9	-1,263.7	1,338.7	1,839.5	0.00	0.00	0.00
6,700.0	17.97	133.35	6,409.1	-1,284.8	1,361.1	1,870.3	0.00	0.00	0.00
6,800.0	17.97	133.35	6,504.2	-1,306.0	1,383.5	1,901.2	0.00	0.00	0.00
Wasatch G									
6,807.2	17.97	133.35	6,511.0	-1,307.5	1,385.2	1,903.4	0.00	0.00	0.00
6,900.0	17.97	133.35	6,599.3	-1,327.2	1,406.0	1,932.0	0.00	0.00	0.00
7,000.0	17.97	133.35	6,694.4	-1,348.3	1,428.4	1,962.8	0.00	0.00	0.00
7,100.0	17.97	133.35	6,789.6	-1,369.5	1,450.8	1,993.6	0.00	0.00	0.00
Fort Union									
7,122.5	17.97	133.35	6,811.0	-1,374.3	1,455.9	2,000.6	0.00	0.00	0.00
7,200.0	17.97	133.35	6,884.7	-1,390.7	1,473.3	2,024.5	0.00	0.00	0.00
7,300.0	17.97	133.35	6,979.8	-1,411.9	1,495.7	2,055.3	0.00	0.00	0.00
7,400.0	17.97	133.35	7,074.9	-1,433.0	1,518.1	2,086.1	0.00	0.00	0.00
7,500.0	17.97	133.35	7,170.1	-1,454.2	1,540.6	2,116.9	0.00	0.00	0.00
7,600.0	17.97	133.35	7,265.2	-1,475.4	1,563.0	2,147.8	0.00	0.00	0.00
7,700.0	17.97	133.35	7,360.3	-1,496.6	1,585.4	2,178.6	0.00	0.00	0.00
7,800.0	17.97	133.35	7,455.4	-1,517.7	1,607.9	2,209.4	0.00	0.00	0.00
7,900.0	17.97	133.35	7,550.5	-1,538.9	1,630.3	2,240.2	0.00	0.00	0.00
8,000.0	17.97	133.35	7,645.7	-1,560.1	1,652.7	2,271.0	0.00	0.00	0.00
8,100.0	17.97	133.35	7,740.8	-1,581.3	1,675.1	2,301.9	0.00	0.00	0.00
8,200.0	17.97	133.35	7,835.9	-1,602.4	1,697.6	2,332.7	0.00	0.00	0.00
8,300.0	17.97	133.35	7,931.0	-1,623.6	1,720.0	2,363.5	0.00	0.00	0.00
8,400.0	17.97	133.35	8,026.2	-1,644.8	1,742.4	2,394.3	0.00	0.00	0.00
Drop 3° /100'									
8,460.7	17.97	133.35	8,083.9	-1,657.6	1,756.0	2,413.0	0.00	0.00	0.00
8,500.0	16.79	133.35	8,121.4	-1,665.7	1,764.6	2,424.8	3.00	-3.00	0.00
8,600.0	13.79	133.35	8,217.9	-1,683.8	1,783.8	2,451.1	3.00	-3.00	0.00
8,700.0	10.79	133.35	8,315.6	-1,698.4	1,799.2	2,472.4	3.00	-3.00	0.00
8,800.0	7.79	133.35	8,414.2	-1,709.5	1,811.0	2,488.5	3.00	-3.00	0.00
8,900.0	4.79	133.35	8,513.6	-1,717.0	1,818.9	2,499.4	3.00	-3.00	0.00
9,000.0	1.79	133.35	8,613.5	-1,720.9	1,823.1	2,505.2	3.00	-3.00	0.00
EOD @ Vertical / Build 1.5° / 100' - Ohio Creek									
9,059.6	0.00	0.00	8,673.0	-1,721.6	1,823.8	2,506.1	3.00	-3.00	0.00
9,100.0	0.61	240.00	8,713.4	-1,721.7	1,823.6	2,506.0	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 12D-18 495 - Slot 12D-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 12D-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)
9,140.9	1.22	240.00	8,754.3	-1,722.0	1,823.0	2,505.9	1.50	1.50	0.00
9,200.0	1.22	240.00	8,813.4	-1,722.6	1,821.9	2,505.6	0.00	0.00	0.00
9,300.0	1.22	240.00	8,913.4	-1,723.7	1,820.1	2,505.0	0.00	0.00	0.00
9,400.0	1.22	240.00	9,013.4	-1,724.7	1,818.2	2,504.5	0.00	0.00	0.00
9,500.0	1.22	240.00	9,113.4	-1,725.8	1,816.4	2,504.0	0.00	0.00	0.00
9,600.0	1.22	240.00	9,213.3	-1,726.9	1,814.6	2,503.4	0.00	0.00	0.00
Williams Fork									
9,634.7	1.22	240.00	9,248.0	-1,727.2	1,813.9	2,503.3	0.00	0.00	0.00
9,700.0	1.22	240.00	9,313.3	-1,727.9	1,812.7	2,502.9	0.00	0.00	0.00
9,800.0	1.22	240.00	9,413.3	-1,729.0	1,810.9	2,502.4	0.00	0.00	0.00
9,900.0	1.22	240.00	9,513.3	-1,730.1	1,809.0	2,501.8	0.00	0.00	0.00
10,000.0	1.22	240.00	9,613.2	-1,731.1	1,807.2	2,501.3	0.00	0.00	0.00
10,100.0	1.22	240.00	9,713.2	-1,732.2	1,805.3	2,500.8	0.00	0.00	0.00
10,200.0	1.22	240.00	9,813.2	-1,733.3	1,803.5	2,500.3	0.00	0.00	0.00
10,300.0	1.22	240.00	9,913.2	-1,734.3	1,801.6	2,499.7	0.00	0.00	0.00
10,400.0	1.22	240.00	10,013.2	-1,735.4	1,799.8	2,499.2	0.00	0.00	0.00
10,500.0	1.22	240.00	10,113.1	-1,736.5	1,798.0	2,498.7	0.00	0.00	0.00
10,600.0	1.22	240.00	10,213.1	-1,737.5	1,796.1	2,498.1	0.00	0.00	0.00
10,700.0	1.22	240.00	10,313.1	-1,738.6	1,794.3	2,497.6	0.00	0.00	0.00
10,800.0	1.22	240.00	10,413.1	-1,739.7	1,792.4	2,497.1	0.00	0.00	0.00
10,900.0	1.22	240.00	10,513.0	-1,740.7	1,790.6	2,496.5	0.00	0.00	0.00
11,000.0	1.22	240.00	10,613.0	-1,741.8	1,788.7	2,496.0	0.00	0.00	0.00
11,100.0	1.22	240.00	10,713.0	-1,742.8	1,786.9	2,495.5	0.00	0.00	0.00
11,200.0	1.22	240.00	10,813.0	-1,743.9	1,785.1	2,494.9	0.00	0.00	0.00
11,300.0	1.22	240.00	10,912.9	-1,745.0	1,783.2	2,494.4	0.00	0.00	0.00
11,400.0	1.22	240.00	11,012.9	-1,746.0	1,781.4	2,493.9	0.00	0.00	0.00
11,500.0	1.22	240.00	11,112.9	-1,747.1	1,779.5	2,493.4	0.00	0.00	0.00
11,600.0	1.22	240.00	11,212.9	-1,748.2	1,777.7	2,492.8	0.00	0.00	0.00
11,700.0	1.22	240.00	11,312.9	-1,749.2	1,775.8	2,492.3	0.00	0.00	0.00
11,800.0	1.22	240.00	11,412.8	-1,750.3	1,774.0	2,491.8	0.00	0.00	0.00
11,900.0	1.22	240.00	11,512.8	-1,751.4	1,772.1	2,491.2	0.00	0.00	0.00
12,000.0	1.22	240.00	11,612.8	-1,752.4	1,770.3	2,490.7	0.00	0.00	0.00
12,100.0	1.22	240.00	11,712.8	-1,753.5	1,768.5	2,490.2	0.00	0.00	0.00
12,200.0	1.22	240.00	11,812.7	-1,754.6	1,766.6	2,489.6	0.00	0.00	0.00
12,300.0	1.22	240.00	11,912.7	-1,755.6	1,764.8	2,489.1	0.00	0.00	0.00
12,400.0	1.22	240.00	12,012.7	-1,756.7	1,762.9	2,488.6	0.00	0.00	0.00
12,500.0	1.22	240.00	12,112.7	-1,757.7	1,761.1	2,488.0	0.00	0.00	0.00
12,600.0	1.22	240.00	12,212.7	-1,758.8	1,759.2	2,487.5	0.00	0.00	0.00
12,700.0	1.22	240.00	12,312.6	-1,759.9	1,757.4	2,487.0	0.00	0.00	0.00
Cameo									
12,760.4	1.22	240.00	12,373.0	-1,760.5	1,756.3	2,486.7	0.00	0.00	0.00
12,800.0	1.22	240.00	12,412.6	-1,760.9	1,755.5	2,486.5	0.00	0.00	0.00
12,900.0	1.22	240.00	12,512.6	-1,762.0	1,753.7	2,485.9	0.00	0.00	0.00
13,000.0	1.22	240.00	12,612.6	-1,763.1	1,751.9	2,485.4	0.00	0.00	0.00
13,100.0	1.22	240.00	12,712.5	-1,764.1	1,750.0	2,484.9	0.00	0.00	0.00
13,200.0	1.22	240.00	12,812.5	-1,765.2	1,748.2	2,484.3	0.00	0.00	0.00
13,300.0	1.22	240.00	12,912.5	-1,766.3	1,746.3	2,483.8	0.00	0.00	0.00
13,400.0	1.22	240.00	13,012.5	-1,767.3	1,744.5	2,483.3	0.00	0.00	0.00
Rollins									
13,496.6	1.22	240.00	13,109.0	-1,768.4	1,742.7	2,482.8	0.00	0.00	0.00
13,500.0	1.22	240.00	13,112.4	-1,768.4	1,742.6	2,482.7	0.00	0.00	0.00
13,600.0	1.22	240.00	13,212.4	-1,769.5	1,740.8	2,482.2	0.00	0.00	0.00
13,700.0	1.22	240.00	13,312.4	-1,770.5	1,738.9	2,481.7	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well ELU A18 FED 12D-18 495 - Slot 12D-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 12D-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 @ 13796.6' MD / 13409.0' TVD - TD									
13,796.6	1.22	240.00	13,409.0	-1,771.6	1,737.2	2,481.2	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
12D-18 - OHCR - plan hits target center - Point	0.00	0.00	8,673.0	-1,721.6	1,823.8	14,431,545.77	2,456,972.25	39.704169	-108.097057
12D-18 - PBHL - plan hits target center - Ellipse (radii L100.0 W50.0 on 240.00 azi)	0.00	0.00	13,409.0	-1,771.6	1,737.2	14,431,493.00	2,456,887.30	39.704032	-108.097365

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,447.3	3,315.0	Wasatch			
6,807.2	6,511.0	Wasatch G			
7,122.5	6,811.0	Fort Union			
9,059.6	8,673.0	Ohio Creek			
9,634.7	9,248.0	Williams Fork			
12,760.4	12,373.0	Cameo			
13,496.6	13,109.0	Rollins			
13,796.6	13,409.0	TD			

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
335.0	335.0	0.0	0.0	Build 3° / 100'
933.9	924.1	-63.9	67.7	EOB @ 17.97° Inc. / 133.35° Azm
8,460.7	8,083.9	-1,657.6	1,756.0	Drop 3° /100'
9,059.6	8,673.0	-1,721.6	1,823.8	EOD @ Vertical / Build 1.5° / 100'
9,140.9	8,754.3	-1,722.0	1,823.0	EOB @ 1.22° Inc. / 240.00° Azm
13,796.6	13,409.0	-1,771.6	1,737.2	TD @ 13796.6' MD / 13409.0' TVD