



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.0	
3	316.7	5.00	180.00	316.5	-7.3	0.0	3.00	180.00	5.8	
4	758.7	16.88	142.39	750.1	-77.7	39.3	3.00	-50.56	85.7	
5	7563.2	16.88	142.39	7261.5	-1642.7	1244.9	0.00	0.00	2061.2	
6	8125.8	0.00	0.00	7816.0	-1707.9	1295.1	3.00	180.00	2143.4	
7	10275.8	0.00	0.00	9966.0	-1707.9	1295.1	0.00	0.00	2143.4	BM 31B-35 795 PBHL

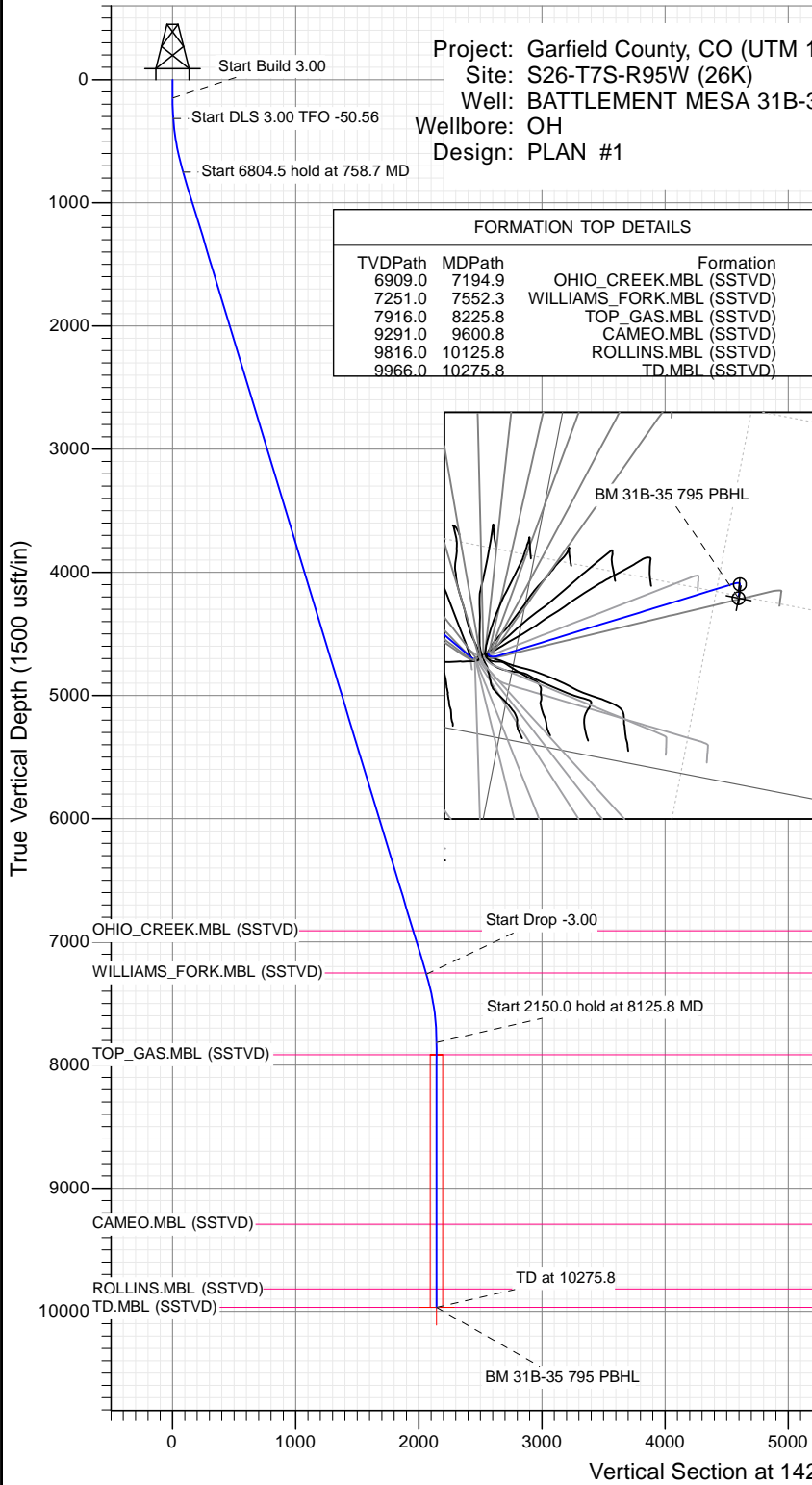
Project: Garfield County, CO (UTM 12)  
 Site: S26-T7S-R95W (26K)  
 Well: BATTLEMENT MESA 31B-35  
 Wellbore: OH  
 Design: PLAN #1

PLAN #1  
 BATTLEMENT MESA 31B-35 795  
 15XXX; LR  
 30 KB @ 8964.0usft  
 Ground Level @ 8964.0  
 NAD 1927 - Western US  
 Well BATTLEMENT MESA 31B-35 795, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	142.83	Slot	0.0	0.0	0.0

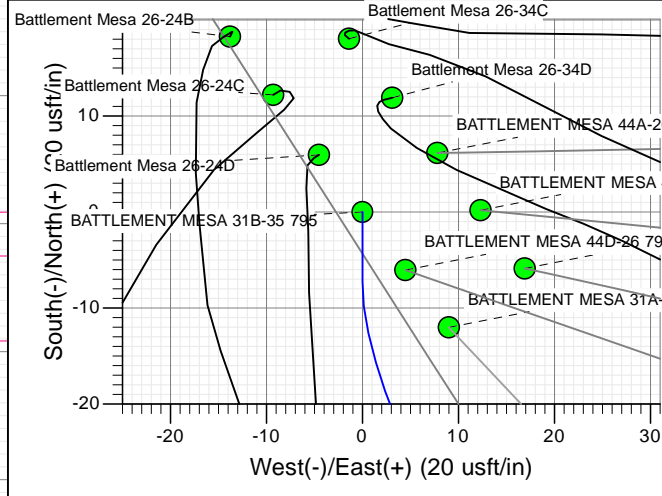
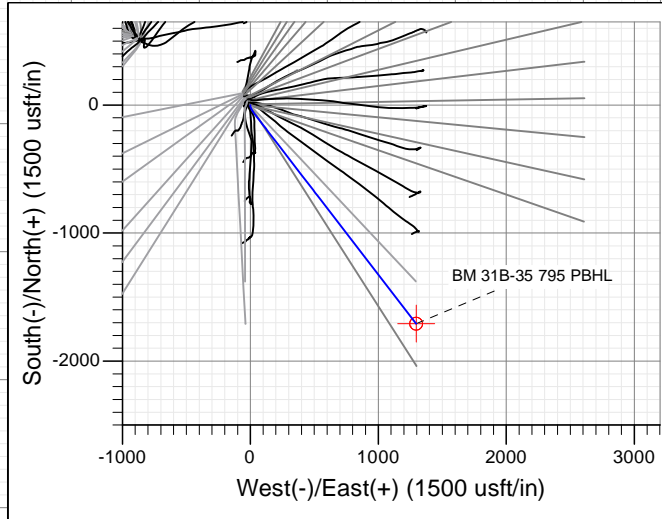
  

Name	TVD	+N-S	+E-W	Latitude	Longitude
BM 31B-35 795 PBHL	9966.0	-1707.9	1295.1	39.399678	-107.961918



FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
6909.0	7194.9	OHIO_CREEK.MBL (SSTVD)
7251.0	7552.3	WILLIAMS_FORK.MBL (SSTVD)
7916.0	8225.8	TOP_GAS.MBL (SSTVD)
9291.0	9600.8	CAMEO.MBL (SSTVD)
9816.0	10125.8	ROLLINS.MBL (SSTVD)
9966.0	10275.8	TD.MBL (SSTVD)



↑ T  
 ↓ M  
 Azimuths to True North  
 Magnetic North: 9.45°  
 Magnetic Field  
 Strength: 51901.0snT  
 Dip Angle: 65.63°  
 Date: 11/12/2015  
 Model: HDGM

CASING DETAILS  
 No casing data is available



WELL DETAILS: BATTLEMENT MESA 31B-35 795

+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14323573.00	2497387.50	39.404365	-107.966499

Ground Level: 8964.0

## Planning Report

<b>Database:</b> USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b> Well BATTLEMENT MESA 31B-35 795
<b>Company:</b> Caerus Oil & Gas	<b>TVD Reference:</b> 30' KB @ 8994.0usft
<b>Project:</b> Garfield County, CO (UTM 12N)	<b>MD Reference:</b> 30' KB @ 8994.0usft
<b>Site:</b> S26-T7S-R95W (26K)	<b>North Reference:</b> True
<b>Well:</b> BATTLEMENT MESA 31B-35 795	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Wellbore:</b> OH	
<b>Design:</b> PLAN #1	

<b>Project</b> Garfield County, CO (UTM 12N)	
<b>Map System:</b> Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b> Mean Sea Level
<b>Geo Datum:</b> NAD 1927 - Western US	
<b>Map Zone:</b> Zone 12N (114 W to 108 W)	

<b>Site</b> S26-T7S-R95W (26K)		
<b>Site Position:</b>	<b>Northing:</b> 14,324,088.50 usft	<b>Latitude:</b> 39.405864
<b>From:</b> Map	<b>Easting:</b> 2,496,462.30 usft	<b>Longitude:</b> -107.969708
<b>Position Uncertainty:</b> 0.0 usft	<b>Slot Radius:</b> 13-3/16"	<b>Grid Convergence:</b> 1.92 °

<b>Well</b> BATTLEMENT MESA 31B-35 795			
<b>Well Position</b>	<b>+N/-S</b> 0.0 usft	<b>Northing:</b> 14,323,573.00 usft	<b>Latitude:</b> 39.404365
	<b>+E/-W</b> 0.0 usft	<b>Easting:</b> 2,497,387.50 usft	<b>Longitude:</b> -107.966499
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b> 0.0 usft	<b>Ground Level:</b> 8,964.0 usft

<b>Wellbore</b> OH					
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	HDGM	11/12/2015	(°) 9.45	(°) 65.63	(nT) 51,901

<b>Design</b> PLAN #1				
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b> PLAN	<b>Tie On Depth:</b> 0.0		
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	142.83

<b>Plan Sections</b>										
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	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
316.7	5.00	180.00	316.5	-7.3	0.0	3.00	3.00	0.00	180.00	
758.7	16.88	142.39	750.1	-77.7	39.3	3.00	2.69	-8.51	-50.56	
7,563.2	16.88	142.39	7,261.5	-1,642.7	1,244.9	0.00	0.00	0.00	0.00	
8,125.8	0.00	0.00	7,816.0	-1,707.9	1,295.1	3.00	-3.00	0.00	180.00	
10,275.8	0.00	0.00	9,966.0	-1,707.9	1,295.1	0.00	0.00	0.00	0.00	BM 31B-35 795 PBHL

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well BATTLEMENT MESA 31B-35 795
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8994.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8994.0usft
<b>Site:</b>	S26-T7S-R95W (26K)	<b>North Reference:</b>	True
<b>Well:</b>	BATTLEMENT MESA 31B-35 795	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	Start Build 3.00
200.0	1.50	180.00	200.0	-0.7	0.0	0.5	3.00	3.00	
300.0	4.50	180.00	299.8	-5.9	0.0	4.7	3.00	3.00	
316.7	5.00	180.00	316.5	-7.3	0.0	5.8	3.00	3.00	Start DLS 3.00 TFO -50.56
400.0	6.86	163.63	399.3	-15.7	1.4	13.3	3.00	2.24	
500.0	9.49	153.34	498.3	-28.8	6.8	27.0	3.00	2.63	
600.0	12.29	147.58	596.5	-45.1	16.2	45.8	3.00	2.80	
700.0	15.17	143.95	693.6	-64.7	29.6	69.5	3.00	2.88	
758.7	16.88	142.39	750.1	-77.7	39.3	85.7	3.00	2.91	Start 6804.5 hold at 758.7 MD
800.0	16.88	142.39	789.6	-87.2	46.6	97.6	0.00	0.00	
900.0	16.88	142.39	885.3	-110.2	64.4	126.7	0.00	0.00	
1,000.0	16.88	142.39	981.0	-133.2	82.1	155.7	0.00	0.00	
1,100.0	16.88	142.39	1,076.7	-156.2	99.8	184.7	0.00	0.00	
1,200.0	16.88	142.39	1,172.4	-179.2	117.5	213.8	0.00	0.00	
1,300.0	16.88	142.39	1,268.1	-202.2	135.2	242.8	0.00	0.00	
1,400.0	16.88	142.39	1,363.7	-225.2	153.0	271.8	0.00	0.00	
1,500.0	16.88	142.39	1,459.4	-248.2	170.7	300.9	0.00	0.00	
1,600.0	16.88	142.39	1,555.1	-271.2	188.4	329.9	0.00	0.00	
1,700.0	16.88	142.39	1,650.8	-294.2	206.1	358.9	0.00	0.00	
1,800.0	16.88	142.39	1,746.5	-317.2	223.8	388.0	0.00	0.00	
1,900.0	16.88	142.39	1,842.2	-340.2	241.5	417.0	0.00	0.00	
2,000.0	16.88	142.39	1,937.9	-363.2	259.3	446.0	0.00	0.00	
2,100.0	16.88	142.39	2,033.6	-386.2	277.0	475.1	0.00	0.00	
2,200.0	16.88	142.39	2,129.3	-409.2	294.7	504.1	0.00	0.00	
2,300.0	16.88	142.39	2,225.0	-432.2	312.4	533.1	0.00	0.00	
2,400.0	16.88	142.39	2,320.7	-455.2	330.1	562.2	0.00	0.00	
2,500.0	16.88	142.39	2,416.4	-478.2	347.8	591.2	0.00	0.00	
2,600.0	16.88	142.39	2,512.1	-501.2	365.6	620.2	0.00	0.00	
2,700.0	16.88	142.39	2,607.7	-524.2	383.3	649.3	0.00	0.00	
2,800.0	16.88	142.39	2,703.4	-547.2	401.0	678.3	0.00	0.00	
2,900.0	16.88	142.39	2,799.1	-570.2	418.7	707.3	0.00	0.00	
3,000.0	16.88	142.39	2,894.8	-593.2	436.4	736.4	0.00	0.00	
3,100.0	16.88	142.39	2,990.5	-616.2	454.1	765.4	0.00	0.00	
3,200.0	16.88	142.39	3,086.2	-639.2	471.9	794.4	0.00	0.00	
3,300.0	16.88	142.39	3,181.9	-662.2	489.6	823.5	0.00	0.00	
3,400.0	16.88	142.39	3,277.6	-685.2	507.3	852.5	0.00	0.00	
3,500.0	16.88	142.39	3,373.3	-708.2	525.0	881.5	0.00	0.00	
3,600.0	16.88	142.39	3,469.0	-731.2	542.7	910.5	0.00	0.00	
3,700.0	16.88	142.39	3,564.7	-754.2	560.4	939.6	0.00	0.00	
3,800.0	16.88	142.39	3,660.4	-777.2	578.2	968.6	0.00	0.00	
3,900.0	16.88	142.39	3,756.1	-800.2	595.9	997.6	0.00	0.00	
4,000.0	16.88	142.39	3,851.8	-823.2	613.6	1,026.7	0.00	0.00	
4,100.0	16.88	142.39	3,947.4	-846.2	631.3	1,055.7	0.00	0.00	
4,200.0	16.88	142.39	4,043.1	-869.2	649.0	1,084.7	0.00	0.00	
4,300.0	16.88	142.39	4,138.8	-892.2	666.8	1,113.8	0.00	0.00	
4,400.0	16.88	142.39	4,234.5	-915.2	684.5	1,142.8	0.00	0.00	
4,500.0	16.88	142.39	4,330.2	-938.2	702.2	1,171.8	0.00	0.00	
4,600.0	16.88	142.39	4,425.9	-961.2	719.9	1,200.9	0.00	0.00	
4,700.0	16.88	142.39	4,521.6	-984.2	737.6	1,229.9	0.00	0.00	
4,800.0	16.88	142.39	4,617.3	-1,007.2	755.3	1,258.9	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well BATTLEMENT MESA 31B-35 795
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8994.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8994.0usft
<b>Site:</b>	S26-T7S-R95W (26K)	<b>North Reference:</b>	True
<b>Well:</b>	BATTLEMENT MESA 31B-35 795	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
4,900.0	16.88	142.39	4,713.0	-1,030.2	773.1	1,288.0	0.00	0.00	
5,000.0	16.88	142.39	4,808.7	-1,053.2	790.8	1,317.0	0.00	0.00	
5,100.0	16.88	142.39	4,904.4	-1,076.2	808.5	1,346.0	0.00	0.00	
5,200.0	16.88	142.39	5,000.1	-1,099.2	826.2	1,375.1	0.00	0.00	
5,300.0	16.88	142.39	5,095.8	-1,122.2	843.9	1,404.1	0.00	0.00	
5,400.0	16.88	142.39	5,191.4	-1,145.2	861.6	1,433.1	0.00	0.00	
5,500.0	16.88	142.39	5,287.1	-1,168.2	879.4	1,462.2	0.00	0.00	
5,600.0	16.88	142.39	5,382.8	-1,191.2	897.1	1,491.2	0.00	0.00	
5,700.0	16.88	142.39	5,478.5	-1,214.2	914.8	1,520.2	0.00	0.00	
5,800.0	16.88	142.39	5,574.2	-1,237.2	932.5	1,549.3	0.00	0.00	
5,900.0	16.88	142.39	5,669.9	-1,260.2	950.2	1,578.3	0.00	0.00	
6,000.0	16.88	142.39	5,765.6	-1,283.2	967.9	1,607.3	0.00	0.00	
6,100.0	16.88	142.39	5,861.3	-1,306.2	985.7	1,636.4	0.00	0.00	
6,200.0	16.88	142.39	5,957.0	-1,329.2	1,003.4	1,665.4	0.00	0.00	
6,300.0	16.88	142.39	6,052.7	-1,352.2	1,021.1	1,694.4	0.00	0.00	
6,400.0	16.88	142.39	6,148.4	-1,375.2	1,038.8	1,723.4	0.00	0.00	
6,500.0	16.88	142.39	6,244.1	-1,398.2	1,056.5	1,752.5	0.00	0.00	
6,600.0	16.88	142.39	6,339.8	-1,421.2	1,074.2	1,781.5	0.00	0.00	
6,700.0	16.88	142.39	6,435.5	-1,444.2	1,092.0	1,810.5	0.00	0.00	
6,800.0	16.88	142.39	6,531.1	-1,467.2	1,109.7	1,839.6	0.00	0.00	
6,900.0	16.88	142.39	6,626.8	-1,490.2	1,127.4	1,868.6	0.00	0.00	
7,000.0	16.88	142.39	6,722.5	-1,513.2	1,145.1	1,897.6	0.00	0.00	
7,100.0	16.88	142.39	6,818.2	-1,536.2	1,162.8	1,926.7	0.00	0.00	
7,194.9	16.88	142.39	6,909.0	-1,558.0	1,179.6	1,954.2	0.00	0.00	OHIO_CREEK.MBL (SSTVD)
7,200.0	16.88	142.39	6,913.9	-1,559.2	1,180.5	1,955.7	0.00	0.00	
7,300.0	16.88	142.39	7,009.6	-1,582.2	1,198.3	1,984.7	0.00	0.00	
7,400.0	16.88	142.39	7,105.3	-1,605.2	1,216.0	2,013.8	0.00	0.00	
7,500.0	16.88	142.39	7,201.0	-1,628.2	1,233.7	2,042.8	0.00	0.00	
7,552.3	16.88	142.39	7,251.0	-1,640.2	1,243.0	2,058.0	0.00	0.00	WILLIAMS_FORK.MBL (SSTVD)
7,563.2	16.88	142.39	7,261.5	-1,642.7	1,244.9	2,061.2	0.00	0.00	Start Drop -3.00
7,600.0	15.77	142.39	7,296.8	-1,650.9	1,251.2	2,071.5	3.00	-3.00	
7,700.0	12.77	142.39	7,393.7	-1,670.5	1,266.3	2,096.1	3.00	-3.00	
7,800.0	9.77	142.39	7,491.7	-1,685.9	1,278.2	2,115.7	3.00	-3.00	
7,900.0	6.77	142.39	7,590.7	-1,697.3	1,287.0	2,130.1	3.00	-3.00	
8,000.0	3.77	142.39	7,690.3	-1,704.6	1,292.6	2,139.3	3.00	-3.00	
8,100.0	0.77	142.39	7,790.2	-1,707.8	1,295.0	2,143.2	3.00	-3.00	
8,125.8	0.00	0.00	7,816.0	-1,707.9	1,295.1	2,143.4	3.00	-3.00	Start 2150.0 hold at 8125.8 MD
8,200.0	0.00	0.00	7,890.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
8,225.8	0.00	0.00	7,916.0	-1,707.9	1,295.1	2,143.4	0.00	0.00	TOP_GAS.MBL (SSTVD)
8,300.0	0.00	0.00	7,990.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
8,400.0	0.00	0.00	8,090.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
8,500.0	0.00	0.00	8,190.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
8,600.0	0.00	0.00	8,290.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
8,700.0	0.00	0.00	8,390.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
8,800.0	0.00	0.00	8,490.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
8,900.0	0.00	0.00	8,590.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,000.0	0.00	0.00	8,690.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,100.0	0.00	0.00	8,790.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,200.0	0.00	0.00	8,890.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,300.0	0.00	0.00	8,990.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,400.0	0.00	0.00	9,090.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,500.0	0.00	0.00	9,190.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well BATTLEMENT MESA 31B-35 795
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8994.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8994.0usft
<b>Site:</b>	S26-T7S-R95W (26K)	<b>North Reference:</b>	True
<b>Well:</b>	BATTLEMENT MESA 31B-35 795	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,600.0	0.00	0.00	9,290.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,600.8	0.00	0.00	9,291.0	-1,707.9	1,295.1	2,143.4	0.00	0.00	CAMEO.MBL (SSTVD)
9,700.0	0.00	0.00	9,390.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,800.0	0.00	0.00	9,490.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
9,900.0	0.00	0.00	9,590.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
10,000.0	0.00	0.00	9,690.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
10,100.0	0.00	0.00	9,790.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
10,125.8	0.00	0.00	9,816.0	-1,707.9	1,295.1	2,143.4	0.00	0.00	ROLLINS.MBL (SSTVD)
10,200.0	0.00	0.00	9,890.2	-1,707.9	1,295.1	2,143.4	0.00	0.00	
10,275.8	0.00	0.00	9,966.0	-1,707.9	1,295.1	2,143.4	0.00	0.00	TD at 10275.8 - TD.MBL (SSTVD) - BM 31B-35

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BM 31B-35 795 PBHL - hit/miss target - Shape - plan hits target center - Circle (radius 50.0)	0.00	0.00	9,966.0	-1,707.9	1,295.1	14,321,909.60	2,498,739.30	39.399678	-107.961918

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,194.9	6,909.0	OHIO_CREEK.MBL (SSTVD)		0.00	
7,552.3	7,251.0	WILLIAMS_FORK.MBL (SSTVD)		0.00	
8,225.8	7,916.0	TOP_GAS.MBL (SSTVD)		0.00	
9,600.8	9,291.0	CAMEO.MBL (SSTVD)		0.00	
10,125.8	9,816.0	ROLLINS.MBL (SSTVD)		0.00	
10,275.8	9,966.0	TD.MBL (SSTVD)		0.00	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
150.0	150.0	0.0	0.0	Start Build 3.00
316.7	316.5	-7.3	0.0	Start DLS 3.00 TFO -50.56
758.7	750.1	-77.7	39.3	Start 6804.5 hold at 758.7 MD
7,563.2	7,261.5	-1,642.7	1,244.9	Start Drop -3.00
8,125.8	7,816.0	-1,707.9	1,295.1	Start 2150.0 hold at 8125.8 MD
10,275.8	9,966.0	-1,707.9	1,295.1	TD at 10275.8