



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well 12B-36-795
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8931.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8931.0usft
<b>Site:</b>	S36-T7S-R95W (36L)	<b>North Reference:</b>	True
<b>Well:</b>	12B-36-795	<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>	S36-T7S-R95W (36L)				
<b>Site Position:</b>		<b>Northing:</b>	14,319,276.10 usft	<b>Latitude:</b>	39.392190
<b>From:</b>	Map	<b>Easting:</b>	2,501,602.10 usft	<b>Longitude:</b>	-107.952113
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"	<b>Grid Convergence:</b>	1.94 °

<b>Well</b>	12B-36-795					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,319,279.10 usft	<b>Latitude:</b>	39.392200
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	2,501,583.90 usft	<b>Longitude:</b>	-107.952177
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft	<b>Ground Level:</b>	8,901.0 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>
			(°)	(°)	(nT)
	HDGM	12/14/2015	9.42	65.60	51,881

<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	355.21

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
638.3	10.15	355.21	636.5	29.8	-2.5	3.00	3.00	0.00	355.21	
7,619.5	10.15	355.21	7,508.5	1,255.5	-105.2	0.00	0.00	0.00	0.00	
7,957.7	0.00	0.00	7,845.0	1,285.3	-107.7	3.00	-3.00	0.00	180.00	
10,061.7	0.00	0.00	9,949.0	1,285.3	-107.7	0.00	0.00	0.00	0.00	12B-36-795 PBHL

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<b>Site:</b>	S36-T7S-R95W (36L)	<b>North Reference:</b>	True
<b>Well:</b>	12B-36-795	<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	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	Start Build 3.00
400.0	3.00	355.21	400.0	2.6	-0.2	2.6	3.00	3.00	
500.0	6.00	355.21	499.6	10.4	-0.9	10.5	3.00	3.00	
600.0	9.00	355.21	598.8	23.4	-2.0	23.5	3.00	3.00	
638.3	10.15	355.21	636.5	29.8	-2.5	29.9	3.00	3.00	Start 6981.2 hold at 638.3 MD
700.0	10.15	355.21	697.3	40.6	-3.4	40.8	0.00	0.00	
800.0	10.15	355.21	795.7	58.2	-4.9	58.4	0.00	0.00	
900.0	10.15	355.21	894.1	75.7	-6.3	76.0	0.00	0.00	
1,000.0	10.15	355.21	992.6	93.3	-7.8	93.6	0.00	0.00	
1,100.0	10.15	355.21	1,091.0	110.8	-9.3	111.2	0.00	0.00	
1,200.0	10.15	355.21	1,189.4	128.4	-10.8	128.8	0.00	0.00	
1,300.0	10.15	355.21	1,287.9	146.0	-12.2	146.5	0.00	0.00	
1,400.0	10.15	355.21	1,386.3	163.5	-13.7	164.1	0.00	0.00	
1,500.0	10.15	355.21	1,484.8	181.1	-15.2	181.7	0.00	0.00	
1,600.0	10.15	355.21	1,583.2	198.6	-16.6	199.3	0.00	0.00	
1,700.0	10.15	355.21	1,681.6	216.2	-18.1	216.9	0.00	0.00	
1,800.0	10.15	355.21	1,780.1	233.7	-19.6	234.6	0.00	0.00	
1,900.0	10.15	355.21	1,878.5	251.3	-21.0	252.2	0.00	0.00	
2,000.0	10.15	355.21	1,976.9	268.9	-22.5	269.8	0.00	0.00	
2,100.0	10.15	355.21	2,075.4	286.4	-24.0	287.4	0.00	0.00	
2,200.0	10.15	355.21	2,173.8	304.0	-25.5	305.0	0.00	0.00	
2,300.0	10.15	355.21	2,272.2	321.5	-26.9	322.7	0.00	0.00	
2,400.0	10.15	355.21	2,370.7	339.1	-28.4	340.3	0.00	0.00	
2,500.0	10.15	355.21	2,469.1	356.6	-29.9	357.9	0.00	0.00	
2,600.0	10.15	355.21	2,567.5	374.2	-31.3	375.5	0.00	0.00	
2,700.0	10.15	355.21	2,666.0	391.8	-32.8	393.1	0.00	0.00	
2,800.0	10.15	355.21	2,764.4	409.3	-34.3	410.8	0.00	0.00	
2,900.0	10.15	355.21	2,862.8	426.9	-35.8	428.4	0.00	0.00	
3,000.0	10.15	355.21	2,961.3	444.4	-37.2	446.0	0.00	0.00	
3,100.0	10.15	355.21	3,059.7	462.0	-38.7	463.6	0.00	0.00	
3,200.0	10.15	355.21	3,158.2	479.5	-40.2	481.2	0.00	0.00	
3,300.0	10.15	355.21	3,256.6	497.1	-41.6	498.8	0.00	0.00	
3,400.0	10.15	355.21	3,355.0	514.7	-43.1	516.5	0.00	0.00	
3,500.0	10.15	355.21	3,453.5	532.2	-44.6	534.1	0.00	0.00	
3,600.0	10.15	355.21	3,551.9	549.8	-46.0	551.7	0.00	0.00	
3,700.0	10.15	355.21	3,650.3	567.3	-47.5	569.3	0.00	0.00	
3,800.0	10.15	355.21	3,748.8	584.9	-49.0	586.9	0.00	0.00	
3,900.0	10.15	355.21	3,847.2	602.4	-50.5	604.6	0.00	0.00	
4,000.0	10.15	355.21	3,945.6	620.0	-51.9	622.2	0.00	0.00	
4,100.0	10.15	355.21	4,044.1	637.6	-53.4	639.8	0.00	0.00	
4,200.0	10.15	355.21	4,142.5	655.1	-54.9	657.4	0.00	0.00	
4,300.0	10.15	355.21	4,240.9	672.7	-56.3	675.0	0.00	0.00	
4,400.0	10.15	355.21	4,339.4	690.2	-57.8	692.7	0.00	0.00	
4,500.0	10.15	355.21	4,437.8	707.8	-59.3	710.3	0.00	0.00	
4,600.0	10.15	355.21	4,536.2	725.4	-60.8	727.9	0.00	0.00	
4,700.0	10.15	355.21	4,634.7	742.9	-62.2	745.5	0.00	0.00	
4,800.0	10.15	355.21	4,733.1	760.5	-63.7	763.1	0.00	0.00	
4,900.0	10.15	355.21	4,831.6	778.0	-65.2	780.7	0.00	0.00	
5,000.0	10.15	355.21	4,930.0	795.6	-66.6	798.4	0.00	0.00	

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<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8931.0usft
<b>Site:</b>	S36-T7S-R95W (36L)	<b>North Reference:</b>	True
<b>Well:</b>	12B-36-795	<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
5,100.0	10.15	355.21	5,028.4	813.1	-68.1	816.0	0.00	0.00	
5,200.0	10.15	355.21	5,126.9	830.7	-69.6	833.6	0.00	0.00	
5,300.0	10.15	355.21	5,225.3	848.3	-71.0	851.2	0.00	0.00	
5,400.0	10.15	355.21	5,323.7	865.8	-72.5	868.8	0.00	0.00	
5,500.0	10.15	355.21	5,422.2	883.4	-74.0	886.5	0.00	0.00	
5,600.0	10.15	355.21	5,520.6	900.9	-75.5	904.1	0.00	0.00	
5,700.0	10.15	355.21	5,619.0	918.5	-76.9	921.7	0.00	0.00	
5,800.0	10.15	355.21	5,717.5	936.0	-78.4	939.3	0.00	0.00	
5,900.0	10.15	355.21	5,815.9	953.6	-79.9	956.9	0.00	0.00	
6,000.0	10.15	355.21	5,914.3	971.2	-81.3	974.6	0.00	0.00	
6,100.0	10.15	355.21	6,012.8	988.7	-82.8	992.2	0.00	0.00	
6,200.0	10.15	355.21	6,111.2	1,006.3	-84.3	1,009.8	0.00	0.00	
6,300.0	10.15	355.21	6,209.7	1,023.8	-85.8	1,027.4	0.00	0.00	
6,400.0	10.15	355.21	6,308.1	1,041.4	-87.2	1,045.0	0.00	0.00	
6,500.0	10.15	355.21	6,406.5	1,058.9	-88.7	1,062.6	0.00	0.00	
6,600.0	10.15	355.21	6,505.0	1,076.5	-90.2	1,080.3	0.00	0.00	
6,700.0	10.15	355.21	6,603.4	1,094.1	-91.6	1,097.9	0.00	0.00	
6,800.0	10.15	355.21	6,701.8	1,111.6	-93.1	1,115.5	0.00	0.00	
6,900.0	10.15	355.21	6,800.3	1,129.2	-94.6	1,133.1	0.00	0.00	
6,963.7	10.15	355.21	6,863.0	1,140.4	-95.5	1,144.4	0.00	0.00	OHIO_CREEK
7,000.0	10.15	355.21	6,898.7	1,146.7	-96.0	1,150.7	0.00	0.00	
7,100.0	10.15	355.21	6,997.1	1,164.3	-97.5	1,168.4	0.00	0.00	
7,200.0	10.15	355.21	7,095.6	1,181.8	-99.0	1,186.0	0.00	0.00	
7,300.0	10.15	355.21	7,194.0	1,199.4	-100.5	1,203.6	0.00	0.00	
7,398.5	10.15	355.21	7,291.0	1,216.7	-101.9	1,221.0	0.00	0.00	WILLIAMS_FORK
7,400.0	10.15	355.21	7,292.4	1,217.0	-101.9	1,221.2	0.00	0.00	
7,500.0	10.15	355.21	7,390.9	1,234.5	-103.4	1,238.8	0.00	0.00	
7,600.0	10.15	355.21	7,489.3	1,252.1	-104.9	1,256.5	0.00	0.00	
7,619.5	10.15	355.21	7,508.5	1,255.5	-105.2	1,259.9	0.00	0.00	Start Drop -3.00
7,700.0	7.73	355.21	7,588.0	1,268.0	-106.2	1,272.4	3.00	-3.00	
7,800.0	4.73	355.21	7,687.4	1,278.8	-107.1	1,283.3	3.00	-3.00	
7,900.0	1.73	355.21	7,787.2	1,284.4	-107.6	1,288.9	3.00	-3.00	
7,957.7	0.00	0.00	7,845.0	1,285.3	-107.7	1,289.8	3.00	-3.00	Start 2104.0 hold at 7957.7 MD
8,000.0	0.00	0.00	7,887.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,057.7	0.00	0.00	7,945.0	1,285.3	-107.7	1,289.8	0.00	0.00	TOP_GAS
8,100.0	0.00	0.00	7,987.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,200.0	0.00	0.00	8,087.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,300.0	0.00	0.00	8,187.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,400.0	0.00	0.00	8,287.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,500.0	0.00	0.00	8,387.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,600.0	0.00	0.00	8,487.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,700.0	0.00	0.00	8,587.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,800.0	0.00	0.00	8,687.2	1,285.3	-107.7	1,289.8	0.00	0.00	
8,900.0	0.00	0.00	8,787.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,000.0	0.00	0.00	8,887.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,100.0	0.00	0.00	8,987.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,200.0	0.00	0.00	9,087.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,300.0	0.00	0.00	9,187.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,400.0	0.00	0.00	9,287.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,500.0	0.00	0.00	9,387.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,600.0	0.00	0.00	9,487.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,655.7	0.00	0.00	9,543.0	1,285.3	-107.7	1,289.8	0.00	0.00	CAMEO

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<b>Well:</b>	12B-36-795	<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
9,700.0	0.00	0.00	9,587.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,800.0	0.00	0.00	9,687.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,900.0	0.00	0.00	9,787.2	1,285.3	-107.7	1,289.8	0.00	0.00	
9,911.7	0.00	0.00	9,799.0	1,285.3	-107.7	1,289.8	0.00	0.00	ROLLINS
10,000.0	0.00	0.00	9,887.2	1,285.3	-107.7	1,289.8	0.00	0.00	
10,061.7	0.00	0.00	9,949.0	1,285.3	-107.7	1,289.8	0.00	0.00	TD at 10061.7 - TD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
12B-36-795 PBHL - hit/miss target - Shape - Circle (radius 50.0)	0.00	0.00	9,949.0	1,285.3	-107.7	14,320,560.00	2,501,432.90	39.395727	-107.952558

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,963.7	6,863.0	OHIO_CREEK				
7,398.5	7,291.0	WILLIAMS_FORK				
8,057.7	7,945.0	TOP_GAS				
9,655.7	9,543.0	CAMEO				
9,911.7	9,799.0	ROLLINS				
10,061.7	9,949.0	TD				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
300.0	300.0	0.0	0.0	Start Build 3.00
638.3	636.5	29.8	-2.5	Start 6981.2 hold at 638.3 MD
7,619.5	7,508.5	1,255.5	-105.2	Start Drop -3.00
7,957.7	7,845.0	1,285.3	-107.7	Start 2104.0 hold at 7957.7 MD
10,061.7	9,949.0	1,285.3	-107.7	TD at 10061.7