



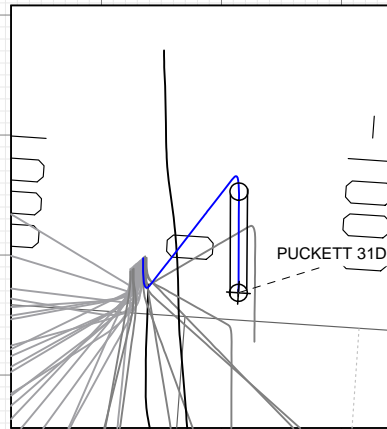
# SECTION DETAILS

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	250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0	
3	1026.5	23.29	187.57	1005.2	-154.3	-20.5	3.00	187.57	155.7	
4	6711.3	23.29	187.57	6226.8	-2382.8	-316.5	0.00	0.00	2403.8	
5	7487.8	0.00	0.00	6982.0	-2537.1	-337.0	3.00	180.00	2559.4	
6	9431.8	0.00	0.00	8926.0	-2537.1	-337.0	0.00	0.00	2559.4	PUCKETT 31D-36 PBHL

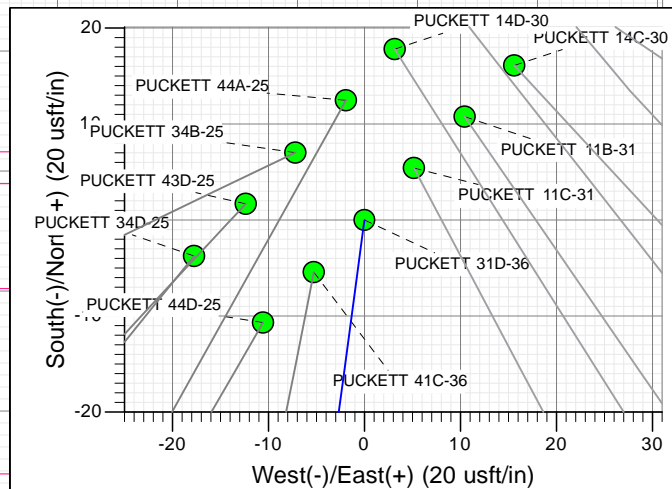
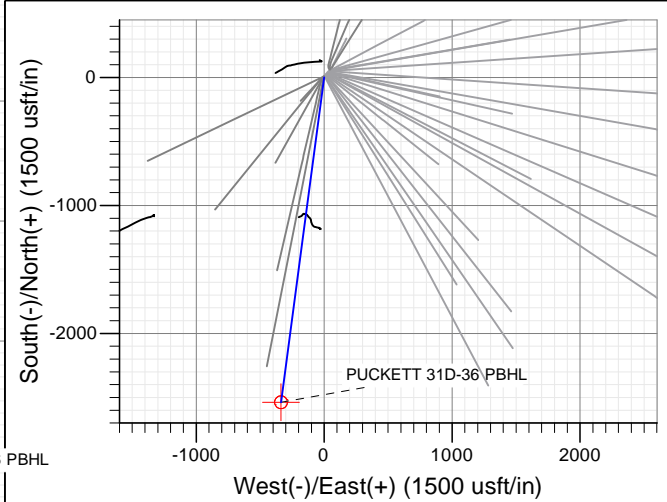
Project: Garfield County, CO (UTM 12  
Site: S30-T6S-R96W (MESA I25)  
Well: PUCKETT 31D-36  
Wellbore: OH  
Design: PLAN #1

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
5841.0	6291.4	OHIO_CREEK.MBL (TVD)
6107.0	6581.0	WILLIAMS_FORK.MBL (TVD)
6982.0	7487.8	TOP_GAS.MBL (TVD)
8526.0	9031.8	CAMEO.MBL (TVD)
8776.0	9281.8	ROLLINS.MBL (TVD)
8926.0	9431.8	TD.MBL (TVD)



Type	Target	Target	Target	Target	Target	Target	Target	Target	Target	Target
TD	No	Target	Freehand	Target	Freehand	Target	Freehand	Target	Freehand	Target
Name	PUCKETT 31D-36 PBHL									
TVD	8926.0	+N/-S	-2537.1	+E/-W	-337.0	Latitude	39.484388	Longitude	-108.162799	

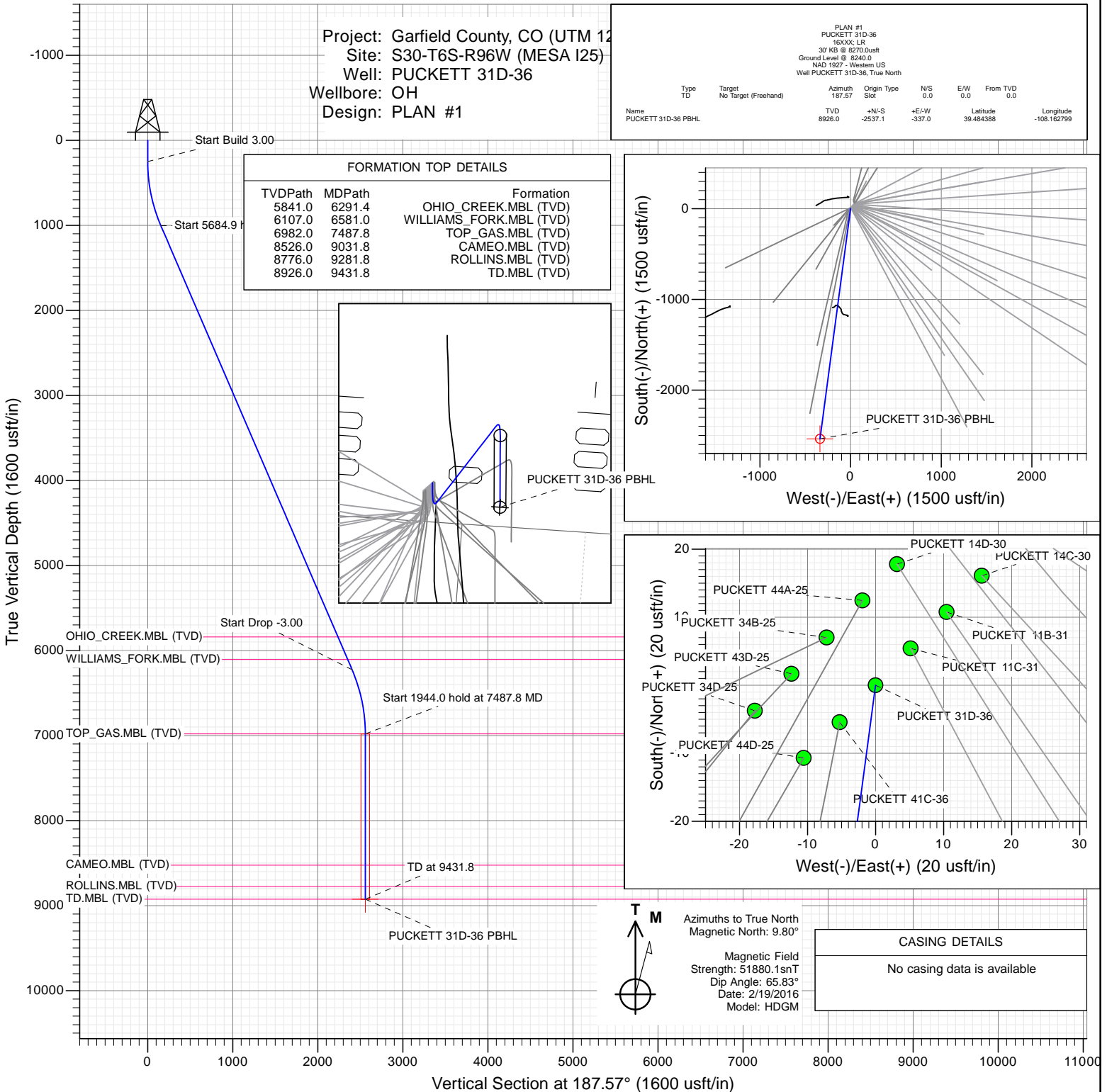


Azimuths to True North  
Magnetic North: 9.80°  
Magnetic Field  
Strength: 51880.1snT  
Dip Angle: 65.83°  
Date: 2/19/2016  
Model: HDGM

## CASING DETAILS

No casing data is available

## VERTICAL SECTION at 187.57° (1600 usft/in)



## WELL DETAILS: PUCKETT 31D-36

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14353457.30	2441262.20	39.491351	-108.161606



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31D-36
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8270.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8270.0usft
<b>Site:</b>	S30-T6S-R96W (MESA I25)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 31D-36	<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)		

Site		S30-T6S-R96W (MESA I25)			
Site Position:		Northing:	14,353,462.90 usft	Latitude:	39.491366
From:	Map	Easting:	2,441,267.20 usft	Longitude:	-108.161587
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	1.81 °

Well	PUCKETT 31D-36					
Well Position	+N/-S	0.0 usft	Northing:	14,353,457.30 usft	Latitude:	39.491351
	+E/-W	0.0 usft	Easting:	2,441,262.20 usft	Longitude:	-108.161606
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,240.0 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	2/19/2016	9.80	65.83	51,880

<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	187.57

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,026.5	23.29	187.57	1,005.2	-154.3	-20.5	3.00	3.00	0.00	187.57	
6,711.3	23.29	187.57	6,226.8	-2,382.8	-316.5	0.00	0.00	0.00	0.00	
7,487.8	0.00	0.00	6,982.0	-2,537.1	-337.0	3.00	-3.00	0.00	180.00	
9,431.8	0.00	0.00	8,926.0	-2,537.1	-337.0	0.00	0.00	0.00	0.00	PUCKETT 31D-36 PE

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31D-36
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8270.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8270.0usft
<b>Site:</b>	S30-T6S-R96W (MESA I25)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 31D-36	<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	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	Start Build 3.00
300.0	1.50	187.57	300.0	-0.6	-0.1	0.7	3.00	3.00	
400.0	4.50	187.57	399.8	-5.8	-0.8	5.9	3.00	3.00	
500.0	7.50	187.57	499.3	-16.2	-2.2	16.3	3.00	3.00	
600.0	10.50	187.57	598.0	-31.7	-4.2	32.0	3.00	3.00	
700.0	13.50	187.57	695.8	-52.3	-6.9	52.8	3.00	3.00	
800.0	16.50	187.57	792.4	-78.0	-10.4	78.6	3.00	3.00	
900.0	19.50	187.57	887.5	-108.6	-14.4	109.5	3.00	3.00	
1,000.0	22.50	187.57	980.9	-144.1	-19.1	145.4	3.00	3.00	
1,026.5	23.29	187.57	1,005.2	-154.3	-20.5	155.7	3.00	3.00	Start 5684.9 hold at 1026.5 MD
1,100.0	23.29	187.57	1,072.8	-183.1	-24.3	184.8	0.00	0.00	
1,200.0	23.29	187.57	1,164.6	-222.3	-29.5	224.3	0.00	0.00	
1,300.0	23.29	187.57	1,256.5	-261.5	-34.7	263.8	0.00	0.00	
1,400.0	23.29	187.57	1,348.3	-300.7	-40.0	303.4	0.00	0.00	
1,500.0	23.29	187.57	1,440.2	-339.9	-45.2	342.9	0.00	0.00	
1,600.0	23.29	187.57	1,532.0	-379.1	-50.4	382.5	0.00	0.00	
1,700.0	23.29	187.57	1,623.9	-418.3	-55.6	422.0	0.00	0.00	
1,800.0	23.29	187.57	1,715.7	-457.5	-60.8	461.6	0.00	0.00	
1,900.0	23.29	187.57	1,807.6	-496.7	-66.0	501.1	0.00	0.00	
2,000.0	23.29	187.57	1,899.4	-536.0	-71.2	540.7	0.00	0.00	
2,100.0	23.29	187.57	1,991.3	-575.2	-76.4	580.2	0.00	0.00	
2,200.0	23.29	187.57	2,083.1	-614.4	-81.6	619.7	0.00	0.00	
2,300.0	23.29	187.57	2,175.0	-653.6	-86.8	659.3	0.00	0.00	
2,400.0	23.29	187.57	2,266.8	-692.8	-92.0	698.8	0.00	0.00	
2,500.0	23.29	187.57	2,358.7	-732.0	-97.2	738.4	0.00	0.00	
2,600.0	23.29	187.57	2,450.5	-771.2	-102.4	777.9	0.00	0.00	
2,700.0	23.29	187.57	2,542.4	-810.4	-107.6	817.5	0.00	0.00	
2,800.0	23.29	187.57	2,634.2	-849.6	-112.9	857.0	0.00	0.00	
2,900.0	23.29	187.57	2,726.1	-888.8	-118.1	896.6	0.00	0.00	
3,000.0	23.29	187.57	2,817.9	-928.0	-123.3	936.1	0.00	0.00	
3,100.0	23.29	187.57	2,909.8	-967.2	-128.5	975.7	0.00	0.00	
3,200.0	23.29	187.57	3,001.6	-1,006.4	-133.7	1,015.2	0.00	0.00	
3,300.0	23.29	187.57	3,093.5	-1,045.6	-138.9	1,054.7	0.00	0.00	
3,400.0	23.29	187.57	3,185.3	-1,084.8	-144.1	1,094.3	0.00	0.00	
3,500.0	23.29	187.57	3,277.2	-1,124.0	-149.3	1,133.8	0.00	0.00	
3,600.0	23.29	187.57	3,369.0	-1,163.2	-154.5	1,173.4	0.00	0.00	
3,700.0	23.29	187.57	3,460.9	-1,202.4	-159.7	1,212.9	0.00	0.00	
3,800.0	23.29	187.57	3,552.7	-1,241.6	-164.9	1,252.5	0.00	0.00	
3,900.0	23.29	187.57	3,644.6	-1,280.8	-170.1	1,292.0	0.00	0.00	
4,000.0	23.29	187.57	3,736.4	-1,320.0	-175.3	1,331.6	0.00	0.00	
4,100.0	23.29	187.57	3,828.3	-1,359.2	-180.5	1,371.1	0.00	0.00	
4,200.0	23.29	187.57	3,920.1	-1,398.4	-185.8	1,410.6	0.00	0.00	
4,300.0	23.29	187.57	4,012.0	-1,437.6	-191.0	1,450.2	0.00	0.00	
4,400.0	23.29	187.57	4,103.8	-1,476.8	-196.2	1,489.7	0.00	0.00	
4,500.0	23.29	187.57	4,195.7	-1,516.0	-201.4	1,529.3	0.00	0.00	
4,600.0	23.29	187.57	4,287.5	-1,555.2	-206.6	1,568.8	0.00	0.00	
4,700.0	23.29	187.57	4,379.4	-1,594.4	-211.8	1,608.4	0.00	0.00	
4,800.0	23.29	187.57	4,471.2	-1,633.6	-217.0	1,647.9	0.00	0.00	
4,900.0	23.29	187.57	4,563.0	-1,672.8	-222.2	1,687.5	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31D-36
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8270.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8270.0usft
<b>Site:</b>	S30-T6S-R96W (MESA I25)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 31D-36	<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
5,000.0	23.29	187.57	4,654.9	-1,712.0	-227.4	1,727.0	0.00	0.00	
5,100.0	23.29	187.57	4,746.7	-1,751.2	-232.6	1,766.5	0.00	0.00	
5,200.0	23.29	187.57	4,838.6	-1,790.4	-237.8	1,806.1	0.00	0.00	
5,300.0	23.29	187.57	4,930.4	-1,829.6	-243.0	1,845.6	0.00	0.00	
5,400.0	23.29	187.57	5,022.3	-1,868.8	-248.2	1,885.2	0.00	0.00	
5,500.0	23.29	187.57	5,114.1	-1,908.0	-253.5	1,924.7	0.00	0.00	
5,600.0	23.29	187.57	5,206.0	-1,947.2	-258.7	1,964.3	0.00	0.00	
5,700.0	23.29	187.57	5,297.8	-1,986.4	-263.9	2,003.8	0.00	0.00	
5,800.0	23.29	187.57	5,389.7	-2,025.6	-269.1	2,043.4	0.00	0.00	
5,900.0	23.29	187.57	5,481.5	-2,064.8	-274.3	2,082.9	0.00	0.00	
6,000.0	23.29	187.57	5,573.4	-2,104.0	-279.5	2,122.4	0.00	0.00	
6,100.0	23.29	187.57	5,665.2	-2,143.2	-284.7	2,162.0	0.00	0.00	
6,200.0	23.29	187.57	5,757.1	-2,182.4	-289.9	2,201.5	0.00	0.00	
6,291.4	23.29	187.57	5,841.0	-2,218.2	-294.7	2,237.7	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,300.0	23.29	187.57	5,848.9	-2,221.6	-295.1	2,241.1	0.00	0.00	
6,400.0	23.29	187.57	5,940.8	-2,260.8	-300.3	2,280.6	0.00	0.00	
6,500.0	23.29	187.57	6,032.6	-2,300.0	-305.5	2,320.2	0.00	0.00	
6,581.0	23.29	187.57	6,107.0	-2,331.7	-309.7	2,352.2	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,600.0	23.29	187.57	6,124.5	-2,339.2	-310.7	2,359.7	0.00	0.00	
6,700.0	23.29	187.57	6,216.3	-2,378.4	-315.9	2,399.3	0.00	0.00	
6,711.3	23.29	187.57	6,226.8	-2,382.8	-316.5	2,403.8	0.00	0.00	Start Drop -3.00
6,800.0	20.63	187.57	6,309.0	-2,415.7	-320.9	2,436.9	3.00	-3.00	
6,900.0	17.63	187.57	6,403.4	-2,448.2	-325.2	2,469.7	3.00	-3.00	
7,000.0	14.63	187.57	6,499.5	-2,475.7	-328.9	2,497.5	3.00	-3.00	
7,100.0	11.63	187.57	6,596.8	-2,498.2	-331.9	2,520.2	3.00	-3.00	
7,200.0	8.63	187.57	6,695.3	-2,515.7	-334.2	2,537.8	3.00	-3.00	
7,300.0	5.63	187.57	6,794.5	-2,528.0	-335.8	2,550.2	3.00	-3.00	
7,400.0	2.63	187.57	6,894.2	-2,535.1	-336.8	2,557.4	3.00	-3.00	
7,487.8	0.00	0.00	6,982.0	-2,537.1	-337.0	2,559.4	3.00	-3.00	Start 1944.0 hold at 7487.8 MD - TOP_GAS.ME
7,500.0	0.00	0.00	6,994.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
7,600.0	0.00	0.00	7,094.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
7,700.0	0.00	0.00	7,194.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
7,800.0	0.00	0.00	7,294.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
7,900.0	0.00	0.00	7,394.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,000.0	0.00	0.00	7,494.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,100.0	0.00	0.00	7,594.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,200.0	0.00	0.00	7,694.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,300.0	0.00	0.00	7,794.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,400.0	0.00	0.00	7,894.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,500.0	0.00	0.00	7,994.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,600.0	0.00	0.00	8,094.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,700.0	0.00	0.00	8,194.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,800.0	0.00	0.00	8,294.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
8,900.0	0.00	0.00	8,394.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
9,000.0	0.00	0.00	8,494.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
9,031.8	0.00	0.00	8,526.0	-2,537.1	-337.0	2,559.4	0.00	0.00	CAMEO.MBL (TVD)
9,100.0	0.00	0.00	8,594.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
9,200.0	0.00	0.00	8,694.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
9,281.8	0.00	0.00	8,776.0	-2,537.1	-337.0	2,559.4	0.00	0.00	ROLLINS.MBL (TVD)
9,300.0	0.00	0.00	8,794.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
9,400.0	0.00	0.00	8,894.2	-2,537.1	-337.0	2,559.4	0.00	0.00	
9,431.8	0.00	0.00	8,926.0	-2,537.1	-337.0	2,559.4	0.00	0.00	TD at 9431.8 - TD.MBL (TVD)

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 31D-36
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8270.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8270.0usft
<b>Site:</b>	S30-T6S-R96W (MESA I25)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 31D-36	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
PUCKETT 31D-36 PBHI	0.00	0.00	8,926.0	-2,537.1	-337.0	14,350,910.80	2,441,005.30	39.484388	-108.162799
- plan hits target center									
- Circle (radius 50.0)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,291.4	5,841.0	OHIO_CREEK.MBL (TVD)				
6,581.0	6,107.0	WILLIAMS_FORK.MBL (TVD)				
7,487.8	6,982.0	TOP_GAS.MBL (TVD)				
9,031.8	8,526.0	CAMEO.MBL (TVD)				
9,281.8	8,776.0	ROLLINS.MBL (TVD)				
9,431.8	8,926.0	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
250.0	250.0	0.0	0.0	Start Build 3.00	
1,026.5	1,005.2	-154.3	-20.5	Start 5684.9 hold at 1026.5 MD	
6,711.3	6,226.8	-2,382.8	-316.5	Start Drop -3.00	
7,487.8	6,982.0	-2,537.1	-337.0	Start 1944.0 hold at 7487.8 MD	
9,431.8	8,926.0	-2,537.1	-337.0	TD at 9431.8	