

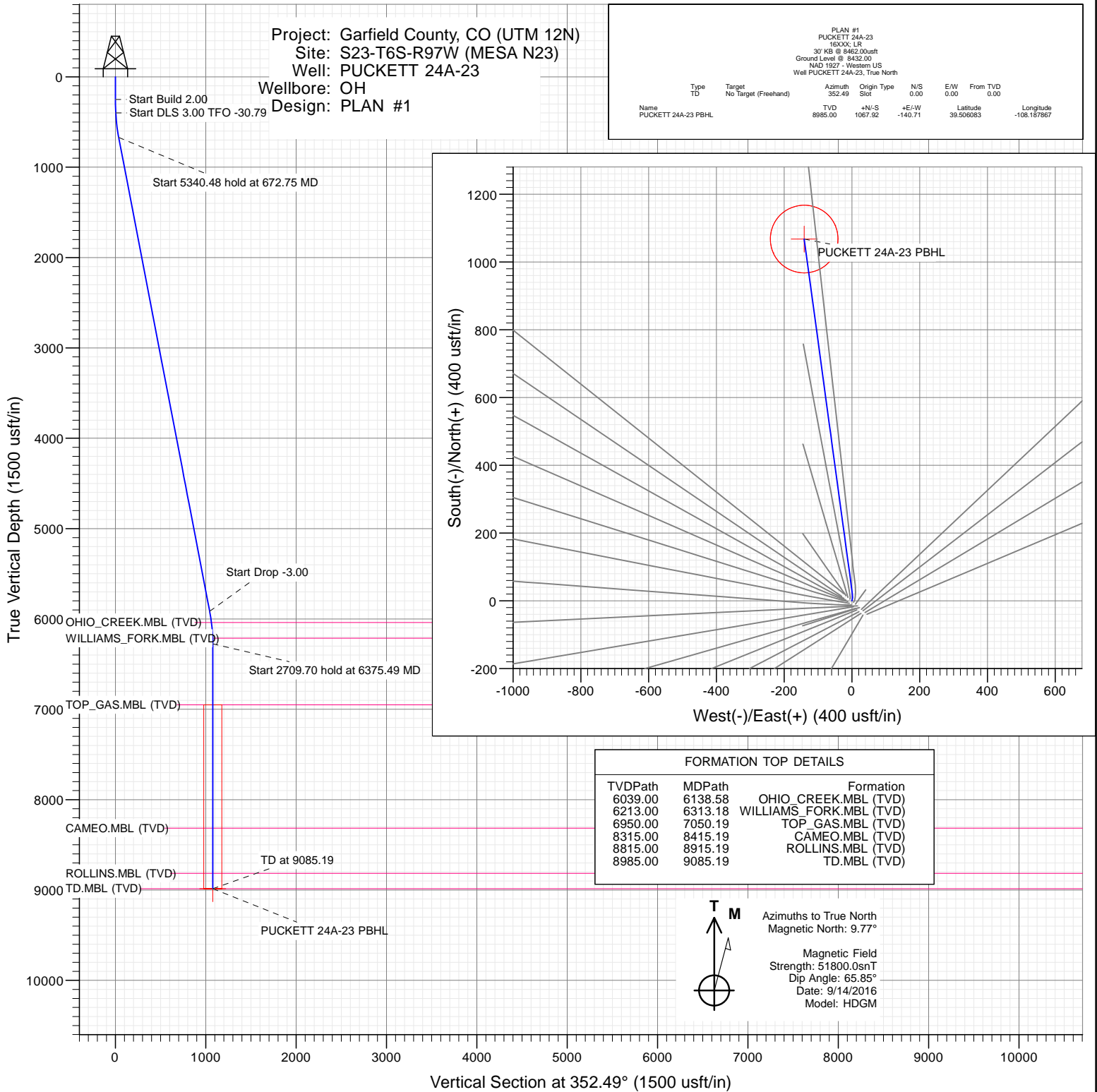


## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	400.00	3.00	15.00	399.93	3.79	1.02	2.00	15.00	3.63	
4	672.75	10.87	352.27	670.51	36.22	-0.60	3.00	-30.79	35.99	
5	6013.23	10.87	352.27	5915.21	1033.97	-136.10	0.00	0.00	1042.89	
6	6375.49	0.00	0.00	6275.30	1067.92	-140.71	3.00	180.00	1077.15	
7	9085.19	0.00	0.00	8985.00	1067.92	-140.71	0.00	0.00	1077.15	PUCKETT 24A-23 PBHL

Project: Garfield County, CO (UTM 12N)  
Site: S23-T6S-R97W (MESA N23)  
Well: PUCKETT 24A-23  
Wellbore: OH  
Design: PLAN #1

Type	Target	Azimuth	Origin	N/S	E/W	From TVD
TD	No Target (Freehand)	352.49	Slot	0.00	0.00	0.00
Name	PUCKETT 24A-23 PBHL	TVD	+N/-S	+E/-W	Latitude	Longitude
		8985.00	1067.92	-140.71	39.506083	-108.187867



## WELL DETAILS: PUCKETT 24A-23

+N/-S	+E/-W	Northing	Ground Level:	8432.00	Latitude	Longitude
0.00	0.00	14357527.00	Easting	2433858.00	39.503152	-108.187368



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24A-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24A-23	<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		S23-T6S-R97W (MESA N23)			
Site Position:		Northing:	14,357,518.00 usft	Latitude:	39.503127
From:	Map	Easting:	2,433,869.00 usft	Longitude:	-108.187330
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.79 °

Well	PUCKETT 24A-23					
Well Position	+N/-S	0.00 usft	Northing:	14,357,527.00 usft	Latitude:	39.503152
	+E/-W	0.00 usft	Easting:	2,433,858.00 usft	Longitude:	-108.187368
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,432.00 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	9/14/2016	9.77	65.85	51,800

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	352.49

<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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	3.00	15.00	399.93	3.79	1.02	2.00	2.00	0.00	15.00	
672.75	10.87	352.27	670.51	36.22	-0.60	3.00	2.88	-8.34	-30.79	
6,013.23	10.87	352.27	5,915.21	1,033.97	-136.10	0.00	0.00	0.00	0.00	
6,375.49	0.00	0.00	6,275.30	1,067.92	-140.71	3.00	-3.00	0.00	180.00	
9,085.19	0.00	0.00	8,985.00	1,067.92	-140.71	0.00	0.00	0.00	0.00	PUCKETT 24A-23 PE

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24A-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24A-23	<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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
300.00	1.00	15.00	300.00	0.42	0.11	0.40	2.00	2.00	
400.00	3.00	15.00	399.93	3.79	1.02	3.63	2.00	2.00	Start DLS 3.00 TFO -30.79
500.00	5.78	359.58	499.63	11.36	1.66	11.05	3.00	2.78	
600.00	8.71	354.31	598.82	23.94	0.87	23.62	3.00	2.93	
672.75	10.87	352.27	670.51	36.22	-0.60	35.99	3.00	2.96	Start 5340.48 hold at 672.75 MD
700.00	10.87	352.27	697.27	41.31	-1.29	41.13	0.00	0.00	
800.00	10.87	352.27	795.48	59.99	-3.83	59.98	0.00	0.00	
900.00	10.87	352.27	893.68	78.68	-6.37	78.83	0.00	0.00	
1,000.00	10.87	352.27	991.89	97.36	-8.90	97.69	0.00	0.00	
1,100.00	10.87	352.27	1,090.10	116.04	-11.44	116.54	0.00	0.00	
1,200.00	10.87	352.27	1,188.30	134.73	-13.98	135.40	0.00	0.00	
1,300.00	10.87	352.27	1,286.51	153.41	-16.51	154.25	0.00	0.00	
1,400.00	10.87	352.27	1,384.72	172.09	-19.05	173.11	0.00	0.00	
1,500.00	10.87	352.27	1,482.92	190.77	-21.59	191.96	0.00	0.00	
1,600.00	10.87	352.27	1,581.13	209.46	-24.13	210.81	0.00	0.00	
1,700.00	10.87	352.27	1,679.33	228.14	-26.66	229.67	0.00	0.00	
1,800.00	10.87	352.27	1,777.54	246.82	-29.20	248.52	0.00	0.00	
1,900.00	10.87	352.27	1,875.75	265.51	-31.74	267.38	0.00	0.00	
2,000.00	10.87	352.27	1,973.95	284.19	-34.27	286.23	0.00	0.00	
2,100.00	10.87	352.27	2,072.16	302.87	-36.81	305.08	0.00	0.00	
2,200.00	10.87	352.27	2,170.37	321.55	-39.35	323.94	0.00	0.00	
2,300.00	10.87	352.27	2,268.57	340.24	-41.89	342.79	0.00	0.00	
2,400.00	10.87	352.27	2,366.78	358.92	-44.42	361.65	0.00	0.00	
2,500.00	10.87	352.27	2,464.99	377.60	-46.96	380.50	0.00	0.00	
2,600.00	10.87	352.27	2,563.19	396.29	-49.50	399.36	0.00	0.00	
2,700.00	10.87	352.27	2,661.40	414.97	-52.04	418.21	0.00	0.00	
2,800.00	10.87	352.27	2,759.61	433.65	-54.57	437.06	0.00	0.00	
2,900.00	10.87	352.27	2,857.81	452.33	-57.11	455.92	0.00	0.00	
3,000.00	10.87	352.27	2,956.02	471.02	-59.65	474.77	0.00	0.00	
3,100.00	10.87	352.27	3,054.23	489.70	-62.18	493.63	0.00	0.00	
3,200.00	10.87	352.27	3,152.43	508.38	-64.72	512.48	0.00	0.00	
3,300.00	10.87	352.27	3,250.64	527.07	-67.26	531.34	0.00	0.00	
3,400.00	10.87	352.27	3,348.85	545.75	-69.80	550.19	0.00	0.00	
3,500.00	10.87	352.27	3,447.05	564.43	-72.33	569.04	0.00	0.00	
3,600.00	10.87	352.27	3,545.26	583.11	-74.87	587.90	0.00	0.00	
3,700.00	10.87	352.27	3,643.46	601.80	-77.41	606.75	0.00	0.00	
3,800.00	10.87	352.27	3,741.67	620.48	-79.94	625.61	0.00	0.00	
3,900.00	10.87	352.27	3,839.88	639.16	-82.48	644.46	0.00	0.00	
4,000.00	10.87	352.27	3,938.08	657.85	-85.02	663.31	0.00	0.00	
4,100.00	10.87	352.27	4,036.29	676.53	-87.56	682.17	0.00	0.00	
4,200.00	10.87	352.27	4,134.50	695.21	-90.09	701.02	0.00	0.00	
4,300.00	10.87	352.27	4,232.70	713.89	-92.63	719.88	0.00	0.00	
4,400.00	10.87	352.27	4,330.91	732.58	-95.17	738.73	0.00	0.00	
4,500.00	10.87	352.27	4,429.12	751.26	-97.70	757.59	0.00	0.00	
4,600.00	10.87	352.27	4,527.32	769.94	-100.24	776.44	0.00	0.00	
4,700.00	10.87	352.27	4,625.53	788.63	-102.78	795.29	0.00	0.00	
4,800.00	10.87	352.27	4,723.74	807.31	-105.32	814.15	0.00	0.00	
4,900.00	10.87	352.27	4,821.94	825.99	-107.85	833.00	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 24A-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24A-23	<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
5,000.00	10.87	352.27	4,920.15	844.67	-110.39	851.86	0.00	0.00	
5,100.00	10.87	352.27	5,018.36	863.36	-112.93	870.71	0.00	0.00	
5,200.00	10.87	352.27	5,116.56	882.04	-115.47	889.57	0.00	0.00	
5,300.00	10.87	352.27	5,214.77	900.72	-118.00	908.42	0.00	0.00	
5,400.00	10.87	352.27	5,312.97	919.41	-120.54	927.27	0.00	0.00	
5,500.00	10.87	352.27	5,411.18	938.09	-123.08	946.13	0.00	0.00	
5,600.00	10.87	352.27	5,509.39	956.77	-125.61	964.98	0.00	0.00	
5,700.00	10.87	352.27	5,607.59	975.45	-128.15	983.84	0.00	0.00	
5,800.00	10.87	352.27	5,705.80	994.14	-130.69	1,002.69	0.00	0.00	
5,900.00	10.87	352.27	5,804.01	1,012.82	-133.23	1,021.54	0.00	0.00	
6,000.00	10.87	352.27	5,902.21	1,031.50	-135.76	1,040.40	0.00	0.00	
6,013.23	10.87	352.27	5,915.21	1,033.97	-136.10	1,042.89	0.00	0.00	Start Drop -3.00
6,100.00	8.26	352.27	6,000.76	1,048.26	-138.04	1,057.31	3.00	-3.00	
6,138.58	7.11	352.27	6,039.00	1,053.38	-138.73	1,062.47	3.00	-3.00	OHIO_CREEK.MBL (TVD)
6,200.00	5.26	352.27	6,100.05	1,059.93	-139.62	1,069.09	3.00	-3.00	
6,300.00	2.26	352.27	6,199.83	1,066.44	-140.51	1,075.65	3.00	-3.00	
6,313.18	1.87	352.27	6,213.00	1,066.91	-140.57	1,076.13	3.00	-3.00	WILLIAMS_FORK.MBL (TVD)
6,375.49	0.00	0.00	6,275.30	1,067.92	-140.71	1,077.15	3.00	-3.00	Start 2709.70 hold at 6375.49 MD
6,400.00	0.00	0.00	6,299.81	1,067.92	-140.71	1,077.15	0.00	0.00	
6,500.00	0.00	0.00	6,399.81	1,067.92	-140.71	1,077.15	0.00	0.00	
6,600.00	0.00	0.00	6,499.81	1,067.92	-140.71	1,077.15	0.00	0.00	
6,700.00	0.00	0.00	6,599.81	1,067.92	-140.71	1,077.15	0.00	0.00	
6,800.00	0.00	0.00	6,699.81	1,067.92	-140.71	1,077.15	0.00	0.00	
6,900.00	0.00	0.00	6,799.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,000.00	0.00	0.00	6,899.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,050.19	0.00	0.00	6,950.00	1,067.92	-140.71	1,077.15	0.00	0.00	TOP_GAS.MBL (TVD)
7,100.00	0.00	0.00	6,999.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,200.00	0.00	0.00	7,099.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,300.00	0.00	0.00	7,199.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,400.00	0.00	0.00	7,299.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,500.00	0.00	0.00	7,399.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,600.00	0.00	0.00	7,499.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,700.00	0.00	0.00	7,599.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,800.00	0.00	0.00	7,699.81	1,067.92	-140.71	1,077.15	0.00	0.00	
7,900.00	0.00	0.00	7,799.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,000.00	0.00	0.00	7,899.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,100.00	0.00	0.00	7,999.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,200.00	0.00	0.00	8,099.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,300.00	0.00	0.00	8,199.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,400.00	0.00	0.00	8,299.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,415.19	0.00	0.00	8,315.00	1,067.92	-140.71	1,077.15	0.00	0.00	CAMEO.MBL (TVD)
8,500.00	0.00	0.00	8,399.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,600.00	0.00	0.00	8,499.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,700.00	0.00	0.00	8,599.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,800.00	0.00	0.00	8,699.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,900.00	0.00	0.00	8,799.81	1,067.92	-140.71	1,077.15	0.00	0.00	
8,915.19	0.00	0.00	8,815.00	1,067.92	-140.71	1,077.15	0.00	0.00	ROLLINS.MBL (TVD)
9,000.00	0.00	0.00	8,899.81	1,067.92	-140.71	1,077.15	0.00	0.00	
9,085.19	0.00	0.00	8,985.00	1,067.92	-140.71	1,077.15	0.00	0.00	TD at 9085.19 - 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 24A-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24A-23	<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 24A-23 PBHL	0.00	0.00	8,985.00	1,067.92	-140.71	14,358,590.00	2,433,684.00	39.506083	-108.187867
- plan hits target center									
- Circle (radius 100.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,138.58	6,039.00	OHIO_CREEK.MBL (TVD)				
6,313.18	6,213.00	WILLIAMS_FORK.MBL (TVD)				
7,050.19	6,950.00	TOP_GAS.MBL (TVD)				
8,415.19	8,315.00	CAMEO.MBL (TVD)				
8,915.19	8,815.00	ROLLINS.MBL (TVD)				
9,085.19	8,985.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
250.00	250.00	0.00	0.00	Start Build 2.00	
400.00	399.93	3.79	1.02	Start DLS 3.00 TFO -30.79	
672.75	670.51	36.22	-0.60	Start 5340.48 hold at 672.75 MD	
6,013.23	5,915.21	1,033.97	-136.10	Start Drop -3.00	
6,375.49	6,275.30	1,067.92	-140.71	Start 2709.70 hold at 6375.49 MD	
9,085.19	8,985.00	1,067.92	-140.71	TD at 9085.19	