

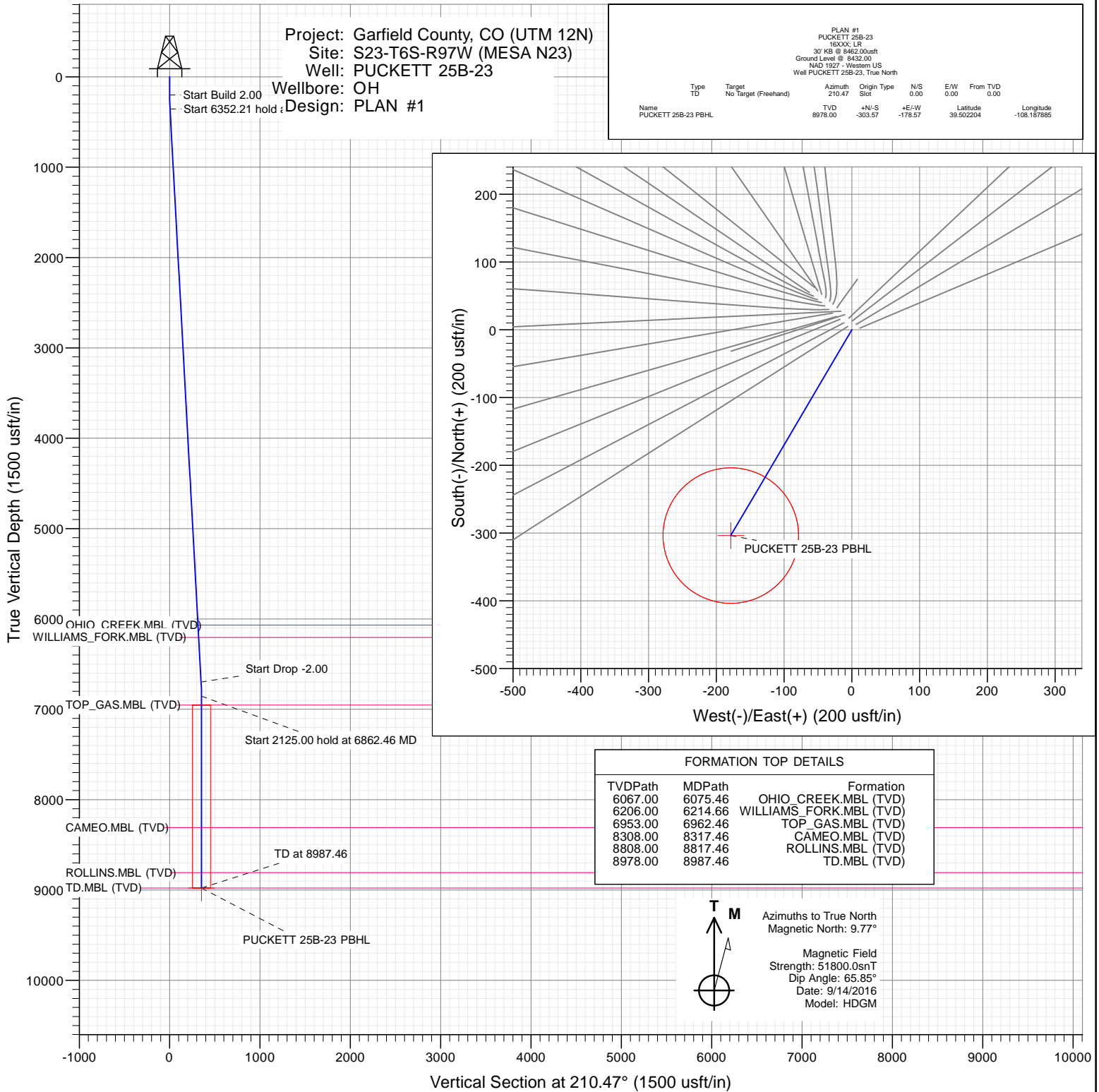


# SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	355.13	3.10	210.47	355.05	-3.62	-2.13	2.00	210.47	4.20	
4	6707.34	3.10	210.47	6697.95	-299.95	-176.44	0.00	0.00	348.00	
5	6862.46	0.00	0.00	6853.00	-303.57	-178.57	2.00	180.00	352.20	
6	8987.46	0.00	0.00	8978.00	-303.57	-178.57	0.00	0.00	352.20	PUCKETT 25B-23 PBHL

Project: Garfield County, CO (UTM 12N)  
Site: S23-T6S-R97W (MESA N23)  
Well: PUCKETT 25B-23  
Wellbore: OH  
Design: PLAN #1

Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	210.47	Slot	0.00	0.00	0.00
Name		TVD	+N/-S	+E/-W	Latitude	Longitude
PUCKETT 25B-23 PBHL		8978.00	-303.57	-178.57	39.502204	-108.187885



## WELL DETAILS: PUCKETT 25B-23

+N/-S	+E/-W	Northing	Ground Level:	8432.00	Latitude	Longitude
0.00	0.00	14357486.00	Easting	2433892.00	39.503037	-108.187252



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 25B-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 25B-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 25B-23					
Well Position	+N/-S	0.00 usft	Northing:	14,357,486.00 usft	Latitude:	39.503037
	+E/-W	0.00 usft	Easting:	2,433,892.00 usft	Longitude:	-108.187252
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	210.47

<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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
355.13	3.10	210.47	355.05	-3.62	-2.13	2.00	2.00	0.00	210.47	
6,707.34	3.10	210.47	6,697.95	-299.95	-176.44	0.00	0.00	0.00	0.00	
6,862.46	0.00	0.00	6,853.00	-303.57	-178.57	2.00	-2.00	0.00	180.00	
8,987.46	0.00	0.00	8,978.00	-303.57	-178.57	0.00	0.00	0.00	0.00	PUCKETT 25B-23 PE

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 25B-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 25B-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	Start Build 2.00
300.00	2.00	210.47	299.98	-1.50	-0.88	1.75	2.00	2.00	
355.13	3.10	210.47	355.05	-3.62	-2.13	4.20	2.00	2.00	Start 6352.21 hold at 355.13 MD
400.00	3.10	210.47	399.86	-5.71	-3.36	6.63	0.00	0.00	
500.00	3.10	210.47	499.71	-10.38	-6.10	12.04	0.00	0.00	
600.00	3.10	210.47	599.57	-15.04	-8.85	17.45	0.00	0.00	
700.00	3.10	210.47	699.42	-19.71	-11.59	22.86	0.00	0.00	
800.00	3.10	210.47	799.27	-24.37	-14.34	28.28	0.00	0.00	
900.00	3.10	210.47	899.13	-29.04	-17.08	33.69	0.00	0.00	
1,000.00	3.10	210.47	998.98	-33.70	-19.83	39.10	0.00	0.00	
1,100.00	3.10	210.47	1,098.83	-38.37	-22.57	44.51	0.00	0.00	
1,200.00	3.10	210.47	1,198.69	-43.03	-25.31	49.93	0.00	0.00	
1,300.00	3.10	210.47	1,298.54	-47.70	-28.06	55.34	0.00	0.00	
1,400.00	3.10	210.47	1,398.39	-52.36	-30.80	60.75	0.00	0.00	
1,500.00	3.10	210.47	1,498.25	-57.03	-33.55	66.16	0.00	0.00	
1,600.00	3.10	210.47	1,598.10	-61.69	-36.29	71.57	0.00	0.00	
1,700.00	3.10	210.47	1,697.95	-66.36	-39.03	76.99	0.00	0.00	
1,800.00	3.10	210.47	1,797.81	-71.02	-41.78	82.40	0.00	0.00	
1,900.00	3.10	210.47	1,897.66	-75.69	-44.52	87.81	0.00	0.00	
2,000.00	3.10	210.47	1,997.51	-80.35	-47.27	93.22	0.00	0.00	
2,100.00	3.10	210.47	2,097.37	-85.02	-50.01	98.64	0.00	0.00	
2,200.00	3.10	210.47	2,197.22	-89.68	-52.75	104.05	0.00	0.00	
2,300.00	3.10	210.47	2,297.07	-94.35	-55.50	109.46	0.00	0.00	
2,400.00	3.10	210.47	2,396.93	-99.01	-58.24	114.87	0.00	0.00	
2,500.00	3.10	210.47	2,496.78	-103.68	-60.99	120.29	0.00	0.00	
2,600.00	3.10	210.47	2,596.63	-108.34	-63.73	125.70	0.00	0.00	
2,700.00	3.10	210.47	2,696.49	-113.01	-66.48	131.11	0.00	0.00	
2,800.00	3.10	210.47	2,796.34	-117.67	-69.22	136.52	0.00	0.00	
2,900.00	3.10	210.47	2,896.19	-122.34	-71.96	141.93	0.00	0.00	
3,000.00	3.10	210.47	2,996.05	-127.00	-74.71	147.35	0.00	0.00	
3,100.00	3.10	210.47	3,095.90	-131.67	-77.45	152.76	0.00	0.00	
3,200.00	3.10	210.47	3,195.75	-136.33	-80.20	158.17	0.00	0.00	
3,300.00	3.10	210.47	3,295.61	-141.00	-82.94	163.58	0.00	0.00	
3,400.00	3.10	210.47	3,395.46	-145.66	-85.68	169.00	0.00	0.00	
3,500.00	3.10	210.47	3,495.31	-150.33	-88.43	174.41	0.00	0.00	
3,600.00	3.10	210.47	3,595.17	-154.99	-91.17	179.82	0.00	0.00	
3,700.00	3.10	210.47	3,695.02	-159.66	-93.92	185.23	0.00	0.00	
3,800.00	3.10	210.47	3,794.88	-164.32	-96.66	190.64	0.00	0.00	
3,900.00	3.10	210.47	3,894.73	-168.99	-99.40	196.06	0.00	0.00	
4,000.00	3.10	210.47	3,994.58	-173.65	-102.15	201.47	0.00	0.00	
4,100.00	3.10	210.47	4,094.44	-178.32	-104.89	206.88	0.00	0.00	
4,200.00	3.10	210.47	4,194.29	-182.98	-107.64	212.29	0.00	0.00	
4,300.00	3.10	210.47	4,294.14	-187.65	-110.38	217.71	0.00	0.00	
4,400.00	3.10	210.47	4,394.00	-192.31	-113.13	223.12	0.00	0.00	
4,500.00	3.10	210.47	4,493.85	-196.98	-115.87	228.53	0.00	0.00	
4,600.00	3.10	210.47	4,593.70	-201.64	-118.61	233.94	0.00	0.00	
4,700.00	3.10	210.47	4,693.56	-206.31	-121.36	239.35	0.00	0.00	
4,800.00	3.10	210.47	4,793.41	-210.97	-124.10	244.77	0.00	0.00	
4,900.00	3.10	210.47	4,893.26	-215.64	-126.85	250.18	0.00	0.00	
5,000.00	3.10	210.47	4,993.12	-220.30	-129.59	255.59	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 25B-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 25B-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
5,100.00	3.10	210.47	5,092.97	-224.97	-132.33	261.00	0.00	0.00	
5,200.00	3.10	210.47	5,192.82	-229.63	-135.08	266.42	0.00	0.00	
5,300.00	3.10	210.47	5,292.68	-234.30	-137.82	271.83	0.00	0.00	
5,400.00	3.10	210.47	5,392.53	-238.96	-140.57	277.24	0.00	0.00	
5,500.00	3.10	210.47	5,492.38	-243.63	-143.31	282.65	0.00	0.00	
5,600.00	3.10	210.47	5,592.24	-248.29	-146.06	288.07	0.00	0.00	
5,700.00	3.10	210.47	5,692.09	-252.96	-148.80	293.48	0.00	0.00	
5,800.00	3.10	210.47	5,791.94	-257.62	-151.54	298.89	0.00	0.00	
5,900.00	3.10	210.47	5,891.80	-262.29	-154.29	304.30	0.00	0.00	
6,000.00	3.10	210.47	5,991.65	-266.95	-157.03	309.71	0.00	0.00	
6,075.46	3.10	210.47	6,067.00	-270.47	-159.10	313.80	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,100.00	3.10	210.47	6,091.50	-271.62	-159.78	315.13	0.00	0.00	
6,200.00	3.10	210.47	6,191.36	-276.28	-162.52	320.54	0.00	0.00	
6,214.66	3.10	210.47	6,206.00	-276.97	-162.92	321.33	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,300.00	3.10	210.47	6,291.21	-280.95	-165.26	325.95	0.00	0.00	
6,400.00	3.10	210.47	6,391.06	-285.61	-168.01	331.36	0.00	0.00	
6,500.00	3.10	210.47	6,490.92	-290.28	-170.75	336.78	0.00	0.00	
6,600.00	3.10	210.47	6,590.77	-294.94	-173.50	342.19	0.00	0.00	
6,700.00	3.10	210.47	6,690.62	-299.61	-176.24	347.60	0.00	0.00	
6,707.34	3.10	210.47	6,697.95	-299.95	-176.44	348.00	0.00	0.00	Start Drop -2.00
6,800.00	1.25	210.47	6,790.54	-302.98	-178.23	351.52	2.00	-2.00	
6,862.46	0.00	0.00	6,853.00	-303.57	-178.57	352.20	2.00	-2.00	Start 2125.00 hold at 6862.46 MD
6,900.00	0.00	0.00	6,890.54	-303.57	-178.57	352.20	0.00	0.00	
6,962.46	0.00	0.00	6,953.00	-303.57	-178.57	352.20	0.00	0.00	TOP_GAS.MBL (TVD)
7,000.00	0.00	0.00	6,990.54	-303.57	-178.57	352.20	0.00	0.00	
7,100.00	0.00	0.00	7,090.54	-303.57	-178.57	352.20	0.00	0.00	
7,200.00	0.00	0.00	7,190.54	-303.57	-178.57	352.20	0.00	0.00	
7,300.00	0.00	0.00	7,290.54	-303.57	-178.57	352.20	0.00	0.00	
7,400.00	0.00	0.00	7,390.54	-303.57	-178.57	352.20	0.00	0.00	
7,500.00	0.00	0.00	7,490.54	-303.57	-178.57	352.20	0.00	0.00	
7,600.00	0.00	0.00	7,590.54	-303.57	-178.57	352.20	0.00	0.00	
7,700.00	0.00	0.00	7,690.54	-303.57	-178.57	352.20	0.00	0.00	
7,800.00	0.00	0.00	7,790.54	-303.57	-178.57	352.20	0.00	0.00	
7,900.00	0.00	0.00	7,890.54	-303.57	-178.57	352.20	0.00	0.00	
8,000.00	0.00	0.00	7,990.54	-303.57	-178.57	352.20	0.00	0.00	
8,100.00	0.00	0.00	8,090.54	-303.57	-178.57	352.20	0.00	0.00	
8,200.00	0.00	0.00	8,190.54	-303.57	-178.57	352.20	0.00	0.00	
8,300.00	0.00	0.00	8,290.54	-303.57	-178.57	352.20	0.00	0.00	
8,317.46	0.00	0.00	8,308.00	-303.57	-178.57	352.20	0.00	0.00	CAMEO.MBL (TVD)
8,400.00	0.00	0.00	8,390.54	-303.57	-178.57	352.20	0.00	0.00	
8,500.00	0.00	0.00	8,490.54	-303.57	-178.57	352.20	0.00	0.00	
8,600.00	0.00	0.00	8,590.54	-303.57	-178.57	352.20	0.00	0.00	
8,700.00	0.00	0.00	8,690.54	-303.57	-178.57	352.20	0.00	0.00	
8,800.00	0.00	0.00	8,790.54	-303.57	-178.57	352.20	0.00	0.00	
8,817.46	0.00	0.00	8,808.00	-303.57	-178.57	352.20	0.00	0.00	ROLLINS.MBL (TVD)
8,900.00	0.00	0.00	8,890.54	-303.57	-178.57	352.20	0.00	0.00	
8,987.46	0.00	0.00	8,978.00	-303.57	-178.57	352.20	0.00	0.00	TD at 8987.46 - 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 25B-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 25B-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 25B-23 PBHL	0.00	0.00	8,978.00	-303.57	-178.57	14,357,177.00	2,433,723.00	39.502204	-108.187885
- plan hits target center									
- Circle (radius 100.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,075.46	6,067.00	OHIO_CREEK.MBL (TVD)				
6,214.66	6,206.00	WILLIAMS_FORK.MBL (TVD)				
6,962.46	6,953.00	TOP_GAS.MBL (TVD)				
8,317.46	8,308.00	CAMEO.MBL (TVD)				
8,817.46	8,808.00	ROLLINS.MBL (TVD)				
8,987.46	8,978.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
200.00	200.00	0.00	0.00	Start Build 2.00	
355.13	355.05	-3.62	-2.13	Start 6352.21 hold at 355.13 MD	
6,707.34	6,697.95	-299.95	-176.44	Start Drop -2.00	
6,862.46	6,853.00	-303.57	-178.57	Start 2125.00 hold at 6862.46 MD	
8,987.46	8,978.00	-303.57	-178.57	TD at 8987.46	