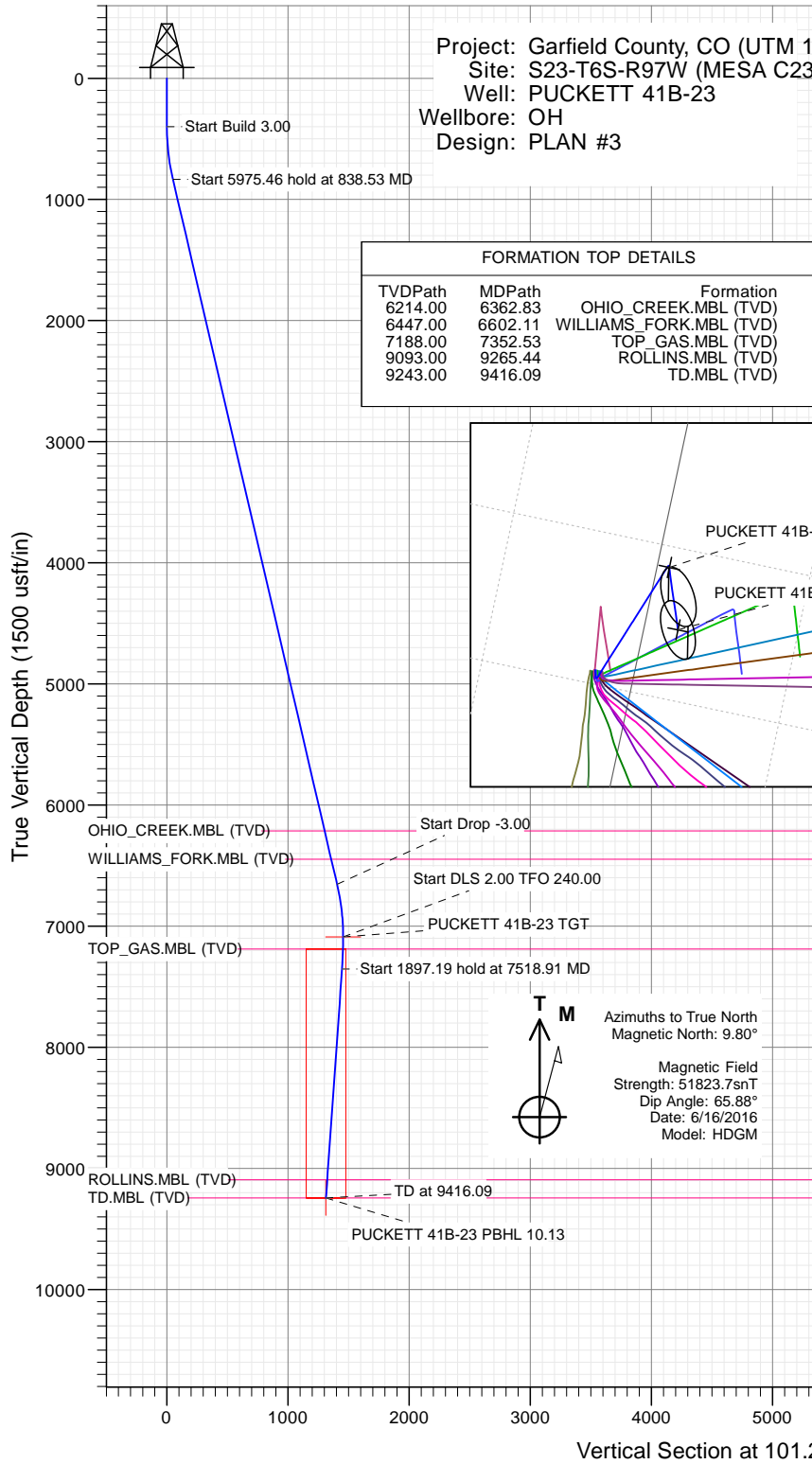




## SECTION DETAILS

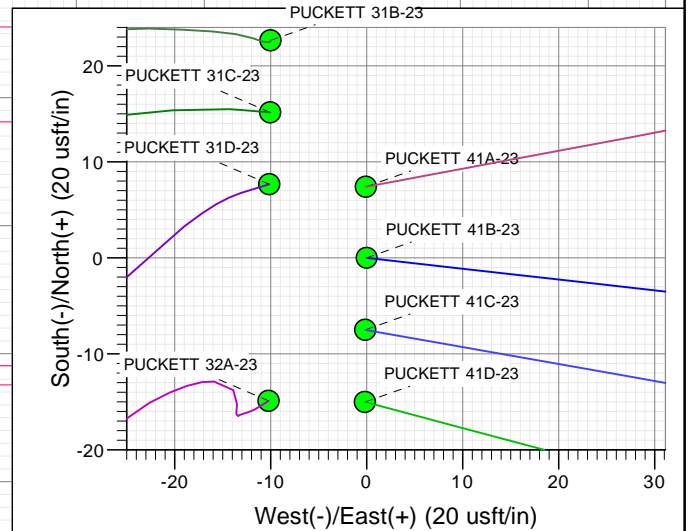
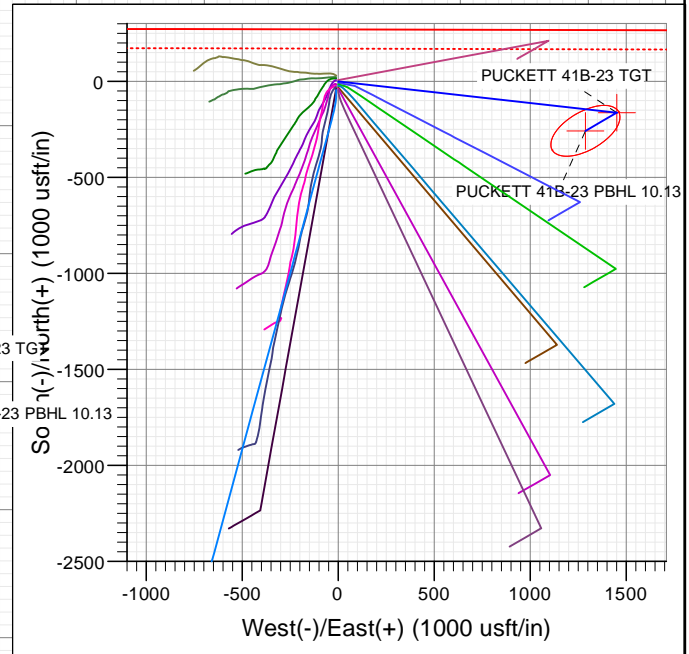
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	838.53	13.16	96.40	834.68	-5.59	49.81	3.00	96.40	49.94	
4	6813.99	13.16	96.40	6653.32	-157.16	1401.36	0.00	0.00	1405.01	
5	7252.51	0.00	0.00	7088.00	-162.75	1451.17	3.00	180.00	1454.96	PUCKETT 41B-23 TGT
6	7518.91	5.33	240.00	7354.01	-168.94	1440.45	2.00	240.00	1445.66	
7	9416.09	5.33	240.00	9243.00	-257.02	1287.89	0.00	0.00	1313.29	PUCKETT 41B-23 PBHL 10.13

Project: Garfield County, CO (UTM 1  
Site: S23-T6S-R97W (MESA C23  
Well: PUCKETT 41B-23  
Wellbore: OH  
Design: PLAN #3



PLAN #3  
PUCKETT 41B-23  
15XXX LR  
30' KB @ 8532.00usft (H&P 330)  
Ground Level @ 8532.00  
NAD 1927 - Western US  
Well PUCKETT 41B-23, True North

Type	TD	Target	No Target (Freehand)	Azimuth	Origin	Type	Slot	N/S	E/W	From	TVD
Name											
PUCKETT 41B-23 TGT				101.29				N/S	E/W	From	TVD
PUCKETT 41B-23 PBHL				101.29				N/S	E/W	From	TVD
PUCKETT 41B-23 PBHL 10.13				101.29				N/S	E/W	From	TVD



## WELL DETAILS: PUCKETT 41B-23

+N/-S	+E/-W	Northing	Ground Level:	8532.00	Latitude	Longitude
0.00	0.00	14361874.50	Easting	2434708.10	39.515005	-108.183876





# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 41B-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Site:</b>	S23-T6S-R97W (MESA C23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 41B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

<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>	S23-T6S-R97W (MESA C23)		
<b>Site Position:</b>		<b>Northing:</b>	14,361,896.90 usft
<b>From:</b>	Map	<b>Easting:</b>	2,434,697.40 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	39.515068
		<b>Longitude:</b>	-108.183912
		<b>Grid Convergence:</b>	1.79 °

<b>Well</b>	PUCKETT 41B-23		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b> 14,361,874.50 usft
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b> 2,434,708.10 usft
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Latitude:</b>	39.515005
		<b>Longitude:</b>	-108.183876
		<b>Ground Level:</b>	8,532.00 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 (nT)</b>
	HDGM	6/16/2016	9.80	65.88	51,824

<b>Design</b>	PLAN #3			
<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	101.29

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
838.53	13.16	96.40	834.68	-5.59	49.81	3.00	3.00	0.00	96.40	
6,813.99	13.16	96.40	6,653.32	-157.16	1,401.36	0.00	0.00	0.00	0.00	
7,252.51	0.00	0.00	7,088.00	-162.75	1,451.17	3.00	-3.00	0.00	180.00	PUCKETT 41B-23 TC
7,518.91	5.33	240.00	7,354.01	-168.94	1,440.45	2.00	2.00	-45.05	240.00	
9,416.09	5.33	240.00	9,243.00	-257.02	1,287.89	0.00	0.00	0.00	0.00	PUCKETT 41B-23 PE



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 41B-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Site:</b>	S23-T6S-R97W (MESA C23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 41B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

### 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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
500.00	3.00	96.40	499.95	-0.29	2.60	2.61	3.00	3.00	
600.00	6.00	96.40	599.63	-1.17	10.40	10.42	3.00	3.00	
700.00	9.00	96.40	698.77	-2.62	23.37	23.43	3.00	3.00	
800.00	12.00	96.40	797.08	-4.65	41.47	41.58	3.00	3.00	
838.53	13.16	96.40	834.68	-5.59	49.81	49.94	3.00	3.00	Start 5975.46 hold at 838.53 MD
900.00	13.16	96.40	894.54	-7.15	63.72	63.88	0.00	0.00	
1,000.00	13.16	96.40	991.92	-9.68	86.33	86.56	0.00	0.00	
1,100.00	13.16	96.40	1,089.29	-12.22	108.95	109.24	0.00	0.00	
1,200.00	13.16	96.40	1,186.67	-14.76	131.57	131.91	0.00	0.00	
1,300.00	13.16	96.40	1,284.05	-17.29	154.19	154.59	0.00	0.00	
1,400.00	13.16	96.40	1,381.42	-19.83	176.81	177.27	0.00	0.00	
1,500.00	13.16	96.40	1,478.80	-22.37	199.43	199.95	0.00	0.00	
1,600.00	13.16	96.40	1,576.17	-24.90	222.04	222.62	0.00	0.00	
1,700.00	13.16	96.40	1,673.55	-27.44	244.66	245.30	0.00	0.00	
1,800.00	13.16	96.40	1,770.92	-29.98	267.28	267.98	0.00	0.00	
1,900.00	13.16	96.40	1,868.30	-32.51	289.90	290.66	0.00	0.00	
2,000.00	13.16	96.40	1,965.67	-35.05	312.52	313.33	0.00	0.00	
2,100.00	13.16	96.40	2,063.05	-37.59	335.14	336.01	0.00	0.00	
2,200.00	13.16	96.40	2,160.42	-40.12	357.75	358.69	0.00	0.00	
2,300.00	13.16	96.40	2,257.80	-42.66	380.37	381.36	0.00	0.00	
2,400.00	13.16	96.40	2,355.18	-45.20	402.99	404.04	0.00	0.00	
2,500.00	13.16	96.40	2,452.55	-47.73	425.61	426.72	0.00	0.00	
2,600.00	13.16	96.40	2,549.93	-50.27	448.23	449.40	0.00	0.00	
2,700.00	13.16	96.40	2,647.30	-52.81	470.84	472.07	0.00	0.00	
2,800.00	13.16	96.40	2,744.68	-55.34	493.46	494.75	0.00	0.00	
2,900.00	13.16	96.40	2,842.05	-57.88	516.08	517.43	0.00	0.00	
3,000.00	13.16	96.40	2,939.43	-60.42	538.70	540.11	0.00	0.00	
3,100.00	13.16	96.40	3,036.80	-62.95	561.32	562.78	0.00	0.00	
3,200.00	13.16	96.40	3,134.18	-65.49	583.94	585.46	0.00	0.00	
3,300.00	13.16	96.40	3,231.55	-68.03	606.55	608.14	0.00	0.00	
3,400.00	13.16	96.40	3,328.93	-70.56	629.17	630.82	0.00	0.00	
3,500.00	13.16	96.40	3,426.31	-73.10	651.79	653.49	0.00	0.00	
3,600.00	13.16	96.40	3,523.68	-75.64	674.41	676.17	0.00	0.00	
3,700.00	13.16	96.40	3,621.06	-78.17	697.03	698.85	0.00	0.00	
3,800.00	13.16	96.40	3,718.43	-80.71	719.65	721.52	0.00	0.00	
3,900.00	13.16	96.40	3,815.81	-83.25	742.26	744.20	0.00	0.00	
4,000.00	13.16	96.40	3,913.18	-85.78	764.88	766.88	0.00	0.00	
4,100.00	13.16	96.40	4,010.56	-88.32	787.50	789.56	0.00	0.00	
4,200.00	13.16	96.40	4,107.93	-90.86	810.12	812.23	0.00	0.00	
4,300.00	13.16	96.40	4,205.31	-93.39	832.74	834.91	0.00	0.00	
4,400.00	13.16	96.40	4,302.68	-95.93	855.35	857.59	0.00	0.00	
4,500.00	13.16	96.40	4,400.06	-98.47	877.97	880.27	0.00	0.00	
4,600.00	13.16	96.40	4,497.44	-101.00	900.59	902.94	0.00	0.00	
4,700.00	13.16	96.40	4,594.81	-103.54	923.21	925.62	0.00	0.00	
4,800.00	13.16	96.40	4,692.19	-106.07	945.83	948.30	0.00	0.00	
4,900.00	13.16	96.40	4,789.56	-108.61	968.45	970.97	0.00	0.00	
5,000.00	13.16	96.40	4,886.94	-111.15	991.06	993.65	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 41B-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Site:</b>	S23-T6S-R97W (MESA C23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 41B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

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	13.16	96.40	4,984.31	-113.68	1,013.68	1,016.33	0.00	0.00	
5,200.00	13.16	96.40	5,081.69	-116.22	1,036.30	1,039.01	0.00	0.00	
5,300.00	13.16	96.40	5,179.06	-118.76	1,058.92	1,061.68	0.00	0.00	
5,400.00	13.16	96.40	5,276.44	-121.29	1,081.54	1,084.36	0.00	0.00	
5,500.00	13.16	96.40	5,373.81	-123.83	1,104.16	1,107.04	0.00	0.00	
5,600.00	13.16	96.40	5,471.19	-126.37	1,126.77	1,129.72	0.00	0.00	
5,700.00	13.16	96.40	5,568.57	-128.90	1,149.39	1,152.39	0.00	0.00	
5,800.00	13.16	96.40	5,665.94	-131.44	1,172.01	1,175.07	0.00	0.00	
5,900.00	13.16	96.40	5,763.32	-133.98	1,194.63	1,197.75	0.00	0.00	
6,000.00	13.16	96.40	5,860.69	-136.51	1,217.25	1,220.42	0.00	0.00	
6,100.00	13.16	96.40	5,958.07	-139.05	1,239.86	1,243.10	0.00	0.00	
6,200.00	13.16	96.40	6,055.44	-141.59	1,262.48	1,265.78	0.00	0.00	
6,300.00	13.16	96.40	6,152.82	-144.12	1,285.10	1,288.46	0.00	0.00	
6,362.83	13.16	96.40	6,214.00	-145.72	1,299.31	1,302.70	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,400.00	13.16	96.40	6,250.19	-146.66	1,307.72	1,311.13	0.00	0.00	
6,500.00	13.16	96.40	6,347.57	-149.20	1,330.34	1,333.81	0.00	0.00	
6,600.00	13.16	96.40	6,444.94	-151.73	1,352.96	1,356.49	0.00	0.00	
6,602.11	13.16	96.40	6,447.00	-151.79	1,353.43	1,356.97	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,700.00	13.16	96.40	6,542.32	-154.27	1,375.57	1,379.17	0.00	0.00	
6,800.00	13.16	96.40	6,639.70	-156.81	1,398.19	1,401.84	0.00	0.00	
6,813.99	13.16	96.40	6,653.32	-157.16	1,401.36	1,405.01	0.00	0.00	Start Drop -3.00
6,900.00	10.58	96.40	6,737.48	-159.13	1,418.93	1,422.63	3.00	-3.00	
7,000.00	7.58	96.40	6,836.22	-160.89	1,434.60	1,438.35	3.00	-3.00	
7,100.00	4.58	96.40	6,935.65	-162.07	1,445.12	1,448.89	3.00	-3.00	
7,200.00	1.58	96.40	7,035.49	-162.67	1,450.45	1,454.24	3.00	-3.00	
7,252.51	0.00	0.00	7,088.00	-162.75	1,451.17	1,454.96	3.00	-3.00	Start DLS 2.00 TFO 240.00
7,300.00	0.95	240.00	7,135.48	-162.95	1,450.83	1,454.66	2.00	2.00	
7,352.53	2.00	240.00	7,188.00	-163.62	1,449.66	1,453.65	2.00	2.00	TOP_GAS.MBL (TVD)
7,400.00	2.95	240.00	7,235.42	-164.65	1,447.88	1,452.11	2.00	2.00	
7,500.00	4.95	240.00	7,335.18	-168.09	1,441.92	1,446.93	2.00	2.00	
7,518.91	5.33	240.00	7,354.01	-168.94	1,440.45	1,445.66	2.00	2.00	Start 1897.19 hold at 7518.91 MD
7,600.00	5.33	240.00	7,434.75	-172.70	1,433.93	1,440.00	0.00	0.00	
7,700.00	5.33	240.00	7,534.32	-177.35	1,425.89	1,433.02	0.00	0.00	
7,800.00	5.33	240.00	7,633.89	-181.99	1,417.85	1,426.04	0.00	0.00	
7,900.00	5.33	240.00	7,733.46	-186.63	1,409.80	1,419.07	0.00	0.00	
8,000.00	5.33	240.00	7,833.02	-191.27	1,401.76	1,412.09	0.00	0.00	
8,100.00	5.33	240.00	7,932.59	-195.92	1,393.72	1,405.11	0.00	0.00	
8,200.00	5.33	240.00	8,032.16	-200.56	1,385.68	1,398.14	0.00	0.00	
8,300.00	5.33	240.00	8,131.73	-205.20	1,377.64	1,391.16	0.00	0.00	
8,400.00	5.33	240.00	8,231.30	-209.84	1,369.60	1,384.18	0.00	0.00	
8,500.00	5.33	240.00	8,330.86	-214.49	1,361.56	1,377.20	0.00	0.00	
8,600.00	5.33	240.00	8,430.43	-219.13	1,353.51	1,370.23	0.00	0.00	
8,700.00	5.33	240.00	8,530.00	-223.77	1,345.47	1,363.25	0.00	0.00	
8,800.00	5.33	240.00	8,629.57	-228.41	1,337.43	1,356.27	0.00	0.00	
8,900.00	5.33	240.00	8,729.14	-233.06	1,329.39	1,349.29	0.00	0.00	
9,000.00	5.33	240.00	8,828.70	-237.70	1,321.35	1,342.32	0.00	0.00	
9,100.00	5.33	240.00	8,928.27	-242.34	1,313.31	1,335.34	0.00	0.00	
9,200.00	5.33	240.00	9,027.84	-246.99	1,305.27	1,328.36	0.00	0.00	
9,265.44	5.33	240.00	9,093.00	-250.02	1,300.00	1,323.80	0.00	0.00	ROLLINS.MBL (TVD)
9,300.00	5.33	240.00	9,127.41	-251.63	1,297.23	1,321.39	0.00	0.00	
9,400.00	5.33	240.00	9,226.98	-256.27	1,289.18	1,314.41	0.00	0.00	
9,416.09	5.33	240.00	9,243.00	-257.02	1,287.89	1,313.29	0.00	0.00	TD at 9416.09 - 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 41B-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8562.00usft (H&P 330)
<b>Site:</b>	S23-T6S-R97W (MESA C23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 41B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #3		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PUCKETT 41B-23 TGT	0.00	0.00	7,088.00	-162.75	1,451.17	14,361,757.23	2,436,163.65	39.514558	-108.178735
- plan hits target center									
- Point									
PUCKETT 41B-23 PBHL	0.00	0.00	9,243.00	-257.02	1,287.89	14,361,657.90	2,436,003.40	39.514300	-108.179313
- plan hits target center									
- Ellipse (radii L200.00 W100.00 on 240.00 azi)									
PUCKETT 41B-23 PBHL	0.00	0.00	9,243.00	-115.39	921.74	14,361,788.00	2,435,633.00	39.514689	-108.180610
- plan misses target center by 392.58usft at 9416.09usft MD (9243.00 TVD, -257.02 N, 1287.89 E)									
- Circle (radius 100.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,362.83	6,214.00	OHIO_CREEK.MBL (TVD)				
6,602.11	6,447.00	WILLIAMS_FORK.MBL (TVD)				
7,352.53	7,188.00	TOP_GAS.MBL (TVD)				
9,265.44	9,093.00	ROLLINS.MBL (TVD)				
9,416.09	9,243.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
400.00	400.00	0.00	0.00	Start Build 3.00	
838.53	834.68	-5.59	49.81	Start 5975.46 hold at 838.53 MD	
6,813.99	6,653.32	-157.16	1,401.36	Start Drop -3.00	
7,252.51	7,088.00	-162.75	1,451.17	Start DLS 2.00 TFO 240.00	
7,518.91	7,354.01	-168.94	1,440.45	Start 1897.19 hold at 7518.91 MD	
9,416.09	9,243.00	-257.02	1,287.89	TD at 9416.09	