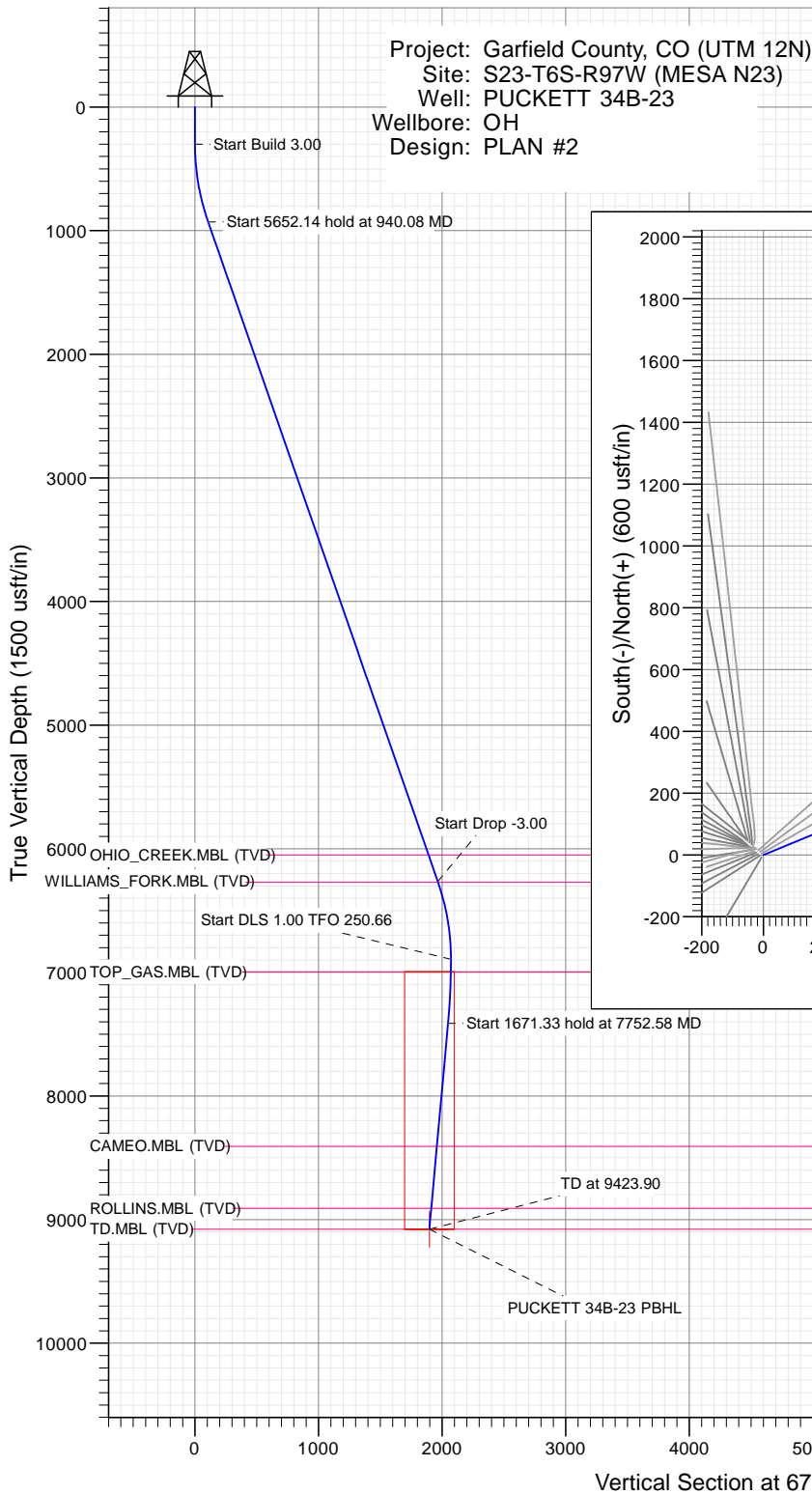




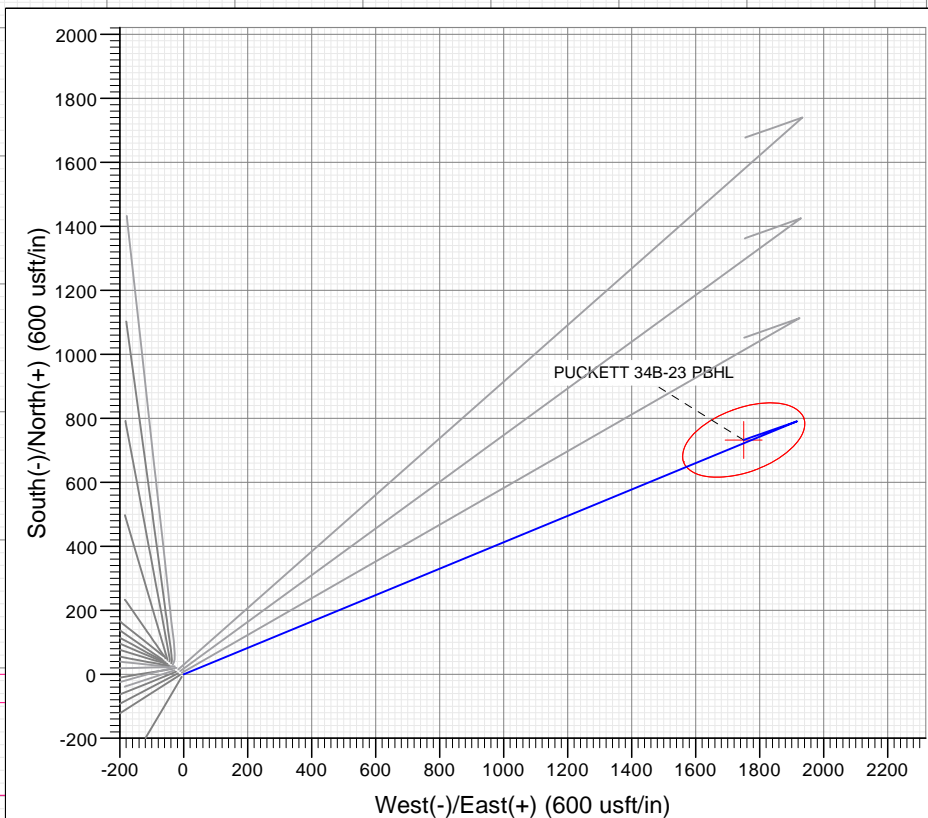
# SECTION DETAILS

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	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	940.08	19.20	67.58	928.17	40.52	98.23	3.00	67.58	106.26	
4	6592.22	19.20	67.58	6265.83	749.48	1816.77	0.00	0.00	1965.27	
5	7232.30	0.00	0.00	6894.00	790.00	1915.00	3.00	180.00	2071.53	
6	7752.58	5.20	250.66	7413.56	782.18	1892.73	1.00	250.66	2047.96	
7	9423.90	5.20	250.66	9078.00	732.00	1749.72	0.00	0.00	1896.67	PUCKETT 34B-23 PBHL



PLAN #2  
PUCKETT 34B-23  
18X00: LR  
30' KB @ 8462.00usft  
Ground Level @ 8432.00  
NAD 1927 - Western US  
Well PUCKETT 34B-23, True North

Type	Target	No Target (Freehand)	Azimuth	Origin Type	N/S	E/W	From TVD
Name	TD		67.30	Slot	0.00	0.00	0.00
PUCKETT 34B-23 PBHL			9078.00		+N/-S	+E/-W	Latitude
					732.00	1749.72	39.503058
							Longitude
							-108.181031



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6050.00	6363.67	OHIO_CREEK.MBL (TVD)
6271.00	6597.69	WILLIAMS_FORK.MBL (TVD)
6994.00	7332.31	TOP_GAS.MBL (TVD)
8408.00	8751.13	CAMEO.MBL (TVD)
8908.00	9253.20	ROLLINS.MBL (TVD)
9078.00	9423.90	TD.MBL (TVD)



Azimuths to True North  
Magnetic North: 9.78°

Magnetic Field  
Strength: 51811.3snT  
Dip Angle: 65.85°  
Date: 9/14/2016  
Model: HDGM

Vertical Section at 67.30° (1500 usft/in)

## WELL DETAILS: PUCKETT 34B-23

+N/-S	+E/-W	Northing	Ground Level:	8432.00	Latitude	Longitude
0.00	0.00	14357493.70	Easting	2433898.00	39.503058	-108.187230



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 34B-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 34B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

<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 34B-23					
Well Position	+N/-S	0.00 usft	Northing:	14,357,493.70 usft	Latitude:	39.503058
	+E/-W	0.00 usft	Easting:	2,433,898.00 usft	Longitude:	-108.187230
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	9.78	65.85	51,811.30000000

<b>Design</b>	PLAN #2			
<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	67.30

<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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
940.08	19.20	67.58	928.17	40.52	98.23	3.00	3.00	0.00	67.58	
6,592.22	19.20	67.58	6,265.83	749.48	1,816.77	0.00	0.00	0.00	0.00	
7,232.30	0.00	0.00	6,894.00	790.00	1,915.00	3.00	-3.00	0.00	180.00	
7,752.58	5.20	250.66	7,413.56	782.18	1,892.73	1.00	1.00	-21.02	250.66	
9,423.90	5.20	250.66	9,078.00	732.00	1,749.72	0.00	0.00	0.00	0.00	PUCKETT 34B-23 PE

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 34B-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 34B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

### 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	Start Build 3.00
400.00	3.00	67.58	399.95	1.00	2.42	2.62	3.00	3.00	
500.00	6.00	67.58	499.63	3.99	9.67	10.46	3.00	3.00	
600.00	9.00	67.58	598.77	8.97	21.74	23.51	3.00	3.00	
700.00	12.00	67.58	697.08	15.92	38.58	41.73	3.00	3.00	
800.00	15.00	67.58	794.31	24.82	60.16	65.08	3.00	3.00	
900.00	18.00	67.58	890.18	35.65	86.41	93.47	3.00	3.00	
940.08	19.20	67.58	928.17	40.52	98.23	106.26	3.00	3.00	Start 5652.14 hold at 940.08 MD
1,000.00	19.20	67.58	984.75	48.04	116.45	125.97	0.00	0.00	
1,100.00	19.20	67.58	1,079.19	60.58	146.85	158.86	0.00	0.00	
1,200.00	19.20	67.58	1,173.62	73.12	177.26	191.75	0.00	0.00	
1,300.00	19.20	67.58	1,268.06	85.67	207.66	224.64	0.00	0.00	
1,400.00	19.20	67.58	1,362.50	98.21	238.07	257.53	0.00	0.00	
1,500.00	19.20	67.58	1,456.93	110.75	268.47	290.42	0.00	0.00	
1,600.00	19.20	67.58	1,551.37	123.30	298.88	323.31	0.00	0.00	
1,700.00	19.20	67.58	1,645.80	135.84	329.28	356.20	0.00	0.00	
1,800.00	19.20	67.58	1,740.24	148.38	359.69	389.09	0.00	0.00	
1,900.00	19.20	67.58	1,834.68	160.93	390.09	421.98	0.00	0.00	
2,000.00	19.20	67.58	1,929.11	173.47	420.50	454.87	0.00	0.00	
2,100.00	19.20	67.58	2,023.55	186.01	450.90	487.76	0.00	0.00	
2,200.00	19.20	67.58	2,117.99	198.56	481.31	520.65	0.00	0.00	
2,300.00	19.20	67.58	2,212.42	211.10	511.71	553.54	0.00	0.00	
2,400.00	19.20	67.58	2,306.86	223.64	542.12	586.43	0.00	0.00	
2,500.00	19.20	67.58	2,401.29	236.19	572.52	619.32	0.00	0.00	
2,600.00	19.20	67.58	2,495.73	248.73	602.93	652.21	0.00	0.00	
2,700.00	19.20	67.58	2,590.17	261.27	633.34	685.10	0.00	0.00	
2,800.00	19.20	67.58	2,684.60	273.81	663.74	717.99	0.00	0.00	
2,900.00	19.20	67.58	2,779.04	286.36	694.15	750.88	0.00	0.00	
3,000.00	19.20	67.58	2,873.48	298.90	724.55	783.77	0.00	0.00	
3,100.00	19.20	67.58	2,967.91	311.44	754.96	816.66	0.00	0.00	
3,200.00	19.20	67.58	3,062.35	323.99	785.36	849.55	0.00	0.00	
3,300.00	19.20	67.58	3,156.78	336.53	815.77	882.44	0.00	0.00	
3,400.00	19.20	67.58	3,251.22	349.07	846.17	915.33	0.00	0.00	
3,500.00	19.20	67.58	3,345.66	361.62	876.58	948.22	0.00	0.00	
3,600.00	19.20	67.58	3,440.09	374.16	906.98	981.11	0.00	0.00	
3,700.00	19.20	67.58	3,534.53	386.70	937.39	1,014.01	0.00	0.00	
3,800.00	19.20	67.58	3,628.96	399.25	967.79	1,046.90	0.00	0.00	
3,900.00	19.20	67.58	3,723.40	411.79	998.20	1,079.79	0.00	0.00	
4,000.00	19.20	67.58	3,817.84	424.33	1,028.60	1,112.68	0.00	0.00	
4,100.00	19.20	67.58	3,912.27	436.87	1,059.01	1,145.57	0.00	0.00	
4,200.00	19.20	67.58	4,006.71	449.42	1,089.41	1,178.46	0.00	0.00	
4,300.00	19.20	67.58	4,101.15	461.96	1,119.82	1,211.35	0.00	0.00	
4,400.00	19.20	67.58	4,195.58	474.50	1,150.22	1,244.24	0.00	0.00	
4,500.00	19.20	67.58	4,290.02	487.05	1,180.63	1,277.13	0.00	0.00	
4,600.00	19.20	67.58	4,384.45	499.59	1,211.03	1,310.02	0.00	0.00	
4,700.00	19.20	67.58	4,478.89	512.13	1,241.44	1,342.91	0.00	0.00	
4,800.00	19.20	67.58	4,573.33	524.68	1,271.84	1,375.80	0.00	0.00	
4,900.00	19.20	67.58	4,667.76	537.22	1,302.25	1,408.69	0.00	0.00	
5,000.00	19.20	67.58	4,762.20	549.76	1,332.65	1,441.58	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 34B-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 34B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

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	19.20	67.58	4,856.64	562.31	1,363.06	1,474.47	0.00	0.00	
5,200.00	19.20	67.58	4,951.07	574.85	1,393.46	1,507.36	0.00	0.00	
5,300.00	19.20	67.58	5,045.51	587.39	1,423.87	1,540.25	0.00	0.00	
5,400.00	19.20	67.58	5,139.94	599.94	1,454.27	1,573.14	0.00	0.00	
5,500.00	19.20	67.58	5,234.38	612.48	1,484.68	1,606.03	0.00	0.00	
5,600.00	19.20	67.58	5,328.82	625.02	1,515.08	1,638.92	0.00	0.00	
5,700.00	19.20	67.58	5,423.25	637.56	1,545.49	1,671.81	0.00	0.00	
5,800.00	19.20	67.58	5,517.69	650.11	1,575.89	1,704.70	0.00	0.00	
5,900.00	19.20	67.58	5,612.13	662.65	1,606.30	1,737.59	0.00	0.00	
6,000.00	19.20	67.58	5,706.56	675.19	1,636.70	1,770.48	0.00	0.00	
6,100.00	19.20	67.58	5,801.00	687.74	1,667.11	1,803.37	0.00	0.00	
6,200.00	19.20	67.58	5,895.43	700.28	1,697.51	1,836.26	0.00	0.00	
6,300.00	19.20	67.58	5,989.87	712.82	1,727.92	1,869.15	0.00	0.00	
6,363.67	19.20	67.58	6,050.00	720.81	1,747.28	1,890.10	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,400.00	19.20	67.58	6,084.31	725.37	1,758.32	1,902.04	0.00	0.00	
6,500.00	19.20	67.58	6,178.74	737.91	1,788.73	1,934.93	0.00	0.00	
6,592.22	19.20	67.58	6,265.83	749.48	1,816.77	1,965.27	0.00	0.00	Start Drop -3.00
6,597.69	19.04	67.58	6,271.00	750.16	1,818.43	1,967.06	3.00	-3.00	WILLIAMS_FORK.MBL (TVD)
6,600.00	18.97	67.58	6,273.18	750.45	1,819.12	1,967.81	3.00	-3.00	
6,700.00	15.97	67.58	6,368.56	761.89	1,846.87	1,997.83	3.00	-3.00	
6,800.00	12.97	67.58	6,465.38	771.42	1,869.96	2,022.81	3.00	-3.00	
6,900.00	9.97	67.58	6,563.37	779.00	1,888.34	2,042.69	3.00	-3.00	
7,000.00	6.97	67.58	6,662.27	784.62	1,901.96	2,057.42	3.00	-3.00	
7,100.00	3.97	67.58	6,761.80	788.25	1,910.77	2,066.95	3.00	-3.00	
7,200.00	0.97	67.58	6,861.70	789.90	1,914.75	2,071.25	3.00	-3.00	
7,232.30	0.00	0.00	6,894.00	790.00	1,915.00	2,071.53	3.00	-3.00	Start DLS 1.00 TFO 250.66
7,300.00	0.68	250.66	6,961.69	789.87	1,914.62	2,071.13	1.00	1.00	
7,332.31	1.00	250.66	6,994.00	789.71	1,914.18	2,070.65	1.00	1.00	TOP_GAS.MBL (TVD)
7,400.00	1.68	250.66	7,061.67	789.19	1,912.68	2,069.08	1.00	1.00	
7,500.00	2.68	250.66	7,161.60	787.93	1,909.10	2,065.28	1.00	1.00	
7,600.00	3.68	250.66	7,261.44	786.09	1,903.87	2,059.75	1.00	1.00	
7,700.00	4.68	250.66	7,361.18	783.68	1,897.00	2,052.48	1.00	1.00	
7,752.58	5.20	250.66	7,413.56	782.18	1,892.73	2,047.96	1.00	1.00	Start 1671.33 hold at 7752.58 MD
7,800.00	5.20	250.66	7,460.79	780.76	1,888.67	2,043.67	0.00	0.00	
7,900.00	5.20	250.66	7,560.37	777.76	1,880.11	2,034.62	0.00	0.00	
8,000.00	5.20	250.66	7,659.96	774.75	1,871.56	2,025.56	0.00	0.00	
8,100.00	5.20	250.66	7,759.55	771.75	1,863.00	2,016.51	0.00	0.00	
8,200.00	5.20	250.66	7,859.14	768.75	1,854.44	2,007.46	0.00	0.00	
8,300.00	5.20	250.66	7,958.73	765.74	1,845.89	1,998.41	0.00	0.00	
8,400.00	5.20	250.66	8,058.31	762.74	1,837.33	1,989.35	0.00	0.00	
8,500.00	5.20	250.66	8,157.90	759.74	1,828.77	1,980.30	0.00	0.00	
8,600.00	5.20	250.66	8,257.49	756.74	1,820.22	1,971.25	0.00	0.00	
8,700.00	5.20	250.66	8,357.08	753.73	1,811.66	1,962.20	0.00	0.00	
8,751.13	5.20	250.66	8,408.00	752.20	1,807.29	1,957.57	0.00	0.00	CAMEO.MBL (TVD)
8,800.00	5.20	250.66	8,456.67	750.73	1,803.11	1,953.14	0.00	0.00	
8,900.00	5.20	250.66	8,556.25	747.73	1,794.55	1,944.09	0.00	0.00	
9,000.00	5.20	250.66	8,655.84	744.72	1,785.99	1,935.04	0.00	0.00	
9,100.00	5.20	250.66	8,755.43	741.72	1,777.44	1,925.99	0.00	0.00	
9,200.00	5.20	250.66	8,855.02	738.72	1,768.88	1,916.94	0.00	0.00	
9,253.20	5.20	250.66	8,908.00	737.12	1,764.33	1,912.12	0.00	0.00	ROLLINS.MBL (TVD)
9,300.00	5.20	250.66	8,954.61	735.72	1,760.32	1,907.88	0.00	0.00	
9,400.00	5.20	250.66	9,054.19	732.71	1,751.77	1,898.83	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 34B-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 34B-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

### 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
9,423.90	5.20	250.66	9,078.00	732.00	1,749.72	1,896.67	0.00	0.00	TD at 9423.90 - TD.MBL (TVD)

### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PUCKETT 34B-23 PBHL - plan hits target center - Ellipse (radii L200.00 W100.00 on 250.00 azi)	0.00	0.00	9,078.00	732.00	1,749.72	14,358,280.00	2,435,624.00	39.505066	-108.181031

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,363.67	6,050.00	OHIO_CREEK.MBL (TVD)			
6,597.69	6,271.00	WILLIAMS_FORK.MBL (TVD)			
7,332.31	6,994.00	TOP_GAS.MBL (TVD)			
8,751.13	8,408.00	CAMEO.MBL (TVD)			
9,253.20	8,908.00	ROLLINS.MBL (TVD)			
9,423.90	9,078.00	TD.MBL (TVD)			

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
300.00	300.00	0.00	0.00	Start Build 3.00
940.08	928.17	40.52	98.23	Start 5652.14 hold at 940.08 MD
6,592.22	6,265.83	749.48	1,816.77	Start Drop -3.00
7,232.30	6,894.00	790.00	1,915.00	Start DLS 1.00 TFO 250.66
7,752.58	7,413.56	782.18	1,892.73	Start 1671.33 hold at 7752.58 MD
9,423.90	9,078.00	732.00	1,749.72	TD at 9423.90