



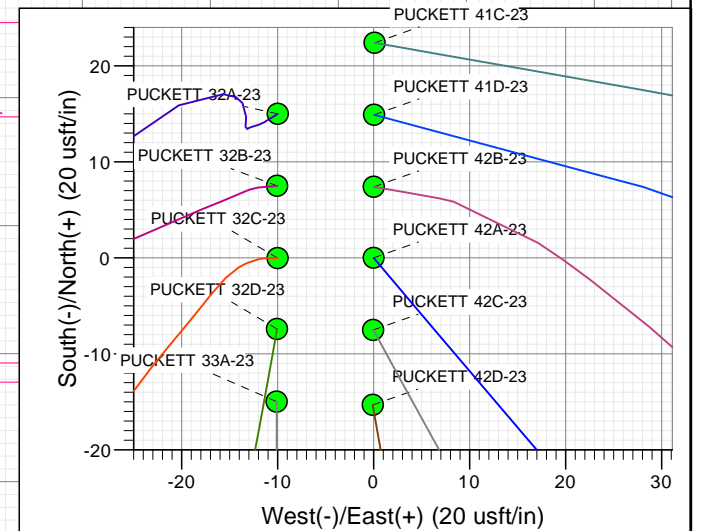
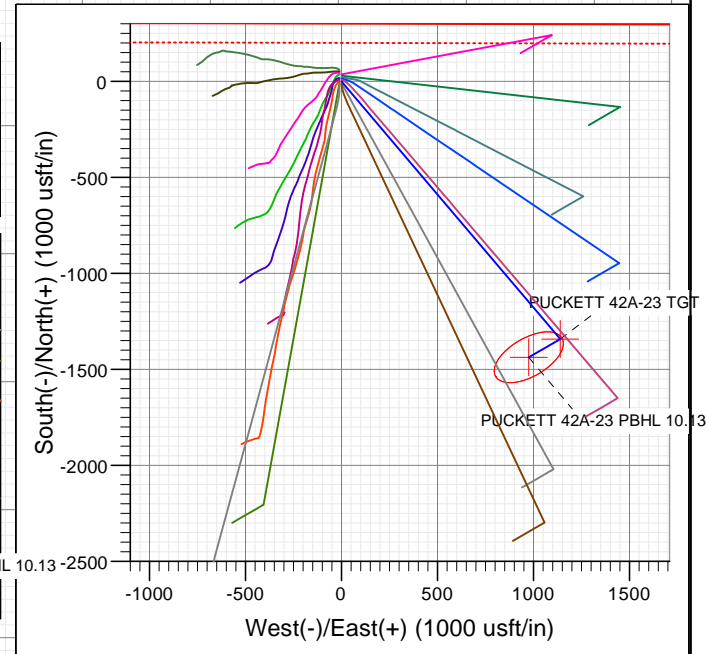
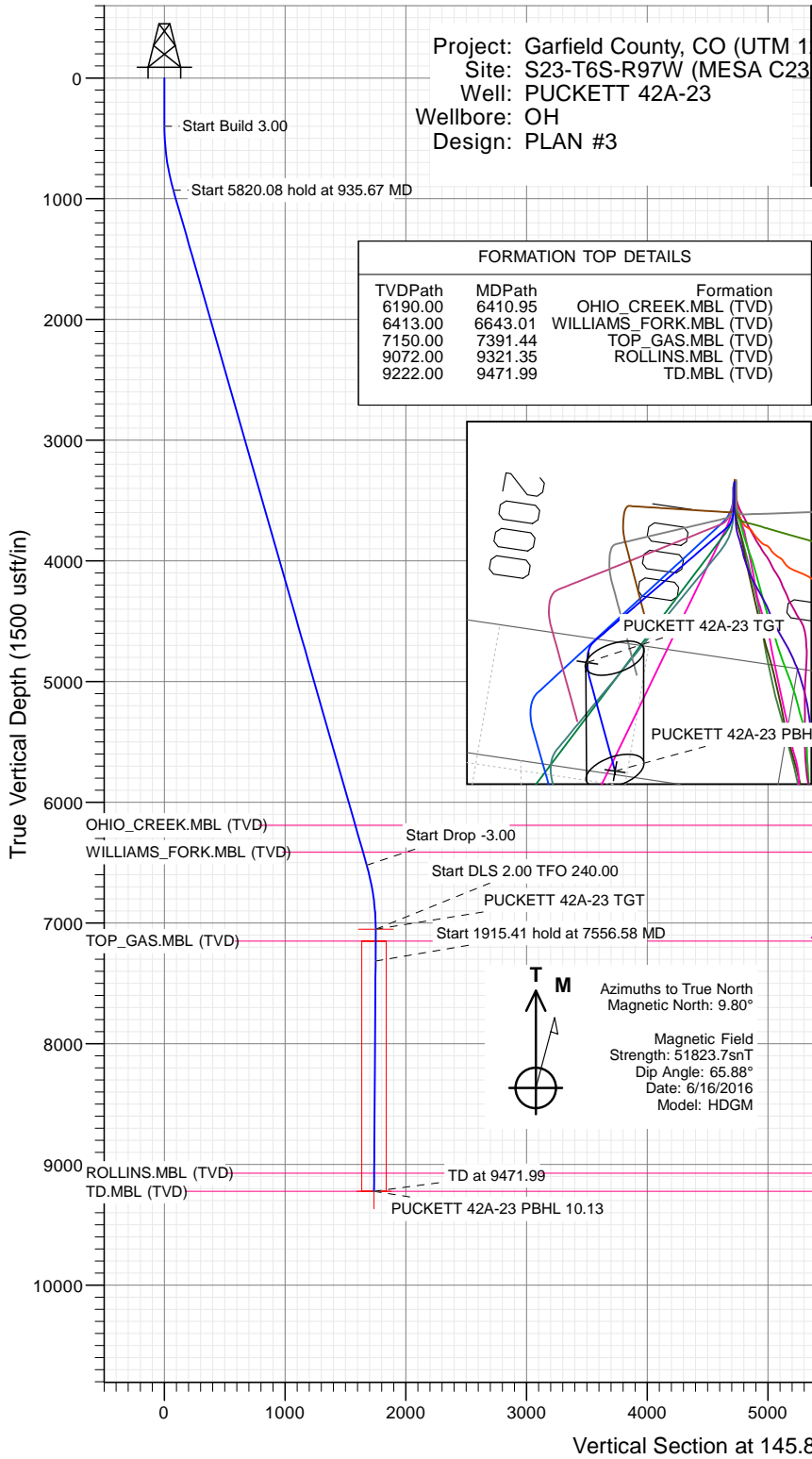
## SECTION DETAILS

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	935.67	16.07	139.66	928.67	-56.88	48.31	3.00	139.66	74.20	
4	6755.75	16.07	139.66	6521.33	-1284.79	1091.27	0.00	0.00	1675.97	
5	7291.42	0.00	0.00	7050.00	-1341.68	1139.58	3.00	180.00	1750.17	PUCKETT 42A-23 TGT
6	7556.58	5.30	240.00	7314.79	-1347.81	1128.96	2.00	240.00	1749.27	
7	9471.99	5.30	240.00	9222.00	-1436.33	975.64	0.00	0.00	1736.35	PUCKETT 42A-23 PBHL 10.13

Project: Garfield County, CO (UTM 1  
Site: S23-T6S-R97W (MESA C23)  
Well: PUCKETT 42A-23  
Wellbore: OH  
Design: PLAN #3

PLAN #3  
PUCKETT 42A-23  
15XXX LR  
30' KB @ 8532.00 (H&P 330)  
Ground Level @ 8532.00  
NAD 1927 - Western US  
Well PUCKETT 42A-23, True North

Name	Type	TD	Target	No Target (Freehand)	Azimuth	Origin	Type	N/S	E/W	From	TVD
PUCKETT 42A-23 TGT		7050.00			145.81						
PUCKETT 42A-23 PBHL		9222.00			-1282.57						
PUCKETT 42A-23 PBHL 10.13		9222.00			-1436.33						



## WELL DETAILS: PUCKETT 42A-23

+N/-S	+E/-W	Northing	Ground Level:	8532.00	Latitude	Longitude
0.00	0.00	14361844.60	Easting	2434708.80	39.514923	-108.183877





# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 42A-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 42A-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 42A-23		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Latitude:</b>	39.514923
		<b>Longitude:</b>	-108.183877
		<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	145.81

<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	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
935.67	16.07	139.66	928.67	-56.88	48.31	3.00	3.00	0.00	139.66	
6,755.75	16.07	139.66	6,521.33	-1,284.79	1,091.27	0.00	0.00	0.00	0.00	
7,291.42	0.00	0.00	7,050.00	-1,341.68	1,139.58	3.00	-3.00	0.00	180.00	PUCKETT 42A-23 TC
7,556.58	5.30	240.00	7,314.79	-1,347.81	1,128.96	2.00	2.00	-45.25	240.00	
9,471.99	5.30	240.00	9,222.00	-1,436.33	975.64	0.00	0.00	0.00	0.00	PUCKETT 42A-23 PE



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 42A-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 42A-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	139.66	499.95	-1.99	1.69	2.60	3.00	3.00	
600.00	6.00	139.66	599.63	-7.97	6.77	10.40	3.00	3.00	
700.00	9.00	139.66	698.77	-17.92	15.22	23.38	3.00	3.00	
800.00	12.00	139.66	797.08	-31.81	27.02	41.49	3.00	3.00	
900.00	15.00	139.66	894.31	-49.60	42.13	64.70	3.00	3.00	
935.67	16.07	139.66	928.67	-56.88	48.31	74.20	3.00	3.00	Start 5820.08 hold at 935.67 MD
1,000.00	16.07	139.66	990.49	-70.45	59.84	91.90	0.00	0.00	
1,100.00	16.07	139.66	1,086.58	-91.55	77.76	119.43	0.00	0.00	
1,200.00	16.07	139.66	1,182.68	-112.65	95.68	146.95	0.00	0.00	
1,300.00	16.07	139.66	1,278.77	-133.75	113.60	174.47	0.00	0.00	
1,400.00	16.07	139.66	1,374.86	-154.85	131.52	201.99	0.00	0.00	
1,500.00	16.07	139.66	1,470.95	-175.94	149.44	229.51	0.00	0.00	
1,600.00	16.07	139.66	1,567.05	-197.04	167.36	257.03	0.00	0.00	
1,700.00	16.07	139.66	1,663.14	-218.14	185.28	284.55	0.00	0.00	
1,800.00	16.07	139.66	1,759.23	-239.24	203.20	312.08	0.00	0.00	
1,900.00	16.07	139.66	1,855.32	-260.33	221.12	339.60	0.00	0.00	
2,000.00	16.07	139.66	1,951.41	-281.43	239.04	367.12	0.00	0.00	
2,100.00	16.07	139.66	2,047.51	-302.53	256.96	394.64	0.00	0.00	
2,200.00	16.07	139.66	2,143.60	-323.63	274.88	422.16	0.00	0.00	
2,300.00	16.07	139.66	2,239.69	-344.73	292.80	449.68	0.00	0.00	
2,400.00	16.07	139.66	2,335.78	-365.82	310.72	477.20	0.00	0.00	
2,500.00	16.07	139.66	2,431.88	-386.92	328.64	504.73	0.00	0.00	
2,600.00	16.07	139.66	2,527.97	-408.02	346.56	532.25	0.00	0.00	
2,700.00	16.07	139.66	2,624.06	-429.12	364.48	559.77	0.00	0.00	
2,800.00	16.07	139.66	2,720.15	-450.22	382.40	587.29	0.00	0.00	
2,900.00	16.07	139.66	2,816.25	-471.31	400.32	614.81	0.00	0.00	
3,000.00	16.07	139.66	2,912.34	-492.41	418.24	642.33	0.00	0.00	
3,100.00	16.07	139.66	3,008.43	-513.51	436.16	669.86	0.00	0.00	
3,200.00	16.07	139.66	3,104.52	-534.61	454.08	697.38	0.00	0.00	
3,300.00	16.07	139.66	3,200.62	-555.70	472.00	724.90	0.00	0.00	
3,400.00	16.07	139.66	3,296.71	-576.80	489.92	752.42	0.00	0.00	
3,500.00	16.07	139.66	3,392.80	-597.90	507.84	779.94	0.00	0.00	
3,600.00	16.07	139.66	3,488.89	-619.00	525.76	807.46	0.00	0.00	
3,700.00	16.07	139.66	3,584.99	-640.10	543.68	834.98	0.00	0.00	
3,800.00	16.07	139.66	3,681.08	-661.19	561.60	862.51	0.00	0.00	
3,900.00	16.07	139.66	3,777.17	-682.29	579.52	890.03	0.00	0.00	
4,000.00	16.07	139.66	3,873.26	-703.39	597.44	917.55	0.00	0.00	
4,100.00	16.07	139.66	3,969.36	-724.49	615.36	945.07	0.00	0.00	
4,200.00	16.07	139.66	4,065.45	-745.59	633.28	972.59	0.00	0.00	
4,300.00	16.07	139.66	4,161.54	-766.68	651.20	1,000.11	0.00	0.00	
4,400.00	16.07	139.66	4,257.63	-787.78	669.12	1,027.63	0.00	0.00	
4,500.00	16.07	139.66	4,353.73	-808.88	687.04	1,055.16	0.00	0.00	
4,600.00	16.07	139.66	4,449.82	-829.98	704.96	1,082.68	0.00	0.00	
4,700.00	16.07	139.66	4,545.91	-851.08	722.88	1,110.20	0.00	0.00	
4,800.00	16.07	139.66	4,642.00	-872.17	740.80	1,137.72	0.00	0.00	
4,900.00	16.07	139.66	4,738.10	-893.27	758.72	1,165.24	0.00	0.00	
5,000.00	16.07	139.66	4,834.19	-914.37	776.64	1,192.76	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 42A-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 42A-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	16.07	139.66	4,930.28	-935.47	794.56	1,220.28	0.00	0.00	
5,200.00	16.07	139.66	5,026.37	-956.56	812.48	1,247.81	0.00	0.00	
5,300.00	16.07	139.66	5,122.46	-977.66	830.40	1,275.33	0.00	0.00	
5,400.00	16.07	139.66	5,218.56	-998.76	848.32	1,302.85	0.00	0.00	
5,500.00	16.07	139.66	5,314.65	-1,019.86	866.24	1,330.37	0.00	0.00	
5,600.00	16.07	139.66	5,410.74	-1,040.96	884.16	1,357.89	0.00	0.00	
5,700.00	16.07	139.66	5,506.83	-1,062.05	902.08	1,385.41	0.00	0.00	
5,800.00	16.07	139.66	5,602.93	-1,083.15	920.00	1,412.94	0.00	0.00	
5,900.00	16.07	139.66	5,699.02	-1,104.25	937.92	1,440.46	0.00	0.00	
6,000.00	16.07	139.66	5,795.11	-1,125.35	955.84	1,467.98	0.00	0.00	
6,100.00	16.07	139.66	5,891.20	-1,146.45	973.76	1,495.50	0.00	0.00	
6,200.00	16.07	139.66	5,987.30	-1,167.54	991.68	1,523.02	0.00	0.00	
6,300.00	16.07	139.66	6,083.39	-1,188.64	1,009.60	1,550.54	0.00	0.00	
6,400.00	16.07	139.66	6,179.48	-1,209.74	1,027.52	1,578.06	0.00	0.00	
6,410.95	16.07	139.66	6,190.00	-1,212.05	1,029.48	1,581.08	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,500.00	16.07	139.66	6,275.57	-1,230.84	1,045.44	1,605.59	0.00	0.00	
6,600.00	16.07	139.66	6,371.67	-1,251.94	1,063.36	1,633.11	0.00	0.00	
6,643.01	16.07	139.66	6,413.00	-1,261.01	1,071.07	1,644.95	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,700.00	16.07	139.66	6,467.76	-1,273.03	1,081.28	1,660.63	0.00	0.00	
6,755.75	16.07	139.66	6,521.33	-1,284.79	1,091.27	1,675.97	0.00	0.00	Start Drop -3.00
6,800.00	14.74	139.66	6,563.99	-1,293.75	1,098.88	1,687.66	3.00	-3.00	
6,900.00	11.74	139.66	6,661.32	-1,311.21	1,113.71	1,710.43	3.00	-3.00	
7,000.00	8.74	139.66	6,759.71	-1,324.76	1,125.22	1,728.11	3.00	-3.00	
7,100.00	5.74	139.66	6,858.91	-1,334.37	1,133.38	1,740.64	3.00	-3.00	
7,200.00	2.74	139.66	6,958.62	-1,340.01	1,138.17	1,748.00	3.00	-3.00	
7,291.42	0.00	0.00	7,050.00	-1,341.68	1,139.58	1,750.17	3.00	-3.00	Start DLS 2.00 TFO 240.00
7,300.00	0.17	240.00	7,058.58	-1,341.68	1,139.57	1,750.17	2.00	2.00	
7,391.44	2.00	240.00	7,150.00	-1,342.55	1,138.07	1,750.04	2.00	2.00	TOP_GAS.MBL (TVD)
7,400.00	2.17	240.00	7,158.56	-1,342.70	1,137.80	1,750.02	2.00	2.00	
7,500.00	4.17	240.00	7,258.40	-1,345.47	1,133.01	1,749.62	2.00	2.00	
7,556.58	5.30	240.00	7,314.79	-1,347.81	1,128.96	1,749.27	2.00	2.00	Start 1915.41 hold at 7556.58 MD
7,600.00	5.30	240.00	7,358.02	-1,349.81	1,125.49	1,748.98	0.00	0.00	
7,700.00	5.30	240.00	7,457.59	-1,354.43	1,117.48	1,748.31	0.00	0.00	
7,800.00	5.30	240.00	7,557.16	-1,359.06	1,109.48	1,747.63	0.00	0.00	
7,900.00	5.30	240.00	7,656.74	-1,363.68	1,101.47	1,746.96	0.00	0.00	
8,000.00	5.30	240.00	7,756.31	-1,368.30	1,093.47	1,746.28	0.00	0.00	
8,100.00	5.30	240.00	7,855.88	-1,372.92	1,085.46	1,745.61	0.00	0.00	
8,200.00	5.30	240.00	7,955.45	-1,377.54	1,077.46	1,744.93	0.00	0.00	
8,300.00	5.30	240.00	8,055.02	-1,382.16	1,069.45	1,744.26	0.00	0.00	
8,400.00	5.30	240.00	8,154.60	-1,386.79	1,061.45	1,743.58	0.00	0.00	
8,500.00	5.30	240.00	8,254.17	-1,391.41	1,053.45	1,742.91	0.00	0.00	
8,600.00	5.30	240.00	8,353.74	-1,396.03	1,045.44	1,742.23	0.00	0.00	
8,700.00	5.30	240.00	8,453.31	-1,400.65	1,037.44	1,741.56	0.00	0.00	
8,800.00	5.30	240.00	8,552.88	-1,405.27	1,029.43	1,740.88	0.00	0.00	
8,900.00	5.30	240.00	8,652.46	-1,409.89	1,021.43	1,740.21	0.00	0.00	
9,000.00	5.30	240.00	8,752.03	-1,414.51	1,013.42	1,739.53	0.00	0.00	
9,100.00	5.30	240.00	8,851.60	-1,419.14	1,005.42	1,738.86	0.00	0.00	
9,200.00	5.30	240.00	8,951.17	-1,423.76	997.41	1,738.19	0.00	0.00	
9,300.00	5.30	240.00	9,050.74	-1,428.38	989.41	1,737.51	0.00	0.00	
9,321.35	5.30	240.00	9,072.00	-1,429.36	987.70	1,737.37	0.00	0.00	ROLLINS.MBL (TVD)
9,400.00	5.30	240.00	9,150.32	-1,433.00	981.40	1,736.84	0.00	0.00	
9,471.99	5.30	240.00	9,222.00	-1,436.33	975.64	1,736.35	0.00	0.00	TD at 9471.99 - TD.MBL (TVD)



# Cathedral Energy Services

## Planning Report

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<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 42A-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 42A-23 TGT	0.00	0.00	7,050.00	-1,341.68	1,139.58	14,360,539.23	2,435,889.80	39.511241	-108.179840
- plan hits target center									
- Point									
PUCKETT 42A-23 PBHL	0.00	0.00	9,222.00	-1,436.33	975.64	14,360,439.50	2,435,728.90	39.510981	-108.180420
- plan hits target center									
- Ellipse (radii L200.00 W100.00 on 240.00 azi)									
PUCKETT 42A-23 PBHL	0.00	0.00	9,222.00	-1,282.57	880.41	14,360,590.20	2,435,628.90	39.511403	-108.180758
- plan misses target center by 180.86usft at 9471.99usft MD (9222.00 TVD, -1436.33 N, 975.64 E)									
- Circle (radius 100.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,410.95	6,190.00	OHIO_CREEK.MBL (TVD)				
6,643.01	6,413.00	WILLIAMS_FORK.MBL (TVD)				
7,391.44	7,150.00	TOP_GAS.MBL (TVD)				
9,321.35	9,072.00	ROLLINS.MBL (TVD)				
9,471.99	9,222.00	TD.MBL (TVD)				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
400.00	400.00	0.00	0.00	Start Build 3.00
935.67	928.67	-56.88	48.31	Start 5820.08 hold at 935.67 MD
6,755.75	6,521.33	-1,284.79	1,091.27	Start Drop -3.00
7,291.42	7,050.00	-1,341.68	1,139.58	Start DLS 2.00 TFO 240.00
7,556.58	7,314.79	-1,347.81	1,128.96	Start 1915.41 hold at 7556.58 MD
9,471.99	9,222.00	-1,436.33	975.64	TD at 9471.99