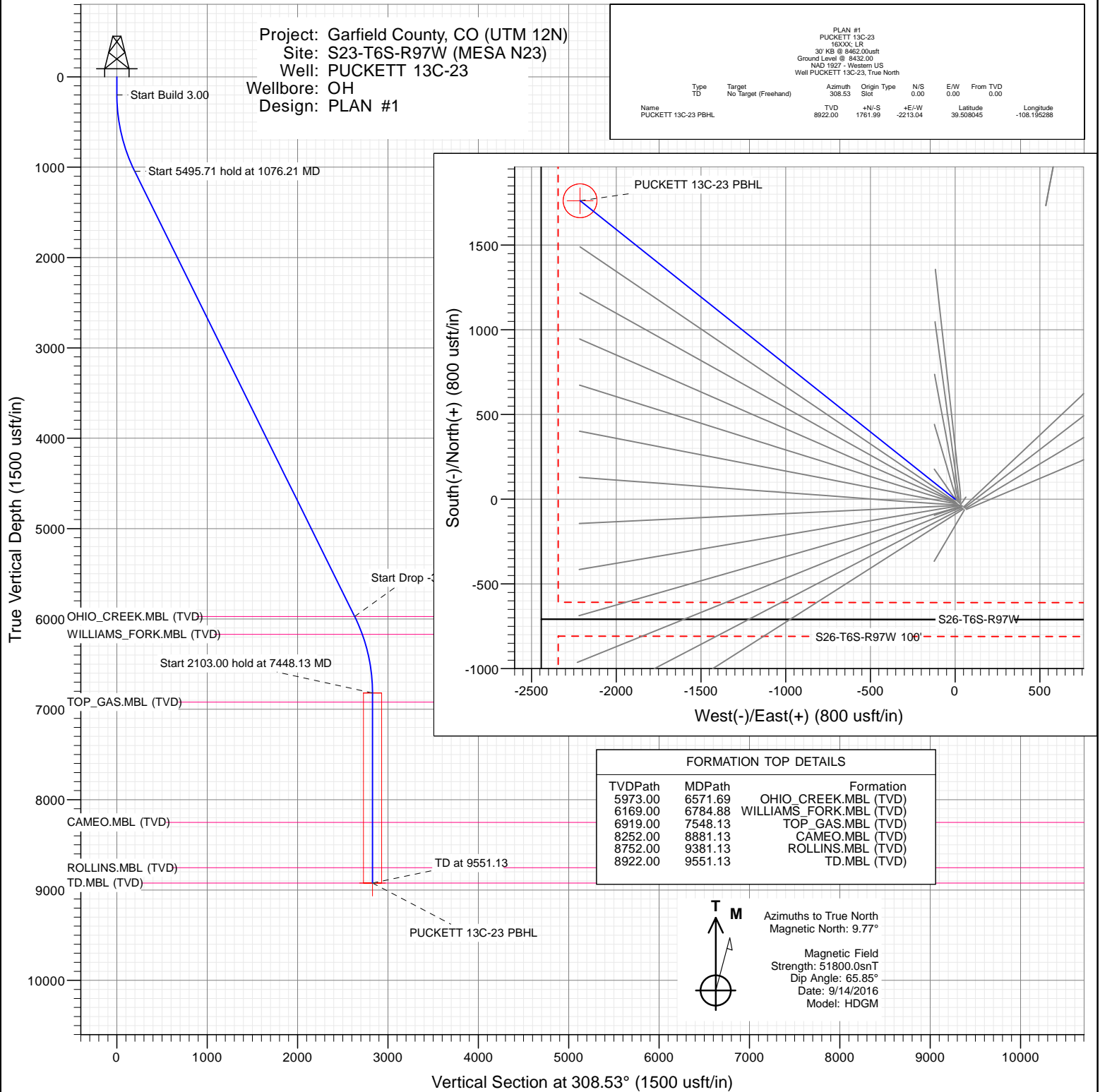




SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	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	1076.21	26.29	308.53	1045.80	123.01	-154.50	3.00	308.53	197.50	
4	6571.92	26.29	308.53	5973.20	1638.98	-2058.53	0.00	0.00	2631.31	
5	7448.13	0.00	0.00	6819.00	1761.99	-2213.04	3.00	180.00	2828.81	
6	9551.13	0.00	0.00	8922.00	1761.99	-2213.04	0.00	0.00	2828.81	PUCKETT 13C-23 PBHL



WELL DETAILS: PUCKETT 13C-23

+N/-S	+E/-W	Northing	Ground Level:	8432.00	Latitude	Longitude
0.00	0.00	14357547.00	Easting	2433835.00	39.503209	-108.187447



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13C-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 13C-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Project	Garfield County, CO (UTM 12N)		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 - Western US		
Map Zone:	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 13C-23					
Well Position	+N/-S	0.00 usft	Northing:	14,357,547.00 usft	Latitude:	39.503209
	+E/-W	0.00 usft	Easting:	2,433,835.00 usft	Longitude:	-108.187447
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,432.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	9/14/2016	9.77	65.85	51,800

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	308.53

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
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	
1,076.21	26.29	308.53	1,045.80	123.01	-154.50	3.00	3.00	0.00	308.53	
6,571.92	26.29	308.53	5,973.20	1,638.98	-2,058.53	0.00	0.00	0.00	0.00	
7,448.13	0.00	0.00	6,819.00	1,761.99	-2,213.04	3.00	-3.00	0.00	180.00	
9,551.13	0.00	0.00	8,922.00	1,761.99	-2,213.04	0.00	0.00	0.00	0.00	PUCKETT 13C-23 PE

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13C-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 13C-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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 3.00
300.00	3.00	308.53	299.95	1.63	-2.05	2.62	3.00	3.00	
400.00	6.00	308.53	399.63	6.52	-8.18	10.46	3.00	3.00	
500.00	9.00	308.53	498.77	14.65	-18.40	23.51	3.00	3.00	
600.00	12.00	308.53	597.08	26.00	-32.65	41.74	3.00	3.00	
700.00	15.00	308.53	694.31	40.53	-50.91	65.08	3.00	3.00	
800.00	18.00	308.53	790.18	58.22	-73.13	93.48	3.00	3.00	
900.00	21.00	308.53	884.43	79.01	-99.24	126.85	3.00	3.00	
1,000.00	24.00	308.53	976.81	102.85	-129.17	165.12	3.00	3.00	
1,076.21	26.29	308.53	1,045.80	123.01	-154.50	197.50	3.00	3.00	Start 5495.71 hold at 1076.21 MD
1,100.00	26.29	308.53	1,067.12	129.58	-162.75	208.03	0.00	0.00	
1,200.00	26.29	308.53	1,156.78	157.16	-197.39	252.32	0.00	0.00	
1,300.00	26.29	308.53	1,246.44	184.75	-232.04	296.60	0.00	0.00	
1,400.00	26.29	308.53	1,336.10	212.33	-266.68	340.89	0.00	0.00	
1,500.00	26.29	308.53	1,425.76	239.91	-301.33	385.17	0.00	0.00	
1,600.00	26.29	308.53	1,515.42	267.50	-335.97	429.46	0.00	0.00	
1,700.00	26.29	308.53	1,605.08	295.08	-370.62	473.74	0.00	0.00	
1,800.00	26.29	308.53	1,694.74	322.67	-405.27	518.03	0.00	0.00	
1,900.00	26.29	308.53	1,784.40	350.25	-439.91	562.32	0.00	0.00	
2,000.00	26.29	308.53	1,874.06	377.84	-474.56	606.60	0.00	0.00	
2,100.00	26.29	308.53	1,963.72	405.42	-509.20	650.89	0.00	0.00	
2,200.00	26.29	308.53	2,053.38	433.01	-543.85	695.17	0.00	0.00	
2,300.00	26.29	308.53	2,143.03	460.59	-578.50	739.46	0.00	0.00	
2,400.00	26.29	308.53	2,232.69	488.17	-613.14	783.74	0.00	0.00	
2,500.00	26.29	308.53	2,322.35	515.76	-647.79	828.03	0.00	0.00	
2,600.00	26.29	308.53	2,412.01	543.34	-682.43	872.32	0.00	0.00	
2,700.00	26.29	308.53	2,501.67	570.93	-717.08	916.60	0.00	0.00	
2,800.00	26.29	308.53	2,591.33	598.51	-751.72	960.89	0.00	0.00	
2,900.00	26.29	308.53	2,680.99	626.10	-786.37	1,005.17	0.00	0.00	
3,000.00	26.29	308.53	2,770.65	653.68	-821.02	1,049.46	0.00	0.00	
3,100.00	26.29	308.53	2,860.31	681.27	-855.66	1,093.75	0.00	0.00	
3,200.00	26.29	308.53	2,949.97	708.85	-890.31	1,138.03	0.00	0.00	
3,300.00	26.29	308.53	3,039.63	736.43	-924.95	1,182.32	0.00	0.00	
3,400.00	26.29	308.53	3,129.29	764.02	-959.60	1,226.60	0.00	0.00	
3,500.00	26.29	308.53	3,218.94	791.60	-994.24	1,270.89	0.00	0.00	
3,600.00	26.29	308.53	3,308.60	819.19	-1,028.89	1,315.17	0.00	0.00	
3,700.00	26.29	308.53	3,398.26	846.77	-1,063.54	1,359.46	0.00	0.00	
3,800.00	26.29	308.53	3,487.92	874.36	-1,098.18	1,403.75	0.00	0.00	
3,900.00	26.29	308.53	3,577.58	901.94	-1,132.83	1,448.03	0.00	0.00	
4,000.00	26.29	308.53	3,667.24	929.53	-1,167.47	1,492.32	0.00	0.00	
4,100.00	26.29	308.53	3,756.90	957.11	-1,202.12	1,536.60	0.00	0.00	
4,200.00	26.29	308.53	3,846.56	984.69	-1,236.76	1,580.89	0.00	0.00	
4,300.00	26.29	308.53	3,936.22	1,012.28	-1,271.41	1,625.17	0.00	0.00	
4,400.00	26.29	308.53	4,025.88	1,039.86	-1,306.06	1,669.46	0.00	0.00	
4,500.00	26.29	308.53	4,115.54	1,067.45	-1,340.70	1,713.75	0.00	0.00	
4,600.00	26.29	308.53	4,205.20	1,095.03	-1,375.35	1,758.03	0.00	0.00	
4,700.00	26.29	308.53	4,294.85	1,122.62	-1,409.99	1,802.32	0.00	0.00	
4,800.00	26.29	308.53	4,384.51	1,150.20	-1,444.64	1,846.60	0.00	0.00	
4,900.00	26.29	308.53	4,474.17	1,177.79	-1,479.28	1,890.89	0.00	0.00	
5,000.00	26.29	308.53	4,563.83	1,205.37	-1,513.93	1,935.18	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13C-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 13C-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	26.29	308.53	4,653.49	1,232.95	-1,548.58	1,979.46	0.00	0.00	
5,200.00	26.29	308.53	4,743.15	1,260.54	-1,583.22	2,023.75	0.00	0.00	
5,300.00	26.29	308.53	4,832.81	1,288.12	-1,617.87	2,068.03	0.00	0.00	
5,400.00	26.29	308.53	4,922.47	1,315.71	-1,652.51	2,112.32	0.00	0.00	
5,500.00	26.29	308.53	5,012.13	1,343.29	-1,687.16	2,156.60	0.00	0.00	
5,600.00	26.29	308.53	5,101.79	1,370.88	-1,721.80	2,200.89	0.00	0.00	
5,700.00	26.29	308.53	5,191.45	1,398.46	-1,756.45	2,245.18	0.00	0.00	
5,800.00	26.29	308.53	5,281.11	1,426.05	-1,791.10	2,289.46	0.00	0.00	
5,900.00	26.29	308.53	5,370.77	1,453.63	-1,825.74	2,333.75	0.00	0.00	
6,000.00	26.29	308.53	5,460.42	1,481.22	-1,860.39	2,378.03	0.00	0.00	
6,100.00	26.29	308.53	5,550.08	1,508.80	-1,895.03	2,422.32	0.00	0.00	
6,200.00	26.29	308.53	5,639.74	1,536.38	-1,929.68	2,466.60	0.00	0.00	
6,300.00	26.29	308.53	5,729.40	1,563.97	-1,964.33	2,510.89	0.00	0.00	
6,400.00	26.29	308.53	5,819.06	1,591.55	-1,998.97	2,555.18	0.00	0.00	
6,500.00	26.29	308.53	5,908.72	1,619.14	-2,033.62	2,599.46	0.00	0.00	
6,571.69	26.29	308.53	5,973.00	1,638.91	-2,058.46	2,631.21	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,571.92	26.29	308.53	5,973.20	1,638.98	-2,058.53	2,631.31	0.00	0.00	Start Drop -3.00
6,600.00	25.44	308.53	5,998.47	1,646.61	-2,068.12	2,643.56	3.00	-3.00	
6,700.00	22.44	308.53	6,089.85	1,671.88	-2,099.86	2,684.14	3.00	-3.00	
6,784.88	19.90	308.53	6,169.00	1,690.97	-2,123.84	2,714.79	3.00	-3.00	WILLIAMS_FORK.MBL (TVD)
6,800.00	19.44	308.53	6,183.24	1,694.14	-2,127.82	2,719.88	3.00	-3.00	
6,900.00	16.44	308.53	6,278.36	1,713.33	-2,151.92	2,750.69	3.00	-3.00	
7,000.00	13.44	308.53	6,374.97	1,729.39	-2,172.10	2,776.47	3.00	-3.00	
7,100.00	10.44	308.53	6,472.79	1,742.28	-2,188.29	2,797.17	3.00	-3.00	
7,200.00	7.44	308.53	6,571.56	1,751.96	-2,200.45	2,812.71	3.00	-3.00	
7,300.00	4.44	308.53	6,671.02	1,758.41	-2,208.55	2,823.07	3.00	-3.00	
7,400.00	1.44	308.53	6,770.87	1,761.61	-2,212.56	2,828.20	3.00	-3.00	
7,448.13	0.00	0.00	6,819.00	1,761.99	-2,213.04	2,828.81	3.00	-3.00	Start 2103.00 hold at 7448.13 MD
7,500.00	0.00	0.00	6,870.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
7,548.13	0.00	0.00	6,919.00	1,761.99	-2,213.04	2,828.81	0.00	0.00	TOP_GAS.MBL (TVD)
7,600.00	0.00	0.00	6,970.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
7,700.00	0.00	0.00	7,070.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
7,800.00	0.00	0.00	7,170.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
7,900.00	0.00	0.00	7,270.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,000.00	0.00	0.00	7,370.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,100.00	0.00	0.00	7,470.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,200.00	0.00	0.00	7,570.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,300.00	0.00	0.00	7,670.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,400.00	0.00	0.00	7,770.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,500.00	0.00	0.00	7,870.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,600.00	0.00	0.00	7,970.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,700.00	0.00	0.00	8,070.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,800.00	0.00	0.00	8,170.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
8,881.13	0.00	0.00	8,252.00	1,761.99	-2,213.04	2,828.81	0.00	0.00	CAMEO.MBL (TVD)
8,900.00	0.00	0.00	8,270.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
9,000.00	0.00	0.00	8,370.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
9,100.00	0.00	0.00	8,470.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
9,200.00	0.00	0.00	8,570.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
9,300.00	0.00	0.00	8,670.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
9,381.13	0.00	0.00	8,752.00	1,761.99	-2,213.04	2,828.81	0.00	0.00	ROLLINS.MBL (TVD)
9,400.00	0.00	0.00	8,770.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	
9,500.00	0.00	0.00	8,870.87	1,761.99	-2,213.04	2,828.81	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13C-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 13C-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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
9,551.13	0.00	0.00	8,922.00	1,761.99	-2,213.04	2,828.81	0.00	0.00	TD at 9551.13 - TD.MBL (TVD)

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PUCKETT 13C-23 PBHI	0.00	0.00	8,922.00	1,761.99	-2,213.04	14,359,239.00	2,431,568.00	39.508045	-108.195288
- plan hits target center									
- Circle (radius 100.00)									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,571.69	5,973.00	OHIO_CREEK.MBL (TVD)				
6,784.88	6,169.00	WILLIAMS_FORK.MBL (TVD)				
7,548.13	6,919.00	TOP_GAS.MBL (TVD)				
8,881.13	8,252.00	CAMEO.MBL (TVD)				
9,381.13	8,752.00	ROLLINS.MBL (TVD)				
9,551.13	8,922.00	TD.MBL (TVD)		0.00		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.00	200.00	0.00	0.00	Start Build 3.00
1,076.21	1,045.80	123.01	-154.50	Start 5495.71 hold at 1076.21 MD
6,571.92	5,973.20	1,638.98	-2,058.53	Start Drop -3.00
7,448.13	6,819.00	1,761.99	-2,213.04	Start 2103.00 hold at 7448.13 MD
9,551.13	8,922.00	1,761.99	-2,213.04	TD at 9551.13