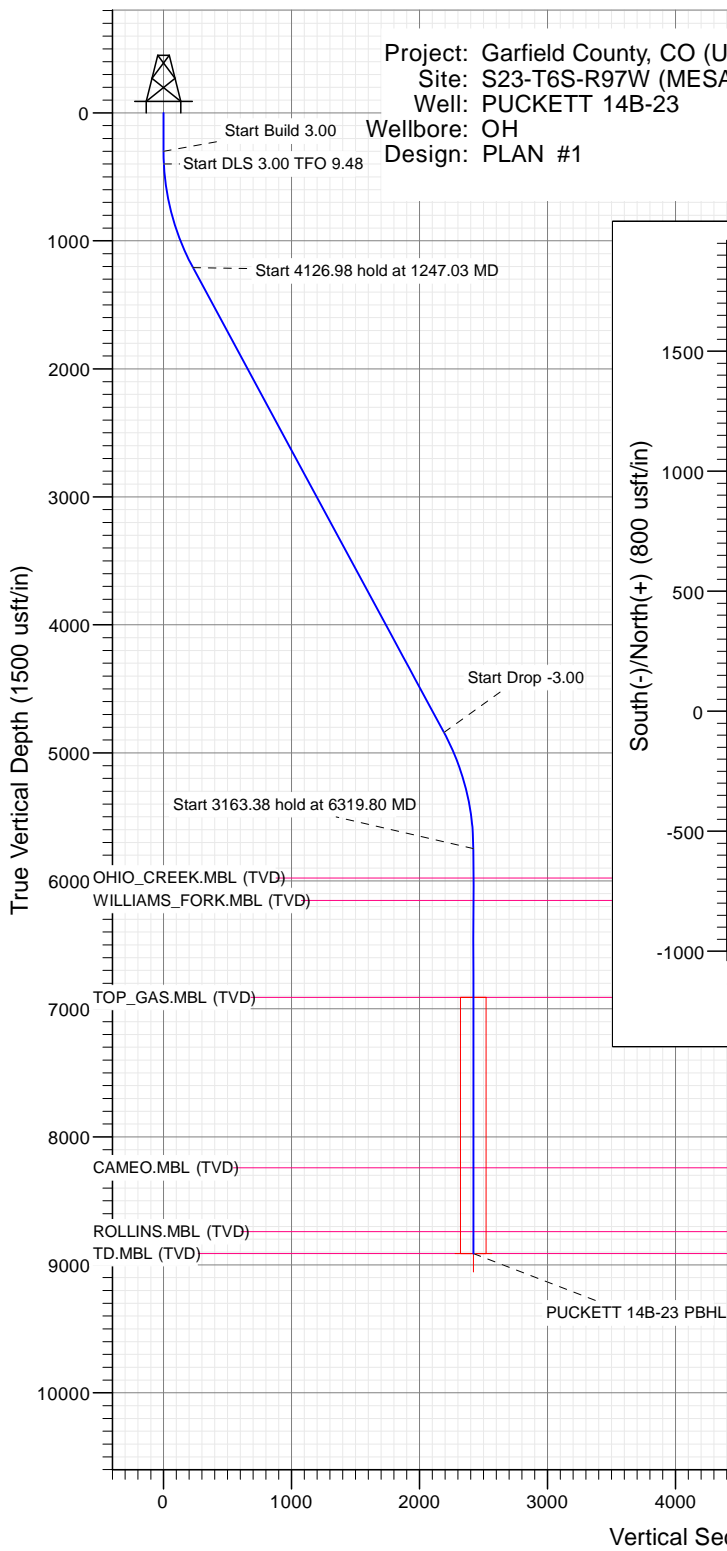




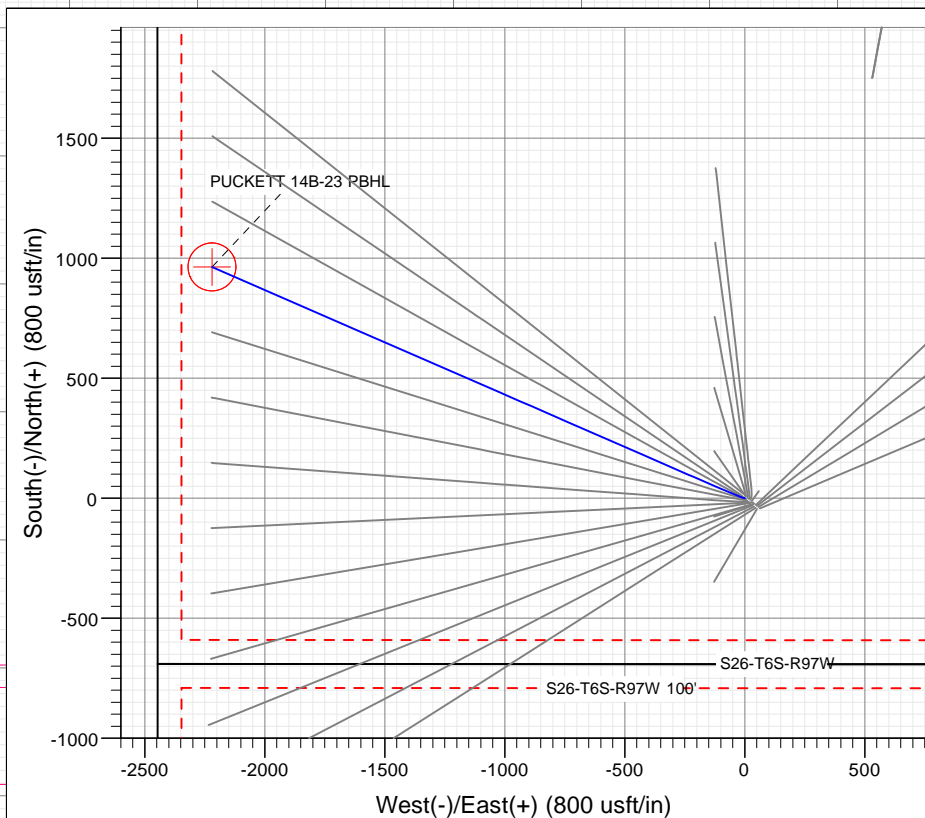
SECTION DETAILS

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	400.00	3.00	285.00	399.95	0.68	-2.53	3.00	285.00	2.59	
4	1247.03	28.37	293.56	1208.82	88.29	-211.87	3.00	9.48	229.51	
5	5374.01	28.37	293.56	4840.01	872.12	-2009.66	0.00	0.00	2190.73	
6	6319.80	0.00	0.00	5747.62	963.82	-2219.98	3.00	180.00	2420.17	
7	9483.18	0.00	0.00	8911.00	963.82	-2219.98	0.00	0.00	2420.17	PUCKETT 14B-23 PBHL



Project: Garfield County, CO (UTM 12N)
Site: S23-T6S-R97W (MESA N23)
Well: PUCKETT 14B-23
Wellbore: OH
Design: PLAN #1

PLAN #1 PUCKETT 14B-23 16XXX LR 30' KB @ 8462.00usft Ground Level @ 8432.00 NAD 1927 - Western US Well PUCKETT 14B-23, True North									
Type	Target	Azimuth	Origin	N/S	E/W	From			
TD	No Target (Freehand)	293.47	Slot	0.00	0.00	TVD			
Name									
PUCKETT 14B-23 PBHL		8911.00	+N/-S	+E/-W	Latitude	Longitude			
			963.82	-2219.98	39.503804	-108.185296			



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
5978.00	6550.18	OHIO_CREEK.MBL (TVD)
6153.00	6725.18	WILLIAMS_FORK.MBL (TVD)
6910.00	7482.18	TOP_GAS.MBL (TVD)
8241.00	8813.18	CAMEO.MBL (TVD)
8741.00	9313.18	ROLLINS.MBL (TVD)
8911.00	9483.18	TD.MBL (TVD)



Azimuths to True North
Magnetic North: 9.77°

Magnetic Field
Strength: 51800.0snT
Dip Angle: 65.85°
Date: 9/14/2016
Model: HDGM

Vertical Section at 293.47° (1500 usft/in)

WELL DETAILS: PUCKETT 14B-23

+N/-S	+E/-W	Northing	Ground Level:	8432.00	Latitude	Longitude
0.00	0.00	14357529.00	Easting	2433840.00	39.503159	-108.187432

CATHEDRAL



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 14B-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 14B-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 14B-23					
Well Position	+N/-S	0.00 usft	Northing:	14,357,529.00 usft	Latitude:	39.503159
	+E/-W	0.00 usft	Easting:	2,433,840.00 usft	Longitude:	-108.187432
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	293.47

Plan Sections										
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	
400.00	3.00	285.00	399.95	0.68	-2.53	3.00	3.00	0.00	285.00	
1,247.03	28.37	293.56	1,208.82	88.29	-211.87	3.00	3.00	1.01	9.48	
5,374.01	28.37	293.56	4,840.01	872.12	-2,009.66	0.00	0.00	0.00	0.00	
6,319.80	0.00	0.00	5,747.62	963.82	-2,219.98	3.00	-3.00	0.00	180.00	
9,483.18	0.00	0.00	8,911.00	963.82	-2,219.98	0.00	0.00	0.00	0.00	PUCKETT 14B-23 PE

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 14B-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 14B-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	
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	285.00	399.95	0.68	-2.53	2.59	3.00	3.00	Start DLS 3.00 TFO 9.48
500.00	5.98	289.75	499.64	3.12	-9.96	10.38	3.00	2.98	
600.00	8.97	291.34	598.78	7.71	-22.13	23.37	3.00	2.99	
700.00	11.97	292.14	697.10	14.46	-39.00	41.53	3.00	3.00	
800.00	14.97	292.62	794.34	23.34	-60.53	64.82	3.00	3.00	
900.00	17.97	292.95	890.23	34.32	-86.66	93.16	3.00	3.00	
1,000.00	20.96	293.18	984.50	47.38	-117.31	126.48	3.00	3.00	
1,100.00	23.96	293.36	1,076.90	62.48	-152.41	164.68	3.00	3.00	
1,200.00	26.96	293.50	1,167.18	79.57	-191.85	207.67	3.00	3.00	
1,247.03	28.37	293.56	1,208.82	88.29	-211.87	229.51	3.00	3.00	Start 4126.98 hold at 1247.03 MD
1,300.00	28.37	293.56	1,255.43	98.35	-234.95	254.68	0.00	0.00	
1,400.00	28.37	293.56	1,343.42	117.35	-278.51	302.20	0.00	0.00	
1,500.00	28.37	293.56	1,431.41	136.34	-322.07	349.72	0.00	0.00	
1,600.00	28.37	293.56	1,519.39	155.33	-365.63	397.25	0.00	0.00	
1,700.00	28.37	293.56	1,607.38	174.32	-409.19	444.77	0.00	0.00	
1,800.00	28.37	293.56	1,695.37	193.32	-452.76	492.29	0.00	0.00	
1,900.00	28.37	293.56	1,783.35	212.31	-496.32	539.81	0.00	0.00	
2,000.00	28.37	293.56	1,871.34	231.30	-539.88	587.34	0.00	0.00	
2,100.00	28.37	293.56	1,959.33	250.30	-583.44	634.86	0.00	0.00	
2,200.00	28.37	293.56	2,047.31	269.29	-627.00	682.38	0.00	0.00	
2,300.00	28.37	293.56	2,135.30	288.28	-670.57	729.90	0.00	0.00	
2,400.00	28.37	293.56	2,223.29	307.27	-714.13	777.42	0.00	0.00	
2,500.00	28.37	293.56	2,311.27	326.27	-757.69	824.95	0.00	0.00	
2,600.00	28.37	293.56	2,399.26	345.26	-801.25	872.47	0.00	0.00	
2,700.00	28.37	293.56	2,487.25	364.25	-844.81	919.99	0.00	0.00	
2,800.00	28.37	293.56	2,575.23	383.25	-888.37	967.51	0.00	0.00	
2,900.00	28.37	293.56	2,663.22	402.24	-931.94	1,015.03	0.00	0.00	
3,000.00	28.37	293.56	2,751.21	421.23	-975.50	1,062.56	0.00	0.00	
3,100.00	28.37	293.56	2,839.19	440.22	-1,019.06	1,110.08	0.00	0.00	
3,200.00	28.37	293.56	2,927.18	459.22	-1,062.62	1,157.60	0.00	0.00	
3,300.00	28.37	293.56	3,015.17	478.21	-1,106.18	1,205.12	0.00	0.00	
3,400.00	28.37	293.56	3,103.15	497.20	-1,149.74	1,252.65	0.00	0.00	
3,500.00	28.37	293.56	3,191.14	516.19	-1,193.31	1,300.17	0.00	0.00	
3,600.00	28.37	293.56	3,279.13	535.19	-1,236.87	1,347.69	0.00	0.00	
3,700.00	28.37	293.56	3,367.11	554.18	-1,280.43	1,395.21	0.00	0.00	
3,800.00	28.37	293.56	3,455.10	573.17	-1,323.99	1,442.73	0.00	0.00	
3,900.00	28.37	293.56	3,543.09	592.17	-1,367.55	1,490.26	0.00	0.00	
4,000.00	28.37	293.56	3,631.07	611.16	-1,411.12	1,537.78	0.00	0.00	
4,100.00	28.37	293.56	3,719.06	630.15	-1,454.68	1,585.30	0.00	0.00	
4,200.00	28.37	293.56	3,807.05	649.14	-1,498.24	1,632.82	0.00	0.00	
4,300.00	28.37	293.56	3,895.03	668.14	-1,541.80	1,680.34	0.00	0.00	
4,400.00	28.37	293.56	3,983.02	687.13	-1,585.36	1,727.87	0.00	0.00	
4,500.00	28.37	293.56	4,071.00	706.12	-1,628.92	1,775.39	0.00	0.00	
4,600.00	28.37	293.56	4,158.99	725.12	-1,672.49	1,822.91	0.00	0.00	
4,700.00	28.37	293.56	4,246.98	744.11	-1,716.05	1,870.43	0.00	0.00	
4,800.00	28.37	293.56	4,334.96	763.10	-1,759.61	1,917.95	0.00	0.00	
4,900.00	28.37	293.56	4,422.95	782.09	-1,803.17	1,965.48	0.00	0.00	
5,000.00	28.37	293.56	4,510.94	801.09	-1,846.73	2,013.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 14B-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 14B-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	28.37	293.56	4,598.92	820.08	-1,890.30	2,060.52	0.00	0.00	
5,200.00	28.37	293.56	4,686.91	839.07	-1,933.86	2,108.04	0.00	0.00	
5,300.00	28.37	293.56	4,774.90	858.06	-1,977.42	2,155.57	0.00	0.00	
5,374.01	28.37	293.56	4,840.01	872.12	-2,009.66	2,190.73	0.00	0.00	Start Drop -3.00
5,400.00	27.59	293.56	4,862.97	877.00	-2,020.84	2,202.93	3.00	-3.00	
5,500.00	24.59	293.56	4,952.76	894.57	-2,061.15	2,246.91	3.00	-3.00	
5,600.00	21.59	293.56	5,044.74	910.25	-2,097.10	2,286.13	3.00	-3.00	
5,700.00	18.59	293.56	5,138.64	923.98	-2,128.59	2,320.48	3.00	-3.00	
5,800.00	15.59	293.56	5,234.21	935.72	-2,155.53	2,349.87	3.00	-3.00	
5,900.00	12.59	293.56	5,331.19	945.45	-2,177.85	2,374.22	3.00	-3.00	
6,000.00	9.59	293.56	5,429.31	953.14	-2,195.49	2,393.46	3.00	-3.00	
6,100.00	6.59	293.56	5,528.31	958.77	-2,208.39	2,407.54	3.00	-3.00	
6,200.00	3.59	293.56	5,627.90	962.32	-2,216.53	2,416.42	3.00	-3.00	
6,300.00	0.59	293.56	5,727.82	963.78	-2,219.88	2,420.07	3.00	-3.00	
6,319.80	0.00	0.00	5,747.62	963.82	-2,219.98	2,420.17	3.00	-3.00	Start 3163.38 hold at 6319.80 MD
6,400.00	0.00	0.00	5,827.82	963.82	-2,219.98	2,420.17	0.00	0.00	
6,500.00	0.00	0.00	5,927.82	963.82	-2,219.98	2,420.17	0.00	0.00	
6,550.18	0.00	0.00	5,978.00	963.82	-2,219.98	2,420.17	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,600.00	0.00	0.00	6,027.82	963.82	-2,219.98	2,420.17	0.00	0.00	
6,700.00	0.00	0.00	6,127.82	963.82	-2,219.98	2,420.17	0.00	0.00	
6,725.18	0.00	0.00	6,153.00	963.82	-2,219.98	2,420.17	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,800.00	0.00	0.00	6,227.82	963.82	-2,219.98	2,420.17	0.00	0.00	
6,900.00	0.00	0.00	6,327.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,000.00	0.00	0.00	6,427.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,100.00	0.00	0.00	6,527.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,200.00	0.00	0.00	6,627.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,300.00	0.00	0.00	6,727.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,400.00	0.00	0.00	6,827.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,482.18	0.00	0.00	6,910.00	963.82	-2,219.98	2,420.17	0.00	0.00	TOP_GAS.MBL (TVD)
7,500.00	0.00	0.00	6,927.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,600.00	0.00	0.00	7,027.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,700.00	0.00	0.00	7,127.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,800.00	0.00	0.00	7,227.82	963.82	-2,219.98	2,420.17	0.00	0.00	
7,900.00	0.00	0.00	7,327.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,000.00	0.00	0.00	7,427.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,100.00	0.00	0.00	7,527.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,200.00	0.00	0.00	7,627.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,300.00	0.00	0.00	7,727.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,400.00	0.00	0.00	7,827.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,500.00	0.00	0.00	7,927.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,600.00	0.00	0.00	8,027.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,700.00	0.00	0.00	8,127.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,800.00	0.00	0.00	8,227.82	963.82	-2,219.98	2,420.17	0.00	0.00	
8,813.18	0.00	0.00	8,241.00	963.82	-2,219.98	2,420.17	0.00	0.00	CAMEO.MBL (TVD)
8,900.00	0.00	0.00	8,327.82	963.82	-2,219.98	2,420.17	0.00	0.00	
9,000.00	0.00	0.00	8,427.82	963.82	-2,219.98	2,420.17	0.00	0.00	
9,100.00	0.00	0.00	8,527.82	963.82	-2,219.98	2,420.17	0.00	0.00	
9,200.00	0.00	0.00	8,627.82	963.82	-2,219.98	2,420.17	0.00	0.00	
9,300.00	0.00	0.00	8,727.82	963.82	-2,219.98	2,420.17	0.00	0.00	
9,313.18	0.00	0.00	8,741.00	963.82	-2,219.98	2,420.17	0.00	0.00	ROLLINS.MBL (TVD)
9,400.00	0.00	0.00	8,827.82	963.82	-2,219.98	2,420.17	0.00	0.00	
9,483.18	0.00	0.00	8,911.00	963.82	-2,219.98	2,420.17	0.00	0.00	TD at 9483.18 - TD.MBL (TVD)

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 14B-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 14B-23	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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 14B-23 PBHL	0.00	0.00	8,911.00	963.82	-2,219.98	14,358,423.00	2,431,591.00	39.505804	-108.195296
- plan hits target center									
- Circle (radius 100.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,550.18	5,978.00	OHIO_CREEK.MBL (TVD)				
6,725.18	6,153.00	WILLIAMS_FORK.MBL (TVD)				
7,482.18	6,910.00	TOP_GAS.MBL (TVD)				
8,813.18	8,241.00	CAMEO.MBL (TVD)				
9,313.18	8,741.00	ROLLINS.MBL (TVD)				
9,483.18	8,911.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
300.00	300.00	0.00	0.00	Start Build 3.00	
400.00	399.95	0.68	-2.53	Start DLS 3.00 TFO 9.48	
1,247.03	1,208.82	88.29	-211.87	Start 4126.98 hold at 1247.03 MD	
5,374.01	4,840.01	872.12	-2,009.66	Start Drop -3.00	
6,319.80	5,747.62	963.82	-2,219.98	Start 3163.38 hold at 6319.80 MD	
9,483.18	8,911.00	963.82	-2,219.98	TD at 9483.18	