

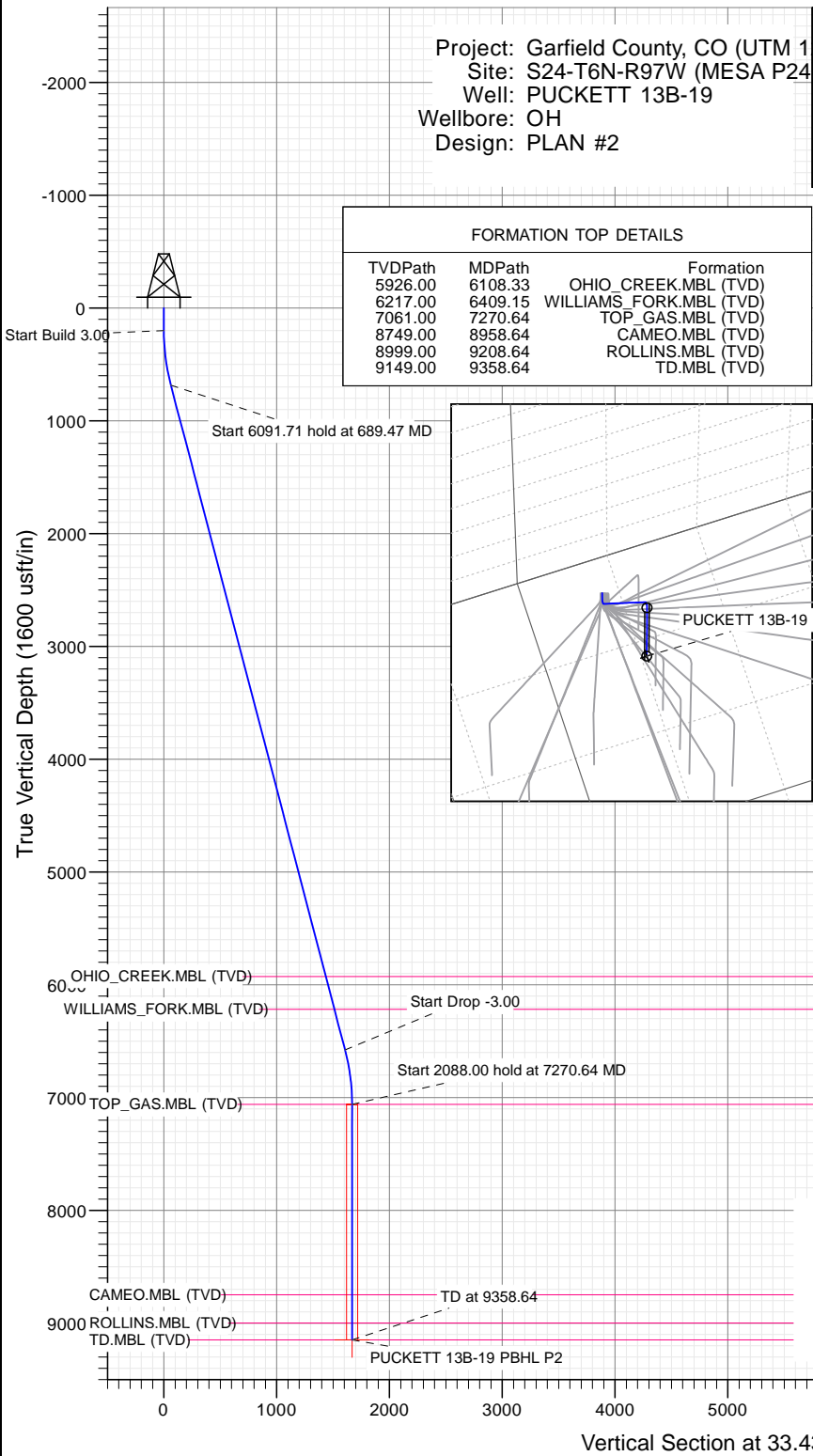


SECTION DETAILS

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	689.47	14.68	33.43	684.13	52.06	34.37	3.00	33.43	62.38	
4	6781.18	14.68	33.43	6576.87	1340.74	885.11	0.00	0.001606.55		
5	7270.64	0.00	0.00	7061.00	1392.80	919.47	3.00	180.001668.93		
6	9358.64	0.00	0.00	9149.00	1392.80	919.47	0.00	0.001668.93	PUCKETT 13B-19 PBHL P2	

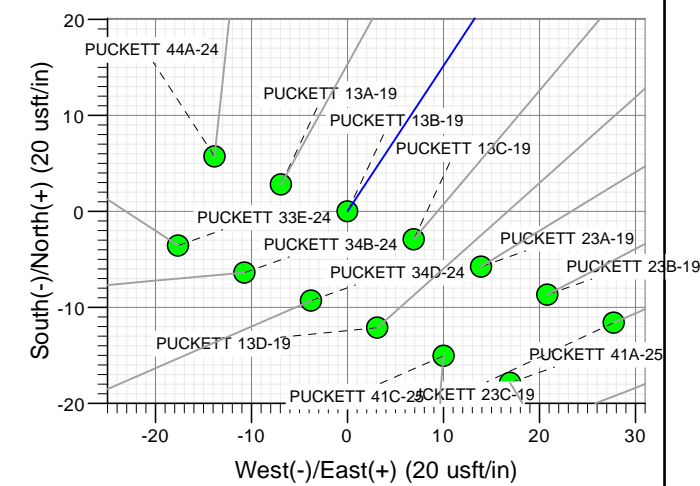
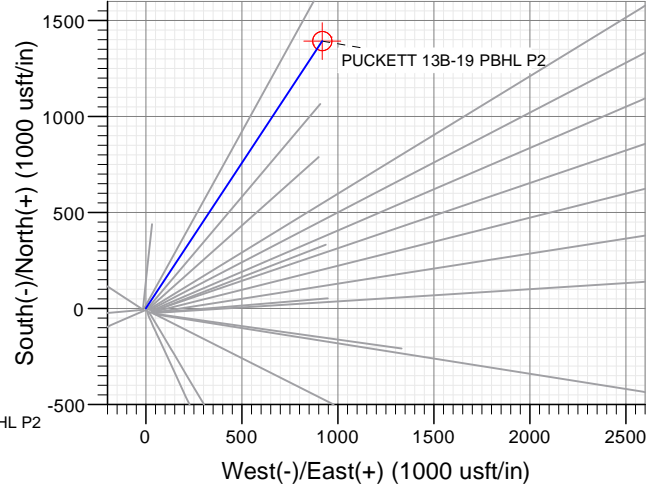
Project: Garfield County, CO (UTM 1
Site: S24-T6N-R97W (MESA P24
Well: PUCKETT 13B-19
Wellbore: OH
Design: PLAN #2

PLAN #2 PUCKETT 13B-19 16X0X LR 30' KB @ 8151.00ft Ground Level @ 8151.00 NAD 1927 - Western US Well PUCKETT 13B-19 - Slot AS, True North									
Type	Target	No Target (Freehand)	Azimuth	Origin Type	N/S	E/W	From TVD		
Name	TD		TVD	+N/-S	+E/-W	Latitude	Longitude		
PUCKETT 13B-19 PBHL			9149.00	1303.20	1311.24	39.506584	-108.156514		
PUCKETT 13B-19 PBHL P2			9149.00	1392.80	919.47	39.506830	-108.157901		



FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
5926.00	6108.33	OHIO_CREEK.MBL (TVD)
6217.00	6409.15	WILLIAMS_FORK.MBL (TVD)
7061.00	7270.64	TOP_GAS.MBL (TVD)
8749.00	8958.64	CAMEO.MBL (TVD)
8999.00	9208.64	ROLLINS.MBL (TVD)
9149.00	9358.64	TD.MBL (TVD)



Azimuths to True North
Magnetic North: 9.80°

Magnetic Field
Strength: 51880.0snT
Dip Angle: 65.87°
Date: 2/16/2016
Model: HDGM

CASING DETAILS

No casing data is available

WELL DETAILS: PUCKETT 13B-19

+N/-S	+E/-W	Northing	Ground Level: Easting	8151.00	Latitude	Longitude
0.00	0.00	14357706.40	2441254.40		39.503007	-108.161159

A9



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13B-19 - Slot A9
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.00usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 13B-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

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		S24-T6N-R97W (MESA P24)			
Site Position:		Northing:	14,357,707.60 usft	Latitude:	39.503013
From:	Map	Easting:	2,441,222.80 usft	Longitude:	-108.161271
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.81 °

Well	PUCKETT 13B-19 - Slot A9					
Well Position	+N/-S	0.00 usft	Northing:	14,357,706.40 usft	Latitude:	39.503007
	+E/-W	0.00 usft	Easting:	2,441,254.40 usft	Longitude:	-108.161159
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,151.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	2/16/2016	9.80	65.87	51,880.00000000

Design	PLAN #2				
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	33.43	

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	
689.47	14.68	33.43	684.13	52.06	34.37	3.00	3.00	0.00	33.43	
6,781.18	14.68	33.43	6,576.87	1,340.74	885.11	0.00	0.00	0.00	0.00	
7,270.64	0.00	0.00	7,061.00	1,392.80	919.47	3.00	-3.00	0.00	180.00	
9,358.64	0.00	0.00	9,149.00	1,392.80	919.47	0.00	0.00	0.00	0.00	PUCKETT 13B-19 PE

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13B-19 - Slot A9
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.00usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 13B-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	Start Build 3.00
300.00	3.00	33.43	299.95	2.18	1.44	2.62	3.00	3.00	
400.00	6.00	33.43	399.63	8.73	5.76	10.46	3.00	3.00	
500.00	9.00	33.43	498.77	19.62	12.95	23.51	3.00	3.00	
600.00	12.00	33.43	597.08	34.83	22.99	41.74	3.00	3.00	
689.47	14.68	33.43	684.13	52.06	34.37	62.38	3.00	3.00	Start 6091.71 hold at 689.47 MD
700.00	14.68	33.43	694.32	54.29	35.84	65.05	0.00	0.00	
800.00	14.68	33.43	791.05	75.44	49.80	90.40	0.00	0.00	
900.00	14.68	33.43	887.78	96.60	63.77	115.75	0.00	0.00	
1,000.00	14.68	33.43	984.52	117.75	77.73	141.10	0.00	0.00	
1,100.00	14.68	33.43	1,081.25	138.91	91.70	166.44	0.00	0.00	
1,200.00	14.68	33.43	1,177.98	160.06	105.67	191.79	0.00	0.00	
1,300.00	14.68	33.43	1,274.72	181.21	119.63	217.14	0.00	0.00	
1,400.00	14.68	33.43	1,371.45	202.37	133.60	242.49	0.00	0.00	
1,500.00	14.68	33.43	1,468.19	223.52	147.56	267.84	0.00	0.00	
1,600.00	14.68	33.43	1,564.92	244.68	161.53	293.19	0.00	0.00	
1,700.00	14.68	33.43	1,661.65	265.83	175.49	318.54	0.00	0.00	
1,800.00	14.68	33.43	1,758.39	286.99	189.46	343.88	0.00	0.00	
1,900.00	14.68	33.43	1,855.12	308.14	203.42	369.23	0.00	0.00	
2,000.00	14.68	33.43	1,951.86	329.30	217.39	394.58	0.00	0.00	
2,100.00	14.68	33.43	2,048.59	350.45	231.35	419.93	0.00	0.00	
2,200.00	14.68	33.43	2,145.32	371.61	245.32	445.28	0.00	0.00	
2,300.00	14.68	33.43	2,242.06	392.76	259.29	470.63	0.00	0.00	
2,400.00	14.68	33.43	2,338.79	413.92	273.25	495.98	0.00	0.00	
2,500.00	14.68	33.43	2,435.53	435.07	287.22	521.33	0.00	0.00	
2,600.00	14.68	33.43	2,532.26	456.23	301.18	546.67	0.00	0.00	
2,700.00	14.68	33.43	2,628.99	477.38	315.15	572.02	0.00	0.00	
2,800.00	14.68	33.43	2,725.73	498.54	329.11	597.37	0.00	0.00	
2,900.00	14.68	33.43	2,822.46	519.69	343.08	622.72	0.00	0.00	
3,000.00	14.68	33.43	2,919.19	540.85	357.04	648.07	0.00	0.00	
3,100.00	14.68	33.43	3,015.93	562.00	371.01	673.42	0.00	0.00	
3,200.00	14.68	33.43	3,112.66	583.15	384.98	698.77	0.00	0.00	
3,300.00	14.68	33.43	3,209.40	604.31	398.94	724.12	0.00	0.00	
3,400.00	14.68	33.43	3,306.13	625.46	412.91	749.46	0.00	0.00	
3,500.00	14.68	33.43	3,402.86	646.62	426.87	774.81	0.00	0.00	
3,600.00	14.68	33.43	3,499.60	667.77	440.84	800.16	0.00	0.00	
3,700.00	14.68	33.43	3,596.33	688.93	454.80	825.51	0.00	0.00	
3,800.00	14.68	33.43	3,693.07	710.08	468.77	850.86	0.00	0.00	
3,900.00	14.68	33.43	3,789.80	731.24	482.73	876.21	0.00	0.00	
4,000.00	14.68	33.43	3,886.53	752.39	496.70	901.56	0.00	0.00	
4,100.00	14.68	33.43	3,983.27	773.55	510.67	926.91	0.00	0.00	
4,200.00	14.68	33.43	4,080.00	794.70	524.63	952.25	0.00	0.00	
4,300.00	14.68	33.43	4,176.73	815.86	538.60	977.60	0.00	0.00	
4,400.00	14.68	33.43	4,273.47	837.01	552.56	1,002.95	0.00	0.00	
4,500.00	14.68	33.43	4,370.20	858.17	566.53	1,028.30	0.00	0.00	
4,600.00	14.68	33.43	4,466.94	879.32	580.49	1,053.65	0.00	0.00	
4,700.00	14.68	33.43	4,563.67	900.48	594.46	1,079.00	0.00	0.00	
4,800.00	14.68	33.43	4,660.40	921.63	608.42	1,104.35	0.00	0.00	
4,900.00	14.68	33.43	4,757.14	942.79	622.39	1,129.70	0.00	0.00	
5,000.00	14.68	33.43	4,853.87	963.94	636.35	1,155.04	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13B-19 - Slot A9
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.00usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 13B-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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	14.68	33.43	4,950.61	985.09	650.32	1,180.39	0.00	0.00	
5,200.00	14.68	33.43	5,047.34	1,006.25	664.29	1,205.74	0.00	0.00	
5,300.00	14.68	33.43	5,144.07	1,027.40	678.25	1,231.09	0.00	0.00	
5,400.00	14.68	33.43	5,240.81	1,048.56	692.22	1,256.44	0.00	0.00	
5,500.00	14.68	33.43	5,337.54	1,069.71	706.18	1,281.79	0.00	0.00	
5,600.00	14.68	33.43	5,434.27	1,090.87	720.15	1,307.14	0.00	0.00	
5,700.00	14.68	33.43	5,531.01	1,112.02	734.11	1,332.49	0.00	0.00	
5,800.00	14.68	33.43	5,627.74	1,133.18	748.08	1,357.83	0.00	0.00	
5,900.00	14.68	33.43	5,724.48	1,154.33	762.04	1,383.18	0.00	0.00	
6,000.00	14.68	33.43	5,821.21	1,175.49	776.01	1,408.53	0.00	0.00	
6,100.00	14.68	33.43	5,917.94	1,196.64	789.98	1,433.88	0.00	0.00	
6,108.33	14.68	33.43	5,926.00	1,198.40	791.14	1,435.99	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,200.00	14.68	33.43	6,014.68	1,217.80	803.94	1,459.23	0.00	0.00	
6,300.00	14.68	33.43	6,111.41	1,238.95	817.91	1,484.58	0.00	0.00	
6,400.00	14.68	33.43	6,208.15	1,260.11	831.87	1,509.93	0.00	0.00	
6,409.15	14.68	33.43	6,217.00	1,262.04	833.15	1,512.25	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,500.00	14.68	33.43	6,304.88	1,281.26	845.84	1,535.28	0.00	0.00	
6,600.00	14.68	33.43	6,401.61	1,302.42	859.80	1,560.62	0.00	0.00	
6,700.00	14.68	33.43	6,498.35	1,323.57	873.77	1,585.97	0.00	0.00	
6,781.18	14.68	33.43	6,576.87	1,340.74	885.11	1,606.55	0.00	0.00	Start Drop -3.00
6,800.00	14.12	33.43	6,595.10	1,344.65	887.68	1,611.23	3.00	-3.00	
6,900.00	11.12	33.43	6,692.68	1,362.88	899.72	1,633.08	3.00	-3.00	
7,000.00	8.12	33.43	6,791.26	1,376.82	908.93	1,649.79	3.00	-3.00	
7,100.00	5.12	33.43	6,890.58	1,386.44	915.28	1,661.31	3.00	-3.00	
7,200.00	2.12	33.43	6,990.37	1,391.71	918.75	1,667.62	3.00	-3.00	
7,270.64	0.00	0.00	7,061.00	1,392.80	919.47	1,668.93	3.00	-3.00	Start 2088.00 hold at 7270.64 MD - TOP_GAS.
7,300.00	0.00	0.00	7,090.36	1,392.80	919.47	1,668.93	0.00	0.00	
7,400.00	0.00	0.00	7,190.36	1,392.80	919.47	1,668.93	0.00	0.00	
7,500.00	0.00	0.00	7,290.36	1,392.80	919.47	1,668.93	0.00	0.00	
7,600.00	0.00	0.00	7,390.36	1,392.80	919.47	1,668.93	0.00	0.00	
7,700.00	0.00	0.00	7,490.36	1,392.80	919.47	1,668.93	0.00	0.00	
7,800.00	0.00	0.00	7,590.36	1,392.80	919.47	1,668.93	0.00	0.00	
7,900.00	0.00	0.00	7,690.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,000.00	0.00	0.00	7,790.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,100.00	0.00	0.00	7,890.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,200.00	0.00	0.00	7,990.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,300.00	0.00	0.00	8,090.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,400.00	0.00	0.00	8,190.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,500.00	0.00	0.00	8,290.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,600.00	0.00	0.00	8,390.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,700.00	0.00	0.00	8,490.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,800.00	0.00	0.00	8,590.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,900.00	0.00	0.00	8,690.36	1,392.80	919.47	1,668.93	0.00	0.00	
8,958.64	0.00	0.00	8,749.00	1,392.80	919.47	1,668.93	0.00	0.00	CAMEO.MBL (TVD)
9,000.00	0.00	0.00	8,790.36	1,392.80	919.47	1,668.93	0.00	0.00	
9,100.00	0.00	0.00	8,890.36	1,392.80	919.47	1,668.93	0.00	0.00	
9,200.00	0.00	0.00	8,990.36	1,392.80	919.47	1,668.93	0.00	0.00	
9,208.64	0.00	0.00	8,999.00	1,392.80	919.47	1,668.93	0.00	0.00	ROLLINS.MBL (TVD)
9,300.00	0.00	0.00	9,090.36	1,392.80	919.47	1,668.93	0.00	0.00	
9,358.64	0.00	0.00	9,149.00	1,392.80	919.47	1,668.93	0.00	0.00	TD at 9358.64 - TD.MBL (TVD)

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 13B-19 - Slot A9
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.00usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 13B-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #2		

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 13B-19 PBHL	0.00	0.00	9,149.00	1,303.20	1,311.24	14,359,050.30	2,442,523.90	39.506584	-108.156514
- plan misses target center by 401.88usft at 9358.64usft MD (9149.00 TVD, 1392.80 N, 919.47 E)									
- Circle (radius 50.00)									
PUCKETT 13B-19 PBHL	0.00	0.00	9,149.00	1,392.80	919.47	14,359,127.50	2,442,129.50	39.506830	-108.157901
- plan hits target center									
- Circle (radius 50.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,108.33	5,926.00	OHIO_CREEK.MBL (TVD)				
6,409.15	6,217.00	WILLIAMS_FORK.MBL (TVD)				
7,270.64	7,061.00	TOP_GAS.MBL (TVD)				
8,958.64	8,749.00	CAMEO.MBL (TVD)				
9,208.64	8,999.00	ROLLINS.MBL (TVD)				
9,358.64	9,149.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
200.00	200.00	0.00	0.00	Start Build 3.00	
689.47	684.13	52.06	34.37	Start 6091.71 hold at 689.47 MD	
6,781.18	6,576.87	1,340.74	885.11	Start Drop -3.00	
7,270.64	7,061.00	1,392.80	919.47	Start 2088.00 hold at 7270.64 MD	
9,358.64	9,149.00	1,392.80	919.47	TD at 9358.64	