



SECTION DETAILS

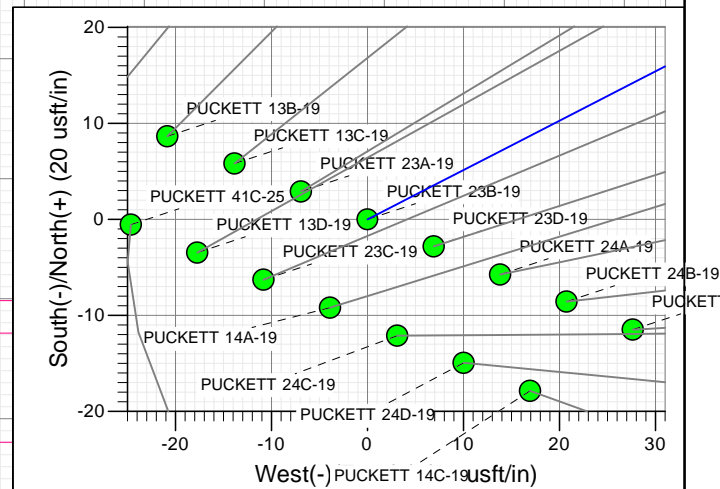
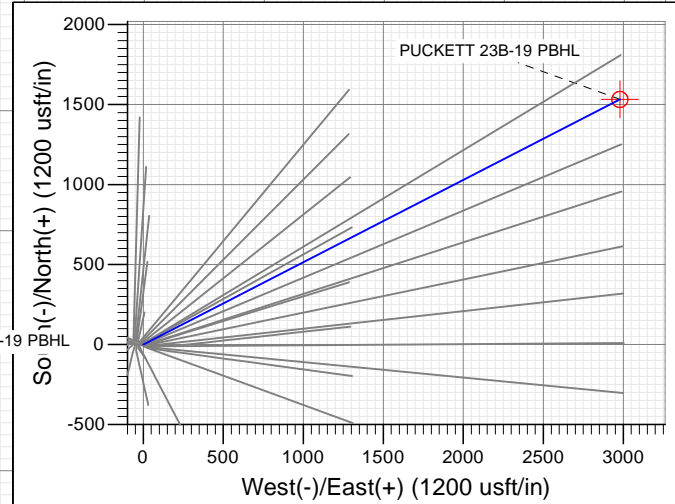
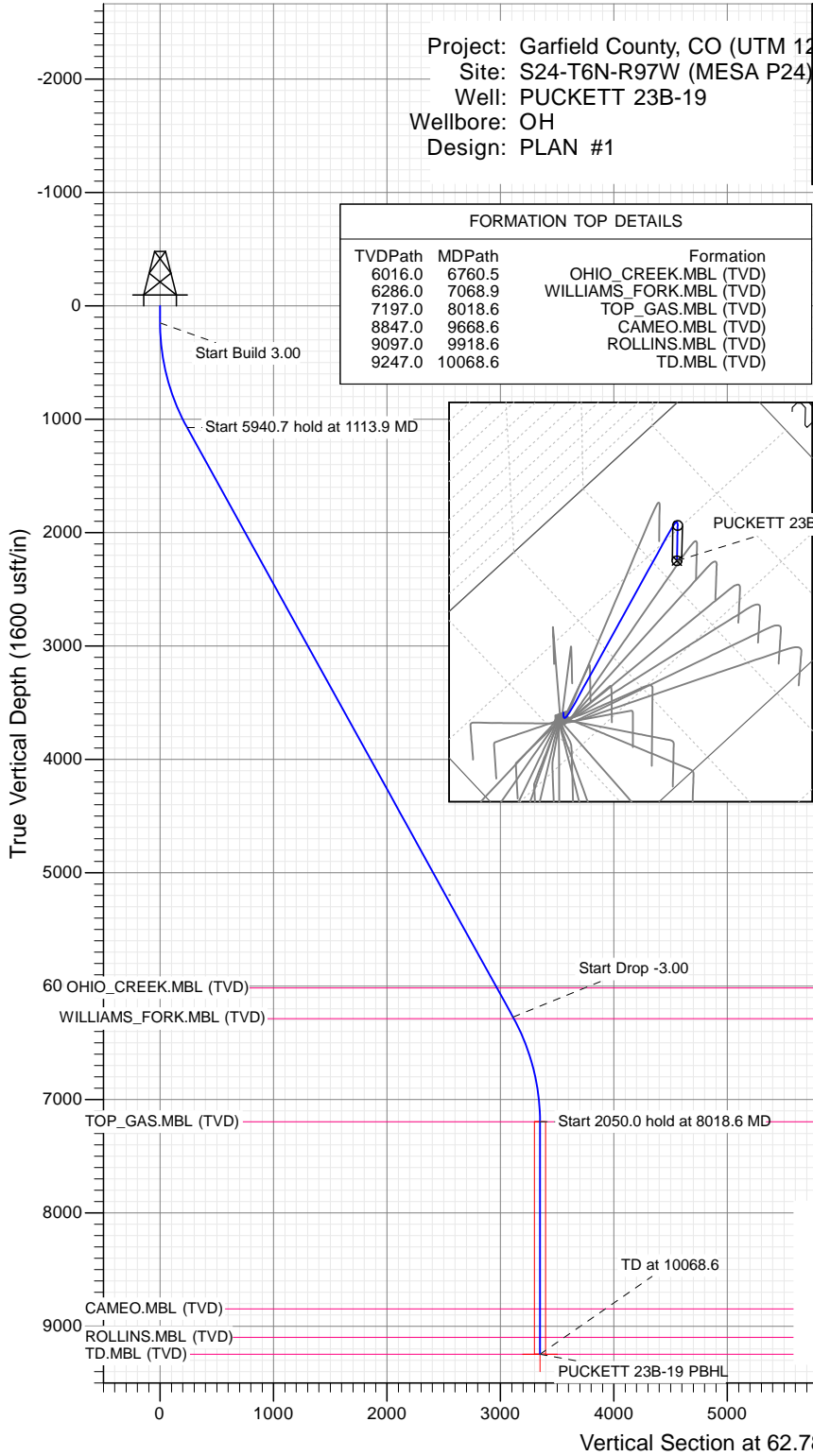
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.0	
3	1113.9	28.92	62.78	1073.5	108.9	211.8	3.00	62.78	238.1	
4	7054.6	28.92	62.78	6273.5	1422.7	2766.4	0.00	0.00	3110.8	
5	8018.6	0.00	0.00	7197.0	1531.7	2978.2	3.00	180.00	3349.0	
6	10068.6	0.00	0.00	9247.0	1531.7	2978.2	0.00	0.00	3349.0	PUCKETT 23B-19 PBHL

Project: Garfield County, CO (UTM 12
Site: S24-T6N-R97W (MESA P24)
Well: PUCKETT 23B-19
Wellbore: OH
Design: PLAN #1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6016.0	6760.5	OHIO_CREEK.MBL (TVD)
6286.0	7068.9	WILLIAMS_FORK.MBL (TVD)
7197.0	8018.6	TOP_GAS.MBL (TVD)
8847.0	9668.6	CAMEO.MBL (TVD)
9097.0	9918.6	ROLLINS.MBL (TVD)
9247.0	10068.6	TD.MBL (TVD)

PLAN #1 PUCKETT 23B-19 16XXX; LR 30' KB @ 8181.0ust Ground Level @ 8151.0 NAD 1927 - Western US Well PUCKETT 23B-19, True North						
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	62.78	Slot	0.0	0.0	0.0
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
PUCKETT 23B-19 PBHL	9247.0	1531.7	2978.2	39.507179	-108.150510	



Azimuths to True North
Magnetic North: 9.80°
Magnetic Field
Strength: 51867.7snT
Dip Angle: 65.87°
Date: 2/16/2016
Model: HDGM

CASING DETAILS

No casing data is available

WELL DETAILS: PUCKETT 23B-19

+N/-S	+E/-W	Northing	Ground Level:	8151.0	Latitude	Longitude
0.0	0.0	14357695.70	Easting	2441282.50	39.502976	-108.161061



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 23B-19
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.0usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 23B-19	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		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:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.81 °

Well	PUCKETT 23B-19					
Well Position	+N/-S	0.0 usft	Northing:	14,357,695.70 usft	Latitude:	39.502976
	+E/-W	0.0 usft	Easting:	2,441,282.50 usft	Longitude:	-108.161061
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,151.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	2/16/2016	9.80	65.87	51,868

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	62.78

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,113.9	28.92	62.78	1,073.5	108.9	211.8	3.00	3.00	0.00	62.78	
7,054.6	28.92	62.78	6,273.5	1,422.7	2,766.4	0.00	0.00	0.00	0.00	
8,018.6	0.00	0.00	7,197.0	1,531.7	2,978.2	3.00	-3.00	0.00	180.00	
10,068.6	0.00	0.00	9,247.0	1,531.7	2,978.2	0.00	0.00	0.00	0.00	PUCKETT 23B-19 PE

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 23B-19
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.0usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 23B-19	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
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	Start Build 3.00
200.0	1.50	62.78	200.0	0.3	0.6	0.7	3.00	3.00	
300.0	4.50	62.78	299.8	2.7	5.2	5.9	3.00	3.00	
400.0	7.50	62.78	399.3	7.5	14.5	16.3	3.00	3.00	
500.0	10.50	62.78	498.0	14.6	28.4	32.0	3.00	3.00	
600.0	13.50	62.78	595.8	24.1	46.9	52.8	3.00	3.00	
700.0	16.50	62.78	692.4	36.0	69.9	78.6	3.00	3.00	
800.0	19.50	62.78	787.5	50.1	97.4	109.5	3.00	3.00	
900.0	22.50	62.78	880.9	66.5	129.3	145.4	3.00	3.00	
1,000.0	25.50	62.78	972.2	85.1	165.5	186.0	3.00	3.00	
1,100.0	28.50	62.78	1,061.3	105.9	205.8	231.4	3.00	3.00	
1,113.9	28.92	62.78	1,073.5	108.9	211.8	238.1	3.00	3.00	Start 5940.7 hold at 1113.9 MD
1,200.0	28.92	62.78	1,148.9	127.9	248.8	279.8	0.00	0.00	
1,300.0	28.92	62.78	1,236.4	150.1	291.8	328.1	0.00	0.00	
1,400.0	28.92	62.78	1,323.9	172.2	334.8	376.5	0.00	0.00	
1,500.0	28.92	62.78	1,411.5	194.3	377.8	424.8	0.00	0.00	
1,600.0	28.92	62.78	1,499.0	216.4	420.8	473.2	0.00	0.00	
1,700.0	28.92	62.78	1,586.5	238.5	463.8	521.5	0.00	0.00	
1,800.0	28.92	62.78	1,674.0	260.6	506.8	569.9	0.00	0.00	
1,900.0	28.92	62.78	1,761.6	282.8	549.8	618.2	0.00	0.00	
2,000.0	28.92	62.78	1,849.1	304.9	592.8	666.6	0.00	0.00	
2,100.0	28.92	62.78	1,936.6	327.0	635.8	715.0	0.00	0.00	
2,200.0	28.92	62.78	2,024.2	349.1	678.8	763.3	0.00	0.00	
2,300.0	28.92	62.78	2,111.7	371.2	721.8	811.7	0.00	0.00	
2,400.0	28.92	62.78	2,199.2	393.3	764.8	860.0	0.00	0.00	
2,500.0	28.92	62.78	2,286.8	415.5	807.8	908.4	0.00	0.00	
2,600.0	28.92	62.78	2,374.3	437.6	850.8	956.7	0.00	0.00	
2,700.0	28.92	62.78	2,461.8	459.7	893.8	1,005.1	0.00	0.00	
2,800.0	28.92	62.78	2,549.4	481.8	936.8	1,053.5	0.00	0.00	
2,900.0	28.92	62.78	2,636.9	503.9	979.8	1,101.8	0.00	0.00	
3,000.0	28.92	62.78	2,724.4	526.0	1,022.8	1,150.2	0.00	0.00	
3,100.0	28.92	62.78	2,812.0	548.1	1,065.8	1,198.5	0.00	0.00	
3,200.0	28.92	62.78	2,899.5	570.3	1,108.8	1,246.9	0.00	0.00	
3,300.0	28.92	62.78	2,987.0	592.4	1,151.8	1,295.2	0.00	0.00	
3,400.0	28.92	62.78	3,074.5	614.5	1,194.8	1,343.6	0.00	0.00	
3,500.0	28.92	62.78	3,162.1	636.6	1,237.8	1,391.9	0.00	0.00	
3,600.0	28.92	62.78	3,249.6	658.7	1,280.8	1,440.3	0.00	0.00	
3,700.0	28.92	62.78	3,337.1	680.8	1,323.8	1,488.7	0.00	0.00	
3,800.0	28.92	62.78	3,424.7	703.0	1,366.8	1,537.0	0.00	0.00	
3,900.0	28.92	62.78	3,512.2	725.1	1,409.8	1,585.4	0.00	0.00	
4,000.0	28.92	62.78	3,599.7	747.2	1,452.8	1,633.7	0.00	0.00	
4,100.0	28.92	62.78	3,687.3	769.3	1,495.8	1,682.1	0.00	0.00	
4,200.0	28.92	62.78	3,774.8	791.4	1,538.9	1,730.4	0.00	0.00	
4,300.0	28.92	62.78	3,862.3	813.5	1,581.9	1,778.8	0.00	0.00	
4,400.0	28.92	62.78	3,949.9	835.7	1,624.9	1,827.1	0.00	0.00	
4,500.0	28.92	62.78	4,037.4	857.8	1,667.9	1,875.5	0.00	0.00	
4,600.0	28.92	62.78	4,124.9	879.9	1,710.9	1,923.9	0.00	0.00	
4,700.0	28.92	62.78	4,212.4	902.0	1,753.9	1,972.2	0.00	0.00	
4,800.0	28.92	62.78	4,300.0	924.1	1,796.9	2,020.6	0.00	0.00	
4,900.0	28.92	62.78	4,387.5	946.2	1,839.9	2,068.9	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 23B-19
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.0usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 23B-19	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
5,000.0	28.92	62.78	4,475.0	968.3	1,882.9	2,117.3	0.00	0.00	
5,100.0	28.92	62.78	4,562.6	990.5	1,925.9	2,165.6	0.00	0.00	
5,200.0	28.92	62.78	4,650.1	1,012.6	1,968.9	2,214.0	0.00	0.00	
5,300.0	28.92	62.78	4,737.6	1,034.7	2,011.9	2,262.4	0.00	0.00	
5,400.0	28.92	62.78	4,825.2	1,056.8	2,054.9	2,310.7	0.00	0.00	
5,500.0	28.92	62.78	4,912.7	1,078.9	2,097.9	2,359.1	0.00	0.00	
5,600.0	28.92	62.78	5,000.2	1,101.0	2,140.9	2,407.4	0.00	0.00	
5,700.0	28.92	62.78	5,087.8	1,123.2	2,183.9	2,455.8	0.00	0.00	
5,800.0	28.92	62.78	5,175.3	1,145.3	2,226.9	2,504.1	0.00	0.00	
5,900.0	28.92	62.78	5,262.8	1,167.4	2,269.9	2,552.5	0.00	0.00	
6,000.0	28.92	62.78	5,350.4	1,189.5	2,312.9	2,600.8	0.00	0.00	
6,100.0	28.92	62.78	5,437.9	1,211.6	2,355.9	2,649.2	0.00	0.00	
6,200.0	28.92	62.78	5,525.4	1,233.7	2,398.9	2,697.6	0.00	0.00	
6,300.0	28.92	62.78	5,612.9	1,255.9	2,441.9	2,745.9	0.00	0.00	
6,400.0	28.92	62.78	5,700.5	1,278.0	2,484.9	2,794.3	0.00	0.00	
6,500.0	28.92	62.78	5,788.0	1,300.1	2,527.9	2,842.6	0.00	0.00	
6,600.0	28.92	62.78	5,875.5	1,322.2	2,570.9	2,891.0	0.00	0.00	
6,700.0	28.92	62.78	5,963.1	1,344.3	2,613.9	2,939.3	0.00	0.00	
6,760.5	28.92	62.78	6,016.0	1,357.7	2,639.9	2,968.6	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,800.0	28.92	62.78	6,050.6	1,366.4	2,656.9	2,987.7	0.00	0.00	
6,900.0	28.92	62.78	6,138.1	1,388.5	2,699.9	3,036.1	0.00	0.00	
7,000.0	28.92	62.78	6,225.7	1,410.7	2,742.9	3,084.4	0.00	0.00	
7,054.6	28.92	62.78	6,273.5	1,422.7	2,766.4	3,110.8	0.00	0.00	Start Drop -3.00
7,068.9	28.49	62.78	6,286.0	1,425.9	2,772.5	3,117.7	3.00	-3.00	WILLIAMS_FORK.MBL (TVD)
7,100.0	27.56	62.78	6,313.5	1,432.6	2,785.5	3,132.3	3.00	-3.00	
7,200.0	24.56	62.78	6,403.3	1,452.7	2,824.6	3,176.2	3.00	-3.00	
7,300.0	21.56	62.78	6,495.3	1,470.6	2,859.4	3,215.4	3.00	-3.00	
7,400.0	18.56	62.78	6,589.2	1,486.2	2,889.9	3,249.7	3.00	-3.00	
7,500.0	15.56	62.78	6,684.8	1,499.7	2,916.0	3,279.0	3.00	-3.00	
7,600.0	12.56	62.78	6,781.8	1,510.8	2,937.6	3,303.3	3.00	-3.00	
7,700.0	9.56	62.78	6,879.9	1,519.5	2,954.6	3,322.5	3.00	-3.00	
7,800.0	6.56	62.78	6,978.9	1,525.9	2,967.1	3,336.5	3.00	-3.00	
7,900.0	3.56	62.78	7,078.5	1,530.0	2,974.9	3,345.3	3.00	-3.00	
8,000.0	0.56	62.78	7,178.4	1,531.6	2,978.1	3,348.9	3.00	-3.00	
8,018.6	0.00	0.00	7,197.0	1,531.7	2,978.2	3,349.0	3.00	-3.00	Start 2050.0 hold at 8018.6 MD - TOP_GAS.ME
8,100.0	0.00	0.00	7,278.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,200.0	0.00	0.00	7,378.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,300.0	0.00	0.00	7,478.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,400.0	0.00	0.00	7,578.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,500.0	0.00	0.00	7,678.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,600.0	0.00	0.00	7,778.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,700.0	0.00	0.00	7,878.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,800.0	0.00	0.00	7,978.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
8,900.0	0.00	0.00	8,078.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,000.0	0.00	0.00	8,178.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,100.0	0.00	0.00	8,278.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,200.0	0.00	0.00	8,378.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,300.0	0.00	0.00	8,478.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,400.0	0.00	0.00	8,578.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,500.0	0.00	0.00	8,678.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,600.0	0.00	0.00	8,778.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,668.6	0.00	0.00	8,847.0	1,531.7	2,978.2	3,349.0	0.00	0.00	CAMEO.MBL (TVD)

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 23B-19
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8181.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8181.0usft
Site:	S24-T6N-R97W (MESA P24)	North Reference:	True
Well:	PUCKETT 23B-19	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
9,700.0	0.00	0.00	8,878.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,800.0	0.00	0.00	8,978.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,900.0	0.00	0.00	9,078.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
9,918.6	0.00	0.00	9,097.0	1,531.7	2,978.2	3,349.0	0.00	0.00	ROLLINS.MBL (TVD)
10,000.0	0.00	0.00	9,178.4	1,531.7	2,978.2	3,349.0	0.00	0.00	
10,068.6	0.00	0.00	9,247.0	1,531.7	2,978.2	3,349.0	0.00	0.00	TD at 10068.6 - 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 23B-19 PBHL	0.00	0.00	9,247.0	1,531.7	2,978.2	14,359,320.50	2,444,210.90	39.507179	-108.150510
- plan hits target center									
- Circle (radius 50.0)									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,760.5	6,016.0	OHIO_CREEK.MBL (TVD)				
7,068.9	6,286.0	WILLIAMS_FORK.MBL (TVD)				
8,018.6	7,197.0	TOP_GAS.MBL (TVD)				
9,668.6	8,847.0	CAMEO.MBL (TVD)				
9,918.6	9,097.0	ROLLINS.MBL (TVD)				
10,068.6	9,247.0	TD.MBL (TVD)				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
150.0	150.0	0.0	0.0	Start Build 3.00
1,113.9	1,073.5	108.9	211.8	Start 5940.7 hold at 1113.9 MD
7,054.6	6,273.5	1,422.7	2,766.4	Start Drop -3.00
8,018.6	7,197.0	1,531.7	2,978.2	Start 2050.0 hold at 8018.6 MD
10,068.6	9,247.0	1,531.7	2,978.2	TD at 10068.6