



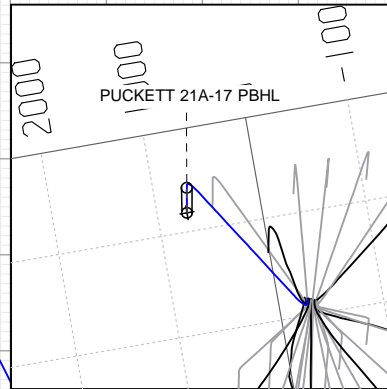
# SECTION DETAILS

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	250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0	
3	1148.1	26.94	68.27	1115.4	76.8	192.6	3.00	68.27	207.3	
4	4775.0	26.94	68.27	4348.6	685.2	1719.2	0.00	0.00	1850.7	
5	5673.2	0.00	0.00	5214.0	762.0	1911.8	3.00	180.00	2058.0	
6	7479.2	0.00	0.00	7020.0	762.0	1911.8	0.00	0.00	2058.0	PUCKETT 21A-17 PBHL

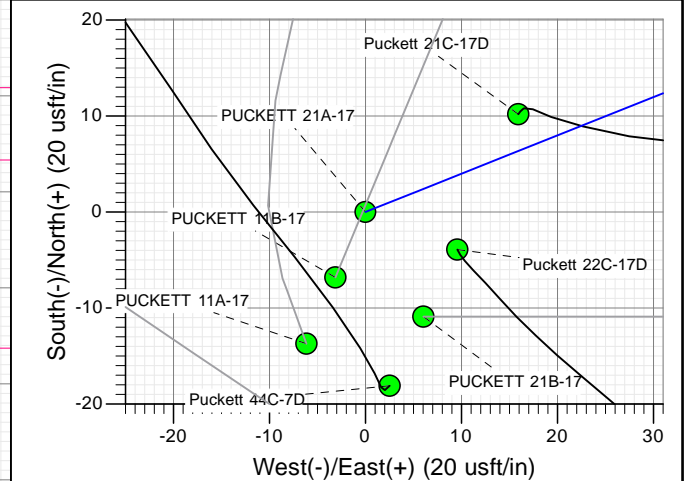
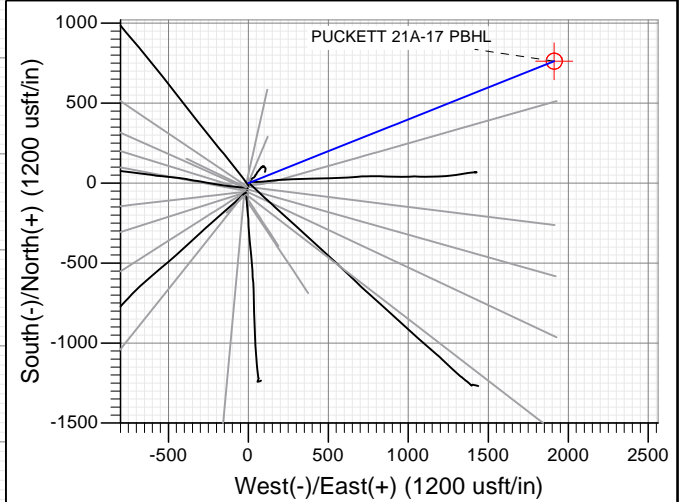
Project: Garfield County, CO (UTM 12  
Site: S17-T7S-R96W (RILEY 1)  
Well: PUCKETT 21A-17  
Wellbore: OH  
Design: PLAN #2

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3958.0	4336.9	OHIO_CREEK.MBL (SSTVD)
4334.0	4758.6	WILLIAMS_FORK.MBL (SSTVD)
5314.0	5773.2	TOP_GAS.MBL (SSTVD)
6430.0	6889.2	CAMEO.MBL (SSTVD)
6870.0	7329.2	ROLLINS.MBL (SSTVD)
7020.0	7479.2	TD.MBL (SSTVD)



Type	Target	Azimuth	Origin	Type	N/S	E/W	From
TD	No Target (Freehand)	68.27	Slot	Slot	0.0	0.0	TVD
Name	PUCKETT 21A-17 PBHL	TVD	+N/-S	+E/-W	Latitude	Longitude	
		7020.0	762.0	1911.8	39.444135	-108.131169	



Azimuths to True North  
Magnetic North: 9.75°  
Magnetic Field  
Strength: 51971.4snT  
Dip Angle: 65.73°  
Date: 11/19/2015  
Model: HDGM

## CASING DETAILS

No casing data is available

## VERTICAL SECTION at 68.27° (1000 usft/in)

## WELL DETAILS: PUCKETT 21A-17

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	14335711.70	2448512.30	39.442044	-108.137936



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB @ 6764.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB @ 6764.0usft
<b>Site:</b>	S17-T7S-R96W (RILEY 1)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 21A-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

<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)		

Site		S17-T7S-R96W (RILEY 1)			
Site Position:		Northing:	14,335,697.50 usft	Latitude:	39.442005
From:	Map	Easting:	2,448,508.30 usft	Longitude:	-108.137952
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.82 °

Well	PUCKETT 21A-17					
Well Position	+N/-S	0.0 usft	Northing:	14,335,711.70 usft	Latitude:	39.442044
	+E/-W	0.0 usft	Easting:	2,448,512.30 usft	Longitude:	-108.137936
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	6,734.0 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	11/19/2015	9.75	65.73	51,971

<b>Design</b>	PLAN #2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	68.27

<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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,148.1	26.94	68.27	1,115.4	76.8	192.6	3.00	3.00	0.00	68.27	
4,775.0	26.94	68.27	4,348.6	685.2	1,719.2	0.00	0.00	0.00	0.00	
5,673.2	0.00	0.00	5,214.0	762.0	1,911.8	3.00	-3.00	0.00	180.00	
7,479.2	0.00	0.00	7,020.0	762.0	1,911.8	0.00	0.00	0.00	0.00	PUCKETT 21A-17 PE

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB @ 6764.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB @ 6764.0usft
<b>Site:</b>	S17-T7S-R96W (RILEY 1)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 21A-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
0.0	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	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	Start Build 3.00
300.0	1.50	68.27	300.0	0.2	0.6	0.7	3.00	3.00	
400.0	4.50	68.27	399.8	2.2	5.5	5.9	3.00	3.00	
500.0	7.50	68.27	499.3	6.0	15.2	16.3	3.00	3.00	
600.0	10.50	68.27	598.0	11.8	29.7	32.0	3.00	3.00	
700.0	13.50	68.27	695.8	19.5	49.0	52.8	3.00	3.00	
800.0	16.50	68.27	792.4	29.1	73.1	78.6	3.00	3.00	
900.0	19.50	68.27	887.5	40.6	101.8	109.5	3.00	3.00	
1,000.0	22.50	68.27	980.9	53.8	135.0	145.4	3.00	3.00	
1,100.0	25.50	68.27	1,072.2	68.9	172.8	186.0	3.00	3.00	
1,148.1	26.94	68.27	1,115.4	76.8	192.6	207.3	3.00	3.00	Start 3626.9 hold at 1148.1 MD
1,200.0	26.94	68.27	1,161.6	85.5	214.4	230.8	0.00	0.00	
1,300.0	26.94	68.27	1,250.8	102.2	256.5	276.1	0.00	0.00	
1,400.0	26.94	68.27	1,339.9	119.0	298.6	321.4	0.00	0.00	
1,500.0	26.94	68.27	1,429.1	135.8	340.7	366.8	0.00	0.00	
1,600.0	26.94	68.27	1,518.2	152.6	382.8	412.1	0.00	0.00	
1,700.0	26.94	68.27	1,607.4	169.3	424.9	457.4	0.00	0.00	
1,800.0	26.94	68.27	1,696.5	186.1	467.0	502.7	0.00	0.00	
1,900.0	26.94	68.27	1,785.6	202.9	509.0	548.0	0.00	0.00	
2,000.0	26.94	68.27	1,874.8	219.7	551.1	593.3	0.00	0.00	
2,100.0	26.94	68.27	1,963.9	236.5	593.2	638.6	0.00	0.00	
2,200.0	26.94	68.27	2,053.1	253.2	635.3	683.9	0.00	0.00	
2,300.0	26.94	68.27	2,142.2	270.0	677.4	729.2	0.00	0.00	
2,400.0	26.94	68.27	2,231.4	286.8	719.5	774.6	0.00	0.00	
2,500.0	26.94	68.27	2,320.5	303.6	761.6	819.9	0.00	0.00	
2,600.0	26.94	68.27	2,409.7	320.3	803.7	865.2	0.00	0.00	
2,700.0	26.94	68.27	2,498.8	337.1	845.8	910.5	0.00	0.00	
2,800.0	26.94	68.27	2,588.0	353.9	887.9	955.8	0.00	0.00	
2,900.0	26.94	68.27	2,677.1	370.7	930.0	1,001.1	0.00	0.00	
3,000.0	26.94	68.27	2,766.2	387.4	972.0	1,046.4	0.00	0.00	
3,100.0	26.94	68.27	2,855.4	404.2	1,014.1	1,091.7	0.00	0.00	
3,200.0	26.94	68.27	2,944.5	421.0	1,056.2	1,137.0	0.00	0.00	
3,300.0	26.94	68.27	3,033.7	437.8	1,098.3	1,182.4	0.00	0.00	
3,400.0	26.94	68.27	3,122.8	454.5	1,140.4	1,227.7	0.00	0.00	
3,500.0	26.94	68.27	3,212.0	471.3	1,182.5	1,273.0	0.00	0.00	
3,600.0	26.94	68.27	3,301.1	488.1	1,224.6	1,318.3	0.00	0.00	
3,700.0	26.94	68.27	3,390.3	504.9	1,266.7	1,363.6	0.00	0.00	
3,800.0	26.94	68.27	3,479.4	521.7	1,308.8	1,408.9	0.00	0.00	
3,900.0	26.94	68.27	3,568.6	538.4	1,350.9	1,454.2	0.00	0.00	
4,000.0	26.94	68.27	3,657.7	555.2	1,393.0	1,499.5	0.00	0.00	
4,100.0	26.94	68.27	3,746.8	572.0	1,435.0	1,544.8	0.00	0.00	
4,200.0	26.94	68.27	3,836.0	588.8	1,477.1	1,590.1	0.00	0.00	
4,300.0	26.94	68.27	3,925.1	605.5	1,519.2	1,635.5	0.00	0.00	
4,336.9	26.94	68.27	3,958.0	611.7	1,534.7	1,652.2	0.00	0.00	OHIO_CREEK.MBL (SSTVD)
4,400.0	26.94	68.27	4,014.3	622.3	1,561.3	1,680.8	0.00	0.00	
4,500.0	26.94	68.27	4,103.4	639.1	1,603.4	1,726.1	0.00	0.00	
4,600.0	26.94	68.27	4,192.6	655.9	1,645.5	1,771.4	0.00	0.00	
4,700.0	26.94	68.27	4,281.7	672.6	1,687.6	1,816.7	0.00	0.00	
4,758.6	26.94	68.27	4,334.0	682.5	1,712.3	1,843.3	0.00	0.00	WILLIAMS_FORK.MBL (SSTVD)

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB @ 6764.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB @ 6764.0usft
<b>Site:</b>	S17-T7S-R96W (RILEY 1)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 21A-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
4,775.0	26.94	68.27	4,348.6	685.2	1,719.2	1,850.7	0.00	0.00	Start Drop -3.00
4,800.0	26.19	68.27	4,370.9	689.4	1,729.5	1,861.9	3.00	-3.00	
4,900.0	23.19	68.27	4,461.8	704.8	1,768.4	1,903.6	3.00	-3.00	
5,000.0	20.19	68.27	4,554.7	718.5	1,802.7	1,940.6	3.00	-3.00	
5,100.0	17.19	68.27	4,649.4	730.4	1,832.5	1,972.7	3.00	-3.00	
5,200.0	14.19	68.27	4,745.7	740.4	1,857.6	1,999.7	3.00	-3.00	
5,300.0	11.19	68.27	4,843.2	748.5	1,878.0	2,021.7	3.00	-3.00	
5,400.0	8.19	68.27	4,941.8	754.8	1,893.6	2,038.5	3.00	-3.00	
5,500.0	5.19	68.27	5,041.1	759.1	1,904.5	2,050.2	3.00	-3.00	
5,600.0	2.19	68.27	5,140.9	761.5	1,910.5	2,056.6	3.00	-3.00	
5,673.2	0.00	0.00	5,214.0	762.0	1,911.8	2,058.0	3.00	-3.00	Start 1806.0 hold at 5673.2 MD
5,700.0	0.00	0.00	5,240.8	762.0	1,911.8	2,058.0	0.00	0.00	
5,773.2	0.00	0.00	5,314.0	762.0	1,911.8	2,058.0	0.00	0.00	TOP_GAS.MBL (SSTVD)
5,800.0	0.00	0.00	5,340.8	762.0	1,911.8	2,058.0	0.00	0.00	
5,900.0	0.00	0.00	5,440.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,000.0	0.00	0.00	5,540.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,100.0	0.00	0.00	5,640.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,200.0	0.00	0.00	5,740.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,300.0	0.00	0.00	5,840.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,400.0	0.00	0.00	5,940.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,500.0	0.00	0.00	6,040.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,600.0	0.00	0.00	6,140.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,700.0	0.00	0.00	6,240.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,800.0	0.00	0.00	6,340.8	762.0	1,911.8	2,058.0	0.00	0.00	
6,889.2	0.00	0.00	6,430.0	762.0	1,911.8	2,058.0	0.00	0.00	CAMEO.MBL (SSTVD)
6,900.0	0.00	0.00	6,440.8	762.0	1,911.8	2,058.0	0.00	0.00	
7,000.0	0.00	0.00	6,540.8	762.0	1,911.8	2,058.0	0.00	0.00	
7,100.0	0.00	0.00	6,640.8	762.0	1,911.8	2,058.0	0.00	0.00	
7,200.0	0.00	0.00	6,740.8	762.0	1,911.8	2,058.0	0.00	0.00	
7,300.0	0.00	0.00	6,840.8	762.0	1,911.8	2,058.0	0.00	0.00	
7,329.2	0.00	0.00	6,870.0	762.0	1,911.8	2,058.0	0.00	0.00	ROLLINS.MBL (SSTVD)
7,400.0	0.00	0.00	6,940.8	762.0	1,911.8	2,058.0	0.00	0.00	
7,479.2	0.00	0.00	7,020.0	762.0	1,911.8	2,058.0	0.00	0.00	TD at 7479.2 - TD.MBL (SSTVD)

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PUCKETT 21A-17 PBHL - hit/miss target - Shape - plan hits target center - Circle (radius 50.0)	0.00	0.00	7,020.0	762.0	1,911.8	14,336,534.00	2,450,398.90	39.444135	-108.131169

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 21A-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	KB @ 6764.0usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	KB @ 6764.0usft
<b>Site:</b>	S17-T7S-R96W (RILEY 1)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 21A-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,336.9	3,958.0	OHIO_CREEK.MBL (SSTVD)		0.00		
4,758.6	4,334.0	WILLIAMS_FORK.MBL (SSTVD)		0.00		
5,773.2	5,314.0	TOP_GAS.MBL (SSTVD)		0.00		
6,889.2	6,430.0	CAMEO.MBL (SSTVD)		0.00		
7,329.2	6,870.0	ROLLINS.MBL (SSTVD)		0.00		
7,479.2	7,020.0	TD.MBL (SSTVD)		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.0	250.0	0.0	0.0	Start Build 3.00	
1,148.1	1,115.4	76.8	192.6	Start 3626.9 hold at 1148.1 MD	
4,775.0	4,348.6	685.2	1,719.2	Start Drop -3.00	
5,673.2	5,214.0	762.0	1,911.8	Start 1806.0 hold at 5673.2 MD	
7,479.2	7,020.0	762.0	1,911.8	TD at 7479.2	