



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	800.7	18.02	303.99	790.9	52.4	-77.7	3.00	303.99	93.7	
4	4940.1	18.02	303.99	4727.1	768.3	-1139.6	0.00	0.00	1374.4	
5	5540.8	0.00	0.00	5318.0	820.7	-1217.3	3.00	180.00	1468.1	
6	7206.8	0.00	0.00	6984.0	820.7	-1217.3	0.00	0.00	1468.1	PUCKETT 41A-18 PBHL

Project: Garfield County, CO (UTM 12  
 Site: S17-T7S-R96W (RILEY 1)  
 Well: PUCKETT 41A-18  
 Wellbore: OH  
 Design: PLAN #2

PLAN #2  
 PUCKETT 41A-18  
 15XXX; LR  
 KB @ 6764.0usft  
 Ground Level @ 6734.0  
 NAD 1927 - Western US  
 Well PUCKETT 41A-18, True North

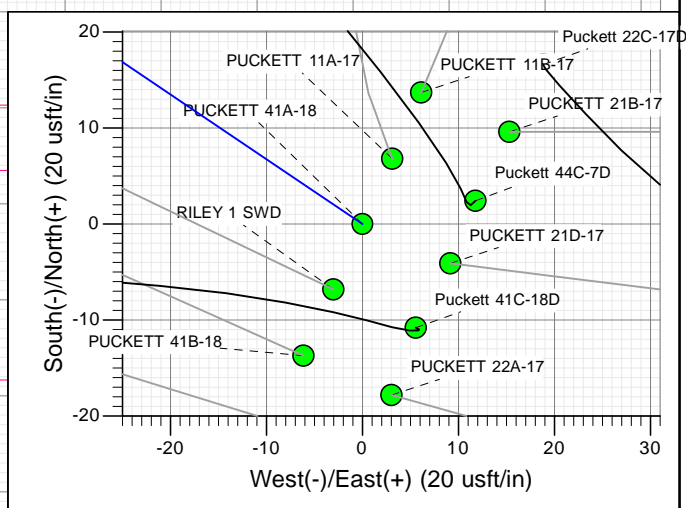
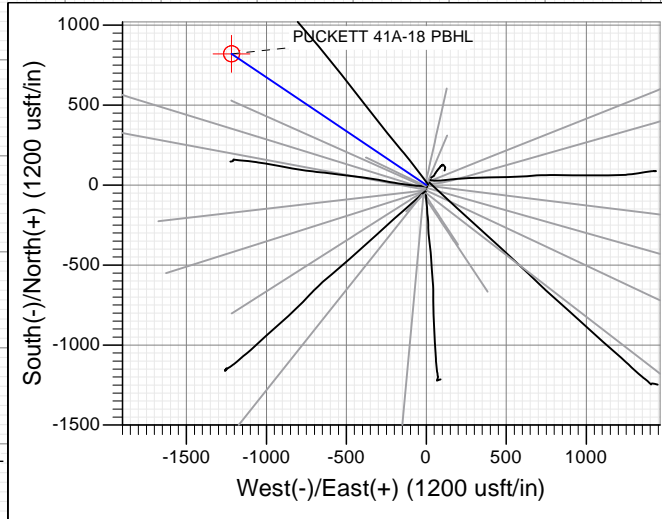
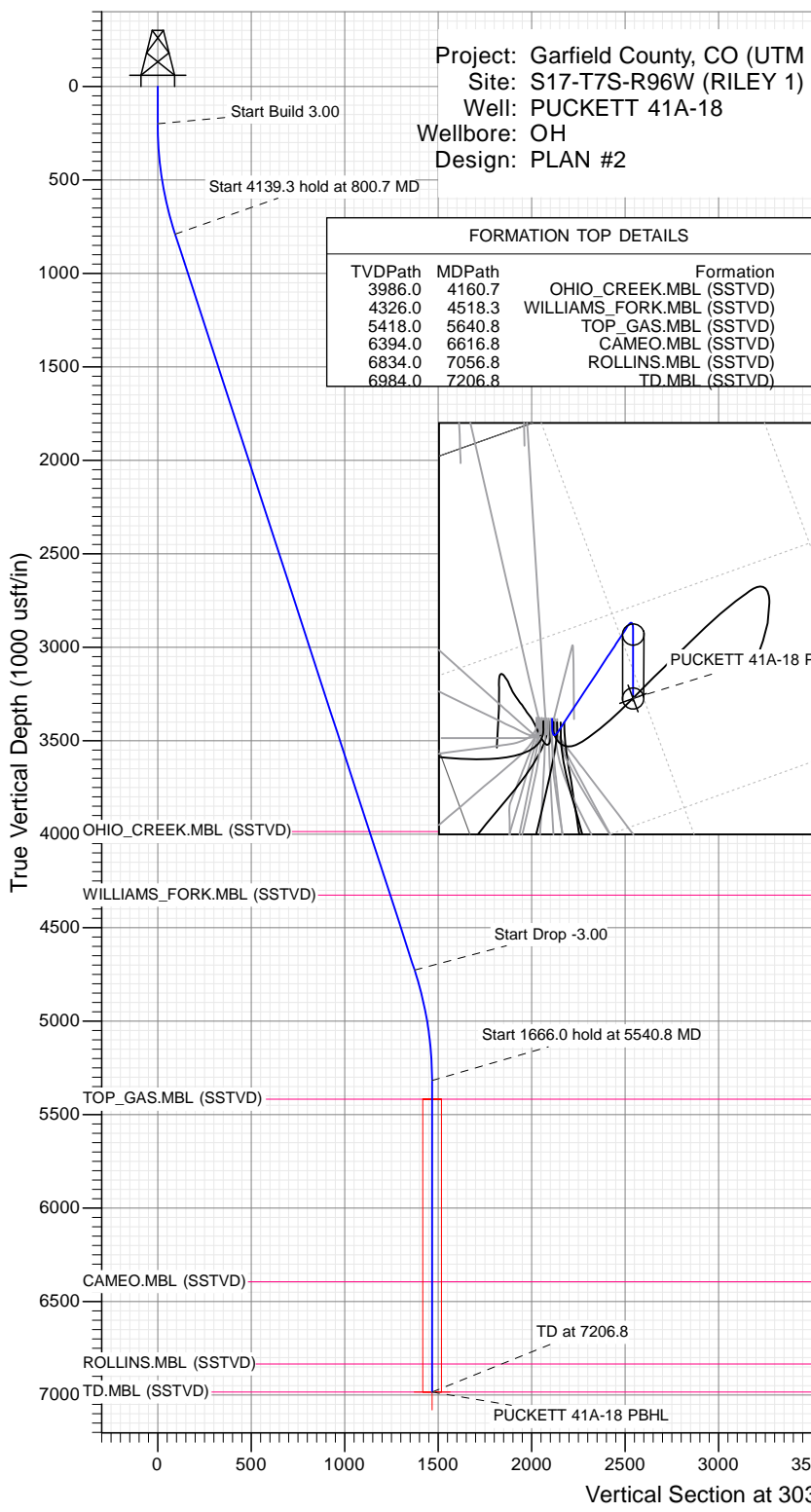
Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	303.99	Slot	0.0	0.0	0.0

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PUCKETT 41A-18 PBHL	6984.0	820.7	-1217.3	39.444240	-108.142277

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3986.0	4160.7	OHIO_CREEK.MBL (SSTVD)
4326.0	4518.3	WILLIAMS_FORK.MBL (SSTVD)
5418.0	5640.8	TOP_GAS.MBL (SSTVD)
6394.0	6616.8	CAMEO.MBL (SSTVD)
6834.0	7056.8	ROLLINS.MBL (SSTVD)
6984.0	7206.8	TD.MBL (SSTVD)



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	

WELL DETAILS: PUCKETT 41A-18  
 Ground Level: 6734.0  
 +N/-S 0.0    +E/-W 0.0    Northing 14335690.90    Easting 2448503.70    Latitude 39.441987    Longitude -108.137969

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 41A-18
<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 41A-18	<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)		

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

<b>Well</b>	PUCKETT 41A-18					
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	14,335,690.90 usft	<b>Latitude:</b>	39.441987
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	2,448,503.70 usft	<b>Longitude:</b>	-108.137969
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft	<b>Ground Level:</b>	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</b>
			(°)	(°)	(nT)
	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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	303.99

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.7	18.02	303.99	790.9	52.4	-77.7	3.00	3.00	0.00	303.99	
4,940.1	18.02	303.99	4,727.1	768.3	-1,139.6	0.00	0.00	0.00	0.00	
5,540.8	0.00	0.00	5,318.0	820.7	-1,217.3	3.00	-3.00	0.00	180.00	
7,206.8	0.00	0.00	6,984.0	820.7	-1,217.3	0.00	0.00	0.00	0.00	PUCKETT 41A-18 PE

Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 41A-18
<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 41A-18	<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	Start Build 3.00
300.0	3.00	303.99	300.0	1.5	-2.2	2.6	3.00	3.00	
400.0	6.00	303.99	399.6	5.8	-8.7	10.5	3.00	3.00	
500.0	9.00	303.99	498.8	13.1	-19.5	23.5	3.00	3.00	
600.0	12.00	303.99	597.1	23.3	-34.6	41.7	3.00	3.00	
700.0	15.00	303.99	694.3	36.4	-54.0	65.1	3.00	3.00	
800.0	18.00	303.99	790.2	52.3	-77.5	93.5	3.00	3.00	
800.7	18.02	303.99	790.9	52.4	-77.7	93.7	3.00	3.00	Start 4139.3 hold at 800.7 MD
900.0	18.02	303.99	885.3	69.5	-103.2	124.4	0.00	0.00	
1,000.0	18.02	303.99	980.4	86.8	-128.8	155.4	0.00	0.00	
1,100.0	18.02	303.99	1,075.5	104.1	-154.5	186.3	0.00	0.00	
1,200.0	18.02	303.99	1,170.6	121.4	-180.1	217.2	0.00	0.00	
1,300.0	18.02	303.99	1,265.6	138.7	-205.8	248.2	0.00	0.00	
1,400.0	18.02	303.99	1,360.7	156.0	-231.4	279.1	0.00	0.00	
1,500.0	18.02	303.99	1,455.8	173.3	-257.1	310.0	0.00	0.00	
1,600.0	18.02	303.99	1,550.9	190.6	-282.7	341.0	0.00	0.00	
1,700.0	18.02	303.99	1,646.0	207.9	-308.4	371.9	0.00	0.00	
1,800.0	18.02	303.99	1,741.1	225.2	-334.0	402.9	0.00	0.00	
1,900.0	18.02	303.99	1,836.2	242.5	-359.7	433.8	0.00	0.00	
2,000.0	18.02	303.99	1,931.3	259.8	-385.3	464.7	0.00	0.00	
2,100.0	18.02	303.99	2,026.4	277.1	-411.0	495.7	0.00	0.00	
2,200.0	18.02	303.99	2,121.5	294.4	-436.7	526.6	0.00	0.00	
2,300.0	18.02	303.99	2,216.6	311.7	-462.3	557.6	0.00	0.00	
2,400.0	18.02	303.99	2,311.7	329.0	-488.0	588.5	0.00	0.00	
2,500.0	18.02	303.99	2,406.8	346.3	-513.6	619.4	0.00	0.00	
2,600.0	18.02	303.99	2,501.9	363.6	-539.3	650.4	0.00	0.00	
2,700.0	18.02	303.99	2,597.0	380.9	-564.9	681.3	0.00	0.00	
2,800.0	18.02	303.99	2,692.1	398.2	-590.6	712.2	0.00	0.00	
2,900.0	18.02	303.99	2,787.1	415.4	-616.2	743.2	0.00	0.00	
3,000.0	18.02	303.99	2,882.2	432.7	-641.9	774.1	0.00	0.00	
3,100.0	18.02	303.99	2,977.3	450.0	-667.5	805.1	0.00	0.00	
3,200.0	18.02	303.99	3,072.4	467.3	-693.2	836.0	0.00	0.00	
3,300.0	18.02	303.99	3,167.5	484.6	-718.8	866.9	0.00	0.00	
3,400.0	18.02	303.99	3,262.6	501.9	-744.5	897.9	0.00	0.00	
3,500.0	18.02	303.99	3,357.7	519.2	-770.1	928.8	0.00	0.00	
3,600.0	18.02	303.99	3,452.8	536.5	-795.8	959.8	0.00	0.00	
3,700.0	18.02	303.99	3,547.9	553.8	-821.4	990.7	0.00	0.00	
3,800.0	18.02	303.99	3,643.0	571.1	-847.1	1,021.6	0.00	0.00	
3,900.0	18.02	303.99	3,738.1	588.4	-872.8	1,052.6	0.00	0.00	
4,000.0	18.02	303.99	3,833.2	605.7	-898.4	1,083.5	0.00	0.00	
4,100.0	18.02	303.99	3,928.3	623.0	-924.1	1,114.5	0.00	0.00	
4,160.7	18.02	303.99	3,986.0	633.5	-939.6	1,133.2	0.00	0.00	OHIO_CREEK.MBL (SSTVD)
4,200.0	18.02	303.99	4,023.4	640.3	-949.7	1,145.4	0.00	0.00	
4,300.0	18.02	303.99	4,118.5	657.6	-975.4	1,176.3	0.00	0.00	
4,400.0	18.02	303.99	4,213.5	674.9	-1,001.0	1,207.3	0.00	0.00	
4,500.0	18.02	303.99	4,308.6	692.2	-1,026.7	1,238.2	0.00	0.00	
4,518.3	18.02	303.99	4,326.0	695.3	-1,031.4	1,243.9	0.00	0.00	WILLIAMS_FORK.MBL (SSTVD)
4,600.0	18.02	303.99	4,403.7	709.5	-1,052.3	1,269.1	0.00	0.00	
4,700.0	18.02	303.99	4,498.8	726.8	-1,078.0	1,300.1	0.00	0.00	
4,800.0	18.02	303.99	4,593.9	744.1	-1,103.6	1,331.0	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 41A-18
<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 41A-18	<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
4,900.0	18.02	303.99	4,689.0	761.3	-1,129.3	1,362.0	0.00	0.00	
4,940.1	18.02	303.99	4,727.1	768.3	-1,139.6	1,374.4	0.00	0.00	Start Drop -3.00
5,000.0	16.22	303.99	4,784.4	778.1	-1,154.2	1,392.0	3.00	-3.00	
5,100.0	13.22	303.99	4,881.1	792.3	-1,175.3	1,417.4	3.00	-3.00	
5,200.0	10.22	303.99	4,979.0	803.7	-1,192.1	1,437.7	3.00	-3.00	
5,300.0	7.22	303.99	5,077.8	812.2	-1,204.7	1,452.9	3.00	-3.00	
5,400.0	4.22	303.99	5,177.3	817.8	-1,213.0	1,462.9	3.00	-3.00	
5,500.0	1.22	303.99	5,277.2	820.4	-1,216.9	1,467.6	3.00	-3.00	
5,540.8	0.00	0.00	5,318.0	820.7	-1,217.3	1,468.1	3.00	-3.00	Start 1666.0 hold at 5540.8 MD
5,600.0	0.00	0.00	5,377.2	820.7	-1,217.3	1,468.1	0.00	0.00	
5,640.8	0.00	0.00	5,418.0	820.7	-1,217.3	1,468.1	0.00	0.00	TOP_GAS.MBL (SSTVD)
5,700.0	0.00	0.00	5,477.2	820.7	-1,217.3	1,468.1	0.00	0.00	
5,800.0	0.00	0.00	5,577.2	820.7	-1,217.3	1,468.1	0.00	0.00	
5,900.0	0.00	0.00	5,677.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,000.0	0.00	0.00	5,777.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,100.0	0.00	0.00	5,877.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,200.0	0.00	0.00	5,977.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,300.0	0.00	0.00	6,077.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,400.0	0.00	0.00	6,177.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,500.0	0.00	0.00	6,277.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,600.0	0.00	0.00	6,377.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,616.8	0.00	0.00	6,394.0	820.7	-1,217.3	1,468.1	0.00	0.00	CAMEO.MBL (SSTVD)
6,700.0	0.00	0.00	6,477.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,800.0	0.00	0.00	6,577.2	820.7	-1,217.3	1,468.1	0.00	0.00	
6,900.0	0.00	0.00	6,677.2	820.7	-1,217.3	1,468.1	0.00	0.00	
7,000.0	0.00	0.00	6,777.2	820.7	-1,217.3	1,468.1	0.00	0.00	
7,056.8	0.00	0.00	6,834.0	820.7	-1,217.3	1,468.1	0.00	0.00	ROLLINS.MBL (SSTVD)
7,100.0	0.00	0.00	6,877.2	820.7	-1,217.3	1,468.1	0.00	0.00	
7,200.0	0.00	0.00	6,977.2	820.7	-1,217.3	1,468.1	0.00	0.00	
7,206.8	0.00	0.00	6,984.0	820.7	-1,217.3	1,468.1	0.00	0.00	TD at 7206.8 - 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 41A-18 PBHL - hit/miss target - Shape - plan hits target center - Circle (radius 50.0)	0.00	0.00	6,984.0	820.7	-1,217.3	14,336,472.50	2,447,261.00	39.444240	-108.142277

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 41A-18
<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 41A-18	<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 (°)
4,160.7	3,986.0	OHIO_CREEK.MBL (SSTVD)		0.00	
4,518.3	4,326.0	WILLIAMS_FORK.MBL (SSTVD)		0.00	
5,640.8	5,418.0	TOP_GAS.MBL (SSTVD)		0.00	
6,616.8	6,394.0	CAMEO.MBL (SSTVD)		0.00	
7,056.8	6,834.0	ROLLINS.MBL (SSTVD)		0.00	
7,206.8	6,984.0	TD.MBL (SSTVD)		0.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
200.0	200.0	0.0	0.0	Start Build 3.00	
800.7	790.9	52.4	-77.7	Start 4139.3 hold at 800.7 MD	
4,940.1	4,727.1	768.3	-1,139.6	Start Drop -3.00	
5,540.8	5,318.0	820.7	-1,217.3	Start 1666.0 hold at 5540.8 MD	
7,206.8	6,984.0	820.7	-1,217.3	TD at 7206.8	