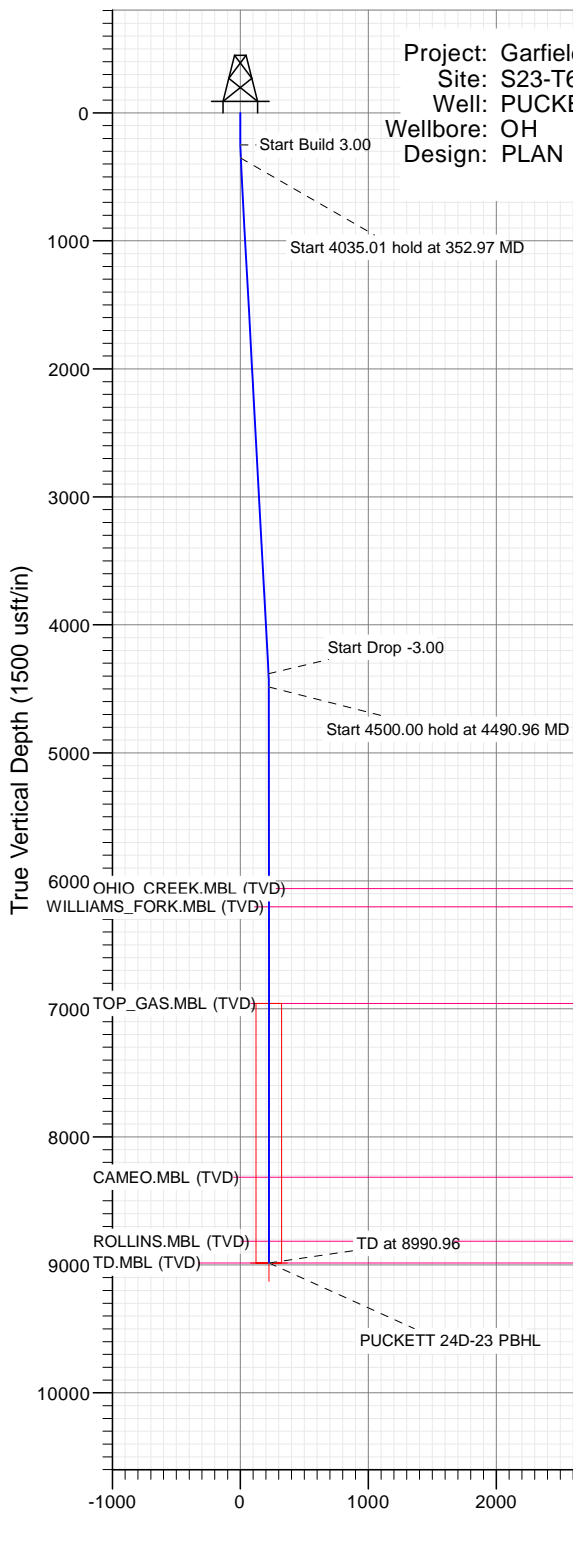




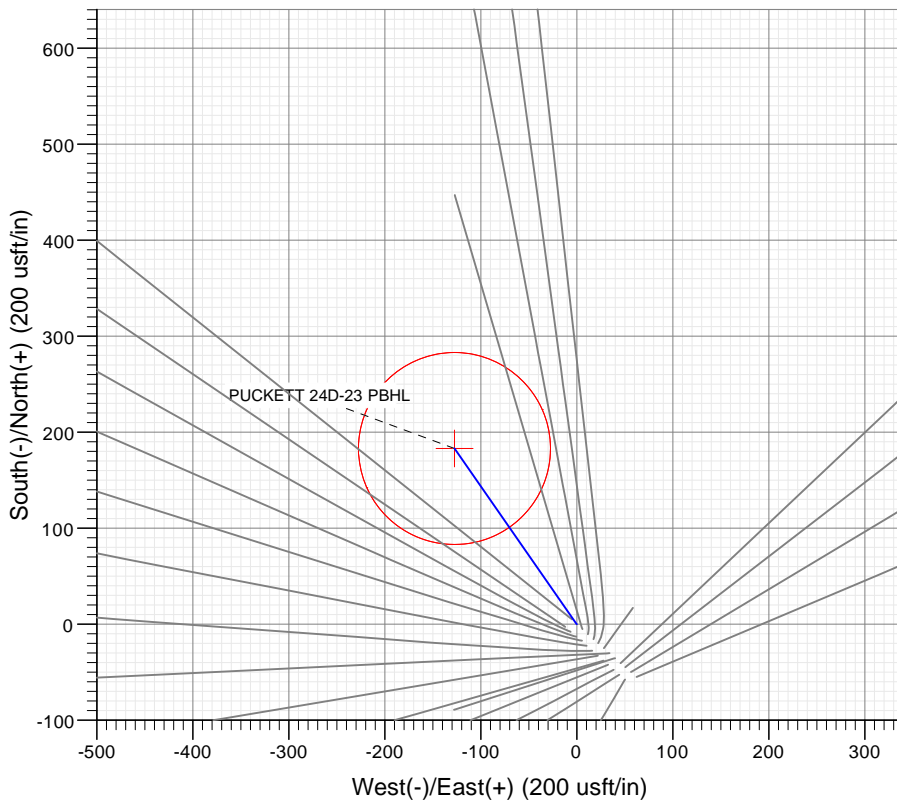
# SECTION DETAILS

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	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	352.97	3.09	325.18	352.92	2.28	-1.58	3.00	325.18	2.78	
4	4387.99	3.09	325.18	4382.08	180.79	-125.76	0.00	0.00	220.23	
5	4490.96	0.00	0.00	4485.00	183.07	-127.34	3.00	180.00	223.00	
6	8990.96	0.00	0.00	8985.00	183.07	-127.34	0.00	0.00	223.00	PUCKETT 24D-23 PBHL



Project: Garfield County, CO (UTM 12N)  
Site: S23-T6S-R97W (MESA N23)  
Well: PUCKETT 24D-23  
Wellbore: OH  
Design: PLAN #1

Type	Target	Azimuth	Origin	N/S	E/W	From
TD	No Target (Freehand)	325.18	Slot	0.00	0.00	TVD 0.00
Name						
PUCKETT 24D-23 PBHL		8985.00	+N/-S	+E/-W	Latitude	Longitude
			183.07	-127.34	39.503697	-108.187881



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6060.00	6065.96	OHIO CREEK.MBL (TVD)
6203.00	6208.96	WILLIAMS_FORK.MBL (TVD)
6957.00	6962.96	TOP_GAS.MBL (TVD)
8315.00	8320.96	CAMEO.MBL (TVD)
8815.00	8820.96	ROLLINS.MBL (TVD)
8985.00	8990.96	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 325.18° (1500 usft/in)

## WELL DETAILS: PUCKETT 24D-23

+N/-S	+E/-W	Northing	Ground Level:	8432.00	Latitude	Longitude
0.00	0.00	14357542.00	Easting	2433640.00	39.503195	-108.187430



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24D-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24D-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<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		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 24D-23					
Well Position	+N/-S	0.00 usft	Northing:	14,357,542.00 usft	Latitude:	39.503195
	+E/-W	0.00 usft	Easting:	2,433,840.00 usft	Longitude:	-108.187430
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,432.00 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	9/14/2016	9.77	65.85	51,800

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	325.18

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
352.97	3.09	325.18	352.92	2.28	-1.58	3.00	3.00	0.00	325.18	
4,387.99	3.09	325.18	4,382.08	180.79	-125.76	0.00	0.00	0.00	0.00	
4,490.96	0.00	0.00	4,485.00	183.07	-127.34	3.00	-3.00	0.00	180.00	
8,990.96	0.00	0.00	8,985.00	183.07	-127.34	0.00	0.00	0.00	0.00	PUCKETT 24D-23 PE

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24D-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24D-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
300.00	1.50	325.18	299.99	0.54	-0.37	0.65	3.00	3.00	
352.97	3.09	325.18	352.92	2.28	-1.58	2.78	3.00	3.00	Start 4035.01 hold at 352.97 MD
400.00	3.09	325.18	399.88	4.36	-3.03	5.31	0.00	0.00	
500.00	3.09	325.18	499.74	8.78	-6.11	10.70	0.00	0.00	
600.00	3.09	325.18	599.59	13.21	-9.19	16.09	0.00	0.00	
700.00	3.09	325.18	699.45	17.63	-12.26	21.48	0.00	0.00	
800.00	3.09	325.18	799.30	22.05	-15.34	26.87	0.00	0.00	
900.00	3.09	325.18	899.16	26.48	-18.42	32.26	0.00	0.00	
1,000.00	3.09	325.18	999.01	30.90	-21.50	37.64	0.00	0.00	
1,100.00	3.09	325.18	1,098.86	35.33	-24.57	43.03	0.00	0.00	
1,200.00	3.09	325.18	1,198.72	39.75	-27.65	48.42	0.00	0.00	
1,300.00	3.09	325.18	1,298.57	44.18	-30.73	53.81	0.00	0.00	
1,400.00	3.09	325.18	1,398.43	48.60	-33.81	59.20	0.00	0.00	
1,500.00	3.09	325.18	1,498.28	53.02	-36.88	64.59	0.00	0.00	
1,600.00	3.09	325.18	1,598.14	57.45	-39.96	69.98	0.00	0.00	
1,700.00	3.09	325.18	1,697.99	61.87	-43.04	75.37	0.00	0.00	
1,800.00	3.09	325.18	1,797.85	66.30	-46.12	80.76	0.00	0.00	
1,900.00	3.09	325.18	1,897.70	70.72	-49.19	86.15	0.00	0.00	
2,000.00	3.09	325.18	1,997.56	75.14	-52.27	91.54	0.00	0.00	
2,100.00	3.09	325.18	2,097.41	79.57	-55.35	96.92	0.00	0.00	
2,200.00	3.09	325.18	2,197.27	83.99	-58.43	102.31	0.00	0.00	
2,300.00	3.09	325.18	2,297.12	88.42	-61.50	107.70	0.00	0.00	
2,400.00	3.09	325.18	2,396.98	92.84	-64.58	113.09	0.00	0.00	
2,500.00	3.09	325.18	2,496.83	97.26	-67.66	118.48	0.00	0.00	
2,600.00	3.09	325.18	2,596.68	101.69	-70.73	123.87	0.00	0.00	
2,700.00	3.09	325.18	2,696.54	106.11	-73.81	129.26	0.00	0.00	
2,800.00	3.09	325.18	2,796.39	110.54	-76.89	134.65	0.00	0.00	
2,900.00	3.09	325.18	2,896.25	114.96	-79.97	140.04	0.00	0.00	
3,000.00	3.09	325.18	2,996.10	119.38	-83.04	145.43	0.00	0.00	
3,100.00	3.09	325.18	3,095.96	123.81	-86.12	150.82	0.00	0.00	
3,200.00	3.09	325.18	3,195.81	128.23	-89.20	156.20	0.00	0.00	
3,300.00	3.09	325.18	3,295.67	132.66	-92.28	161.59	0.00	0.00	
3,400.00	3.09	325.18	3,395.52	137.08	-95.35	166.98	0.00	0.00	
3,500.00	3.09	325.18	3,495.38	141.50	-98.43	172.37	0.00	0.00	
3,600.00	3.09	325.18	3,595.23	145.93	-101.51	177.76	0.00	0.00	
3,700.00	3.09	325.18	3,695.09	150.35	-104.59	183.15	0.00	0.00	
3,800.00	3.09	325.18	3,794.94	154.78	-107.66	188.54	0.00	0.00	
3,900.00	3.09	325.18	3,894.80	159.20	-110.74	193.93	0.00	0.00	
4,000.00	3.09	325.18	3,994.65	163.62	-113.82	199.32	0.00	0.00	
4,100.00	3.09	325.18	4,094.51	168.05	-116.90	204.71	0.00	0.00	
4,200.00	3.09	325.18	4,194.36	172.47	-119.97	210.10	0.00	0.00	
4,300.00	3.09	325.18	4,294.21	176.90	-123.05	215.49	0.00	0.00	
4,387.99	3.09	325.18	4,382.08	180.79	-125.76	220.23	0.00	0.00	Start Drop -3.00
4,400.00	2.73	325.18	4,394.07	181.29	-126.11	220.84	3.00	-3.00	
4,490.96	0.00	0.00	4,485.00	183.07	-127.34	223.00	3.00	-3.00	Start 4500.00 hold at 4490.96 MD
4,500.00	0.00	0.00	4,494.04	183.07	-127.34	223.00	0.00	0.00	
4,600.00	0.00	0.00	4,594.04	183.07	-127.34	223.00	0.00	0.00	
4,700.00	0.00	0.00	4,694.04	183.07	-127.34	223.00	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24D-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24D-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
4,800.00	0.00	0.00	4,794.04	183.07	-127.34	223.00	0.00	0.00	
4,900.00	0.00	0.00	4,894.04	183.07	-127.34	223.00	0.00	0.00	
5,000.00	0.00	0.00	4,994.04	183.07	-127.34	223.00	0.00	0.00	
5,100.00	0.00	0.00	5,094.04	183.07	-127.34	223.00	0.00	0.00	
5,200.00	0.00	0.00	5,194.04	183.07	-127.34	223.00	0.00	0.00	
5,300.00	0.00	0.00	5,294.04	183.07	-127.34	223.00	0.00	0.00	
5,400.00	0.00	0.00	5,394.04	183.07	-127.34	223.00	0.00	0.00	
5,500.00	0.00	0.00	5,494.04	183.07	-127.34	223.00	0.00	0.00	
5,600.00	0.00	0.00	5,594.04	183.07	-127.34	223.00	0.00	0.00	
5,700.00	0.00	0.00	5,694.04	183.07	-127.34	223.00	0.00	0.00	
5,800.00	0.00	0.00	5,794.04	183.07	-127.34	223.00	0.00	0.00	
5,900.00	0.00	0.00	5,894.04	183.07	-127.34	223.00	0.00	0.00	
6,000.00	0.00	0.00	5,994.04	183.07	-127.34	223.00	0.00	0.00	
6,065.96	0.00	0.00	6,060.00	183.07	-127.34	223.00	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,100.00	0.00	0.00	6,094.04	183.07	-127.34	223.00	0.00	0.00	
6,200.00	0.00	0.00	6,194.04	183.07	-127.34	223.00	0.00	0.00	
6,208.96	0.00	0.00	6,203.00	183.07	-127.34	223.00	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,300.00	0.00	0.00	6,294.04	183.07	-127.34	223.00	0.00	0.00	
6,400.00	0.00	0.00	6,394.04	183.07	-127.34	223.00	0.00	0.00	
6,500.00	0.00	0.00	6,494.04	183.07	-127.34	223.00	0.00	0.00	
6,600.00	0.00	0.00	6,594.04	183.07	-127.34	223.00	0.00	0.00	
6,700.00	0.00	0.00	6,694.04	183.07	-127.34	223.00	0.00	0.00	
6,800.00	0.00	0.00	6,794.04	183.07	-127.34	223.00	0.00	0.00	
6,900.00	0.00	0.00	6,894.04	183.07	-127.34	223.00	0.00	0.00	
6,962.96	0.00	0.00	6,957.00	183.07	-127.34	223.00	0.00	0.00	TOP_GAS.MBL (TVD)
7,000.00	0.00	0.00	6,994.04	183.07	-127.34	223.00	0.00	0.00	
7,100.00	0.00	0.00	7,094.04	183.07	-127.34	223.00	0.00	0.00	
7,200.00	0.00	0.00	7,194.04	183.07	-127.34	223.00	0.00	0.00	
7,300.00	0.00	0.00	7,294.04	183.07	-127.34	223.00	0.00	0.00	
7,400.00	0.00	0.00	7,394.04	183.07	-127.34	223.00	0.00	0.00	
7,500.00	0.00	0.00	7,494.04	183.07	-127.34	223.00	0.00	0.00	
7,600.00	0.00	0.00	7,594.04	183.07	-127.34	223.00	0.00	0.00	
7,700.00	0.00	0.00	7,694.04	183.07	-127.34	223.00	0.00	0.00	
7,800.00	0.00	0.00	7,794.04	183.07	-127.34	223.00	0.00	0.00	
7,900.00	0.00	0.00	7,894.04	183.07	-127.34	223.00	0.00	0.00	
8,000.00	0.00	0.00	7,994.04	183.07	-127.34	223.00	0.00	0.00	
8,100.00	0.00	0.00	8,094.04	183.07	-127.34	223.00	0.00	0.00	
8,200.00	0.00	0.00	8,194.04	183.07	-127.34	223.00	0.00	0.00	
8,300.00	0.00	0.00	8,294.04	183.07	-127.34	223.00	0.00	0.00	
8,320.96	0.00	0.00	8,315.00	183.07	-127.34	223.00	0.00	0.00	CAMEO.MBL (TVD)
8,400.00	0.00	0.00	8,394.04	183.07	-127.34	223.00	0.00	0.00	
8,500.00	0.00	0.00	8,494.04	183.07	-127.34	223.00	0.00	0.00	
8,600.00	0.00	0.00	8,594.04	183.07	-127.34	223.00	0.00	0.00	
8,700.00	0.00	0.00	8,694.04	183.07	-127.34	223.00	0.00	0.00	
8,800.00	0.00	0.00	8,794.04	183.07	-127.34	223.00	0.00	0.00	
8,820.96	0.00	0.00	8,815.00	183.07	-127.34	223.00	0.00	0.00	ROLLINS.MBL (TVD)
8,900.00	0.00	0.00	8,894.04	183.07	-127.34	223.00	0.00	0.00	
8,990.96	0.00	0.00	8,985.00	183.07	-127.34	223.00	0.00	0.00	TD at 8990.96 - TD.MBL (TVD)

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well PUCKETT 24D-23
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 8462.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 8462.00usft
<b>Site:</b>	S23-T6S-R97W (MESA N23)	<b>North Reference:</b>	True
<b>Well:</b>	PUCKETT 24D-23	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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 24D-23 PBHI	0.00	0.00	8,985.00	183.07	-127.34	14,357,721.00	2,433,707.00	39.503697	-108.187881
- plan hits target center									
- Circle (radius 100.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,065.96	6,060.00	OHIO_CREEK.MBL (TVD)				
6,208.96	6,203.00	WILLIAMS_FORK.MBL (TVD)				
6,962.96	6,957.00	TOP_GAS.MBL (TVD)				
8,320.96	8,315.00	CAMEO.MBL (TVD)				
8,820.96	8,815.00	ROLLINS.MBL (TVD)				
8,990.96	8,985.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
250.00	250.00	0.00	0.00	Start Build 3.00	
352.97	352.92	2.28	-1.58	Start 4035.01 hold at 352.97 MD	
4,387.99	4,382.08	180.79	-125.76	Start Drop -3.00	
4,490.96	4,485.00	183.07	-127.34	Start 4500.00 hold at 4490.96 MD	
8,990.96	8,985.00	183.07	-127.34	TD at 8990.96	