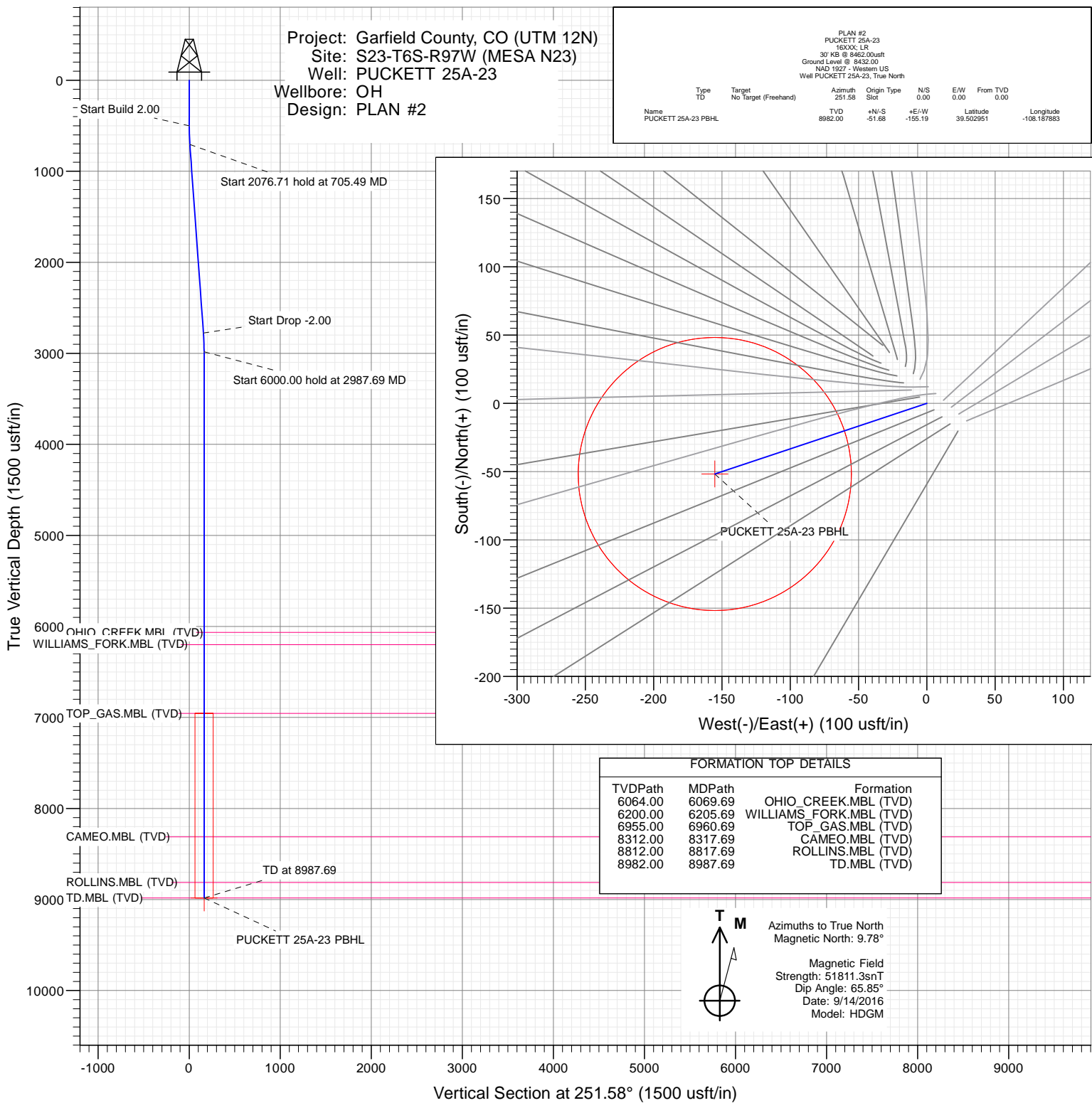




SECTION DETAILS

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	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	705.49	4.11	251.58	705.31	-2.33	-6.99	2.00	251.58	7.37	
4	2782.20	4.11	251.58	2776.69	-49.35	-148.20	0.00	0.00	156.20	
5	2987.69	0.00	0.00	2982.00	-51.68	-155.19	2.00	180.00	163.57	
6	8987.69	0.00	0.00	8982.00	-51.68	-155.19	0.00	0.00	163.57	PUCKETT 25A-23 PBHL



WELL DETAILS: PUCKETT 25A-23

+N/-S	+E/-W	Northing	Ground Level:	8432.00	Latitude	Longitude
0.00	0.00	14357505.50	Easting	2433868.50	39.503092	-108.187333



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 25A-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 25A-23	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		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 25A-23					
Well Position	+N/-S	0.00 usft	Northing:	14,357,505.50 usft	Latitude:	39.503092
	+E/-W	0.00 usft	Easting:	2,433,868.50 usft	Longitude:	-108.187333
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	8,432.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	9/14/2016	9.78	65.85	51,811.30000000

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	251.58	

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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
705.49	4.11	251.58	705.31	-2.33	-6.99	2.00	2.00	0.00	251.58	
2,782.20	4.11	251.58	2,776.69	-49.35	-148.20	0.00	0.00	0.00	0.00	
2,987.69	0.00	0.00	2,982.00	-51.68	-155.19	2.00	-2.00	0.00	180.00	
8,987.69	0.00	0.00	8,982.00	-51.68	-155.19	0.00	0.00	0.00	0.00	PUCKETT 25A-23 PE

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 25A-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 25A-23	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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
600.00	2.00	251.58	599.98	-0.55	-1.66	1.75	2.00	2.00	
700.00	4.00	251.58	699.84	-2.20	-6.62	6.98	2.00	2.00	
705.49	4.11	251.58	705.31	-2.33	-6.99	7.37	2.00	2.00	Start 2076.71 hold at 705.49 MD
800.00	4.11	251.58	799.58	-4.47	-13.42	14.14	0.00	0.00	
900.00	4.11	251.58	899.32	-6.73	-20.22	21.31	0.00	0.00	
1,000.00	4.11	251.58	999.07	-9.00	-27.02	28.47	0.00	0.00	
1,100.00	4.11	251.58	1,098.81	-11.26	-33.82	35.64	0.00	0.00	
1,200.00	4.11	251.58	1,198.55	-13.52	-40.61	42.81	0.00	0.00	
1,300.00	4.11	251.58	1,298.30	-15.79	-47.41	49.97	0.00	0.00	
1,400.00	4.11	251.58	1,398.04	-18.05	-54.21	57.14	0.00	0.00	
1,500.00	4.11	251.58	1,497.78	-20.32	-61.01	64.31	0.00	0.00	
1,600.00	4.11	251.58	1,597.52	-22.58	-67.81	71.47	0.00	0.00	
1,700.00	4.11	251.58	1,697.27	-24.85	-74.61	78.64	0.00	0.00	
1,800.00	4.11	251.58	1,797.01	-27.11	-81.41	85.81	0.00	0.00	
1,900.00	4.11	251.58	1,896.75	-29.37	-88.21	92.98	0.00	0.00	
2,000.00	4.11	251.58	1,996.50	-31.64	-95.01	100.14	0.00	0.00	
2,100.00	4.11	251.58	2,096.24	-33.90	-101.81	107.31	0.00	0.00	
2,200.00	4.11	251.58	2,195.98	-36.17	-108.61	114.48	0.00	0.00	
2,300.00	4.11	251.58	2,295.72	-38.43	-115.41	121.64	0.00	0.00	
2,400.00	4.11	251.58	2,395.47	-40.70	-122.21	128.81	0.00	0.00	
2,500.00	4.11	251.58	2,495.21	-42.96	-129.01	135.98	0.00	0.00	
2,600.00	4.11	251.58	2,594.95	-45.22	-135.81	143.14	0.00	0.00	
2,700.00	4.11	251.58	2,694.69	-47.49	-142.61	150.31	0.00	0.00	
2,782.20	4.11	251.58	2,776.69	-49.35	-148.20	156.20	0.00	0.00	Start Drop -2.00
2,800.00	3.75	251.58	2,794.44	-49.74	-149.36	157.42	2.00	-2.00	
2,900.00	1.75	251.58	2,894.32	-51.25	-153.92	162.23	2.00	-2.00	
2,987.69	0.00	0.00	2,982.00	-51.68	-155.19	163.57	2.00	-2.00	Start 6000.00 hold at 2987.69 MD
3,000.00	0.00	0.00	2,994.31	-51.68	-155.19	163.57	0.00	0.00	
3,100.00	0.00	0.00	3,094.31	-51.68	-155.19	163.57	0.00	0.00	
3,200.00	0.00	0.00	3,194.31	-51.68	-155.19	163.57	0.00	0.00	
3,300.00	0.00	0.00	3,294.31	-51.68	-155.19	163.57	0.00	0.00	
3,400.00	0.00	0.00	3,394.31	-51.68	-155.19	163.57	0.00	0.00	
3,500.00	0.00	0.00	3,494.31	-51.68	-155.19	163.57	0.00	0.00	
3,600.00	0.00	0.00	3,594.31	-51.68	-155.19	163.57	0.00	0.00	
3,700.00	0.00	0.00	3,694.31	-51.68	-155.19	163.57	0.00	0.00	
3,800.00	0.00	0.00	3,794.31	-51.68	-155.19	163.57	0.00	0.00	
3,900.00	0.00	0.00	3,894.31	-51.68	-155.19	163.57	0.00	0.00	
4,000.00	0.00	0.00	3,994.31	-51.68	-155.19	163.57	0.00	0.00	
4,100.00	0.00	0.00	4,094.31	-51.68	-155.19	163.57	0.00	0.00	
4,200.00	0.00	0.00	4,194.31	-51.68	-155.19	163.57	0.00	0.00	
4,300.00	0.00	0.00	4,294.31	-51.68	-155.19	163.57	0.00	0.00	
4,400.00	0.00	0.00	4,394.31	-51.68	-155.19	163.57	0.00	0.00	
4,500.00	0.00	0.00	4,494.31	-51.68	-155.19	163.57	0.00	0.00	
4,600.00	0.00	0.00	4,594.31	-51.68	-155.19	163.57	0.00	0.00	
4,700.00	0.00	0.00	4,694.31	-51.68	-155.19	163.57	0.00	0.00	
4,800.00	0.00	0.00	4,794.31	-51.68	-155.19	163.57	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 25A-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 25A-23	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
4,900.00	0.00	0.00	4,894.31	-51.68	-155.19	163.57	0.00	0.00	
5,000.00	0.00	0.00	4,994.31	-51.68	-155.19	163.57	0.00	0.00	
5,100.00	0.00	0.00	5,094.31	-51.68	-155.19	163.57	0.00	0.00	
5,200.00	0.00	0.00	5,194.31	-51.68	-155.19	163.57	0.00	0.00	
5,300.00	0.00	0.00	5,294.31	-51.68	-155.19	163.57	0.00	0.00	
5,400.00	0.00	0.00	5,394.31	-51.68	-155.19	163.57	0.00	0.00	
5,500.00	0.00	0.00	5,494.31	-51.68	-155.19	163.57	0.00	0.00	
5,600.00	0.00	0.00	5,594.31	-51.68	-155.19	163.57	0.00	0.00	
5,700.00	0.00	0.00	5,694.31	-51.68	-155.19	163.57	0.00	0.00	
5,800.00	0.00	0.00	5,794.31	-51.68	-155.19	163.57	0.00	0.00	
5,900.00	0.00	0.00	5,894.31	-51.68	-155.19	163.57	0.00	0.00	
6,000.00	0.00	0.00	5,994.31	-51.68	-155.19	163.57	0.00	0.00	
6,069.69	0.00	0.00	6,064.00	-51.68	-155.19	163.57	0.00	0.00	OHIO_CREEK.MBL (TVD)
6,100.00	0.00	0.00	6,094.31	-51.68	-155.19	163.57	0.00	0.00	
6,200.00	0.00	0.00	6,194.31	-51.68	-155.19	163.57	0.00	0.00	
6,205.69	0.00	0.00	6,200.00	-51.68	-155.19	163.57	0.00	0.00	WILLIAMS_FORK.MBL (TVD)
6,300.00	0.00	0.00	6,294.31	-51.68	-155.19	163.57	0.00	0.00	
6,400.00	0.00	0.00	6,394.31	-51.68	-155.19	163.57	0.00	0.00	
6,500.00	0.00	0.00	6,494.31	-51.68	-155.19	163.57	0.00	0.00	
6,600.00	0.00	0.00	6,594.31	-51.68	-155.19	163.57	0.00	0.00	
6,700.00	0.00	0.00	6,694.31	-51.68	-155.19	163.57	0.00	0.00	
6,800.00	0.00	0.00	6,794.31	-51.68	-155.19	163.57	0.00	0.00	
6,900.00	0.00	0.00	6,894.31	-51.68	-155.19	163.57	0.00	0.00	
6,960.69	0.00	0.00	6,955.00	-51.68	-155.19	163.57	0.00	0.00	TOP_GAS.MBL (TVD)
7,000.00	0.00	0.00	6,994.31	-51.68	-155.19	163.57	0.00	0.00	
7,100.00	0.00	0.00	7,094.31	-51.68	-155.19	163.57	0.00	0.00	
7,200.00	0.00	0.00	7,194.31	-51.68	-155.19	163.57	0.00	0.00	
7,300.00	0.00	0.00	7,294.31	-51.68	-155.19	163.57	0.00	0.00	
7,400.00	0.00	0.00	7,394.31	-51.68	-155.19	163.57	0.00	0.00	
7,500.00	0.00	0.00	7,494.31	-51.68	-155.19	163.57	0.00	0.00	
7,600.00	0.00	0.00	7,594.31	-51.68	-155.19	163.57	0.00	0.00	
7,700.00	0.00	0.00	7,694.31	-51.68	-155.19	163.57	0.00	0.00	
7,800.00	0.00	0.00	7,794.31	-51.68	-155.19	163.57	0.00	0.00	
7,900.00	0.00	0.00	7,894.31	-51.68	-155.19	163.57	0.00	0.00	
8,000.00	0.00	0.00	7,994.31	-51.68	-155.19	163.57	0.00	0.00	
8,100.00	0.00	0.00	8,094.31	-51.68	-155.19	163.57	0.00	0.00	
8,200.00	0.00	0.00	8,194.31	-51.68	-155.19	163.57	0.00	0.00	
8,300.00	0.00	0.00	8,294.31	-51.68	-155.19	163.57	0.00	0.00	
8,317.69	0.00	0.00	8,312.00	-51.68	-155.19	163.57	0.00	0.00	CAMEO.MBL (TVD)
8,400.00	0.00	0.00	8,394.31	-51.68	-155.19	163.57	0.00	0.00	
8,500.00	0.00	0.00	8,494.31	-51.68	-155.19	163.57	0.00	0.00	
8,600.00	0.00	0.00	8,594.31	-51.68	-155.19	163.57	0.00	0.00	
8,700.00	0.00	0.00	8,694.31	-51.68	-155.19	163.57	0.00	0.00	
8,800.00	0.00	0.00	8,794.31	-51.68	-155.19	163.57	0.00	0.00	
8,817.69	0.00	0.00	8,812.00	-51.68	-155.19	163.57	0.00	0.00	ROLLINS.MBL (TVD)
8,900.00	0.00	0.00	8,894.31	-51.68	-155.19	163.57	0.00	0.00	
8,987.69	0.00	0.00	8,982.00	-51.68	-155.19	163.57	0.00	0.00	TD at 8987.69 - TD.MBL (TVD)

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well PUCKETT 25A-23
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8462.00usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8462.00usft
Site:	S23-T6S-R97W (MESA N23)	North Reference:	True
Well:	PUCKETT 25A-23	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 25A-23 PBHL	0.00	0.00	8,982.00	-51.68	-155.19	14,357,449.00	2,433,715.00	39.502951	-108.187883
- plan hits target center									
- Circle (radius 100.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
6,069.69	6,064.00	OHIO_CREEK.MBL (TVD)				
6,205.69	6,200.00	WILLIAMS_FORK.MBL (TVD)				
6,960.69	6,955.00	TOP_GAS.MBL (TVD)				
8,317.69	8,312.00	CAMEO.MBL (TVD)				
8,817.69	8,812.00	ROLLINS.MBL (TVD)				
8,987.69	8,982.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	Comment	
500.00	500.00	0.00	0.00	Start Build 2.00	
705.49	705.31	-2.33	-6.99	Start 2076.71 hold at 705.49 MD	
2,782.20	2,776.69	-49.35	-148.20	Start Drop -2.00	
2,987.69	2,982.00	-51.68	-155.19	Start 6000.00 hold at 2987.69 MD	
8,987.69	8,982.00	-51.68	-155.19	TD at 8987.69	