

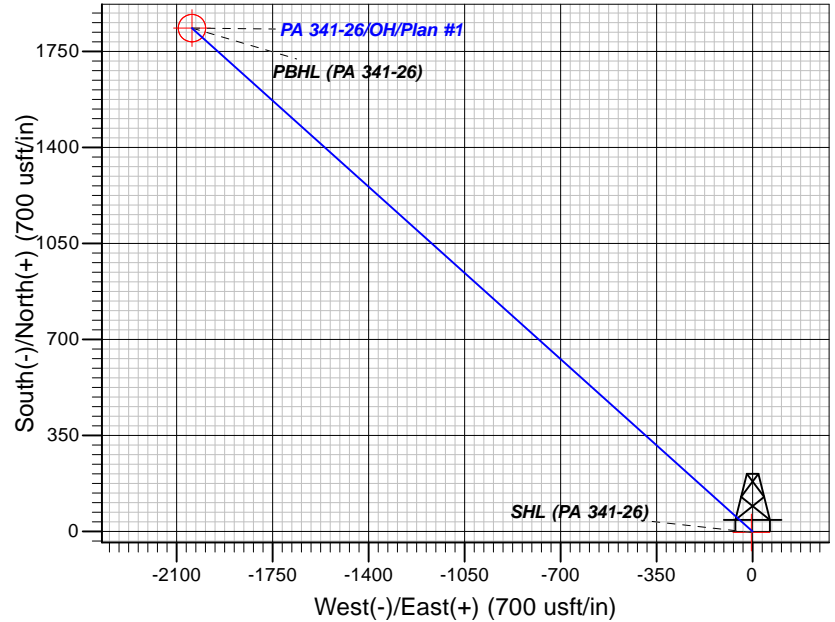
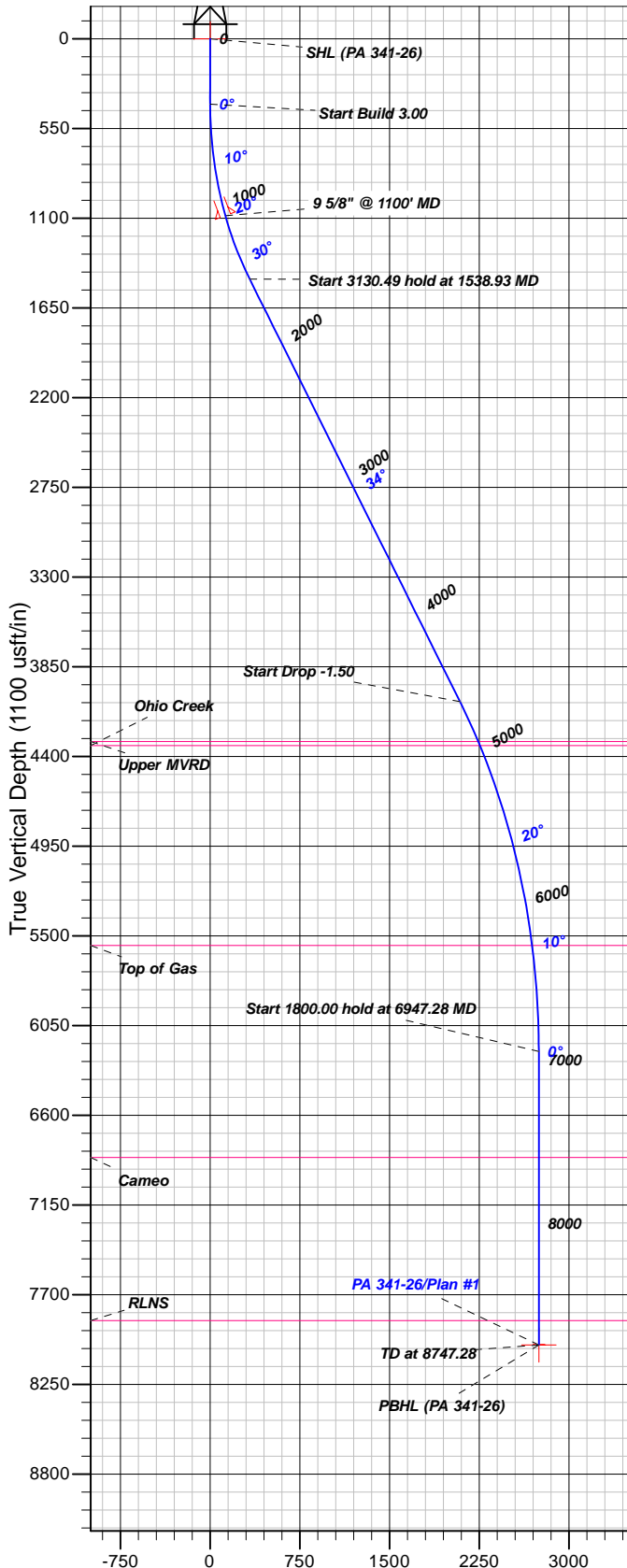
Well Details: PA 341-26

WELL @ 5248.00usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1615188.76	2308785.27	39.4968838	-107.9497024	PA 341-26 (A8)

T M Azimuths to True North
Magnetic North: 10.60°

Magnetic Field
Strength: 52878.2snT
Dip Angle: 66.08°
Date: 5/22/2007
Model: HDGM



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
4308.00	4958.66	Upper MVRD
4333.00	4987.41	Ohio Creek
5558.00	6294.11	Top of Gas
6858.00	7597.28	Cameo
7858.00	8597.28	RLNS

Plan: Plan #1

22:28, June 03 2017
Created By: Mel Mireles

PROJECT DETAILS: Garfield County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

CASING DETAILS

TVD	MD	Name	Size
1084.43	1100.00	9 5/8" @ 1100' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1538.93	34.17	311.92	1472.62	220.23	-245.29	3.00	311.92	329.65	
4	4669.42	34.17	311.92	4062.77	1394.80	-1553.53	0.00	0.002087.80		
5	6947.28	0.00	0.00	6208.00	1835.26	-2044.11	1.50	180.002747.10		
6	8747.28	0.00	0.00	8008.00	1835.26	-2044.11	0.00	0.002747.10		PBHL (PA 341-26)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL (PA 341-26)	0.00	-3.31	-4.50	1615185.57	2308780.68	39.4968747	-107.9497184	Point
- plan misses target center by 5.59usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)								
PBHL (PA 341-26)	8008.00	1835.26	-2044.11	1617078.47	2306791.39	39.5019222	-107.9569465	Circle (Radius: 50.00)
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

PA 22-25 Pad

PA 341-26 - Slot PA 341-26 (A8)

OH

Plan: Plan #1

Standard Planning Report

03 June, 2017



Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 341-26 - Slot PA 341-26 (A8)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 341-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		PA 22-25 Pad			
Site Position:		Northing:		1,615,186.77 usft	
From:		Easting:		2,308,728.18 usft	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
Map		0.00 usft		13.20 in	
				39.4968742	
				-107.9499045	
				-1.55 °	

Well	PA 341-26 - Slot PA 341-26 (A8), A8					
Well Position	+N/-S	3.53 usft	Northing:	1,615,188.76 usft	Latitude:	39.4968839
	+E/-W	57.02 usft	Easting:	2,308,785.27 usft	Longitude:	-107.9497025
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,224.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/22/2007	10.60	66.08	52,878

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	311.92

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
0.00	0.00	0.00	0.00	0.00	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	0.00	
1,538.93	34.17	311.92	1,472.62	220.23	-245.29	3.00	3.00	0.00	311.92	
4,669.42	34.17	311.92	4,062.77	1,394.80	-1,553.53	0.00	0.00	0.00	0.00	
6,947.28	0.00	0.00	6,208.00	1,835.26	-2,044.11	1.50	-1.50	0.00	180.00	
8,747.28	0.00	0.00	8,008.00	1,835.26	-2,044.11	0.00	0.00	0.00	0.00	PBHL (PA 341-26)

Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 341-26 - Slot PA 341-26 (A8)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 341-26	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 (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (PA 341-26)									
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	3.00	311.92	499.95	1.75	-1.95	2.62	3.00	3.00	0.00
600.00	6.00	311.92	599.63	6.99	-7.79	10.46	3.00	3.00	0.00
700.00	9.00	311.92	698.77	15.71	-17.50	23.51	3.00	3.00	0.00
800.00	12.00	311.92	797.08	27.88	-31.05	41.74	3.00	3.00	0.00
900.00	15.00	311.92	894.31	43.48	-48.42	65.08	3.00	3.00	0.00
1,000.00	18.00	311.92	990.18	62.45	-69.55	93.48	3.00	3.00	0.00
1,100.00	21.00	311.92	1,084.43	84.75	-94.39	126.85	3.00	3.00	0.00
9 5/8" @ 1100' MD									
1,200.00	24.00	311.92	1,176.81	110.31	-122.86	165.12	3.00	3.00	0.00
1,300.00	27.00	311.92	1,267.06	139.07	-154.89	208.16	3.00	3.00	0.00
1,400.00	30.00	311.92	1,354.93	170.94	-190.39	255.87	3.00	3.00	0.00
1,500.00	33.00	311.92	1,440.18	205.84	-229.27	308.12	3.00	3.00	0.00
1,538.93	34.17	311.92	1,472.62	220.23	-245.29	329.65	3.00	3.00	0.00
1,600.00	34.17	311.92	1,523.14	243.14	-270.81	363.95	0.00	0.00	0.00
1,700.00	34.17	311.92	1,605.88	280.66	-312.60	420.11	0.00	0.00	0.00
1,800.00	34.17	311.92	1,688.62	318.18	-354.39	476.27	0.00	0.00	0.00
1,900.00	34.17	311.92	1,771.36	355.70	-396.18	532.43	0.00	0.00	0.00
2,000.00	34.17	311.92	1,854.10	393.22	-437.97	588.60	0.00	0.00	0.00
2,100.00	34.17	311.92	1,936.84	430.74	-479.76	644.76	0.00	0.00	0.00
2,200.00	34.17	311.92	2,019.58	468.27	-521.55	700.92	0.00	0.00	0.00
2,300.00	34.17	311.92	2,102.32	505.79	-563.34	757.08	0.00	0.00	0.00
2,400.00	34.17	311.92	2,185.06	543.31	-605.13	813.25	0.00	0.00	0.00
2,500.00	34.17	311.92	2,267.80	580.83	-646.92	869.41	0.00	0.00	0.00
2,600.00	34.17	311.92	2,350.54	618.35	-688.71	925.57	0.00	0.00	0.00
2,700.00	34.17	311.92	2,433.28	655.87	-730.50	981.73	0.00	0.00	0.00
2,800.00	34.17	311.92	2,516.02	693.39	-772.29	1,037.89	0.00	0.00	0.00
2,900.00	34.17	311.92	2,598.76	730.91	-814.08	1,094.06	0.00	0.00	0.00
3,000.00	34.17	311.92	2,681.50	768.43	-855.87	1,150.22	0.00	0.00	0.00
3,100.00	34.17	311.92	2,764.24	805.95	-897.66	1,206.38	0.00	0.00	0.00
3,200.00	34.17	311.92	2,846.98	843.47	-939.45	1,262.54	0.00	0.00	0.00
3,300.00	34.17	311.92	2,929.72	880.99	-981.24	1,318.70	0.00	0.00	0.00
3,400.00	34.17	311.92	3,012.46	918.51	-1,023.03	1,374.87	0.00	0.00	0.00
3,500.00	34.17	311.92	3,095.19	956.03	-1,064.82	1,431.03	0.00	0.00	0.00
3,600.00	34.17	311.92	3,177.93	993.55	-1,106.61	1,487.19	0.00	0.00	0.00
3,700.00	34.17	311.92	3,260.67	1,031.07	-1,148.40	1,543.35	0.00	0.00	0.00
3,800.00	34.17	311.92	3,343.41	1,068.59	-1,190.19	1,599.51	0.00	0.00	0.00
3,900.00	34.17	311.92	3,426.15	1,106.11	-1,231.98	1,655.68	0.00	0.00	0.00
4,000.00	34.17	311.92	3,508.89	1,143.63	-1,273.77	1,711.84	0.00	0.00	0.00
4,100.00	34.17	311.92	3,591.63	1,181.15	-1,315.56	1,768.00	0.00	0.00	0.00
4,200.00	34.17	311.92	3,674.37	1,218.67	-1,357.35	1,824.16	0.00	0.00	0.00
4,300.00	34.17	311.92	3,757.11	1,256.19	-1,399.14	1,880.32	0.00	0.00	0.00
4,400.00	34.17	311.92	3,839.85	1,293.71	-1,440.93	1,936.49	0.00	0.00	0.00
4,500.00	34.17	311.92	3,922.59	1,331.23	-1,482.72	1,992.65	0.00	0.00	0.00
4,600.00	34.17	311.92	4,005.33	1,368.75	-1,524.51	2,048.81	0.00	0.00	0.00
4,669.42	34.17	311.92	4,062.77	1,394.80	-1,553.53	2,087.80	0.00	0.00	0.00
4,700.00	33.71	311.92	4,088.14	1,406.20	-1,566.23	2,104.87	1.50	-1.50	0.00
4,800.00	32.21	311.92	4,172.04	1,442.55	-1,606.71	2,159.27	1.50	-1.50	0.00
4,900.00	30.71	311.92	4,257.34	1,477.41	-1,645.54	2,211.46	1.50	-1.50	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 341-26 - Slot PA 341-26 (A8)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 341-26	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 (°/100usft)	Turn Rate (°/100usft)
4,958.66	29.83	311.92	4,308.00	1,497.17	-1,667.54	2,241.03	1.50	-1.50	0.00
Upper MVRD									
4,987.42	29.40	311.92	4,333.00	1,506.66	-1,678.12	2,255.24	1.50	-1.50	0.00
Ohio Creek									
5,000.00	29.21	311.92	4,343.97	1,510.77	-1,682.70	2,261.40	1.50	-1.50	0.00
5,100.00	27.71	311.92	4,431.89	1,542.61	-1,718.16	2,309.05	1.50	-1.50	0.00
5,168.44	26.68	311.92	4,492.76	1,563.50	-1,741.43	2,340.33	1.50	-1.50	0.00
PA 341-26 MVRD									
5,200.00	26.21	311.92	4,521.02	1,572.90	-1,751.89	2,354.38	1.50	-1.50	0.00
5,300.00	24.71	311.92	4,611.30	1,601.61	-1,783.88	2,397.37	1.50	-1.50	0.00
5,400.00	23.21	311.92	4,702.69	1,628.74	-1,814.09	2,437.98	1.50	-1.50	0.00
5,500.00	21.71	311.92	4,795.10	1,654.26	-1,842.52	2,476.18	1.50	-1.50	0.00
5,600.00	20.21	311.92	4,888.48	1,678.16	-1,869.13	2,511.95	1.50	-1.50	0.00
5,700.00	18.71	311.92	4,982.76	1,700.42	-1,893.92	2,545.26	1.50	-1.50	0.00
5,800.00	17.21	311.92	5,077.89	1,721.01	-1,916.87	2,576.09	1.50	-1.50	0.00
5,900.00	15.71	311.92	5,173.79	1,739.94	-1,937.95	2,604.43	1.50	-1.50	0.00
6,000.00	14.21	311.92	5,270.40	1,757.19	-1,957.15	2,630.24	1.50	-1.50	0.00
6,100.00	12.71	311.92	5,367.65	1,772.74	-1,974.47	2,653.51	1.50	-1.50	0.00
6,200.00	11.21	311.92	5,465.47	1,786.58	-1,989.89	2,674.24	1.50	-1.50	0.00
6,294.11	9.80	311.92	5,558.00	1,798.04	-2,002.66	2,691.39	1.50	-1.50	0.00
Top of Gas									
6,300.00	9.71	311.92	5,563.81	1,798.71	-2,003.40	2,692.39	1.50	-1.50	0.00
6,400.00	8.21	311.92	5,662.59	1,809.11	-2,014.99	2,707.96	1.50	-1.50	0.00
6,500.00	6.71	311.92	5,761.74	1,817.78	-2,024.65	2,720.94	1.50	-1.50	0.00
6,600.00	5.21	311.92	5,861.19	1,824.72	-2,032.37	2,731.32	1.50	-1.50	0.00
6,700.00	3.71	311.92	5,960.89	1,829.91	-2,038.16	2,739.10	1.50	-1.50	0.00
6,800.00	2.21	311.92	6,060.75	1,833.36	-2,042.00	2,744.26	1.50	-1.50	0.00
6,900.00	0.71	311.92	6,160.72	1,835.06	-2,043.89	2,746.81	1.50	-1.50	0.00
6,947.28	0.00	0.00	6,208.00	1,835.26	-2,044.11	2,747.10	1.50	-1.50	0.00
7,000.00	0.00	0.00	6,260.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,100.00	0.00	0.00	6,360.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,200.00	0.00	0.00	6,460.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,300.00	0.00	0.00	6,560.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,400.00	0.00	0.00	6,660.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,500.00	0.00	0.00	6,760.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,597.28	0.00	0.00	6,858.00	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
Cameo									
7,600.00	0.00	0.00	6,860.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,700.00	0.00	0.00	6,960.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,800.00	0.00	0.00	7,060.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
7,900.00	0.00	0.00	7,160.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,000.00	0.00	0.00	7,260.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,100.00	0.00	0.00	7,360.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,200.00	0.00	0.00	7,460.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,300.00	0.00	0.00	7,560.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,400.00	0.00	0.00	7,660.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,500.00	0.00	0.00	7,760.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,597.28	0.00	0.00	7,858.00	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
RLNS									
8,600.00	0.00	0.00	7,860.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,700.00	0.00	0.00	7,960.72	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
8,747.28	0.00	0.00	8,008.00	1,835.26	-2,044.11	2,747.10	0.00	0.00	0.00
PA 341-26 PBHL - PBHL (PA 341-26)									

Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 341-26 - Slot PA 341-26 (A8)
Company:	TEP Rocky Mountain LLC	TVD Reference:	WELL @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	WELL @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 341-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design 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									
SHL (PA 341-26)	0.00	0.00	0.00	-3.31	-4.50	1,615,185.57	2,308,780.68	39.4968748	-107.9497184
- plan misses target center by 5.59usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL (PA 341-26)	0.00	0.00	8,008.00	1,835.26	-2,044.11	1,617,078.46	2,306,791.39	39.5019222	-107.9569466
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,084.43	9 5/8" @ 1100' MD	9.62	13.50	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,958.66	7,629.20	Upper MVRD		0.00		
4,987.42	7,654.20	Ohio Creek		0.00		
6,294.11	8,879.20	Top of Gas		0.00		
7,597.28	10,179.20	Cameo		0.00		
8,597.28	11,179.20	RLNS		0.00		