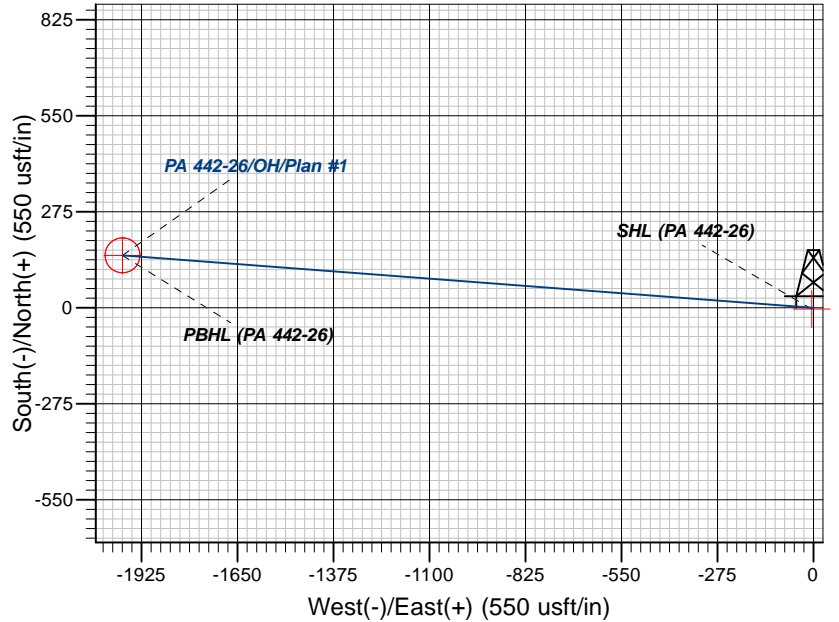
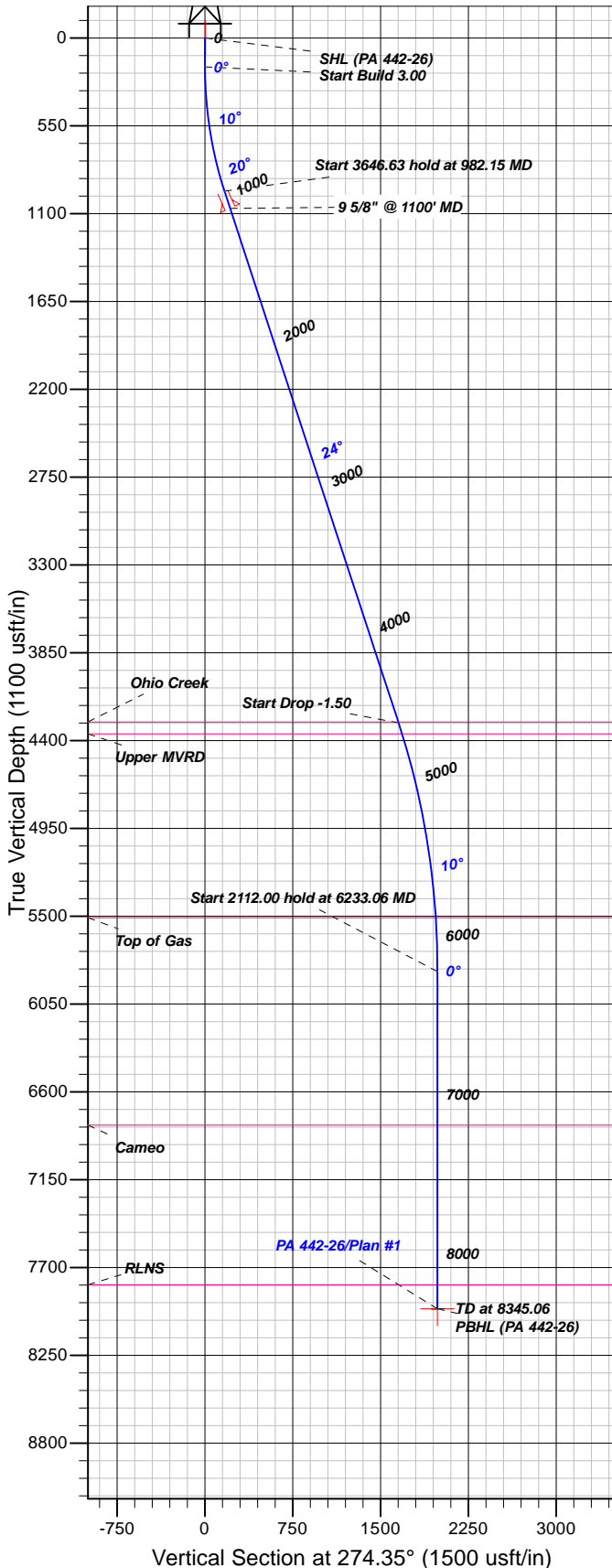


## Well Details: PA 442-26

WELL @ 5248.00usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1615200.04	2308733.03	39.4969109	-107.9498886	PA 442-26 (B1)

**T M** Azimuths to True North  
Magnetic North: 9.45°  
  
Magnetic Field  
Strength: 51743.4snT  
Dip Angle: 65.82°  
Date: 5/23/2017  
Model: HDGM



### FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
4283.00	4622.79	Ohio Creek
4358.00	4704.60	Upper MVRD
5508.00	5894.62	Top of Gas
6808.00	7195.06	Cameo
7808.00	8195.06	RLNS

Plan: Plan #1

16:51, June 04 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
1066.38	1100.00	9 5/8" @ 1100' MD	9.62

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	180.00	0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00	
3	982.15	24.06	274.35	958.77	12.58	-165.51	3.00	274.35	165.99	
4	4628.77	24.06	274.35	4288.46	125.26	-1648.20	0.00	0.001652.95		
5	6233.06	0.00	0.00	5846.00	150.41	-1979.22	1.50	180.001984.93		
6	8345.06	0.00	0.00	7958.00	150.41	-1979.22	0.00	0.001984.93	PBHL (PA 442-26)	

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SHL (PA 442-26)	0.00	-3.40	-4.56	1615196.77	2308728.38	39.4969016	-107.9499047	Point
- plan misses target center by 5.69usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)								
PBHL (PA 442-26)	7958.00	150.41	-1979.22	1615403.77	2306758.59	39.4973237	-107.9569022	Circle (Radius: 50.00)
- plan hits target center								



# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**PA 22-25 Pad**

**PA 442-26 - Slot PA 442-26 (B1)**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**04 June, 2017**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 442-26 - Slot PA 442-26 (B1)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Site:</b>	PA 22-25 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 442-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

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

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

<b>Well</b>	PA 442-26 - Slot PA 442-26 (B1), B1			
<b>Well Position</b>	<b>+N/-S</b>	13.40 usft	<b>Northing:</b>	1,615,200.04 usft
	<b>+E/-W</b>	4.49 usft	<b>Easting:</b>	2,308,733.03 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	5,224.00 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 (nT)</b>
	HDGM	5/23/2017	9.45	65.82	51,743

<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	274.35

<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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
180.00	0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00	0.00	
982.15	24.06	274.35	958.77	12.58	-165.51	3.00	3.00	0.00	274.35	
4,628.77	24.06	274.35	4,288.46	125.26	-1,648.20	0.00	0.00	0.00	0.00	
6,233.06	0.00	0.00	5,846.00	150.41	-1,979.22	1.50	-1.50	0.00	180.00	
8,345.06	0.00	0.00	7,958.00	150.41	-1,979.22	0.00	0.00	0.00	0.00	PBHL (PA 442-26)

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 442-26 - Slot PA 442-26 (B1)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Site:</b>	PA 22-25 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 442-26	<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 (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>SHL (PA 442-26)</b>									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.60	274.35	200.00	0.01	-0.10	0.10	3.00	3.00	0.00
300.00	3.60	274.35	299.92	0.29	-3.76	3.77	3.00	3.00	0.00
400.00	6.60	274.35	399.51	0.96	-12.62	12.66	3.00	3.00	0.00
500.00	9.60	274.35	498.50	2.03	-26.67	26.75	3.00	3.00	0.00
600.00	12.60	274.35	596.62	3.49	-45.86	46.00	3.00	3.00	0.00
700.00	15.60	274.35	693.60	5.33	-70.15	70.35	3.00	3.00	0.00
800.00	18.60	274.35	789.17	7.56	-99.47	99.75	3.00	3.00	0.00
900.00	21.60	274.35	883.07	10.16	-133.73	134.12	3.00	3.00	0.00
982.15	24.06	274.35	958.77	12.58	-165.51	165.99	3.00	3.00	0.00
1,000.00	24.06	274.35	975.07	13.13	-172.77	173.27	0.00	0.00	0.00
1,100.00	24.06	274.35	1,066.38	16.22	-213.43	214.05	0.00	0.00	0.00
<b>9 5/8" @ 1100' MD</b>									
1,200.00	24.06	274.35	1,157.69	19.31	-254.09	254.82	0.00	0.00	0.00
1,300.00	24.06	274.35	1,249.00	22.40	-294.75	295.60	0.00	0.00	0.00
1,400.00	24.06	274.35	1,340.31	25.49	-335.41	336.38	0.00	0.00	0.00
1,500.00	24.06	274.35	1,431.62	28.58	-376.07	377.15	0.00	0.00	0.00
1,600.00	24.06	274.35	1,522.92	31.67	-416.73	417.93	0.00	0.00	0.00
1,700.00	24.06	274.35	1,614.23	34.76	-457.39	458.70	0.00	0.00	0.00
1,800.00	24.06	274.35	1,705.54	37.85	-498.04	499.48	0.00	0.00	0.00
1,900.00	24.06	274.35	1,796.85	40.94	-538.70	540.26	0.00	0.00	0.00
2,000.00	24.06	274.35	1,888.16	44.03	-579.36	581.03	0.00	0.00	0.00
2,100.00	24.06	274.35	1,979.47	47.12	-620.02	621.81	0.00	0.00	0.00
2,200.00	24.06	274.35	2,070.78	50.21	-660.68	662.59	0.00	0.00	0.00
2,300.00	24.06	274.35	2,162.09	53.30	-701.34	703.36	0.00	0.00	0.00
2,400.00	24.06	274.35	2,253.40	56.39	-742.00	744.14	0.00	0.00	0.00
2,500.00	24.06	274.35	2,344.70	59.48	-782.66	784.91	0.00	0.00	0.00
2,600.00	24.06	274.35	2,436.01	62.57	-823.32	825.69	0.00	0.00	0.00
2,700.00	24.06	274.35	2,527.32	65.66	-863.98	866.47	0.00	0.00	0.00
2,800.00	24.06	274.35	2,618.63	68.75	-904.63	907.24	0.00	0.00	0.00
2,900.00	24.06	274.35	2,709.94	71.84	-945.29	948.02	0.00	0.00	0.00
3,000.00	24.06	274.35	2,801.25	74.93	-985.95	988.80	0.00	0.00	0.00
3,100.00	24.06	274.35	2,892.56	78.02	-1,026.61	1,029.57	0.00	0.00	0.00
3,200.00	24.06	274.35	2,983.87	81.11	-1,067.27	1,070.35	0.00	0.00	0.00
3,300.00	24.06	274.35	3,075.17	84.20	-1,107.93	1,111.12	0.00	0.00	0.00
3,400.00	24.06	274.35	3,166.48	87.29	-1,148.59	1,151.90	0.00	0.00	0.00
3,500.00	24.06	274.35	3,257.79	90.38	-1,189.25	1,192.68	0.00	0.00	0.00
3,600.00	24.06	274.35	3,349.10	93.47	-1,229.91	1,233.45	0.00	0.00	0.00
3,700.00	24.06	274.35	3,440.41	96.56	-1,270.57	1,274.23	0.00	0.00	0.00
3,800.00	24.06	274.35	3,531.72	99.65	-1,311.22	1,315.01	0.00	0.00	0.00
3,900.00	24.06	274.35	3,623.03	102.74	-1,351.88	1,355.78	0.00	0.00	0.00
4,000.00	24.06	274.35	3,714.34	105.83	-1,392.54	1,396.56	0.00	0.00	0.00
4,100.00	24.06	274.35	3,805.64	108.92	-1,433.20	1,437.33	0.00	0.00	0.00
4,200.00	24.06	274.35	3,896.95	112.01	-1,473.86	1,478.11	0.00	0.00	0.00
4,300.00	24.06	274.35	3,988.26	115.10	-1,514.52	1,518.89	0.00	0.00	0.00
4,400.00	24.06	274.35	4,079.57	118.19	-1,555.18	1,559.66	0.00	0.00	0.00
4,500.00	24.06	274.35	4,170.88	121.28	-1,595.84	1,600.44	0.00	0.00	0.00
4,600.00	24.06	274.35	4,262.19	124.37	-1,636.50	1,641.22	0.00	0.00	0.00
4,622.79	24.06	274.35	4,283.00	125.07	-1,645.76	1,650.51	0.00	0.00	0.00
<b>Ohio Creek</b>									

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 442-26 - Slot PA 442-26 (B1)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Site:</b>	PA 22-25 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 442-26	<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 (°/100usft)	Turn Rate (°/100usft)
4,628.77	24.06	274.35	4,288.46	125.26	-1,648.20	1,652.95	0.00	0.00	0.00
4,700.00	23.00	274.35	4,353.76	127.41	-1,676.55	1,681.38	1.50	-1.50	0.00
4,704.60	22.93	274.35	4,358.00	127.55	-1,678.34	1,683.18	1.50	-1.50	0.00
<b>Upper MVRD</b>									
4,800.00	21.50	274.35	4,446.32	130.28	-1,714.30	1,719.24	1.50	-1.50	0.00
4,811.52	21.32	274.35	4,457.04	130.60	-1,718.49	1,723.45	1.50	-1.50	0.00
<b>PA 442-26 MVRD</b>									
4,900.00	20.00	274.35	4,539.83	132.97	-1,749.62	1,754.66	1.50	-1.50	0.00
5,000.00	18.50	274.35	4,634.24	135.46	-1,782.48	1,787.62	1.50	-1.50	0.00
5,100.00	17.00	274.35	4,729.48	137.77	-1,812.88	1,818.10	1.50	-1.50	0.00
5,200.00	15.50	274.35	4,825.48	139.89	-1,840.77	1,846.08	1.50	-1.50	0.00
5,300.00	14.00	274.35	4,922.19	141.82	-1,866.15	1,871.53	1.50	-1.50	0.00
5,400.00	12.50	274.35	5,019.52	143.56	-1,889.00	1,894.44	1.50	-1.50	0.00
5,500.00	11.00	274.35	5,117.43	145.10	-1,909.29	1,914.80	1.50	-1.50	0.00
5,600.00	9.50	274.35	5,215.83	146.45	-1,927.03	1,932.59	1.50	-1.50	0.00
5,700.00	8.00	274.35	5,314.66	147.60	-1,942.19	1,947.79	1.50	-1.50	0.00
5,800.00	6.50	274.35	5,413.86	148.56	-1,954.77	1,960.41	1.50	-1.50	0.00
5,894.62	5.08	274.35	5,508.00	149.28	-1,964.28	1,969.94	1.50	-1.50	0.00
<b>Top of Gas</b>									
5,900.00	5.00	274.35	5,513.36	149.32	-1,964.75	1,970.42	1.50	-1.50	0.00
6,000.00	3.50	274.35	5,613.08	149.88	-1,972.13	1,977.82	1.50	-1.50	0.00
6,100.00	2.00	274.35	5,712.96	150.24	-1,976.91	1,982.61	1.50	-1.50	0.00
6,200.00	0.50	274.35	5,812.94	150.40	-1,979.08	1,984.79	1.50	-1.50	0.00
6,233.06	0.00	0.00	5,846.00	150.41	-1,979.22	1,984.93	1.50	-1.50	0.00
6,300.00	0.00	0.00	5,912.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
6,400.00	0.00	0.00	6,012.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
6,500.00	0.00	0.00	6,112.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
6,600.00	0.00	0.00	6,212.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
6,700.00	0.00	0.00	6,312.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
6,800.00	0.00	0.00	6,412.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
6,900.00	0.00	0.00	6,512.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,000.00	0.00	0.00	6,612.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,100.00	0.00	0.00	6,712.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,195.06	0.00	0.00	6,808.00	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
<b>Cameo</b>									
7,200.00	0.00	0.00	6,812.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,300.00	0.00	0.00	6,912.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,400.00	0.00	0.00	7,012.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,500.00	0.00	0.00	7,112.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,600.00	0.00	0.00	7,212.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,700.00	0.00	0.00	7,312.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,800.00	0.00	0.00	7,412.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
7,900.00	0.00	0.00	7,512.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
8,000.00	0.00	0.00	7,612.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
8,100.00	0.00	0.00	7,712.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
8,195.06	0.00	0.00	7,808.00	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
<b>RLNS</b>									
8,200.00	0.00	0.00	7,812.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
8,300.00	0.00	0.00	7,912.94	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
8,345.06	0.00	0.00	7,958.00	150.41	-1,979.22	1,984.93	0.00	0.00	0.00
<b>PBHL (PA 442-26) - PA 442-26 PBHL</b>									

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 442-26 - Slot PA 442-26 (B1)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	WELL @ 5248.00usft (Original Well Elev)
<b>Site:</b>	PA 22-25 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 442-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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 442-26)	0.00	0.00	0.00	-3.40	-4.56	1,615,196.77	2,308,728.38	39.4969016	-107.9499048
- plan misses target center by 5.69usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL (PA 442-26)	0.00	0.00	7,958.00	150.41	-1,979.22	1,615,403.77	2,306,758.59	39.4973237	-107.9569023
- 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	1,066.38	9 5/8" @ 1100' MD	9.62	13.50	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,622.79	4,283.00	Ohio Creek		0.00		
4,704.60	4,358.00	Upper MVRD		0.00		
5,894.62	5,508.00	Top of Gas		0.00		
7,195.06	6,808.00	Cameo		0.00		
8,195.06	7,808.00	RLNS		0.00		