

# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**PA 23-26 Pad**

**PA 612-26 - Slot A15**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**10 July, 2017**

**N/A**  
Planning Report

<b>Database:</b>	EDM_PRO	<b>Local Co-ordinate Reference:</b>	Well PA 612-26 - Slot A15
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	WELL @ 5658.0ft (Original Well Elev)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	WELL @ 5658.0ft (Original Well Elev)
<b>Site:</b>	PA 23-26 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 612-26	<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 23-26 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,614,400.30 ft	<b>Latitude:</b> 39° 29' 39.674 N
<b>From:</b> Map		<b>Easting:</b>	2,303,981.10 ft	<b>Longitude:</b> 107° 57' 59.978 W
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.56 °

<b>Well</b>	PA 612-26 - Slot A15, A15			
<b>Well Position</b>	<b>+N/-S</b>	-4.3 ft	<b>Northing:</b>	1,614,398.84 ft
	<b>+E/-W</b>	-105.6 ft	<b>Easting:</b>	2,303,875.43 ft
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 5,637.0 ft

<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>
	IGRF2000	12/31/2004	11.44	65.99	53,054.03766437

<b>Design</b>	Plan #1			
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	319.64

<b>Plan Survey Tool Program</b>	<b>Date</b>	7/10/2017		
<b>Depth From (ft)</b>	<b>Depth To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.0	9,029.7 Plan #1 (OH)	SDI MWD	
			SDI MWD - Standard ver 1.0.1	

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
150.0	0.00	0.00	150.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,116.7	29.00	319.64	1,075.9	182.5	-155.1	3.00	3.00	0.00	319.64	
4,959.8	29.00	319.64	4,437.1	1,602.1	-1,361.8	0.00	0.00	0.00	0.00	
6,893.1	0.00	0.00	6,289.0	1,967.0	-1,672.0	1.50	-1.50	0.00	180.00	
9,030.1	0.00	0.00	8,426.0	1,967.0	-1,672.0	0.00	0.00	0.00	0.00	PBHL(PA 612-26)

**N/A**  
Planning Report

<b>Database:</b>	EDM_PRO	<b>Local Co-ordinate Reference:</b>	Well PA 612-26 - Slot A15
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	WELL @ 5658.0ft (Original Well Elev)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	WELL @ 5658.0ft (Original Well Elev)
<b>Site:</b>	PA 23-26 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 612-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
150.0	0.00	0.00	150.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	1.50	319.64	200.0	0.5	-0.4	0.7	3.00	3.00	0.00
300.0	4.50	319.64	299.8	4.5	-3.8	5.9	3.00	3.00	0.00
400.0	7.50	319.64	399.3	12.4	-10.6	16.3	3.00	3.00	0.00
500.0	10.50	319.64	498.0	24.4	-20.7	32.0	3.00	3.00	0.00
600.0	13.50	319.64	595.8	40.2	-34.2	52.8	3.00	3.00	0.00
700.0	16.50	319.64	692.4	59.9	-50.9	78.6	3.00	3.00	0.00
800.0	19.50	319.64	787.5	83.5	-70.9	109.5	3.00	3.00	0.00
900.0	22.50	319.64	880.9	110.8	-94.2	145.4	3.00	3.00	0.00
1,000.0	25.50	319.64	972.2	141.8	-120.5	186.0	3.00	3.00	0.00
1,100.0	28.50	319.64	1,061.3	176.3	-149.9	231.4	3.00	3.00	0.00
<b>9 5/8"</b>									
1,116.7	29.00	319.64	1,075.9	182.5	-155.1	239.5	3.00	3.00	0.00
1,200.0	29.00	319.64	1,148.8	213.2	-181.3	279.9	0.00	0.00	0.00
1,300.0	29.00	319.64	1,236.3	250.2	-212.7	328.3	0.00	0.00	0.00
1,400.0	29.00	319.64	1,323.7	287.1	-244.1	376.8	0.00	0.00	0.00
1,500.0	29.00	319.64	1,411.2	324.1	-275.5	425.3	0.00	0.00	0.00
1,600.0	29.00	319.64	1,498.7	361.0	-306.8	473.8	0.00	0.00	0.00
1,700.0	29.00	319.64	1,586.1	397.9	-338.2	522.3	0.00	0.00	0.00
1,800.0	29.00	319.64	1,673.6	434.9	-369.6	570.7	0.00	0.00	0.00
1,900.0	29.00	319.64	1,761.0	471.8	-401.0	619.2	0.00	0.00	0.00
2,000.0	29.00	319.64	1,848.5	508.8	-432.4	667.7	0.00	0.00	0.00
2,100.0	29.00	319.64	1,936.0	545.7	-463.8	716.2	0.00	0.00	0.00
2,200.0	29.00	319.64	2,023.4	582.6	-495.2	764.7	0.00	0.00	0.00
2,300.0	29.00	319.64	2,110.9	619.6	-526.6	813.2	0.00	0.00	0.00
2,400.0	29.00	319.64	2,198.3	656.5	-558.0	861.6	0.00	0.00	0.00
2,500.0	29.00	319.64	2,285.8	693.5	-589.4	910.1	0.00	0.00	0.00
2,600.0	29.00	319.64	2,373.3	730.4	-620.8	958.6	0.00	0.00	0.00
2,700.0	29.00	319.64	2,460.7	767.3	-652.2	1,007.1	0.00	0.00	0.00
2,800.0	29.00	319.64	2,548.2	804.3	-683.6	1,055.6	0.00	0.00	0.00
2,811.2	29.00	319.64	2,558.0	808.4	-687.2	1,061.0	0.00	0.00	0.00
<b>WASATCH G</b>									
2,879.8	29.00	319.64	2,618.0	833.8	-708.7	1,094.3	0.00	0.00	0.00
<b>WASATCH G BASE</b>									
2,900.0	29.00	319.64	2,635.7	841.2	-715.0	1,104.0	0.00	0.00	0.00
3,000.0	29.00	319.64	2,723.1	878.1	-746.4	1,152.5	0.00	0.00	0.00
3,100.0	29.00	319.64	2,810.6	915.1	-777.8	1,201.0	0.00	0.00	0.00
3,200.0	29.00	319.64	2,898.0	952.0	-809.2	1,249.5	0.00	0.00	0.00
3,300.0	29.00	319.64	2,985.5	989.0	-840.6	1,298.0	0.00	0.00	0.00
3,400.0	29.00	319.64	3,073.0	1,025.9	-872.0	1,346.5	0.00	0.00	0.00
3,500.0	29.00	319.64	3,160.4	1,062.8	-903.4	1,394.9	0.00	0.00	0.00
3,600.0	29.00	319.64	3,247.9	1,099.8	-934.8	1,443.4	0.00	0.00	0.00
3,700.0	29.00	319.64	3,335.4	1,136.7	-966.2	1,491.9	0.00	0.00	0.00
3,800.0	29.00	319.64	3,422.8	1,173.7	-997.6	1,540.4	0.00	0.00	0.00
3,900.0	29.00	319.64	3,510.3	1,210.6	-1,029.0	1,588.9	0.00	0.00	0.00
4,000.0	29.00	319.64	3,597.7	1,247.5	-1,060.4	1,637.3	0.00	0.00	0.00
4,100.0	29.00	319.64	3,685.2	1,284.5	-1,091.8	1,685.8	0.00	0.00	0.00
4,200.0	29.00	319.64	3,772.7	1,321.4	-1,123.2	1,734.3	0.00	0.00	0.00
4,300.0	29.00	319.64	3,860.1	1,358.4	-1,154.6	1,782.8	0.00	0.00	0.00
4,400.0	29.00	319.64	3,947.6	1,395.3	-1,186.0	1,831.3	0.00	0.00	0.00
4,500.0	29.00	319.64	4,035.1	1,432.2	-1,217.4	1,879.7	0.00	0.00	0.00

**N/A**  
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<b>Well:</b>	PA 612-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	29.00	319.64	4,122.5	1,469.2	-1,248.8	1,928.2	0.00	0.00	0.00
4,700.0	29.00	319.64	4,210.0	1,506.1	-1,280.2	1,976.7	0.00	0.00	0.00
4,800.0	29.00	319.64	4,297.4	1,543.1	-1,311.6	2,025.2	0.00	0.00	0.00
4,900.0	29.00	319.64	4,384.9	1,580.0	-1,343.0	2,073.7	0.00	0.00	0.00
4,959.8	29.00	319.64	4,437.1	1,602.1	-1,361.8	2,102.6	0.00	0.00	0.00
5,000.0	28.40	319.64	4,472.5	1,616.8	-1,374.3	2,122.0	1.50	-1.50	0.00
5,100.0	26.90	319.64	4,561.0	1,652.2	-1,404.4	2,168.4	1.50	-1.50	0.00
5,200.0	25.40	319.64	4,650.8	1,685.7	-1,432.9	2,212.4	1.50	-1.50	0.00
5,300.0	23.90	319.64	4,741.7	1,717.5	-1,459.9	2,254.1	1.50	-1.50	0.00
5,345.1	23.22	319.64	4,783.0	1,731.2	-1,471.6	2,272.1	1.50	-1.50	0.00
<b>MESAVERDE</b>									
5,400.0	22.40	319.64	4,833.6	1,747.5	-1,485.4	2,293.4	1.50	-1.50	0.00
5,500.0	20.90	319.64	4,926.6	1,775.6	-1,509.2	2,330.3	1.50	-1.50	0.00
5,538.9	20.31	319.64	4,963.0	1,786.0	-1,518.1	2,344.0	1.50	-1.50	0.00
<b>U MESAVERDE</b>									
5,600.0	19.40	319.64	5,020.5	1,801.8	-1,531.6	2,364.8	1.50	-1.50	0.00
5,700.0	17.90	319.64	5,115.2	1,826.2	-1,552.3	2,396.7	1.50	-1.50	0.00
5,800.0	16.40	319.64	5,210.8	1,848.6	-1,571.4	2,426.2	1.50	-1.50	0.00
5,900.0	14.90	319.64	5,307.1	1,869.2	-1,588.8	2,453.2	1.50	-1.50	0.00
6,000.0	13.40	319.64	5,404.0	1,887.8	-1,604.6	2,477.6	1.50	-1.50	0.00
6,100.0	11.90	319.64	5,501.6	1,904.5	-1,618.8	2,499.5	1.50	-1.50	0.00
6,200.0	10.40	319.64	5,599.7	1,919.2	-1,631.3	2,518.9	1.50	-1.50	0.00
6,300.0	8.90	319.64	5,698.3	1,932.0	-1,642.2	2,535.6	1.50	-1.50	0.00
6,400.0	7.40	319.64	5,797.3	1,942.8	-1,651.4	2,549.8	1.50	-1.50	0.00
6,500.0	5.90	319.64	5,896.6	1,951.6	-1,658.9	2,561.4	1.50	-1.50	0.00
6,586.8	4.59	319.64	5,983.0	1,957.6	-1,664.0	2,569.3	1.50	-1.50	0.00
<b>TOP GAS</b>									
6,600.0	4.40	319.64	5,996.2	1,958.4	-1,664.7	2,570.3	1.50	-1.50	0.00
6,700.0	2.90	319.64	6,096.0	1,963.3	-1,668.8	2,576.7	1.50	-1.50	0.00
6,800.0	1.40	319.64	6,195.9	1,966.1	-1,671.2	2,580.4	1.50	-1.50	0.00
6,893.1	0.00	0.00	6,289.0	1,967.0	-1,672.0	2,581.6	1.50	-1.50	0.00
6,900.0	0.00	0.00	6,295.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,395.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,100.0	0.00	0.00	6,495.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,200.0	0.00	0.00	6,595.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,300.0	0.00	0.00	6,695.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,400.0	0.00	0.00	6,795.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,500.0	0.00	0.00	6,895.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,600.0	0.00	0.00	6,995.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,700.0	0.00	0.00	7,095.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,195.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
7,900.0	0.00	0.00	7,295.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,000.0	0.00	0.00	7,395.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,100.0	0.00	0.00	7,495.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,167.1	0.00	0.00	7,563.0	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
<b>CAMEO</b>									
8,200.0	0.00	0.00	7,595.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,300.0	0.00	0.00	7,695.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,400.0	0.00	0.00	7,795.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,500.0	0.00	0.00	7,895.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,600.0	0.00	0.00	7,995.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,700.0	0.00	0.00	8,095.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,800.0	0.00	0.00	8,195.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
8,877.1	0.00	0.00	8,273.0	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00

**N/A**  
Planning Report

<b>Database:</b>	EDM_PRO	<b>Local Co-ordinate Reference:</b>	Well PA 612-26 - Slot A15
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	WELL @ 5658.0ft (Original Well Elev)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	WELL @ 5658.0ft (Original Well Elev)
<b>Site:</b>	PA 23-26 Pad	<b>North Reference:</b>	True
<b>Well:</b>	PA 612-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>ROLLINS</b>									
8,900.0	0.00	0.00	8,295.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
9,000.0	0.00	0.00	8,395.9	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
9,027.1	0.00	0.00	8,423.0	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
<b>TD</b>									
9,030.1	0.00	0.00	8,426.0	1,967.0	-1,672.0	2,581.6	0.00	0.00	0.00
<b>PBHL(PA 612-26)</b>									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL(PA 612-26) - plan hits target center - Point	0.00	0.00	8,426.0	1,967.0	-1,672.0	1,616,410.50	2,302,257.50	39° 29' 59.072 N	107° 58' 22.655 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (in)	Hole Diameter (in)
1,100.0	1,061.3	9 5/8"		9.625	13.500

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,811.2	2,558.0	WASATCH G		0.00	
2,879.8	2,618.0	WASATCH G BASE		0.00	
5,345.1	4,783.0	MESAVERDE		0.00	
5,538.9	4,963.0	U MESAVERDE		0.00	
6,586.8	5,983.0	TOP GAS		0.00	
8,167.1	7,563.0	CAMEO		0.00	
8,877.1	8,273.0	ROLLINS		0.00	
9,027.1	8,423.0	TD		0.00	