





# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**PA 22-25 Pad**

**PA 42-26 - Slot PA 42-26 (B4)**

**OH**

**Plan: Plan #1**

## **Standard Planning Report**

**03 June, 2017**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 42-26 - Slot PA 42-26 (B4)
<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 42-26	<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 42-26 - Slot PA 42-26 (B4), B4			
<b>Well Position</b>	<b>+N/-S</b>	13.45 usft	<b>Northing:</b>	1,615,199.49 usft
	<b>+E/-W</b>	26.99 usft	<b>Easting:</b>	2,308,755.53 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	292.24

<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	
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	3.00	330.00	799.93	3.40	-1.96	2.00	2.00	0.00	330.00	
1,000.00	3.00	330.00	999.66	12.46	-7.20	0.00	0.00	0.00	0.00	
1,912.47	29.67	291.60	1,868.28	118.29	-233.42	3.00	2.92	-4.21	-41.96	
4,754.06	29.67	291.60	4,337.38	636.05	-1,541.14	0.00	0.00	0.00	0.00	
6,731.88	0.00	0.00	6,228.00	820.37	-2,006.69	1.50	-1.50	0.00	180.00	
8,481.88	0.00	0.00	7,978.00	820.37	-2,006.69	0.00	0.00	0.00	0.00	PBHL (PA 42-26)

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 42-26 - Slot PA 42-26 (B4)
<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 42-26	<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 42-26)</b>									
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	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
650.00	0.00	0.00	650.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	1.00	330.00	700.00	0.38	-0.22	0.34	2.00	2.00	0.00
800.00	3.00	330.00	799.93	3.40	-1.96	3.10	2.00	2.00	0.00
900.00	3.00	330.00	899.79	7.93	-4.58	7.24	0.00	0.00	0.00
1,000.00	3.00	330.00	999.66	12.46	-7.20	11.38	0.00	0.00	0.00
1,100.00	5.60	308.99	1,099.37	17.80	-12.30	18.12	3.00	2.60	-21.01
<b>9 5/8" @ 1100' MD</b>									
1,200.00	8.47	301.67	1,198.61	24.74	-22.36	30.06	3.00	2.87	-7.32
1,300.00	11.41	298.07	1,297.10	33.27	-37.36	47.17	3.00	2.94	-3.60
1,400.00	14.37	295.93	1,394.57	43.35	-57.25	69.40	3.00	2.96	-2.14
1,500.00	17.34	294.51	1,490.76	54.96	-81.98	96.68	3.00	2.98	-1.42
1,600.00	20.33	293.50	1,585.39	68.07	-111.47	128.95	3.00	2.98	-1.01
1,700.00	23.31	292.74	1,678.22	82.65	-145.66	166.11	3.00	2.99	-0.76
1,800.00	26.30	292.14	1,768.98	98.65	-184.44	208.06	3.00	2.99	-0.60
1,900.00	29.29	291.65	1,857.43	116.03	-227.71	254.69	3.00	2.99	-0.48
1,912.47	29.67	291.60	1,868.28	118.29	-233.42	260.82	3.00	2.99	-0.43
2,000.00	29.67	291.60	1,944.34	134.24	-273.70	304.15	0.00	0.00	0.00
2,100.00	29.67	291.60	2,031.23	152.46	-319.72	353.64	0.00	0.00	0.00
2,200.00	29.67	291.60	2,118.12	170.68	-365.74	403.13	0.00	0.00	0.00
2,300.00	29.67	291.60	2,205.01	188.90	-411.76	452.63	0.00	0.00	0.00
2,400.00	29.67	291.60	2,291.90	207.12	-457.78	502.12	0.00	0.00	0.00
2,500.00	29.67	291.60	2,378.79	225.34	-503.80	551.61	0.00	0.00	0.00
2,600.00	29.67	291.60	2,465.69	243.56	-549.82	601.11	0.00	0.00	0.00
2,700.00	29.67	291.60	2,552.58	261.79	-595.84	650.60	0.00	0.00	0.00
2,800.00	29.67	291.60	2,639.47	280.01	-641.87	700.09	0.00	0.00	0.00
2,900.00	29.67	291.60	2,726.36	298.23	-687.89	749.59	0.00	0.00	0.00
3,000.00	29.67	291.60	2,813.25	316.45	-733.91	799.08	0.00	0.00	0.00
3,100.00	29.67	291.60	2,900.14	334.67	-779.93	848.57	0.00	0.00	0.00
3,200.00	29.67	291.60	2,987.03	352.89	-825.95	898.07	0.00	0.00	0.00
3,300.00	29.67	291.60	3,073.93	371.11	-871.97	947.56	0.00	0.00	0.00
3,400.00	29.67	291.60	3,160.82	389.33	-917.99	997.05	0.00	0.00	0.00
3,500.00	29.67	291.60	3,247.71	407.55	-964.01	1,046.55	0.00	0.00	0.00
3,600.00	29.67	291.60	3,334.60	425.77	-1,010.03	1,096.04	0.00	0.00	0.00
3,700.00	29.67	291.60	3,421.49	443.99	-1,056.05	1,145.53	0.00	0.00	0.00
3,800.00	29.67	291.60	3,508.38	462.21	-1,102.07	1,195.03	0.00	0.00	0.00
3,900.00	29.67	291.60	3,595.27	480.43	-1,148.09	1,244.52	0.00	0.00	0.00
4,000.00	29.67	291.60	3,682.17	498.65	-1,194.11	1,294.01	0.00	0.00	0.00
4,100.00	29.67	291.60	3,769.06	516.87	-1,240.13	1,343.51	0.00	0.00	0.00
4,200.00	29.67	291.60	3,855.95	535.09	-1,286.15	1,393.00	0.00	0.00	0.00
4,300.00	29.67	291.60	3,942.84	553.31	-1,332.18	1,442.49	0.00	0.00	0.00
4,400.00	29.67	291.60	4,029.73	571.53	-1,378.20	1,491.99	0.00	0.00	0.00
4,500.00	29.67	291.60	4,116.62	589.76	-1,424.22	1,541.48	0.00	0.00	0.00
4,600.00	29.67	291.60	4,203.51	607.98	-1,470.24	1,590.97	0.00	0.00	0.00
4,700.00	29.67	291.60	4,290.40	626.20	-1,516.26	1,640.47	0.00	0.00	0.00
4,714.50	29.67	291.60	4,303.00	628.84	-1,522.93	1,647.64	0.00	0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 42-26 - Slot PA 42-26 (B4)
<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 42-26	<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)
<b>Ohio Creek</b>									
4,754.06	29.67	291.60	4,337.38	636.05	-1,541.14	1,667.22	0.00	0.00	0.00
4,800.00	28.98	291.60	4,377.43	644.33	-1,562.05	1,689.72	1.50	-1.50	0.00
4,800.65	28.97	291.60	4,378.00	644.44	-1,562.35	1,690.03	1.50	-1.50	0.00
<b>Upper MVRD</b>									
4,900.00	27.48	291.60	4,465.54	661.74	-1,606.03	1,737.01	1.50	-1.50	0.00
5,000.00	25.98	291.60	4,554.85	678.30	-1,647.85	1,781.98	1.50	-1.50	0.00
5,004.52	25.91	291.60	4,558.91	679.02	-1,649.69	1,783.96	1.50	-1.50	0.00
<b>PA 42-26 MVRD</b>									
5,100.00	24.48	291.60	4,645.31	693.99	-1,687.48	1,824.60	1.50	-1.50	0.00
5,200.00	22.98	291.60	4,736.85	708.80	-1,724.89	1,864.84	1.50	-1.50	0.00
5,300.00	21.48	291.60	4,829.42	722.72	-1,760.06	1,902.67	1.50	-1.50	0.00
5,400.00	19.98	291.60	4,922.94	735.75	-1,792.97	1,938.06	1.50	-1.50	0.00
5,500.00	18.48	291.60	5,017.36	747.87	-1,823.59	1,970.99	1.50	-1.50	0.00
5,600.00	16.98	291.60	5,112.61	759.08	-1,851.90	2,001.43	1.50	-1.50	0.00
5,700.00	15.48	291.60	5,208.62	769.37	-1,877.88	2,029.38	1.50	-1.50	0.00
5,800.00	13.98	291.60	5,305.33	778.73	-1,901.52	2,054.80	1.50	-1.50	0.00
5,900.00	12.48	291.60	5,402.68	787.15	-1,922.80	2,077.68	1.50	-1.50	0.00
6,000.00	10.98	291.60	5,500.59	794.64	-1,941.69	2,098.00	1.50	-1.50	0.00
6,027.91	10.56	291.60	5,528.00	796.56	-1,946.54	2,103.22	1.50	-1.50	0.00
<b>Top of Gas</b>									
6,100.00	9.48	291.60	5,598.99	801.17	-1,958.20	2,115.76	1.50	-1.50	0.00
6,200.00	7.98	291.60	5,697.83	806.76	-1,972.31	2,130.93	1.50	-1.50	0.00
6,300.00	6.48	291.60	5,797.04	811.39	-1,984.01	2,143.51	1.50	-1.50	0.00
6,400.00	4.98	291.60	5,896.53	815.06	-1,993.29	2,153.50	1.50	-1.50	0.00
6,500.00	3.48	291.60	5,996.26	817.78	-2,000.15	2,160.87	1.50	-1.50	0.00
6,600.00	1.98	291.60	6,096.14	819.53	-2,004.57	2,165.63	1.50	-1.50	0.00
6,700.00	0.48	291.60	6,196.12	820.32	-2,006.57	2,167.77	1.50	-1.50	0.00
6,731.88	0.00	0.00	6,228.00	820.37	-2,006.69	2,167.90	1.50	-1.50	0.00
6,800.00	0.00	0.00	6,296.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
6,900.00	0.00	0.00	6,396.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,000.00	0.00	0.00	6,496.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,100.00	0.00	0.00	6,596.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,200.00	0.00	0.00	6,696.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,300.00	0.00	0.00	6,796.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,331.88	0.00	0.00	6,828.00	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
<b>Cameo</b>									
7,400.00	0.00	0.00	6,896.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,500.00	0.00	0.00	6,996.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,600.00	0.00	0.00	7,096.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,700.00	0.00	0.00	7,196.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,800.00	0.00	0.00	7,296.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
7,900.00	0.00	0.00	7,396.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
8,000.00	0.00	0.00	7,496.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
8,100.00	0.00	0.00	7,596.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
8,200.00	0.00	0.00	7,696.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
8,300.00	0.00	0.00	7,796.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
8,331.88	0.00	0.00	7,828.00	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
<b>RLNS</b>									
8,400.00	0.00	0.00	7,896.12	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
8,481.88	0.00	0.00	7,978.00	820.37	-2,006.69	2,167.90	0.00	0.00	0.00
<b>PBHL (PA 42-26) - PA 42-26 PBHL</b>									

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well PA 42-26 - Slot PA 42-26 (B4)
<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 42-26	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1		

Design 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)		
SHL (PA 42-26)	0.00	0.00	0.00	-3.35	-4.55	1,615,196.27	2,308,750.88	39.4969019	-107.9498250
- plan misses target center by 5.65usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
PBHL (PA 42-26)	0.00	0.00	7,978.00	820.37	-2,006.69	1,616,073.66	2,306,771.69	39.4991632	-107.9569201
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(in)	(in)
	1,100.00	1,099.37	9 5/8" @ 1100' MD	9.62	13.50

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(usft)	(usft)	Name	Lithology	(°)	(°)
	4,714.50	4,302.99	Ohio Creek		0.00	
	4,800.65	4,377.99	Upper MVRD		0.00	
	6,027.91	5,527.99	Top of Gas		0.00	
	7,331.88	6,827.99	Cameo		0.00	
	8,331.88	7,827.99	RLNS		0.00	