



TEP Rocky Mountain LLC

Garfield County, CO NAD83

PA 22-25 Pad

PA 343-26 - Slot PA 343-26 (A2)

OH

Plan: Plan #1

Standard Planning Report

03 June, 2017



Database:	Grand Junction District	Local Co-ordinate Reference:	Well PA 343-26 - Slot PA 343-26 (A2)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 343-26	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	Latitude: 39.4968742
From: Map		Easting:	2,308,728.18 usft	Longitude: -107.9499045
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.55 °

Well	PA 343-26 - Slot PA 343-26 (A2), A2			
Well Position	+N/-S	3.42 usft	Northing:	1,615,189.86 usft
	+E/-W	12.02 usft	Easting:	2,308,740.29 usft
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	5/22/2017	9.45	65.82	51,744

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	247.09

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	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,522.65	27.68	247.09	1,487.17	-85.07	-201.33	3.00	3.00	0.00	247.09	
4,736.97	27.68	247.09	4,333.65	-666.23	-1,576.71	0.00	0.00	0.00	0.00	
6,582.26	0.00	0.00	6,108.00	-836.37	-1,979.37	1.50	-1.50	0.00	180.00	
8,382.26	0.00	0.00	7,908.00	-836.37	-1,979.37	0.00	0.00	0.00	0.00	PBHL (PA 343-26)

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Project:	Garfield County, CO NAD83	MD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 343-26	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 343-26)									
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	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
700.00	3.00	247.09	699.95	-1.02	-2.41	2.62	3.00	3.00	0.00
800.00	6.00	247.09	799.63	-4.07	-9.64	10.46	3.00	3.00	0.00
900.00	9.00	247.09	898.77	-9.15	-21.66	23.51	3.00	3.00	0.00
1,000.00	12.00	247.09	997.08	-16.24	-38.44	41.74	3.00	3.00	0.00
1,100.00	15.00	247.09	1,094.31	-25.33	-59.95	65.08	3.00	3.00	0.00
9 5/8" @ 1100' MD									
1,200.00	18.00	247.09	1,190.18	-36.38	-86.10	93.48	3.00	3.00	0.00
1,300.00	21.00	247.09	1,284.43	-49.37	-116.85	126.85	3.00	3.00	0.00
1,400.00	24.00	247.09	1,376.81	-64.27	-152.10	165.12	3.00	3.00	0.00
1,500.00	27.00	247.09	1,467.06	-81.02	-191.75	208.16	3.00	3.00	0.00
1,522.65	27.68	247.09	1,487.17	-85.07	-201.33	218.56	3.00	3.00	0.00
1,600.00	27.68	247.09	1,555.68	-99.06	-234.43	254.50	0.00	0.00	0.00
1,700.00	27.68	247.09	1,644.23	-117.14	-277.22	300.95	0.00	0.00	0.00
1,800.00	27.68	247.09	1,732.79	-135.22	-320.01	347.40	0.00	0.00	0.00
1,900.00	27.68	247.09	1,821.34	-153.30	-362.79	393.85	0.00	0.00	0.00
2,000.00	27.68	247.09	1,909.90	-171.38	-405.58	440.30	0.00	0.00	0.00
2,100.00	27.68	247.09	1,998.46	-189.46	-448.37	486.76	0.00	0.00	0.00
2,200.00	27.68	247.09	2,087.01	-207.54	-491.16	533.21	0.00	0.00	0.00
2,300.00	27.68	247.09	2,175.57	-225.62	-533.95	579.66	0.00	0.00	0.00
2,400.00	27.68	247.09	2,264.12	-243.70	-576.74	626.11	0.00	0.00	0.00
2,500.00	27.68	247.09	2,352.68	-261.78	-619.53	672.57	0.00	0.00	0.00
2,600.00	27.68	247.09	2,441.24	-279.86	-662.32	719.02	0.00	0.00	0.00
2,700.00	27.68	247.09	2,529.79	-297.94	-705.11	765.47	0.00	0.00	0.00
2,800.00	27.68	247.09	2,618.35	-316.02	-747.90	811.92	0.00	0.00	0.00
2,900.00	27.68	247.09	2,706.91	-334.10	-790.69	858.38	0.00	0.00	0.00
3,000.00	27.68	247.09	2,795.46	-352.18	-833.48	904.83	0.00	0.00	0.00
3,100.00	27.68	247.09	2,884.02	-370.26	-876.27	951.28	0.00	0.00	0.00
3,200.00	27.68	247.09	2,972.57	-388.34	-919.06	997.73	0.00	0.00	0.00
3,300.00	27.68	247.09	3,061.13	-406.42	-961.84	1,044.18	0.00	0.00	0.00
3,400.00	27.68	247.09	3,149.69	-424.50	-1,004.63	1,090.64	0.00	0.00	0.00
3,500.00	27.68	247.09	3,238.24	-442.58	-1,047.42	1,137.09	0.00	0.00	0.00
3,600.00	27.68	247.09	3,326.80	-460.66	-1,090.21	1,183.54	0.00	0.00	0.00
3,700.00	27.68	247.09	3,415.35	-478.74	-1,133.00	1,229.99	0.00	0.00	0.00
3,800.00	27.68	247.09	3,503.91	-496.82	-1,175.79	1,276.45	0.00	0.00	0.00
3,900.00	27.68	247.09	3,592.47	-514.90	-1,218.58	1,322.90	0.00	0.00	0.00
4,000.00	27.68	247.09	3,681.02	-532.98	-1,261.37	1,369.35	0.00	0.00	0.00
4,100.00	27.68	247.09	3,769.58	-551.06	-1,304.16	1,415.80	0.00	0.00	0.00
4,200.00	27.68	247.09	3,858.13	-569.14	-1,346.95	1,462.26	0.00	0.00	0.00
4,300.00	27.68	247.09	3,946.69	-587.22	-1,389.74	1,508.71	0.00	0.00	0.00
4,400.00	27.68	247.09	4,035.25	-605.30	-1,432.53	1,555.16	0.00	0.00	0.00
4,500.00	27.68	247.09	4,123.80	-623.38	-1,475.32	1,601.61	0.00	0.00	0.00
4,600.00	27.68	247.09	4,212.36	-641.46	-1,518.11	1,648.06	0.00	0.00	0.00
4,623.31	27.68	247.09	4,233.00	-645.68	-1,528.08	1,658.89	0.00	0.00	0.00
Ohio Creek									

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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)
4,700.00	27.68	247.09	4,300.92	-659.54	-1,560.89	1,694.52	0.00	0.00	0.00
4,708.00	27.68	247.09	4,308.00	-660.99	-1,564.32	1,698.23	0.00	0.00	0.00
Upper MVRD									
4,736.97	27.68	247.09	4,333.65	-666.23	-1,576.71	1,711.69	0.00	0.00	0.00
4,800.00	26.73	247.09	4,389.71	-677.44	-1,603.26	1,740.51	1.50	-1.50	0.00
4,900.00	25.23	247.09	4,479.60	-694.50	-1,643.61	1,784.32	1.50	-1.50	0.00
PA 343-26 MVRD									
5,000.00	23.73	247.09	4,570.60	-710.63	-1,681.79	1,825.76	1.50	-1.50	0.00
5,100.00	22.23	247.09	4,662.66	-725.82	-1,717.76	1,864.81	1.50	-1.50	0.00
5,200.00	20.73	247.09	4,755.71	-740.08	-1,751.49	1,901.43	1.50	-1.50	0.00
5,300.00	19.23	247.09	4,849.69	-753.38	-1,782.97	1,935.60	1.50	-1.50	0.00
5,400.00	17.73	247.09	4,944.53	-765.72	-1,812.17	1,967.31	1.50	-1.50	0.00
5,500.00	16.23	247.09	5,040.16	-777.09	-1,839.08	1,996.52	1.50	-1.50	0.00
5,600.00	14.73	247.09	5,136.53	-787.48	-1,863.67	2,023.21	1.50	-1.50	0.00
5,700.00	13.23	247.09	5,233.57	-796.88	-1,885.93	2,047.38	1.50	-1.50	0.00
5,800.00	11.73	247.09	5,331.20	-805.30	-1,905.84	2,068.99	1.50	-1.50	0.00
5,900.00	10.23	247.09	5,429.36	-812.71	-1,923.39	2,088.05	1.50	-1.50	0.00
5,929.08	9.80	247.09	5,458.00	-814.68	-1,928.05	2,093.10	1.50	-1.50	0.00
Top of Gas									
6,000.00	8.73	247.09	5,527.99	-819.13	-1,938.57	2,104.52	1.50	-1.50	0.00
6,100.00	7.23	247.09	5,627.02	-824.53	-1,951.36	2,118.41	1.50	-1.50	0.00
6,200.00	5.73	247.09	5,726.38	-828.93	-1,961.76	2,129.70	1.50	-1.50	0.00
6,300.00	4.23	247.09	5,826.00	-832.31	-1,969.77	2,138.39	1.50	-1.50	0.00
6,400.00	2.73	247.09	5,925.81	-834.67	-1,975.36	2,144.47	1.50	-1.50	0.00
6,500.00	1.23	247.09	6,025.75	-836.02	-1,978.55	2,147.93	1.50	-1.50	0.00
6,582.26	0.00	0.00	6,108.00	-836.37	-1,979.37	2,148.81	1.50	-1.50	0.00
6,600.00	0.00	0.00	6,125.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
6,700.00	0.00	0.00	6,225.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
6,800.00	0.00	0.00	6,325.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
6,900.00	0.00	0.00	6,425.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,000.00	0.00	0.00	6,525.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,100.00	0.00	0.00	6,625.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,200.00	0.00	0.00	6,725.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,232.26	0.00	0.00	6,758.00	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
Cameo									
7,300.00	0.00	0.00	6,825.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,400.00	0.00	0.00	6,925.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,500.00	0.00	0.00	7,025.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,600.00	0.00	0.00	7,125.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,700.00	0.00	0.00	7,225.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,800.00	0.00	0.00	7,325.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
7,900.00	0.00	0.00	7,425.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
8,000.00	0.00	0.00	7,525.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
8,100.00	0.00	0.00	7,625.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
8,200.00	0.00	0.00	7,725.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
8,232.26	0.00	0.00	7,758.00	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
RLNS									
8,300.00	0.00	0.00	7,825.74	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
8,382.26	0.00	0.00	7,908.00	-836.37	-1,979.37	2,148.81	0.00	0.00	0.00
PA 343-26 PBHL - PBHL (PA 343-26)									

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Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5224' + KB 24' @ 5248.00usft (Original Well Elev)
Site:	PA 22-25 Pad	North Reference:	True
Well:	PA 343-26	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (PA 343-26) - plan misses target center by 5.60usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-3.31	-4.52	1,615,186.67	2,308,735.68	39.4968745	-107.9498779
PBHL (PA 343-26) - plan hits target center - Circle (radius 50.00)	0.00	0.00	7,908.00	-836.37	-1,979.37	1,614,407.17	2,306,739.09	39.4945872	-107.9568758

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,094.31	9 5/8" @ 1100' MD	9.62	13.50	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,623.31	4,233.00	Ohio Creek		0.00		
4,708.00	4,308.00	Upper MVRD		0.00		
5,929.08	5,458.00	Top of Gas		0.00		
7,232.26	6,758.00	Cameo		0.00		
8,232.26	7,758.00	RLNS		0.00		