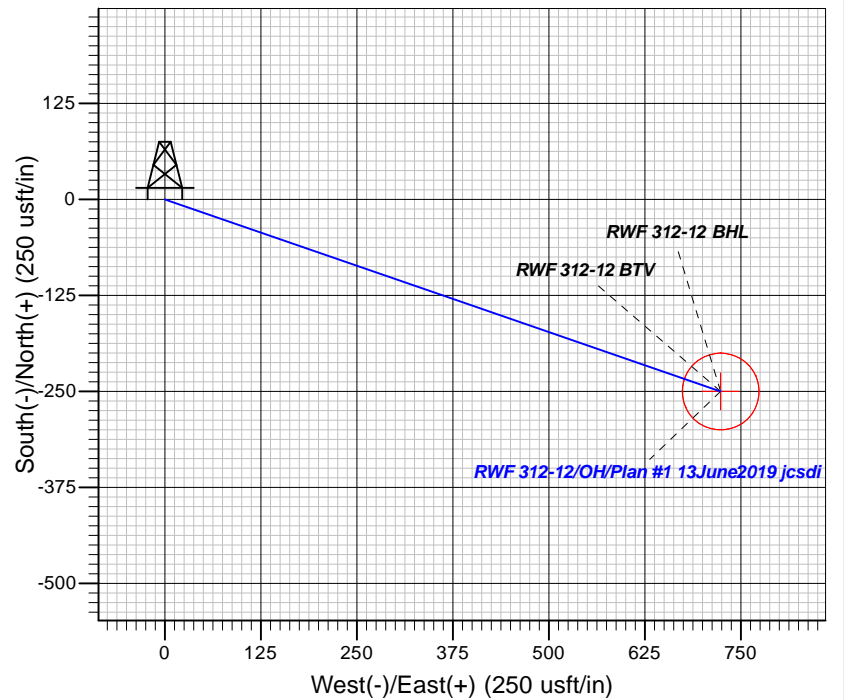
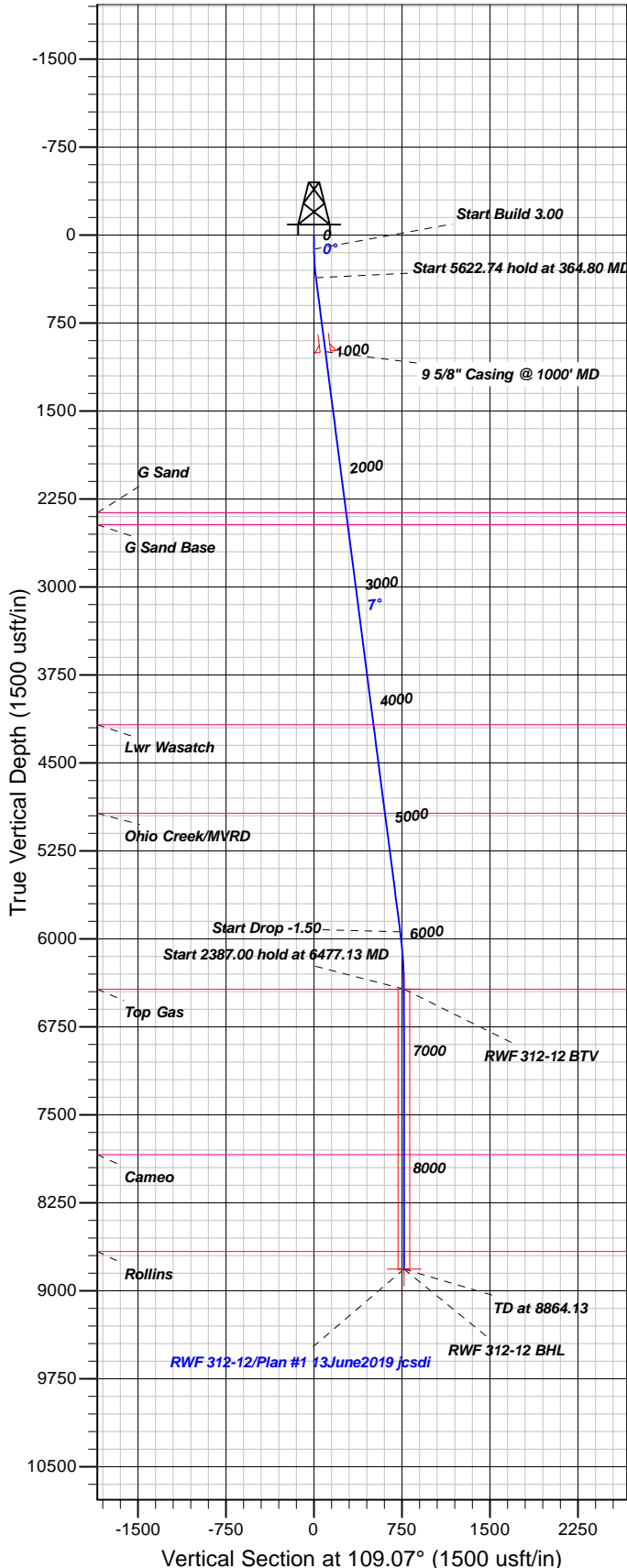


## Well Details: RWF 312-12

GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)						Slot
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1630841.90	2339709.70	39.5420820	-107.8415838	



## FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
2369.00	2386.25	G Sand
2469.00	2487.08	G Sand Base
4174.00	4206.18	Lwr Wasatch
4929.00	4967.43	Ohio Creek/MVRD
6429.00	6477.13	Top Gas
7839.00	7887.13	Cameo
8666.00	8714.13	Rollins

Plan: Plan #1 13June2019 jcsdi

12:29, June 18 2019  
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
994.12	1000.00	5/8" Casing @ 1000' 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	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	
3	364.80	7.34	109.07	364.13	-5.12	14.81	3.00	109.07	15.67	
4	5987.54	7.34	109.07	5940.74	-239.99	694.08	0.00	0.00	734.40	
5	6477.13	0.00	0.00	6429.00	-250.23	723.69	1.50	180.00	765.73	RWF 312-12 BTV
6	8864.13	0.00	0.00	8816.00	-250.23	723.69	0.00	0.00	765.73	RWF 312-12 BHL

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RWF 312-12 BTV	6429.00	-250.23	723.69	1630573.10	2340426.70	39.5413950	-107.8390177	Circle (Radius: 50.00)
- plan hits target center								
RWF 312-12 BHL	8816.00	-250.23	723.69	1630573.10	2340426.70	39.5413950	-107.8390177	Point
- plan hits target center								



# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RWF 12-12 Pad**

**RWF 312-12**

**OH**

**Plan: Plan #1 13June2019 jcsdi**

## **Standard Planning Report**

**18 June, 2019**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RWF 312-12
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Site:</b>	RWF 12-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RWF 312-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 13June2019 jcsdi		

<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>	RWF 12-12 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,630,797.20 usft	<b>Latitude:</b> 39.5419586
<b>From:</b> Map		<b>Easting:</b>	2,339,698.60 usft	<b>Longitude:</b> -107.8416191
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b> -1.48 °

<b>Well</b>	RWF 312-12			
<b>Well Position</b>	<b>+N/-S</b>	44.97 usft	<b>Northing:</b>	1,630,841.90 usft
	<b>+E/-W</b>	9.94 usft	<b>Easting:</b>	2,339,709.70 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	5,466.80 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>
	BGGM2016	6/13/2019	9.37	65.62	51,378

<b>Design</b>	Plan #1 13June2019 jcsdi			
<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	109.07

<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	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
364.80	7.34	109.07	364.13	-5.12	14.81	3.00	3.00	0.00	109.07	
5,987.54	7.34	109.07	5,940.74	-239.99	694.08	0.00	0.00	0.00	0.00	
6,477.13	0.00	0.00	6,429.00	-250.23	723.69	1.50	-1.50	0.00	180.00	RWF 312-12 BTV
8,864.13	0.00	0.00	8,816.00	-250.23	723.69	0.00	0.00	0.00	0.00	RWF 312-12 BHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RWF 312-12
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Site:</b>	RWF 12-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RWF 312-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 13June2019 jcsdi		

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	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 3.00										
200.00	2.40	109.07	199.98	-0.55	1.58	1.68	3.00	3.00	0.00	
300.00	5.40	109.07	299.73	-2.77	8.01	8.48	3.00	3.00	0.00	
364.80	7.34	109.07	364.13	-5.12	14.81	15.67	3.00	3.00	0.00	
Start 5622.74 hold at 364.80 MD										
400.00	7.34	109.07	399.04	-6.59	19.06	20.17	0.00	0.00	0.00	
500.00	7.34	109.07	498.22	-10.77	31.14	32.95	0.00	0.00	0.00	
600.00	7.34	109.07	597.40	-14.94	43.22	45.73	0.00	0.00	0.00	
700.00	7.34	109.07	696.58	-19.12	55.30	58.51	0.00	0.00	0.00	
800.00	7.34	109.07	795.76	-23.30	67.38	71.30	0.00	0.00	0.00	
900.00	7.34	109.07	894.94	-27.48	79.46	84.08	0.00	0.00	0.00	
1,000.00	7.34	109.07	994.12	-31.65	91.54	96.86	0.00	0.00	0.00	
9 5/8" Casing @ 1000' MD										
1,100.00	7.34	109.07	1,093.30	-35.83	103.62	109.64	0.00	0.00	0.00	
1,200.00	7.34	109.07	1,192.48	-40.01	115.71	122.43	0.00	0.00	0.00	
1,300.00	7.34	109.07	1,291.66	-44.18	127.79	135.21	0.00	0.00	0.00	
1,400.00	7.34	109.07	1,390.84	-48.36	139.87	147.99	0.00	0.00	0.00	
1,500.00	7.34	109.07	1,490.02	-52.54	151.95	160.77	0.00	0.00	0.00	
1,600.00	7.34	109.07	1,589.20	-56.72	164.03	173.56	0.00	0.00	0.00	
1,700.00	7.34	109.07	1,688.38	-60.89	176.11	186.34	0.00	0.00	0.00	
1,800.00	7.34	109.07	1,787.56	-65.07	188.19	199.12	0.00	0.00	0.00	
1,900.00	7.34	109.07	1,886.74	-69.25	200.27	211.90	0.00	0.00	0.00	
2,000.00	7.34	109.07	1,985.92	-73.43	212.35	224.69	0.00	0.00	0.00	
2,100.00	7.34	109.07	2,085.10	-77.60	224.43	237.47	0.00	0.00	0.00	
2,200.00	7.34	109.07	2,184.28	-81.78	236.51	250.25	0.00	0.00	0.00	
2,300.00	7.34	109.07	2,283.46	-85.96	248.59	263.03	0.00	0.00	0.00	
2,386.25	7.34	109.07	2,369.00	-89.56	259.01	274.06	0.00	0.00	0.00	
G Sand										
2,400.00	7.34	109.07	2,382.63	-90.13	260.67	275.82	0.00	0.00	0.00	
2,487.08	7.34	109.07	2,469.00	-93.77	271.19	286.95	0.00	0.00	0.00	
G Sand Base										
2,500.00	7.34	109.07	2,481.81	-94.31	272.76	288.60	0.00	0.00	0.00	
2,600.00	7.34	109.07	2,580.99	-98.49	284.84	301.38	0.00	0.00	0.00	
2,700.00	7.34	109.07	2,680.17	-102.67	296.92	314.17	0.00	0.00	0.00	
2,800.00	7.34	109.07	2,779.35	-106.84	309.00	326.95	0.00	0.00	0.00	
2,900.00	7.34	109.07	2,878.53	-111.02	321.08	339.73	0.00	0.00	0.00	
3,000.00	7.34	109.07	2,977.71	-115.20	333.16	352.51	0.00	0.00	0.00	
3,100.00	7.34	109.07	3,076.89	-119.37	345.24	365.30	0.00	0.00	0.00	
3,200.00	7.34	109.07	3,176.07	-123.55	357.32	378.08	0.00	0.00	0.00	
3,300.00	7.34	109.07	3,275.25	-127.73	369.40	390.86	0.00	0.00	0.00	
3,400.00	7.34	109.07	3,374.43	-131.91	381.48	403.64	0.00	0.00	0.00	
3,500.00	7.34	109.07	3,473.61	-136.08	393.56	416.43	0.00	0.00	0.00	
3,600.00	7.34	109.07	3,572.79	-140.26	405.64	429.21	0.00	0.00	0.00	
3,700.00	7.34	109.07	3,671.97	-144.44	417.72	441.99	0.00	0.00	0.00	
3,800.00	7.34	109.07	3,771.15	-148.61	429.80	454.77	0.00	0.00	0.00	
3,900.00	7.34	109.07	3,870.33	-152.79	441.89	467.56	0.00	0.00	0.00	
4,000.00	7.34	109.07	3,969.51	-156.97	453.97	480.34	0.00	0.00	0.00	
4,100.00	7.34	109.07	4,068.69	-161.15	466.05	493.12	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RWF 312-12
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Site:</b>	RWF 12-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RWF 312-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 13June2019 jcsdi		

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)
4,200.00	7.34	109.07	4,167.87	-165.32	478.13	505.90	0.00	0.00	0.00
4,206.18	7.34	109.07	4,174.00	-165.58	478.87	506.69	0.00	0.00	0.00
<b>Lwr Wasatch</b>									
4,300.00	7.34	109.07	4,267.05	-169.50	490.21	518.69	0.00	0.00	0.00
4,400.00	7.34	109.07	4,366.23	-173.68	502.29	531.47	0.00	0.00	0.00
4,500.00	7.34	109.07	4,465.41	-177.85	514.37	544.25	0.00	0.00	0.00
4,600.00	7.34	109.07	4,564.59	-182.03	526.45	557.03	0.00	0.00	0.00
4,700.00	7.34	109.07	4,663.77	-186.21	538.53	569.82	0.00	0.00	0.00
4,800.00	7.34	109.07	4,762.95	-190.39	550.61	582.60	0.00	0.00	0.00
4,900.00	7.34	109.07	4,862.13	-194.56	562.69	595.38	0.00	0.00	0.00
4,967.43	7.34	109.07	4,929.00	-197.38	570.84	604.00	0.00	0.00	0.00
<b>Ohio Creek/MVRD</b>									
5,000.00	7.34	109.07	4,961.31	-198.74	574.77	608.16	0.00	0.00	0.00
5,100.00	7.34	109.07	5,060.49	-202.92	586.85	620.95	0.00	0.00	0.00
5,200.00	7.34	109.07	5,159.67	-207.10	598.94	633.73	0.00	0.00	0.00
5,300.00	7.34	109.07	5,258.85	-211.27	611.02	646.51	0.00	0.00	0.00
5,400.00	7.34	109.07	5,358.03	-215.45	623.10	659.29	0.00	0.00	0.00
5,500.00	7.34	109.07	5,457.20	-219.63	635.18	672.08	0.00	0.00	0.00
5,600.00	7.34	109.07	5,556.38	-223.80	647.26	684.86	0.00	0.00	0.00
5,700.00	7.34	109.07	5,655.56	-227.98	659.34	697.64	0.00	0.00	0.00
5,800.00	7.34	109.07	5,754.74	-232.16	671.42	710.42	0.00	0.00	0.00
5,900.00	7.34	109.07	5,853.92	-236.34	683.50	723.21	0.00	0.00	0.00
5,987.54	7.34	109.07	5,940.74	-239.99	694.08	734.40	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
6,000.00	7.16	109.07	5,953.11	-240.51	695.56	735.97	1.50	-1.50	0.00
6,100.00	5.66	109.07	6,052.48	-244.15	706.11	747.13	1.50	-1.50	0.00
6,200.00	4.16	109.07	6,152.11	-246.95	714.19	755.68	1.50	-1.50	0.00
6,300.00	2.66	109.07	6,251.93	-248.89	719.81	761.62	1.50	-1.50	0.00
6,400.00	1.16	109.07	6,351.87	-249.98	722.95	764.95	1.50	-1.50	0.00
6,477.13	0.00	0.00	6,429.00	-250.23	723.69	765.73	1.50	-1.50	0.00
<b>Start 2387.00 hold at 6477.13 MD - Top Gas - RWF 312-12 BTV</b>									
6,500.00	0.00	0.00	6,451.87	-250.23	723.69	765.73	0.00	0.00	0.00
6,600.00	0.00	0.00	6,551.87	-250.23	723.69	765.73	0.00	0.00	0.00
6,700.00	0.00	0.00	6,651.87	-250.23	723.69	765.73	0.00	0.00	0.00
6,800.00	0.00	0.00	6,751.87	-250.23	723.69	765.73	0.00	0.00	0.00
6,900.00	0.00	0.00	6,851.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,000.00	0.00	0.00	6,951.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,100.00	0.00	0.00	7,051.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,200.00	0.00	0.00	7,151.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,300.00	0.00	0.00	7,251.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,400.00	0.00	0.00	7,351.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,500.00	0.00	0.00	7,451.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,600.00	0.00	0.00	7,551.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,700.00	0.00	0.00	7,651.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,800.00	0.00	0.00	7,751.87	-250.23	723.69	765.73	0.00	0.00	0.00
7,887.13	0.00	0.00	7,839.00	-250.23	723.69	765.73	0.00	0.00	0.00
<b>Cameo</b>									
7,900.00	0.00	0.00	7,851.87	-250.23	723.69	765.73	0.00	0.00	0.00
8,000.00	0.00	0.00	7,951.87	-250.23	723.69	765.73	0.00	0.00	0.00
8,100.00	0.00	0.00	8,051.87	-250.23	723.69	765.73	0.00	0.00	0.00
8,200.00	0.00	0.00	8,151.87	-250.23	723.69	765.73	0.00	0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RWF 312-12
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Site:</b>	RWF 12-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RWF 312-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 13June2019 jcsdi		

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)	
8,300.00	0.00	0.00	8,251.87	-250.23	723.69	765.73	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,351.87	-250.23	723.69	765.73	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,451.87	-250.23	723.69	765.73	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,551.87	-250.23	723.69	765.73	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,651.87	-250.23	723.69	765.73	0.00	0.00	0.00	
8,714.13	0.00	0.00	8,666.00	-250.23	723.69	765.73	0.00	0.00	0.00	
<b>Rollins</b>										
8,800.00	0.00	0.00	8,751.87	-250.23	723.69	765.73	0.00	0.00	0.00	
8,864.13	0.00	0.00	8,816.00	-250.23	723.69	765.73	0.00	0.00	0.00	
<b>TD at 8864.13 - RWF 312-12 BHL</b>										

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	
RWF 312-12 BTV - plan hits target center - Circle (radius 50.00)	0.00	0.00	6,429.00	-250.23	723.69	1,630,573.10	2,340,426.70	39.5413950	-107.8390177	
RWF 312-12 BHL - plan hits target center - Point	0.00	0.00	8,816.00	-250.23	723.69	1,630,573.10	2,340,426.70	39.5413950	-107.8390177	

Casing Points									
Measured Depth (usft)	Vertical Depth (usft)	Name				Casing Diameter (in)	Hole Diameter (in)		
1,000.00	994.12	9 5/8" Casing @ 1000' MD				9.62	12.25		

Formations								
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)			
2,386.25	2,369.00	G Sand		0.00	0.00			
2,487.08	2,469.00	G Sand Base		0.00	0.00			
4,206.18	4,174.00	Lwr Wasatch		0.00	0.00			
4,967.43	4,929.00	Ohio Creek/MVRD		0.00	0.00			
6,477.13	6,429.00	Top Gas		0.00	0.00			
7,887.13	7,839.00	Cameo		0.00	0.00			
8,714.13	8,666.00	Rollins		0.00	0.00			

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RWF 312-12
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
<b>Site:</b>	RWF 12-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RWF 312-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 13June2019 jcsdi		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
120.00	120.00	0.00	0.00	Start Build 3.00
364.80	364.13	-5.12	14.81	Start 5622.74 hold at 364.80 MD
5,987.54	5,940.74	-239.99	694.08	Start Drop -1.50
6,477.13	6,429.00	-250.23	723.69	Start 2387.00 hold at 6477.13 MD
8,864.13	8,816.00	-250.23	723.69	TD at 8864.13