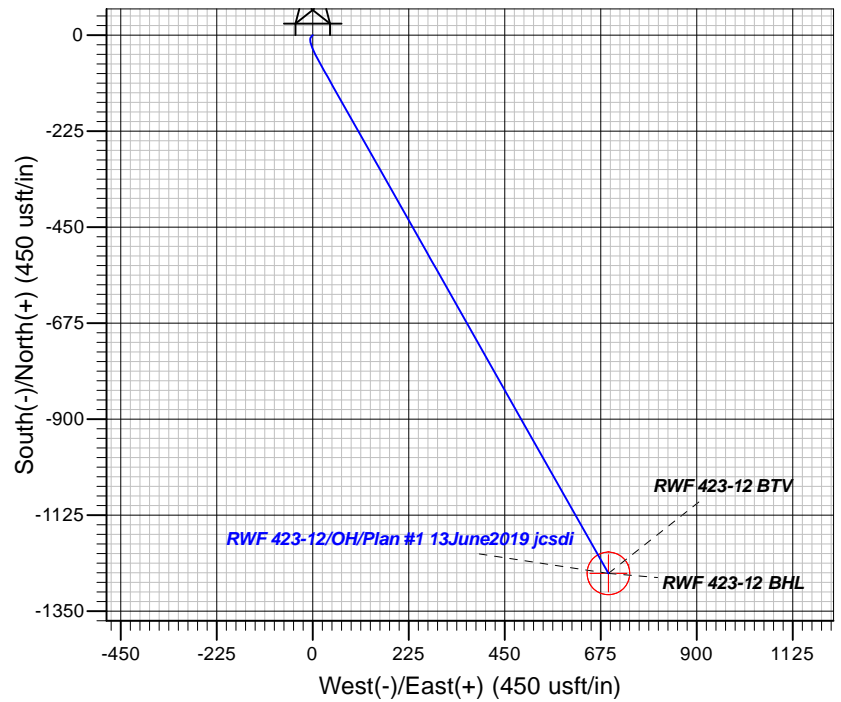
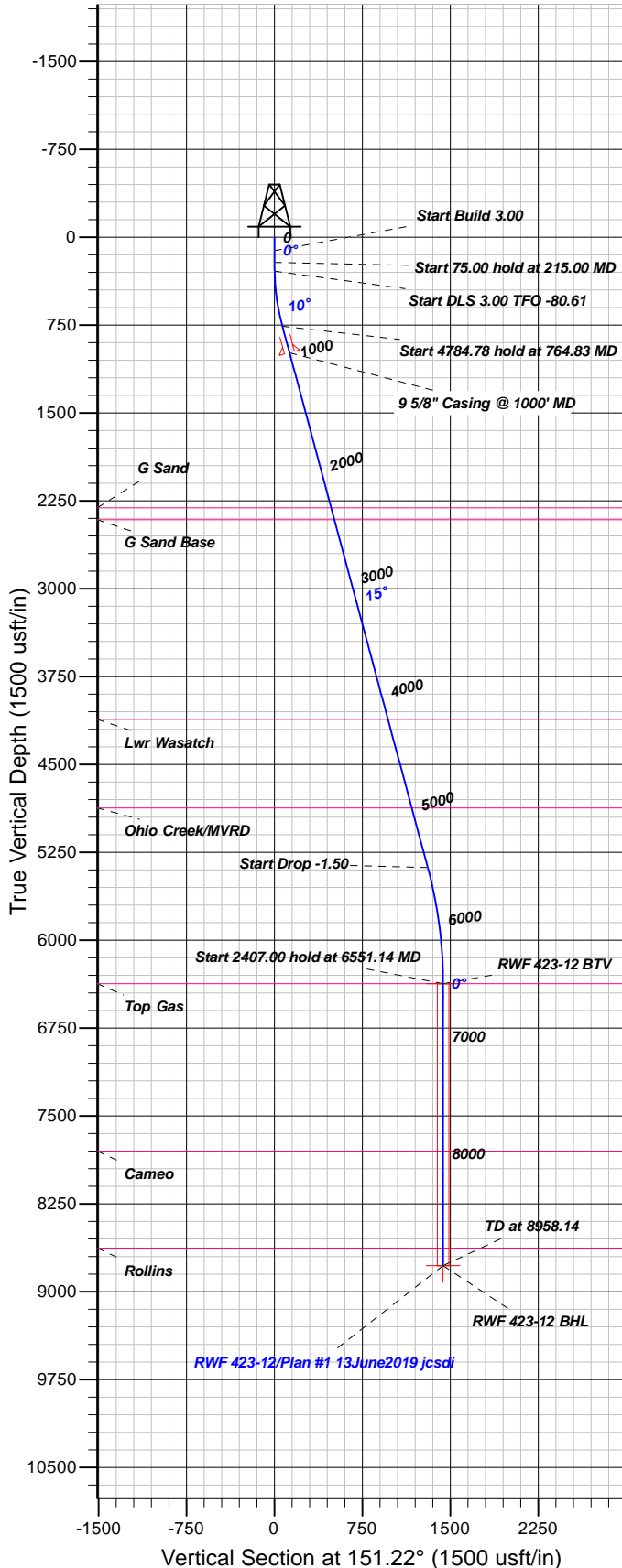


Well Details: RWF 423-12

GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1630803.90	2339702.00	39.5419772	-107.8416076	



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
2310.00	2371.07	G Sand
2410.00	2474.61	G Sand Base
4115.00	4239.94	Lwr Wasatch
4870.00	5021.66	Ohio Creek/MVRD
6370.00	6551.14	Top Gas
7800.00	7981.14	Cameo
8627.00	8808.14	Rollins

Plan: Plan #1 13June2019 jcsdi

15:52, 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
985.79	1000.00	5/8\" Casing @ 1000' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	115.00	0.00	0.00	115.00	0.00	0.00	0.00	0.00	0.00	
3	215.00	3.00	220.00	214.95	-2.01	-1.68	3.00	220.00	0.95	
4	290.00	3.00	220.00	289.85	-5.01	-4.21	0.00	0.00	2.37	
5	764.83	15.02	150.51	758.66	-68.43	18.21	3.00	-80.61	68.74	
6	5549.61	15.02	150.51	5379.91	-1148.02	628.69	0.00	0.001308.89		
7	6551.14	0.00	0.00	6370.00	-1261.66	692.95	1.50	180.001439.43		RWF 423-12 BTM
8	8958.14	0.00	0.00	8777.00	-1261.66	692.95	0.00	0.001439.43		RWF 423-12 BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RWF 423-12 BTM	6370.00	-1261.66	692.95	1629524.80	2340362.20	39.5385134	-107.8391506	Circle (Radius: 50.00)
- plan hits target center								
RWF 423-12 BHL	8777.00	-1261.66	692.95	1629524.80	2340362.20	39.5385134	-107.8391506	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RWF 12-12 Pad

RWF 423-12

OH

Plan: Plan #1 13June2019 jcsdi

Standard Planning Report

18 June, 2019



www.scientificdrilling.com



Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 423-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 423-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 13June2019 jcsdi		

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

Well	RWF 423-12					
Well Position	+N/-S	6.79 usft	Northing:	1,630,803.90 usft	Latitude:	39.5419772
	+E/-W	3.23 usft	Easting:	2,339,702.00 usft	Longitude:	-107.8416077
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,466.80 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	6/13/2019	9.37	65.62	51,378

Design	Plan #1 13June2019 jcsdi			
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	151.22

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	
115.00	0.00	0.00	115.00	0.00	0.00	0.00	0.00	0.00	0.00	
215.00	3.00	220.00	214.95	-2.01	-1.68	3.00	3.00	0.00	220.00	
290.00	3.00	220.00	289.85	-5.01	-4.21	0.00	0.00	0.00	0.00	
764.83	15.02	150.51	758.66	-68.43	18.21	3.00	2.53	-14.63	-80.61	
5,549.61	15.02	150.51	5,379.91	-1,148.02	628.69	0.00	0.00	0.00	0.00	
6,551.14	0.00	0.00	6,370.00	-1,261.66	692.95	1.50	-1.50	0.00	180.00	RWF 423-12 BTV
8,958.14	0.00	0.00	8,777.00	-1,261.66	692.95	0.00	0.00	0.00	0.00	RWF 423-12 BHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 423-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 423-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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
115.00	0.00	0.00	115.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00									
200.00	2.55	220.00	199.97	-1.45	-1.22	0.68	3.00	3.00	0.00
215.00	3.00	220.00	214.95	-2.01	-1.68	0.95	3.00	3.00	0.00
Start 75.00 hold at 215.00 MD									
290.00	3.00	220.00	289.85	-5.01	-4.21	2.37	0.00	0.00	0.00
Start DLS 3.00 TFO -80.61									
300.00	3.06	214.45	299.84	-5.43	-4.52	2.58	3.00	0.63	-55.47
400.00	4.81	177.34	399.61	-11.82	-5.84	7.55	3.00	1.74	-37.11
500.00	7.40	162.85	499.04	-22.17	-3.75	17.63	3.00	2.60	-14.49
600.00	10.22	156.07	597.85	-36.44	1.75	32.78	3.00	2.82	-6.79
700.00	13.12	152.22	695.78	-54.60	10.65	52.98	3.00	2.90	-3.85
764.83	15.02	150.51	758.66	-68.43	18.21	68.74	3.00	2.93	-2.63
Start 4784.78 hold at 764.83 MD									
800.00	15.02	150.51	792.63	-76.36	22.70	77.86	0.00	0.00	0.00
900.00	15.02	150.51	889.21	-98.92	35.46	103.78	0.00	0.00	0.00
1,000.00	15.02	150.51	985.79	-121.49	48.22	129.70	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,100.00	15.02	150.51	1,082.37	-144.05	60.98	155.61	0.00	0.00	0.00
1,200.00	15.02	150.51	1,178.96	-166.61	73.74	181.53	0.00	0.00	0.00
1,300.00	15.02	150.51	1,275.54	-189.18	86.49	207.45	0.00	0.00	0.00
1,400.00	15.02	150.51	1,372.12	-211.74	99.25	233.37	0.00	0.00	0.00
1,500.00	15.02	150.51	1,468.70	-234.30	112.01	259.29	0.00	0.00	0.00
1,600.00	15.02	150.51	1,565.28	-256.87	124.77	285.21	0.00	0.00	0.00
1,700.00	15.02	150.51	1,661.87	-279.43	137.53	311.13	0.00	0.00	0.00
1,800.00	15.02	150.51	1,758.45	-301.99	150.29	337.04	0.00	0.00	0.00
1,900.00	15.02	150.51	1,855.03	-324.55	163.05	362.96	0.00	0.00	0.00
2,000.00	15.02	150.51	1,951.61	-347.12	175.80	388.88	0.00	0.00	0.00
2,100.00	15.02	150.51	2,048.20	-369.68	188.56	414.80	0.00	0.00	0.00
2,200.00	15.02	150.51	2,144.78	-392.24	201.32	440.72	0.00	0.00	0.00
2,300.00	15.02	150.51	2,241.36	-414.81	214.08	466.64	0.00	0.00	0.00
2,371.07	15.02	150.51	2,310.00	-430.84	223.15	485.06	0.00	0.00	0.00
G Sand									
2,400.00	15.02	150.51	2,337.94	-437.37	226.84	492.56	0.00	0.00	0.00
2,474.61	15.02	150.51	2,410.00	-454.20	236.36	511.89	0.00	0.00	0.00
G Sand Base									
2,500.00	15.02	150.51	2,434.52	-459.93	239.60	518.47	0.00	0.00	0.00
2,600.00	15.02	150.51	2,531.11	-482.50	252.36	544.39	0.00	0.00	0.00
2,700.00	15.02	150.51	2,627.69	-505.06	265.12	570.31	0.00	0.00	0.00
2,800.00	15.02	150.51	2,724.27	-527.62	277.87	596.23	0.00	0.00	0.00
2,900.00	15.02	150.51	2,820.85	-550.19	290.63	622.15	0.00	0.00	0.00
3,000.00	15.02	150.51	2,917.44	-572.75	303.39	648.07	0.00	0.00	0.00
3,100.00	15.02	150.51	3,014.02	-595.31	316.15	673.99	0.00	0.00	0.00
3,200.00	15.02	150.51	3,110.60	-617.87	328.91	699.90	0.00	0.00	0.00
3,300.00	15.02	150.51	3,207.18	-640.44	341.67	725.82	0.00	0.00	0.00
3,400.00	15.02	150.51	3,303.76	-663.00	354.43	751.74	0.00	0.00	0.00
3,500.00	15.02	150.51	3,400.35	-685.56	367.18	777.66	0.00	0.00	0.00
3,600.00	15.02	150.51	3,496.93	-708.13	379.94	803.58	0.00	0.00	0.00
3,700.00	15.02	150.51	3,593.51	-730.69	392.70	829.50	0.00	0.00	0.00
3,800.00	15.02	150.51	3,690.09	-753.25	405.46	855.42	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 423-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 423-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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)
3,900.00	15.02	150.51	3,786.68	-775.82	418.22	881.33	0.00	0.00	0.00
4,000.00	15.02	150.51	3,883.26	-798.38	430.98	907.25	0.00	0.00	0.00
4,100.00	15.02	150.51	3,979.84	-820.94	443.74	933.17	0.00	0.00	0.00
4,200.00	15.02	150.51	4,076.42	-843.51	456.50	959.09	0.00	0.00	0.00
4,239.94	15.02	150.51	4,115.00	-852.52	461.59	969.44	0.00	0.00	0.00
Lwr Wasatch									
4,300.00	15.02	150.51	4,173.00	-866.07	469.25	985.01	0.00	0.00	0.00
4,400.00	15.02	150.51	4,269.59	-888.63	482.01	1,010.93	0.00	0.00	0.00
4,500.00	15.02	150.51	4,366.17	-911.20	494.77	1,036.85	0.00	0.00	0.00
4,600.00	15.02	150.51	4,462.75	-933.76	507.53	1,062.76	0.00	0.00	0.00
4,700.00	15.02	150.51	4,559.33	-956.32	520.29	1,088.68	0.00	0.00	0.00
4,800.00	15.02	150.51	4,655.92	-978.88	533.05	1,114.60	0.00	0.00	0.00
4,900.00	15.02	150.51	4,752.50	-1,001.45	545.81	1,140.52	0.00	0.00	0.00
5,000.00	15.02	150.51	4,849.08	-1,024.01	558.56	1,166.44	0.00	0.00	0.00
5,021.66	15.02	150.51	4,870.00	-1,028.90	561.33	1,172.05	0.00	0.00	0.00
Ohio Creek/MVRD									
5,100.00	15.02	150.51	4,945.66	-1,046.57	571.32	1,192.36	0.00	0.00	0.00
5,200.00	15.02	150.51	5,042.24	-1,069.14	584.08	1,218.28	0.00	0.00	0.00
5,300.00	15.02	150.51	5,138.83	-1,091.70	596.84	1,244.20	0.00	0.00	0.00
5,400.00	15.02	150.51	5,235.41	-1,114.26	609.60	1,270.11	0.00	0.00	0.00
5,500.00	15.02	150.51	5,331.99	-1,136.83	622.36	1,296.03	0.00	0.00	0.00
5,549.61	15.02	150.51	5,379.91	-1,148.02	628.69	1,308.89	0.00	0.00	0.00
Start Drop -1.50									
5,600.00	14.27	150.51	5,428.66	-1,159.11	634.96	1,321.63	1.50	-1.50	0.00
5,700.00	12.77	150.51	5,525.89	-1,179.46	646.46	1,345.00	1.50	-1.50	0.00
5,800.00	11.27	150.51	5,623.69	-1,197.58	656.71	1,365.82	1.50	-1.50	0.00
5,900.00	9.77	150.51	5,722.01	-1,213.47	665.69	1,384.07	1.50	-1.50	0.00
6,000.00	8.27	150.51	5,820.77	-1,227.11	673.41	1,399.74	1.50	-1.50	0.00
6,100.00	6.77	150.51	5,919.91	-1,238.50	679.85	1,412.82	1.50	-1.50	0.00
6,200.00	5.27	150.51	6,019.35	-1,247.62	685.01	1,423.30	1.50	-1.50	0.00
6,300.00	3.77	150.51	6,119.04	-1,254.48	688.88	1,431.18	1.50	-1.50	0.00
6,400.00	2.27	150.51	6,218.90	-1,259.06	691.47	1,436.44	1.50	-1.50	0.00
6,500.00	0.77	150.51	6,318.86	-1,261.36	692.78	1,439.09	1.50	-1.50	0.00
6,551.14	0.00	0.00	6,370.00	-1,261.66	692.95	1,439.43	1.50	-1.50	0.00
Start 2407.00 hold at 6551.14 MD - Top Gas - RWF 423-12 BTV									
6,600.00	0.00	0.00	6,418.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
6,700.00	0.00	0.00	6,518.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
6,800.00	0.00	0.00	6,618.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
6,900.00	0.00	0.00	6,718.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,000.00	0.00	0.00	6,818.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,100.00	0.00	0.00	6,918.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,200.00	0.00	0.00	7,018.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,300.00	0.00	0.00	7,118.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,400.00	0.00	0.00	7,218.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,500.00	0.00	0.00	7,318.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,600.00	0.00	0.00	7,418.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,700.00	0.00	0.00	7,518.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,800.00	0.00	0.00	7,618.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,900.00	0.00	0.00	7,718.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
7,981.14	0.00	0.00	7,800.00	-1,261.66	692.95	1,439.43	0.00	0.00	0.00
Cameo									

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 423-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 423-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	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)	
8,000.00	0.00	0.00	7,818.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,918.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,018.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,300.00	0.00	0.00	8,118.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,218.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,318.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,418.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,518.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,618.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,808.14	0.00	0.00	8,627.00	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
Rollins										
8,900.00	0.00	0.00	8,718.86	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
8,958.14	0.00	0.00	8,777.00	-1,261.66	692.95	1,439.43	0.00	0.00	0.00	
TD at 8958.14 - RWF 423-12 BHL										

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										
RWF 423-12 BTV	0.00	0.00	6,370.00	-1,261.66	692.95	1,629,524.80	2,340,362.20	39.5385134	-107.8391507	
- plan hits target center										
- Circle (radius 50.00)										
RWF 423-12 BHL	0.00	0.00	8,777.00	-1,261.66	692.95	1,629,524.80	2,340,362.20	39.5385134	-107.8391507	
- plan hits target center										
- Point										

Casing Points									
Measured Depth (usft)	Vertical Depth (usft)	Name			Casing Diameter (in)	Hole Diameter (in)			
1,000.00	985.79	9 5/8" Casing @ 1000' MD			9.62	12.25			

Formations									
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)				
2,371.07	2,310.00	G Sand		0.00	0.00				
2,474.61	2,410.00	G Sand Base		0.00	0.00				
4,239.94	4,115.00	Lwr Wasatch		0.00	0.00				
5,021.66	4,870.00	Ohio Creek/MVRD		0.00	0.00				
6,551.14	6,370.00	Top Gas		0.00	0.00				
7,981.14	7,800.00	Cameo		0.00	0.00				
8,808.14	8,627.00	Rollins		0.00	0.00				

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 423-12
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5466.8' & RKB 24' @ 5490.80usft (H&P 318)
Site:	RWF 12-12 Pad	North Reference:	True
Well:	RWF 423-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 13June2019 jcsdi		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
115.00	115.00	0.00	0.00	Start Build 3.00
215.00	214.95	-2.01	-1.68	Start 75.00 hold at 215.00 MD
290.00	289.85	-5.01	-4.21	Start DLS 3.00 TFO -80.61
764.83	758.66	-68.43	18.21	Start 4784.78 hold at 764.83 MD
5,549.61	5,379.91	-1,148.02	628.69	Start Drop -1.50
6,551.14	6,370.00	-1,261.66	692.95	Start 2407.00 hold at 6551.14 MD
8,958.14	8,777.00	-1,261.66	692.95	TD at 8958.14