



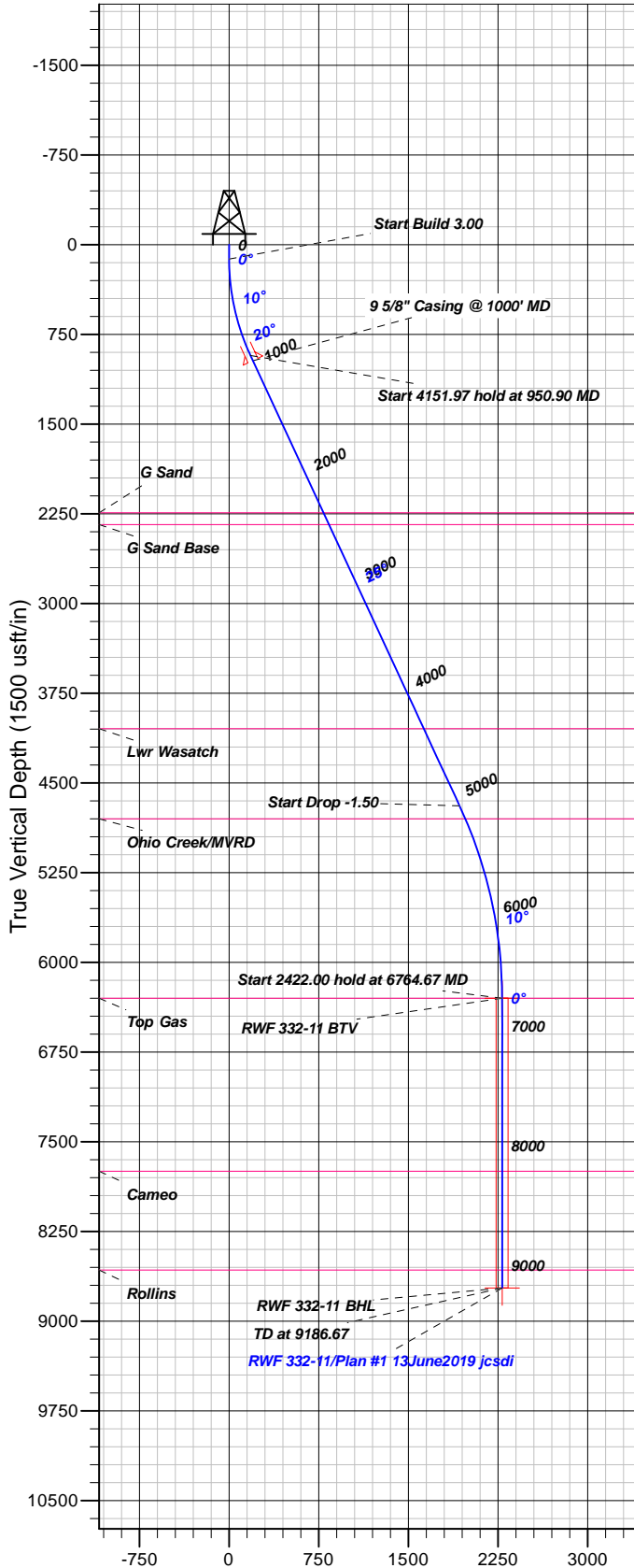
Azimuths to True North
Magnetic North: 9.37°

Magnetic Field
Strength: 51377.6snT
Dip Angle: 65.62°
Date: 6/13/2019
Model: BGGM2016

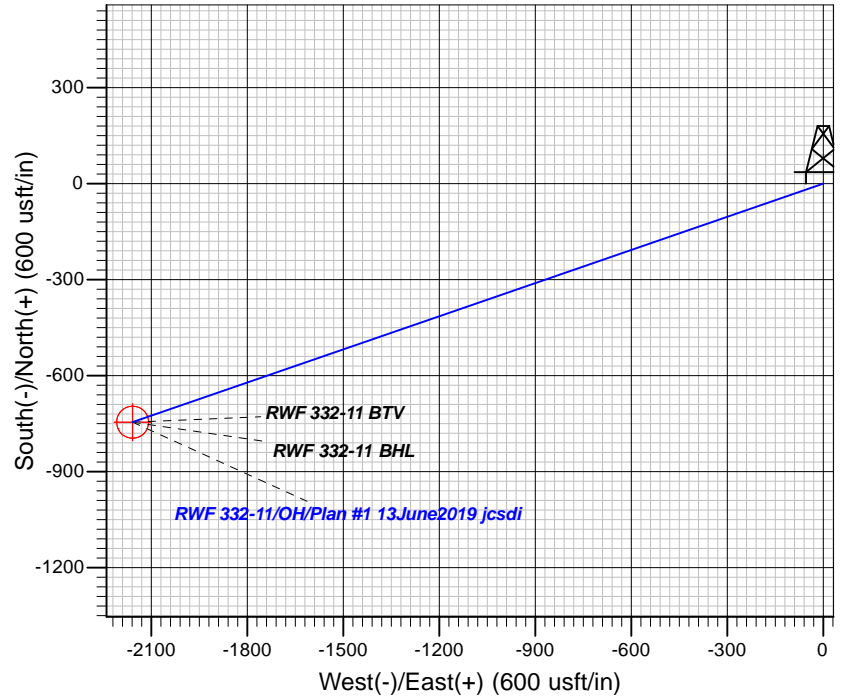
Well Details: RWF 332-11

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1630828.50	2339703.10	39.5420448	-107.8416060	



Vertical Section at 250.94° (1500 usft/in)



FORMATION TOP DETAILS

TVDP	MD	Formation
2240.00	2401.05	G Sand
2340.00	2511.33	G Sand Base
4045.00	4391.47	Lwr Wasatch
4800.00	5223.17	Ohio Creek/MVRD
6300.00	6764.67	Top Gas
7745.00	8209.67	Cameo
8572.00	9036.67	Rollins

Plan: Plan #1 13June2019 jcsdi

12:48, 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
969.46	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	950.90	24.93	250.94	924.94	-58.09	-168.16	3.00	250.94	177.91	
4	5102.87	24.93	250.94	4690.13	-629.41	-1822.18	0.00	0.00	1927.82	
5	6764.67	0.00	0.00	6300.00	-745.58	-2158.50	1.50	180.00	2283.64	RWF 332-11 BTV
6	9186.67	0.00	0.00	8722.00	-745.58	-2158.50	0.00	0.00	2283.64	RWF 332-11 BHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RWF 332-11 BTV	6300.00	-745.58	-2158.50	1630138.80	2337526.10	39.5399976	-107.8492596	Circle (Radius: 50.00)
- plan hits target center								
RWF 332-11 BHL	8722.00	-745.58	-2158.50	1630138.80	2337526.10	39.5399976	-107.8492596	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RWF 12-12 Pad

RWF 332-11

OH

Plan: Plan #1 13June2019 jcsdi

Standard Planning Report

18 June, 2019



Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 332-11
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 332-11	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 332-11					
Well Position	+N-S	31.41 usft	Northing:	1,630,828.50 usft	Latitude:	39.5420448
	+E-W	3.69 usft	Easting:	2,339,703.10 usft	Longitude:	-107.8416060
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	250.94

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	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
950.90	24.93	250.94	924.94	-58.09	-168.16	3.00	3.00	0.00	250.94	
5,102.87	24.93	250.94	4,690.13	-629.41	-1,822.18	0.00	0.00	0.00	0.00	
6,764.67	0.00	0.00	6,300.00	-745.58	-2,158.50	1.50	-1.50	0.00	180.00	RWF 332-11 BTV
9,186.67	0.00	0.00	8,722.00	-745.58	-2,158.50	0.00	0.00	0.00	0.00	RWF 332-11 BHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 332-11
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 332-11	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	
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	250.94	199.98	-0.55	-1.58	1.68	3.00	3.00	0.00	
300.00	5.40	250.94	299.73	-2.77	-8.01	8.48	3.00	3.00	0.00	
400.00	8.40	250.94	399.00	-6.69	-19.37	20.49	3.00	3.00	0.00	
500.00	11.40	250.94	497.50	-12.30	-35.61	37.68	3.00	3.00	0.00	
600.00	14.40	250.94	594.96	-19.59	-56.71	60.00	3.00	3.00	0.00	
700.00	17.40	250.94	691.13	-28.53	-82.61	87.39	3.00	3.00	0.00	
800.00	20.40	250.94	785.72	-39.11	-113.22	119.78	3.00	3.00	0.00	
900.00	23.40	250.94	878.50	-51.28	-148.47	157.08	3.00	3.00	0.00	
950.90	24.93	250.94	924.94	-58.09	-168.16	177.91	3.00	3.00	0.00	
Start 4151.97 hold at 950.90 MD										
1,000.00	24.93	250.94	969.46	-64.84	-187.72	198.61	0.00	0.00	0.00	
9 5/8" Casing @ 1000' MD										
1,100.00	24.93	250.94	1,060.15	-78.60	-227.56	240.75	0.00	0.00	0.00	
1,200.00	24.93	250.94	1,150.83	-92.36	-267.40	282.90	0.00	0.00	0.00	
1,300.00	24.93	250.94	1,241.52	-106.12	-307.23	325.04	0.00	0.00	0.00	
1,400.00	24.93	250.94	1,332.20	-119.88	-347.07	367.19	0.00	0.00	0.00	
1,500.00	24.93	250.94	1,422.88	-133.64	-386.91	409.34	0.00	0.00	0.00	
1,600.00	24.93	250.94	1,513.57	-147.40	-426.74	451.48	0.00	0.00	0.00	
1,700.00	24.93	250.94	1,604.25	-161.16	-466.58	493.63	0.00	0.00	0.00	
1,800.00	24.93	250.94	1,694.94	-174.92	-506.42	535.78	0.00	0.00	0.00	
1,900.00	24.93	250.94	1,785.62	-188.68	-546.25	577.92	0.00	0.00	0.00	
2,000.00	24.93	250.94	1,876.31	-202.44	-586.09	620.07	0.00	0.00	0.00	
2,100.00	24.93	250.94	1,966.99	-216.20	-625.93	662.22	0.00	0.00	0.00	
2,200.00	24.93	250.94	2,057.68	-229.96	-665.76	704.36	0.00	0.00	0.00	
2,300.00	24.93	250.94	2,148.36	-243.73	-705.60	746.51	0.00	0.00	0.00	
2,400.00	24.93	250.94	2,239.04	-257.49	-745.44	788.66	0.00	0.00	0.00	
2,401.05	24.93	250.94	2,240.00	-257.63	-745.86	789.10	0.00	0.00	0.00	
G Sand										
2,500.00	24.93	250.94	2,329.73	-271.25	-785.28	830.80	0.00	0.00	0.00	
2,511.33	24.93	250.94	2,340.00	-272.80	-789.79	835.57	0.00	0.00	0.00	
G Sand Base										
2,600.00	24.93	250.94	2,420.41	-285.01	-825.11	872.95	0.00	0.00	0.00	
2,700.00	24.93	250.94	2,511.10	-298.77	-864.95	915.09	0.00	0.00	0.00	
2,800.00	24.93	250.94	2,601.78	-312.53	-904.79	957.24	0.00	0.00	0.00	
2,900.00	24.93	250.94	2,692.47	-326.29	-944.62	999.39	0.00	0.00	0.00	
3,000.00	24.93	250.94	2,783.15	-340.05	-984.46	1,041.53	0.00	0.00	0.00	
3,100.00	24.93	250.94	2,873.84	-353.81	-1,024.30	1,083.68	0.00	0.00	0.00	
3,200.00	24.93	250.94	2,964.52	-367.57	-1,064.13	1,125.83	0.00	0.00	0.00	
3,300.00	24.93	250.94	3,055.21	-381.33	-1,103.97	1,167.97	0.00	0.00	0.00	
3,400.00	24.93	250.94	3,145.89	-395.09	-1,143.81	1,210.12	0.00	0.00	0.00	
3,500.00	24.93	250.94	3,236.57	-408.85	-1,183.64	1,252.27	0.00	0.00	0.00	
3,600.00	24.93	250.94	3,327.26	-422.61	-1,223.48	1,294.41	0.00	0.00	0.00	
3,700.00	24.93	250.94	3,417.94	-436.37	-1,263.32	1,336.56	0.00	0.00	0.00	
3,800.00	24.93	250.94	3,508.63	-450.13	-1,303.15	1,378.70	0.00	0.00	0.00	
3,900.00	24.93	250.94	3,599.31	-463.89	-1,342.99	1,420.85	0.00	0.00	0.00	
4,000.00	24.93	250.94	3,690.00	-477.65	-1,382.83	1,463.00	0.00	0.00	0.00	
4,100.00	24.93	250.94	3,780.68	-491.41	-1,422.66	1,505.14	0.00	0.00	0.00	

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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 332-11	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)
4,200.00	24.93	250.94	3,871.37	-505.17	-1,462.50	1,547.29	0.00	0.00	0.00
4,300.00	24.93	250.94	3,962.05	-518.93	-1,502.34	1,589.44	0.00	0.00	0.00
4,391.47	24.93	250.94	4,045.00	-531.52	-1,538.78	1,627.99	0.00	0.00	0.00
Lwr Wasatch									
4,400.00	24.93	250.94	4,052.74	-532.69	-1,542.18	1,631.58	0.00	0.00	0.00
4,500.00	24.93	250.94	4,143.42	-546.45	-1,582.01	1,673.73	0.00	0.00	0.00
4,600.00	24.93	250.94	4,234.10	-560.21	-1,621.85	1,715.88	0.00	0.00	0.00
4,700.00	24.93	250.94	4,324.79	-573.97	-1,661.69	1,758.02	0.00	0.00	0.00
4,800.00	24.93	250.94	4,415.47	-587.73	-1,701.52	1,800.17	0.00	0.00	0.00
4,900.00	24.93	250.94	4,506.16	-601.49	-1,741.36	1,842.31	0.00	0.00	0.00
5,000.00	24.93	250.94	4,596.84	-615.25	-1,781.20	1,884.46	0.00	0.00	0.00
5,100.00	24.93	250.94	4,687.53	-629.01	-1,821.03	1,926.61	0.00	0.00	0.00
5,102.87	24.93	250.94	4,690.13	-629.41	-1,822.18	1,927.82	0.00	0.00	0.00
Start Drop -1.50									
5,200.00	23.47	250.94	4,778.72	-642.40	-1,859.81	1,967.63	1.50	-1.50	0.00
5,223.17	23.12	250.94	4,800.00	-645.40	-1,868.47	1,976.79	1.50	-1.50	0.00
Ohio Creek/MVRD									
5,300.00	21.97	250.94	4,870.96	-655.01	-1,896.31	2,006.25	1.50	-1.50	0.00
5,400.00	20.47	250.94	4,964.18	-666.83	-1,930.52	2,042.45	1.50	-1.50	0.00
5,500.00	18.97	250.94	5,058.31	-677.85	-1,962.42	2,076.19	1.50	-1.50	0.00
5,600.00	17.47	250.94	5,153.29	-688.05	-1,991.97	2,107.45	1.50	-1.50	0.00
5,700.00	15.97	250.94	5,249.06	-697.45	-2,019.16	2,136.22	1.50	-1.50	0.00
5,800.00	14.47	250.94	5,345.55	-706.02	-2,043.97	2,162.47	1.50	-1.50	0.00
5,900.00	12.97	250.94	5,442.70	-713.76	-2,066.39	2,186.19	1.50	-1.50	0.00
6,000.00	11.47	250.94	5,540.43	-720.67	-2,086.40	2,207.36	1.50	-1.50	0.00
6,100.00	9.97	250.94	5,638.68	-726.74	-2,103.98	2,225.96	1.50	-1.50	0.00
6,200.00	8.47	250.94	5,737.39	-731.98	-2,119.12	2,241.98	1.50	-1.50	0.00
6,300.00	6.97	250.94	5,836.48	-736.36	-2,131.82	2,255.41	1.50	-1.50	0.00
6,400.00	5.47	250.94	5,935.88	-739.90	-2,142.06	2,266.25	1.50	-1.50	0.00
6,500.00	3.97	250.94	6,035.54	-742.59	-2,149.84	2,274.47	1.50	-1.50	0.00
6,600.00	2.47	250.94	6,135.38	-744.42	-2,155.15	2,280.09	1.50	-1.50	0.00
6,700.00	0.97	250.94	6,235.33	-745.40	-2,157.98	2,283.09	1.50	-1.50	0.00
6,764.67	0.00	0.00	6,300.00	-745.58	-2,158.50	2,283.64	1.50	-1.50	168.64
Start 2422.00 hold at 6764.67 MD - Top Gas - RWF 332-11 BTV									
6,800.00	0.00	0.00	6,335.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
6,900.00	0.00	0.00	6,435.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,000.00	0.00	0.00	6,535.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,100.00	0.00	0.00	6,635.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,200.00	0.00	0.00	6,735.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,300.00	0.00	0.00	6,835.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,400.00	0.00	0.00	6,935.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,500.00	0.00	0.00	7,035.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,600.00	0.00	0.00	7,135.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,700.00	0.00	0.00	7,235.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,800.00	0.00	0.00	7,335.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
7,900.00	0.00	0.00	7,435.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,000.00	0.00	0.00	7,535.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,100.00	0.00	0.00	7,635.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,200.00	0.00	0.00	7,735.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,209.67	0.00	0.00	7,745.00	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
Cameo									

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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 332-11	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)
8,300.00	0.00	0.00	7,835.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,400.00	0.00	0.00	7,935.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,500.00	0.00	0.00	8,035.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,600.00	0.00	0.00	8,135.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,700.00	0.00	0.00	8,235.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,800.00	0.00	0.00	8,335.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
8,900.00	0.00	0.00	8,435.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
9,000.00	0.00	0.00	8,535.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
9,036.67	0.00	0.00	8,572.00	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
Rollins									
9,100.00	0.00	0.00	8,635.33	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
9,186.67	0.00	0.00	8,722.00	-745.58	-2,158.50	2,283.64	0.00	0.00	0.00
TD at 9186.67 - RWF 332-11 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 332-11 BTV	0.00	0.00	6,300.00	-745.58	-2,158.50	1,630,138.80	2,337,526.10	39.5399977	-107.8492596
- plan hits target center									
- Circle (radius 50.00)									
RWF 332-11 BHL	0.00	0.00	8,722.00	-745.58	-2,158.50	1,630,138.80	2,337,526.10	39.5399977	-107.8492596
- plan hits target center									
- Point									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,000.00	969.46	9 5/8" Casing @ 1000' MD	9.62	12.25

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,401.05	2,240.00	G Sand		0.00	0.00
2,511.33	2,340.00	G Sand Base		0.00	0.00
4,391.47	4,045.00	Lwr Wasatch		0.00	0.00
5,223.17	4,800.00	Ohio Creek/MVRD		0.00	0.00
6,764.67	6,300.00	Top Gas		0.00	0.00
8,209.67	7,745.00	Cameo		0.00	0.00
9,036.67	8,572.00	Rollins		0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 332-11
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 332-11	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)	
120.00	120.00	0.00	0.00	Start Build 3.00
950.90	924.94	-58.09	-168.16	Start 4151.97 hold at 950.90 MD
5,102.87	4,690.13	-629.41	-1,822.18	Start Drop -1.50
6,764.67	6,300.00	-745.58	-2,158.50	Start 2422.00 hold at 6764.67 MD
9,186.67	8,722.00	-745.58	-2,158.50	TD at 9186.67