



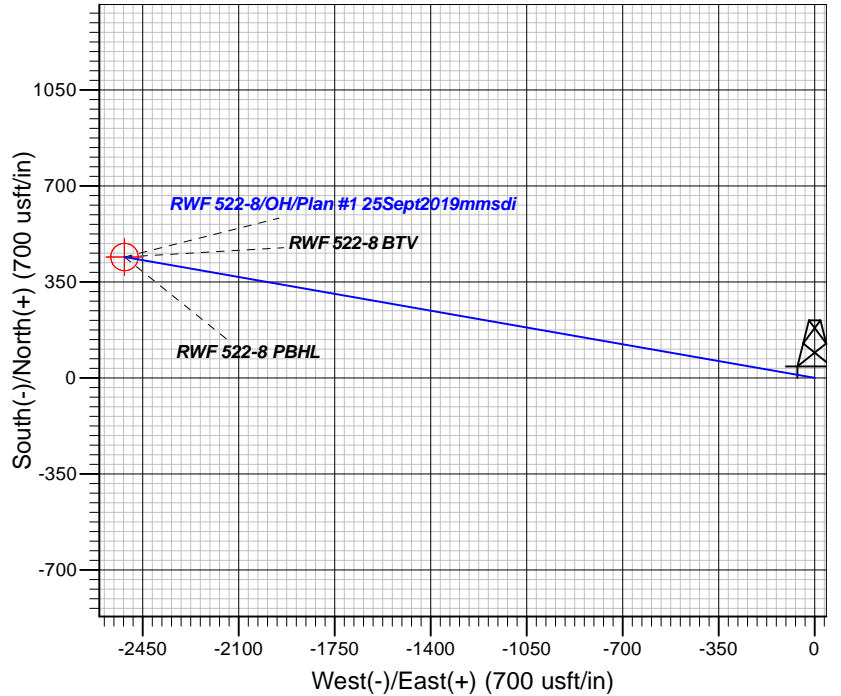
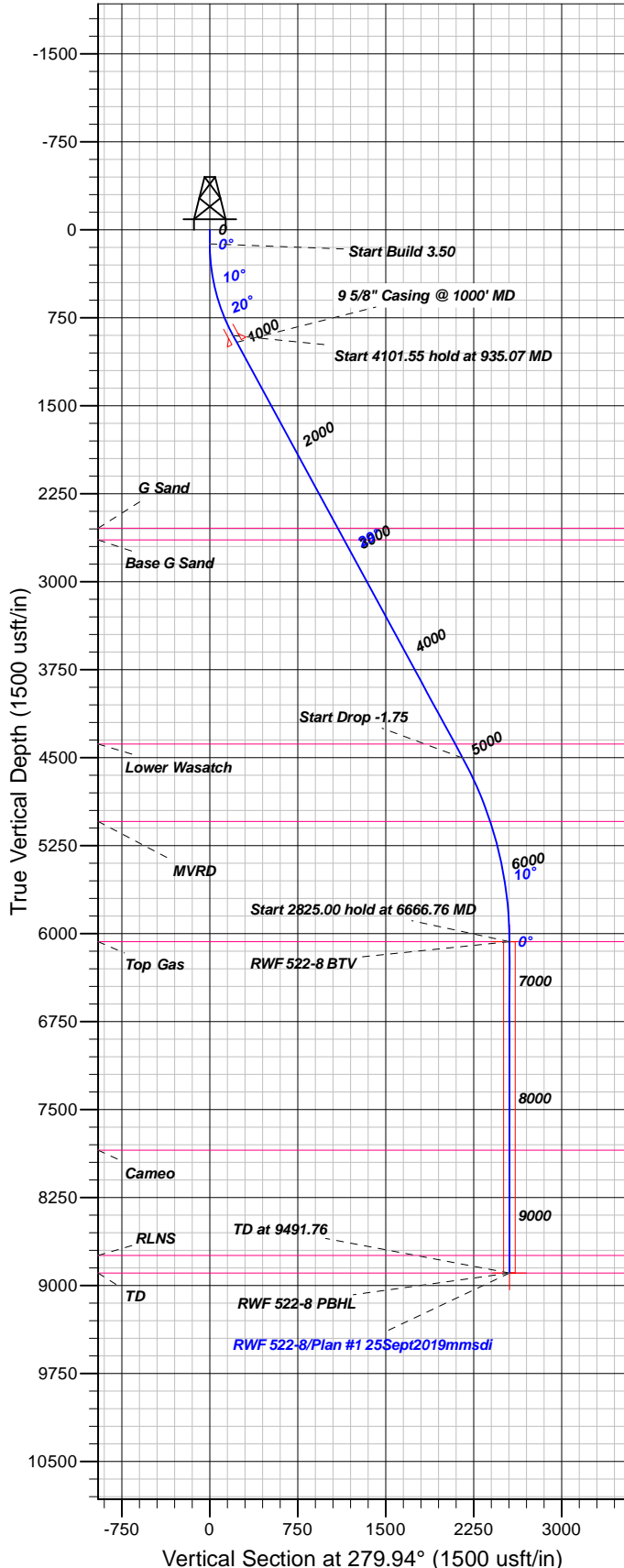
Azimuths to True North
Magnetic North: 9.30°

Magnetic Field
Strength: 51443.5snT
Dip Angle: 65.73°
Date: 9/25/2019
Model: HDGM

Well Details: RWF 522-8

GL 5979.6' & RKB 24' @ 6003.60usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1630230.9570	2322131.0080	39.5391450	-107.9038370	RWF 522-8 (B11)



FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
2544.00	2804.20	G Sand
2644.00	2918.02	Base G Sand
4384.00	4898.47	Lower Wasatch
5044.00	5624.23	MVRD
6069.00	6666.76	Top Gas
7847.00	8444.76	Cameo
8744.00	9341.76	RLNS
8894.00	9491.76	TD

Plan: Plan #1 25Sept2019mmsdi

11:50, October 08 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

TVDP	MD	Name	Size
958.86	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	935.07	28.53	279.94	901.81	34.30	-195.77	3.50	279.94	198.75	
4	5036.62	28.53	279.94	4505.38	372.32	-2125.21	0.00	0.00	2157.57	
5	6666.76	0.00	0.00	6069.00	440.91	-2516.75	1.75	180.00	2555.08	RWF 522-8 BTV
6	9491.76	0.00	0.00	8894.00	440.91	-2516.75	0.00	0.00	2555.08	RWF 522-8 PBHL

DESIGN TARGET DETAILS

Name	TVDP	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RWF 522-8 BTV	6069.00	440.91	-2516.75	1630738.30	2319626.80	39.5403551	-107.9127609	Circle (Radius: 50.00)
- plan hits target center								
RWF 522-8 PBHL	8894.00	440.91	-2516.75	1630738.30	2319626.80	39.5403551	-107.9127609	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RWF 12-9 Pad

RWF 522-8 - Slot RWF 522-8 (B11)

OH

Plan: Plan #1 25Sept2019mmsdi

Standard Planning Report

08 October, 2019



Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 522-8 - Slot RWF 522-8 (B11)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Site:	RWF 12-9 Pad	North Reference:	True
Well:	RWF 522-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 25Sept2019mmsdi		

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 12-9 Pad, Sec 9 T6S R94W				
Site Position:		Northing:	1,630,302.1330 usft	Latitude:	39.5393436	
From:	Map	Easting:	2,322,174.9450 usft	Longitude:	-107.9036880	
Position Uncertainty:		0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.52 °

Well	RWF 522-8 - Slot RWF 522-8 (B11)					
Well Position	+N/-S	-72.31 usft	Northing:	1,630,230.9570 usft	Latitude:	39.5391450
	+E/-W	-42.04 usft	Easting:	2,322,131.0080 usft	Longitude:	-107.9038370
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,979.60 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/25/2019	9.30	65.73	51,444

Design	Plan #1 25Sept2019mmsdi			
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	279.94

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	
935.07	28.53	279.94	901.81	34.30	-195.77	3.50	3.50	0.00	279.94	
5,036.62	28.53	279.94	4,505.38	372.32	-2,125.21	0.00	0.00	0.00	0.00	
6,666.76	0.00	0.00	6,069.00	440.91	-2,516.75	1.75	-1.75	0.00	180.00	RWF 522-8 BTV
9,491.76	0.00	0.00	8,894.00	440.91	-2,516.75	0.00	0.00	0.00	0.00	RWF 522-8 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 522-8 - Slot RWF 522-8 (B11)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Site:	RWF 12-9 Pad	North Reference:	True
Well:	RWF 522-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 25Sept2019mmsdi		

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 3.50									
200.00	2.80	279.94	199.97	0.34	-1.93	1.95	3.50	3.50	0.00
300.00	6.30	279.94	299.64	1.71	-9.74	9.89	3.50	3.50	0.00
400.00	9.80	279.94	398.64	4.12	-23.53	23.89	3.50	3.50	0.00
500.00	13.30	279.94	496.60	7.58	-43.25	43.91	3.50	3.50	0.00
600.00	16.80	279.94	593.15	12.06	-68.82	69.87	3.50	3.50	0.00
700.00	20.30	279.94	687.94	17.55	-100.15	101.68	3.50	3.50	0.00
800.00	23.80	279.94	780.61	24.02	-137.12	139.21	3.50	3.50	0.00
900.00	27.30	279.94	870.82	31.46	-179.60	182.34	3.50	3.50	0.00
935.07	28.53	279.94	901.81	34.30	-195.77	198.75	3.50	3.50	0.00
Start 4101.55 hold at 935.07 MD									
1,000.00	28.53	279.94	958.86	39.65	-226.32	229.76	0.00	0.00	0.00
9 5/8" Casing @ 1000' MD									
1,100.00	28.53	279.94	1,046.71	47.89	-273.36	277.52	0.00	0.00	0.00
1,200.00	28.53	279.94	1,134.57	56.13	-320.40	325.28	0.00	0.00	0.00
1,300.00	28.53	279.94	1,222.43	64.37	-367.44	373.04	0.00	0.00	0.00
1,400.00	28.53	279.94	1,310.29	72.61	-414.48	420.80	0.00	0.00	0.00
1,500.00	28.53	279.94	1,398.15	80.85	-461.52	468.55	0.00	0.00	0.00
1,600.00	28.53	279.94	1,486.01	89.10	-508.57	516.31	0.00	0.00	0.00
1,700.00	28.53	279.94	1,573.87	97.34	-555.61	564.07	0.00	0.00	0.00
1,800.00	28.53	279.94	1,661.73	105.58	-602.65	611.83	0.00	0.00	0.00
1,900.00	28.53	279.94	1,749.58	113.82	-649.69	659.59	0.00	0.00	0.00
2,000.00	28.53	279.94	1,837.44	122.06	-696.73	707.34	0.00	0.00	0.00
2,100.00	28.53	279.94	1,925.30	130.30	-743.77	755.10	0.00	0.00	0.00
2,200.00	28.53	279.94	2,013.16	138.54	-790.82	802.86	0.00	0.00	0.00
2,300.00	28.53	279.94	2,101.02	146.78	-837.86	850.62	0.00	0.00	0.00
2,400.00	28.53	279.94	2,188.88	155.03	-884.90	898.38	0.00	0.00	0.00
2,500.00	28.53	279.94	2,276.74	163.27	-931.94	946.13	0.00	0.00	0.00
2,600.00	28.53	279.94	2,364.60	171.51	-978.98	993.89	0.00	0.00	0.00
2,700.00	28.53	279.94	2,452.45	179.75	-1,026.02	1,041.65	0.00	0.00	0.00
2,800.00	28.53	279.94	2,540.31	187.99	-1,073.07	1,089.41	0.00	0.00	0.00
2,804.20	28.53	279.94	2,544.00	188.34	-1,075.04	1,091.41	0.00	0.00	0.00
G Sand									
2,900.00	28.53	279.94	2,628.17	196.23	-1,120.11	1,137.17	0.00	0.00	0.00
2,918.02	28.53	279.94	2,644.00	197.72	-1,128.58	1,145.77	0.00	0.00	0.00
Base G Sand									
3,000.00	28.53	279.94	2,716.03	204.47	-1,167.15	1,184.92	0.00	0.00	0.00
3,100.00	28.53	279.94	2,803.89	212.71	-1,214.19	1,232.68	0.00	0.00	0.00
3,200.00	28.53	279.94	2,891.75	220.96	-1,261.23	1,280.44	0.00	0.00	0.00
3,300.00	28.53	279.94	2,979.61	229.20	-1,308.27	1,328.20	0.00	0.00	0.00
3,400.00	28.53	279.94	3,067.47	237.44	-1,355.32	1,375.96	0.00	0.00	0.00
3,500.00	28.53	279.94	3,155.32	245.68	-1,402.36	1,423.72	0.00	0.00	0.00
3,600.00	28.53	279.94	3,243.18	253.92	-1,449.40	1,471.47	0.00	0.00	0.00
3,700.00	28.53	279.94	3,331.04	262.16	-1,496.44	1,519.23	0.00	0.00	0.00
3,800.00	28.53	279.94	3,418.90	270.40	-1,543.48	1,566.99	0.00	0.00	0.00
3,900.00	28.53	279.94	3,506.76	278.64	-1,590.52	1,614.75	0.00	0.00	0.00
4,000.00	28.53	279.94	3,594.62	286.89	-1,637.57	1,662.51	0.00	0.00	0.00
4,100.00	28.53	279.94	3,682.48	295.13	-1,684.61	1,710.26	0.00	0.00	0.00
4,200.00	28.53	279.94	3,770.34	303.37	-1,731.65	1,758.02	0.00	0.00	0.00
4,300.00	28.53	279.94	3,858.19	311.61	-1,778.69	1,805.78	0.00	0.00	0.00
4,400.00	28.53	279.94	3,946.05	319.85	-1,825.73	1,853.54	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 522-8 - Slot RWF 522-8 (B11)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Site:	RWF 12-9 Pad	North Reference:	True
Well:	RWF 522-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 25Sept2019mmsdi		

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)
4,500.00	28.53	279.94	4,033.91	328.09	-1,872.77	1,901.30	0.00	0.00	0.00
4,600.00	28.53	279.94	4,121.77	336.33	-1,919.82	1,949.05	0.00	0.00	0.00
4,700.00	28.53	279.94	4,209.63	344.57	-1,966.86	1,996.81	0.00	0.00	0.00
4,800.00	28.53	279.94	4,297.49	352.82	-2,013.90	2,044.57	0.00	0.00	0.00
4,898.47	28.53	279.94	4,384.00	360.93	-2,060.22	2,091.60	0.00	0.00	0.00
Lower Wasatch									
4,900.00	28.53	279.94	4,385.35	361.06	-2,060.94	2,092.33	0.00	0.00	0.00
5,000.00	28.53	279.94	4,473.21	369.30	-2,107.98	2,140.09	0.00	0.00	0.00
5,036.62	28.53	279.94	4,505.38	372.32	-2,125.21	2,157.57	0.00	0.00	0.00
Start Drop -1.75									
5,100.00	27.42	279.94	4,561.35	377.45	-2,154.49	2,187.30	1.75	-1.75	0.00
5,200.00	25.67	279.94	4,650.81	385.16	-2,198.51	2,231.99	1.75	-1.75	0.00
5,300.00	23.92	279.94	4,741.59	392.39	-2,239.81	2,273.92	1.75	-1.75	0.00
5,400.00	22.17	279.94	4,833.61	399.15	-2,278.36	2,313.06	1.75	-1.75	0.00
5,500.00	20.42	279.94	4,926.78	405.41	-2,314.13	2,349.38	1.75	-1.75	0.00
5,600.00	18.67	279.94	5,021.01	411.19	-2,347.08	2,382.83	1.75	-1.75	0.00
5,624.23	18.24	279.94	5,044.00	412.51	-2,354.64	2,390.50	1.75	-1.75	0.00
MVRD									
5,700.00	16.92	279.94	5,116.22	416.46	-2,377.18	2,413.38	1.75	-1.75	0.00
5,800.00	15.17	279.94	5,212.33	421.23	-2,404.40	2,441.02	1.75	-1.75	0.00
5,900.00	13.42	279.94	5,309.23	425.49	-2,428.72	2,465.71	1.75	-1.75	0.00
6,000.00	11.67	279.94	5,406.84	429.24	-2,450.11	2,487.42	1.75	-1.75	0.00
6,100.00	9.92	279.94	5,505.06	432.47	-2,468.56	2,506.15	1.75	-1.75	0.00
6,200.00	8.17	279.94	5,603.82	435.18	-2,484.04	2,521.87	1.75	-1.75	0.00
6,300.00	6.42	279.94	5,703.00	437.37	-2,496.54	2,534.56	1.75	-1.75	0.00
6,400.00	4.67	279.94	5,802.53	439.04	-2,506.06	2,544.22	1.75	-1.75	0.00
6,500.00	2.92	279.94	5,902.31	440.18	-2,512.57	2,550.84	1.75	-1.75	0.00
6,600.00	1.17	279.94	6,002.24	440.79	-2,516.08	2,554.40	1.75	-1.75	0.00
6,666.76	0.00	0.00	6,069.00	440.91	-2,516.75	2,555.08	1.75	-1.75	0.00
Start 2825.00 hold at 6666.76 MD - Top Gas - RWF 522-8 BTV									
6,700.00	0.00	0.00	6,102.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
6,800.00	0.00	0.00	6,202.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
6,900.00	0.00	0.00	6,302.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,000.00	0.00	0.00	6,402.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,100.00	0.00	0.00	6,502.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,200.00	0.00	0.00	6,602.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,300.00	0.00	0.00	6,702.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,400.00	0.00	0.00	6,802.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,500.00	0.00	0.00	6,902.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,600.00	0.00	0.00	7,002.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,700.00	0.00	0.00	7,102.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,800.00	0.00	0.00	7,202.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
7,900.00	0.00	0.00	7,302.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,000.00	0.00	0.00	7,402.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,100.00	0.00	0.00	7,502.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,200.00	0.00	0.00	7,602.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,300.00	0.00	0.00	7,702.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,400.00	0.00	0.00	7,802.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,444.76	0.00	0.00	7,847.00	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
Cameo									
8,500.00	0.00	0.00	7,902.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,600.00	0.00	0.00	8,002.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,700.00	0.00	0.00	8,102.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 522-8 - Slot RWF 522-8 (B11)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Site:	RWF 12-9 Pad	North Reference:	True
Well:	RWF 522-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 25Sept2019mmsdi		

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)
8,800.00	0.00	0.00	8,202.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
8,900.00	0.00	0.00	8,302.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
9,000.00	0.00	0.00	8,402.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
9,100.00	0.00	0.00	8,502.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
9,200.00	0.00	0.00	8,602.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
9,300.00	0.00	0.00	8,702.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
9,341.76	0.00	0.00	8,744.00	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
RLNS									
9,400.00	0.00	0.00	8,802.24	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
9,491.76	0.00	0.00	8,894.00	440.91	-2,516.75	2,555.08	0.00	0.00	0.00
TD at 9491.76 - TD - RWF 522-8 PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RWF 522-8 BTV	0.00	0.00	6,069.00	440.91	-2,516.75	1,630,738.3000	2,319,626.8000	39.5403552	-107.9127610
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 50.00)									
RWF 522-8 PBHL	0.00	0.00	8,894.00	440.91	-2,516.75	1,630,738.3000	2,319,626.8000	39.5403552	-107.9127610
- plan hits target center									
- Point									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,000.00	958.86	9 5/8" Casing @ 1000' MD	9.62	13.50

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,804.20	2,544.00	G Sand		0.00	0.00	
2,918.02	2,644.00	Base G Sand		0.00	0.00	
4,898.47	4,384.00	Lower Wasatch		0.00	0.00	
5,624.23	5,044.00	MVRD		0.00	0.00	
6,666.76	6,069.00	Top Gas		0.00	0.00	
8,444.76	7,847.00	Cameo		0.00	0.00	
9,341.76	8,744.00	RLNS		0.00	0.00	
9,491.76	8,894.00	TD		0.00	0.00	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RWF 522-8 - Slot RWF 522-8 (B11)
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Project:	Garfield County, CO NAD83	MD Reference:	GL 5979.6' & RKB 24' @ 6003.60usft
Site:	RWF 12-9 Pad	North Reference:	True
Well:	RWF 522-8	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 25Sept2019mmsdi		

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 3.50
935.07	901.81	34.30	-195.77	Start 4101.55 hold at 935.07 MD
5,036.62	4,505.38	372.32	-2,125.21	Start Drop -1.75
6,666.76	6,069.00	440.91	-2,516.75	Start 2825.00 hold at 6666.76 MD
9,491.76	8,894.00	440.91	-2,516.75	TD at 9491.76