



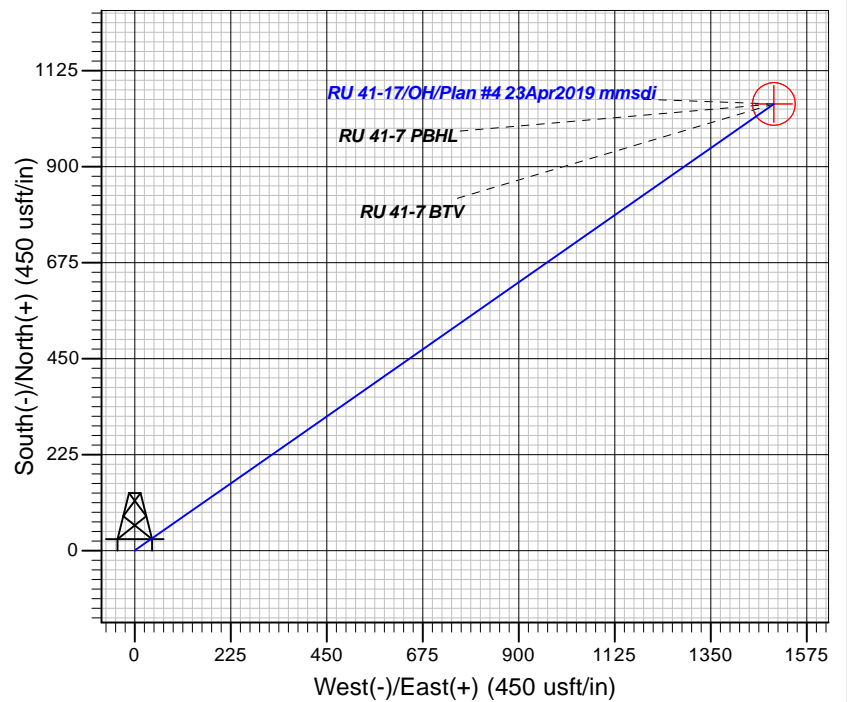
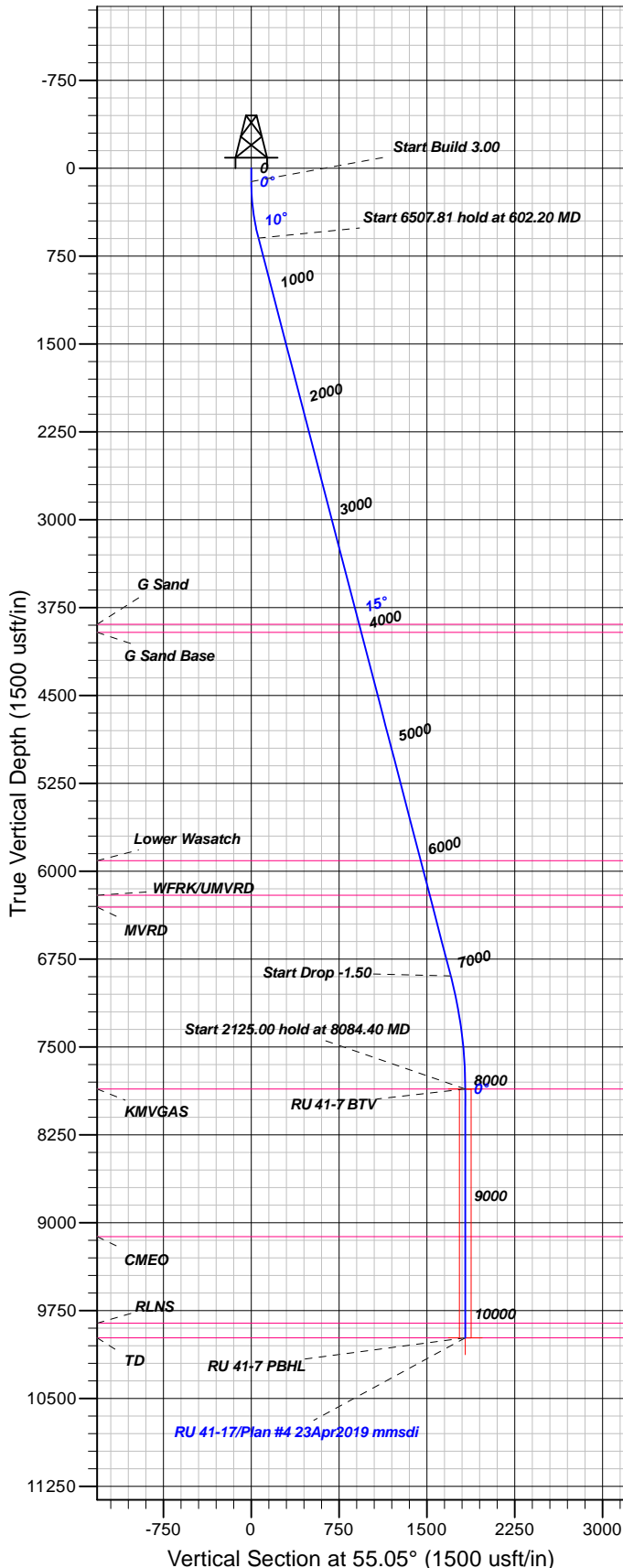
Azimuths to True North
Magnetic North: 9.30°

Magnetic Field
Strength: 51715.5snT
Dip Angle: 65.63°
Date: 2/9/2017
Model: HDGM

Well Details: RU 41-17

GL 7864' & RKB 24' @ 7888.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1596998.90	2351747.60	39.4500417	-107.7958798	RU 41-17



FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3892.00	4007.46	G Sand
3962.00	4079.81	G Sand Base
5910.00	6092.95	Lower Wasatch
6205.00	6397.82	WFRK/UMVRD
6306.00	6502.20	MVRD
7858.00	8084.40	KMVGAS
9119.00	9345.40	CMEO
9858.00	10084.40	RLNS
9983.00	10209.40	TD

Plan: Plan #4 23Apr2019 mmsdi

17:53, April 29 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
1078.62	1100.00	9 5/8" @ 1100' MD	9.62

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	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	602.20	14.62	55.05	596.93	35.40	50.66	3.00	55.05	61.80	
4	7110.00	14.62	55.05	6894.14	976.08	1396.70	0.00	0.001703.97		
5	8084.40	0.00	0.00	7858.00	1046.89	1498.02	1.50	180.001827.58		RU 41-7 BTV
6	10209.40	0.00	0.00	9983.00	1046.89	1498.02	0.00	0.001827.58		RU 41-7 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RU 41-7 BTV	7858.00	1046.89	1498.02	1598007.60	2353271.60	39.4529157	-107.7905747	Circle (Radius: 50.00)
- plan hits target center								
RU 41-7 PBHL	9983.00	1046.89	1498.02	1598007.60	2353271.60	39.4529157	-107.7905747	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RU 31-17 Pad

RU 41-17 - Slot RU 41-17

OH

Plan: Plan #4 23Apr2019 mmsdi

Standard Planning Report

29 April, 2019



Database:	Grand Junction District	Local Co-ordinate Reference:	Well RU 41-17 - Slot RU 41-17
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7864' & RKB 24' @ 7888.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7864' & RKB 24' @ 7888.00usft (H&P 318)
Site:	RU 31-17 Pad	North Reference:	True
Well:	RU 41-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 23Apr2019 mmsdi		

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		RU 31-17 Pad			
Site Position:		Northing:	1,596,940.40 usft	Latitude:	39.4498852
From:	Map	Easting:	2,351,805.70 usft	Longitude:	-107.7956689
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.45 °

Well	RU 41-17 - Slot RU 41-17					
Well Position	+N/-S	57.01 usft	Northing:	1,596,998.90 usft	Latitude:	39.4500417
	+E/-W	-59.56 usft	Easting:	2,351,747.60 usft	Longitude:	-107.7958798
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,864.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/9/2017	9.30	65.63	51,716

Design	Plan #4 23Apr2019 mmsdi			
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	55.05

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	
602.20	14.62	55.05	596.93	35.40	50.66	3.00	3.00	0.00	55.05	
7,110.01	14.62	55.05	6,894.14	976.08	1,396.70	0.00	0.00	0.00	0.00	
8,084.40	0.00	0.00	7,858.00	1,046.89	1,498.02	1.50	-1.50	0.00	180.00	RU 41-7 BTV
10,209.40	0.00	0.00	9,983.00	1,046.89	1,498.02	0.00	0.00	0.00	0.00	RU 41-7 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RU 41-17 - Slot RU 41-17
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7864' & RKB 24' @ 7888.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7864' & RKB 24' @ 7888.00usft (H&P 318)
Site:	RU 31-17 Pad	North Reference:	True
Well:	RU 41-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 23Apr2019 mmsdi		

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	55.05	199.97	1.08	1.55	1.89	3.00	3.00	0.00
300.00	5.55	55.05	299.71	5.13	7.34	8.95	3.00	3.00	0.00
400.00	8.55	55.05	398.94	12.16	17.40	21.23	3.00	3.00	0.00
500.00	11.55	55.05	497.40	22.15	31.70	38.67	3.00	3.00	0.00
600.00	14.55	55.05	594.80	35.09	50.21	61.25	3.00	3.00	0.00
602.20	14.62	55.05	596.93	35.40	50.66	61.80	3.00	3.00	0.00
Start 6507.81 hold at 602.20 MD									
700.00	14.62	55.05	691.57	49.54	70.89	86.48	0.00	0.00	0.00
800.00	14.62	55.05	788.33	64.00	91.57	111.72	0.00	0.00	0.00
900.00	14.62	55.05	885.10	78.45	112.26	136.95	0.00	0.00	0.00
1,000.00	14.62	55.05	981.86	92.90	132.94	162.19	0.00	0.00	0.00
1,100.00	14.62	55.05	1,078.62	107.36	153.62	187.42	0.00	0.00	0.00
9 5/8" @ 1100' MD									
1,200.00	14.62	55.05	1,175.39	121.81	174.31	212.65	0.00	0.00	0.00
1,300.00	14.62	55.05	1,272.15	136.27	194.99	237.89	0.00	0.00	0.00
1,400.00	14.62	55.05	1,368.92	150.72	215.67	263.12	0.00	0.00	0.00
1,500.00	14.62	55.05	1,465.68	165.18	236.36	288.35	0.00	0.00	0.00
1,600.00	14.62	55.05	1,562.44	179.63	257.04	313.59	0.00	0.00	0.00
1,700.00	14.62	55.05	1,659.21	194.09	277.72	338.82	0.00	0.00	0.00
1,800.00	14.62	55.05	1,755.97	208.54	298.41	364.06	0.00	0.00	0.00
1,900.00	14.62	55.05	1,852.74	223.00	319.09	389.29	0.00	0.00	0.00
2,000.00	14.62	55.05	1,949.50	237.45	339.77	414.52	0.00	0.00	0.00
2,100.00	14.62	55.05	2,046.26	251.91	360.46	439.76	0.00	0.00	0.00
2,200.00	14.62	55.05	2,143.03	266.36	381.14	464.99	0.00	0.00	0.00
2,300.00	14.62	55.05	2,239.79	280.81	401.83	490.22	0.00	0.00	0.00
2,400.00	14.62	55.05	2,336.55	295.27	422.51	515.46	0.00	0.00	0.00
2,500.00	14.62	55.05	2,433.32	309.72	443.19	540.69	0.00	0.00	0.00
2,600.00	14.62	55.05	2,530.08	324.18	463.88	565.93	0.00	0.00	0.00
2,700.00	14.62	55.05	2,626.85	338.63	484.56	591.16	0.00	0.00	0.00
2,800.00	14.62	55.05	2,723.61	353.09	505.24	616.39	0.00	0.00	0.00
2,900.00	14.62	55.05	2,820.37	367.54	525.93	641.63	0.00	0.00	0.00
3,000.00	14.62	55.05	2,917.14	382.00	546.61	666.86	0.00	0.00	0.00
3,100.00	14.62	55.05	3,013.90	396.45	567.29	692.10	0.00	0.00	0.00
3,200.00	14.62	55.05	3,110.67	410.91	587.98	717.33	0.00	0.00	0.00
3,300.00	14.62	55.05	3,207.43	425.36	608.66	742.56	0.00	0.00	0.00
3,400.00	14.62	55.05	3,304.19	439.81	629.34	767.80	0.00	0.00	0.00
3,500.00	14.62	55.05	3,400.96	454.27	650.03	793.03	0.00	0.00	0.00
3,600.00	14.62	55.05	3,497.72	468.72	670.71	818.26	0.00	0.00	0.00
3,700.00	14.62	55.05	3,594.49	483.18	691.39	843.50	0.00	0.00	0.00
3,800.00	14.62	55.05	3,691.25	497.63	712.08	868.73	0.00	0.00	0.00
3,900.00	14.62	55.05	3,788.01	512.09	732.76	893.97	0.00	0.00	0.00
4,000.00	14.62	55.05	3,884.78	526.54	753.45	919.20	0.00	0.00	0.00
4,007.46	14.62	55.05	3,892.00	527.62	754.99	921.08	0.00	0.00	0.00
G Sand									
4,079.81	14.62	55.05	3,962.00	538.08	769.95	939.34	0.00	0.00	0.00
G Sand Base									
4,100.00	14.62	55.05	3,981.54	541.00	774.13	944.43	0.00	0.00	0.00

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Project:	Garfield County, CO NAD83	MD Reference:	GL 7864' & RKB 24' @ 7888.00usft (H&P 318)
Site:	RU 31-17 Pad	North Reference:	True
Well:	RU 41-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 23Apr2019 mmsdi		

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	14.62	55.05	4,078.31	555.45	794.81	969.67	0.00	0.00	0.00
4,300.00	14.62	55.05	4,175.07	569.91	815.50	994.90	0.00	0.00	0.00
4,400.00	14.62	55.05	4,271.83	584.36	836.18	1,020.13	0.00	0.00	0.00
4,500.00	14.62	55.05	4,368.60	598.82	856.86	1,045.37	0.00	0.00	0.00
4,600.00	14.62	55.05	4,465.36	613.27	877.55	1,070.60	0.00	0.00	0.00
4,700.00	14.62	55.05	4,562.12	627.72	898.23	1,095.84	0.00	0.00	0.00
4,800.00	14.62	55.05	4,658.89	642.18	918.91	1,121.07	0.00	0.00	0.00
4,900.00	14.62	55.05	4,755.65	656.63	939.60	1,146.30	0.00	0.00	0.00
5,000.00	14.62	55.05	4,852.42	671.09	960.28	1,171.54	0.00	0.00	0.00
5,100.00	14.62	55.05	4,949.18	685.54	980.96	1,196.77	0.00	0.00	0.00
5,200.00	14.62	55.05	5,045.94	700.00	1,001.65	1,222.00	0.00	0.00	0.00
5,300.00	14.62	55.05	5,142.71	714.45	1,022.33	1,247.24	0.00	0.00	0.00
5,400.00	14.62	55.05	5,239.47	728.91	1,043.02	1,272.47	0.00	0.00	0.00
5,500.00	14.62	55.05	5,336.24	743.36	1,063.70	1,297.71	0.00	0.00	0.00
5,600.00	14.62	55.05	5,433.00	757.82	1,084.38	1,322.94	0.00	0.00	0.00
5,700.00	14.62	55.05	5,529.76	772.27	1,105.07	1,348.17	0.00	0.00	0.00
5,800.00	14.62	55.05	5,626.53	786.73	1,125.75	1,373.41	0.00	0.00	0.00
5,900.00	14.62	55.05	5,723.29	801.18	1,146.43	1,398.64	0.00	0.00	0.00
6,000.00	14.62	55.05	5,820.06	815.63	1,167.12	1,423.88	0.00	0.00	0.00
6,092.95	14.62	55.05	5,910.00	829.07	1,186.34	1,447.33	0.00	0.00	0.00
Lower Wasatch									
6,100.00	14.62	55.05	5,916.82	830.09	1,187.80	1,449.11	0.00	0.00	0.00
6,200.00	14.62	55.05	6,013.58	844.54	1,208.48	1,474.34	0.00	0.00	0.00
6,300.00	14.62	55.05	6,110.35	859.00	1,229.17	1,499.58	0.00	0.00	0.00
6,397.82	14.62	55.05	6,205.00	873.14	1,249.40	1,524.26	0.00	0.00	0.00
WFRK/UMVRD									
6,400.00	14.62	55.05	6,207.11	873.45	1,249.85	1,524.81	0.00	0.00	0.00
6,500.00	14.62	55.05	6,303.88	887.91	1,270.53	1,550.04	0.00	0.00	0.00
6,502.20	14.62	55.05	6,306.00	888.23	1,270.99	1,550.60	0.00	0.00	0.00
MVRD									
6,600.00	14.62	55.05	6,400.64	902.36	1,291.22	1,575.28	0.00	0.00	0.00
6,700.00	14.62	55.05	6,497.40	916.82	1,311.90	1,600.51	0.00	0.00	0.00
6,800.00	14.62	55.05	6,594.17	931.27	1,332.58	1,625.75	0.00	0.00	0.00
6,900.00	14.62	55.05	6,690.93	945.73	1,353.27	1,650.98	0.00	0.00	0.00
7,000.00	14.62	55.05	6,787.70	960.18	1,373.95	1,676.21	0.00	0.00	0.00
7,100.00	14.62	55.05	6,884.46	974.64	1,394.64	1,701.45	0.00	0.00	0.00
7,110.01	14.62	55.05	6,894.14	976.08	1,396.70	1,703.97	0.00	0.00	0.00
Start Drop -1.50									
7,200.00	13.27	55.05	6,981.48	988.50	1,414.48	1,725.65	1.50	-1.50	0.00
7,300.00	11.77	55.05	7,079.10	1,000.91	1,432.24	1,747.32	1.50	-1.50	0.00
7,400.00	10.27	55.05	7,177.26	1,011.86	1,447.90	1,766.43	1.50	-1.50	0.00
7,500.00	8.77	55.05	7,275.88	1,021.33	1,461.45	1,782.96	1.50	-1.50	0.00
7,600.00	7.27	55.05	7,374.90	1,029.32	1,472.88	1,796.91	1.50	-1.50	0.00
7,700.00	5.77	55.05	7,474.25	1,035.82	1,482.18	1,808.26	1.50	-1.50	0.00
7,800.00	4.27	55.05	7,573.86	1,040.83	1,489.35	1,817.00	1.50	-1.50	0.00
7,900.00	2.77	55.05	7,673.67	1,044.34	1,494.38	1,823.13	1.50	-1.50	0.00
8,000.00	1.27	55.05	7,773.61	1,046.35	1,497.26	1,826.65	1.50	-1.50	0.00
8,084.40	0.00	0.00	7,858.00	1,046.89	1,498.02	1,827.58	1.50	-1.50	0.00
Start 2125.00 hold at 8084.40 MD - KMGAS - RU 41-7 BTV									
8,100.00	0.00	0.00	7,873.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00
8,200.00	0.00	0.00	7,973.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00

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Site:	RU 31-17 Pad	North Reference:	True
Well:	RU 41-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 23Apr2019 mmsdi		

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	8,073.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
8,400.00	0.00	0.00	8,173.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,273.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,373.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,473.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,573.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,673.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,773.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,873.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,973.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,073.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,345.40	0.00	0.00	9,119.00	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
CME0										
9,400.00	0.00	0.00	9,173.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,273.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,373.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,473.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,573.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,673.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,773.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
10,084.40	0.00	0.00	9,858.00	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
RLNS										
10,100.00	0.00	0.00	9,873.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
10,200.00	0.00	0.00	9,973.60	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
10,209.40	0.00	0.00	9,983.00	1,046.89	1,498.02	1,827.58	0.00	0.00	0.00	
TD at 10209.40 - TD - RU 41-7 PBHL										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
RU 41-7 BTV - hit/miss target - Shape	0.00	0.00	7,858.00	1,046.89	1,498.02	1,598,007.60	2,353,271.60	39.4529158	-107.7905747
RU 41-7 PBHL - plan hits target center - Point	0.00	0.00	9,983.00	1,046.89	1,498.02	1,598,007.60	2,353,271.60	39.4529158	-107.7905747

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,078.62	9 5/8" @ 1100' MD	9.62	9.62	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well RU 41-17 - Slot RU 41-17
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7864' & RKB 24' @ 7888.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7864' & RKB 24' @ 7888.00usft (H&P 318)
Site:	RU 31-17 Pad	North Reference:	True
Well:	RU 41-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #4 23Apr2019 mmsdi		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,007.46	3,892.00	G Sand		0.00	0.00
4,079.81	3,962.00	G Sand Base		0.00	0.00
6,092.95	5,910.00	Lower Wasatch		0.00	0.00
6,397.82	6,205.00	WFRK/UMVRD		0.00	0.00
6,502.20	6,306.00	MVRD		0.00	0.00
8,084.40	7,858.00	KMVGAS		0.00	0.00
9,345.40	9,119.00	CMEO		0.00	0.00
10,084.40	9,858.00	RLNS		0.00	0.00
10,209.40	9,983.00	TD		0.00	0.00

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
602.20	596.93	35.40	50.66	Start 6507.81 hold at 602.20 MD
7,110.01	6,894.14	976.08	1,396.70	Start Drop -1.50
8,084.40	7,858.00	1,046.89	1,498.02	Start 2125.00 hold at 8084.40 MD
10,209.40	9,983.00	1,046.89	1,498.02	TD at 10209.40