



Company: TEP Rocky Mountain LLC  
Project: Garfield County, CO NAD83  
Site: RG 41-18-297 Pad  
Well: Federal RG 343-18-297

PROJECT DETAILS: Garfield County, CO NAD83

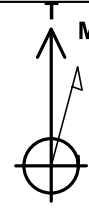
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Central Zone

System Datum: Mean Sea Level

Plan: Plan #2 29March2020 SB-SDI

Well Details: Federal RG 343-18-297

+N/-S +E/-W Northing Easting Longitude  
0.00 0.00 1758367.1000 2207904.2000 39.8817467 -108.3227781 Federal RG 343-18-297

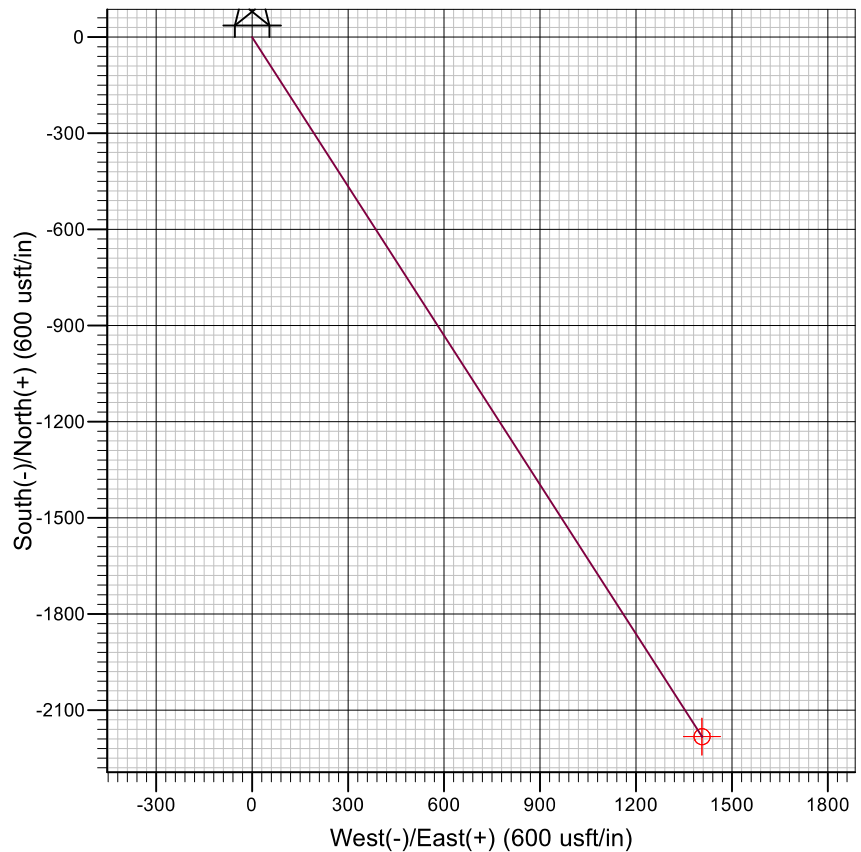
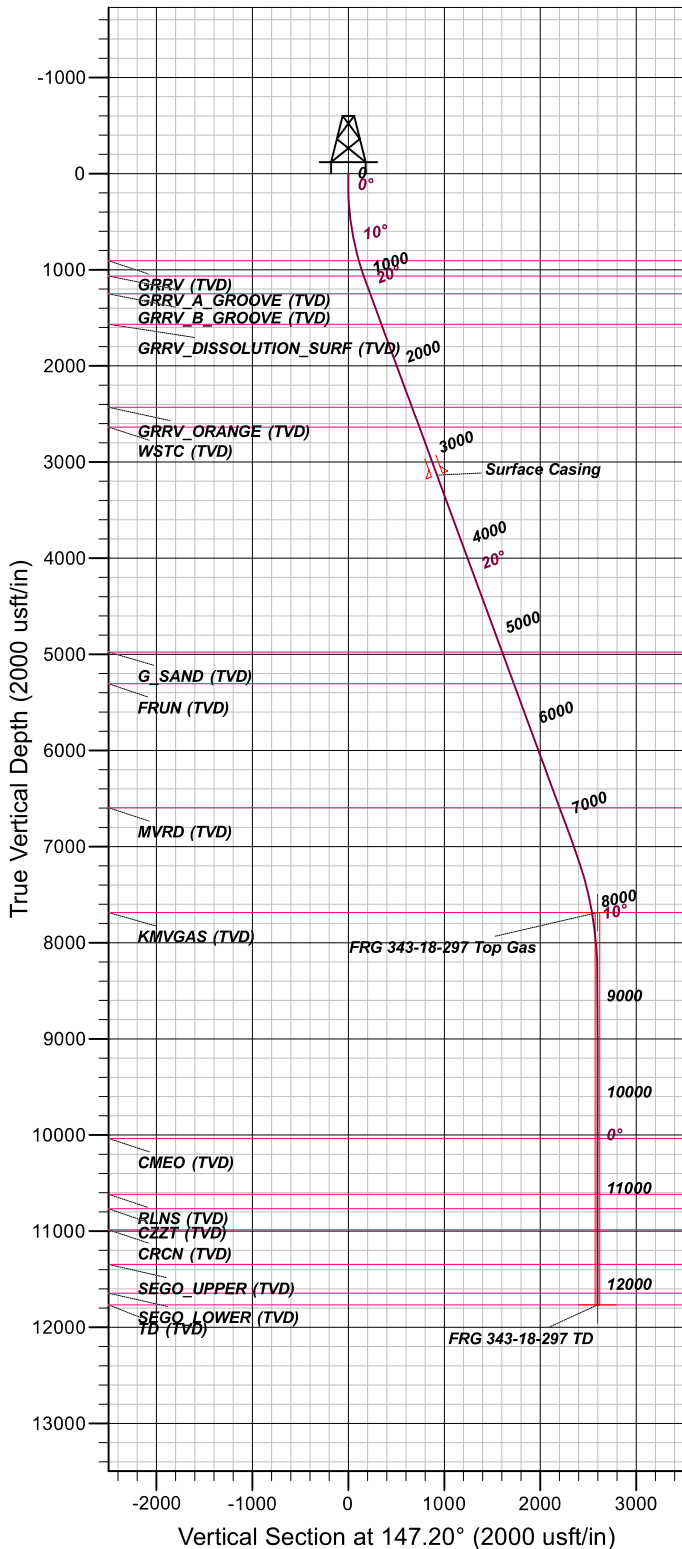


Azimuths to True North  
Magnetic North: 9.28°

Magnetic Field  
Strength: 51352.9nT  
Dip Angle: 65.83°  
Date: 3/16/2020  
Model: HDGM\_FILE

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Circle (Radius: 25.00)	Shape
FRG 343-18-297 Top Gas	7685.00	-2182.95	1406.80	1756141.5000	2209242.5000	39.8757542	-108.3177659	Circle (Radius: 25.00)	Point
- plan misses target center by 57.16usft at 8130.27usft MD (7694.34 TVD, -2135.54 N, 1376.26 E)									
FRG 343-18-297 TD	11765.00	-2182.95	1406.80	1756141.5000	2209242.5000	39.8757542	-108.3177659		
- plan hits target center									



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
905.00	915.17	GRRV (TVD)
1065.00	1083.04	GRRV A GROOVE (TVD)
1250.00	1280.08	GRRV B GROOVE (TVD)
1565.00	1615.87	GRRV DISSOLUTION SURF (TVD)
2430.00	2537.95	GRRV ORANGE (TVD)
2635.00	2756.47	WSTC (TVD)
4975.00	5250.88	G SAND (TVD)
5305.00	5602.66	FRUN (TVD)
6595.00	6977.78	MVRD (TVD)
7685.00	8120.78	KMGAS (TVD)
10035.00	10474.16	CMEO (TVD)
10615.00	11054.16	RLNS (TVD)
10765.00	11204.16	CZZT (TVD)
10985.00	11424.16	CRCN (TVD)
11345.00	11784.16	SEGO UPPER (TVD)
11645.00	12084.16	SEGO LOWER (TVD)
11765.00	12204.16	TD (TVD)

#### CASING DETAILS

TVD	MD	Name	Size
3135.00	3289.47	Surface Casing	0.00

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
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
1133.27	20.27	147.20	1112.27	-149.06	96.06	2.00	147.20	177.33
7436.43	20.27	147.20	7025.26	-1984.20	1278.72	0.00	0.00	2360.55
8120.78	10.00	147.20	7685.00	-2134.17	1375.37	1.50	180.00	2538.96
8787.45	0.00	0.00	8348.29	-2182.95	1406.81	1.50	-180.00	2596.99
12204.16	0.00	0.00	11765.00	-2182.95	1406.80	0.00	0.00	2596.99

# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RG 41-18-297 Pad**

**Federal RG 343-18-297 - Slot Federal RG 343-18-297**

**OH**

**Plan: Plan #2 29March2020 SB-SDI**

## **Standard Planning Report**

**30 March, 2020**



# Scientific Drilling, Intl

## Planning Report

<b>Database:</b>	Grand Junction	<b>Local Co-ordinate Reference:</b>	Well Federal RG 343-18-297 - Slot Federal RG 343-18-297
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 6620.9' & KB 24' @ 6644.90usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 6620.9' & KB 24' @ 6644.90usft (H&P 318)
<b>Site:</b>	RG 41-18-297 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Federal RG 343-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 29March2020 SB-SDI		

<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		

Site		RG 41-18-297 Pad, Site Center : Federal RG 341-18-297			
Site Position:		Northing:	1,758,382.6564 usft	Latitude:	39.8817910
From:	Lat/Long	Easting:	2,207,923.2396 usft	Longitude:	-108.3227120
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.78 °

Well	Federal RG 343-18-297 - Slot Federal RG 343-18-297, 684' FNL 2115' FEL Sec 18 T2S R97W					
Well Position	+N/-S	-16.14 usft	Northing:	1,758,367.1000 usft	Latitude:	39.8817467
	+E/-W	-18.55 usft	Easting:	2,207,904.2000 usft	Longitude:	-108.3227781
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	6,620.90 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>
	HDGM_FILE	3/16/2020	9.28	65.83	51,352.90000000

<b>Design</b>	Plan #2 29March2020 SB-SDI				
<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	147.20	

<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	
1,133.27	20.27	147.20	1,112.27	-149.06	96.06	2.00	2.00	0.00	147.20	
7,436.43	20.27	147.20	7,025.26	-1,984.20	1,278.72	0.00	0.00	0.00	0.00	
8,120.78	10.00	147.20	7,685.00	-2,134.17	1,375.37	1.50	-1.50	0.00	180.00	
8,787.45	0.00	0.00	8,348.29	-2,182.95	1,406.81	1.50	-1.50	-22.08	-180.00	
12,204.16	0.00	0.00	11,765.00	-2,182.95	1,406.80	0.00	0.00	0.00	0.00	FRG 343-18-297 TD

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<b>Site:</b>	RG 41-18-297 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Federal RG 343-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 29March2020 SB-SDI		

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
<b>Start Build 2.00</b>									
200.00	1.60	147.20	199.99	-0.94	0.61	1.12	2.00	2.00	0.00
300.00	3.60	147.20	299.88	-4.75	3.06	5.65	2.00	2.00	0.00
400.00	5.60	147.20	399.55	-11.49	7.41	13.67	2.00	2.00	0.00
500.00	7.60	147.20	498.89	-21.15	13.63	25.17	2.00	2.00	0.00
600.00	9.60	147.20	597.76	-33.72	21.73	40.12	2.00	2.00	0.00
700.00	11.60	147.20	696.05	-49.18	31.70	58.51	2.00	2.00	0.00
800.00	13.60	147.20	793.63	-67.52	43.51	80.33	2.00	2.00	0.00
900.00	15.60	147.20	890.40	-88.71	57.17	105.53	2.00	2.00	0.00
915.17	15.90	147.20	905.00	-92.17	59.40	109.65	2.00	2.00	0.00
<b>GRRV (TVD)</b>									
1,000.00	17.60	147.20	986.23	-112.72	72.64	134.10	2.00	2.00	0.00
1,083.04	19.26	147.20	1,065.00	-134.78	86.86	160.35	2.00	2.00	0.00
<b>GRRV_A_GROOVE (TVD)</b>									
1,100.00	19.60	147.20	1,081.00	-139.53	89.92	165.99	2.00	2.00	0.00
1,133.27	20.27	147.20	1,112.27	-149.06	96.06	177.33	2.00	2.00	0.00
<b>Start 6303.16 hold at 1133.27 MD</b>									
1,200.00	20.27	147.20	1,174.87	-168.49	108.58	200.45	0.00	0.00	0.00
1,280.08	20.27	147.20	1,250.00	-191.81	123.61	228.19	0.00	0.00	0.00
<b>GRRV_B_GROOVE (TVD)</b>									
1,300.00	20.27	147.20	1,268.68	-197.61	127.35	235.09	0.00	0.00	0.00
1,400.00	20.27	147.20	1,362.49	-226.72	146.11	269.72	0.00	0.00	0.00
1,500.00	20.27	147.20	1,456.30	-255.83	164.87	304.36	0.00	0.00	0.00
1,600.00	20.27	147.20	1,550.11	-284.95	183.64	339.00	0.00	0.00	0.00
1,615.87	20.27	147.20	1,565.00	-289.57	186.61	344.49	0.00	0.00	0.00
<b>GRRV DISSOLUTION_SURF (TVD)</b>									
1,700.00	20.27	147.20	1,643.92	-314.06	202.40	373.63	0.00	0.00	0.00
1,800.00	20.27	147.20	1,737.73	-343.18	221.16	408.27	0.00	0.00	0.00
1,900.00	20.27	147.20	1,831.54	-372.29	239.92	442.91	0.00	0.00	0.00
2,000.00	20.27	147.20	1,925.35	-401.41	258.69	477.54	0.00	0.00	0.00
2,100.00	20.27	147.20	2,019.16	-430.52	277.45	512.18	0.00	0.00	0.00
2,200.00	20.27	147.20	2,112.97	-459.64	296.21	546.82	0.00	0.00	0.00
2,300.00	20.27	147.20	2,206.78	-488.75	314.98	581.45	0.00	0.00	0.00
2,400.00	20.27	147.20	2,300.59	-517.87	333.74	616.09	0.00	0.00	0.00
2,500.00	20.27	147.20	2,394.40	-546.98	352.50	650.73	0.00	0.00	0.00
2,537.95	20.27	147.20	2,430.00	-558.03	359.62	663.87	0.00	0.00	0.00
<b>GRRV_ORANGE (TVD)</b>									
2,600.00	20.27	147.20	2,488.21	-576.09	371.27	685.36	0.00	0.00	0.00
2,700.00	20.27	147.20	2,582.02	-605.21	390.03	720.00	0.00	0.00	0.00
2,756.47	20.27	147.20	2,635.00	-621.65	400.62	739.56	0.00	0.00	0.00
<b>WSTC (TVD)</b>									
2,800.00	20.27	147.20	2,675.83	-634.32	408.79	754.64	0.00	0.00	0.00
2,900.00	20.27	147.20	2,769.64	-663.44	427.55	789.27	0.00	0.00	0.00
3,000.00	20.27	147.20	2,863.45	-692.55	446.32	823.91	0.00	0.00	0.00
3,100.00	20.27	147.20	2,957.26	-721.67	465.08	858.55	0.00	0.00	0.00
3,200.00	20.27	147.20	3,051.07	-750.78	483.84	893.18	0.00	0.00	0.00
3,289.47	20.27	147.20	3,135.00	-776.83	500.63	924.17	0.00	0.00	0.00

# Scientific Drilling, Intl

## Planning Report

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<b>Site:</b>	RG 41-18-297 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Federal RG 343-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 29March2020 SB-SDI		

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)
<b>Surface Casing</b>									
3,300.00	20.27	147.20	3,144.88	-779.90	502.61	927.82	0.00	0.00	0.00
3,400.00	20.27	147.20	3,238.69	-809.01	521.37	962.46	0.00	0.00	0.00
3,500.00	20.27	147.20	3,332.50	-838.13	540.13	997.09	0.00	0.00	0.00
3,600.00	20.27	147.20	3,426.31	-867.24	558.89	1,031.73	0.00	0.00	0.00
3,700.00	20.27	147.20	3,520.12	-896.35	577.66	1,066.37	0.00	0.00	0.00
3,800.00	20.27	147.20	3,613.93	-925.47	596.42	1,101.00	0.00	0.00	0.00
3,900.00	20.27	147.20	3,707.74	-954.58	615.18	1,135.64	0.00	0.00	0.00
4,000.00	20.27	147.20	3,801.55	-983.70	633.95	1,170.28	0.00	0.00	0.00
4,100.00	20.27	147.20	3,895.36	-1,012.81	652.71	1,204.92	0.00	0.00	0.00
4,200.00	20.27	147.20	3,989.17	-1,041.93	671.47	1,239.55	0.00	0.00	0.00
4,300.00	20.27	147.20	4,082.98	-1,071.04	690.24	1,274.19	0.00	0.00	0.00
4,400.00	20.27	147.20	4,176.79	-1,100.16	709.00	1,308.83	0.00	0.00	0.00
4,500.00	20.27	147.20	4,270.60	-1,129.27	727.76	1,343.46	0.00	0.00	0.00
4,600.00	20.27	147.20	4,364.41	-1,158.39	746.52	1,378.10	0.00	0.00	0.00
4,700.00	20.27	147.20	4,458.22	-1,187.50	765.29	1,412.74	0.00	0.00	0.00
4,800.00	20.27	147.20	4,552.03	-1,216.62	784.05	1,447.37	0.00	0.00	0.00
4,900.00	20.27	147.20	4,645.84	-1,245.73	802.81	1,482.01	0.00	0.00	0.00
5,000.00	20.27	147.20	4,739.65	-1,274.84	821.58	1,516.65	0.00	0.00	0.00
5,100.00	20.27	147.20	4,833.46	-1,303.96	840.34	1,551.28	0.00	0.00	0.00
5,200.00	20.27	147.20	4,927.27	-1,333.07	859.10	1,585.92	0.00	0.00	0.00
5,250.88	20.27	147.20	4,975.00	-1,347.89	868.65	1,603.54	0.00	0.00	0.00
<b>G_SAND (TVD)</b>									
5,300.00	20.27	147.20	5,021.08	-1,362.19	877.86	1,620.56	0.00	0.00	0.00
5,400.00	20.27	147.20	5,114.89	-1,391.30	896.63	1,655.19	0.00	0.00	0.00
5,500.00	20.27	147.20	5,208.70	-1,420.42	915.39	1,689.83	0.00	0.00	0.00
5,600.00	20.27	147.20	5,302.51	-1,449.53	934.15	1,724.47	0.00	0.00	0.00
5,602.66	20.27	147.20	5,305.00	-1,450.31	934.65	1,725.39	0.00	0.00	0.00
<b>FRUN (TVD)</b>									
5,700.00	20.27	147.20	5,396.32	-1,478.65	952.92	1,759.10	0.00	0.00	0.00
5,800.00	20.27	147.20	5,490.13	-1,507.76	971.68	1,793.74	0.00	0.00	0.00
5,900.00	20.27	147.20	5,583.94	-1,536.88	990.44	1,828.38	0.00	0.00	0.00
6,000.00	20.27	147.20	5,677.75	-1,565.99	1,009.21	1,863.01	0.00	0.00	0.00
6,100.00	20.27	147.20	5,771.56	-1,595.10	1,027.97	1,897.65	0.00	0.00	0.00
6,200.00	20.27	147.20	5,865.37	-1,624.22	1,046.73	1,932.29	0.00	0.00	0.00
6,300.00	20.27	147.20	5,959.18	-1,653.33	1,065.49	1,966.92	0.00	0.00	0.00
6,400.00	20.27	147.20	6,052.99	-1,682.45	1,084.26	2,001.56	0.00	0.00	0.00
6,500.00	20.27	147.20	6,146.80	-1,711.56	1,103.02	2,036.20	0.00	0.00	0.00
6,600.00	20.27	147.20	6,240.61	-1,740.68	1,121.78	2,070.83	0.00	0.00	0.00
6,700.00	20.27	147.20	6,334.42	-1,769.79	1,140.55	2,105.47	0.00	0.00	0.00
6,800.00	20.27	147.20	6,428.23	-1,798.91	1,159.31	2,140.11	0.00	0.00	0.00
6,900.00	20.27	147.20	6,522.04	-1,828.02	1,178.07	2,174.74	0.00	0.00	0.00
6,977.78	20.27	147.20	6,595.00	-1,850.67	1,192.67	2,201.68	0.00	0.00	0.00
<b>MVRD (TVD)</b>									
7,000.00	20.27	147.20	6,615.85	-1,857.14	1,196.83	2,209.38	0.00	0.00	0.00
7,100.00	20.27	147.20	6,709.66	-1,886.25	1,215.60	2,244.02	0.00	0.00	0.00
7,200.00	20.27	147.20	6,803.47	-1,915.37	1,234.36	2,278.66	0.00	0.00	0.00
7,300.00	20.27	147.20	6,897.28	-1,944.48	1,253.12	2,313.29	0.00	0.00	0.00
7,400.00	20.27	147.20	6,991.09	-1,973.59	1,271.89	2,347.93	0.00	0.00	0.00
7,436.43	20.27	147.20	7,025.26	-1,984.20	1,278.72	2,360.55	0.00	0.00	0.00

# Scientific Drilling, Intl

## Planning Report

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<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 6620.9' & KB 24' @ 6644.90usft (H&P 318)
<b>Site:</b>	RG 41-18-297 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Federal RG 343-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 29March2020 SB-SDI		

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)
<b>Start Drop -1.50</b>									
7,500.00	19.31	147.20	7,085.08	-2,002.29	1,290.38	2,382.07	1.50	-1.50	0.00
7,600.00	17.81	147.20	7,179.87	-2,029.05	1,307.62	2,413.90	1.50	-1.50	0.00
7,700.00	16.31	147.20	7,275.47	-2,053.71	1,323.52	2,443.24	1.50	-1.50	0.00
7,800.00	14.81	147.20	7,371.80	-2,076.26	1,338.05	2,470.07	1.50	-1.50	0.00
7,900.00	13.31	147.20	7,468.80	-2,096.68	1,351.21	2,494.36	1.50	-1.50	0.00
8,000.00	11.81	147.20	7,566.40	-2,114.96	1,362.99	2,516.11	1.50	-1.50	0.00
8,100.00	10.31	147.20	7,664.54	-2,131.09	1,373.38	2,535.30	1.50	-1.50	0.00
8,120.78	10.00	147.20	7,685.00	-2,134.17	1,375.37	2,538.96	1.50	-1.50	0.00
<b>Start DLS 1.50 TFO -180.00 - KMGAS (TVD)</b>									
8,200.00	8.81	147.20	7,763.15	-2,145.05	1,382.38	2,551.91	1.50	-1.50	0.00
8,300.00	7.31	147.20	7,862.16	-2,156.84	1,389.98	2,565.93	1.50	-1.50	0.00
8,400.00	5.81	147.20	7,961.50	-2,166.45	1,396.17	2,577.36	1.50	-1.50	0.00
8,500.00	4.31	147.20	8,061.11	-2,173.86	1,400.95	2,586.18	1.50	-1.50	0.00
8,600.00	2.81	147.20	8,160.91	-2,179.08	1,404.31	2,592.39	1.50	-1.50	0.00
8,700.00	1.31	147.20	8,260.85	-2,182.11	1,406.26	2,595.99	1.50	-1.50	0.00
8,787.45	0.00	0.00	8,348.29	-2,182.95	1,406.81	2,596.99	1.50	-1.50	-168.33
<b>Start 3416.71 hold at 8787.45 MD</b>									
8,800.00	0.00	0.00	8,360.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
8,900.00	0.00	0.00	8,460.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,000.00	0.00	0.00	8,560.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,100.00	0.00	0.00	8,660.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,200.00	0.00	0.00	8,760.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,300.00	0.00	0.00	8,860.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,400.00	0.00	0.00	8,960.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,500.00	0.00	0.00	9,060.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,600.00	0.00	0.00	9,160.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,700.00	0.00	0.00	9,260.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,800.00	0.00	0.00	9,360.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
9,900.00	0.00	0.00	9,460.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,000.00	0.00	0.00	9,560.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,100.00	0.00	0.00	9,660.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,200.00	0.00	0.00	9,760.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,300.00	0.00	0.00	9,860.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,400.00	0.00	0.00	9,960.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,474.16	0.00	0.00	10,035.00	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
<b>CME0 (TVD)</b>									
10,500.00	0.00	0.00	10,060.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,600.00	0.00	0.00	10,160.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,700.00	0.00	0.00	10,260.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,800.00	0.00	0.00	10,360.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
10,900.00	0.00	0.00	10,460.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
11,000.00	0.00	0.00	10,560.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
11,054.16	0.00	0.00	10,615.00	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
<b>RLNS (TVD)</b>									
11,100.00	0.00	0.00	10,660.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
11,200.00	0.00	0.00	10,760.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
11,204.16	0.00	0.00	10,765.00	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00
<b>CZZT (TVD)</b>									
11,300.00	0.00	0.00	10,860.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00

# Scientific Drilling, Intl

## Planning Report

<b>Database:</b>	Grand Junction	<b>Local Co-ordinate Reference:</b>	Well Federal RG 343-18-297 - Slot Federal RG 343-18-297
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 6620.9' & KB 24' @ 6644.90usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 6620.9' & KB 24' @ 6644.90usft (H&P 318)
<b>Site:</b>	RG 41-18-297 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Federal RG 343-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 29March2020 SB-SDI		

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)	
11,400.00	0.00	0.00	10,960.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
11,424.16	0.00	0.00	10,985.00	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
<b>CRCN (TVD)</b>										
11,500.00	0.00	0.00	11,060.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
11,600.00	0.00	0.00	11,160.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,260.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
11,784.16	0.00	0.00	11,345.00	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
<b>SEGO_UPPER (TVD)</b>										
11,800.00	0.00	0.00	11,360.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,460.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
12,000.00	0.00	0.00	11,560.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
12,084.16	0.00	0.00	11,645.00	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
<b>SEGO_LOWER (TVD)</b>										
12,100.00	0.00	0.00	11,660.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
12,200.00	0.00	0.00	11,760.84	-2,182.95	1,406.81	2,596.99	0.00	0.00	0.00	
12,204.16	0.00	0.00	11,765.00	-2,182.95	1,406.80	2,596.99	0.00	0.00	0.00	
<b>TD at 12204.16 - TD (TVD)</b>										

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										
FRG 343-18-297 Top Gæ	0.00	0.00	7,685.00	-2,182.95	1,406.80	1,756,141.5000	2,209,242.5000	39.8757542	-108.3177660	
- plan misses target center by 57.16usft at 8130.27usft MD (7694.34 TVD, -2135.54 N, 1376.26 E)										
- Circle (radius 25.00)										
FRG 343-18-297 TD	0.00	0.00	11,765.00	-2,182.95	1,406.80	1,756,141.5000	2,209,242.5000	39.8757542	-108.3177660	
- plan hits target center										
- Point										

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
3,289.47	3,135.00	Surface Casing	0.00	0.00		

# Scientific Drilling, Intl

## Planning Report

<b>Database:</b>	Grand Junction	<b>Local Co-ordinate Reference:</b>	Well Federal RG 343-18-297 - Slot Federal RG 343-18-297
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 6620.9' & KB 24' @ 6644.90usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 6620.9' & KB 24' @ 6644.90usft (H&P 318)
<b>Site:</b>	RG 41-18-297 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Federal RG 343-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 29March2020 SB-SDI		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
915.17	905.00	GRRV (TVD)		0.00		
1,083.04	1,065.00	GRRV_A_GROOVE (TVD)		0.00		
1,280.08	1,250.00	GRRV_B_GROOVE (TVD)		0.00		
1,615.87	1,565.00	GRRV DISSOLUTION_SURF (TVD)		0.00		
2,537.95	2,430.00	GRRV_ORANGE (TVD)		0.00		
2,756.47	2,635.00	WSTC (TVD)		0.00		
5,250.88	4,975.00	G_SAND (TVD)		0.00		
5,602.66	5,305.00	FRUN (TVD)		0.00		
6,977.78	6,595.00	MVRD (TVD)		0.00		
8,120.78	7,685.00	KMVGAS (TVD)		0.00		
10,474.16	10,035.00	CMEO (TVD)		0.00		
11,054.16	10,615.00	RLNS (TVD)		0.00		
11,204.16	10,765.00	CZZT (TVD)		0.00		
11,424.16	10,985.00	CRCN (TVD)		0.00		
11,784.16	11,345.00	SEGO_UPPER (TVD)		0.00		
12,084.16	11,645.00	SEGO_LOWER (TVD)		0.00		
12,204.16	11,765.00	TD (TVD)		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
120.00	120.00	0.00	0.00	Start Build 2.00	
1,133.27	1,112.27	-149.06	96.06	Start 6303.16 hold at 1133.27 MD	
7,436.43	7,025.26	-1,984.20	1,278.72	Start Drop -1.50	
8,120.78	7,685.00	-2,134.17	1,375.37	Start DLS 1.50 TFO -180.00	
8,787.45	8,348.29	-2,182.95	1,406.81	Start 3416.71 hold at 8787.45 MD	
12,204.16	11,765.00	-2,182.95	1,406.80	TD at 12204.16	