



Company: TEP Rocky Mountain LLC  
Project: Garfield County, CO NAD83  
Site: RG 41-18-297 Pad  
Well: Federal RG 442-18-297

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 #1 11March2020 SB-SDI

Well Details: Federal RG 442-18-297

+N/-S +E/-W Northing Easting Longitude  
0.00 0.00 1758362.6000 2207913.2000 39.8817351 -108.3227455 Federal RG 442-18-297

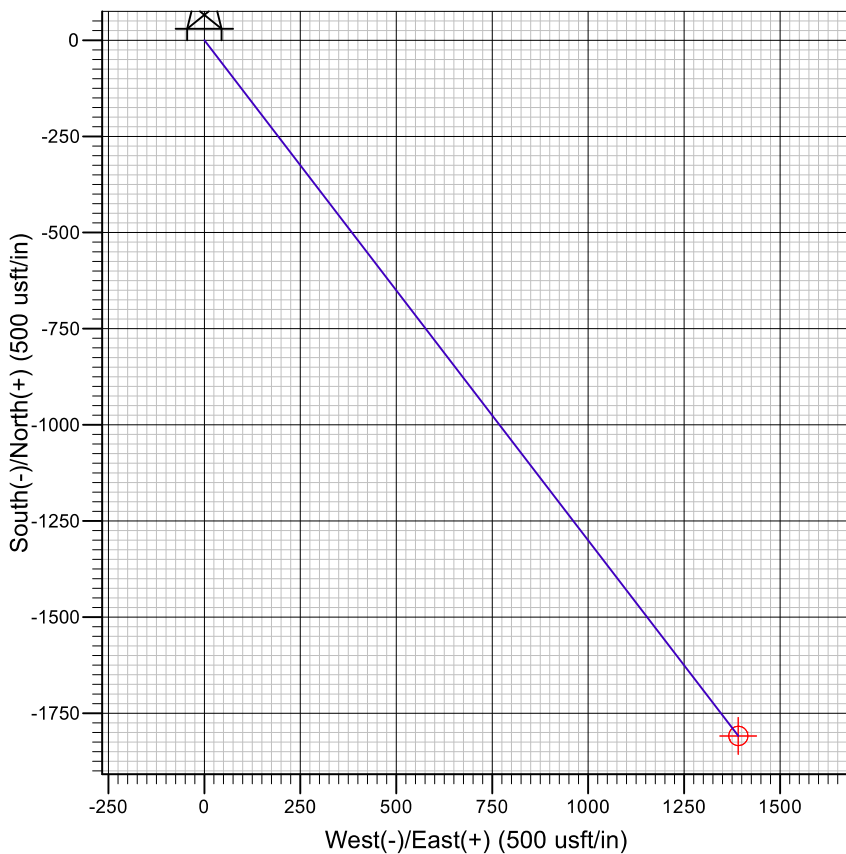
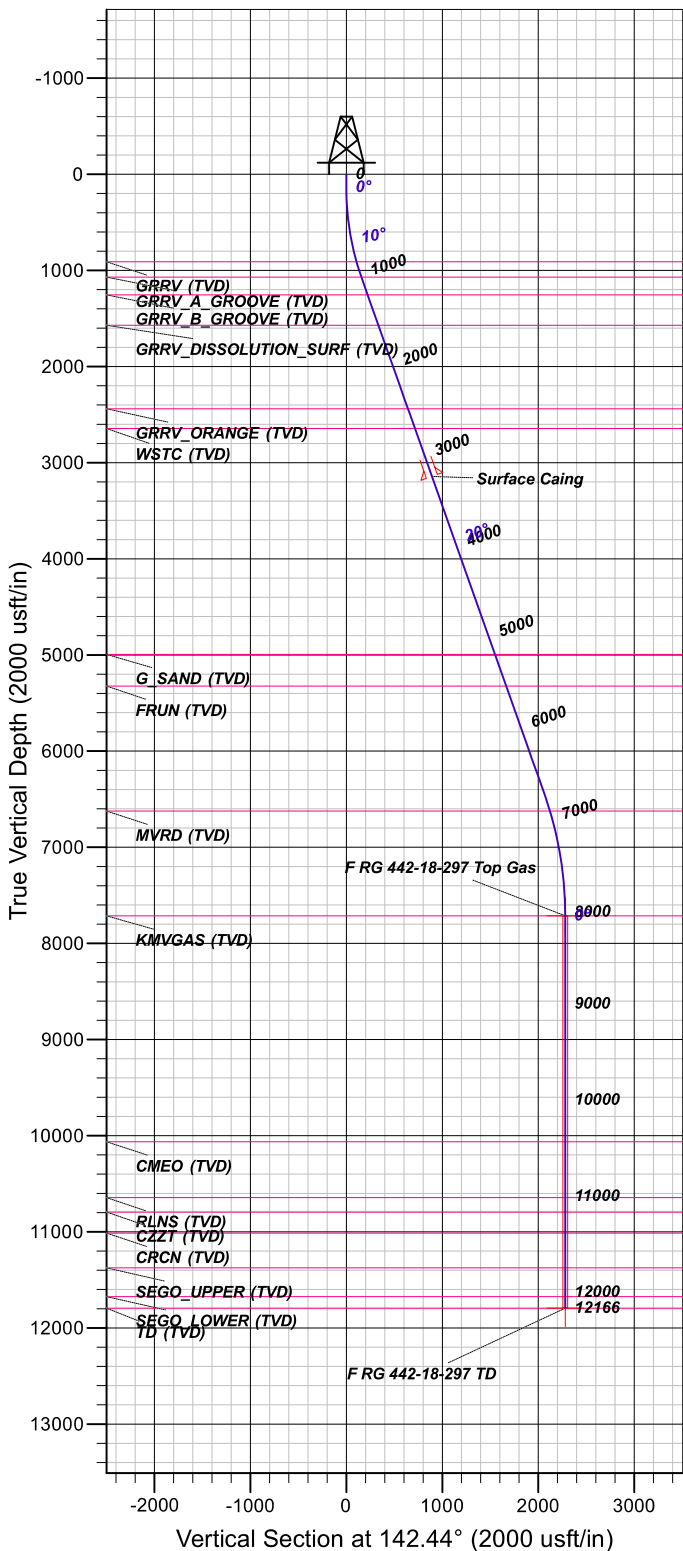


Azimuths to True North  
Magnetic North: 9.28°

Magnetic Field  
Strength: 51354.2nT  
Dip Angle: 65.83°  
Date: 3/11/2020  
Model: HDGM\_FILE

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Circle (Radius: 25.00)	Shape
F RG 442-18-297 Top Gas	7715.00	-1808.95	1391.27	1756511.3000	2209247.6000	39.8767693	-108.3177886	Circle (Radius: 25.00)	Point
F RG 442-18-297 TD	11795.00	-1808.95	1391.27	1756511.3000	2209247.6000	39.8767693	-108.3177886		
- plan hits target center									



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
910.00	919.78	GRRV (TVD)
1070.00	1087.45	GRRV_A GROOVE (TVD)
1255.00	1283.72	GRRV_B GROOVE (TVD)
1570.00	1617.98	GRRV DISSOLUTION SURF (TVD)
2440.00	2541.17	GRRV_ORANGE (TVD)
2645.00	2758.70	WSTC (TVD)
4995.00	5252.38	G SAND (TVD)
5325.00	5602.55	FRUN (TVD)
6625.00	6980.30	MVRD (TVD)
7715.00	8085.67	KMGAS (TVD)
10065.00	10435.67	CMEQ (TVD)
10645.00	11015.67	RLNS (TVD)
10795.00	11165.67	CZZT (TVD)
11015.00	11385.67	CRCN (TVD)
11375.00	11745.67	SEGO_UPPER (TVD)
11675.00	12045.67	SEGO_LOWER (TVD)
11795.00	12165.67	TD (TVD)

CASING DETAILS

TVD	MD	Name	Size
3145.00	3289.27	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
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00
1112.20	19.54	142.44	1093.36	-130.83	100.62	2.00	142.44	165.05
6782.74	19.54	142.44	6437.19	-1634.51	1257.10	0.00	0.00	2062.02
8085.67	0.00	0.00	7715.00	-1808.95	1391.27	1.50	180.00	2282.09
12165.67	0.00	0.00	11795.00	-1808.95	1391.27	0.00	0.00	2282.09

# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RG 41-18-297 Pad**

**Federal RG 442-18-297 - Slot Federal RG 442-18-297**

**OH**

**Plan: Plan #1 11March2020 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 442-18-297 - Slot Federal RG 442-18-297
<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 442-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11March2020 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		

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

<b>Well</b>	Federal RG 442-18-297 - Slot Federal RG 442-18-297, 688' FNL 2106' FEL Sec 18 T2S R97W			
<b>Well Position</b>	<b>+N/-S</b>	-20.36 usft	<b>Northing:</b>	1,758,362.6000 usft
	<b>+E/-W</b>	-9.41 usft	<b>Easting:</b>	2,207,913.2000 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	
			<b>Ground Level:</b>	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	3/11/2020	9.28	65.83	51,354.20000000

<b>Design</b>	Plan #1 11March2020 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	142.44

<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	
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,112.20	19.54	142.44	1,093.36	-130.83	100.62	2.00	2.00	0.00	142.44	
6,782.74	19.54	142.44	6,437.19	-1,634.51	1,257.10	0.00	0.00	0.00	0.00	
8,085.67	0.00	0.00	7,715.00	-1,808.95	1,391.27	1.50	-1.50	0.00	180.00	F RG 442-18-297 Top
12,165.67	0.00	0.00	11,795.00	-1,808.95	1,391.27	0.00	0.00	0.00	0.00	F RG 442-18-297 TD

# Scientific Drilling, Intl

## Planning Report

<b>Database:</b>	Grand Junction	<b>Local Co-ordinate Reference:</b>	Well Federal RG 442-18-297 - Slot Federal RG 442-18-297
<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 442-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11March2020 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
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
200.00	1.30	142.44	199.99	-0.58	0.45	0.74	2.00	2.00	0.00
300.00	3.30	142.44	299.91	-3.77	2.90	4.75	2.00	2.00	0.00
400.00	5.30	142.44	399.62	-9.71	7.47	12.25	2.00	2.00	0.00
500.00	7.30	142.44	499.01	-18.41	14.16	23.22	2.00	2.00	0.00
600.00	9.30	142.44	597.96	-29.85	22.96	37.66	2.00	2.00	0.00
700.00	11.30	142.44	696.34	-44.02	33.86	55.53	2.00	2.00	0.00
800.00	13.30	142.44	794.04	-60.91	46.84	76.84	2.00	2.00	0.00
900.00	15.30	142.44	890.94	-80.48	61.90	101.54	2.00	2.00	0.00
919.78	15.70	142.44	910.00	-84.67	65.12	106.82	2.00	2.00	0.00
GRRV (TVD)									
1,000.00	17.30	142.44	986.92	-102.73	79.01	129.60	2.00	2.00	0.00
1,087.45	19.05	142.44	1,070.00	-124.35	95.64	156.88	2.00	2.00	0.00
GRRV_A_GROOVE (TVD)									
1,100.00	19.30	142.44	1,081.85	-127.62	98.15	161.00	2.00	2.00	0.00
1,112.20	19.54	142.44	1,093.36	-130.83	100.62	165.05	2.00	2.00	0.00
Start 5670.54 hold at 1112.20 MD									
1,200.00	19.54	142.44	1,176.10	-154.12	118.53	194.43	0.00	0.00	0.00
1,283.72	19.54	142.44	1,255.00	-176.32	135.61	222.43	0.00	0.00	0.00
GRRV_B_GROOVE (TVD)									
1,300.00	19.54	142.44	1,270.34	-180.63	138.93	227.88	0.00	0.00	0.00
1,400.00	19.54	142.44	1,364.58	-207.15	159.32	261.33	0.00	0.00	0.00
1,500.00	19.54	142.44	1,458.82	-233.67	179.72	294.79	0.00	0.00	0.00
1,600.00	19.54	142.44	1,553.06	-260.19	200.11	328.24	0.00	0.00	0.00
1,617.98	19.54	142.44	1,570.00	-264.95	203.78	334.25	0.00	0.00	0.00
GRRV DISSOLUTION_SURF (TVD)									
1,700.00	19.54	142.44	1,647.29	-286.70	220.50	361.69	0.00	0.00	0.00
1,800.00	19.54	142.44	1,741.53	-313.22	240.90	395.14	0.00	0.00	0.00
1,900.00	19.54	142.44	1,835.77	-339.74	261.29	428.60	0.00	0.00	0.00
2,000.00	19.54	142.44	1,930.01	-366.25	281.69	462.05	0.00	0.00	0.00
2,100.00	19.54	142.44	2,024.25	-392.77	302.08	495.50	0.00	0.00	0.00
2,200.00	19.54	142.44	2,118.49	-419.29	322.48	528.96	0.00	0.00	0.00
2,300.00	19.54	142.44	2,212.72	-445.81	342.87	562.41	0.00	0.00	0.00
2,400.00	19.54	142.44	2,306.96	-472.32	363.27	595.86	0.00	0.00	0.00
2,500.00	19.54	142.44	2,401.20	-498.84	383.66	629.32	0.00	0.00	0.00
2,541.17	19.54	142.44	2,440.00	-509.76	392.06	643.09	0.00	0.00	0.00
GRRV_ORANGE (TVD)									
2,600.00	19.54	142.44	2,495.44	-525.36	404.05	662.77	0.00	0.00	0.00
2,700.00	19.54	142.44	2,589.68	-551.88	424.45	696.22	0.00	0.00	0.00
2,758.70	19.54	142.44	2,645.00	-567.44	436.42	715.86	0.00	0.00	0.00
WSTC (TVD)									
2,800.00	19.54	142.44	2,683.92	-578.39	444.84	729.67	0.00	0.00	0.00
2,900.00	19.54	142.44	2,778.16	-604.91	465.24	763.13	0.00	0.00	0.00
3,000.00	19.54	142.44	2,872.39	-631.43	485.63	796.58	0.00	0.00	0.00
3,100.00	19.54	142.44	2,966.63	-657.94	506.03	830.03	0.00	0.00	0.00
3,200.00	19.54	142.44	3,060.87	-684.46	526.42	863.49	0.00	0.00	0.00
3,289.27	19.54	142.44	3,145.00	-708.13	544.63	893.35	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 442-18-297 - Slot Federal RG 442-18-297
<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 442-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11March2020 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 Caing</b>									
3,300.00	19.54	142.44	3,155.11	-710.98	546.82	896.94	0.00	0.00	0.00
3,400.00	19.54	142.44	3,249.35	-737.50	567.21	930.39	0.00	0.00	0.00
3,500.00	19.54	142.44	3,343.59	-764.01	587.61	963.84	0.00	0.00	0.00
3,600.00	19.54	142.44	3,437.83	-790.53	608.00	997.30	0.00	0.00	0.00
3,700.00	19.54	142.44	3,532.06	-817.05	628.39	1,030.75	0.00	0.00	0.00
3,800.00	19.54	142.44	3,626.30	-843.57	648.79	1,064.20	0.00	0.00	0.00
3,900.00	19.54	142.44	3,720.54	-870.08	669.18	1,097.66	0.00	0.00	0.00
4,000.00	19.54	142.44	3,814.78	-896.60	689.58	1,131.11	0.00	0.00	0.00
4,100.00	19.54	142.44	3,909.02	-923.12	709.97	1,164.56	0.00	0.00	0.00
4,200.00	19.54	142.44	4,003.26	-949.63	730.37	1,198.02	0.00	0.00	0.00
4,300.00	19.54	142.44	4,097.50	-976.15	750.76	1,231.47	0.00	0.00	0.00
4,400.00	19.54	142.44	4,191.73	-1,002.67	771.16	1,264.92	0.00	0.00	0.00
4,500.00	19.54	142.44	4,285.97	-1,029.19	791.55	1,298.37	0.00	0.00	0.00
4,600.00	19.54	142.44	4,380.21	-1,055.70	811.94	1,331.83	0.00	0.00	0.00
4,700.00	19.54	142.44	4,474.45	-1,082.22	832.34	1,365.28	0.00	0.00	0.00
4,800.00	19.54	142.44	4,568.69	-1,108.74	852.73	1,398.73	0.00	0.00	0.00
4,900.00	19.54	142.44	4,662.93	-1,135.26	873.13	1,432.19	0.00	0.00	0.00
5,000.00	19.54	142.44	4,757.17	-1,161.77	893.52	1,465.64	0.00	0.00	0.00
5,100.00	19.54	142.44	4,851.40	-1,188.29	913.92	1,499.09	0.00	0.00	0.00
5,200.00	19.54	142.44	4,945.64	-1,214.81	934.31	1,532.55	0.00	0.00	0.00
5,252.38	19.54	142.44	4,995.00	-1,228.70	944.99	1,550.07	0.00	0.00	0.00
<b>G_SAND (TVD)</b>									
5,300.00	19.54	142.44	5,039.88	-1,241.32	954.71	1,566.00	0.00	0.00	0.00
5,400.00	19.54	142.44	5,134.12	-1,267.84	975.10	1,599.45	0.00	0.00	0.00
5,500.00	19.54	142.44	5,228.36	-1,294.36	995.50	1,632.90	0.00	0.00	0.00
5,600.00	19.54	142.44	5,322.60	-1,320.88	1,015.89	1,666.36	0.00	0.00	0.00
5,602.55	19.54	142.44	5,325.00	-1,321.55	1,016.41	1,667.21	0.00	0.00	0.00
<b>FRUN (TVD)</b>									
5,700.00	19.54	142.44	5,416.83	-1,347.39	1,036.28	1,699.81	0.00	0.00	0.00
5,800.00	19.54	142.44	5,511.07	-1,373.91	1,056.68	1,733.26	0.00	0.00	0.00
5,900.00	19.54	142.44	5,605.31	-1,400.43	1,077.07	1,766.72	0.00	0.00	0.00
6,000.00	19.54	142.44	5,699.55	-1,426.95	1,097.47	1,800.17	0.00	0.00	0.00
6,100.00	19.54	142.44	5,793.79	-1,453.46	1,117.86	1,833.62	0.00	0.00	0.00
6,200.00	19.54	142.44	5,888.03	-1,479.98	1,138.26	1,867.07	0.00	0.00	0.00
6,300.00	19.54	142.44	5,982.27	-1,506.50	1,158.65	1,900.53	0.00	0.00	0.00
6,400.00	19.54	142.44	6,076.50	-1,533.01	1,179.05	1,933.98	0.00	0.00	0.00
6,500.00	19.54	142.44	6,170.74	-1,559.53	1,199.44	1,967.43	0.00	0.00	0.00
6,600.00	19.54	142.44	6,264.98	-1,586.05	1,219.83	2,000.89	0.00	0.00	0.00
6,700.00	19.54	142.44	6,359.22	-1,612.57	1,240.23	2,034.34	0.00	0.00	0.00
6,782.74	19.54	142.44	6,437.19	-1,634.51	1,257.10	2,062.02	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
6,800.00	19.29	142.44	6,453.47	-1,639.05	1,260.60	2,067.76	1.50	-1.50	0.00
6,900.00	17.79	142.44	6,548.28	-1,664.25	1,279.98	2,099.54	1.50	-1.50	0.00
6,980.30	16.58	142.44	6,625.00	-1,683.06	1,294.44	2,123.27	1.50	-1.50	0.00
<b>MVRD (TVD)</b>									
7,000.00	16.29	142.44	6,643.89	-1,687.47	1,297.84	2,128.84	1.50	-1.50	0.00
7,100.00	14.79	142.44	6,740.24	-1,708.70	1,314.17	2,155.62	1.50	-1.50	0.00
7,200.00	13.29	142.44	6,837.25	-1,727.92	1,328.95	2,179.87	1.50	-1.50	0.00
7,300.00	11.79	142.44	6,934.86	-1,745.13	1,342.18	2,201.57	1.50	-1.50	0.00

# Scientific Drilling, Intl

## Planning Report

<b>Database:</b>	Grand Junction	<b>Local Co-ordinate Reference:</b>	Well Federal RG 442-18-297 - Slot Federal RG 442-18-297
<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 442-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11March2020 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)
7,400.00	10.29	142.44	7,033.01	-1,760.30	1,353.85	2,220.71	1.50	-1.50	0.00
7,500.00	8.79	142.44	7,131.63	-1,773.43	1,363.95	2,237.28	1.50	-1.50	0.00
7,600.00	7.29	142.44	7,230.64	-1,784.51	1,372.47	2,251.26	1.50	-1.50	0.00
7,700.00	5.79	142.44	7,329.99	-1,793.53	1,379.41	2,262.64	1.50	-1.50	0.00
7,800.00	4.29	142.44	7,429.60	-1,800.49	1,384.76	2,271.41	1.50	-1.50	0.00
7,900.00	2.79	142.44	7,529.41	-1,805.37	1,388.52	2,277.58	1.50	-1.50	0.00
8,000.00	1.29	142.44	7,629.34	-1,808.19	1,390.68	2,281.13	1.50	-1.50	0.00
8,085.67	0.00	0.00	7,715.00	-1,808.95	1,391.27	2,282.09	1.50	-1.50	0.00
Start 4080.00 hold at 8085.67 MD - KMWGAS (TVD)									
8,100.00	0.00	0.00	7,729.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,200.00	0.00	0.00	7,829.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,300.00	0.00	0.00	7,929.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,400.00	0.00	0.00	8,029.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,500.00	0.00	0.00	8,129.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,600.00	0.00	0.00	8,229.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,700.00	0.00	0.00	8,329.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,800.00	0.00	0.00	8,429.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
8,900.00	0.00	0.00	8,529.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,000.00	0.00	0.00	8,629.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,100.00	0.00	0.00	8,729.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,200.00	0.00	0.00	8,829.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,300.00	0.00	0.00	8,929.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,400.00	0.00	0.00	9,029.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,500.00	0.00	0.00	9,129.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,600.00	0.00	0.00	9,229.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,700.00	0.00	0.00	9,329.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,800.00	0.00	0.00	9,429.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
9,900.00	0.00	0.00	9,529.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,000.00	0.00	0.00	9,629.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,100.00	0.00	0.00	9,729.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,200.00	0.00	0.00	9,829.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,300.00	0.00	0.00	9,929.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,400.00	0.00	0.00	10,029.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,435.67	0.00	0.00	10,065.00	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
CMEO (TVD)									
10,500.00	0.00	0.00	10,129.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,600.00	0.00	0.00	10,229.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,700.00	0.00	0.00	10,329.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,800.00	0.00	0.00	10,429.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
10,900.00	0.00	0.00	10,529.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
11,000.00	0.00	0.00	10,629.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
11,015.67	0.00	0.00	10,645.00	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
RLNS (TVD)									
11,100.00	0.00	0.00	10,729.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
11,165.67	0.00	0.00	10,795.00	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
CZZT (TVD)									
11,200.00	0.00	0.00	10,829.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
11,300.00	0.00	0.00	10,929.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
11,385.67	0.00	0.00	11,015.00	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00
CRCN (TVD)									

# Scientific Drilling, Intl

## Planning Report

<b>Database:</b>	Grand Junction	<b>Local Co-ordinate Reference:</b>	Well Federal RG 442-18-297 - Slot Federal RG 442-18-297
<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 442-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11March2020 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	11,029.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,129.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
11,600.00	0.00	0.00	11,229.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,329.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
11,745.67	0.00	0.00	11,375.00	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
SEGO_UPPER (TVD)										
11,800.00	0.00	0.00	11,429.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,529.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
12,000.00	0.00	0.00	11,629.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
12,045.67	0.00	0.00	11,675.00	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
SEGO_LOWER (TVD)										
12,100.00	0.00	0.00	11,729.33	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
12,165.67	0.00	0.00	11,795.00	-1,808.95	1,391.27	2,282.09	0.00	0.00	0.00	
TD at 12165.67 - TD (TVD)										

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										
F RG 442-18-297 Top G	0.00	0.00	7,715.00	-1,808.95	1,391.27	1,756,511.3000	2,209,247.6000	39.8767693	-108.3177887	
- plan hits target center										
- Circle (radius 25.00)										
F RG 442-18-297 TD	0.00	0.00	11,795.00	-1,808.95	1,391.27	1,756,511.3000	2,209,247.6000	39.8767693	-108.3177887	
- plan hits target center										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,289.27	3,145.00	Surface Caing	0.00	0.00	

# Scientific Drilling, Intl

## Planning Report

<b>Database:</b>	Grand Junction	<b>Local Co-ordinate Reference:</b>	Well Federal RG 442-18-297 - Slot Federal RG 442-18-297
<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 442-18-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11March2020 SB-SDI		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
919.78	910.00	GRRV (TVD)		0.00		
1,087.45	1,070.00	GRRV_A_GROOVE (TVD)		0.00		
1,283.72	1,255.00	GRRV_B_GROOVE (TVD)		0.00		
1,617.98	1,570.00	GRRV DISSOLUTION_SURF (TVD)		0.00		
2,541.17	2,440.00	GRRV_ORANGE (TVD)		0.00		
2,758.70	2,645.00	WSTC (TVD)		0.00		
5,252.38	4,995.00	G_SAND (TVD)		0.00		
5,602.55	5,325.00	FRUN (TVD)		0.00		
6,980.30	6,625.00	MVRD (TVD)		0.00		
8,085.67	7,715.00	KMVGAS (TVD)		0.00		
10,435.67	10,065.00	CME0 (TVD)		0.00		
11,015.67	10,645.00	RLNS (TVD)		0.00		
11,165.67	10,795.00	CZZT (TVD)		0.00		
11,385.67	11,015.00	CRCN (TVD)		0.00		
11,745.67	11,375.00	SEGO_UPPER (TVD)		0.00		
12,045.67	11,675.00	SEGO_LOWER (TVD)		0.00		
12,165.67	11,795.00	TD (TVD)		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
135.00	135.00	0.00	0.00	Start Build 2.00	
1,112.20	1,093.36	-130.83	100.62	Start 5670.54 hold at 1112.20 MD	
6,782.74	6,437.19	-1,634.51	1,257.10	Start Drop -1.50	
8,085.67	7,715.00	-1,808.95	1,391.27	Start 4080.00 hold at 8085.67 MD	
12,165.67	11,795.00	-1,808.95	1,391.27	TD at 12165.67	