



Company: TEP Rocky Mountain LLC  
Project: Garfield County, CO NAD83  
Site: RG 41-18-297 Pad  
Well: Federal RG 342-18-297

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 342-18-297

+N/-S +E/-W Northing Easting Longitude  
0.00 0.00 1758369.3000 2207916.6000 39.8817538 -108.3227342 Federal RG 342-18-297

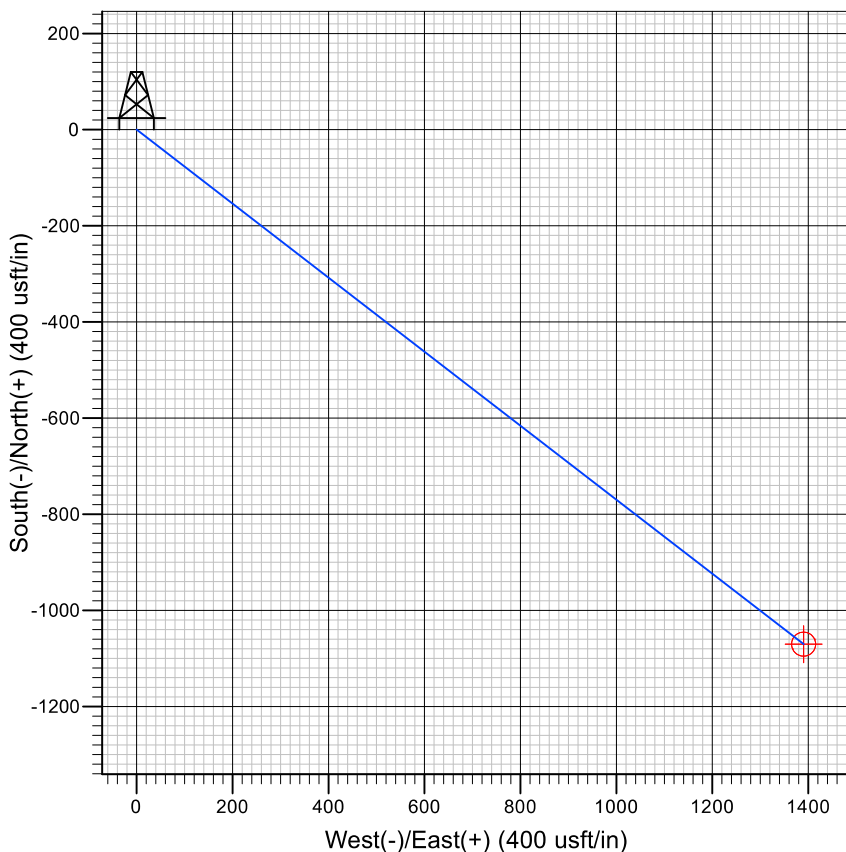
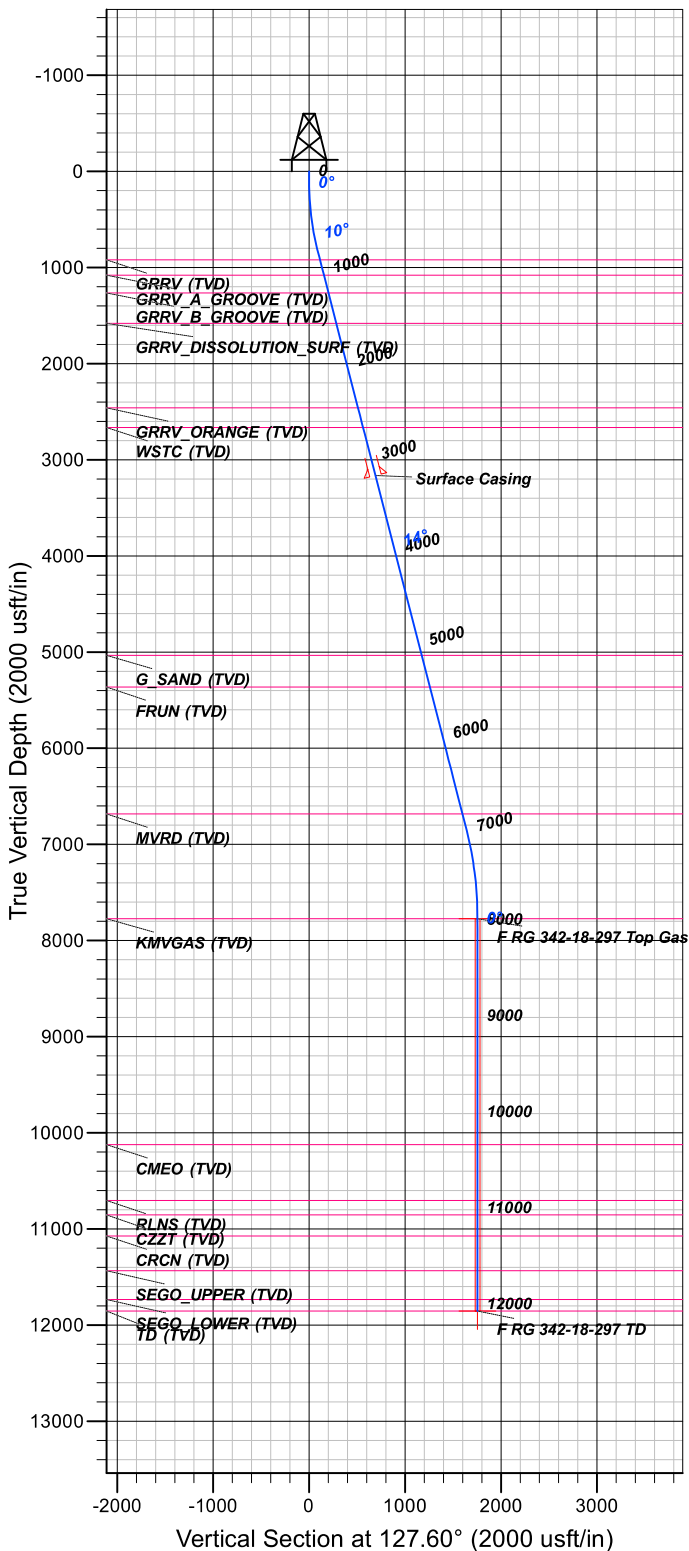


Azimuths to True North  
Magnetic North: 9.28°

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 342-18-297 Top Gas	7775.00	-1070.43	1390.23	1757256.2000	2209272.9000	39.8788153	-108.3177809	Circle (Radius: 25.00)	Point
- plan hits target center									
F RG 342-18-297 TD	11855.00	-1070.43	1390.23	1757256.2000	2209272.9000	39.8788153	-108.3177809		
- plan hits target center									



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
920.00	930.42	GRRV (TVD)
1080.00	1095.65	GRRV_A GROOVE (TVD)
1265.00	1286.69	GRRV_B GROOVE (TVD)
1580.00	1611.99	GRRV DISSOLUTION SURF (TVD)
2460.00	2520.75	GRRV_ORANGE (TVD)
2665.00	2732.45	WSTC (TVD)
5035.00	5179.90	G SAND (TVD)
5365.00	5520.69	FRUN (TVD)
6685.00	6883.83	MVRD (TVD)
7775.00	7988.48	KMGAS (TVD)
10125.00	10338.48	CMEO (TVD)
10705.00	10918.48	RLNS (TVD)
10855.00	11068.48	CZZT (TVD)
11075.00	11288.48	CRCN (TVD)
11435.00	11648.48	SEGO_UPPER (TVD)
11735.00	11948.48	SEGO_LOWER (TVD)
11855.00	12068.48	TD (TVD)

CASING DETAILS

TVD	MD	Name	Size
3165.00	3248.79	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
842.66	14.45	127.60	835.02	-55.31	71.84	2.00	127.60	90.66
7024.94	14.45	127.60	6821.64	-996.68	1294.44	0.00	0.00	1633.69
7988.48	0.00	0.00	7775.00	-1070.43	1390.23	1.50	180.00	1754.58
12068.48	0.00	0.00	11855.00	-1070.43	1390.23	0.00	0.00	1754.58

# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RG 41-18-297 Pad**

**Federal RG 342-18-297 - Slot Federal RG 342-18-297**

**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 342-18-297 - Slot Federal RG 342-18-297
<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 342-18-297	<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		

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 342-18-297 - Slot Federal RG 342-18-297, 682' FNL 2103' FEL Sec 18 T2S R97W					
Well Position	+N/-S	-13.56 usft	Northing:	1,758,369.3000 usft	Latitude:	39.8817538
	+E/-W	-6.22 usft	Easting:	2,207,916.6000 usft	Longitude:	-108.3227342
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	3/11/2020	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	127.60	

<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	
842.66	14.45	127.60	835.02	-55.31	71.84	2.00	2.00	0.00	127.60	
7,024.94	14.45	127.60	6,821.64	-996.68	1,294.44	0.00	0.00	0.00	0.00	
7,988.48	0.00	0.00	7,775.00	-1,070.43	1,390.23	1.50	-1.50	0.00	180.00	F RG 342-18-297 Top
12,068.48	0.00	0.00	11,855.00	-1,070.43	1,390.23	0.00	0.00	0.00	0.00	F RG 342-18-297 TD

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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 342-18-297	<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
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	127.60	199.99	-0.68	0.88	1.12	2.00	2.00	0.00
300.00	3.60	127.60	299.88	-3.45	4.48	5.65	2.00	2.00	0.00
400.00	5.60	127.60	399.55	-8.34	10.83	13.67	2.00	2.00	0.00
500.00	7.60	127.60	498.89	-15.35	19.94	25.17	2.00	2.00	0.00
600.00	9.60	127.60	597.76	-24.48	31.79	40.12	2.00	2.00	0.00
700.00	11.60	127.60	696.05	-35.70	46.36	58.51	2.00	2.00	0.00
800.00	13.60	127.60	793.63	-49.00	63.65	80.33	2.00	2.00	0.00
842.66	14.45	127.60	835.02	-55.31	71.84	90.66	2.00	2.00	0.00
<b>Start 6182.28 hold at 842.66 MD</b>									
900.00	14.45	127.60	890.55	-64.04	83.18	104.98	0.00	0.00	0.00
930.42	14.45	127.60	920.00	-68.68	89.19	112.57	0.00	0.00	0.00
<b>GRRV (TVD)</b>									
1,000.00	14.45	127.60	987.38	-79.27	102.95	129.94	0.00	0.00	0.00
1,095.65	14.45	127.60	1,080.00	-93.83	121.87	153.81	0.00	0.00	0.00
<b>GRRV_A_GROOVE (TVD)</b>									
1,100.00	14.45	127.60	1,084.22	-94.50	122.73	154.89	0.00	0.00	0.00
1,200.00	14.45	127.60	1,181.05	-109.72	142.51	179.85	0.00	0.00	0.00
1,286.69	14.45	127.60	1,265.00	-122.92	159.65	201.49	0.00	0.00	0.00
<b>GRRV_B_GROOVE (TVD)</b>									
1,300.00	14.45	127.60	1,277.89	-124.95	162.28	204.81	0.00	0.00	0.00
1,400.00	14.45	127.60	1,374.72	-140.18	182.06	229.77	0.00	0.00	0.00
1,500.00	14.45	127.60	1,471.56	-155.40	201.83	254.73	0.00	0.00	0.00
1,600.00	14.45	127.60	1,568.39	-170.63	221.61	279.69	0.00	0.00	0.00
1,611.99	14.45	127.60	1,580.00	-172.46	223.98	282.68	0.00	0.00	0.00
<b>GRRV DISSOLUTION_SURF (TVD)</b>									
1,700.00	14.45	127.60	1,665.23	-185.86	241.39	304.65	0.00	0.00	0.00
1,800.00	14.45	127.60	1,762.06	-201.09	261.16	329.61	0.00	0.00	0.00
1,900.00	14.45	127.60	1,858.90	-216.31	280.94	354.57	0.00	0.00	0.00
2,000.00	14.45	127.60	1,955.73	-231.54	300.71	379.52	0.00	0.00	0.00
2,100.00	14.45	127.60	2,052.57	-246.77	320.49	404.48	0.00	0.00	0.00
2,200.00	14.45	127.60	2,149.40	-261.99	340.26	429.44	0.00	0.00	0.00
2,300.00	14.45	127.60	2,246.24	-277.22	360.04	454.40	0.00	0.00	0.00
2,400.00	14.45	127.60	2,343.07	-292.45	379.82	479.36	0.00	0.00	0.00
2,500.00	14.45	127.60	2,439.91	-307.67	399.59	504.32	0.00	0.00	0.00
2,520.75	14.45	127.60	2,460.00	-310.83	403.70	509.50	0.00	0.00	0.00
<b>GRRV_ORANGE (TVD)</b>									
2,600.00	14.45	127.60	2,536.74	-322.90	419.37	529.28	0.00	0.00	0.00
2,700.00	14.45	127.60	2,633.58	-338.13	439.14	554.24	0.00	0.00	0.00
2,732.45	14.45	127.60	2,665.00	-343.07	445.56	562.33	0.00	0.00	0.00
<b>WSTC (TVD)</b>									
2,800.00	14.45	127.60	2,730.41	-353.35	458.92	579.19	0.00	0.00	0.00
2,900.00	14.45	127.60	2,827.25	-368.58	478.70	604.15	0.00	0.00	0.00
3,000.00	14.45	127.60	2,924.08	-383.81	498.47	629.11	0.00	0.00	0.00
3,100.00	14.45	127.60	3,020.92	-399.03	518.25	654.07	0.00	0.00	0.00
3,200.00	14.45	127.60	3,117.76	-414.26	538.02	679.03	0.00	0.00	0.00
3,248.79	14.45	127.60	3,165.00	-421.69	547.67	691.21	0.00	0.00	0.00

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## Planning Report

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<b>Site:</b>	RG 41-18-297 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Federal RG 342-18-297	<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 Casing</b>									
3,300.00	14.45	127.60	3,214.59	-429.49	557.80	703.99	0.00	0.00	0.00
3,400.00	14.45	127.60	3,311.43	-444.71	577.58	728.95	0.00	0.00	0.00
3,500.00	14.45	127.60	3,408.26	-459.94	597.35	753.91	0.00	0.00	0.00
3,600.00	14.45	127.60	3,505.10	-475.17	617.13	778.87	0.00	0.00	0.00
3,700.00	14.45	127.60	3,601.93	-490.39	636.90	803.82	0.00	0.00	0.00
3,800.00	14.45	127.60	3,698.77	-505.62	656.68	828.78	0.00	0.00	0.00
3,900.00	14.45	127.60	3,795.60	-520.85	676.46	853.74	0.00	0.00	0.00
4,000.00	14.45	127.60	3,892.44	-536.08	696.23	878.70	0.00	0.00	0.00
4,100.00	14.45	127.60	3,989.27	-551.30	716.01	903.66	0.00	0.00	0.00
4,200.00	14.45	127.60	4,086.11	-566.53	735.78	928.62	0.00	0.00	0.00
4,300.00	14.45	127.60	4,182.94	-581.76	755.56	953.58	0.00	0.00	0.00
4,400.00	14.45	127.60	4,279.78	-596.98	775.34	978.54	0.00	0.00	0.00
4,500.00	14.45	127.60	4,376.61	-612.21	795.11	1,003.50	0.00	0.00	0.00
4,600.00	14.45	127.60	4,473.45	-627.44	814.89	1,028.45	0.00	0.00	0.00
4,700.00	14.45	127.60	4,570.28	-642.66	834.66	1,053.41	0.00	0.00	0.00
4,800.00	14.45	127.60	4,667.12	-657.89	854.44	1,078.37	0.00	0.00	0.00
4,900.00	14.45	127.60	4,763.95	-673.12	874.22	1,103.33	0.00	0.00	0.00
5,000.00	14.45	127.60	4,860.79	-688.34	893.99	1,128.29	0.00	0.00	0.00
5,100.00	14.45	127.60	4,957.62	-703.57	913.77	1,153.25	0.00	0.00	0.00
5,179.91	14.45	127.60	5,035.00	-715.74	929.57	1,173.19	0.00	0.00	0.00
<b>G_SAND (TVD)</b>									
5,200.00	14.45	127.60	5,054.46	-718.80	933.54	1,178.21	0.00	0.00	0.00
5,300.00	14.45	127.60	5,151.29	-734.02	953.32	1,203.17	0.00	0.00	0.00
5,400.00	14.45	127.60	5,248.13	-749.25	973.10	1,228.12	0.00	0.00	0.00
5,500.00	14.45	127.60	5,344.96	-764.48	992.87	1,253.08	0.00	0.00	0.00
5,520.69	14.45	127.60	5,365.00	-767.63	996.96	1,258.25	0.00	0.00	0.00
<b>FRUN (TVD)</b>									
5,600.00	14.45	127.60	5,441.80	-779.70	1,012.65	1,278.04	0.00	0.00	0.00
5,700.00	14.45	127.60	5,538.64	-794.93	1,032.42	1,303.00	0.00	0.00	0.00
5,800.00	14.45	127.60	5,635.47	-810.16	1,052.20	1,327.96	0.00	0.00	0.00
5,900.00	14.45	127.60	5,732.31	-825.38	1,071.97	1,352.92	0.00	0.00	0.00
6,000.00	14.45	127.60	5,829.14	-840.61	1,091.75	1,377.88	0.00	0.00	0.00
6,100.00	14.45	127.60	5,925.98	-855.84	1,111.53	1,402.84	0.00	0.00	0.00
6,200.00	14.45	127.60	6,022.81	-871.07	1,131.30	1,427.80	0.00	0.00	0.00
6,300.00	14.45	127.60	6,119.65	-886.29	1,151.08	1,452.75	0.00	0.00	0.00
6,400.00	14.45	127.60	6,216.48	-901.52	1,170.85	1,477.71	0.00	0.00	0.00
6,500.00	14.45	127.60	6,313.32	-916.75	1,190.63	1,502.67	0.00	0.00	0.00
6,600.00	14.45	127.60	6,410.15	-931.97	1,210.41	1,527.63	0.00	0.00	0.00
6,700.00	14.45	127.60	6,506.99	-947.20	1,230.18	1,552.59	0.00	0.00	0.00
6,800.00	14.45	127.60	6,603.82	-962.43	1,249.96	1,577.55	0.00	0.00	0.00
6,883.83	14.45	127.60	6,685.00	-975.19	1,266.54	1,598.47	0.00	0.00	0.00
<b>MVRD (TVD)</b>									
6,900.00	14.45	127.60	6,700.66	-977.65	1,269.73	1,602.51	0.00	0.00	0.00
7,000.00	14.45	127.60	6,797.49	-992.88	1,289.51	1,627.47	0.00	0.00	0.00
7,024.94	14.45	127.60	6,821.64	-996.68	1,294.44	1,633.69	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
7,100.00	13.33	127.60	6,894.51	-1,007.67	1,308.72	1,651.71	1.50	-1.50	0.00
7,200.00	11.83	127.60	6,992.10	-1,020.95	1,325.97	1,673.48	1.50	-1.50	0.00
7,300.00	10.33	127.60	7,090.24	-1,032.68	1,341.20	1,692.70	1.50	-1.50	0.00

# Scientific Drilling, Intl

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Planned Survey									
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7,400.00	8.83	127.60	7,188.84	-1,042.83	1,354.38	1,709.33	1.50	-1.50	0.00
7,500.00	7.33	127.60	7,287.85	-1,051.40	1,365.51	1,723.39	1.50	-1.50	0.00
7,600.00	5.83	127.60	7,387.19	-1,058.39	1,374.59	1,734.84	1.50	-1.50	0.00
7,700.00	4.33	127.60	7,486.79	-1,063.78	1,381.60	1,743.69	1.50	-1.50	0.00
7,800.00	2.83	127.60	7,586.59	-1,067.59	1,386.54	1,749.93	1.50	-1.50	0.00
7,900.00	1.33	127.60	7,686.53	-1,069.80	1,389.41	1,753.55	1.50	-1.50	0.00
7,988.48	0.00	0.00	7,775.00	-1,070.43	1,390.23	1,754.58	1.50	-1.50	0.00
Start 4080.00 hold at 7988.48 MD - KLVGAS (TVD)									
8,000.00	0.00	0.00	7,786.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,100.00	0.00	0.00	7,886.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,200.00	0.00	0.00	7,986.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,300.00	0.00	0.00	8,086.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,400.00	0.00	0.00	8,186.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,500.00	0.00	0.00	8,286.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,600.00	0.00	0.00	8,386.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,700.00	0.00	0.00	8,486.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,800.00	0.00	0.00	8,586.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
8,900.00	0.00	0.00	8,686.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,000.00	0.00	0.00	8,786.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,100.00	0.00	0.00	8,886.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,200.00	0.00	0.00	8,986.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,300.00	0.00	0.00	9,086.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,400.00	0.00	0.00	9,186.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,500.00	0.00	0.00	9,286.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,600.00	0.00	0.00	9,386.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,700.00	0.00	0.00	9,486.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,800.00	0.00	0.00	9,586.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
9,900.00	0.00	0.00	9,686.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,000.00	0.00	0.00	9,786.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,100.00	0.00	0.00	9,886.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,200.00	0.00	0.00	9,986.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,300.00	0.00	0.00	10,086.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,338.48	0.00	0.00	10,125.00	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
CMEQ (TVD)									
10,400.00	0.00	0.00	10,186.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,500.00	0.00	0.00	10,286.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,600.00	0.00	0.00	10,386.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,700.00	0.00	0.00	10,486.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,800.00	0.00	0.00	10,586.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,900.00	0.00	0.00	10,686.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
10,918.48	0.00	0.00	10,705.00	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
RLNS (TVD)									
11,000.00	0.00	0.00	10,786.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,068.48	0.00	0.00	10,855.00	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
CZZT (TVD)									
11,100.00	0.00	0.00	10,886.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,200.00	0.00	0.00	10,986.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,288.48	0.00	0.00	11,075.00	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
CRCN (TVD)									
11,300.00	0.00	0.00	11,086.52	-1,070.43	1,390.23	1,754.58	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 342-18-297 - Slot Federal RG 342-18-297
<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 342-18-297	<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	11,186.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,500.00	0.00	0.00	11,286.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,600.00	0.00	0.00	11,386.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,648.48	0.00	0.00	11,435.00	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
SEGO_UPPER (TVD)									
11,700.00	0.00	0.00	11,486.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,800.00	0.00	0.00	11,586.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,900.00	0.00	0.00	11,686.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
11,948.48	0.00	0.00	11,735.00	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
SEGO_LOWER (TVD)									
12,000.00	0.00	0.00	11,786.52	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
12,068.48	0.00	0.00	11,855.00	-1,070.43	1,390.23	1,754.58	0.00	0.00	0.00
TD at 12068.48 - TD (TVD)									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
F RG 342-18-297 Top G - plan hits target center - Circle (radius 25.00)	0.00	0.00	7,775.00	-1,070.43	1,390.23	1,757,256.2000	2,209,272.9000	39.8788153	-108.3177809
F RG 342-18-297 TD - plan hits target center - Point	0.00	0.00	11,855.00	-1,070.43	1,390.23	1,757,256.2000	2,209,272.9000	39.8788153	-108.3177809

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,248.79	3,165.00	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 342-18-297 - Slot Federal RG 342-18-297
<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 342-18-297	<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 (°)	
930.42	920.00	GRRV (TVD)		0.00		
1,095.65	1,080.00	GRRV_A_GROOVE (TVD)		0.00		
1,286.69	1,265.00	GRRV_B_GROOVE (TVD)		0.00		
1,611.99	1,580.00	GRRV DISSOLUTION_SURF (TVD)		0.00		
2,520.75	2,460.00	GRRV_ORANGE (TVD)		0.00		
2,732.45	2,665.00	WSTC (TVD)		0.00		
5,179.91	5,035.00	G_SAND (TVD)		0.00		
5,520.69	5,365.00	FRUN (TVD)		0.00		
6,883.83	6,685.00	MVRD (TVD)		0.00		
7,988.48	7,775.00	KMVGAS (TVD)		0.00		
10,338.48	10,125.00	CME0 (TVD)		0.00		
10,918.48	10,705.00	RLNS (TVD)		0.00		
11,068.48	10,855.00	CZZT (TVD)		0.00		
11,288.48	11,075.00	CRCN (TVD)		0.00		
11,648.48	11,435.00	SEGO_UPPER (TVD)		0.00		
11,948.48	11,735.00	SEGO_LOWER (TVD)		0.00		
12,068.48	11,855.00	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	
842.66	835.02	-55.31	71.84	Start 6182.28 hold at 842.66 MD	
7,024.94	6,821.64	-996.68	1,294.44	Start Drop -1.50	
7,988.48	7,775.00	-1,070.43	1,390.23	Start 4080.00 hold at 7988.48 MD	
12,068.48	11,855.00	-1,070.43	1,390.23	TD at 12068.48	