



Company: TEP Rocky Mountain LLC  
Project: Garfield County, CO NAD83  
Site: RG 41-18-297 Pad  
Well: Federal RG 444-7-297

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 16March2020 SB-SDI

Well Details: Federal RG 444-7-297

+N/-S +E/-W Northing Easting Longitude  
0.00 0.00 1758402.8000 2207933.5000 39.8818471 -108.3226777 Federal RG 444-7-297

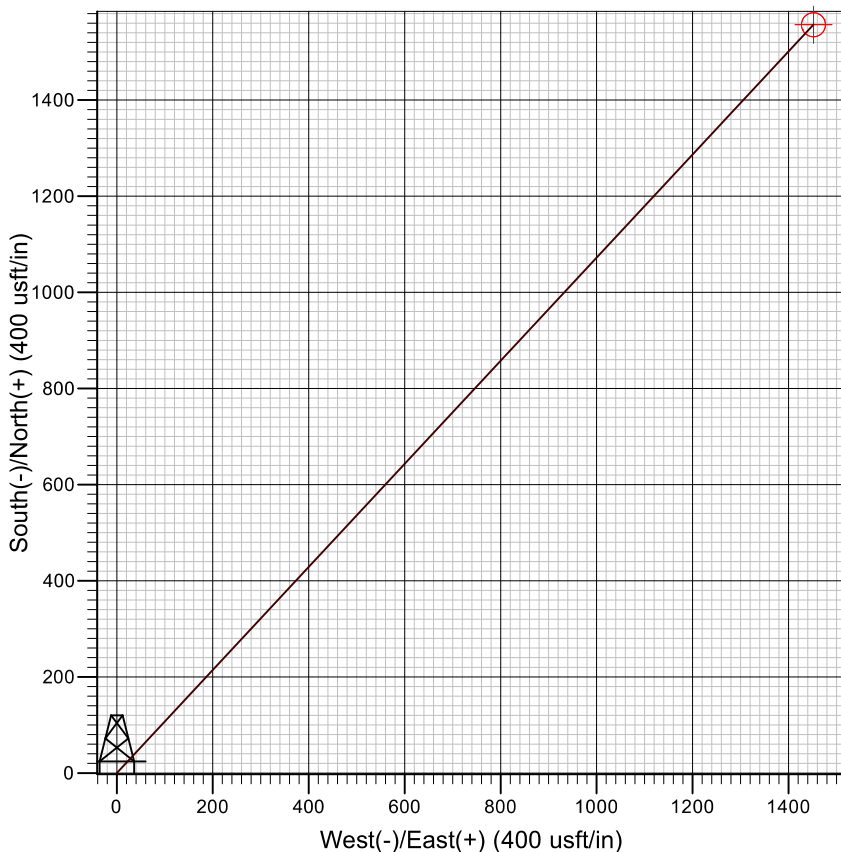
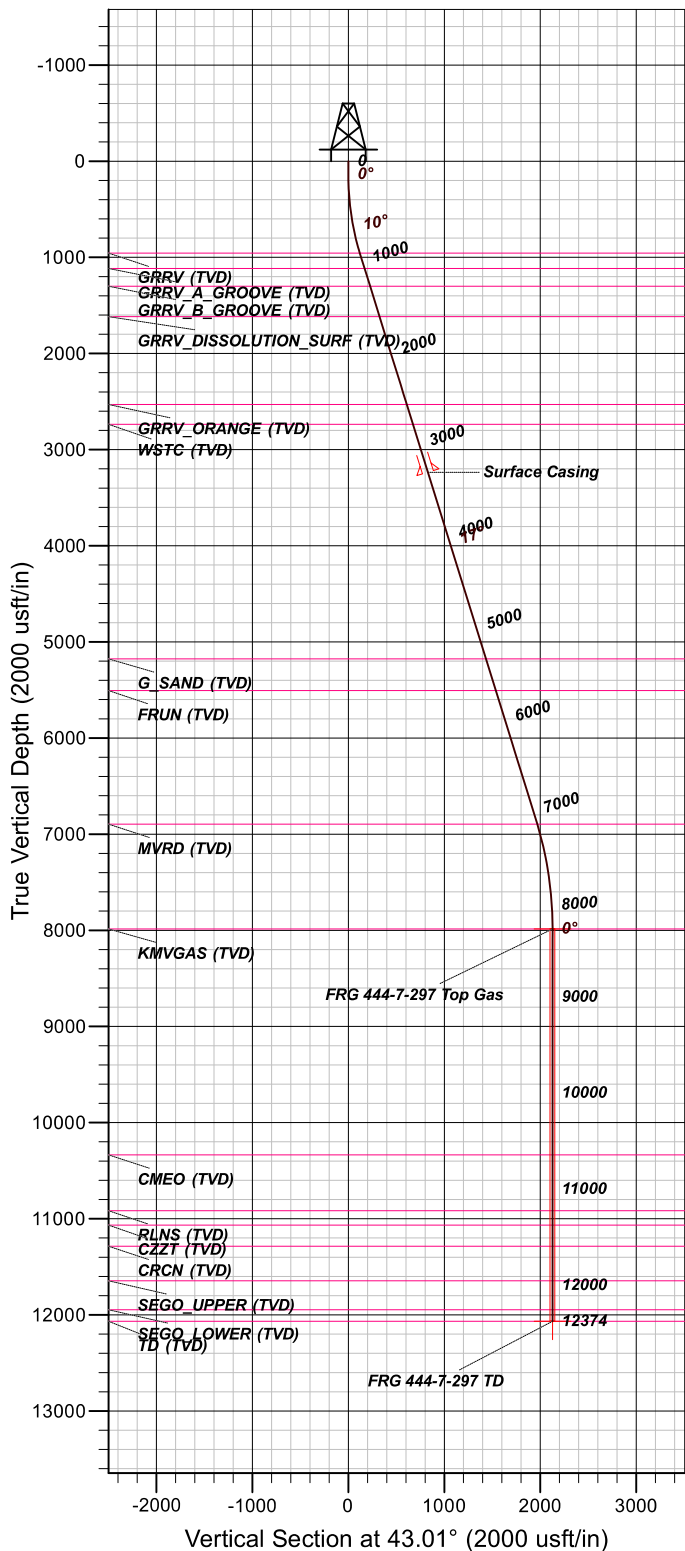


Azimuths to True North  
Magnetic North: 9.28°

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	Shape
FRG 444-7-297 Top Gas	7985.00	1556.86	1452.14	1759913.8000	2209433.3000	39.8861207	-108.3175032	Circle (Radius: 25.00)
- plan hits target center								
FRG 444-7-297 TD	12065.00	1556.86	1452.14	1759913.8000	2209433.3000	39.8861207	-108.3175032	Point
- plan hits target center								



#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
955.00	966.63	GRRV (TVD)
1115.00	1134.16	GRRV_A_GROOVE (TVD)
1300.00	1327.93	GRRV_B_GROOVE (TVD)
1615.00	1657.87	GRRV DISSOLUTION_SURF (TVD)
2530.00	2616.25	GRRV_ORANGE (TVD)
2735.00	2830.97	WSTC (TVD)
5175.00	5386.68	G SAND (TVD)
5505.00	5732.32	FRUN (TVD)
6895.00	7188.14	MVRD (TVD)
7985.00	8293.50	KMGAS (TVD)
10335.00	10643.50	CMEO (TVD)
10915.00	11223.50	RLNS (TVD)
11065.00	11373.50	CZTZ (TVD)
11285.00	11593.50	CRCN (TVD)
11645.00	11953.50	SEGO_UPPER (TVD)
11945.00	12253.50	SEGO_LOWER (TVD)
12065.00	12373.50	TD (TVD)

#### CASING DETAILS

TVD	MD	Name	Size
3235.00	3354.68	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
1000.31	17.31	43.01	987.21	94.84	88.46	2.00	43.01	129.69
7139.75	17.31	43.01	6848.71	1430.41	1334.19	0.00	0.00	1956.05
8293.50	0.00	0.00	7985.00	1556.86	1452.14	1.50	180.00	2128.97
12373.50	0.00	0.00	12065.00	1556.86	1452.14	0.00	0.00	2128.97

# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RG 41-18-297 Pad**

**Federal RG 444-7-297 - Slot Federal RG 444-7-297**

**OH**

**Plan: Plan #1 16March2020 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 444-7-297 - Slot Federal RG 444-7-297
<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 444-7-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 16March2020 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 444-7-297 - Slot Federal RG 444-7-297, 648' FNL 2087' FEL Sec 18 T2S R97W			
<b>Well Position</b>	<b>+N/-S</b>	20.45 usft	<b>Northing:</b>	1,758,402.8000 usft
	<b>+E/-W</b>	9.63 usft	<b>Easting:</b>	2,207,933.5000 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	3/16/2020	9.28	65.83	51,352.90000000

<b>Design</b>	Plan #1 16March2020 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	43.01

<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	
1,000.31	17.31	43.01	987.21	94.84	88.46	2.00	2.00	0.00	43.01	
7,139.76	17.31	43.01	6,848.72	1,430.41	1,334.19	0.00	0.00	0.00	0.00	
8,293.50	0.00	0.00	7,985.00	1,556.86	1,452.14	1.50	-1.50	0.00	180.00	FRG 444-7-297 Top C
12,373.50	0.00	0.00	12,065.00	1,556.86	1,452.14	0.00	0.00	0.00	0.00	FRG 444-7-297 TD

# 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 444-7-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 16March2020 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
<b>Start Build 2.00</b>									
200.00	1.30	43.01	199.99	0.54	0.50	0.74	2.00	2.00	0.00
300.00	3.30	43.01	299.91	3.47	3.24	4.75	2.00	2.00	0.00
400.00	5.30	43.01	399.62	8.96	8.35	12.25	2.00	2.00	0.00
500.00	7.30	43.01	499.01	16.98	15.84	23.22	2.00	2.00	0.00
600.00	9.30	43.01	597.96	27.54	25.68	37.66	2.00	2.00	0.00
700.00	11.30	43.01	696.34	40.61	37.88	55.53	2.00	2.00	0.00
800.00	13.30	43.01	794.04	56.19	52.41	76.84	2.00	2.00	0.00
900.00	15.30	43.01	890.94	74.25	69.26	101.54	2.00	2.00	0.00
966.63	16.63	43.01	955.00	87.65	81.76	119.86	2.00	2.00	0.00
<b>GRRV (TVD)</b>									
1,000.00	17.30	43.01	986.92	94.77	88.40	129.60	2.00	2.00	0.00
1,000.31	17.31	43.01	987.21	94.84	88.46	129.69	2.00	2.00	0.00
<b>Start 6139.44 hold at 1000.31 MD</b>									
1,100.00	17.31	43.01	1,082.39	116.53	108.69	159.35	0.00	0.00	0.00
1,134.16	17.31	43.01	1,115.00	123.96	115.62	169.51	0.00	0.00	0.00
<b>GRRV_A_GROOVE (TVD)</b>									
1,200.00	17.31	43.01	1,177.86	138.28	128.98	189.10	0.00	0.00	0.00
1,300.00	17.31	43.01	1,273.33	160.04	149.27	218.84	0.00	0.00	0.00
1,327.93	17.31	43.01	1,300.00	166.11	154.94	227.15	0.00	0.00	0.00
<b>GRRV_B_GROOVE (TVD)</b>									
1,400.00	17.31	43.01	1,368.81	181.79	169.56	248.59	0.00	0.00	0.00
1,500.00	17.31	43.01	1,464.28	203.54	189.85	278.34	0.00	0.00	0.00
1,600.00	17.31	43.01	1,559.75	225.30	210.14	308.09	0.00	0.00	0.00
1,657.87	17.31	43.01	1,615.00	237.89	221.88	325.30	0.00	0.00	0.00
<b>GRRV DISSOLUTION_SURF (TVD)</b>									
1,700.00	17.31	43.01	1,655.23	247.05	230.43	337.84	0.00	0.00	0.00
1,800.00	17.31	43.01	1,750.70	268.80	250.72	367.58	0.00	0.00	0.00
1,900.00	17.31	43.01	1,846.17	290.56	271.01	397.33	0.00	0.00	0.00
2,000.00	17.31	43.01	1,941.64	312.31	291.30	427.08	0.00	0.00	0.00
2,100.00	17.31	43.01	2,037.12	334.07	311.59	456.83	0.00	0.00	0.00
2,200.00	17.31	43.01	2,132.59	355.82	331.88	486.58	0.00	0.00	0.00
2,300.00	17.31	43.01	2,228.06	377.57	352.18	516.32	0.00	0.00	0.00
2,400.00	17.31	43.01	2,323.54	399.33	372.47	546.07	0.00	0.00	0.00
2,500.00	17.31	43.01	2,419.01	421.08	392.76	575.82	0.00	0.00	0.00
2,600.00	17.31	43.01	2,514.48	442.84	413.05	605.57	0.00	0.00	0.00
2,616.25	17.31	43.01	2,530.00	446.37	416.34	610.40	0.00	0.00	0.00
<b>GRRV_ORANGE (TVD)</b>									
2,700.00	17.31	43.01	2,609.95	464.59	433.34	635.31	0.00	0.00	0.00
2,800.00	17.31	43.01	2,705.43	486.34	453.63	665.06	0.00	0.00	0.00
2,830.97	17.31	43.01	2,735.00	493.08	459.91	674.28	0.00	0.00	0.00
<b>WSTC (TVD)</b>									
2,900.00	17.31	43.01	2,800.90	508.10	473.92	694.81	0.00	0.00	0.00
3,000.00	17.31	43.01	2,896.37	529.85	494.21	724.56	0.00	0.00	0.00
3,100.00	17.31	43.01	2,991.85	551.61	514.50	754.31	0.00	0.00	0.00
3,200.00	17.31	43.01	3,087.32	573.36	534.79	784.05	0.00	0.00	0.00
3,300.00	17.31	43.01	3,182.79	595.11	555.08	813.80	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 444-7-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 16March2020 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)	
3,354.68	17.31	43.01	3,235.00	607.01	566.18	830.07	0.00	0.00	0.00	
<b>Surface Casing</b>										
3,400.00	17.31	43.01	3,278.26	616.87	575.37	843.55	0.00	0.00	0.00	
3,500.00	17.31	43.01	3,373.74	638.62	595.66	873.30	0.00	0.00	0.00	
3,600.00	17.31	43.01	3,469.21	660.37	615.95	903.05	0.00	0.00	0.00	
3,700.00	17.31	43.01	3,564.68	682.13	636.24	932.79	0.00	0.00	0.00	
3,800.00	17.31	43.01	3,660.16	703.88	656.53	962.54	0.00	0.00	0.00	
3,900.00	17.31	43.01	3,755.63	725.64	676.82	992.29	0.00	0.00	0.00	
4,000.00	17.31	43.01	3,851.10	747.39	697.11	1,022.04	0.00	0.00	0.00	
4,100.00	17.31	43.01	3,946.57	769.14	717.40	1,051.78	0.00	0.00	0.00	
4,200.00	17.31	43.01	4,042.05	790.90	737.70	1,081.53	0.00	0.00	0.00	
4,300.00	17.31	43.01	4,137.52	812.65	757.99	1,111.28	0.00	0.00	0.00	
4,400.00	17.31	43.01	4,232.99	834.41	778.28	1,141.03	0.00	0.00	0.00	
4,500.00	17.31	43.01	4,328.47	856.16	798.57	1,170.78	0.00	0.00	0.00	
4,600.00	17.31	43.01	4,423.94	877.91	818.86	1,200.52	0.00	0.00	0.00	
4,700.00	17.31	43.01	4,519.41	899.67	839.15	1,230.27	0.00	0.00	0.00	
4,800.00	17.31	43.01	4,614.88	921.42	859.44	1,260.02	0.00	0.00	0.00	
4,900.00	17.31	43.01	4,710.36	943.17	879.73	1,289.77	0.00	0.00	0.00	
5,000.00	17.31	43.01	4,805.83	964.93	900.02	1,319.52	0.00	0.00	0.00	
5,100.00	17.31	43.01	4,901.30	986.68	920.31	1,349.26	0.00	0.00	0.00	
5,200.00	17.31	43.01	4,996.78	1,008.44	940.60	1,379.01	0.00	0.00	0.00	
5,300.00	17.31	43.01	5,092.25	1,030.19	960.89	1,408.76	0.00	0.00	0.00	
5,386.68	17.31	43.01	5,175.00	1,049.05	978.48	1,434.54	0.00	0.00	0.00	
<b>G_SAND (TVD)</b>										
5,400.00	17.31	43.01	5,187.72	1,051.94	981.18	1,438.51	0.00	0.00	0.00	
5,500.00	17.31	43.01	5,283.19	1,073.70	1,001.47	1,468.26	0.00	0.00	0.00	
5,600.00	17.31	43.01	5,378.67	1,095.45	1,021.76	1,498.00	0.00	0.00	0.00	
5,700.00	17.31	43.01	5,474.14	1,117.21	1,042.05	1,527.75	0.00	0.00	0.00	
5,732.32	17.31	43.01	5,505.00	1,124.24	1,048.61	1,537.37	0.00	0.00	0.00	
<b>FRUN (TVD)</b>										
5,800.00	17.31	43.01	5,569.61	1,138.96	1,062.34	1,557.50	0.00	0.00	0.00	
5,900.00	17.31	43.01	5,665.09	1,160.71	1,082.63	1,587.25	0.00	0.00	0.00	
6,000.00	17.31	43.01	5,760.56	1,182.47	1,102.92	1,616.99	0.00	0.00	0.00	
6,100.00	17.31	43.01	5,856.03	1,204.22	1,123.21	1,646.74	0.00	0.00	0.00	
6,200.00	17.31	43.01	5,951.50	1,225.97	1,143.51	1,676.49	0.00	0.00	0.00	
6,300.00	17.31	43.01	6,046.98	1,247.73	1,163.80	1,706.24	0.00	0.00	0.00	
6,400.00	17.31	43.01	6,142.45	1,269.48	1,184.09	1,735.99	0.00	0.00	0.00	
6,500.00	17.31	43.01	6,237.92	1,291.24	1,204.38	1,765.73	0.00	0.00	0.00	
6,600.00	17.31	43.01	6,333.40	1,312.99	1,224.67	1,795.48	0.00	0.00	0.00	
6,700.00	17.31	43.01	6,428.87	1,334.74	1,244.96	1,825.23	0.00	0.00	0.00	
6,800.00	17.31	43.01	6,524.34	1,356.50	1,265.25	1,854.98	0.00	0.00	0.00	
6,900.00	17.31	43.01	6,619.81	1,378.25	1,285.54	1,884.73	0.00	0.00	0.00	
7,000.00	17.31	43.01	6,715.29	1,400.01	1,305.83	1,914.47	0.00	0.00	0.00	
7,100.00	17.31	43.01	6,810.76	1,421.76	1,326.12	1,944.22	0.00	0.00	0.00	
7,139.76	17.31	43.01	6,848.72	1,430.41	1,334.19	1,956.05	0.00	0.00	0.00	
<b>Start Drop -1.50</b>										
7,188.14	16.58	43.01	6,895.00	1,440.72	1,343.80	1,970.15	1.50	-1.50	0.00	
<b>MVRD (TVD)</b>										
7,200.00	16.40	43.01	6,906.37	1,443.18	1,346.10	1,973.51	1.50	-1.50	0.00	
7,300.00	14.90	43.01	7,002.66	1,462.91	1,364.50	2,000.49	1.50	-1.50	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 444-7-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 16March2020 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	13.40	43.01	7,099.62	1,480.79	1,381.18	2,024.94	1.50	-1.50	0.00
7,500.00	11.90	43.01	7,197.19	1,496.81	1,396.12	2,046.85	1.50	-1.50	0.00
7,600.00	10.40	43.01	7,295.30	1,510.95	1,409.31	2,066.19	1.50	-1.50	0.00
7,700.00	8.90	43.01	7,393.88	1,523.21	1,420.75	2,082.96	1.50	-1.50	0.00
7,800.00	7.40	43.01	7,492.87	1,533.58	1,430.42	2,097.14	1.50	-1.50	0.00
7,900.00	5.90	43.01	7,592.19	1,542.05	1,438.32	2,108.72	1.50	-1.50	0.00
8,000.00	4.40	43.01	7,691.79	1,548.62	1,444.45	2,117.70	1.50	-1.50	0.00
8,100.00	2.90	43.01	7,791.58	1,553.28	1,448.79	2,124.07	1.50	-1.50	0.00
8,200.00	1.40	43.01	7,891.51	1,556.03	1,451.35	2,127.83	1.50	-1.50	0.00
8,293.50	0.00	0.00	7,985.00	1,556.86	1,452.14	2,128.97	1.50	-1.50	0.00
Start 4080.00 hold at 8293.50 MD - KMGAS (TVD)									
8,300.00	0.00	0.00	7,991.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
8,400.00	0.00	0.00	8,091.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
8,500.00	0.00	0.00	8,191.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
8,600.00	0.00	0.00	8,291.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
8,700.00	0.00	0.00	8,391.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
8,800.00	0.00	0.00	8,491.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
8,900.00	0.00	0.00	8,591.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,000.00	0.00	0.00	8,691.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,100.00	0.00	0.00	8,791.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,200.00	0.00	0.00	8,891.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,300.00	0.00	0.00	8,991.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,400.00	0.00	0.00	9,091.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,500.00	0.00	0.00	9,191.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,600.00	0.00	0.00	9,291.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,700.00	0.00	0.00	9,391.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,800.00	0.00	0.00	9,491.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
9,900.00	0.00	0.00	9,591.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,000.00	0.00	0.00	9,691.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,100.00	0.00	0.00	9,791.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,200.00	0.00	0.00	9,891.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,300.00	0.00	0.00	9,991.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,400.00	0.00	0.00	10,091.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,500.00	0.00	0.00	10,191.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,600.00	0.00	0.00	10,291.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,643.50	0.00	0.00	10,335.00	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
CMEO (TVD)									
10,700.00	0.00	0.00	10,391.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,800.00	0.00	0.00	10,491.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
10,900.00	0.00	0.00	10,591.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
11,000.00	0.00	0.00	10,691.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
11,100.00	0.00	0.00	10,791.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
11,200.00	0.00	0.00	10,891.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
11,223.50	0.00	0.00	10,915.00	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
RLNS (TVD)									
11,300.00	0.00	0.00	10,991.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
11,373.50	0.00	0.00	11,065.00	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
CZZT (TVD)									
11,400.00	0.00	0.00	11,091.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
11,500.00	0.00	0.00	11,191.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00
11,593.50	0.00	0.00	11,285.00	1,556.86	1,452.14	2,128.97	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 444-7-297 - Slot Federal RG 444-7-297
<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 444-7-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 16March2020 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>CRCN (TVD)</b>										
11,600.00	0.00	0.00	11,291.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,391.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
11,800.00	0.00	0.00	11,491.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,591.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
11,953.50	0.00	0.00	11,645.00	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
<b>SEGO_UPPER (TVD)</b>										
12,000.00	0.00	0.00	11,691.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
12,100.00	0.00	0.00	11,791.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
12,200.00	0.00	0.00	11,891.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
12,253.50	0.00	0.00	11,945.00	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
<b>SEGO_LOWER (TVD)</b>										
12,300.00	0.00	0.00	11,991.50	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
12,373.50	0.00	0.00	12,065.00	1,556.86	1,452.14	2,128.97	0.00	0.00	0.00	
<b>TD at 12373.50 - 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 444-7-297 Top Gas	0.00	0.00	7,985.00	1,556.86	1,452.14	1,759,913.8000	2,209,433.3000	39.8861208	-108.3175033	
- plan hits target center										
- Circle (radius 25.00)										
FRG 444-7-297 TD	0.00	0.00	12,065.00	1,556.86	1,452.14	1,759,913.8000	2,209,433.3000	39.8861208	-108.3175033	
- plan hits target center										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,354.68	3,235.00	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 444-7-297 - Slot Federal RG 444-7-297
<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 444-7-297	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 16March2020 SB-SDI		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
966.63	955.00	GRRV (TVD)		0.00		
1,134.16	1,115.00	GRRV_A_GROOVE (TVD)		0.00		
1,327.93	1,300.00	GRRV_B_GROOVE (TVD)		0.00		
1,657.87	1,615.00	GRRV DISSOLUTION_SURF (TVD)		0.00		
2,616.25	2,530.00	GRRV_ORANGE (TVD)		0.00		
2,830.97	2,735.00	WSTC (TVD)		0.00		
5,386.68	5,175.00	G_SAND (TVD)		0.00		
5,732.32	5,505.00	FRUN (TVD)		0.00		
7,188.14	6,895.00	MVRD (TVD)		0.00		
8,293.50	7,985.00	KMVGAS (TVD)		0.00		
10,643.50	10,335.00	CME0 (TVD)		0.00		
11,223.50	10,915.00	RLNS (TVD)		0.00		
11,373.50	11,065.00	CZZT (TVD)		0.00		
11,593.50	11,285.00	CRCN (TVD)		0.00		
11,953.50	11,645.00	SEGO_UPPER (TVD)		0.00		
12,253.50	11,945.00	SEGO_LOWER (TVD)		0.00		
12,373.50	12,065.00	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	
1,000.31	987.21	94.84	88.46	Start 6139.44 hold at 1000.31 MD	
7,139.76	6,848.72	1,430.41	1,334.19	Start Drop -1.50	
8,293.50	7,985.00	1,556.86	1,452.14	Start 4080.00 hold at 8293.50 MD	
12,373.50	12,065.00	1,556.86	1,452.14	TD at 12373.50	