



Company: TEP Rocky Mountain LLC
Project: Garfield County, CO NAD83
Site: RGU 23-7-297 Pad
Well: Federal RG 12-18-297

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 7April2020 SB-SDI

Well Details: Federal RG 12-18-297

+N/-S +E/-W Northing Easting Longitude
0.00 0.00 1760871.0000 2206255.1000 39.8884759 -108.3289289 RGU 12-18-297

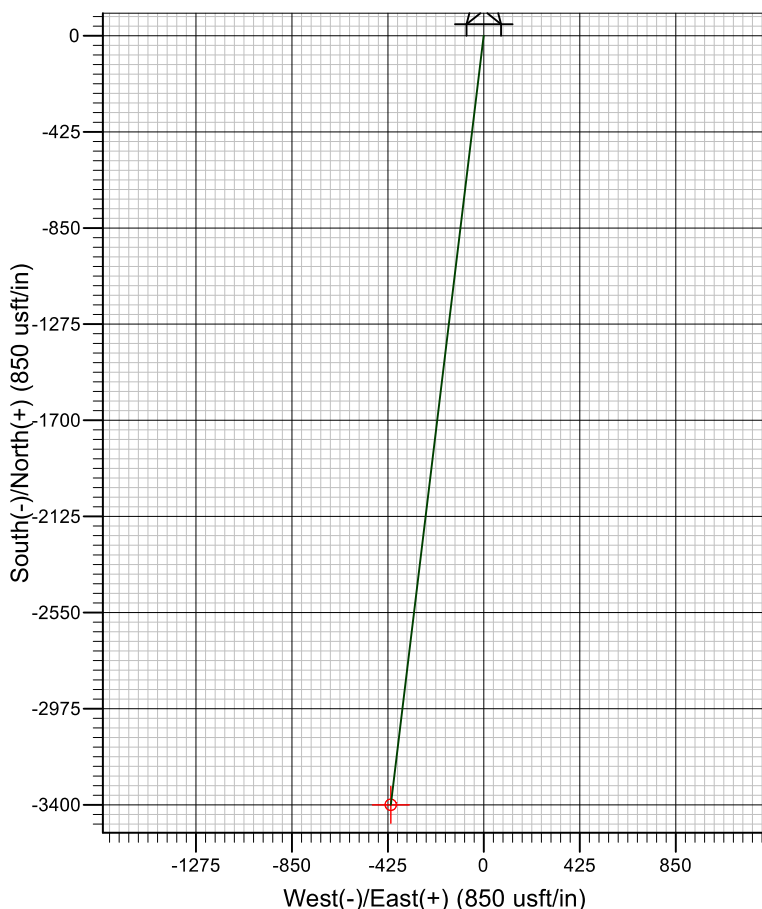
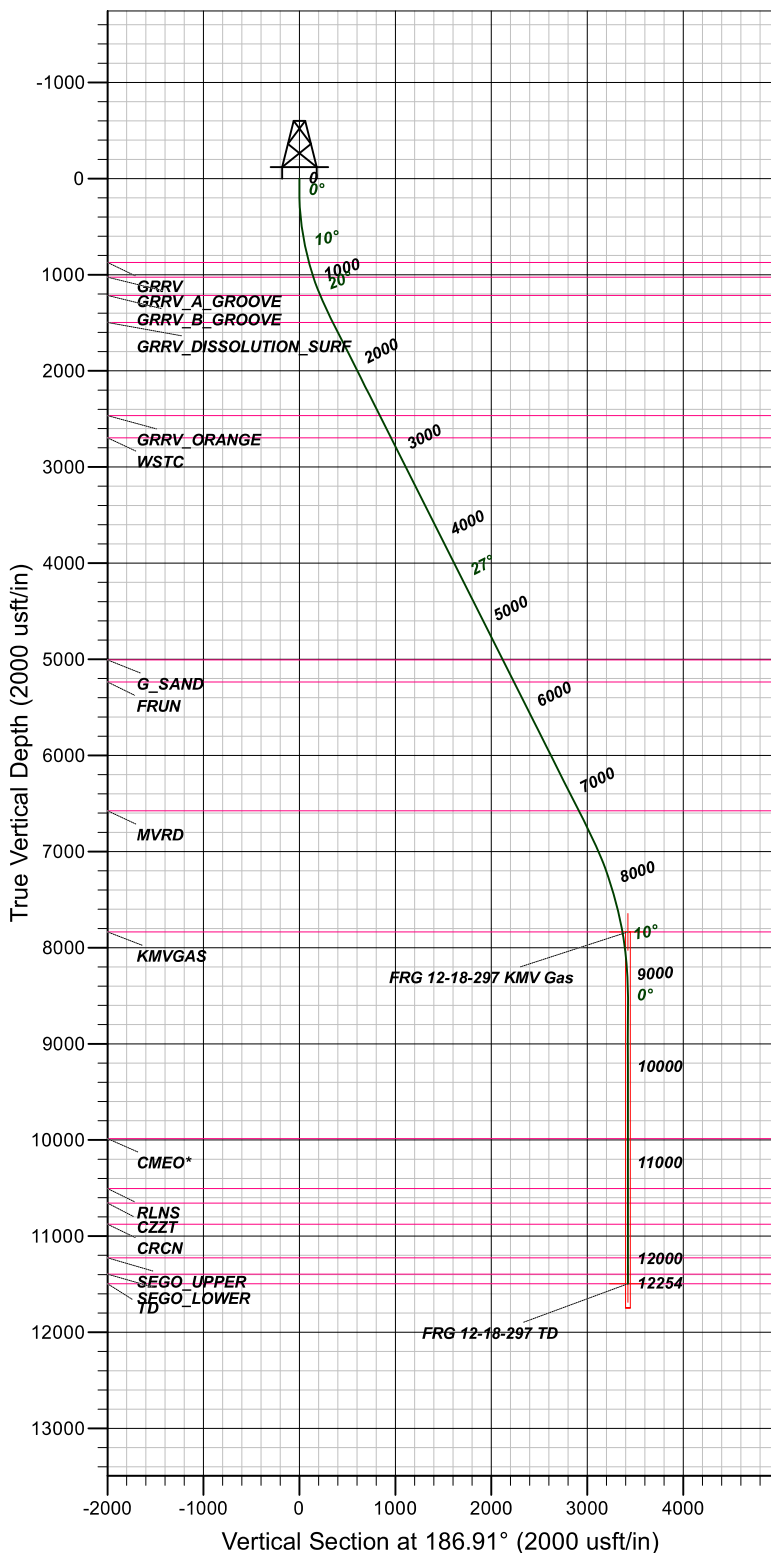


Azimuths to True North
Magnetic North: 9.28°

Magnetic Field
Strength: 51354.1nT
Dip Angle: 65.83°
Date: 4/7/2020
Model: HDGM_FILE

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FRG 12-18-297 KMV Gas	7837.00	-3399.78	-412.05	1757485.7000	2205737.4000	39.8791433	-108.3303971	Circle (Radius: 25.00)
- plan misses target center by 57.16usft at 8600.00usft MD (7846.52 TVD, -3343.82 N, -405.27 E)								
FRG 12-18-297 TD	11497.00	-3399.78	-412.05	1757485.7000	2205737.4000	39.8791433	-108.3303971	Point
- plan hits target center								



FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
872.00	880.92	GRRV
1027.00	1042.88	GRRV_A_GROOVE
1217.00	1245.75	GRRV_B_GROOVE
1497.00	1555.57	GRRV DISSOLUTION_SURF
2467.00	2641.97	GRRV_ORANGE
2697.00	2899.56	WSTC
5007.00	5486.75	G_SAND
5237.00	5744.35	FRUN
6577.00	7245.15	MVRD
7837.00	8590.33	KMGAS
9987.00	10743.71	CMEO*
10507.00	11263.71	RLNS
10657.00	11413.71	CZZT
10877.00	11633.71	CRCN
11227.00	11983.71	SEGO_UPPER
11397.00	12153.71	SEGO_LOWER
11497.00	12253.71	TD

CASING DETAILS

TVD	MD	NAME
3197.00	3459.56	Surface Casing

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
1458.25	26.77	186.91	1410.11	-304.70	-36.93	2.00	186.91	306.93
7472.67	26.77	186.91	6780.14	-2993.51	-362.81	0.00	0.00	3015.42
8590.33	10.00	186.91	7837.00	-3342.17	-405.07	1.50	180.00	3366.63
9257.00	0.00	0.00	8500.29	-3399.78	-412.05	1.50	180.00	3424.66
12253.71	0.00	0.00	11497.00	-3399.78	-412.05	0.00	0.00	3424.66

TEP Rocky Mountain LLC

Garfield County, CO NAD83

RGU 23-7-297 Pad

Federal RG 12-18-297 - Slot RGU 12-18-297

OH

Plan: Plan #2 7April2020 SB-SDI

Standard Planning Report

07 April, 2020



Scientific Drilling, Intl

Planning Report

Database:	Grand Junction	Local Co-ordinate Reference:	Well Federal RG 12-18-297 - Slot RGU 12-18-297
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Site:	RGU 23-7-297 Pad	North Reference:	True
Well:	Federal RG 12-18-297	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7April2020 SB-SDI		

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	RGU 23-7-297 Pad, Site Center : RGU 314-7-297			
Site Position:		Northing:	1,760,880.9000 usft	Latitude: 39.8884987
From: Map		Easting:	2,206,203.5000 usft	Longitude: -108.3291139
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.78 °

Well	Federal RG 12-18-297 - Slot RGU 12-18-297, 1794' FSL 1372' FWL Sec 7 T2S R97W			
Well Position	+N/-S	-8.29 usft	Northing:	1,760,871.0000 usft
	+E/-W	51.88 usft	Easting:	2,206,255.1000 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	
			Ground Level:	6,603.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	4/7/2020	9.28	65.83	51,354.10000000

Design	Plan #2 7April2020 SB-SDI			
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	186.91

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	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,458.25	26.77	186.91	1,410.11	-304.70	-36.93	2.00	2.00	0.00	186.91	
7,472.67	26.77	186.91	6,780.14	-2,993.51	-362.81	0.00	0.00	0.00	0.00	
8,590.33	10.00	186.91	7,837.00	-3,342.17	-405.07	1.50	-1.50	0.00	180.00	
9,257.00	0.00	0.00	8,500.29	-3,399.78	-412.05	1.50	-1.50	0.00	180.00	
12,253.71	0.00	0.00	11,497.00	-3,399.78	-412.05	0.00	0.00	0.00	0.00	FRG 12-18-297 TD

Scientific Drilling, Intl

Planning Report

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Project:	Garfield County, CO NAD83	MD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Site:	RGU 23-7-297 Pad	North Reference:	True
Well:	Federal RG 12-18-297	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7April2020 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
Start Build 2.00									
200.00	1.60	186.91	199.99	-1.11	-0.13	1.12	2.00	2.00	0.00
300.00	3.60	186.91	299.88	-5.61	-0.68	5.65	2.00	2.00	0.00
400.00	5.60	186.91	399.55	-13.57	-1.65	13.67	2.00	2.00	0.00
500.00	7.60	186.91	498.89	-24.98	-3.03	25.17	2.00	2.00	0.00
600.00	9.60	186.91	597.76	-39.83	-4.83	40.12	2.00	2.00	0.00
700.00	11.60	186.91	696.05	-58.09	-7.04	58.51	2.00	2.00	0.00
800.00	13.60	186.91	793.63	-79.74	-9.66	80.33	2.00	2.00	0.00
880.92	15.22	186.91	872.00	-99.73	-12.09	100.46	2.00	2.00	0.00
GRRV									
900.00	15.60	186.91	890.40	-104.76	-12.70	105.53	2.00	2.00	0.00
1,000.00	17.60	186.91	986.23	-133.12	-16.13	134.10	2.00	2.00	0.00
1,042.88	18.46	186.91	1,027.00	-146.30	-17.73	147.37	2.00	2.00	0.00
GRRV_A_GROOVE									
1,100.00	19.60	186.91	1,081.00	-164.79	-19.97	165.99	2.00	2.00	0.00
1,200.00	21.60	186.91	1,174.60	-199.71	-24.21	201.18	2.00	2.00	0.00
1,245.75	22.51	186.91	1,217.00	-216.77	-26.27	218.36	2.00	2.00	0.00
GRRV_B_GROOVE									
1,300.00	23.60	186.91	1,266.92	-237.86	-28.83	239.60	2.00	2.00	0.00
1,400.00	25.60	186.91	1,357.83	-279.19	-33.84	281.23	2.00	2.00	0.00
1,458.25	26.77	186.91	1,410.11	-304.70	-36.93	306.93	2.00	2.00	0.00
Start 6014.42 hold at 1458.25 MD									
1,500.00	26.77	186.91	1,447.38	-323.37	-39.19	325.73	0.00	0.00	0.00
1,555.57	26.77	186.91	1,497.00	-348.21	-42.20	350.76	0.00	0.00	0.00
GRRV DISSOLUTION_SURF									
1,600.00	26.77	186.91	1,536.67	-368.07	-44.61	370.77	0.00	0.00	0.00
1,700.00	26.77	186.91	1,625.96	-412.78	-50.03	415.80	0.00	0.00	0.00
1,800.00	26.77	186.91	1,715.24	-457.48	-55.45	460.83	0.00	0.00	0.00
1,900.00	26.77	186.91	1,804.53	-502.19	-60.87	505.86	0.00	0.00	0.00
2,000.00	26.77	186.91	1,893.81	-546.90	-66.28	550.90	0.00	0.00	0.00
2,100.00	26.77	186.91	1,983.10	-591.60	-71.70	595.93	0.00	0.00	0.00
2,200.00	26.77	186.91	2,072.39	-636.31	-77.12	640.96	0.00	0.00	0.00
2,300.00	26.77	186.91	2,161.67	-681.01	-82.54	686.00	0.00	0.00	0.00
2,400.00	26.77	186.91	2,250.96	-725.72	-87.96	731.03	0.00	0.00	0.00
2,500.00	26.77	186.91	2,340.24	-770.43	-93.38	776.06	0.00	0.00	0.00
2,600.00	26.77	186.91	2,429.53	-815.13	-98.79	821.10	0.00	0.00	0.00
2,641.97	26.77	186.91	2,467.00	-833.89	-101.07	840.00	0.00	0.00	0.00
GRRV_ORANGE									
2,700.00	26.77	186.91	2,518.82	-859.84	-104.21	866.13	0.00	0.00	0.00
2,800.00	26.77	186.91	2,608.10	-904.54	-109.63	911.16	0.00	0.00	0.00
2,899.56	26.77	186.91	2,697.00	-949.06	-115.03	956.00	0.00	0.00	0.00
WSTC									
2,900.00	26.77	186.91	2,697.39	-949.25	-115.05	956.20	0.00	0.00	0.00
3,000.00	26.77	186.91	2,786.68	-993.96	-120.47	1,001.23	0.00	0.00	0.00
3,100.00	26.77	186.91	2,875.96	-1,038.66	-125.89	1,046.26	0.00	0.00	0.00
3,200.00	26.77	186.91	2,965.25	-1,083.37	-131.30	1,091.30	0.00	0.00	0.00
3,300.00	26.77	186.91	3,054.53	-1,128.07	-136.72	1,136.33	0.00	0.00	0.00
3,400.00	26.77	186.91	3,143.82	-1,172.78	-142.14	1,181.36	0.00	0.00	0.00
3,459.56	26.77	186.91	3,197.00	-1,199.41	-145.37	1,208.19	0.00	0.00	0.00

Scientific Drilling, Intl

Planning Report

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Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Site:	RGU 23-7-297 Pad	North Reference:	True
Well:	Federal RG 12-18-297	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7April2020 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)
Surface Casing									
3,500.00	26.77	186.91	3,233.11	-1,217.49	-147.56	1,226.40	0.00	0.00	0.00
3,600.00	26.77	186.91	3,322.39	-1,262.19	-152.98	1,271.43	0.00	0.00	0.00
3,700.00	26.77	186.91	3,411.68	-1,306.90	-158.40	1,316.46	0.00	0.00	0.00
3,800.00	26.77	186.91	3,500.96	-1,351.61	-163.81	1,361.50	0.00	0.00	0.00
3,900.00	26.77	186.91	3,590.25	-1,396.31	-169.23	1,406.53	0.00	0.00	0.00
4,000.00	26.77	186.91	3,679.54	-1,441.02	-174.65	1,451.56	0.00	0.00	0.00
4,100.00	26.77	186.91	3,768.82	-1,485.72	-180.07	1,496.60	0.00	0.00	0.00
4,200.00	26.77	186.91	3,858.11	-1,530.43	-185.49	1,541.63	0.00	0.00	0.00
4,300.00	26.77	186.91	3,947.39	-1,575.14	-190.91	1,586.66	0.00	0.00	0.00
4,400.00	26.77	186.91	4,036.68	-1,619.84	-196.32	1,631.70	0.00	0.00	0.00
4,500.00	26.77	186.91	4,125.97	-1,664.55	-201.74	1,676.73	0.00	0.00	0.00
4,600.00	26.77	186.91	4,215.25	-1,709.25	-207.16	1,721.76	0.00	0.00	0.00
4,700.00	26.77	186.91	4,304.54	-1,753.96	-212.58	1,766.80	0.00	0.00	0.00
4,800.00	26.77	186.91	4,393.83	-1,798.67	-218.00	1,811.83	0.00	0.00	0.00
4,900.00	26.77	186.91	4,483.11	-1,843.37	-223.42	1,856.86	0.00	0.00	0.00
5,000.00	26.77	186.91	4,572.40	-1,888.08	-228.83	1,901.90	0.00	0.00	0.00
5,100.00	26.77	186.91	4,661.68	-1,932.78	-234.25	1,946.93	0.00	0.00	0.00
5,200.00	26.77	186.91	4,750.97	-1,977.49	-239.67	1,991.96	0.00	0.00	0.00
5,300.00	26.77	186.91	4,840.26	-2,022.20	-245.09	2,036.99	0.00	0.00	0.00
5,400.00	26.77	186.91	4,929.54	-2,066.90	-250.51	2,082.03	0.00	0.00	0.00
5,486.75	26.77	186.91	5,007.00	-2,105.69	-255.21	2,121.10	0.00	0.00	0.00
G_SAND									
5,500.00	26.77	186.91	5,018.83	-2,111.61	-255.93	2,127.06	0.00	0.00	0.00
5,600.00	26.77	186.91	5,108.11	-2,156.31	-261.34	2,172.09	0.00	0.00	0.00
5,700.00	26.77	186.91	5,197.40	-2,201.02	-266.76	2,217.13	0.00	0.00	0.00
5,744.35	26.77	186.91	5,237.00	-2,220.85	-269.17	2,237.10	0.00	0.00	0.00
FRUN									
5,800.00	26.77	186.91	5,286.69	-2,245.73	-272.18	2,262.16	0.00	0.00	0.00
5,900.00	26.77	186.91	5,375.97	-2,290.43	-277.60	2,307.19	0.00	0.00	0.00
6,000.00	26.77	186.91	5,465.26	-2,335.14	-283.02	2,352.23	0.00	0.00	0.00
6,100.00	26.77	186.91	5,554.54	-2,379.85	-288.44	2,397.26	0.00	0.00	0.00
6,200.00	26.77	186.91	5,643.83	-2,424.55	-293.85	2,442.29	0.00	0.00	0.00
6,300.00	26.77	186.91	5,733.12	-2,469.26	-299.27	2,487.33	0.00	0.00	0.00
6,400.00	26.77	186.91	5,822.40	-2,513.96	-304.69	2,532.36	0.00	0.00	0.00
6,500.00	26.77	186.91	5,911.69	-2,558.67	-310.11	2,577.39	0.00	0.00	0.00
6,600.00	26.77	186.91	6,000.97	-2,603.38	-315.53	2,622.43	0.00	0.00	0.00
6,700.00	26.77	186.91	6,090.26	-2,648.08	-320.95	2,667.46	0.00	0.00	0.00
6,800.00	26.77	186.91	6,179.55	-2,692.79	-326.37	2,712.49	0.00	0.00	0.00
6,900.00	26.77	186.91	6,268.83	-2,737.49	-331.78	2,757.53	0.00	0.00	0.00
7,000.00	26.77	186.91	6,358.12	-2,782.20	-337.20	2,802.56	0.00	0.00	0.00
7,100.00	26.77	186.91	6,447.41	-2,826.91	-342.62	2,847.59	0.00	0.00	0.00
7,200.00	26.77	186.91	6,536.69	-2,871.61	-348.04	2,892.63	0.00	0.00	0.00
7,245.15	26.77	186.91	6,577.00	-2,891.80	-350.48	2,912.96	0.00	0.00	0.00
MVRD									
7,300.00	26.77	186.91	6,625.98	-2,916.32	-353.46	2,937.66	0.00	0.00	0.00
7,400.00	26.77	186.91	6,715.26	-2,961.02	-358.88	2,982.69	0.00	0.00	0.00
7,472.67	26.77	186.91	6,780.14	-2,993.51	-362.81	3,015.42	0.00	0.00	0.00
Start Drop -1.50									
7,500.00	26.36	186.91	6,804.59	-3,005.64	-364.28	3,027.64	1.50	-1.50	0.00
7,600.00	24.86	186.91	6,894.77	-3,048.55	-369.48	3,070.85	1.50	-1.50	0.00
7,700.00	23.36	186.91	6,986.05	-3,089.09	-374.40	3,111.69	1.50	-1.50	0.00

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Planned Survey									
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7,800.00	21.86	186.91	7,078.36	-3,127.25	-379.02	3,150.13	1.50	-1.50	0.00
7,900.00	20.36	186.91	7,171.65	-3,162.99	-383.35	3,186.14	1.50	-1.50	0.00
8,000.00	18.86	186.91	7,265.85	-3,196.30	-387.39	3,219.69	1.50	-1.50	0.00
8,100.00	17.36	186.91	7,360.90	-3,227.15	-391.13	3,250.76	1.50	-1.50	0.00
8,200.00	15.86	186.91	7,456.73	-3,255.52	-394.57	3,279.34	1.50	-1.50	0.00
8,300.00	14.36	186.91	7,553.27	-3,281.39	-397.70	3,305.40	1.50	-1.50	0.00
8,400.00	12.86	186.91	7,650.46	-3,304.74	-400.53	3,328.92	1.50	-1.50	0.00
8,500.00	11.36	186.91	7,748.23	-3,325.55	-403.06	3,349.89	1.50	-1.50	0.00
8,590.33	10.00	186.91	7,837.00	-3,342.17	-405.07	3,366.63	1.50	-1.50	0.00
Start Drop -1.50 - KMGVGS									
8,600.00	9.86	186.91	7,846.52	-3,343.82	-405.27	3,368.29	1.50	-1.50	0.00
8,700.00	8.36	186.91	7,945.26	-3,359.53	-407.17	3,384.12	1.50	-1.50	0.00
8,800.00	6.86	186.91	8,044.38	-3,372.67	-408.77	3,397.35	1.50	-1.50	0.00
8,900.00	5.36	186.91	8,143.81	-3,383.23	-410.05	3,407.99	1.50	-1.50	0.00
9,000.00	3.86	186.91	8,243.48	-3,391.20	-411.01	3,416.02	1.50	-1.50	0.00
9,100.00	2.36	186.91	8,343.33	-3,396.58	-411.66	3,421.43	1.50	-1.50	0.00
9,200.00	0.86	186.91	8,443.29	-3,399.36	-412.00	3,424.23	1.50	-1.50	0.00
9,257.00	0.00	0.00	8,500.29	-3,399.78	-412.05	3,424.66	1.50	-1.50	0.00
Start 2996.71 hold at 9257.00 MD									
9,300.00	0.00	0.00	8,543.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
9,400.00	0.00	0.00	8,643.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
9,500.00	0.00	0.00	8,743.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
9,600.00	0.00	0.00	8,843.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
9,700.00	0.00	0.00	8,943.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
9,800.00	0.00	0.00	9,043.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
9,900.00	0.00	0.00	9,143.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,000.00	0.00	0.00	9,243.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,100.00	0.00	0.00	9,343.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,200.00	0.00	0.00	9,443.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,300.00	0.00	0.00	9,543.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,400.00	0.00	0.00	9,643.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,500.00	0.00	0.00	9,743.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,600.00	0.00	0.00	9,843.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,700.00	0.00	0.00	9,943.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,743.71	0.00	0.00	9,987.00	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
CMEQ*									
10,800.00	0.00	0.00	10,043.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
10,900.00	0.00	0.00	10,143.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,000.00	0.00	0.00	10,243.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,100.00	0.00	0.00	10,343.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,200.00	0.00	0.00	10,443.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,263.71	0.00	0.00	10,507.00	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
RLNS									
11,300.00	0.00	0.00	10,543.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,400.00	0.00	0.00	10,643.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,413.71	0.00	0.00	10,657.00	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
CZZT									
11,500.00	0.00	0.00	10,743.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,600.00	0.00	0.00	10,843.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
11,633.71	0.00	0.00	10,877.00	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00
CRCN									
11,700.00	0.00	0.00	10,943.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction	Local Co-ordinate Reference:	Well Federal RG 12-18-297 - Slot RGU 12-18-297
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Site:	RGU 23-7-297 Pad	North Reference:	True
Well:	Federal RG 12-18-297	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7April2020 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)	
11,800.00	0.00	0.00	11,043.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,143.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
11,983.71	0.00	0.00	11,227.00	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
SEGO_UPPER										
12,000.00	0.00	0.00	11,243.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
12,100.00	0.00	0.00	11,343.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
12,153.71	0.00	0.00	11,397.00	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
SEGO_LOWER										
12,200.00	0.00	0.00	11,443.29	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
12,253.71	0.00	0.00	11,497.00	-3,399.78	-412.05	3,424.66	0.00	0.00	0.00	
TD at 12253.71 - TD										

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 12-18-297 KMV Gc	0.00	0.00	7,837.00	-3,399.78	-412.05	1,757,485.7000	2,205,737.4000	39.8791433	-108.3303971	
- plan misses target center by 57.16usft at 8600.00usft MD (7846.52 TVD, -3343.82 N, -405.27 E)										
- Circle (radius 25.00)										
FRG 12-18-297 TD	0.00	0.00	11,497.00	-3,399.78	-412.05	1,757,485.7000	2,205,737.4000	39.8791433	-108.3303971	
- plan hits target center										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,459.56	3,197.00	Surface Casing	0.00	0.00	

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction	Local Co-ordinate Reference:	Well Federal RG 12-18-297 - Slot RGU 12-18-297
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 6603' & KB 24' @ 6627.00usft (H&P 318)
Site:	RGU 23-7-297 Pad	North Reference:	True
Well:	Federal RG 12-18-297	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7April2020 SB-SDI		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
880.92	872.00	GRRV		0.00		
1,042.88	1,027.00	GRRV_A_GROOVE		0.00		
1,245.75	1,217.00	GRRV_B_GROOVE		0.00		
1,555.57	1,497.00	GRRV DISSOLUTION_SURF		0.00		
2,641.97	2,467.00	GRRV_ORANGE		0.00		
2,899.56	2,697.00	WSTC		0.00		
5,486.75	5,007.00	G_SAND		0.00		
5,744.35	5,237.00	FRUN		0.00		
7,245.15	6,577.00	MVRD		0.00		
8,590.33	7,837.00	KMVGAS		0.00		
10,743.71	9,987.00	CMEO*		0.00		
11,263.71	10,507.00	RLNS		0.00		
11,413.71	10,657.00	CZZT		0.00		
11,633.71	10,877.00	CRCN		0.00		
11,983.71	11,227.00	SEGO_UPPER		0.00		
12,153.71	11,397.00	SEGO_LOWER		0.00		
12,253.71	11,497.00	TD		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	
1,458.25	1,410.11	-304.70	-36.93	Start 6014.42 hold at 1458.25 MD	
7,472.67	6,780.14	-2,993.51	-362.81	Start Drop -1.50	
8,590.33	7,837.00	-3,342.17	-405.07	Start Drop -1.50	
9,257.00	8,500.29	-3,399.78	-412.05	Start 2996.71 hold at 9257.00 MD	
12,253.71	11,497.00	-3,399.78	-412.05	TD at 12253.71	