



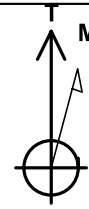
Company: TEP Rocky Mountain LLC
Project: Garfield County, CO NAD83
Site: RGU 23-7-297 Pad
Well: Federal RG 512-7-297

Plan: Plan #2 7April2020 SB-SDI

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



Azimuths to True North
Magnetic North: 9.28°

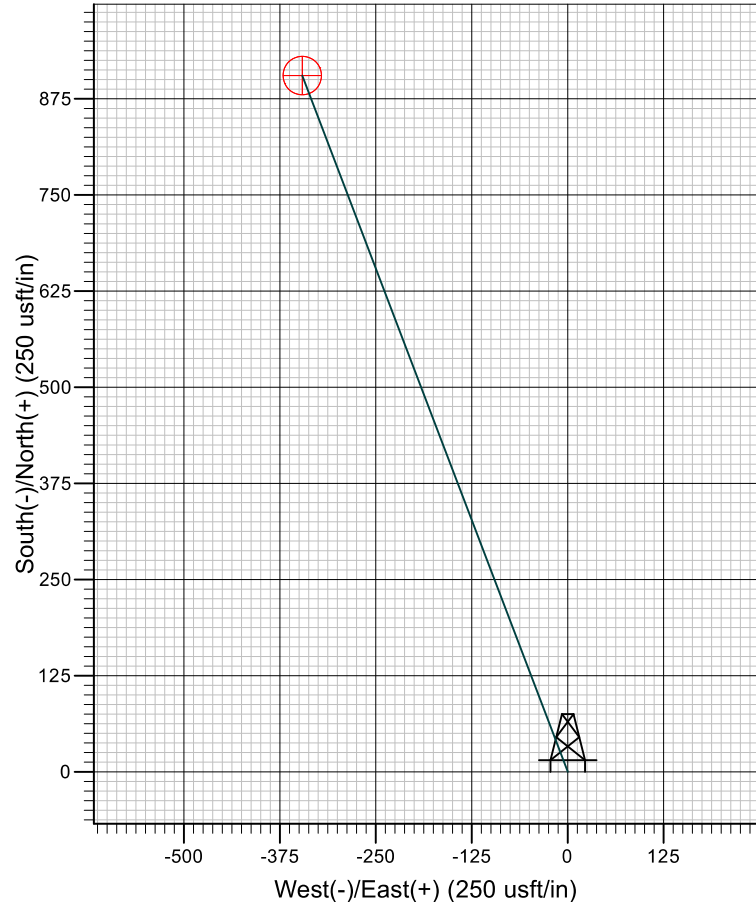
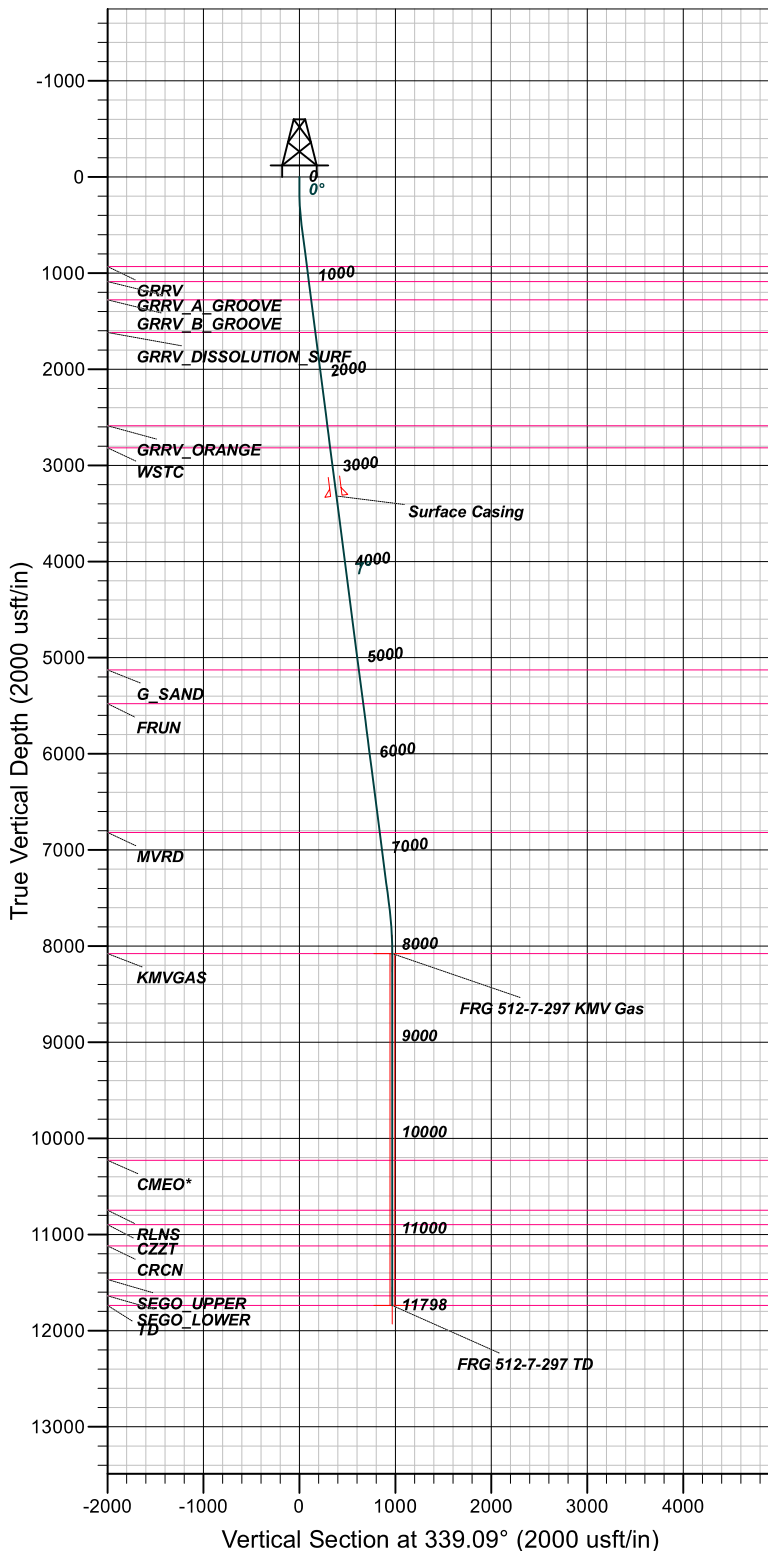
Magnetic Field
Strength: 51354.8nT
Dip Angle: 65.83°
Date: 4/7/2020
Model: HDGM_FILE

Well Details: Federal RG 512-7-297

+N/-S +E/-W Northing Easting Longitude
0.00 0.00 1760886.5000 2206227.5000 39.8885161 -108.3290290 RGU 512-7-297

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FRG 512-7-297 KMV Gas	8077.00	905.27	-345.85	1761802.1000	2205910.0000	39.8910011	-108.3302614	Circle (Radius: 25.00)
- plan hits target center								
FRG 512-7-297 TD	11737.00	905.27	-345.85	1761802.1000	2205910.0000	39.8910011	-108.3302614	Point
- plan hits target center								



FORMATION TOP DETAILS

TVDPth	MDPath	Formation
932.00	936.57	GRRV
1087.00	1092.86	GRRV_A GROOVE
1277.00	1284.43	GRRV_B GROOVE
1617.00	1627.25	GRRV DISSOLUTION SURF
2587.00	2605.29	GRRV_ORANGE
2817.00	2837.19	WSTC
5127.00	5166.33	G SAND
5477.00	5519.23	FRUN
6817.00	6870.33	MVRD
8077.00	8138.07	KMGAS
10227.00	10288.07	CMEO*
10747.00	10808.07	RLNS
10897.00	10958.07	CZZT
11117.00	11178.07	CRCN
11467.00	11528.07	SEGO_UPPER
11637.00	11698.07	SEGO_LOWER
11737.00	11798.07	TD

CASING DETAILS

TVD	MD	Name
3317.00	3341.33	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
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00
502.51	7.35	339.09	501.50	21.99	-8.40	2.00	339.09	23.54
7648.05	7.35	339.09	7588.33	875.95	-334.65	0.00	0.00	937.70
8138.07	0.00	0.00	8077.00	905.27	-345.85	1.50	180.00	969.09
11798.07	0.00	0.00	11737.00	905.27	-345.85	0.00	0.00	969.09

TEP Rocky Mountain LLC

Garfield County, CO NAD83

RGU 23-7-297 Pad

Federal RG 512-7-297 - Slot RGU 512-7-297

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 512-7-297 - Slot RGU 512-7-297
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 512-7-297	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 512-7-297 - Slot RGU 512-7-297, 1809' FSL 1344' FWL Sec 7 T2S R97W		
Well Position	+N/-S	6.34 usft	Northing: 1,760,886.5000 usft
	+E/-W	23.81 usft	Easting: 2,206,227.5000 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	51,354.80000000

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	339.09

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	
135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	0.00	
502.51	7.35	339.09	501.50	21.99	-8.40	2.00	2.00	0.00	339.09	
7,648.05	7.35	339.09	7,588.33	875.95	-334.65	0.00	0.00	0.00	0.00	
8,138.07	0.00	0.00	8,077.00	905.27	-345.85	1.50	-1.50	0.00	180.00	FRG 512-7-297 KMV
11,798.07	0.00	0.00	11,737.00	905.27	-345.85	0.00	0.00	0.00	0.00	FRG 512-7-297 TD

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction	Local Co-ordinate Reference:	Well Federal RG 512-7-297 - Slot RGU 512-7-297
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 512-7-297	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
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	339.09	199.99	0.69	-0.26	0.74	2.00	2.00	0.00
300.00	3.30	339.09	299.91	4.44	-1.70	4.75	2.00	2.00	0.00
400.00	5.30	339.09	399.62	11.44	-4.37	12.25	2.00	2.00	0.00
500.00	7.30	339.09	499.01	21.69	-8.29	23.22	2.00	2.00	0.00
502.51	7.35	339.09	501.50	21.99	-8.40	23.54	2.00	2.00	0.00
Start 7145.54 hold at 502.51 MD									
600.00	7.35	339.09	598.19	33.64	-12.85	36.01	0.00	0.00	0.00
700.00	7.35	339.09	697.37	45.59	-17.42	48.81	0.00	0.00	0.00
800.00	7.35	339.09	796.55	57.54	-21.98	61.60	0.00	0.00	0.00
900.00	7.35	339.09	895.73	69.49	-26.55	74.39	0.00	0.00	0.00
936.57	7.35	339.09	932.00	73.87	-28.22	79.07	0.00	0.00	0.00
GRRV									
1,000.00	7.35	339.09	994.90	81.45	-31.12	87.19	0.00	0.00	0.00
1,092.86	7.35	339.09	1,087.00	92.54	-35.36	99.07	0.00	0.00	0.00
GRRV_A_GROOVE									
1,100.00	7.35	339.09	1,094.08	93.40	-35.68	99.98	0.00	0.00	0.00
1,200.00	7.35	339.09	1,193.26	105.35	-40.25	112.77	0.00	0.00	0.00
1,284.43	7.35	339.09	1,277.00	115.44	-44.10	123.58	0.00	0.00	0.00
GRRV_B_GROOVE									
1,300.00	7.35	339.09	1,292.44	117.30	-44.81	125.57	0.00	0.00	0.00
1,400.00	7.35	339.09	1,391.62	129.25	-49.38	138.36	0.00	0.00	0.00
1,500.00	7.35	339.09	1,490.80	141.20	-53.94	151.15	0.00	0.00	0.00
1,600.00	7.35	339.09	1,589.97	153.15	-58.51	163.95	0.00	0.00	0.00
1,627.25	7.35	339.09	1,617.00	156.41	-59.75	167.43	0.00	0.00	0.00
GRRV DISSOLUTION_SURF									
1,700.00	7.35	339.09	1,689.15	165.10	-63.08	176.74	0.00	0.00	0.00
1,800.00	7.35	339.09	1,788.33	177.05	-67.64	189.53	0.00	0.00	0.00
1,900.00	7.35	339.09	1,887.51	189.00	-72.21	202.33	0.00	0.00	0.00
2,000.00	7.35	339.09	1,986.69	200.95	-76.77	215.12	0.00	0.00	0.00
2,100.00	7.35	339.09	2,085.87	212.91	-81.34	227.91	0.00	0.00	0.00
2,200.00	7.35	339.09	2,185.04	224.86	-85.91	240.71	0.00	0.00	0.00
2,300.00	7.35	339.09	2,284.22	236.81	-90.47	253.50	0.00	0.00	0.00
2,400.00	7.35	339.09	2,383.40	248.76	-95.04	266.29	0.00	0.00	0.00
2,500.00	7.35	339.09	2,482.58	260.71	-99.60	279.09	0.00	0.00	0.00
2,600.00	7.35	339.09	2,581.76	272.66	-104.17	291.88	0.00	0.00	0.00
2,605.29	7.35	339.09	2,587.00	273.29	-104.41	292.56	0.00	0.00	0.00
GRRV_ORANGE									
2,700.00	7.35	339.09	2,680.94	284.61	-108.73	304.67	0.00	0.00	0.00
2,800.00	7.35	339.09	2,780.11	296.56	-113.30	317.47	0.00	0.00	0.00
2,837.19	7.35	339.09	2,817.00	301.01	-115.00	322.23	0.00	0.00	0.00
WSTC									
2,900.00	7.35	339.09	2,879.29	308.51	-117.87	330.26	0.00	0.00	0.00
3,000.00	7.35	339.09	2,978.47	320.46	-122.43	343.05	0.00	0.00	0.00
3,100.00	7.35	339.09	3,077.65	332.41	-127.00	355.85	0.00	0.00	0.00
3,200.00	7.35	339.09	3,176.83	344.37	-131.56	368.64	0.00	0.00	0.00
3,300.00	7.35	339.09	3,276.00	356.32	-136.13	381.44	0.00	0.00	0.00
3,341.33	7.35	339.09	3,317.00	361.26	-138.02	386.72	0.00	0.00	0.00
Surface Casing									

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction	Local Co-ordinate Reference:	Well Federal RG 512-7-297 - Slot RGU 512-7-297
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 512-7-297	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)	
3,400.00	7.35	339.09	3,375.18	368.27	-140.69	394.23	0.00	0.00	0.00	
3,500.00	7.35	339.09	3,474.36	380.22	-145.26	407.02	0.00	0.00	0.00	
3,600.00	7.35	339.09	3,573.54	392.17	-149.83	419.82	0.00	0.00	0.00	
3,700.00	7.35	339.09	3,672.72	404.12	-154.39	432.61	0.00	0.00	0.00	
3,800.00	7.35	339.09	3,771.90	416.07	-158.96	445.40	0.00	0.00	0.00	
3,900.00	7.35	339.09	3,871.07	428.02	-163.52	458.20	0.00	0.00	0.00	
4,000.00	7.35	339.09	3,970.25	439.97	-168.09	470.99	0.00	0.00	0.00	
4,100.00	7.35	339.09	4,069.43	451.92	-172.66	483.78	0.00	0.00	0.00	
4,200.00	7.35	339.09	4,168.61	463.88	-177.22	496.58	0.00	0.00	0.00	
4,300.00	7.35	339.09	4,267.79	475.83	-181.79	509.37	0.00	0.00	0.00	
4,400.00	7.35	339.09	4,366.97	487.78	-186.35	522.16	0.00	0.00	0.00	
4,500.00	7.35	339.09	4,466.14	499.73	-190.92	534.96	0.00	0.00	0.00	
4,600.00	7.35	339.09	4,565.32	511.68	-195.48	547.75	0.00	0.00	0.00	
4,700.00	7.35	339.09	4,664.50	523.63	-200.05	560.54	0.00	0.00	0.00	
4,800.00	7.35	339.09	4,763.68	535.58	-204.62	573.34	0.00	0.00	0.00	
4,900.00	7.35	339.09	4,862.86	547.53	-209.18	586.13	0.00	0.00	0.00	
5,000.00	7.35	339.09	4,962.04	559.48	-213.75	598.92	0.00	0.00	0.00	
5,100.00	7.35	339.09	5,061.21	571.43	-218.31	611.72	0.00	0.00	0.00	
5,166.33	7.35	339.09	5,127.00	579.36	-221.34	620.20	0.00	0.00	0.00	
G_SAND										
5,200.00	7.35	339.09	5,160.39	583.38	-222.88	624.51	0.00	0.00	0.00	
5,300.00	7.35	339.09	5,259.57	595.34	-227.44	637.30	0.00	0.00	0.00	
5,400.00	7.35	339.09	5,358.75	607.29	-232.01	650.10	0.00	0.00	0.00	
5,500.00	7.35	339.09	5,457.93	619.24	-236.58	662.89	0.00	0.00	0.00	
5,519.23	7.35	339.09	5,477.00	621.54	-237.45	665.35	0.00	0.00	0.00	
FRUN										
5,600.00	7.35	339.09	5,557.11	631.19	-241.14	675.68	0.00	0.00	0.00	
5,700.00	7.35	339.09	5,656.28	643.14	-245.71	688.48	0.00	0.00	0.00	
5,800.00	7.35	339.09	5,755.46	655.09	-250.27	701.27	0.00	0.00	0.00	
5,900.00	7.35	339.09	5,854.64	667.04	-254.84	714.06	0.00	0.00	0.00	
6,000.00	7.35	339.09	5,953.82	678.99	-259.41	726.86	0.00	0.00	0.00	
6,100.00	7.35	339.09	6,053.00	690.94	-263.97	739.65	0.00	0.00	0.00	
6,200.00	7.35	339.09	6,152.17	702.89	-268.54	752.44	0.00	0.00	0.00	
6,300.00	7.35	339.09	6,251.35	714.84	-273.10	765.24	0.00	0.00	0.00	
6,400.00	7.35	339.09	6,350.53	726.80	-277.67	778.03	0.00	0.00	0.00	
6,500.00	7.35	339.09	6,449.71	738.75	-282.23	790.82	0.00	0.00	0.00	
6,600.00	7.35	339.09	6,548.89	750.70	-286.80	803.62	0.00	0.00	0.00	
6,700.00	7.35	339.09	6,648.07	762.65	-291.37	816.41	0.00	0.00	0.00	
6,800.00	7.35	339.09	6,747.24	774.60	-295.93	829.20	0.00	0.00	0.00	
6,870.33	7.35	339.09	6,817.00	783.00	-299.14	838.20	0.00	0.00	0.00	
MVRD										
6,900.00	7.35	339.09	6,846.42	786.55	-300.50	842.00	0.00	0.00	0.00	
7,000.00	7.35	339.09	6,945.60	798.50	-305.06	854.79	0.00	0.00	0.00	
7,100.00	7.35	339.09	7,044.78	810.45	-309.63	867.58	0.00	0.00	0.00	
7,200.00	7.35	339.09	7,143.96	822.40	-314.19	880.38	0.00	0.00	0.00	
7,300.00	7.35	339.09	7,243.14	834.35	-318.76	893.17	0.00	0.00	0.00	
7,400.00	7.35	339.09	7,342.31	846.31	-323.33	905.96	0.00	0.00	0.00	
7,500.00	7.35	339.09	7,441.49	858.26	-327.89	918.76	0.00	0.00	0.00	
7,600.00	7.35	339.09	7,540.67	870.21	-332.46	931.55	0.00	0.00	0.00	
7,648.05	7.35	339.09	7,588.33	875.95	-334.65	937.70	0.00	0.00	0.00	
Start Drop -1.50										
7,700.00	6.57	339.09	7,639.89	881.83	-336.90	943.99	1.50	-1.50	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 512-7-297	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)
7,800.00	5.07	339.09	7,739.37	891.30	-340.52	954.14	1.50	-1.50	0.00
7,900.00	3.57	339.09	7,839.09	898.34	-343.21	961.67	1.50	-1.50	0.00
8,000.00	2.07	339.09	7,938.96	902.94	-344.96	966.59	1.50	-1.50	0.00
8,100.00	0.57	339.09	8,038.93	905.09	-345.79	968.90	1.50	-1.50	0.00
8,138.07	0.00	0.00	8,077.00	905.27	-345.85	969.09	1.50	-1.50	0.00
Start 3660.00 hold at 8138.07 MD - KMYGAS									
8,200.00	0.00	0.00	8,138.93	905.27	-345.85	969.09	0.00	0.00	0.00
8,300.00	0.00	0.00	8,238.93	905.27	-345.85	969.09	0.00	0.00	0.00
8,400.00	0.00	0.00	8,338.93	905.27	-345.85	969.09	0.00	0.00	0.00
8,500.00	0.00	0.00	8,438.93	905.27	-345.85	969.09	0.00	0.00	0.00
8,600.00	0.00	0.00	8,538.93	905.27	-345.85	969.09	0.00	0.00	0.00
8,700.00	0.00	0.00	8,638.93	905.27	-345.85	969.09	0.00	0.00	0.00
8,800.00	0.00	0.00	8,738.93	905.27	-345.85	969.09	0.00	0.00	0.00
8,900.00	0.00	0.00	8,838.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,000.00	0.00	0.00	8,938.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,100.00	0.00	0.00	9,038.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,200.00	0.00	0.00	9,138.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,300.00	0.00	0.00	9,238.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,400.00	0.00	0.00	9,338.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,500.00	0.00	0.00	9,438.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,600.00	0.00	0.00	9,538.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,700.00	0.00	0.00	9,638.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,800.00	0.00	0.00	9,738.93	905.27	-345.85	969.09	0.00	0.00	0.00
9,900.00	0.00	0.00	9,838.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,000.00	0.00	0.00	9,938.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,100.00	0.00	0.00	10,038.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,200.00	0.00	0.00	10,138.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,288.07	0.00	0.00	10,227.00	905.27	-345.85	969.09	0.00	0.00	0.00
CME0*									
10,300.00	0.00	0.00	10,238.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,400.00	0.00	0.00	10,338.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,500.00	0.00	0.00	10,438.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,600.00	0.00	0.00	10,538.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,700.00	0.00	0.00	10,638.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,800.00	0.00	0.00	10,738.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,808.07	0.00	0.00	10,747.00	905.27	-345.85	969.09	0.00	0.00	0.00
RLNS									
10,900.00	0.00	0.00	10,838.93	905.27	-345.85	969.09	0.00	0.00	0.00
10,958.07	0.00	0.00	10,897.00	905.27	-345.85	969.09	0.00	0.00	0.00
CZZT									
11,000.00	0.00	0.00	10,938.93	905.27	-345.85	969.09	0.00	0.00	0.00
11,100.00	0.00	0.00	11,038.93	905.27	-345.85	969.09	0.00	0.00	0.00
11,178.07	0.00	0.00	11,117.00	905.27	-345.85	969.09	0.00	0.00	0.00
CRCN									
11,200.00	0.00	0.00	11,138.93	905.27	-345.85	969.09	0.00	0.00	0.00
11,300.00	0.00	0.00	11,238.93	905.27	-345.85	969.09	0.00	0.00	0.00
11,400.00	0.00	0.00	11,338.93	905.27	-345.85	969.09	0.00	0.00	0.00
11,500.00	0.00	0.00	11,438.93	905.27	-345.85	969.09	0.00	0.00	0.00
11,528.07	0.00	0.00	11,467.00	905.27	-345.85	969.09	0.00	0.00	0.00
SEGO_UPPER									
11,600.00	0.00	0.00	11,538.93	905.27	-345.85	969.09	0.00	0.00	0.00
11,698.07	0.00	0.00	11,637.00	905.27	-345.85	969.09	0.00	0.00	0.00

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction	Local Co-ordinate Reference:	Well Federal RG 512-7-297 - Slot RGU 512-7-297
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 512-7-297	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)	
SEGO_LOWER										
11,700.00	0.00	0.00	11,638.93	905.27	-345.85	969.09	0.00	0.00	0.00	
11,798.07	0.00	0.00	11,737.00	905.27	-345.85	969.09	0.00	0.00	0.00	
TD at 11798.07 - 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 512-7-297 KMV Gε	0.00	0.00	8,077.00	905.27	-345.85	1,761,802.1000	2,205,910.0000	39.8910012	-108.3302615	
- plan hits target center										
- Circle (radius 25.00)										
FRG 512-7-297 TD	0.00	0.00	11,737.00	905.27	-345.85	1,761,802.1000	2,205,910.0000	39.8910012	-108.3302615	
- plan hits target center										
- Point										

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
3,341.33	3,317.00	Surface Casing	0.00	0.00		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
936.57	932.00	GRRV		0.00		
1,092.86	1,087.00	GRRV_A_GROOVE		0.00		
1,284.43	1,277.00	GRRV_B_GROOVE		0.00		
1,627.25	1,617.00	GRRV DISSOLUTION_SURF		0.00		
2,605.29	2,587.00	GRRV_ORANGE		0.00		
2,837.19	2,817.00	WSTC		0.00		
5,166.33	5,127.00	G_SAND		0.00		
5,519.23	5,477.00	FRUN		0.00		
6,870.33	6,817.00	MVRD		0.00		
8,138.07	8,077.00	KMVGAS		0.00		
10,288.07	10,227.00	CMEO*		0.00		
10,808.07	10,747.00	RLNS		0.00		
10,958.07	10,897.00	CZZT		0.00		
11,178.07	11,117.00	CRCN		0.00		
11,528.07	11,467.00	SEGO_UPPER		0.00		
11,698.07	11,637.00	SEGO_LOWER		0.00		
11,798.07	11,737.00	TD		0.00		

Scientific Drilling, Intl

Planning Report

Database:	Grand Junction	Local Co-ordinate Reference:	Well Federal RG 512-7-297 - Slot RGU 512-7-297
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 512-7-297	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 7April2020 SB-SDI		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
135.00	135.00	0.00	0.00	Start Build 2.00
502.51	501.50	21.99	-8.40	Start 7145.54 hold at 502.51 MD
7,648.05	7,588.33	875.95	-334.65	Start Drop -1.50
8,138.07	8,077.00	905.27	-345.85	Start 3660.00 hold at 8138.07 MD
11,798.07	11,737.00	905.27	-345.85	TD at 11798.07