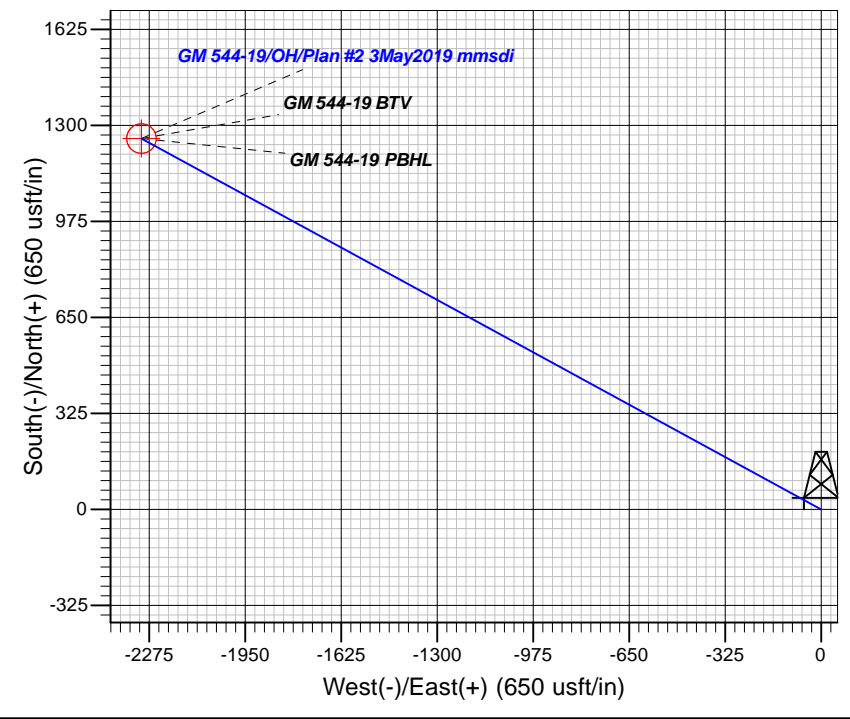
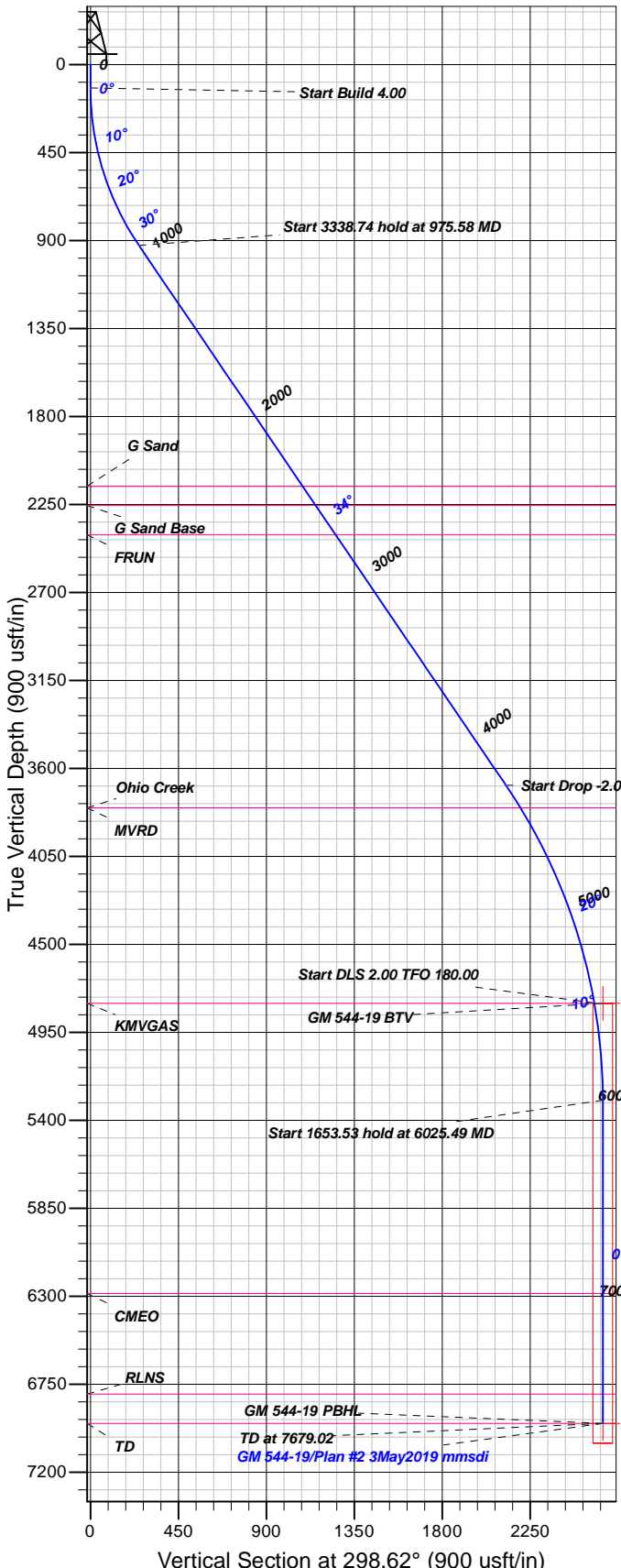


T M Azimuths to True North
 Magnetic North: 9.50°
 Magnetic Field Strength: 51557.8snT
 Dip Angle: 65.75°
 Date: 3/20/2019
 Model: HDGM

Well Details: GM 544-19

GL 5849 & RKB 24' @ 5873.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1617169.51	2255394.48	39.4982149	-108.1390236	



FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
2156.00	2463.63	G Sand
2256.00	2584.57	G Sand Base
2406.00	2765.98	FRUN
3802.00	4452.11	MVRD
3802.00	4452.11	Ohio Creek
4800.00	5525.49	KMGV GAS
6286.00	7014.02	CMEO
6801.00	7529.02	RLNS
6951.00	7679.02	TD

Plan: Plan #2 3May2019 mmsdi

11:32, May 06 2019
 Created By: Mel Mireles

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

CASING DETAILS

No casing data is available

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	
3	975.58	34.22	298.62	925.61	118.79	-217.72	4.00	298.62	248.02	
4	4314.32	34.22	298.62	3686.25	1018.18	-1866.09	0.00	0.00	0.00	0.002125.79
5	5525.49	10.00	298.62	4800.00	1234.92	-2263.32	2.00	180.00	2578.30	
6	6025.49	0.00	0.00	5297.47	1255.77	-2301.53	2.00	180.00	2621.83	
7	7679.02	0.00	0.00	6951.00	1255.77	-2301.53	0.00	0.00	2621.83	GM 544-19 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 544-19 BTV	4802.00	1255.77	-2301.53	1618491.60	2253130.40	39.5016623	-108.1471799	Circle (Radius: 50.00)
- plan misses target center by 42.53usft at 5534.46usft MD (4808.84 TVD, 1235.66 N, -2264.68 E)								
GM 544-19 PBHL	6951.00	1255.77	-2301.53	1618491.60	2253130.40	39.5016623	-108.1471799	Point
- plan misses target center by 0.01usft at 7679.02usft MD (6951.00 TVD, 1255.77 N, -2301.53 E)								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

GR 12-29 Pad

GM 544-19

OH

Plan: Plan #2 3May2019 mmsdi

Standard Planning Report

06 May, 2019



www.scientificdrilling.com





Scientific Drilling, Intl Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 544-19
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 544-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 mmsdi		

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	GR 12-29 Pad				
Site Position:	Northing:	1,617,169.51 usft	Latitude:	39.4982149	
From: Map	Easting:	2,255,394.48 usft	Longitude:	-108.1390236	
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.66 °

Well	GM 544-19					
Well Position	+N/-S	0.00 usft	Northing:	1,617,169.51 usft	Latitude:	39.4982149
	+E/-W	0.00 usft	Easting:	2,255,394.48 usft	Longitude:	-108.1390236
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,849.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/20/2019	9.50	65.75	51,558

Design	Plan #2 3May2019 mmsdi			
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	298.62

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	
975.58	34.22	298.62	925.61	118.79	-217.72	4.00	4.00	0.00	298.62	
4,314.32	34.22	298.62	3,686.25	1,018.18	-1,866.09	0.00	0.00	0.00	0.00	
5,525.49	10.00	298.62	4,800.00	1,234.92	-2,263.32	2.00	-2.00	0.00	180.00	
6,025.49	0.00	0.00	5,297.47	1,255.77	-2,301.53	2.00	-2.00	12.28	180.00	
7,679.03	0.00	0.00	6,951.00	1,255.77	-2,301.53	0.00	0.00	0.00	0.00	GM 544-19 PBHL



Scientific Drilling, Intl Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 544-19
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 544-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 mmsdi		

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	0.00
100.00	0.00	0.00	100.00	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	0.00
Start Build 4.00										
200.00	3.20	298.62	199.96	1.07	-1.96	2.23	4.00	4.00	4.00	0.00
300.00	7.20	298.62	299.53	5.41	-9.92	11.29	4.00	4.00	4.00	0.00
400.00	11.20	298.62	398.22	13.07	-23.95	27.28	4.00	4.00	4.00	0.00
500.00	15.20	298.62	495.56	24.00	-43.99	50.11	4.00	4.00	4.00	0.00
600.00	19.20	298.62	591.07	38.16	-69.94	79.67	4.00	4.00	4.00	0.00
700.00	23.20	298.62	684.28	55.48	-101.68	115.83	4.00	4.00	4.00	0.00
800.00	27.20	298.62	774.74	75.87	-139.05	158.40	4.00	4.00	4.00	0.00
900.00	31.20	298.62	862.02	99.23	-181.87	207.18	4.00	4.00	4.00	0.00
975.58	34.22	298.62	925.61	118.79	-217.72	248.02	4.00	4.00	4.00	0.00
Start 3338.74 hold at 975.58 MD										
1,000.00	34.22	298.62	945.80	125.37	-229.77	261.75	0.00	0.00	0.00	0.00
1,100.00	34.22	298.62	1,028.48	152.31	-279.14	317.99	0.00	0.00	0.00	0.00
1,200.00	34.22	298.62	1,111.17	179.25	-328.51	374.23	0.00	0.00	0.00	0.00
1,300.00	34.22	298.62	1,193.85	206.18	-377.89	430.48	0.00	0.00	0.00	0.00
1,400.00	34.22	298.62	1,276.54	233.12	-427.26	486.72	0.00	0.00	0.00	0.00
1,500.00	34.22	298.62	1,359.22	260.06	-476.63	542.96	0.00	0.00	0.00	0.00
1,600.00	34.22	298.62	1,441.91	287.00	-526.00	599.20	0.00	0.00	0.00	0.00
1,700.00	34.22	298.62	1,524.59	313.94	-575.37	655.44	0.00	0.00	0.00	0.00
1,800.00	34.22	298.62	1,607.28	340.87	-624.74	711.69	0.00	0.00	0.00	0.00
1,900.00	34.22	298.62	1,689.96	367.81	-674.11	767.93	0.00	0.00	0.00	0.00
2,000.00	34.22	298.62	1,772.65	394.75	-723.48	824.17	0.00	0.00	0.00	0.00
2,100.00	34.22	298.62	1,855.33	421.69	-772.85	880.41	0.00	0.00	0.00	0.00
2,200.00	34.22	298.62	1,938.02	448.63	-822.23	936.65	0.00	0.00	0.00	0.00
2,300.00	34.22	298.62	2,020.70	475.56	-871.60	992.90	0.00	0.00	0.00	0.00
2,400.00	34.22	298.62	2,103.39	502.50	-920.97	1,049.14	0.00	0.00	0.00	0.00
2,463.63	34.22	298.62	2,156.00	519.64	-952.38	1,084.92	0.00	0.00	0.00	0.00
G Sand										
2,500.00	34.22	298.62	2,186.07	529.44	-970.34	1,105.38	0.00	0.00	0.00	0.00
2,584.57	34.22	298.62	2,256.00	552.22	-1,012.09	1,152.94	0.00	0.00	0.00	0.00
G Sand Base										
2,600.00	34.22	298.62	2,268.76	556.38	-1,019.71	1,161.62	0.00	0.00	0.00	0.00
2,700.00	34.22	298.62	2,351.44	583.32	-1,069.08	1,217.86	0.00	0.00	0.00	0.00
2,765.98	34.22	298.62	2,406.00	601.09	-1,101.66	1,254.97	0.00	0.00	0.00	0.00
FRUN										
2,800.00	34.22	298.62	2,434.13	610.25	-1,118.45	1,274.11	0.00	0.00	0.00	0.00
2,900.00	34.22	298.62	2,516.81	637.19	-1,167.82	1,330.35	0.00	0.00	0.00	0.00
3,000.00	34.22	298.62	2,599.50	664.13	-1,217.19	1,386.59	0.00	0.00	0.00	0.00
3,100.00	34.22	298.62	2,682.18	691.07	-1,266.57	1,442.83	0.00	0.00	0.00	0.00
3,200.00	34.22	298.62	2,764.87	718.01	-1,315.94	1,499.07	0.00	0.00	0.00	0.00
3,300.00	34.22	298.62	2,847.56	744.94	-1,365.31	1,555.32	0.00	0.00	0.00	0.00
3,400.00	34.22	298.62	2,930.24	771.88	-1,414.68	1,611.56	0.00	0.00	0.00	0.00
3,500.00	34.22	298.62	3,012.93	798.82	-1,464.05	1,667.80	0.00	0.00	0.00	0.00
3,600.00	34.22	298.62	3,095.61	825.76	-1,513.42	1,724.04	0.00	0.00	0.00	0.00
3,700.00	34.22	298.62	3,178.30	852.70	-1,562.79	1,780.28	0.00	0.00	0.00	0.00
3,800.00	34.22	298.62	3,260.98	879.63	-1,612.16	1,836.53	0.00	0.00	0.00	0.00
3,900.00	34.22	298.62	3,343.67	906.57	-1,661.53	1,892.77	0.00	0.00	0.00	0.00
4,000.00	34.22	298.62	3,426.35	933.51	-1,710.91	1,949.01	0.00	0.00	0.00	0.00
4,100.00	34.22	298.62	3,509.04	960.45	-1,760.28	2,005.25	0.00	0.00	0.00	0.00
4,200.00	34.22	298.62	3,591.72	987.39	-1,809.65	2,061.49	0.00	0.00	0.00	0.00
4,300.00	34.22	298.62	3,674.41	1,014.32	-1,859.02	2,117.74	0.00	0.00	0.00	0.00



Scientific Drilling, Intl
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 544-19
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 544-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 mmsdi		

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)
4,314.32	34.22	298.62	3,686.25	1,018.18	-1,866.09	2,125.79	0.00	0.00	0.00
Start Drop -2.00									
4,400.00	32.51	298.62	3,757.80	1,040.75	-1,907.45	2,172.91	2.00	-2.00	0.00
4,452.11	31.47	298.62	3,802.00	1,053.97	-1,931.69	2,200.52	2.00	-2.00	0.00
Ohio Creek - MVRD									
4,500.00	30.51	298.62	3,843.05	1,065.78	-1,953.33	2,225.17	2.00	-2.00	0.00
4,600.00	28.51	298.62	3,930.08	1,089.37	-1,996.57	2,274.43	2.00	-2.00	0.00
4,700.00	26.51	298.62	4,018.76	1,111.50	-2,037.11	2,320.62	2.00	-2.00	0.00
4,800.00	24.51	298.62	4,109.01	1,132.12	-2,074.92	2,363.68	2.00	-2.00	0.00
4,900.00	22.51	298.62	4,200.71	1,151.23	-2,109.93	2,403.57	2.00	-2.00	0.00
5,000.00	20.51	298.62	4,293.74	1,168.79	-2,142.12	2,440.23	2.00	-2.00	0.00
5,100.00	18.51	298.62	4,387.99	1,184.78	-2,171.43	2,473.63	2.00	-2.00	0.00
5,200.00	16.51	298.62	4,483.35	1,199.19	-2,197.84	2,503.71	2.00	-2.00	0.00
5,300.00	14.51	298.62	4,579.70	1,212.00	-2,221.32	2,530.45	2.00	-2.00	0.00
5,400.00	12.51	298.62	4,676.93	1,223.19	-2,241.82	2,553.81	2.00	-2.00	0.00
5,500.00	10.51	298.62	4,774.92	1,232.75	-2,259.34	2,573.76	2.00	-2.00	0.00
5,525.49	10.00	298.62	4,800.00	1,234.92	-2,263.32	2,578.30	2.00	-2.00	0.00
Start DLS 2.00 TFO 180.00									
5,527.52	9.96	298.62	4,802.00	1,235.09	-2,263.63	2,578.65	2.00	-2.00	0.00
KMVGAS									
5,534.45	9.82	298.62	4,808.83	1,235.66	-2,264.67	2,579.84	2.00	-2.00	0.00
GM 544-19 BTV									
5,600.00	8.51	298.62	4,873.54	1,240.66	-2,273.84	2,590.29	2.00	-2.00	0.00
5,700.00	6.51	298.62	4,972.67	1,246.92	-2,285.31	2,603.35	2.00	-2.00	0.00
5,800.00	4.51	298.62	5,072.21	1,251.52	-2,293.74	2,612.96	2.00	-2.00	0.00
5,900.00	2.51	298.62	5,172.02	1,254.45	-2,299.11	2,619.08	2.00	-2.00	0.00
6,000.00	0.51	298.62	5,271.98	1,255.71	-2,301.43	2,621.71	2.00	-2.00	0.00
6,025.49	0.00	0.00	5,297.47	1,255.77	-2,301.53	2,621.83	2.00	-2.00	0.00
Start 1653.53 hold at 6025.49 MD									
6,100.00	0.00	0.00	5,371.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,200.00	0.00	0.00	5,471.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,300.00	0.00	0.00	5,571.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,400.00	0.00	0.00	5,671.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,500.00	0.00	0.00	5,771.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,600.00	0.00	0.00	5,871.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,700.00	0.00	0.00	5,971.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,800.00	0.00	0.00	6,071.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
6,900.00	0.00	0.00	6,171.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,000.00	0.00	0.00	6,271.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,014.03	0.00	0.00	6,286.00	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
CMEO									
7,100.00	0.00	0.00	6,371.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,200.00	0.00	0.00	6,471.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,300.00	0.00	0.00	6,571.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,400.00	0.00	0.00	6,671.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,500.00	0.00	0.00	6,771.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,529.03	0.00	0.00	6,801.00	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
RLNS									
7,600.00	0.00	0.00	6,871.98	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
7,679.03	0.00	0.00	6,951.00	1,255.77	-2,301.53	2,621.83	0.00	0.00	0.00
TD at 7679.02 - TD - GM 544-19 PBHL									



Scientific Drilling, Intl
Planning Report

Database:	Grand Junction District	Local Co-ordinate Reference:	Well GM 544-19
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 5849 & RKB 24' @ 5873.00usft (H&P 318)
Site:	GR 12-29 Pad	North Reference:	True
Well:	GM 544-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 3May2019 mmsdi		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
GM 544-19 BTV	0.00	0.00	4,800.00	1,255.77	-2,301.53	1,618,491.60	2,253,130.40	39.5016623	-108.1471799
- plan misses target center by 42.53usft at 5534.45usft MD (4808.83 TVD, 1235.66 N, -2264.67 E)									
- Circle (radius 50.00)									
GM 544-19 PBHL	0.00	0.00	6,951.00	1,255.77	-2,301.53	1,618,491.60	2,253,130.40	39.5016623	-108.1471799
- plan misses target center by 0.01usft at 7679.02usft MD (6951.00 TVD, 1255.77 N, -2301.53 E)									
- Point									

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
2,463.63	2,156.00	G Sand		0.00	0.00
2,584.57	2,256.00	G Sand Base		0.00	0.00
2,765.98	2,406.00	FRUN		0.00	0.00
4,452.11	3,802.00	Ohio Creek		0.00	0.00
4,452.11	3,802.00	MVRD		0.00	0.00
5,525.49	4,800.00	KMVGAS		0.00	0.00
7,014.03	6,286.00	CME0		0.00	0.00
7,529.03	6,801.00	RLNS		0.00	0.00
7,679.03	6,951.00	TD		0.00	0.00

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S	+E/-W	
		(usft)	(usft)	
120.00	120.00	0.00	0.00	Start Build 4.00
975.58	925.61	118.79	-217.72	Start 3338.74 hold at 975.58 MD
4,314.32	3,686.25	1,018.18	-1,866.09	Start Drop -2.00
5,525.49	4,800.00	1,234.92	-2,263.32	Start DLS 2.00 TFO 180.00
6,025.49	5,297.47	1,255.77	-2,301.53	Start 1653.53 hold at 6025.49 MD
7,679.03	6,951.00	1,255.77	-2,301.53	TD at 7679.02