



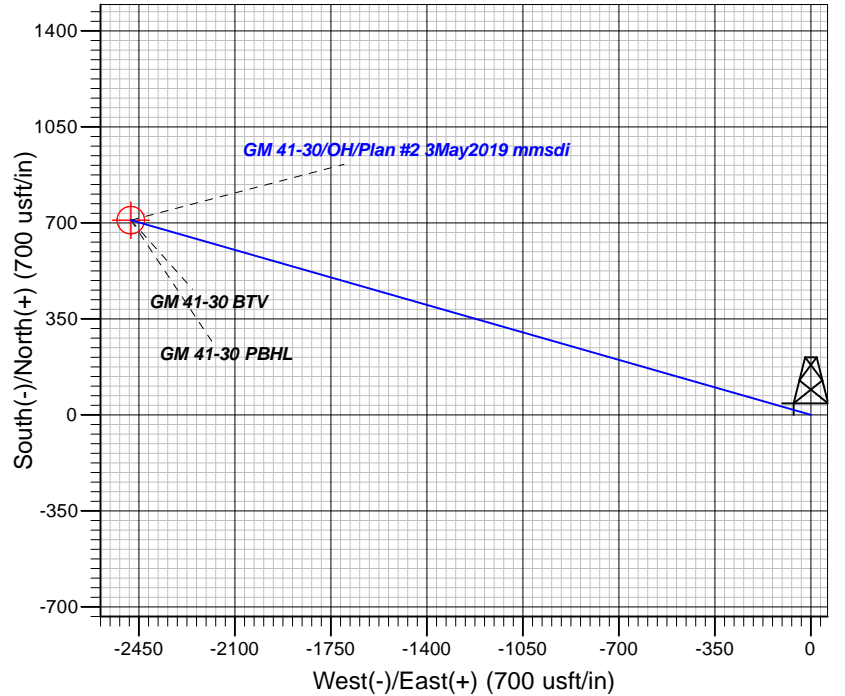
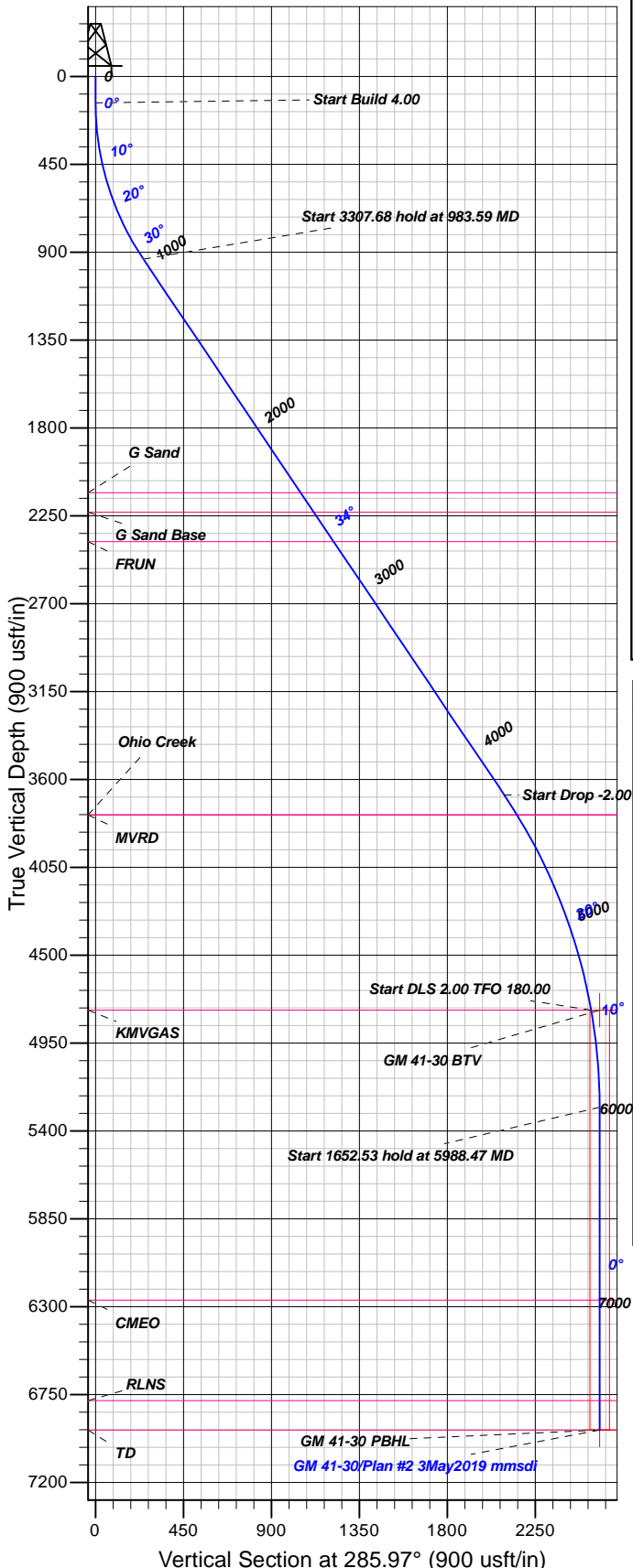
Azimuths to True North  
Magnetic North: 9.50°

Magnetic Field  
Strength: 51557.8snT  
Dip Angle: 65.75°  
Date: 3/20/2019  
Model: HDGM

## Well Details: GM 41-30

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1617160.17	2255390.91	39.4981890	-108.1390352	GM 41-30 (A1)



### FORMATION TOP DETAILS

TVDP	MD	Formation
2131.00	2425.50	G Sand
2231.00	2546.04	G Sand Base
2381.00	2726.85	FRUN
3781.00	4412.74	MVRD
3781.00	4412.74	Ohio Creek
4781.00	5488.47	KMGAS
6266.00	6976.00	CMEQ
6781.00	7491.00	RLNS
6931.00	7641.00	TD

Plan: Plan #2 3May2019 mmsdi

10:43, 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	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	135.00	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	
3	983.59	33.94	285.97	934.82	67.17	-234.68	4.00	285.97	244.10	
4	4291.28	33.94	285.97	3678.83	575.41	-2010.31	0.00	0.00	0.00	
5	5488.47	10.00	285.97	4781.00	697.78	-2437.82	2.00	180.00	2535.72	
6	5988.47	0.00	0.00	5278.47	709.76	-2479.66	2.00	180.00	2579.24	
7	7641.00	0.00	0.00	6931.00	709.76	-2479.66	0.00	0.00	2579.24	GM 41-30 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 41-30 BTV	4781.00	709.76	-2479.66	1617941.65	2252932.91	39.5001373	-108.1478226	Circle (Radius: 50.00)
- plan misses target center by 42.87usft at 5495.94usft MD (4788.36 TVD, 698.13 N, -2439.06 E)								
GM 41-30 PBHL	6931.00	709.76	-2479.66	1617941.65	2252932.91	39.5001373	-108.1478226	Point
- plan hits target center								



## **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**GR 12-29 Pad**

**GM 41-30 - Slot GM 41-30 (A1)**

**OH**

**Plan: Plan #2 3May2019 mmsdi**

## **Standard Planning Report**

**06 May, 2019**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 41-30 - Slot GM 41-30 (A1)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Site:</b>	GR 12-29 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 41-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 3May2019 mmsdi		

<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		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 41-30 - Slot GM 41-30 (A1)					
Well Position	+N/-S	-9.44 usft	Northing:	1,617,160.17 usft	Latitude:	39.4981890
	+E/-W	-3.30 usft	Easting:	2,255,390.91 usft	Longitude:	-108.1390353
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	5,849.00 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	3/20/2019	9.50	65.75	51,558

<b>Design</b>	Plan #2 3May2019 mmsdi			
<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	285.97

<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	
983.59	33.94	285.97	934.82	67.17	-234.68	4.00	4.00	0.00	285.97	
4,291.28	33.94	285.97	3,678.83	575.41	-2,010.31	0.00	0.00	0.00	0.00	
5,488.47	10.00	285.97	4,781.00	697.78	-2,437.82	2.00	-2.00	0.00	180.00	
5,988.47	0.00	0.00	5,278.47	709.76	-2,479.66	2.00	-2.00	14.81	180.00	
7,641.00	0.00	0.00	6,931.00	709.76	-2,479.66	0.00	0.00	0.00	0.00	GM 41-30 PBHL

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<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Site:</b>	GR 12-29 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 41-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
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 4.00									
200.00	2.60	285.97	199.98	0.41	-1.42	1.47	4.00	4.00	0.00
300.00	6.60	285.97	299.64	2.61	-9.13	9.49	4.00	4.00	0.00
400.00	10.60	285.97	398.49	6.73	-23.50	24.44	4.00	4.00	0.00
500.00	14.60	285.97	496.06	12.73	-44.47	46.25	4.00	4.00	0.00
600.00	18.60	285.97	591.88	20.59	-71.93	74.82	4.00	4.00	0.00
700.00	22.60	285.97	685.46	30.27	-105.75	109.99	4.00	4.00	0.00
800.00	26.60	285.97	776.37	41.72	-145.76	151.61	4.00	4.00	0.00
900.00	30.60	285.97	864.15	54.89	-191.77	199.47	4.00	4.00	0.00
983.59	33.94	285.97	934.82	67.17	-234.68	244.10	4.00	4.00	0.00
Start 3307.68 hold at 983.59 MD									
1,000.00	33.94	285.97	948.43	69.69	-243.48	253.26	0.00	0.00	0.00
1,100.00	33.94	285.97	1,031.39	85.06	-297.17	309.10	0.00	0.00	0.00
1,200.00	33.94	285.97	1,114.35	100.42	-350.85	364.94	0.00	0.00	0.00
1,300.00	33.94	285.97	1,197.30	115.79	-404.53	420.77	0.00	0.00	0.00
1,400.00	33.94	285.97	1,280.26	131.15	-458.21	476.61	0.00	0.00	0.00
1,500.00	33.94	285.97	1,363.22	146.52	-511.89	532.45	0.00	0.00	0.00
1,600.00	33.94	285.97	1,446.18	161.89	-565.58	588.29	0.00	0.00	0.00
1,700.00	33.94	285.97	1,529.14	177.25	-619.26	644.13	0.00	0.00	0.00
1,800.00	33.94	285.97	1,612.10	192.62	-672.94	699.96	0.00	0.00	0.00
1,900.00	33.94	285.97	1,695.06	207.98	-726.62	755.80	0.00	0.00	0.00
2,000.00	33.94	285.97	1,778.02	223.35	-780.30	811.64	0.00	0.00	0.00
2,100.00	33.94	285.97	1,860.97	238.71	-833.99	867.48	0.00	0.00	0.00
2,200.00	33.94	285.97	1,943.93	254.08	-887.67	923.32	0.00	0.00	0.00
2,300.00	33.94	285.97	2,026.89	269.44	-941.35	979.15	0.00	0.00	0.00
2,400.00	33.94	285.97	2,109.85	284.81	-995.03	1,034.99	0.00	0.00	0.00
2,425.50	33.94	285.97	2,131.00	288.73	-1,008.72	1,049.23	0.00	0.00	0.00
G Sand									
2,500.00	33.94	285.97	2,192.81	300.17	-1,048.71	1,090.83	0.00	0.00	0.00
2,546.04	33.94	285.97	2,231.00	307.25	-1,073.43	1,116.53	0.00	0.00	0.00
G Sand Base									
2,600.00	33.94	285.97	2,275.77	315.54	-1,102.40	1,146.67	0.00	0.00	0.00
2,700.00	33.94	285.97	2,358.73	330.91	-1,156.08	1,202.50	0.00	0.00	0.00
2,726.85	33.94	285.97	2,381.00	335.03	-1,170.49	1,217.50	0.00	0.00	0.00
FRUN									
2,800.00	33.94	285.97	2,441.68	346.27	-1,209.76	1,258.34	0.00	0.00	0.00
2,900.00	33.94	285.97	2,524.64	361.64	-1,263.44	1,314.18	0.00	0.00	0.00
3,000.00	33.94	285.97	2,607.60	377.00	-1,317.13	1,370.02	0.00	0.00	0.00
3,100.00	33.94	285.97	2,690.56	392.37	-1,370.81	1,425.86	0.00	0.00	0.00
3,200.00	33.94	285.97	2,773.52	407.73	-1,424.49	1,481.69	0.00	0.00	0.00
3,300.00	33.94	285.97	2,856.48	423.10	-1,478.17	1,537.53	0.00	0.00	0.00
3,400.00	33.94	285.97	2,939.44	438.46	-1,531.85	1,593.37	0.00	0.00	0.00
3,500.00	33.94	285.97	3,022.39	453.83	-1,585.54	1,649.21	0.00	0.00	0.00
3,600.00	33.94	285.97	3,105.35	469.20	-1,639.22	1,705.05	0.00	0.00	0.00
3,700.00	33.94	285.97	3,188.31	484.56	-1,692.90	1,760.88	0.00	0.00	0.00
3,800.00	33.94	285.97	3,271.27	499.93	-1,746.58	1,816.72	0.00	0.00	0.00
3,900.00	33.94	285.97	3,354.23	515.29	-1,800.26	1,872.56	0.00	0.00	0.00
4,000.00	33.94	285.97	3,437.19	530.66	-1,853.95	1,928.40	0.00	0.00	0.00

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<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Site:</b>	GR 12-29 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 41-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
4,100.00	33.94	285.97	3,520.15	546.02	-1,907.63	1,984.23	0.00	0.00	0.00
4,200.00	33.94	285.97	3,603.10	561.39	-1,961.31	2,040.07	0.00	0.00	0.00
4,291.28	33.94	285.97	3,678.83	575.41	-2,010.31	2,091.04	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
4,300.00	33.77	285.97	3,686.07	576.75	-2,014.98	2,095.90	2.00	-2.00	0.00
4,400.00	31.77	285.97	3,770.15	591.64	-2,067.02	2,150.02	2.00	-2.00	0.00
4,412.74	31.51	285.97	3,781.00	593.48	-2,073.44	2,156.71	2.00	-2.00	0.00
<b>Ohio Creek - MVRD</b>									
4,500.00	29.77	285.97	3,856.07	605.72	-2,116.20	2,201.18	2.00	-2.00	0.00
4,600.00	27.77	285.97	3,943.72	618.96	-2,162.46	2,249.30	2.00	-2.00	0.00
4,700.00	25.77	285.97	4,033.00	631.36	-2,205.76	2,294.34	2.00	-2.00	0.00
4,800.00	23.77	285.97	4,123.80	642.89	-2,246.04	2,336.24	2.00	-2.00	0.00
4,900.00	21.77	285.97	4,216.00	653.54	-2,283.25	2,374.94	2.00	-2.00	0.00
5,000.00	19.77	285.97	4,309.50	663.29	-2,317.34	2,410.40	2.00	-2.00	0.00
5,100.00	17.77	285.97	4,404.17	672.15	-2,348.27	2,442.57	2.00	-2.00	0.00
5,200.00	15.77	285.97	4,499.92	680.09	-2,376.00	2,471.42	2.00	-2.00	0.00
5,300.00	13.77	285.97	4,596.61	687.10	-2,400.51	2,496.91	2.00	-2.00	0.00
5,400.00	11.77	285.97	4,694.13	693.18	-2,421.76	2,519.01	2.00	-2.00	0.00
5,488.47	10.00	285.97	4,781.00	697.78	-2,437.82	2,535.72	2.00	-2.00	0.00
<b>Start DLS 2.00 TFO 180.00 - KMGAS</b>									
5,495.94	9.85	285.97	4,788.36	698.13	-2,439.06	2,537.01	2.00	-2.00	0.00
<b>GM 41-30 BTV</b>									
5,500.00	9.77	285.97	4,792.36	698.32	-2,439.72	2,537.70	2.00	-2.00	0.00
5,600.00	7.77	285.97	4,891.19	702.52	-2,454.38	2,552.94	2.00	-2.00	0.00
5,700.00	5.77	285.97	4,990.49	705.76	-2,465.71	2,564.73	2.00	-2.00	0.00
5,800.00	3.77	285.97	5,090.14	708.05	-2,473.70	2,573.04	2.00	-2.00	0.00
5,900.00	1.77	285.97	5,190.01	709.38	-2,478.35	2,577.87	2.00	-2.00	0.00
5,988.47	0.00	0.00	5,278.47	709.76	-2,479.66	2,579.24	2.00	-2.00	0.00
<b>Start 1652.53 hold at 5988.47 MD</b>									
6,000.00	0.00	0.00	5,290.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,100.00	0.00	0.00	5,390.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,200.00	0.00	0.00	5,490.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,300.00	0.00	0.00	5,590.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,400.00	0.00	0.00	5,690.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,500.00	0.00	0.00	5,790.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,600.00	0.00	0.00	5,890.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,700.00	0.00	0.00	5,990.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,800.00	0.00	0.00	6,090.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,900.00	0.00	0.00	6,190.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
6,976.00	0.00	0.00	6,266.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
<b>CMEO</b>									
7,000.00	0.00	0.00	6,290.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
7,100.00	0.00	0.00	6,390.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
7,200.00	0.00	0.00	6,490.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
7,300.00	0.00	0.00	6,590.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
7,400.00	0.00	0.00	6,690.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
7,491.00	0.00	0.00	6,781.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
<b>RLNS</b>									
7,500.00	0.00	0.00	6,790.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
7,600.00	0.00	0.00	6,890.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00
7,641.00	0.00	0.00	6,931.00	709.76	-2,479.66	2,579.24	0.00	0.00	0.00

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<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 5849' & RKB 24' @ 5873.00usft (H&P 318)
<b>Site:</b>	GR 12-29 Pad	<b>North Reference:</b>	True
<b>Well:</b>	GM 41-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
TD at 7641.00 - TD - GM 41-30 PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
GM 41-30 BTV	0.00	0.00	4,781.00	709.76	-2,479.66	1,617,941.65	2,252,932.91	39.5001373	-108.1478227
- hit/miss target									
- Shape									
- plan misses target center by 42.87usft at 5495.94usft MD (4788.36 TVD, 698.13 N, -2439.06 E)									
- Circle (radius 50.00)									
GM 41-30 PBHL	0.00	0.00	6,931.00	709.76	-2,479.66	1,617,941.65	2,252,932.91	39.5001373	-108.1478227
- plan hits target center									
- Point									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,425.50	2,131.00	G Sand		0.00	0.00	
2,546.04	2,231.00	G Sand Base		0.00	0.00	
2,726.85	2,381.00	FRUN		0.00	0.00	
4,412.74	3,781.00	Ohio Creek		0.00	0.00	
4,412.74	3,781.00	MVRD		0.00	0.00	
5,488.47	4,781.00	KMVGAS		0.00	0.00	
6,976.00	6,266.00	CMEQ		0.00	0.00	
7,491.00	6,781.00	RLNS		0.00	0.00	
7,641.00	6,931.00	TD		0.00	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 4.00	
983.59	934.82	67.17	-234.68	Start 3307.68 hold at 983.59 MD	
4,291.28	3,678.83	575.41	-2,010.31	Start Drop -2.00	
5,488.47	4,781.00	697.78	-2,437.82	Start DLS 2.00 TFO 180.00	
5,988.47	5,278.47	709.76	-2,479.66	Start 1652.53 hold at 5988.47 MD	
7,641.00	6,931.00	709.76	-2,479.66	TD at 7641.00	