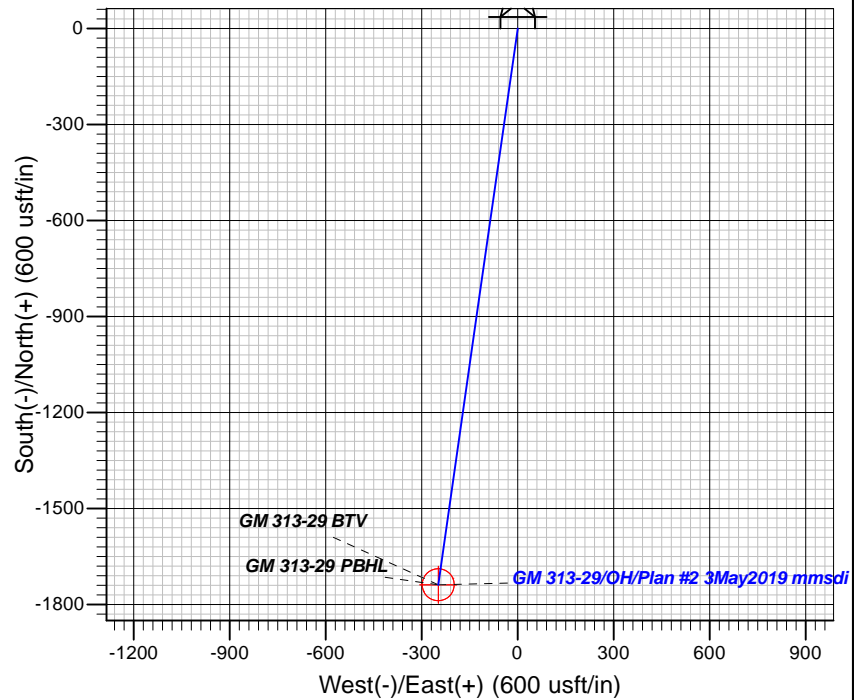
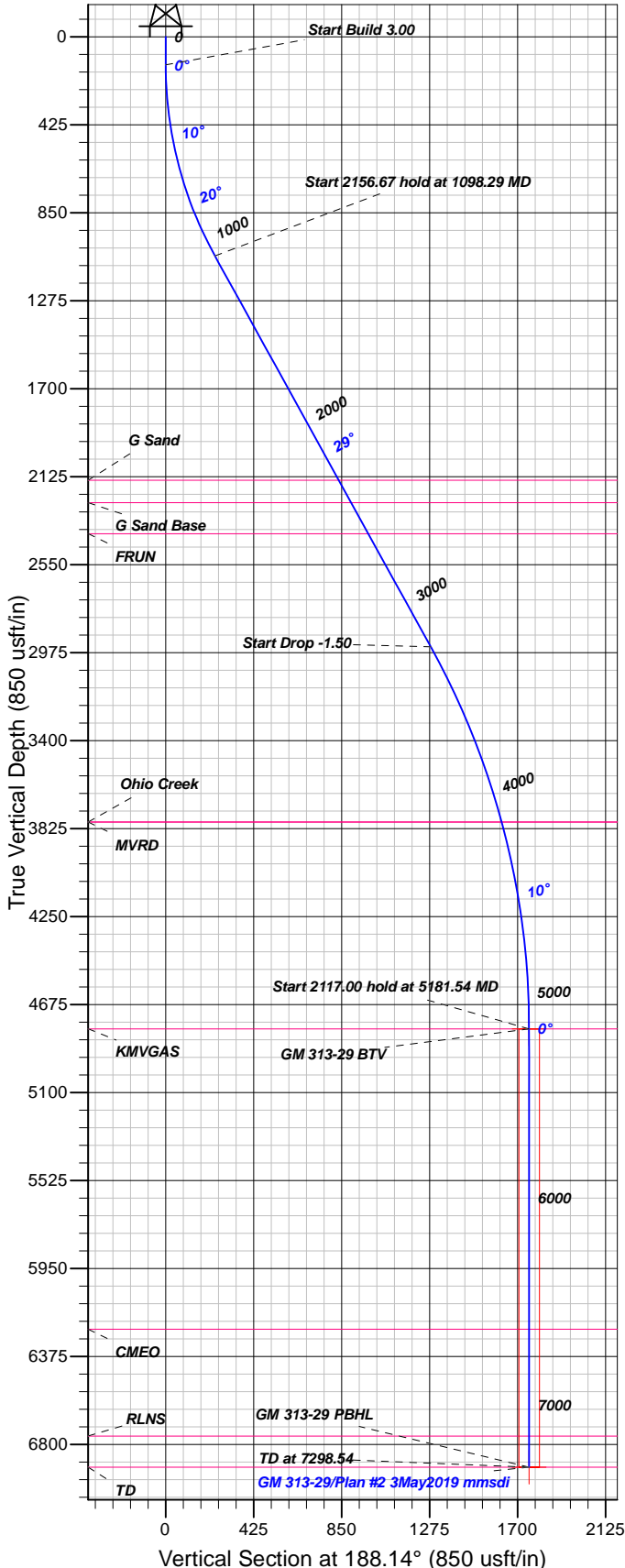


## Well Details: GM 313-29

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1617130.71	2255467.95	39.4981143	-108.1387593	GM 313-29 (A12)



## FORMATION TOP DETAILS

TVDP	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
2142.00	2336.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2250.00	2459.88	0.00	0.00	135.00	0.00	0.00	0.00	0.00	0.00	
2400.00	2631.21	0.00	0.00	1057.96	-235.43	-33.66	3.00	188.14	237.82	
3792.00	4169.75	0.00	0.00	1267.17	-181.19	0.00	0.00	180.00	1755.71	GM 313-29 BTV
3792.00	4169.75	0.00	0.00	1267.17	-181.19	0.00	0.00	180.00	1755.71	GM 313-29 PBHL
4792.00	5181.54	0.00	0.00	4792.00	-1738.03	-248.52	1.50	180.00	1755.71	
6243.00	6632.54	0.00	0.00	6909.00	-1738.03	-248.52	0.00	0.00	1755.71	
6759.00	7148.54	0.00	0.00							
6909.00	7298.54	0.00	0.00							

Plan: Plan #2 3May2019 mmsdi

10:17, 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	VFace	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	1098.29	28.90	188.14	1057.96	-235.43	-33.66	3.00	188.14	237.82	
4	3254.96	28.90	188.14	2946.07	-1267.17	-181.19	0.00	0.00	1280.06	
5	5181.54	0.00	0.00	4792.00	-1738.03	-248.52	1.50	180.00	1755.71	GM 313-29 BTV
6	7298.54	0.00	0.00	6909.00	-1738.03	-248.52	0.00	0.00	1755.71	GM 313-29 PBHL

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
GM 313-29 BTV	4792.00	-1738.03	-248.52	1615400.63	2255169.06	39.4933426	-108.1396399	Circle (Radius: 50.00)
- plan hits target center								
GM 313-29 PBHL	6909.00	-1738.03	-248.52	1615400.63	2255169.06	39.4933426	-108.1396399	Point
- plan hits target center								



## **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**GR 12-29 Pad**

**GM 313-29 - Slot GM 313-29 (A12)**

**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 313-29 - Slot GM 313-29 (A12)
<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 313-29	<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 313-29 - Slot GM 313-29 (A12)					
Well Position	+N/-S	-36.65 usft	Northing:	1,617,130.71 usft	Latitude:	39.4981143
	+E/-W	74.57 usft	Easting:	2,255,467.95 usft	Longitude:	-108.1387594
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	188.14	

<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	
1,098.29	28.90	188.14	1,057.96	-235.43	-33.66	3.00	3.00	0.00	188.14	
3,254.96	28.90	188.14	2,946.07	-1,267.17	-181.19	0.00	0.00	0.00	0.00	
5,181.54	0.00	0.00	4,792.00	-1,738.03	-248.52	1.50	-1.50	0.00	180.00	GM 313-29 BTV
7,298.54	0.00	0.00	6,909.00	-1,738.03	-248.52	0.00	0.00	0.00	0.00	GM 313-29 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 313-29 - Slot GM 313-29 (A12)
<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 313-29	<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 3.00										
200.00	1.95	188.14	199.99	-1.09	-0.16	1.11	3.00	3.00	0.00	
300.00	4.95	188.14	299.79	-7.05	-1.01	7.12	3.00	3.00	0.00	
400.00	7.95	188.14	399.15	-18.17	-2.60	18.36	3.00	3.00	0.00	
500.00	10.95	188.14	497.78	-34.42	-4.92	34.77	3.00	3.00	0.00	
600.00	13.95	188.14	595.42	-55.76	-7.97	56.33	3.00	3.00	0.00	
700.00	16.95	188.14	691.79	-82.13	-11.74	82.97	3.00	3.00	0.00	
800.00	19.95	188.14	786.64	-113.46	-16.22	114.61	3.00	3.00	0.00	
900.00	22.95	188.14	879.71	-149.65	-21.40	151.17	3.00	3.00	0.00	
1,000.00	25.95	188.14	970.73	-190.62	-27.26	192.56	3.00	3.00	0.00	
1,098.29	28.90	188.14	1,057.96	-235.43	-33.66	237.82	3.00	3.00	0.00	
Start 2156.67 hold at 1098.29 MD										
1,100.00	28.90	188.14	1,059.46	-236.25	-33.78	238.65	0.00	0.00	0.00	
1,200.00	28.90	188.14	1,147.01	-284.09	-40.62	286.98	0.00	0.00	0.00	
1,300.00	28.90	188.14	1,234.56	-331.93	-47.46	335.30	0.00	0.00	0.00	
1,400.00	28.90	188.14	1,322.10	-379.77	-54.30	383.63	0.00	0.00	0.00	
1,500.00	28.90	188.14	1,409.65	-427.61	-61.14	431.96	0.00	0.00	0.00	
1,600.00	28.90	188.14	1,497.20	-475.45	-67.98	480.28	0.00	0.00	0.00	
1,700.00	28.90	188.14	1,584.75	-523.29	-74.82	528.61	0.00	0.00	0.00	
1,800.00	28.90	188.14	1,672.29	-571.13	-81.66	576.93	0.00	0.00	0.00	
1,900.00	28.90	188.14	1,759.84	-618.96	-88.50	625.26	0.00	0.00	0.00	
2,000.00	28.90	188.14	1,847.39	-666.80	-95.35	673.59	0.00	0.00	0.00	
2,100.00	28.90	188.14	1,934.94	-714.64	-102.19	721.91	0.00	0.00	0.00	
2,200.00	28.90	188.14	2,022.48	-762.48	-109.03	770.24	0.00	0.00	0.00	
2,300.00	28.90	188.14	2,110.03	-810.32	-115.87	818.57	0.00	0.00	0.00	
2,336.52	28.90	188.14	2,142.00	-827.79	-118.36	836.21	0.00	0.00	0.00	
G Sand										
2,400.00	28.90	188.14	2,197.58	-858.16	-122.71	866.89	0.00	0.00	0.00	
2,459.88	28.90	188.14	2,250.00	-886.81	-126.80	895.83	0.00	0.00	0.00	
G Sand Base										
2,500.00	28.90	188.14	2,285.13	-906.00	-129.55	915.22	0.00	0.00	0.00	
2,600.00	28.90	188.14	2,372.67	-953.84	-136.39	963.54	0.00	0.00	0.00	
2,631.21	28.90	188.14	2,400.00	-968.77	-138.52	978.63	0.00	0.00	0.00	
FRUN										
2,700.00	28.90	188.14	2,460.22	-1,001.68	-143.23	1,011.87	0.00	0.00	0.00	
2,800.00	28.90	188.14	2,547.77	-1,049.52	-150.07	1,060.20	0.00	0.00	0.00	
2,900.00	28.90	188.14	2,635.32	-1,097.36	-156.91	1,108.52	0.00	0.00	0.00	
3,000.00	28.90	188.14	2,722.86	-1,145.20	-163.75	1,156.85	0.00	0.00	0.00	
3,100.00	28.90	188.14	2,810.41	-1,193.04	-170.59	1,205.17	0.00	0.00	0.00	
3,200.00	28.90	188.14	2,897.96	-1,240.88	-177.43	1,253.50	0.00	0.00	0.00	
3,254.96	28.90	188.14	2,946.07	-1,267.17	-181.19	1,280.06	0.00	0.00	0.00	
Start Drop -1.50										
3,300.00	28.22	188.14	2,985.63	-1,288.49	-184.24	1,301.59	1.50	-1.50	0.00	
3,400.00	26.72	188.14	3,074.35	-1,334.16	-190.77	1,347.73	1.50	-1.50	0.00	
3,500.00	25.22	188.14	3,164.25	-1,377.51	-196.97	1,391.52	1.50	-1.50	0.00	
3,600.00	23.72	188.14	3,255.27	-1,418.52	-202.83	1,432.95	1.50	-1.50	0.00	
3,700.00	22.22	188.14	3,347.33	-1,457.15	-208.36	1,471.97	1.50	-1.50	0.00	
3,800.00	20.72	188.14	3,440.39	-1,493.39	-213.54	1,508.58	1.50	-1.50	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 313-29 - Slot GM 313-29 (A12)
<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 313-29	<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)
3,900.00	19.22	188.14	3,534.37	-1,527.20	-218.37	1,542.74	1.50	-1.50	0.00
4,000.00	17.72	188.14	3,629.22	-1,558.57	-222.86	1,574.42	1.50	-1.50	0.00
4,100.00	16.22	188.14	3,724.86	-1,587.47	-226.99	1,603.61	1.50	-1.50	0.00
4,169.75	15.18	188.14	3,792.00	-1,606.15	-229.66	1,622.49	1.50	-1.50	0.00
<b>Ohio Creek - MVRD</b>									
4,200.00	14.72	188.14	3,821.23	-1,613.88	-230.77	1,630.29	1.50	-1.50	0.00
4,300.00	13.22	188.14	3,918.27	-1,637.78	-234.18	1,654.44	1.50	-1.50	0.00
4,400.00	11.72	188.14	4,015.90	-1,659.16	-237.24	1,676.03	1.50	-1.50	0.00
4,500.00	10.22	188.14	4,114.07	-1,678.00	-239.93	1,695.07	1.50	-1.50	0.00
4,600.00	8.72	188.14	4,212.71	-1,694.29	-242.26	1,711.53	1.50	-1.50	0.00
4,700.00	7.22	188.14	4,311.74	-1,708.02	-244.23	1,725.40	1.50	-1.50	0.00
4,800.00	5.72	188.14	4,411.10	-1,719.18	-245.82	1,736.67	1.50	-1.50	0.00
4,900.00	4.22	188.14	4,510.72	-1,727.76	-247.05	1,745.34	1.50	-1.50	0.00
5,000.00	2.72	188.14	4,610.53	-1,733.76	-247.91	1,751.40	1.50	-1.50	0.00
5,100.00	1.22	188.14	4,710.47	-1,737.17	-248.40	1,754.84	1.50	-1.50	0.00
5,181.54	0.00	0.00	4,792.00	-1,738.03	-248.52	1,755.71	1.50	-1.50	0.00
<b>Start 2117.00 hold at 5181.54 MD - KMGAS - GM 313-29 BTV</b>									
5,200.00	0.00	0.00	4,810.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
5,300.00	0.00	0.00	4,910.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
5,400.00	0.00	0.00	5,010.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
5,500.00	0.00	0.00	5,110.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
5,600.00	0.00	0.00	5,210.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
5,700.00	0.00	0.00	5,310.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
5,800.00	0.00	0.00	5,410.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
5,900.00	0.00	0.00	5,510.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,000.00	0.00	0.00	5,610.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,100.00	0.00	0.00	5,710.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,200.00	0.00	0.00	5,810.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,300.00	0.00	0.00	5,910.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,400.00	0.00	0.00	6,010.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,500.00	0.00	0.00	6,110.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,600.00	0.00	0.00	6,210.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,632.54	0.00	0.00	6,243.00	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
<b>CME0</b>									
6,700.00	0.00	0.00	6,310.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,800.00	0.00	0.00	6,410.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
6,900.00	0.00	0.00	6,510.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
7,000.00	0.00	0.00	6,610.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
7,100.00	0.00	0.00	6,710.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
7,148.54	0.00	0.00	6,759.00	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
<b>RLNS</b>									
7,200.00	0.00	0.00	6,810.46	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
7,298.54	0.00	0.00	6,909.00	-1,738.03	-248.52	1,755.71	0.00	0.00	0.00
<b>TD at 7298.54 - TD - GM 313-29 PBHL</b>									

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well GM 313-29 - Slot GM 313-29 (A12)
<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 313-29	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2 3May2019 mmsdi		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
GM 313-29 BTV - plan hits target center - Circle (radius 50.00)	0.00	0.00	4,792.00	-1,738.03	-248.52	1,615,400.63	2,255,169.06	39.4933427	-108.1396400
GM 313-29 PBHL - plan hits target center - Point	0.00	0.00	6,909.00	-1,738.03	-248.52	1,615,400.63	2,255,169.06	39.4933427	-108.1396400

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,336.52	2,141.00	G Sand		0.00	0.00	
2,459.88	2,249.00	G Sand Base		0.00	0.00	
2,631.21	2,399.00	FRUN		0.00	0.00	
4,169.75	3,791.00	Ohio Creek		0.00	0.00	
4,169.75	3,791.00	MVRD		0.00	0.00	
5,181.54	4,791.00	KMVGAS		0.00	0.00	
6,632.54	6,242.00	CME0		0.00	0.00	
7,148.54	6,758.00	RLNS		0.00	0.00	
7,298.54	6,908.00	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 3.00	
1,098.29	1,057.96	-235.43	-33.66	Start 2156.67 hold at 1098.29 MD	
3,254.96	2,946.07	-1,267.17	-181.19	Start Drop -1.50	
5,181.54	4,792.00	-1,738.03	-248.52	Start 2117.00 hold at 5181.54 MD	
7,298.54	6,909.00	-1,738.03	-248.52	TD at 7298.54	