

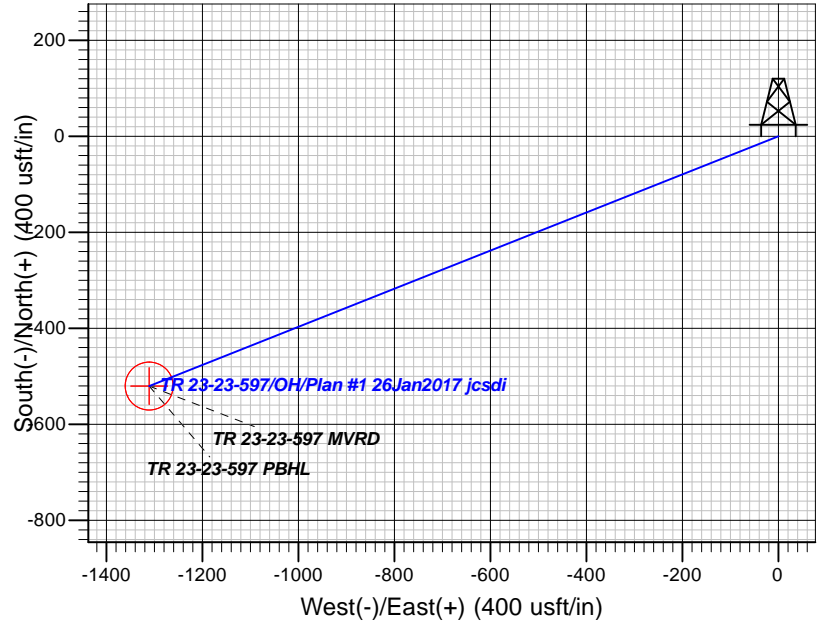
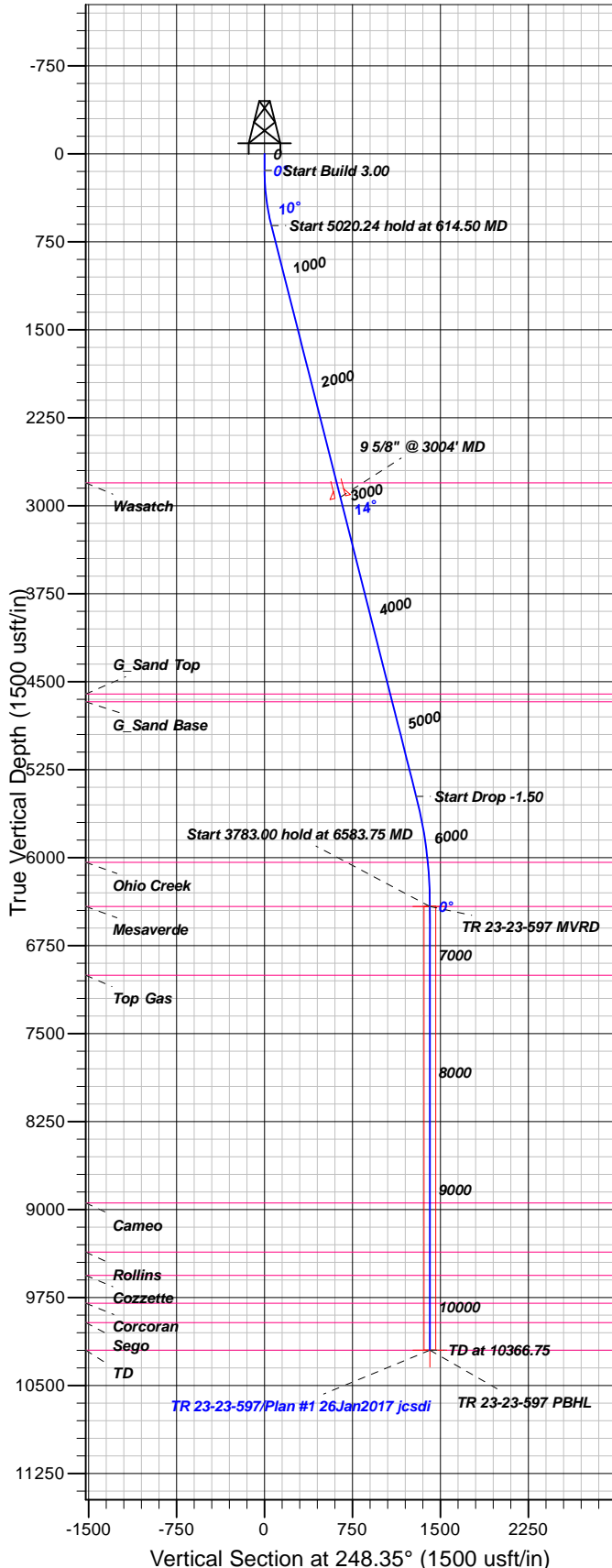
## Well Details: TR 23-23-597

GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1654846.10	2227589.80	39.5993467	-108.2415385	B2 (TR 23-23-597)

**T M** Azimuths to True North  
Magnetic North: 9.80°

Magnetic Field  
Strength: 51645.8snT  
Dip Angle: 65.93°  
Date: 1/26/2017  
Model: HDGM



### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2805.00	2879.41	Wasatch
4604.00	4735.40	G_Sand Top
4671.00	4804.52	G_Sand Base
6039.00	6207.14	Ohio Creek
6415.00	6583.75	Mesaverde
7002.00	7170.75	Top Gas
8942.00	9110.75	Cameo
9361.00	9529.75	Rollins
9561.00	9729.75	Cozzette
9798.00	9966.75	Corcoran
9963.00	10131.75	Sego
10198.00	10366.75	TD

Plan: Plan #1 26Jan2017 jcsdi

15:54, January 27 2017  
Created By: Janie Collins

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

TVD	MD	Name	Size
2925.76	3004.00	9 5/8" @ 3004' MD	9.62

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	140.00	0.00	0.00	140.00	0.00	0.00	0.00	0.00	0.00	
3	614.50	14.24	248.35	609.64	-21.64	-54.50	3.00	248.35	58.64	
4	5634.74	14.24	248.35	5475.73	-477.12	-1201.89	0.00	0.001293.12		
5	6583.75	0.00	0.00	6415.00	-520.39	-1310.90	1.50	180.001410.41		TR 23-23-597 MVRD
6	10366.75	0.00	0.00	10198.00	-520.39	-1310.90	0.00	0.001410.41		TR 23-23-597 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
TR 23-23-597 MVRD	6415.00	-520.39	-1310.90	1654365.50	2226263.80	39.5979179	-108.2461905	Circle (Radius: 50.00)
- plan hits target center								
TR 23-23-597 PBHL	10198.00	-520.39	-1310.90	1654365.50	2226263.80	39.5979179	-108.2461905	Point
- plan hits target center								



# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**TR 32-23-597 Pad**

**TR 23-23-597 - Slot B2 (TR 23-23-597)**

**OH**

**Plan: Plan #1 26Jan2017 jcsdi**

## **Standard Planning Report**

**27 January, 2017**



[www.scientificdrilling.com](http://www.scientificdrilling.com)



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 23-23-597 - Slot B2 (TR 23-23-597)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Site:</b>	TR 32-23-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 23-23-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 26Jan2017 jcsdi		

<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		

<b>Site</b>	TR 32-23-597 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,654,899.00 usft	<b>Latitude:</b> 39.5994964
<b>From:</b> Map		<b>Easting:</b>	2,227,644.00 usft	<b>Longitude:</b> -108.2413519
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b> -1.73 °

<b>Well</b>	TR 23-23-597 - Slot B2 (TR 23-23-597)			
<b>Well Position</b>	<b>+N/-S</b>	-54.51 usft	<b>Northing:</b>	1,654,846.10 usft
	<b>+E/-W</b>	-52.58 usft	<b>Easting:</b>	2,227,589.80 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	8,545.20 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	1/26/2017	9.80	65.93	51,646

<b>Design</b>	Plan #1 26Jan2017 jcsdi			
<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	248.35

<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	
140.00	0.00	0.00	140.00	0.00	0.00	0.00	0.00	0.00	0.00	
614.50	14.24	248.35	609.64	-21.64	-54.50	3.00	3.00	0.00	248.35	
5,634.74	14.24	248.35	5,475.73	-477.12	-1,201.89	0.00	0.00	0.00	0.00	
6,583.75	0.00	0.00	6,415.00	-520.39	-1,310.90	1.50	-1.50	0.00	180.00	TR 23-23-597 MVRD
10,366.75	0.00	0.00	10,198.00	-520.39	-1,310.90	0.00	0.00	0.00	0.00	TR 23-23-597 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 23-23-597 - Slot B2 (TR 23-23-597)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Site:</b>	TR 32-23-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 23-23-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 26Jan2017 jcsdi		

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	
140.00	0.00	0.00	140.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.80	248.35	199.99	-0.35	-0.88	0.94	3.00	3.00	0.00	
300.00	4.80	248.35	299.81	-2.47	-6.23	6.70	3.00	3.00	0.00	
400.00	7.80	248.35	399.20	-6.52	-16.42	17.67	3.00	3.00	0.00	
500.00	10.80	248.35	497.87	-12.48	-31.44	33.83	3.00	3.00	0.00	
600.00	13.80	248.35	595.56	-20.34	-51.24	55.13	3.00	3.00	0.00	
614.50	14.24	248.35	609.64	-21.64	-54.50	58.64	3.00	3.00	0.00	
700.00	14.24	248.35	692.51	-29.39	-74.04	79.67	0.00	0.00	0.00	
800.00	14.24	248.35	789.44	-38.47	-96.90	104.26	0.00	0.00	0.00	
900.00	14.24	248.35	886.37	-47.54	-119.75	128.85	0.00	0.00	0.00	
1,000.00	14.24	248.35	983.29	-56.61	-142.61	153.44	0.00	0.00	0.00	
1,100.00	14.24	248.35	1,080.22	-65.69	-165.47	178.03	0.00	0.00	0.00	
1,200.00	14.24	248.35	1,177.15	-74.76	-188.32	202.62	0.00	0.00	0.00	
1,300.00	14.24	248.35	1,274.08	-83.83	-211.18	227.21	0.00	0.00	0.00	
1,400.00	14.24	248.35	1,371.01	-92.90	-234.03	251.80	0.00	0.00	0.00	
1,500.00	14.24	248.35	1,467.94	-101.98	-256.89	276.39	0.00	0.00	0.00	
1,600.00	14.24	248.35	1,564.87	-111.05	-279.74	300.98	0.00	0.00	0.00	
1,700.00	14.24	248.35	1,661.80	-120.12	-302.60	325.57	0.00	0.00	0.00	
1,800.00	14.24	248.35	1,758.73	-129.20	-325.45	350.16	0.00	0.00	0.00	
1,900.00	14.24	248.35	1,855.66	-138.27	-348.31	374.75	0.00	0.00	0.00	
2,000.00	14.24	248.35	1,952.59	-147.34	-371.16	399.34	0.00	0.00	0.00	
2,100.00	14.24	248.35	2,049.52	-156.41	-394.02	423.93	0.00	0.00	0.00	
2,200.00	14.24	248.35	2,146.45	-165.49	-416.87	448.52	0.00	0.00	0.00	
2,300.00	14.24	248.35	2,243.38	-174.56	-439.73	473.11	0.00	0.00	0.00	
2,400.00	14.24	248.35	2,340.31	-183.63	-462.58	497.70	0.00	0.00	0.00	
2,500.00	14.24	248.35	2,437.23	-192.71	-485.44	522.29	0.00	0.00	0.00	
2,599.99	14.24	248.35	2,534.16	-201.78	-508.29	546.88	0.00	0.00	0.00	
2,699.99	14.24	248.35	2,631.09	-210.85	-531.15	571.47	0.00	0.00	0.00	
2,799.99	14.24	248.35	2,728.02	-219.92	-554.00	596.06	0.00	0.00	0.00	
2,879.41	14.24	248.35	2,805.00	-227.13	-572.15	615.59	0.00	0.00	0.00	
<b>Wasatch</b>										
2,899.99	14.24	248.35	2,824.95	-229.00	-576.86	620.65	0.00	0.00	0.00	
2,999.99	14.24	248.35	2,921.88	-238.07	-599.71	645.24	0.00	0.00	0.00	
3,004.00	14.24	248.35	2,925.76	-238.43	-600.63	646.22	0.00	0.00	0.00	
<b>9 5/8" @ 3004' MD</b>										
3,099.99	14.24	248.35	3,018.81	-247.14	-622.57	669.83	0.00	0.00	0.00	
3,199.99	14.24	248.35	3,115.74	-256.22	-645.42	694.42	0.00	0.00	0.00	
3,299.99	14.24	248.35	3,212.67	-265.29	-668.28	719.01	0.00	0.00	0.00	
3,399.99	14.24	248.35	3,309.60	-274.36	-691.13	743.60	0.00	0.00	0.00	
3,499.99	14.24	248.35	3,406.53	-283.43	-713.99	768.19	0.00	0.00	0.00	
3,599.99	14.24	248.35	3,503.46	-292.51	-736.84	792.78	0.00	0.00	0.00	
3,699.99	14.24	248.35	3,600.39	-301.58	-759.70	817.37	0.00	0.00	0.00	
3,799.99	14.24	248.35	3,697.32	-310.65	-782.55	841.96	0.00	0.00	0.00	
3,899.99	14.24	248.35	3,794.24	-319.73	-805.41	866.55	0.00	0.00	0.00	
3,999.99	14.24	248.35	3,891.17	-328.80	-828.26	891.14	0.00	0.00	0.00	
4,099.99	14.24	248.35	3,988.10	-337.87	-851.12	915.73	0.00	0.00	0.00	
4,199.99	14.24	248.35	4,085.03	-346.94	-873.97	940.32	0.00	0.00	0.00	
4,299.99	14.24	248.35	4,181.96	-356.02	-896.83	964.91	0.00	0.00	0.00	
4,399.99	14.24	248.35	4,278.89	-365.09	-919.68	989.50	0.00	0.00	0.00	
4,499.99	14.24	248.35	4,375.82	-374.16	-942.54	1,014.09	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 23-23-597 - Slot B2 (TR 23-23-597)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Site:</b>	TR 32-23-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 23-23-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 26Jan2017 jcsdi		

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)	
4,599.99	14.24	248.35	4,472.75	-383.24	-965.39	1,038.68	0.00	0.00	0.00	
4,699.99	14.24	248.35	4,569.68	-392.31	-988.25	1,063.27	0.00	0.00	0.00	
4,735.40	14.24	248.35	4,604.00	-395.52	-996.34	1,071.97	0.00	0.00	0.00	
<b>G_Sand Top</b>										
4,799.99	14.24	248.35	4,666.61	-401.38	-1,011.10	1,087.86	0.00	0.00	0.00	
4,804.52	14.24	248.35	4,671.00	-401.79	-1,012.14	1,088.97	0.00	0.00	0.00	
<b>G_Sand Base</b>										
4,899.99	14.24	248.35	4,763.54	-410.45	-1,033.96	1,112.45	0.00	0.00	0.00	
4,999.99	14.24	248.35	4,860.47	-419.53	-1,056.81	1,137.04	0.00	0.00	0.00	
5,099.99	14.24	248.35	4,957.40	-428.60	-1,079.67	1,161.63	0.00	0.00	0.00	
5,199.99	14.24	248.35	5,054.33	-437.67	-1,102.52	1,186.22	0.00	0.00	0.00	
5,299.99	14.24	248.35	5,151.25	-446.75	-1,125.38	1,210.81	0.00	0.00	0.00	
5,399.99	14.24	248.35	5,248.18	-455.82	-1,148.23	1,235.40	0.00	0.00	0.00	
5,499.99	14.24	248.35	5,345.11	-464.89	-1,171.09	1,259.99	0.00	0.00	0.00	
5,599.99	14.24	248.35	5,442.04	-473.96	-1,193.94	1,284.58	0.00	0.00	0.00	
5,634.74	14.24	248.35	5,475.73	-477.12	-1,201.89	1,293.12	0.00	0.00	0.00	
5,699.99	13.26	248.35	5,539.11	-482.84	-1,216.30	1,308.63	1.50	-1.50	0.00	
5,799.99	11.76	248.35	5,636.73	-490.83	-1,236.42	1,330.28	1.50	-1.50	0.00	
5,899.99	10.26	248.35	5,734.89	-497.87	-1,254.17	1,349.37	1.50	-1.50	0.00	
5,999.99	8.76	248.35	5,833.51	-503.96	-1,269.52	1,365.89	1.50	-1.50	0.00	
6,099.99	7.26	248.35	5,932.53	-509.10	-1,282.46	1,379.82	1.50	-1.50	0.00	
6,199.99	5.76	248.35	6,031.89	-513.28	-1,292.99	1,391.15	1.50	-1.50	0.00	
6,207.14	5.65	248.35	6,039.00	-513.55	-1,293.65	1,391.86	1.50	-1.50	0.00	
<b>Ohio Creek</b>										
6,299.99	4.26	248.35	6,131.50	-516.50	-1,301.10	1,399.87	1.50	-1.50	0.00	
6,399.99	2.76	248.35	6,231.31	-518.76	-1,306.79	1,405.99	1.50	-1.50	0.00	
6,499.99	1.26	248.35	6,331.25	-520.05	-1,310.04	1,409.49	1.50	-1.50	0.00	
6,583.75	0.00	0.00	6,415.00	-520.39	-1,310.90	1,410.41	1.50	-1.50	0.00	
<b>Mesaverde - TR 23-23-597 MVRD</b>										
6,599.99	0.00	0.00	6,431.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
6,699.99	0.00	0.00	6,531.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
6,799.99	0.00	0.00	6,631.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
6,899.99	0.00	0.00	6,731.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
6,999.99	0.00	0.00	6,831.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,099.99	0.00	0.00	6,931.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,170.75	0.00	0.00	7,002.00	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
<b>Top Gas</b>										
7,199.99	0.00	0.00	7,031.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,299.99	0.00	0.00	7,131.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,399.99	0.00	0.00	7,231.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,499.99	0.00	0.00	7,331.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,599.98	0.00	0.00	7,431.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,699.98	0.00	0.00	7,531.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,799.98	0.00	0.00	7,631.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,899.98	0.00	0.00	7,731.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
7,999.98	0.00	0.00	7,831.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,099.98	0.00	0.00	7,931.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,199.98	0.00	0.00	8,031.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,299.98	0.00	0.00	8,131.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,399.98	0.00	0.00	8,231.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,499.98	0.00	0.00	8,331.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 23-23-597 - Slot B2 (TR 23-23-597)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Site:</b>	TR 32-23-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 23-23-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 26Jan2017 jcsdi		

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)	
8,599.98	0.00	0.00	8,431.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,699.98	0.00	0.00	8,531.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,799.98	0.00	0.00	8,631.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,899.98	0.00	0.00	8,731.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
8,999.98	0.00	0.00	8,831.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,099.98	0.00	0.00	8,931.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,110.75	0.00	0.00	8,942.00	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
Cameo										
9,199.98	0.00	0.00	9,031.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,299.98	0.00	0.00	9,131.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,399.98	0.00	0.00	9,231.24	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,499.98	0.00	0.00	9,331.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,529.75	0.00	0.00	9,361.00	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
Rollins										
9,599.98	0.00	0.00	9,431.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,699.98	0.00	0.00	9,531.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,729.75	0.00	0.00	9,561.00	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
Cozzette										
9,799.98	0.00	0.00	9,631.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,899.98	0.00	0.00	9,731.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
9,966.75	0.00	0.00	9,798.00	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
Corcoran										
9,999.98	0.00	0.00	9,831.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
10,099.98	0.00	0.00	9,931.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
10,131.75	0.00	0.00	9,963.00	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
Sego										
10,199.98	0.00	0.00	10,031.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
10,299.98	0.00	0.00	10,131.23	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
10,366.75	0.00	0.00	10,198.00	-520.39	-1,310.90	1,410.41	0.00	0.00	0.00	
TD - TR 23-23-597 PBHL										

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									
TR 23-23-597 MVRD	0.00	0.00	6,415.00	-520.39	-1,310.90	1,654,365.50	2,226,263.80	39.5979180	-108.2461905
- plan hits target center									
- Circle (radius 50.00)									
TR 23-23-597 PBHL	0.00	0.00	10,198.00	-520.39	-1,310.90	1,654,365.50	2,226,263.80	39.5979180	-108.2461905
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
3,004.00	2,925.76	9 5/8" @ 3004' MD	9.62	9.62	

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<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8545.20' & RKB 24' @ 8569.20usft (H&P 318)
<b>Site:</b>	TR 32-23-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 23-23-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 26Jan2017 jcsdi		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,879.41	2,805.00	Wasatch		0.00	0.00	
4,735.40	4,604.00	G_Sand Top		0.00	0.00	
4,804.52	4,671.00	G_Sand Base		0.00	0.00	
6,207.14	6,039.00	Ohio Creek		0.00	0.00	
6,583.75	6,415.00	Mesaverde		0.00	0.00	
7,170.75	7,002.00	Top Gas		0.00	0.00	
9,110.75	8,942.00	Cameo		0.00	0.00	
9,529.75	9,361.00	Rollins		0.00	0.00	
9,729.75	9,561.00	Cozzette		0.00	0.00	
9,966.75	9,798.00	Corcoran		0.00	0.00	
10,131.75	9,963.00	Sego		0.00	0.00	
10,366.75	10,198.00	TD		0.00	0.00	