

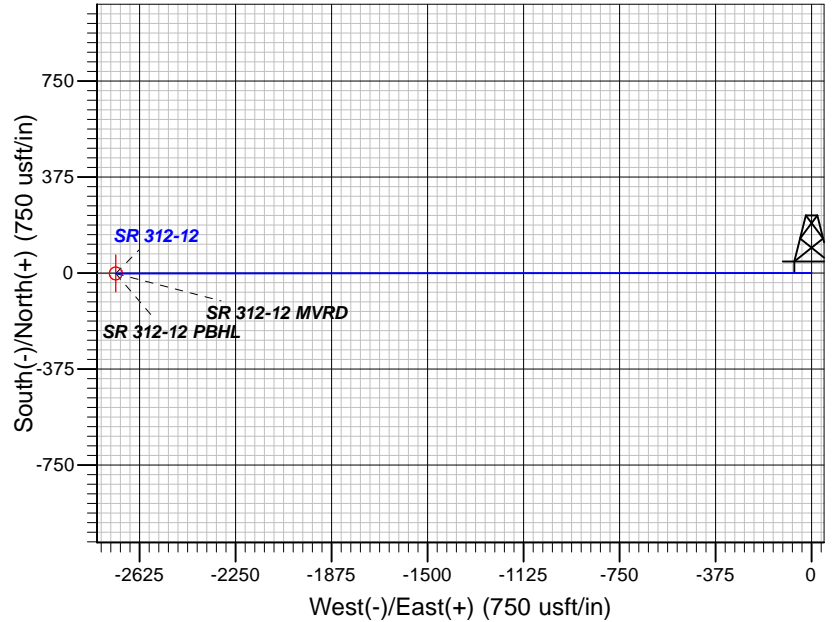
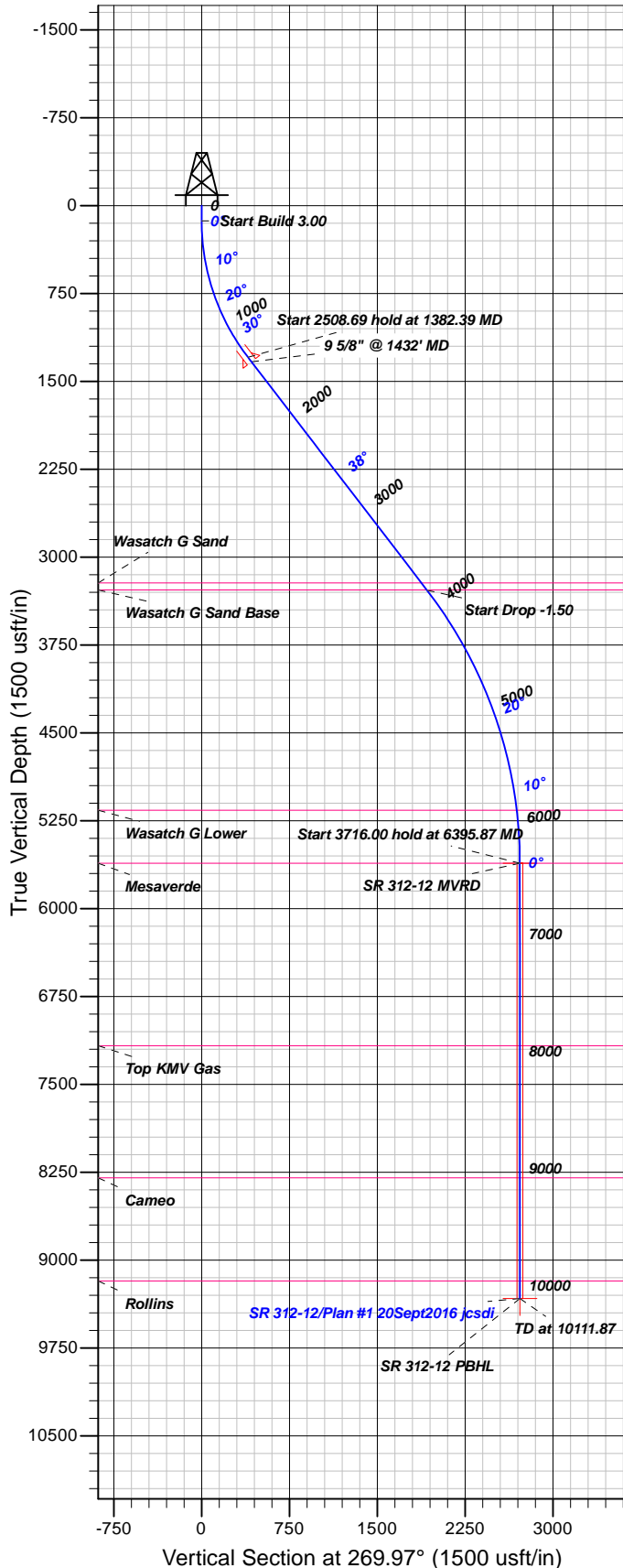
Well Details: SR 312-12

GL 7254' & RKB 24' @ 7278.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599187.60	2341065.40	39.4553015	-107.8338949	A10

T M Azimuths to True North
Magnetic North: 9.60°

Magnetic Field
Strength: 51598.3snT
Dip Angle: 65.62°
Date: 9/19/2016
Model: BGGM2016



FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3220.00	3811.71	Wasatch G Sand
3280.00	3887.41	Wasatch G Sand Base
5159.00	5941.80	Wasatch G Lower
5612.00	6395.87	Mesaverde
7169.00	7952.87	Top KMV Gas
8297.00	9080.87	Cameo
9178.00	9961.87	Rollins

Plan: Plan #1 20Sept2016 jcsdi

16:16, September 20 2016
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
1333.86	1432.00	9 5/8" @ 1432' MD	9.62

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	130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	
3	1382.39	37.57	269.97	1294.55	-0.24	-396.12	3.00	269.97	396.12	
4	3891.08	37.57	269.97	3282.91	-1.15	-1925.81	0.00	0.00	1925.81	
5	6395.87	0.00	0.00	5612.00	-1.62	-2718.06	1.50	180.00	2718.06	SR 312-12 MVRD
6	10111.87	0.00	0.00	9328.00	-1.62	-2718.06	0.00	0.00	2718.06	SR 312-12 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 312-12 MVRD	5612.00	-1.62	-2718.06	1599255.80	2338348.20	39.4552967	-107.8435210	Circle (Radius: 25.00)
- plan hits target center								
SR 312-12 PBHL	9328.00	-1.62	-2718.06	1599255.80	2338348.20	39.4552967	-107.8435210	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RU 32-12 Pad

SR 312-12 - Slot A10

OH

Plan: Plan #1 20Sept2016 jcsdi

Standard Planning Report

20 September, 2016



Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 312-12 - Slot A10
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 312-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

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		RU 32-12 Pad			
Site Position:		Northing:	1,599,253.30 usft	Latitude:	39.4554808
From:	Map	Easting:	2,341,050.00 usft	Longitude:	-107.8339555
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.47 °

Well	SR 312-12 - Slot A10					
Well Position	+N/-S	-65.28 usft	Northing:	1,599,187.60 usft	Latitude:	39.4553015
	+E/-W	17.08 usft	Easting:	2,341,065.40 usft	Longitude:	-107.8338950
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,254.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	9/19/2016	9.60	65.62	51,598

Design	Plan #1 20Sept2016 jcsdi			
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	269.97

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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,382.39	37.57	269.97	1,294.55	-0.24	-396.12	3.00	3.00	0.00	269.97	
3,891.08	37.57	269.97	3,282.91	-1.15	-1,925.81	0.00	0.00	0.00	0.00	
6,395.87	0.00	0.00	5,612.00	-1.62	-2,718.06	1.50	-1.50	0.00	180.00	SR 312-12 MVRD
10,111.87	0.00	0.00	9,328.00	-1.62	-2,718.06	0.00	0.00	0.00	0.00	SR 312-12 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 312-12 - Slot A10
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 312-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 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	
130.00	0.00	0.00	130.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	2.10	269.97	199.98	0.00	-1.28	1.28	3.00	3.00	0.00	
300.00	5.10	269.97	299.78	0.00	-7.56	7.56	3.00	3.00	0.00	
400.00	8.10	269.97	399.10	-0.01	-19.05	19.05	3.00	3.00	0.00	
500.00	11.10	269.97	497.69	-0.02	-35.73	35.73	3.00	3.00	0.00	
600.00	14.10	269.97	595.27	-0.03	-57.54	57.54	3.00	3.00	0.00	
700.00	17.10	269.97	691.58	-0.05	-84.43	84.43	3.00	3.00	0.00	
800.00	20.10	269.97	786.34	-0.07	-116.32	116.32	3.00	3.00	0.00	
900.00	23.10	269.97	879.31	-0.09	-153.13	153.13	3.00	3.00	0.00	
1,000.00	26.10	269.97	970.22	-0.12	-194.75	194.75	3.00	3.00	0.00	
1,100.00	29.10	269.97	1,058.83	-0.14	-241.08	241.08	3.00	3.00	0.00	
1,200.00	32.10	269.97	1,144.90	-0.17	-291.98	291.98	3.00	3.00	0.00	
1,300.00	35.10	269.97	1,228.18	-0.21	-347.31	347.31	3.00	3.00	0.00	
1,382.39	37.57	269.97	1,294.55	-0.24	-396.12	396.12	3.00	3.00	0.00	
1,400.00	37.57	269.97	1,308.50	-0.24	-406.86	406.86	0.00	0.00	0.00	
1,432.00	37.57	269.97	1,333.86	-0.25	-426.37	426.37	0.00	0.00	0.00	
9 5/8" @ 1432' MD										
1,500.00	37.57	269.97	1,387.76	-0.28	-467.84	467.84	0.00	0.00	0.00	
1,600.00	37.57	269.97	1,467.02	-0.32	-528.81	528.81	0.00	0.00	0.00	
1,700.00	37.57	269.97	1,546.28	-0.35	-589.79	589.79	0.00	0.00	0.00	
1,800.00	37.57	269.97	1,625.54	-0.39	-650.76	650.76	0.00	0.00	0.00	
1,900.00	37.57	269.97	1,704.80	-0.42	-711.74	711.74	0.00	0.00	0.00	
2,000.00	37.57	269.97	1,784.06	-0.46	-772.71	772.71	0.00	0.00	0.00	
2,100.00	37.57	269.97	1,863.31	-0.50	-833.69	833.69	0.00	0.00	0.00	
2,200.00	37.57	269.97	1,942.57	-0.53	-894.66	894.66	0.00	0.00	0.00	
2,300.00	37.57	269.97	2,021.83	-0.57	-955.64	955.64	0.00	0.00	0.00	
2,400.00	37.57	269.97	2,101.09	-0.61	-1,016.61	1,016.61	0.00	0.00	0.00	
2,500.00	37.57	269.97	2,180.35	-0.64	-1,077.59	1,077.59	0.00	0.00	0.00	
2,600.00	37.57	269.97	2,259.61	-0.68	-1,138.57	1,138.57	0.00	0.00	0.00	
2,700.00	37.57	269.97	2,338.87	-0.72	-1,199.54	1,199.54	0.00	0.00	0.00	
2,800.00	37.57	269.97	2,418.13	-0.75	-1,260.52	1,260.52	0.00	0.00	0.00	
2,900.00	37.57	269.97	2,497.39	-0.79	-1,321.49	1,321.49	0.00	0.00	0.00	
3,000.00	37.57	269.97	2,576.65	-0.82	-1,382.47	1,382.47	0.00	0.00	0.00	
3,100.00	37.57	269.97	2,655.90	-0.86	-1,443.44	1,443.44	0.00	0.00	0.00	
3,200.00	37.57	269.97	2,735.16	-0.90	-1,504.42	1,504.42	0.00	0.00	0.00	
3,300.00	37.57	269.97	2,814.42	-0.93	-1,565.39	1,565.39	0.00	0.00	0.00	
3,400.00	37.57	269.97	2,893.68	-0.97	-1,626.37	1,626.37	0.00	0.00	0.00	
3,500.00	37.57	269.97	2,972.94	-1.01	-1,687.34	1,687.34	0.00	0.00	0.00	
3,600.00	37.57	269.97	3,052.20	-1.04	-1,748.32	1,748.32	0.00	0.00	0.00	
3,700.00	37.57	269.97	3,131.46	-1.08	-1,809.30	1,809.30	0.00	0.00	0.00	
3,800.00	37.57	269.97	3,210.72	-1.12	-1,870.27	1,870.27	0.00	0.00	0.00	
3,811.71	37.57	269.97	3,220.00	-1.12	-1,877.41	1,877.41	0.00	0.00	0.00	
Wasatch G Sand										
3,887.41	37.57	269.97	3,280.00	-1.15	-1,923.57	1,923.57	0.00	0.00	0.00	
Wasatch G Sand Base										
3,891.08	37.57	269.97	3,282.91	-1.15	-1,925.81	1,925.81	0.00	0.00	0.00	
3,900.00	37.44	269.97	3,289.98	-1.15	-1,931.24	1,931.24	1.50	-1.50	0.00	
4,000.00	35.94	269.97	3,370.17	-1.19	-1,990.98	1,990.98	1.50	-1.50	0.00	
4,100.00	34.44	269.97	3,451.90	-1.22	-2,048.61	2,048.61	1.50	-1.50	0.00	
4,200.00	32.94	269.97	3,535.10	-1.26	-2,104.07	2,104.07	1.50	-1.50	0.00	

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Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 312-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 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)
4,300.00	31.44	269.97	3,619.73	-1.29	-2,157.34	2,157.34	1.50	-1.50	0.00
4,400.00	29.94	269.97	3,705.72	-1.32	-2,208.37	2,208.38	1.50	-1.50	0.00
4,500.00	28.44	269.97	3,793.02	-1.35	-2,257.14	2,257.14	1.50	-1.50	0.00
4,600.00	26.94	269.97	3,881.57	-1.37	-2,303.61	2,303.61	1.50	-1.50	0.00
4,700.00	25.44	269.97	3,971.30	-1.40	-2,347.74	2,347.74	1.50	-1.50	0.00
4,800.00	23.94	269.97	4,062.16	-1.43	-2,389.50	2,389.50	1.50	-1.50	0.00
4,900.00	22.44	269.97	4,154.08	-1.45	-2,428.88	2,428.88	1.50	-1.50	0.00
5,000.00	20.94	269.97	4,247.00	-1.47	-2,465.83	2,465.83	1.50	-1.50	0.00
5,100.00	19.44	269.97	4,340.85	-1.49	-2,500.34	2,500.34	1.50	-1.50	0.00
5,200.00	17.94	269.97	4,435.57	-1.51	-2,532.38	2,532.38	1.50	-1.50	0.00
5,300.00	16.44	269.97	4,531.11	-1.53	-2,561.93	2,561.93	1.50	-1.50	0.00
5,400.00	14.94	269.97	4,627.38	-1.54	-2,588.97	2,588.97	1.50	-1.50	0.00
5,500.00	13.44	269.97	4,724.32	-1.56	-2,613.48	2,613.48	1.50	-1.50	0.00
5,600.00	11.94	269.97	4,821.88	-1.57	-2,635.44	2,635.44	1.50	-1.50	0.00
5,700.00	10.44	269.97	4,919.98	-1.58	-2,654.84	2,654.85	1.50	-1.50	0.00
5,800.00	8.94	269.97	5,018.55	-1.59	-2,671.67	2,671.67	1.50	-1.50	0.00
5,900.00	7.44	269.97	5,117.53	-1.60	-2,685.91	2,685.91	1.50	-1.50	0.00
5,941.80	6.81	269.97	5,159.00	-1.61	-2,691.10	2,691.10	1.50	-1.50	0.00
Wasatch G Lower									
6,000.00	5.94	269.97	5,216.84	-1.61	-2,697.56	2,697.56	1.50	-1.50	0.00
6,100.00	4.44	269.97	5,316.43	-1.61	-2,706.60	2,706.60	1.50	-1.50	0.00
6,200.00	2.94	269.97	5,416.22	-1.62	-2,713.03	2,713.04	1.50	-1.50	0.00
6,300.00	1.44	269.97	5,516.14	-1.62	-2,716.85	2,716.85	1.50	-1.50	0.00
6,395.87	0.00	0.00	5,612.00	-1.62	-2,718.06	2,718.06	1.50	-1.50	93.92
Mesaverde - SR 312-12 MVRD									
6,400.00	0.00	0.00	5,616.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
6,500.00	0.00	0.00	5,716.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
6,600.00	0.00	0.00	5,816.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
6,700.00	0.00	0.00	5,916.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
6,800.00	0.00	0.00	6,016.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
6,900.00	0.00	0.00	6,116.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,000.00	0.00	0.00	6,216.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,100.00	0.00	0.00	6,316.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,200.00	0.00	0.00	6,416.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,300.00	0.00	0.00	6,516.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,400.00	0.00	0.00	6,616.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,500.00	0.00	0.00	6,716.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,600.00	0.00	0.00	6,816.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,700.00	0.00	0.00	6,916.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,800.00	0.00	0.00	7,016.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,900.00	0.00	0.00	7,116.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
7,952.87	0.00	0.00	7,169.00	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
Top KMV Gas									
8,000.00	0.00	0.00	7,216.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
8,100.00	0.00	0.00	7,316.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
8,200.00	0.00	0.00	7,416.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
8,300.00	0.00	0.00	7,516.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
8,400.00	0.00	0.00	7,616.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
8,500.00	0.00	0.00	7,716.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
8,600.00	0.00	0.00	7,816.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00
8,700.00	0.00	0.00	7,916.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 312-12 - Slot A10
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 312-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 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)	
8,800.00	0.00	0.00	8,016.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,116.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,216.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,080.87	0.00	0.00	8,297.00	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
Cameo										
9,100.00	0.00	0.00	8,316.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,416.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,300.00	0.00	0.00	8,516.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,400.00	0.00	0.00	8,616.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,500.00	0.00	0.00	8,716.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,600.00	0.00	0.00	8,816.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,700.00	0.00	0.00	8,916.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,016.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,116.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
9,961.87	0.00	0.00	9,178.00	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
Rollins										
10,000.00	0.00	0.00	9,216.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
10,100.00	0.00	0.00	9,316.13	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
10,111.87	0.00	0.00	9,328.00	-1.62	-2,718.06	2,718.06	0.00	0.00	0.00	
SR 312-12 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									
SR 312-12 MVRD	0.00	0.00	5,612.00	-1.62	-2,718.06	1,599,255.80	2,338,348.20	39.4552967	-107.8435211
- plan hits target center									
- Circle (radius 25.00)									
SR 312-12 PBHL	0.00	0.00	9,328.00	-1.62	-2,718.06	1,599,255.80	2,338,348.20	39.4552967	-107.8435211
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,432.00	1,333.86	9 5/8" @ 1432' MD	9.62	9.62	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 312-12 - Slot A10
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 312-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,811.71	3,220.00	Wasatch G Sand		0.00	0.00
3,887.41	3,280.00	Wasatch G Sand Base		0.00	0.00
5,941.80	5,159.00	Wasatch G Lower		0.00	0.00
6,395.87	5,612.00	Mesaverde		0.00	0.00
7,952.87	7,169.00	Top KMV Gas		0.00	0.00
9,080.87	8,297.00	Cameo		0.00	0.00
9,961.87	9,178.00	Rollins		0.00	0.00