

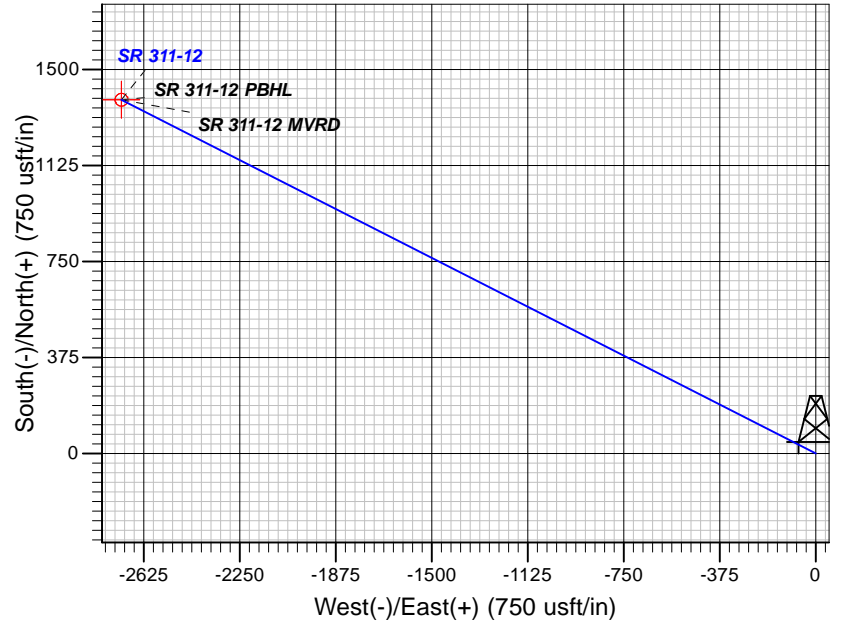
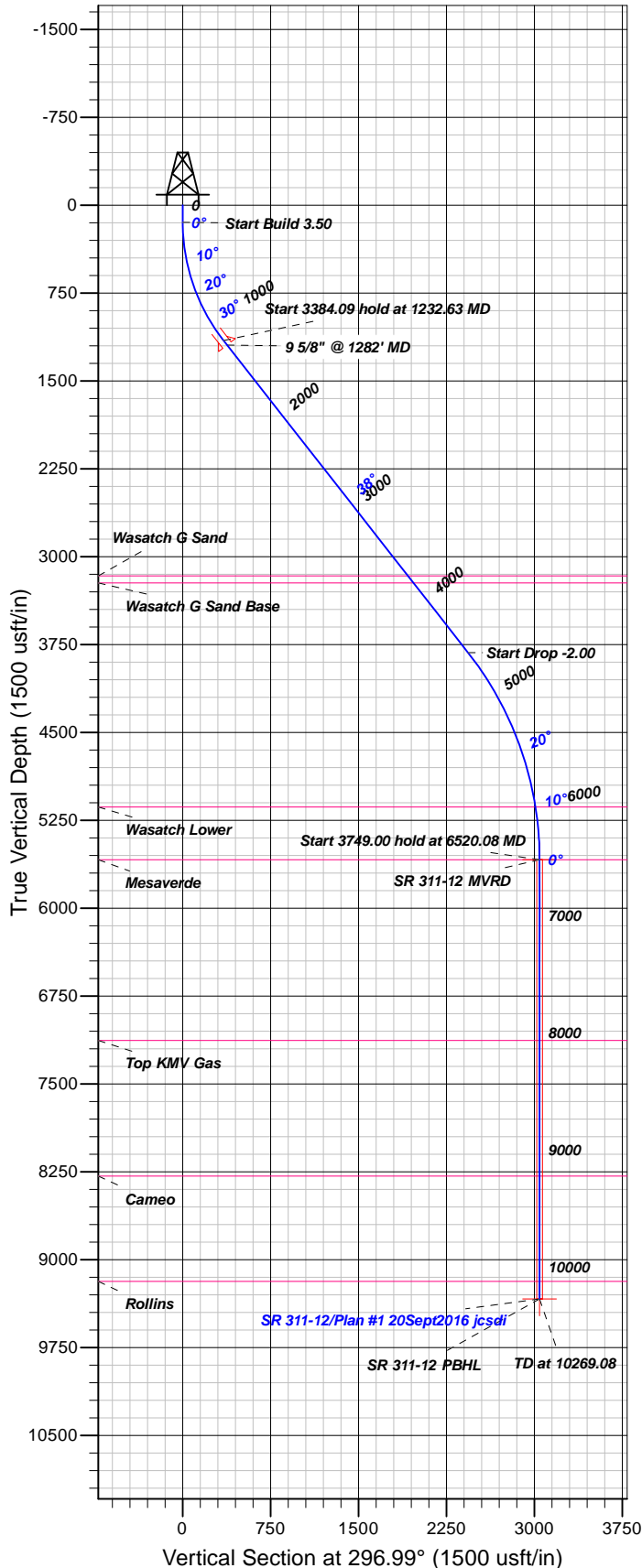
Well Details: SR 311-12

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599224.10	2341056.80	39.4554011	-107.8339287	A5

T M Azimuths to True North
Magnetic North: 9.60°

Magnetic Field
Strength: 51598.4snT
Dip Angle: 65.62°
Date: 9/19/2016
Model: BGGM2016



FORMATION TOP DETAILS

TVDP	MD	Formation
3163.00	3783.97	Wasatch G Sand
3223.00	3860.18	Wasatch G Sand Base
5136.00	6069.22	Wasatch Lower
5585.00	6520.08	Mesaverde
7128.00	8063.08	Top KMV Gas
8285.00	9220.08	Cameo
9184.00	10119.08	Rollins

Plan: Plan #1 20Sept2016 jcsdi

15:37, 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
1193.23	1282.00	9 5/8" @ 1282' 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	145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	
3	1232.63	38.07	296.99	1154.36	158.06	-310.27	3.50	296.99	348.21	
4	4616.72	38.07	296.99	3818.62	1105.18	-2169.51	0.00	0.00	2434.79	
5	6520.08	0.00	0.00	5585.00	1381.78	-2712.49	2.00	180.00	3044.16	SR 311-12 MVRD
6	10269.08	0.00	0.00	9334.00	1381.78	-2712.49	0.00	0.00	3044.16	SR 311-12 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 311-12 MVRD	5585.00	1381.78	-2712.49	1600675.10	2338380.70	39.4591943	-107.8435356	Circle (Radius: 25.00)
- plan hits target center								
SR 311-12 PBHL	9334.00	1381.78	-2712.49	1600675.10	2338380.70	39.4591943	-107.8435356	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RU 32-12 Pad

SR 311-12 - Slot A5

OH

Plan: Plan #1 20Sept2016 jcsdi

Standard Planning Report

20 September, 2016



Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 311-12 - Slot A5
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 311-12	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 311-12 - Slot A5			
Well Position	+N/-S	-29.02 usft	Northing:	1,599,224.10 usft
	+E/-W	7.55 usft	Easting:	2,341,056.80 usft
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	296.99

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	
145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,232.63	38.07	296.99	1,154.36	158.06	-310.27	3.50	3.50	0.00	296.99	
4,616.72	38.07	296.99	3,818.62	1,105.18	-2,169.51	0.00	0.00	0.00	0.00	
6,520.08	0.00	0.00	5,585.00	1,381.78	-2,712.49	2.00	-2.00	0.00	180.00	SR 311-12 MVRD
10,269.08	0.00	0.00	9,334.00	1,381.78	-2,712.49	0.00	0.00	0.00	0.00	SR 311-12 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 311-12 - Slot A5
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 311-12	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	
145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.93	296.99	199.99	0.42	-0.82	0.92	3.50	3.50	0.00	
300.00	5.43	296.99	299.77	3.33	-6.53	7.33	3.50	3.50	0.00	
400.00	8.93	296.99	398.97	9.00	-17.66	19.82	3.50	3.50	0.00	
500.00	12.43	296.99	497.22	17.40	-34.16	38.34	3.50	3.50	0.00	
600.00	15.93	296.99	594.16	28.52	-55.98	62.83	3.50	3.50	0.00	
700.00	19.43	296.99	689.43	42.30	-83.03	93.18	3.50	3.50	0.00	
800.00	22.93	296.99	782.66	58.69	-115.21	129.30	3.50	3.50	0.00	
900.00	26.43	296.99	873.52	77.64	-152.40	171.04	3.50	3.50	0.00	
1,000.00	29.93	296.99	961.65	99.07	-194.47	218.25	3.50	3.50	0.00	
1,100.00	33.43	296.99	1,046.75	122.90	-241.25	270.75	3.50	3.50	0.00	
1,200.00	36.93	296.99	1,128.47	149.04	-292.58	328.35	3.50	3.50	0.00	
1,232.63	38.07	296.99	1,154.36	158.06	-310.27	348.21	3.50	3.50	0.00	
1,282.00	38.07	296.99	1,193.23	171.87	-337.40	378.65	0.00	0.00	0.00	
9 5/8" @ 1282' MD										
1,300.00	38.07	296.99	1,207.40	176.91	-347.29	389.75	0.00	0.00	0.00	
1,400.00	38.07	296.99	1,286.13	204.90	-402.23	451.41	0.00	0.00	0.00	
1,500.00	38.07	296.99	1,364.86	232.89	-457.17	513.07	0.00	0.00	0.00	
1,600.00	38.07	296.99	1,443.59	260.87	-512.11	574.73	0.00	0.00	0.00	
1,700.00	38.07	296.99	1,522.32	288.86	-567.05	636.38	0.00	0.00	0.00	
1,800.00	38.07	296.99	1,601.04	316.85	-621.99	698.04	0.00	0.00	0.00	
1,900.00	38.07	296.99	1,679.77	344.84	-676.93	759.70	0.00	0.00	0.00	
2,000.00	38.07	296.99	1,758.50	372.82	-731.87	821.36	0.00	0.00	0.00	
2,100.00	38.07	296.99	1,837.23	400.81	-786.81	883.02	0.00	0.00	0.00	
2,200.00	38.07	296.99	1,915.96	428.80	-841.75	944.68	0.00	0.00	0.00	
2,300.00	38.07	296.99	1,994.69	456.79	-896.69	1,006.34	0.00	0.00	0.00	
2,400.00	38.07	296.99	2,073.42	484.77	-951.63	1,067.99	0.00	0.00	0.00	
2,500.00	38.07	296.99	2,152.15	512.76	-1,006.57	1,129.65	0.00	0.00	0.00	
2,600.00	38.07	296.99	2,230.88	540.75	-1,061.51	1,191.31	0.00	0.00	0.00	
2,700.00	38.07	296.99	2,309.60	568.74	-1,116.45	1,252.97	0.00	0.00	0.00	
2,800.00	38.07	296.99	2,388.33	596.72	-1,171.39	1,314.63	0.00	0.00	0.00	
2,900.00	38.07	296.99	2,467.06	624.71	-1,226.34	1,376.29	0.00	0.00	0.00	
3,000.00	38.07	296.99	2,545.79	652.70	-1,281.28	1,437.94	0.00	0.00	0.00	
3,100.00	38.07	296.99	2,624.52	680.69	-1,336.22	1,499.60	0.00	0.00	0.00	
3,200.00	38.07	296.99	2,703.25	708.67	-1,391.16	1,561.26	0.00	0.00	0.00	
3,300.00	38.07	296.99	2,781.98	736.66	-1,446.10	1,622.92	0.00	0.00	0.00	
3,400.00	38.07	296.99	2,860.71	764.65	-1,501.04	1,684.58	0.00	0.00	0.00	
3,500.00	38.07	296.99	2,939.44	792.64	-1,555.98	1,746.24	0.00	0.00	0.00	
3,600.00	38.07	296.99	3,018.16	820.62	-1,610.92	1,807.89	0.00	0.00	0.00	
3,700.00	38.07	296.99	3,096.89	848.61	-1,665.86	1,869.55	0.00	0.00	0.00	
3,783.97	38.07	296.99	3,163.00	872.11	-1,711.99	1,921.33	0.00	0.00	0.00	
Wasatch G Sand										
3,800.00	38.07	296.99	3,175.62	876.60	-1,720.80	1,931.21	0.00	0.00	0.00	
3,860.18	38.07	296.99	3,223.00	893.44	-1,753.86	1,968.32	0.00	0.00	0.00	
Wasatch G Sand Base										
3,900.00	38.07	296.99	3,254.35	904.59	-1,775.74	1,992.87	0.00	0.00	0.00	
4,000.00	38.07	296.99	3,333.08	932.57	-1,830.68	2,054.53	0.00	0.00	0.00	
4,100.00	38.07	296.99	3,411.81	960.56	-1,885.62	2,116.19	0.00	0.00	0.00	
4,200.00	38.07	296.99	3,490.54	988.55	-1,940.56	2,177.85	0.00	0.00	0.00	
4,300.00	38.07	296.99	3,569.27	1,016.53	-1,995.50	2,239.50	0.00	0.00	0.00	

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Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 311-12	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)
4,400.00	38.07	296.99	3,648.00	1,044.52	-2,050.44	2,301.16	0.00	0.00	0.00
4,500.00	38.07	296.99	3,726.72	1,072.51	-2,105.38	2,362.82	0.00	0.00	0.00
4,600.00	38.07	296.99	3,805.45	1,100.50	-2,160.33	2,424.48	0.00	0.00	0.00
4,616.72	38.07	296.99	3,818.62	1,105.18	-2,169.51	2,434.79	0.00	0.00	0.00
4,700.00	36.40	296.99	3,884.92	1,128.05	-2,214.41	2,485.18	2.00	-2.00	0.00
4,800.00	34.40	296.99	3,966.43	1,154.34	-2,266.03	2,543.10	2.00	-2.00	0.00
4,900.00	32.40	296.99	4,049.91	1,179.33	-2,315.08	2,598.15	2.00	-2.00	0.00
5,000.00	30.40	296.99	4,135.25	1,202.98	-2,361.50	2,650.25	2.00	-2.00	0.00
5,100.00	28.40	296.99	4,222.37	1,225.26	-2,405.24	2,699.34	2.00	-2.00	0.00
5,200.00	26.40	296.99	4,311.15	1,246.15	-2,446.25	2,745.36	2.00	-2.00	0.00
5,300.00	24.40	296.99	4,401.47	1,265.62	-2,484.47	2,788.26	2.00	-2.00	0.00
5,400.00	22.40	296.99	4,493.24	1,283.65	-2,519.86	2,827.97	2.00	-2.00	0.00
5,500.00	20.40	296.99	4,586.34	1,300.21	-2,552.37	2,864.46	2.00	-2.00	0.00
5,600.00	18.40	296.99	4,680.66	1,315.29	-2,581.97	2,897.68	2.00	-2.00	0.00
5,700.00	16.40	296.99	4,776.08	1,328.86	-2,608.61	2,927.58	2.00	-2.00	0.00
5,800.00	14.40	296.99	4,872.48	1,340.92	-2,632.28	2,954.14	2.00	-2.00	0.00
5,900.00	12.40	296.99	4,969.75	1,351.44	-2,652.93	2,977.32	2.00	-2.00	0.00
6,000.00	10.40	296.99	5,067.78	1,360.41	-2,670.54	2,997.08	2.00	-2.00	0.00
6,069.22	9.02	296.99	5,136.00	1,365.71	-2,680.94	3,008.76	2.00	-2.00	0.00
Wasatch Lower									
6,100.00	8.40	296.99	5,166.43	1,367.82	-2,685.10	3,013.42	2.00	-2.00	0.00
6,200.00	6.40	296.99	5,265.59	1,373.67	-2,696.57	3,026.30	2.00	-2.00	0.00
6,300.00	4.40	296.99	5,365.14	1,377.94	-2,704.96	3,035.71	2.00	-2.00	0.00
6,400.00	2.40	296.99	5,464.96	1,380.64	-2,710.25	3,041.64	2.00	-2.00	0.00
6,500.00	0.40	296.99	5,564.92	1,381.75	-2,712.43	3,044.09	2.00	-2.00	0.00
6,520.08	0.00	0.00	5,585.00	1,381.78	-2,712.49	3,044.16	2.00	-2.00	313.84
Mesaverde - SR 311-12 MVRD									
6,600.00	0.00	0.00	5,664.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
6,700.00	0.00	0.00	5,764.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
6,800.00	0.00	0.00	5,864.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
6,900.00	0.00	0.00	5,964.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,000.00	0.00	0.00	6,064.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,100.00	0.00	0.00	6,164.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,200.00	0.00	0.00	6,264.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,300.00	0.00	0.00	6,364.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,400.00	0.00	0.00	6,464.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,500.00	0.00	0.00	6,564.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,600.00	0.00	0.00	6,664.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,700.00	0.00	0.00	6,764.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,800.00	0.00	0.00	6,864.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
7,900.00	0.00	0.00	6,964.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,000.00	0.00	0.00	7,064.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,063.08	0.00	0.00	7,128.00	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
Top KMV Gas									
8,100.00	0.00	0.00	7,164.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,200.00	0.00	0.00	7,264.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,300.00	0.00	0.00	7,364.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,400.00	0.00	0.00	7,464.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,500.00	0.00	0.00	7,564.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,600.00	0.00	0.00	7,664.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00
8,700.00	0.00	0.00	7,764.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00

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Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 311-12	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	7,864.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
8,900.00	0.00	0.00	7,964.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,064.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,164.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,264.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,220.08	0.00	0.00	8,285.00	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
Cameo										
9,300.00	0.00	0.00	8,364.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,400.00	0.00	0.00	8,464.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,500.00	0.00	0.00	8,564.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,600.00	0.00	0.00	8,664.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,700.00	0.00	0.00	8,764.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,800.00	0.00	0.00	8,864.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
9,900.00	0.00	0.00	8,964.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,064.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
10,100.00	0.00	0.00	9,164.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
10,119.08	0.00	0.00	9,184.00	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
Rollins										
10,200.00	0.00	0.00	9,264.92	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
10,269.08	0.00	0.00	9,334.00	1,381.78	-2,712.49	3,044.16	0.00	0.00	0.00	
SR 311-12 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 311-12 MVRD	0.00	0.00	5,585.00	1,381.78	-2,712.49	1,600,675.10	2,338,380.70	39.4591944	-107.8435357
- plan hits target center									
- Circle (radius 25.00)									
SR 311-12 PBHL	0.00	0.00	9,334.00	1,381.78	-2,712.49	1,600,675.10	2,338,380.70	39.4591944	-107.8435357
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,282.00	1,193.23	9 5/8" @ 1282' MD	9.62	9.62	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 311-12 - Slot A5
Company:	TEP Rocky Mountain LLC	TVD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Project:	Garfield County, CO NAD83	MD Reference:	GL 7254' & RKB 24'24' @ 7278.00usft (H&P 318)
Site:	RU 32-12 Pad	North Reference:	True
Well:	SR 311-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,783.97	2,480.02	Wasatch G Sand		0.00	0.00
3,860.18	2,540.02	Wasatch G Sand Base		0.00	0.00
6,069.22	4,453.02	Wasatch Lower		0.00	0.00
6,520.08	4,902.02	Mesaverde		0.00	0.00
8,063.08	6,445.02	Top KMV Gas		0.00	0.00
9,220.08	7,602.02	Cameo		0.00	0.00
10,119.08	8,501.02	Rollins		0.00	0.00