

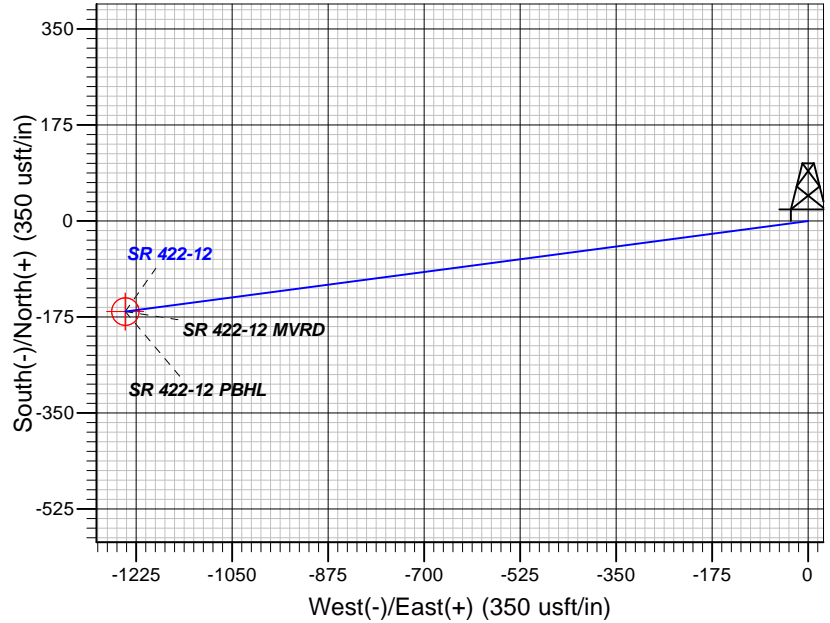
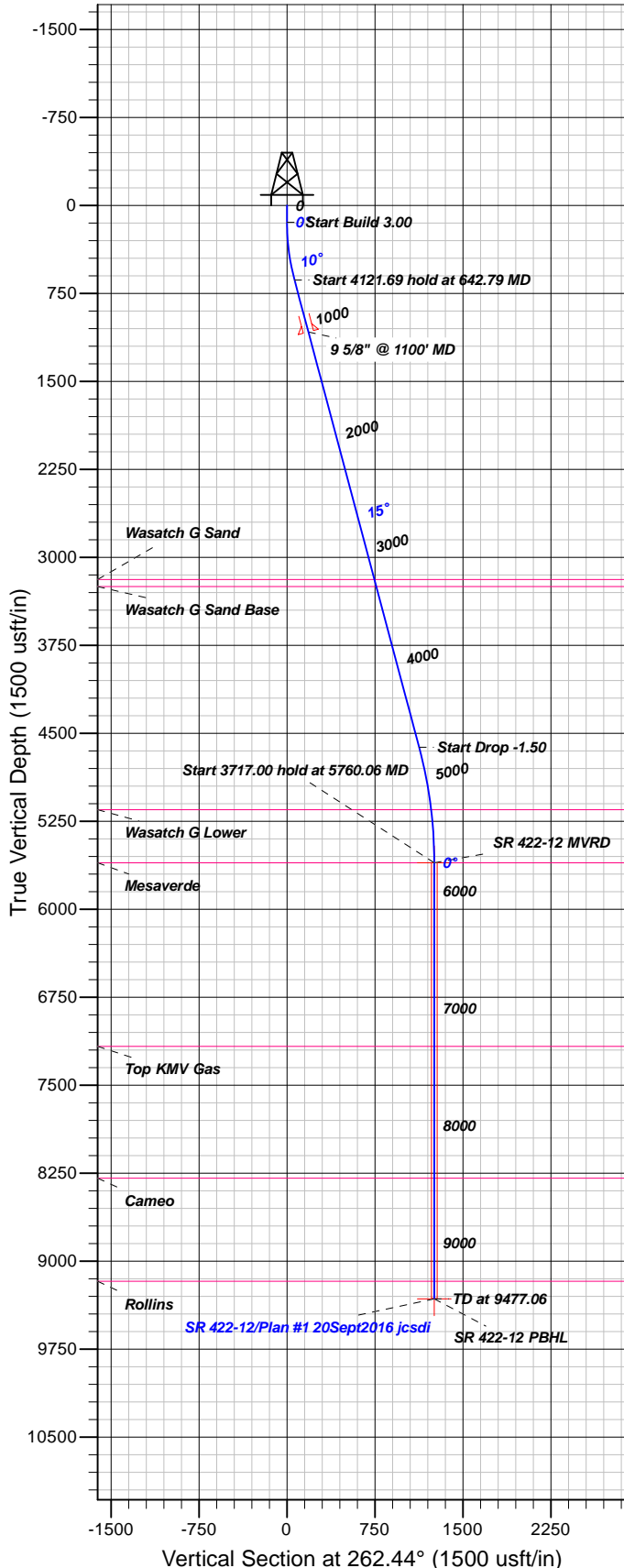
## Well Details: SR 422-12

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599180.30	2341067.10	39.4552816	-107.8338883	A11

**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
3190.00	3284.85	Wasatch G Sand
3250.00	3346.95	Wasatch G Sand Base
5152.00	5307.00	Wasatch G Lower
5604.00	5760.06	Mesaverde
7169.00	7325.06	Top KMV Gas
8292.00	8448.06	Cameo
9171.00	9327.06	Rollins

Plan: Plan #1 20Sept2016 jcsdi

11:11, September 30 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
1078.94	1100.00	9 5/8" @ 1100' 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	642.79	14.93	262.44	637.17	-8.49	-63.95	3.00	262.44	64.51	
4	4764.48	14.93	262.44	4619.65	-148.25	-1116.88	0.00	0.001126.67		
5	5760.06	0.00	0.00	5604.00	-165.23	-1244.77	1.50	180.001255.68		SR 422-12 MVRD
6	9477.06	0.00	0.00	9321.00	-165.23	-1244.77	0.00	0.001255.68		SR 422-12 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 422-12 MVRD	5604.00	-165.23	-1244.77	1599047.10	2339818.50	39.4548279	-107.8382966	Circle (Radius: 25.00)
- plan hits target center								
SR 422-12 PBHL	9321.00	-165.23	-1244.77	1599047.10	2339818.50	39.4548279	-107.8382966	Point
- plan hits target center								



# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RU 32-12 Pad**

**SR 422-12 - Slot A11**

**OH**

**Plan: Plan #1 20Sept2016 jcsdi**

## **Standard Planning Report**

**30 September, 2016**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 422-12 - Slot A11
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
<b>Site:</b>	RU 32-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 422-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 20Sept2016 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>	RU 32-12 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,599,253.30 usft	<b>Latitude:</b> 39.4554808
<b>From:</b> Map		<b>Easting:</b>	2,341,050.00 usft	<b>Longitude:</b> -107.8339555
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b> -1.47 °

<b>Well</b>	SR 422-12 - Slot A11			
<b>Well Position</b>	<b>+N/-S</b>	-72.54 usft	<b>Northing:</b>	1,599,180.30 usft
	<b>+E/-W</b>	18.97 usft	<b>Easting:</b>	2,341,067.10 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	7,254.00 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>
	BGGM2016	9/19/2016	9.60	65.62	51,598

<b>Design</b>	Plan #1 20Sept2016 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	262.44

<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	
145.00	0.00	0.00	145.00	0.00	0.00	0.00	0.00	0.00	0.00	
642.79	14.93	262.44	637.17	-8.49	-63.95	3.00	3.00	0.00	262.44	
4,764.48	14.93	262.44	4,619.65	-148.25	-1,116.88	0.00	0.00	0.00	0.00	
5,760.06	0.00	0.00	5,604.00	-165.23	-1,244.77	1.50	-1.50	0.00	180.00	SR 422-12 MVRD
9,477.06	0.00	0.00	9,321.00	-165.23	-1,244.77	0.00	0.00	0.00	0.00	SR 422-12 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 422-12 - Slot A11
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
<b>Site:</b>	RU 32-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 422-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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	1.65	262.44	199.99	-0.10	-0.79	0.79	3.00	3.00	0.00	
300.00	4.65	262.44	299.83	-0.83	-6.23	6.29	3.00	3.00	0.00	
400.00	7.65	262.44	399.24	-2.24	-16.85	17.00	3.00	3.00	0.00	
500.00	10.65	262.44	497.96	-4.33	-32.61	32.90	3.00	3.00	0.00	
600.00	13.65	262.44	595.71	-7.10	-53.47	53.94	3.00	3.00	0.00	
642.79	14.93	262.44	637.17	-8.49	-63.95	64.51	3.00	3.00	0.00	
700.00	14.93	262.44	692.45	-10.43	-78.56	79.25	0.00	0.00	0.00	
800.00	14.93	262.44	789.07	-13.82	-104.11	105.02	0.00	0.00	0.00	
900.00	14.93	262.44	885.70	-17.21	-129.65	130.79	0.00	0.00	0.00	
1,000.00	14.93	262.44	982.32	-20.60	-155.20	156.56	0.00	0.00	0.00	
1,100.00	14.93	262.44	1,078.94	-23.99	-180.74	182.33	0.00	0.00	0.00	
9 5/8" @ 1100' MD										
1,200.00	14.93	262.44	1,175.56	-27.38	-206.29	208.10	0.00	0.00	0.00	
1,300.00	14.93	262.44	1,272.19	-30.77	-231.84	233.87	0.00	0.00	0.00	
1,400.00	14.93	262.44	1,368.81	-34.16	-257.38	259.64	0.00	0.00	0.00	
1,500.00	14.93	262.44	1,465.43	-37.56	-282.93	285.41	0.00	0.00	0.00	
1,600.00	14.93	262.44	1,562.05	-40.95	-308.47	311.18	0.00	0.00	0.00	
1,700.00	14.93	262.44	1,658.68	-44.34	-334.02	336.95	0.00	0.00	0.00	
1,800.00	14.93	262.44	1,755.30	-47.73	-359.57	362.72	0.00	0.00	0.00	
1,900.00	14.93	262.44	1,851.92	-51.12	-385.11	388.49	0.00	0.00	0.00	
2,000.00	14.93	262.44	1,948.54	-54.51	-410.66	414.26	0.00	0.00	0.00	
2,100.00	14.93	262.44	2,045.17	-57.90	-436.21	440.03	0.00	0.00	0.00	
2,200.00	14.93	262.44	2,141.79	-61.29	-461.75	465.80	0.00	0.00	0.00	
2,300.00	14.93	262.44	2,238.41	-64.68	-487.30	491.57	0.00	0.00	0.00	
2,400.00	14.93	262.44	2,335.03	-68.07	-512.84	517.34	0.00	0.00	0.00	
2,500.00	14.93	262.44	2,431.65	-71.47	-538.39	543.11	0.00	0.00	0.00	
2,600.00	14.93	262.44	2,528.28	-74.86	-563.94	568.88	0.00	0.00	0.00	
2,700.00	14.93	262.44	2,624.90	-78.25	-589.48	594.65	0.00	0.00	0.00	
2,800.00	14.93	262.44	2,721.52	-81.64	-615.03	620.42	0.00	0.00	0.00	
2,900.00	14.93	262.44	2,818.14	-85.03	-640.57	646.19	0.00	0.00	0.00	
3,000.00	14.93	262.44	2,914.77	-88.42	-666.12	671.96	0.00	0.00	0.00	
3,100.00	14.93	262.44	3,011.39	-91.81	-691.67	697.73	0.00	0.00	0.00	
3,200.00	14.93	262.44	3,108.01	-95.20	-717.21	723.50	0.00	0.00	0.00	
3,284.85	14.93	262.44	3,190.00	-98.08	-738.89	745.37	0.00	0.00	0.00	
Wasatch G Sand										
3,300.00	14.93	262.44	3,204.63	-98.59	-742.76	749.27	0.00	0.00	0.00	
3,346.95	14.93	262.44	3,250.00	-100.19	-754.75	761.37	0.00	0.00	0.00	
Wasatch G Sand Base										
3,400.00	14.93	262.44	3,301.26	-101.98	-768.30	775.04	0.00	0.00	0.00	
3,500.00	14.93	262.44	3,397.88	-105.38	-793.85	800.81	0.00	0.00	0.00	
3,600.00	14.93	262.44	3,494.50	-108.77	-819.40	826.58	0.00	0.00	0.00	
3,700.00	14.93	262.44	3,591.12	-112.16	-844.94	852.35	0.00	0.00	0.00	
3,800.00	14.93	262.44	3,687.75	-115.55	-870.49	878.12	0.00	0.00	0.00	
3,900.00	14.93	262.44	3,784.37	-118.94	-896.03	903.89	0.00	0.00	0.00	
4,000.00	14.93	262.44	3,880.99	-122.33	-921.58	929.66	0.00	0.00	0.00	
4,100.00	14.93	262.44	3,977.61	-125.72	-947.13	955.43	0.00	0.00	0.00	
4,200.00	14.93	262.44	4,074.24	-129.11	-972.67	981.20	0.00	0.00	0.00	
4,300.00	14.93	262.44	4,170.86	-132.50	-998.22	1,006.97	0.00	0.00	0.00	
4,400.00	14.93	262.44	4,267.48	-135.89	-1,023.76	1,032.74	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 422-12 - Slot A11
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<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
<b>Site:</b>	RU 32-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 422-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
4,500.00	14.93	262.44	4,364.10	-139.29	-1,049.31	1,058.51	0.00	0.00	0.00
4,600.00	14.93	262.44	4,460.73	-142.68	-1,074.86	1,084.28	0.00	0.00	0.00
4,700.00	14.93	262.44	4,557.35	-146.07	-1,100.40	1,110.06	0.00	0.00	0.00
4,764.48	14.93	262.44	4,619.65	-148.25	-1,116.88	1,126.67	0.00	0.00	0.00
4,800.00	14.40	262.44	4,654.01	-149.44	-1,125.79	1,135.67	1.50	-1.50	0.00
4,900.00	12.90	262.44	4,751.19	-152.54	-1,149.19	1,159.27	1.50	-1.50	0.00
5,000.00	11.40	262.44	4,848.94	-155.31	-1,170.05	1,180.31	1.50	-1.50	0.00
5,100.00	9.90	262.44	4,947.22	-157.74	-1,188.37	1,198.80	1.50	-1.50	0.00
5,200.00	8.40	262.44	5,045.94	-159.84	-1,204.14	1,214.70	1.50	-1.50	0.00
5,300.00	6.90	262.44	5,145.05	-161.59	-1,217.33	1,228.01	1.50	-1.50	0.00
5,307.00	6.80	262.44	5,152.00	-161.70	-1,218.16	1,228.85	1.50	-1.50	0.00
Wasatch G Lower									
5,400.00	5.40	262.44	5,244.47	-163.00	-1,227.96	1,238.73	1.50	-1.50	0.00
5,500.00	3.90	262.44	5,344.14	-164.07	-1,235.99	1,246.84	1.50	-1.50	0.00
5,600.00	2.40	262.44	5,443.98	-164.79	-1,241.44	1,252.33	1.50	-1.50	0.00
5,700.00	0.90	262.44	5,543.94	-165.17	-1,244.30	1,255.21	1.50	-1.50	0.00
5,760.06	0.00	0.00	5,604.00	-165.23	-1,244.77	1,255.68	1.50	-1.50	0.00
Mesaverde - SR 422-12 MVRD									
5,800.00	0.00	0.00	5,643.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
5,900.00	0.00	0.00	5,743.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,000.00	0.00	0.00	5,843.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,100.00	0.00	0.00	5,943.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,200.00	0.00	0.00	6,043.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,300.00	0.00	0.00	6,143.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,400.00	0.00	0.00	6,243.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,500.00	0.00	0.00	6,343.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,600.00	0.00	0.00	6,443.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,700.00	0.00	0.00	6,543.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,800.00	0.00	0.00	6,643.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
6,900.00	0.00	0.00	6,743.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,000.00	0.00	0.00	6,843.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,100.00	0.00	0.00	6,943.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,200.00	0.00	0.00	7,043.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,300.00	0.00	0.00	7,143.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,325.06	0.00	0.00	7,169.00	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
Top KMV Gas									
7,400.00	0.00	0.00	7,243.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,500.00	0.00	0.00	7,343.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,600.00	0.00	0.00	7,443.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,700.00	0.00	0.00	7,543.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,800.00	0.00	0.00	7,643.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
7,900.00	0.00	0.00	7,743.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
8,000.00	0.00	0.00	7,843.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
8,100.00	0.00	0.00	7,943.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
8,200.00	0.00	0.00	8,043.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
8,300.00	0.00	0.00	8,143.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
8,400.00	0.00	0.00	8,243.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
8,448.06	0.00	0.00	8,292.00	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
Cameo									
8,500.00	0.00	0.00	8,343.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00
8,600.00	0.00	0.00	8,443.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 422-12 - Slot A11
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7254' & RKB 24' @ 7278.00usft (H&P 318)
<b>Site:</b>	RU 32-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 422-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)	
8,700.00	0.00	0.00	8,543.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,643.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,743.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,843.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,943.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,043.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,143.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
9,327.06	0.00	0.00	9,171.00	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
Rollins										
9,400.00	0.00	0.00	9,243.94	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
9,477.06	0.00	0.00	9,321.00	-165.23	-1,244.77	1,255.68	0.00	0.00	0.00	
SR 422-12 PBHL										

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
SR 422-12 MVRD - plan hits target center - Circle (radius 25.00)	0.00	0.00	5,604.00	-165.23	-1,244.77	1,599,047.10	2,339,818.50	39.4548279	-107.8382967
SR 422-12 PBHL - plan hits target center - Point	0.00	0.00	9,321.00	-165.23	-1,244.77	1,599,047.10	2,339,818.50	39.4548279	-107.8382967

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,078.94	9 5/8" @ 1100' MD	9.62	9.62	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,284.85	3,190.00	Wasatch G Sand		0.00	0.00
3,346.95	3,250.00	Wasatch G Sand Base		0.00	0.00
5,307.00	5,152.00	Wasatch G Lower		0.00	0.00
5,760.06	5,604.00	Mesaverde		0.00	0.00
7,325.06	7,169.00	Top KVM Gas		0.00	0.00
8,448.06	8,292.00	Cameo		0.00	0.00
9,327.06	9,171.00	Rollins		0.00	0.00