

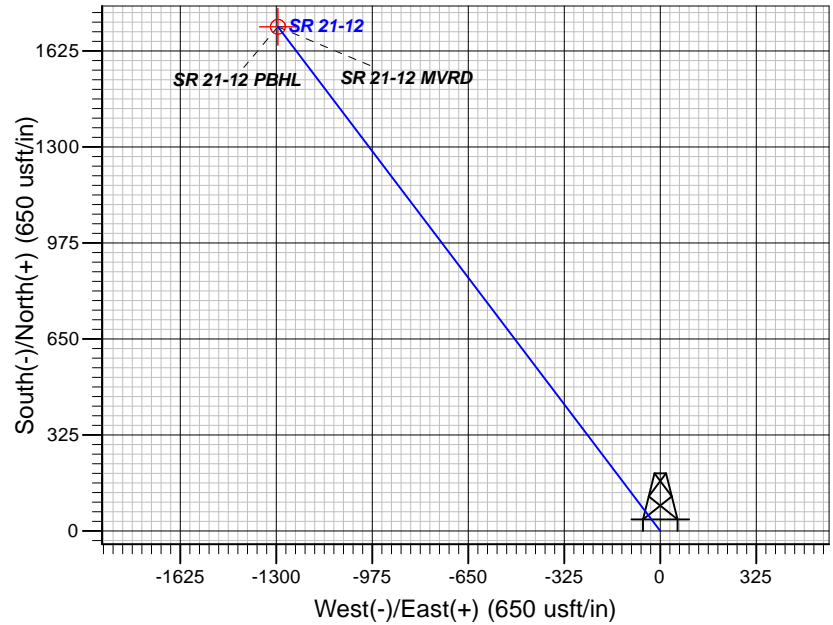
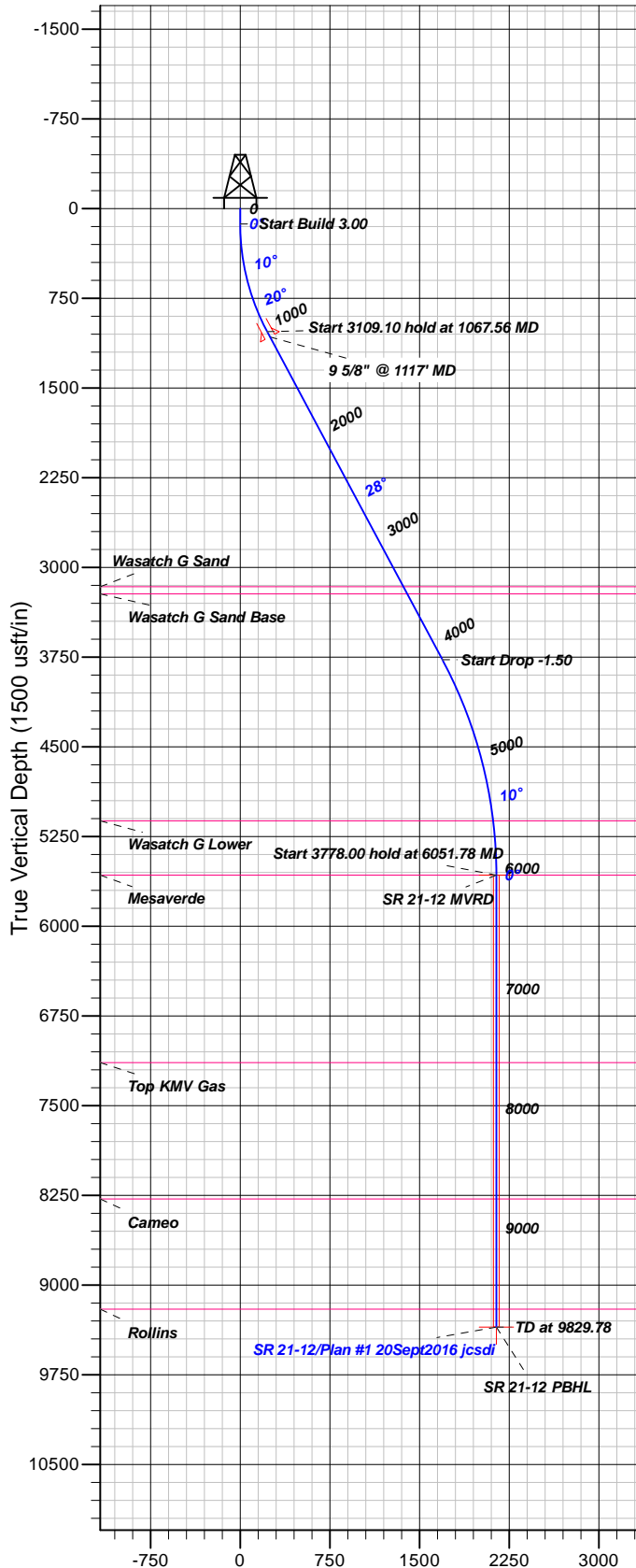
Well Details: SR 21-12

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599255.60	2341059.70	39.4554877	-107.8339213	B1

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
3161.00	3483.52	Wasatch G Sand
3221.00	3551.55	Wasatch G Sand Base
5118.00	5595.70	Wasatch G Lower
5573.00	6051.78	Mesaverde
7141.00	7619.78	Top KMV Gas
8281.00	8759.78	Cameo
9201.00	9679.78	Rollins

Plan: Plan #1 20Sept2016 jcsdi

13:14, 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
1073.96	1117.00	9 5/8" @ 1117' 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	1067.56	28.13	322.82	1030.36	179.69	-136.31	3.00	322.82	225.54	
4	4176.66	28.13	322.82	3772.29	1347.42	-1022.15	0.00	0.00	1691.25	
5	6051.78	0.00	0.00	5573.00	1706.80	-1294.77	1.50	180.00	2142.34	SR 21-12 MVRD
6	9829.78	0.00	0.00	9351.00	1706.80	-1294.77	0.00	0.00	2142.34	SR 21-12 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 21-12 MVRD	5573.00	1706.80	-1294.77	1600995.10	2339809.20	39.4601736	-107.8385071	Circle (Radius: 25.00)
- plan hits target center								
SR 21-12 PBHL	9351.00	1706.80	-1294.77	1600995.10	2339809.20	39.4601736	-107.8385071	Point
- plan hits target center								



TEP Rocky Mountain LLC

Garfield County, CO NAD83

RU 32-12 Pad

SR 21-12 - Slot B1

OH

Plan: Plan #1 20Sept2016 jcsdi

Standard Planning Report

20 September, 2016



Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 21-12 - Slot B1
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 21-12	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 21-12 - Slot B1			
Well Position	+N/-S	2.55 usft	Northing:	1,599,255.60 usft
	+E/-W	9.64 usft	Easting:	2,341,059.70 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	322.82

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	
1,067.56	28.13	322.82	1,030.36	179.69	-136.31	3.00	3.00	0.00	322.82	
4,176.66	28.13	322.82	3,772.29	1,347.42	-1,022.15	0.00	0.00	0.00	0.00	
6,051.78	0.00	0.00	5,573.00	1,706.80	-1,294.77	1.50	-1.50	0.00	180.00	SR 21-12 MVRD
9,829.78	0.00	0.00	9,351.00	1,706.80	-1,294.77	0.00	0.00	0.00	0.00	SR 21-12 PBHL

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 21-12 - Slot B1
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 21-12	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	322.82	199.98	1.02	-0.78	1.28	3.00	3.00	0.00	
300.00	5.10	322.82	299.78	6.02	-4.57	7.56	3.00	3.00	0.00	
400.00	8.10	322.82	399.10	15.18	-11.52	19.05	3.00	3.00	0.00	
500.00	11.10	322.82	497.69	28.46	-21.59	35.73	3.00	3.00	0.00	
600.00	14.10	322.82	595.27	45.84	-34.78	57.54	3.00	3.00	0.00	
700.00	17.10	322.82	691.58	67.26	-51.03	84.43	3.00	3.00	0.00	
800.00	20.10	322.82	786.34	92.67	-70.30	116.32	3.00	3.00	0.00	
900.00	23.10	322.82	879.31	122.00	-92.55	153.13	3.00	3.00	0.00	
1,000.00	26.10	322.82	970.22	155.16	-117.70	194.75	3.00	3.00	0.00	
1,067.56	28.13	322.82	1,030.36	179.69	-136.31	225.54	3.00	3.00	0.00	
1,100.00	28.13	322.82	1,058.96	191.87	-145.55	240.84	0.00	0.00	0.00	
1,117.00	28.13	322.82	1,073.96	198.26	-150.40	248.85	0.00	0.00	0.00	
9 5/8" @ 1117' MD										
1,200.00	28.13	322.82	1,147.15	229.43	-174.05	287.98	0.00	0.00	0.00	
1,300.00	28.13	322.82	1,235.34	266.99	-202.54	335.12	0.00	0.00	0.00	
1,400.00	28.13	322.82	1,323.54	304.55	-231.03	382.26	0.00	0.00	0.00	
1,500.00	28.13	322.82	1,411.73	342.11	-259.52	429.41	0.00	0.00	0.00	
1,600.00	28.13	322.82	1,499.92	379.67	-288.01	476.55	0.00	0.00	0.00	
1,700.00	28.13	322.82	1,588.11	417.22	-316.50	523.69	0.00	0.00	0.00	
1,800.00	28.13	322.82	1,676.30	454.78	-345.00	570.83	0.00	0.00	0.00	
1,900.00	28.13	322.82	1,764.49	492.34	-373.49	617.98	0.00	0.00	0.00	
2,000.00	28.13	322.82	1,852.68	529.90	-401.98	665.12	0.00	0.00	0.00	
2,100.00	28.13	322.82	1,940.87	567.46	-430.47	712.26	0.00	0.00	0.00	
2,200.00	28.13	322.82	2,029.06	605.02	-458.96	759.40	0.00	0.00	0.00	
2,300.00	28.13	322.82	2,117.25	642.58	-487.45	806.55	0.00	0.00	0.00	
2,400.00	28.13	322.82	2,205.44	680.13	-515.95	853.69	0.00	0.00	0.00	
2,500.00	28.13	322.82	2,293.63	717.69	-544.44	900.83	0.00	0.00	0.00	
2,600.00	28.13	322.82	2,381.82	755.25	-572.93	947.97	0.00	0.00	0.00	
2,700.00	28.13	322.82	2,470.01	792.81	-601.42	995.12	0.00	0.00	0.00	
2,800.00	28.13	322.82	2,558.20	830.37	-629.91	1,042.26	0.00	0.00	0.00	
2,900.00	28.13	322.82	2,646.39	867.93	-658.41	1,089.40	0.00	0.00	0.00	
3,000.00	28.13	322.82	2,734.58	905.49	-686.90	1,136.54	0.00	0.00	0.00	
3,100.00	28.13	322.82	2,822.78	943.04	-715.39	1,183.69	0.00	0.00	0.00	
3,200.00	28.13	322.82	2,910.97	980.60	-743.88	1,230.83	0.00	0.00	0.00	
3,300.00	28.13	322.82	2,999.16	1,018.16	-772.37	1,277.97	0.00	0.00	0.00	
3,400.00	28.13	322.82	3,087.35	1,055.72	-800.86	1,325.11	0.00	0.00	0.00	
3,483.52	28.13	322.82	3,161.00	1,087.09	-824.66	1,364.49	0.00	0.00	0.00	
Wasatch G Sand										
3,500.00	28.13	322.82	3,175.54	1,093.28	-829.36	1,372.26	0.00	0.00	0.00	
3,551.55	28.13	322.82	3,221.00	1,112.64	-844.04	1,396.56	0.00	0.00	0.00	
Wasatch G Sand Base										
3,600.00	28.13	322.82	3,263.73	1,130.84	-857.85	1,419.40	0.00	0.00	0.00	
3,700.00	28.13	322.82	3,351.92	1,168.40	-886.34	1,466.54	0.00	0.00	0.00	
3,800.00	28.13	322.82	3,440.11	1,205.95	-914.83	1,513.68	0.00	0.00	0.00	
3,900.00	28.13	322.82	3,528.30	1,243.51	-943.32	1,560.83	0.00	0.00	0.00	
4,000.00	28.13	322.82	3,616.49	1,281.07	-971.81	1,607.97	0.00	0.00	0.00	
4,100.00	28.13	322.82	3,704.68	1,318.63	-1,000.31	1,655.11	0.00	0.00	0.00	
4,176.66	28.13	322.82	3,772.29	1,347.42	-1,022.15	1,691.25	0.00	0.00	0.00	
4,200.00	27.78	322.82	3,792.90	1,356.14	-1,028.76	1,702.19	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 21-12	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	26.28	322.82	3,881.98	1,392.34	-1,056.22	1,747.63	1.50	-1.50	0.00
4,400.00	24.78	322.82	3,972.22	1,426.67	-1,082.27	1,790.72	1.50	-1.50	0.00
4,500.00	23.28	322.82	4,063.55	1,459.11	-1,106.87	1,831.44	1.50	-1.50	0.00
4,600.00	21.78	322.82	4,155.92	1,489.63	-1,130.03	1,869.75	1.50	-1.50	0.00
4,700.00	20.28	322.82	4,249.26	1,518.22	-1,151.71	1,905.63	1.50	-1.50	0.00
4,800.00	18.78	322.82	4,343.50	1,544.85	-1,171.91	1,939.05	1.50	-1.50	0.00
4,900.00	17.28	322.82	4,438.59	1,569.50	-1,190.61	1,970.00	1.50	-1.50	0.00
5,000.00	15.78	322.82	4,534.46	1,592.16	-1,207.81	1,998.44	1.50	-1.50	0.00
5,100.00	14.28	322.82	4,631.03	1,612.82	-1,223.47	2,024.37	1.50	-1.50	0.00
5,200.00	12.78	322.82	4,728.26	1,631.45	-1,237.61	2,047.76	1.50	-1.50	0.00
5,300.00	11.28	322.82	4,826.06	1,648.05	-1,250.20	2,068.59	1.50	-1.50	0.00
5,400.00	9.78	322.82	4,924.37	1,662.61	-1,261.24	2,086.86	1.50	-1.50	0.00
5,500.00	8.28	322.82	5,023.13	1,675.11	-1,270.73	2,102.55	1.50	-1.50	0.00
5,595.70	6.84	322.82	5,118.00	1,685.14	-1,278.34	2,115.14	1.50	-1.50	0.00
Wasatch G Lower									
5,600.00	6.78	322.82	5,122.27	1,685.54	-1,278.64	2,115.65	1.50	-1.50	0.00
5,700.00	5.28	322.82	5,221.71	1,693.91	-1,284.99	2,126.15	1.50	-1.50	0.00
5,800.00	3.78	322.82	5,321.40	1,700.19	-1,289.76	2,134.04	1.50	-1.50	0.00
5,900.00	2.28	322.82	5,421.26	1,704.40	-1,292.95	2,139.32	1.50	-1.50	0.00
6,000.00	0.78	322.82	5,521.22	1,706.52	-1,294.56	2,141.99	1.50	-1.50	0.00
6,051.78	0.00	0.00	5,573.00	1,706.80	-1,294.77	2,142.34	1.50	-1.50	71.81
Mesaverde - SR 21-12 MVRD									
6,100.00	0.00	0.00	5,621.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,200.00	0.00	0.00	5,721.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,300.00	0.00	0.00	5,821.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,400.00	0.00	0.00	5,921.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,500.00	0.00	0.00	6,021.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,600.00	0.00	0.00	6,121.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,700.00	0.00	0.00	6,221.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,800.00	0.00	0.00	6,321.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
6,900.00	0.00	0.00	6,421.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,000.00	0.00	0.00	6,521.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,100.00	0.00	0.00	6,621.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,200.00	0.00	0.00	6,721.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,300.00	0.00	0.00	6,821.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,400.00	0.00	0.00	6,921.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,500.00	0.00	0.00	7,021.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,600.00	0.00	0.00	7,121.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,619.78	0.00	0.00	7,141.00	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
Top KMV Gas									
7,700.00	0.00	0.00	7,221.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,800.00	0.00	0.00	7,321.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
7,900.00	0.00	0.00	7,421.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,000.00	0.00	0.00	7,521.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,100.00	0.00	0.00	7,621.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,200.00	0.00	0.00	7,721.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,300.00	0.00	0.00	7,821.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,400.00	0.00	0.00	7,921.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,500.00	0.00	0.00	8,021.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,600.00	0.00	0.00	8,121.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,700.00	0.00	0.00	8,221.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	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 21-12	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)
8,759.78	0.00	0.00	8,281.00	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
Cameo									
8,800.00	0.00	0.00	8,321.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
8,900.00	0.00	0.00	8,421.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,000.00	0.00	0.00	8,521.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,100.00	0.00	0.00	8,621.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,200.00	0.00	0.00	8,721.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,300.00	0.00	0.00	8,821.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,400.00	0.00	0.00	8,921.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,500.00	0.00	0.00	9,021.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,600.00	0.00	0.00	9,121.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,679.78	0.00	0.00	9,201.00	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
Rollins									
9,700.00	0.00	0.00	9,221.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,800.00	0.00	0.00	9,321.22	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
9,829.78	0.00	0.00	9,351.00	1,706.80	-1,294.77	2,142.34	0.00	0.00	0.00
SR 21-12 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 21-12 MVRD	0.00	0.00	5,573.00	1,706.80	-1,294.77	1,600,995.10	2,339,809.20	39.4601737	-107.8385071
- plan hits target center									
- Circle (radius 25.00)									
SR 21-12 PBHL	0.00	0.00	9,351.00	1,706.80	-1,294.77	1,600,995.10	2,339,809.20	39.4601737	-107.8385071
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,117.00	1,073.96	9 5/8" @ 1117' MD	9.62	9.62	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well SR 21-12 - Slot B1
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 21-12	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 20Sept2016 jcsdi		

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	3,483.52	3,161.00	Wasatch G Sand		0.00	0.00
	3,551.55	3,221.00	Wasatch G Sand Base		0.00	0.00
	5,595.70	5,118.00	Wasatch G Lower		0.00	0.00
	6,051.78	5,573.00	Mesaverde		0.00	0.00
	7,619.78	7,141.00	Top KMV Gas		0.00	0.00
	8,759.78	8,281.00	Cameo		0.00	0.00
	9,679.78	9,201.00	Rollins		0.00	0.00