

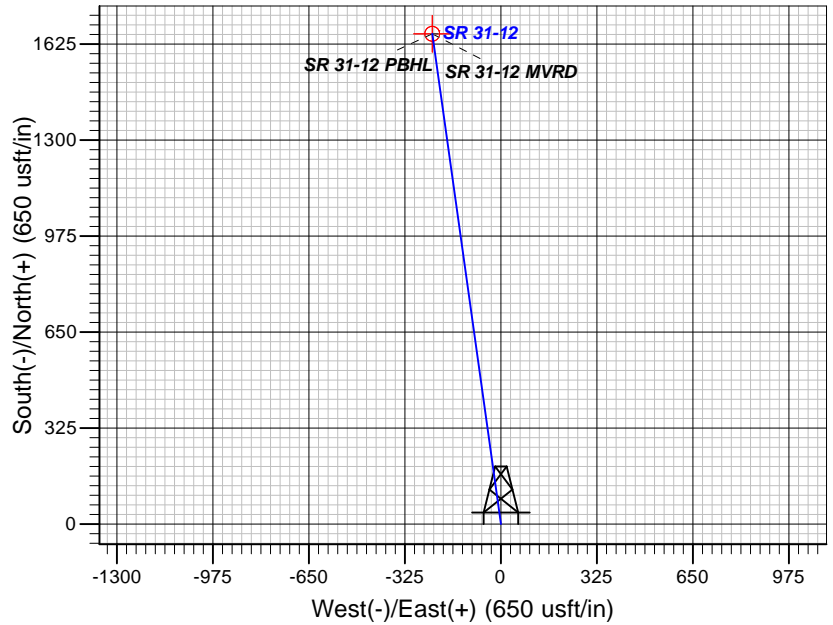
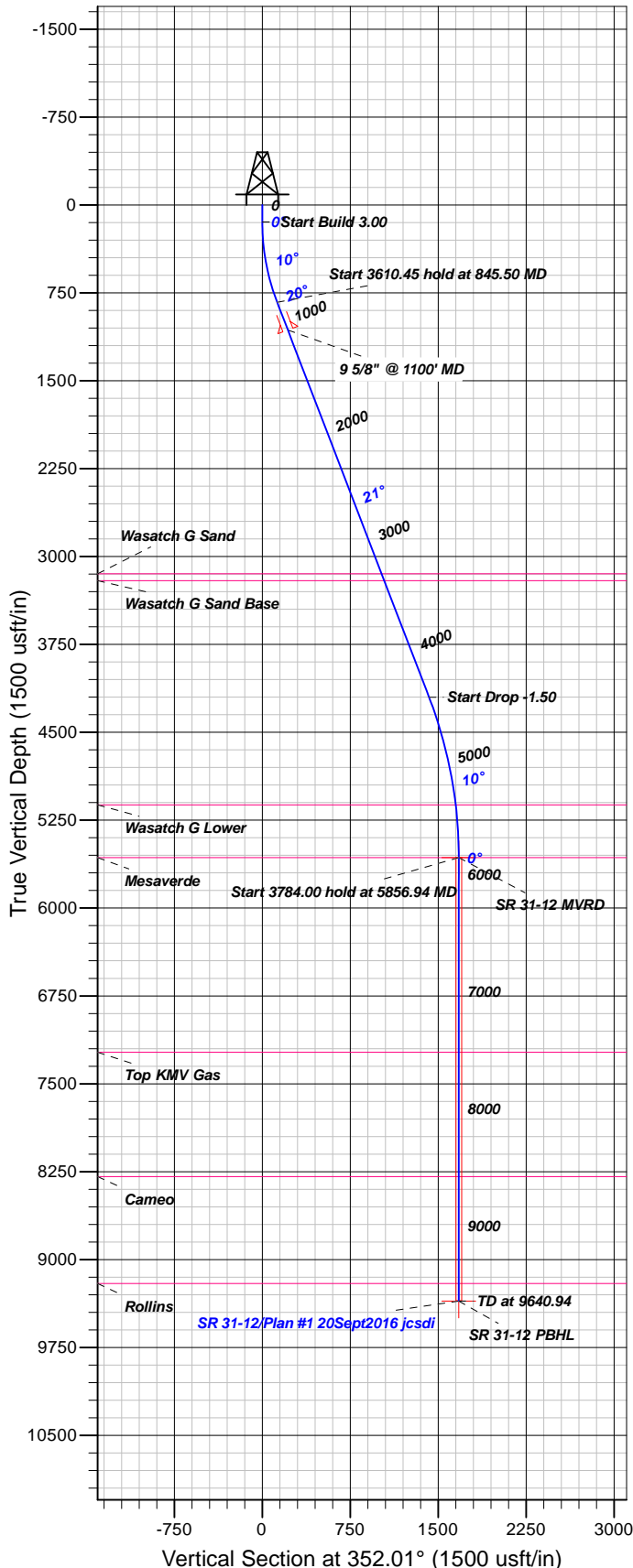
## Well Details: SR 31-12

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1599248.30	2341061.40	39.4554678	-107.8339146	B2

**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

TVDPath	MDPath	Formation
3147.00	3327.70	Wasatch G Sand
3207.00	3391.97	Wasatch G Sand Base
5120.00	5405.90	Wasatch G Lower
5570.00	5856.94	Mesaverde
7231.00	7517.94	Top KMV Gas
8293.00	8579.94	Cameo
9204.00	9490.94	Rollins

Plan: Plan #1 20Sept2016 jcsdi

8:45, 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
1067.47	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	845.50	21.01	352.01	829.90	125.80	-17.66	3.00	352.01	127.03	
4	4455.95	21.01	352.01	4200.21	1407.97	-197.68	0.00	0.00	1421.78	
5	5856.94	0.00	0.00	5570.00	1659.56	-233.01	1.50	180.00	1675.84	SR 31-12 MVRD
6	9640.94	0.00	0.00	9354.00	1659.56	-233.01	0.00	0.00	1675.84	SR 31-12 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 31-12 MVRD	5570.00	1659.56	-233.01	1600913.30	2340871.10	39.4600241	-107.8347399	Circle (Radius: 25.00)
- plan hits target center								
SR 31-12 PBHL	9354.00	1659.56	-233.01	1600913.30	2340871.10	39.4600241	-107.8347399	Point
- plan hits target center								



## **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RU 32-12 Pad**

**SR 31-12 - Slot B2**

**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 31-12 - Slot B2
<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 31-12	<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 31-12 - Slot B2			
<b>Well Position</b>	<b>+N/-S</b>	-4.71 usft	<b>Northing:</b>	1,599,248.30 usft
	<b>+E/-W</b>	11.52 usft	<b>Easting:</b>	2,341,061.40 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	352.01

<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	
845.50	21.01	352.01	829.90	125.80	-17.66	3.00	3.00	0.00	352.01	
4,455.95	21.01	352.01	4,200.21	1,407.97	-197.68	0.00	0.00	0.00	0.00	
5,856.94	0.00	0.00	5,570.00	1,659.56	-233.01	1.50	-1.50	0.00	180.00	SR 31-12 MVRD
9,640.94	0.00	0.00	9,354.00	1,659.56	-233.01	0.00	0.00	0.00	0.00	SR 31-12 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 31-12 - Slot B2
<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 31-12	<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	352.01	199.99	0.78	-0.11	0.79	3.00	3.00	0.00	
300.00	4.65	352.01	299.83	6.23	-0.87	6.29	3.00	3.00	0.00	
400.00	7.65	352.01	399.24	16.83	-2.36	17.00	3.00	3.00	0.00	
500.00	10.65	352.01	497.96	32.58	-4.57	32.90	3.00	3.00	0.00	
600.00	13.65	352.01	595.71	53.42	-7.50	53.94	3.00	3.00	0.00	
700.00	16.65	352.01	692.22	79.30	-11.13	80.07	3.00	3.00	0.00	
800.00	19.65	352.01	787.24	110.14	-15.46	111.22	3.00	3.00	0.00	
845.50	21.01	352.01	829.90	125.80	-17.66	127.03	3.00	3.00	0.00	
900.00	21.01	352.01	880.77	145.15	-20.38	146.58	0.00	0.00	0.00	
1,000.00	21.01	352.01	974.12	180.66	-25.37	182.44	0.00	0.00	0.00	
1,100.00	21.01	352.01	1,067.47	216.18	-30.35	218.30	0.00	0.00	0.00	
9 5/8" @ 1100' MD										
1,200.00	21.01	352.01	1,160.82	251.69	-35.34	254.16	0.00	0.00	0.00	
1,300.00	21.01	352.01	1,254.17	287.20	-40.32	290.02	0.00	0.00	0.00	
1,400.00	21.01	352.01	1,347.52	322.72	-45.31	325.88	0.00	0.00	0.00	
1,500.00	21.01	352.01	1,440.87	358.23	-50.30	361.74	0.00	0.00	0.00	
1,600.00	21.01	352.01	1,534.22	393.74	-55.28	397.60	0.00	0.00	0.00	
1,700.00	21.01	352.01	1,627.56	429.25	-60.27	433.46	0.00	0.00	0.00	
1,800.00	21.01	352.01	1,720.91	464.77	-65.25	469.33	0.00	0.00	0.00	
1,900.00	21.01	352.01	1,814.26	500.28	-70.24	505.19	0.00	0.00	0.00	
2,000.00	21.01	352.01	1,907.61	535.79	-75.23	541.05	0.00	0.00	0.00	
2,100.00	21.01	352.01	2,000.96	571.31	-80.21	576.91	0.00	0.00	0.00	
2,200.00	21.01	352.01	2,094.31	606.82	-85.20	612.77	0.00	0.00	0.00	
2,300.00	21.01	352.01	2,187.66	642.33	-90.19	648.63	0.00	0.00	0.00	
2,400.00	21.01	352.01	2,281.00	677.84	-95.17	684.49	0.00	0.00	0.00	
2,500.00	21.01	352.01	2,374.35	713.36	-100.16	720.35	0.00	0.00	0.00	
2,600.00	21.01	352.01	2,467.70	748.87	-105.14	756.21	0.00	0.00	0.00	
2,700.00	21.01	352.01	2,561.05	784.38	-110.13	792.08	0.00	0.00	0.00	
2,800.00	21.01	352.01	2,654.40	819.90	-115.12	827.94	0.00	0.00	0.00	
2,900.00	21.01	352.01	2,747.75	855.41	-120.10	863.80	0.00	0.00	0.00	
3,000.00	21.01	352.01	2,841.10	890.92	-125.09	899.66	0.00	0.00	0.00	
3,100.00	21.01	352.01	2,934.45	926.43	-130.07	935.52	0.00	0.00	0.00	
3,200.00	21.01	352.01	3,027.79	961.95	-135.06	971.38	0.00	0.00	0.00	
3,300.00	21.01	352.01	3,121.14	997.46	-140.05	1,007.24	0.00	0.00	0.00	
3,327.70	21.01	352.01	3,147.00	1,007.30	-141.43	1,017.18	0.00	0.00	0.00	
Wasatch G Sand										
3,391.97	21.01	352.01	3,207.00	1,030.12	-144.63	1,040.23	0.00	0.00	0.00	
Wasatch G Sand Base										
3,400.00	21.01	352.01	3,214.49	1,032.97	-145.03	1,043.10	0.00	0.00	0.00	
3,500.00	21.01	352.01	3,307.84	1,068.48	-150.02	1,078.96	0.00	0.00	0.00	
3,600.00	21.01	352.01	3,401.19	1,104.00	-155.00	1,114.83	0.00	0.00	0.00	
3,700.00	21.01	352.01	3,494.54	1,139.51	-159.99	1,150.69	0.00	0.00	0.00	
3,800.00	21.01	352.01	3,587.89	1,175.02	-164.98	1,186.55	0.00	0.00	0.00	
3,900.00	21.01	352.01	3,681.24	1,210.54	-169.96	1,222.41	0.00	0.00	0.00	
4,000.00	21.01	352.01	3,774.58	1,246.05	-174.95	1,258.27	0.00	0.00	0.00	
4,100.00	21.01	352.01	3,867.93	1,281.56	-179.94	1,294.13	0.00	0.00	0.00	
4,200.00	21.01	352.01	3,961.28	1,317.07	-184.92	1,329.99	0.00	0.00	0.00	
4,300.00	21.01	352.01	4,054.63	1,352.59	-189.91	1,365.85	0.00	0.00	0.00	
4,400.00	21.01	352.01	4,147.98	1,388.10	-194.89	1,401.72	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 31-12 - Slot B2
<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 31-12	<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)
4,455.95	21.01	352.01	4,200.21	1,407.97	-197.68	1,421.78	0.00	0.00	0.00
4,500.00	20.35	352.01	4,241.42	1,423.38	-199.85	1,437.34	1.50	-1.50	0.00
4,600.00	18.85	352.01	4,335.62	1,456.60	-204.51	1,470.89	1.50	-1.50	0.00
4,700.00	17.35	352.01	4,430.66	1,487.37	-208.83	1,501.96	1.50	-1.50	0.00
4,800.00	15.85	352.01	4,526.49	1,515.67	-212.81	1,530.54	1.50	-1.50	0.00
4,900.00	14.35	352.01	4,623.03	1,541.48	-216.43	1,556.60	1.50	-1.50	0.00
5,000.00	12.85	352.01	4,720.23	1,564.77	-219.70	1,580.12	1.50	-1.50	0.00
5,100.00	11.35	352.01	4,818.00	1,585.53	-222.61	1,601.08	1.50	-1.50	0.00
5,200.00	9.85	352.01	4,916.29	1,603.76	-225.17	1,619.49	1.50	-1.50	0.00
5,300.00	8.35	352.01	5,015.03	1,619.42	-227.37	1,635.31	1.50	-1.50	0.00
5,400.00	6.85	352.01	5,114.15	1,632.53	-229.21	1,648.54	1.50	-1.50	0.00
5,405.90	6.77	352.01	5,120.00	1,633.22	-229.31	1,649.24	1.50	-1.50	0.00
<b>Wasatch G Lower</b>									
5,500.00	5.35	352.01	5,213.58	1,643.06	-230.69	1,659.17	1.50	-1.50	0.00
5,600.00	3.85	352.01	5,313.25	1,651.01	-231.81	1,667.20	1.50	-1.50	0.00
5,700.00	2.35	352.01	5,413.10	1,656.37	-232.56	1,672.62	1.50	-1.50	0.00
5,800.00	0.85	352.01	5,513.06	1,659.14	-232.95	1,675.42	1.50	-1.50	0.00
5,856.94	0.00	0.00	5,570.00	1,659.56	-233.01	1,675.84	1.50	-1.50	14.04
<b>Mesaverde - SR 31-12 MVRD</b>									
5,900.00	0.00	0.00	5,613.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,000.00	0.00	0.00	5,713.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,100.00	0.00	0.00	5,813.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,200.00	0.00	0.00	5,913.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,300.00	0.00	0.00	6,013.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,400.00	0.00	0.00	6,113.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,500.00	0.00	0.00	6,213.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,600.00	0.00	0.00	6,313.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,700.00	0.00	0.00	6,413.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,800.00	0.00	0.00	6,513.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
6,900.00	0.00	0.00	6,613.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,000.00	0.00	0.00	6,713.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,100.00	0.00	0.00	6,813.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,200.00	0.00	0.00	6,913.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,300.00	0.00	0.00	7,013.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,400.00	0.00	0.00	7,113.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,500.00	0.00	0.00	7,213.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,517.94	0.00	0.00	7,231.00	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
<b>Top KMV Gas</b>									
7,600.00	0.00	0.00	7,313.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,700.00	0.00	0.00	7,413.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,800.00	0.00	0.00	7,513.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
7,900.00	0.00	0.00	7,613.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
8,000.00	0.00	0.00	7,713.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
8,100.00	0.00	0.00	7,813.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
8,200.00	0.00	0.00	7,913.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
8,300.00	0.00	0.00	8,013.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
8,400.00	0.00	0.00	8,113.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
8,500.00	0.00	0.00	8,213.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
8,579.94	0.00	0.00	8,293.00	1,659.56	-233.01	1,675.84	0.00	0.00	0.00
<b>Cameo</b>									
8,600.00	0.00	0.00	8,313.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 31-12 - Slot B2
<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 31-12	<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	8,413.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,513.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,613.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,713.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,813.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,913.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,013.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,113.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,490.94	0.00	0.00	9,204.00	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
Rollins										
9,500.00	0.00	0.00	9,213.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,313.06	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
9,640.94	0.00	0.00	9,354.00	1,659.56	-233.01	1,675.84	0.00	0.00	0.00	
SR 31-12 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 31-12 MVRD	0.00	0.00	5,570.00	1,659.56	-233.01	1,600,913.30	2,340,871.10	39.4600241	-107.8347399	
- plan hits target center										
- Circle (radius 25.00)										
SR 31-12 PBHL	0.00	0.00	9,354.00	1,659.56	-233.01	1,600,913.30	2,340,871.10	39.4600241	-107.8347399	
- plan hits target center										
- Point										

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)		
1,100.00	1,067.47	9 5/8" @ 1100' MD	9.62	9.62		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,327.70	3,147.00	Wasatch G Sand		0.00	0.00	
3,391.97	3,207.00	Wasatch G Sand Base		0.00	0.00	
5,405.90	5,120.00	Wasatch G Lower		0.00	0.00	
5,856.94	5,570.00	Mesaverde		0.00	0.00	
7,517.94	7,231.00	Top KMV Gas		0.00	0.00	
8,579.94	8,293.00	Cameo		0.00	0.00	
9,490.94	9,204.00	Rollins		0.00	0.00	