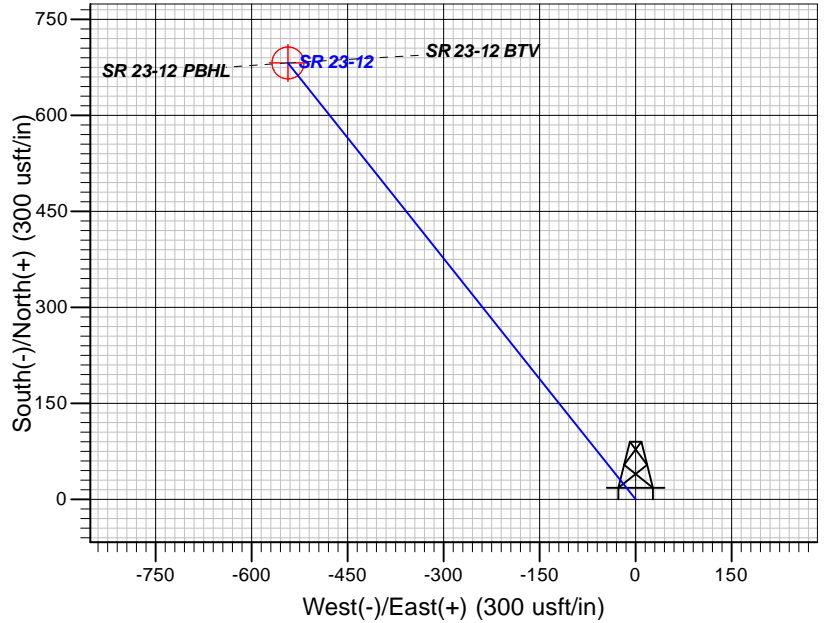
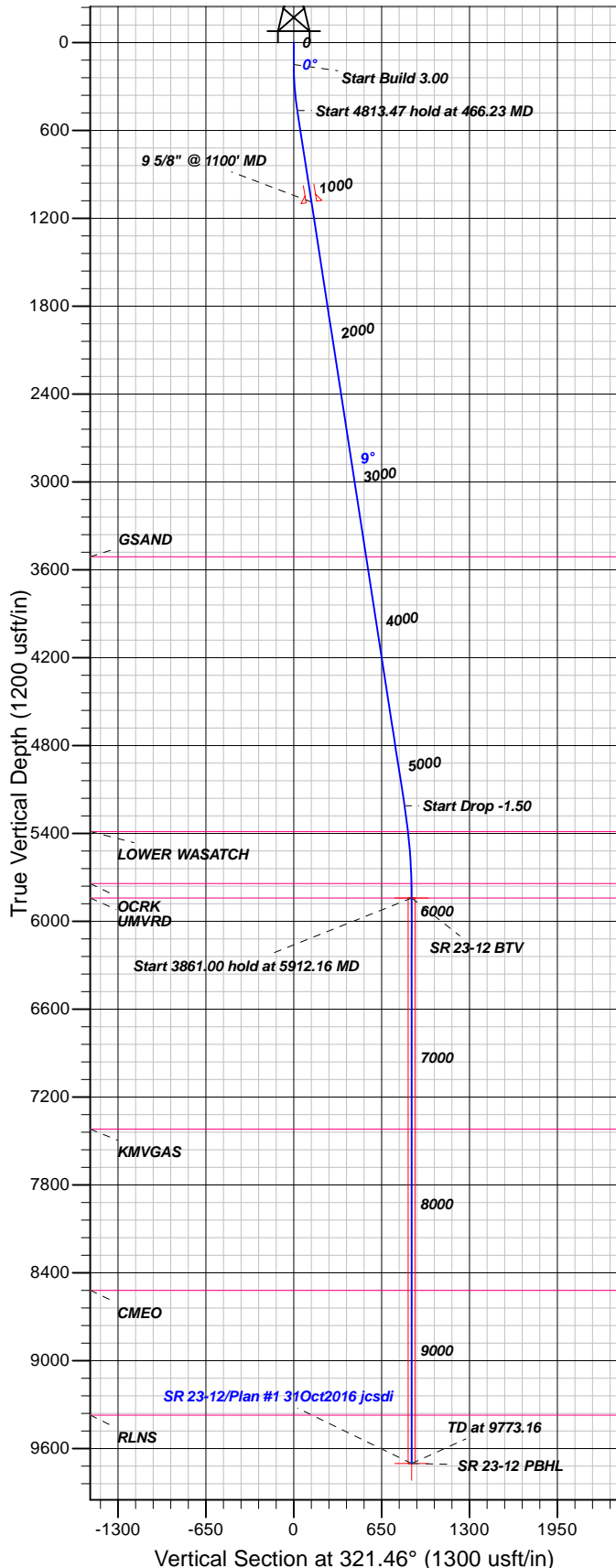


## Well Details: SR 23-12

GL 7478' & RKB 24' @ 7502.00usft (H&P 318)  
+N/-S 0.00 +E/-W 0.00 Northing 1597710.00 Easting 2340241.80 Latitude 39.4511880 Longitude -107.8366762 Slot SR 23-12 (B2)

T M Azimuths to True North  
Magnetic North: 9.59°  
Magnetic Field  
Strength: 51582.5snT  
Dip Angle: 65.62°  
Date: 10/31/2016  
Model: BGGM2016



### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3512.00	3555.70	GSAND
5387.00	5456.08	LOWER WASATCH
5742.00	5812.15	OCRK
5842.00	5912.16	UMVRD
7420.00	7490.16	KMVGAS
8521.00	8591.16	CMEQ
9373.00	9443.16	RLNS

Plan: Plan #1 31Oct2016 jcsdi

9:44, November 03 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
1089.89	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	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	466.23	9.49	321.46	464.79	20.43	-16.27	3.00	321.46	26.12	
4	5279.70	9.49	321.46	5212.43	641.00	-510.57	0.00	0.00	819.48	
5	5912.16	0.00	0.00	5842.00	681.86	-543.12	1.50	180.00	871.73	SR 23-12 BTV
6	9773.16	0.00	0.00	9703.00	681.86	-543.12	0.00	0.00	871.73	SR 23-12 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
SR 23-12 BTV	5842.00	681.86	-543.12	1598405.60	2339716.40	39.4530600	-107.8385996	Circle (Radius: 25.00)
- plan hits target center								
SR 23-12 PBHL	9703.00	681.86	-543.12	1598405.60	2339716.40	39.4530600	-107.8385996	Point
- plan hits target center								



## **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**SR 23-12 Pad**

**SR 23-12 - Slot SR 23-12 (B2)**

**OH**

**Plan: Plan #1 31Oct2016 jcsdi**

## **Standard Planning Report**

**03 November, 2016**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 23-12 - Slot SR 23-12 (B2)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Site:</b>	SR 23-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 23-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 31Oct2016 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>	SR 23-12 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,597,713.40 usft	<b>Latitude:</b> 39.4511965
<b>From:</b> Map		<b>Easting:</b>	2,340,229.70 usft	<b>Longitude:</b> -107.8367194
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b> -1.47 °

<b>Well</b>	SR 23-12 - Slot SR 23-12 (B2)			
<b>Well Position</b>	<b>+N/-S</b>	-3.09 usft	<b>Northing:</b>	1,597,710.00 usft
	<b>+E/-W</b>	12.18 usft	<b>Easting:</b>	2,340,241.80 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	7,478.00 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	10/31/2016	9.59	65.62	51,582

<b>Design</b>	Plan #1 31Oct2016 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	321.46

<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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
466.23	9.49	321.46	464.79	20.43	-16.27	3.00	3.00	0.00	321.46	
5,279.70	9.49	321.46	5,212.43	641.00	-510.57	0.00	0.00	0.00	0.00	
5,912.16	0.00	0.00	5,842.00	681.86	-543.12	1.50	-1.50	0.00	180.00	SR 23-12 BTV
9,773.16	0.00	0.00	9,703.00	681.86	-543.12	0.00	0.00	0.00	0.00	SR 23-12 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 23-12 - Slot SR 23-12 (B2)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Site:</b>	SR 23-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 23-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 31Oct2016 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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.50	321.46	199.99	0.51	-0.41	0.65	3.00	3.00	0.00	
300.00	4.50	321.46	299.85	4.61	-3.67	5.89	3.00	3.00	0.00	
400.00	7.50	321.46	399.29	12.78	-10.18	16.34	3.00	3.00	0.00	
466.23	9.49	321.46	464.79	20.43	-16.27	26.12	3.00	3.00	0.00	
500.00	9.49	321.46	498.10	24.79	-19.74	31.69	0.00	0.00	0.00	
600.00	9.49	321.46	596.73	37.68	-30.01	48.17	0.00	0.00	0.00	
700.00	9.49	321.46	695.36	50.57	-40.28	64.65	0.00	0.00	0.00	
800.00	9.49	321.46	793.99	63.46	-50.55	81.13	0.00	0.00	0.00	
900.00	9.49	321.46	892.62	76.35	-60.82	97.62	0.00	0.00	0.00	
1,000.00	9.49	321.46	991.26	89.25	-71.09	114.10	0.00	0.00	0.00	
1,100.00	9.49	321.46	1,089.89	102.14	-81.36	130.58	0.00	0.00	0.00	
9 5/8" @ 1100' MD										
1,200.00	9.49	321.46	1,188.52	115.03	-91.62	147.06	0.00	0.00	0.00	
1,300.00	9.49	321.46	1,287.15	127.92	-101.89	163.54	0.00	0.00	0.00	
1,400.00	9.49	321.46	1,385.79	140.82	-112.16	180.03	0.00	0.00	0.00	
1,500.00	9.49	321.46	1,484.42	153.71	-122.43	196.51	0.00	0.00	0.00	
1,600.00	9.49	321.46	1,583.05	166.60	-132.70	212.99	0.00	0.00	0.00	
1,700.00	9.49	321.46	1,681.68	179.49	-142.97	229.47	0.00	0.00	0.00	
1,800.00	9.49	321.46	1,780.32	192.38	-153.24	245.95	0.00	0.00	0.00	
1,900.00	9.49	321.46	1,878.95	205.28	-163.51	262.44	0.00	0.00	0.00	
2,000.00	9.49	321.46	1,977.58	218.17	-173.78	278.92	0.00	0.00	0.00	
2,100.00	9.49	321.46	2,076.21	231.06	-184.05	295.40	0.00	0.00	0.00	
2,200.00	9.49	321.46	2,174.85	243.95	-194.31	311.88	0.00	0.00	0.00	
2,300.00	9.49	321.46	2,273.48	256.85	-204.58	328.37	0.00	0.00	0.00	
2,400.00	9.49	321.46	2,372.11	269.74	-214.85	344.85	0.00	0.00	0.00	
2,500.00	9.49	321.46	2,470.74	282.63	-225.12	361.33	0.00	0.00	0.00	
2,600.00	9.49	321.46	2,569.37	295.52	-235.39	377.81	0.00	0.00	0.00	
2,700.00	9.49	321.46	2,668.01	308.41	-245.66	394.29	0.00	0.00	0.00	
2,800.00	9.49	321.46	2,766.64	321.31	-255.93	410.78	0.00	0.00	0.00	
2,900.00	9.49	321.46	2,865.27	334.20	-266.20	427.26	0.00	0.00	0.00	
3,000.00	9.49	321.46	2,963.90	347.09	-276.47	443.74	0.00	0.00	0.00	
3,100.00	9.49	321.46	3,062.54	359.98	-286.74	460.22	0.00	0.00	0.00	
3,200.00	9.49	321.46	3,161.17	372.88	-297.00	476.70	0.00	0.00	0.00	
3,300.00	9.49	321.46	3,259.80	385.77	-307.27	493.19	0.00	0.00	0.00	
3,400.00	9.49	321.46	3,358.43	398.66	-317.54	509.67	0.00	0.00	0.00	
3,500.00	9.49	321.46	3,457.07	411.55	-327.81	526.15	0.00	0.00	0.00	
3,555.70	9.49	321.46	3,512.00	418.73	-333.53	535.33	0.00	0.00	0.00	
GSAND										
3,600.00	9.49	321.46	3,555.70	424.44	-338.08	542.63	0.00	0.00	0.00	
3,700.00	9.49	321.46	3,654.33	437.34	-348.35	559.12	0.00	0.00	0.00	
3,800.00	9.49	321.46	3,752.96	450.23	-358.62	575.60	0.00	0.00	0.00	
3,900.00	9.49	321.46	3,851.59	463.12	-368.89	592.08	0.00	0.00	0.00	
4,000.00	9.49	321.46	3,950.23	476.01	-379.16	608.56	0.00	0.00	0.00	
4,100.00	9.49	321.46	4,048.86	488.91	-389.42	625.04	0.00	0.00	0.00	
4,200.00	9.49	321.46	4,147.49	501.80	-399.69	641.53	0.00	0.00	0.00	
4,300.00	9.49	321.46	4,246.12	514.69	-409.96	658.01	0.00	0.00	0.00	
4,400.00	9.49	321.46	4,344.76	527.58	-420.23	674.49	0.00	0.00	0.00	
4,500.00	9.49	321.46	4,443.39	540.47	-430.50	690.97	0.00	0.00	0.00	
4,600.00	9.49	321.46	4,542.02	553.37	-440.77	707.45	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 23-12 - Slot SR 23-12 (B2)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Site:</b>	SR 23-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 23-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 31Oct2016 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)
4,700.00	9.49	321.46	4,640.65	566.26	-451.04	723.94	0.00	0.00	0.00
4,800.00	9.49	321.46	4,739.29	579.15	-461.31	740.42	0.00	0.00	0.00
4,900.00	9.49	321.46	4,837.92	592.04	-471.58	756.90	0.00	0.00	0.00
5,000.00	9.49	321.46	4,936.55	604.94	-481.85	773.38	0.00	0.00	0.00
5,100.00	9.49	321.46	5,035.18	617.83	-492.11	789.87	0.00	0.00	0.00
5,200.00	9.49	321.46	5,133.82	630.72	-502.38	806.35	0.00	0.00	0.00
5,279.70	9.49	321.46	5,212.43	641.00	-510.57	819.48	0.00	0.00	0.00
5,300.00	9.18	321.46	5,232.46	643.57	-512.62	822.78	1.50	-1.50	0.00
5,400.00	7.68	321.46	5,331.37	655.04	-521.76	837.44	1.50	-1.50	0.00
5,456.08	6.84	321.46	5,387.00	660.58	-526.17	844.53	1.50	-1.50	0.00
LOWER WASATCH									
5,500.00	6.18	321.46	5,430.64	664.48	-529.28	849.51	1.50	-1.50	0.00
5,600.00	4.68	321.46	5,530.19	671.89	-535.17	858.98	1.50	-1.50	0.00
5,700.00	3.18	321.46	5,629.95	677.25	-539.45	865.83	1.50	-1.50	0.00
5,800.00	1.68	321.46	5,729.86	680.57	-542.09	870.08	1.50	-1.50	0.00
5,812.15	1.50	321.46	5,742.00	680.83	-542.30	870.42	1.50	-1.50	0.00
OCRK									
5,900.00	0.18	321.46	5,829.84	681.84	-543.10	871.71	1.50	-1.50	0.00
5,912.16	0.00	0.00	5,842.00	681.86	-543.12	871.73	1.50	-1.50	0.00
UMVRD - SR 23-12 BTV									
6,000.00	0.00	0.00	5,929.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,100.00	0.00	0.00	6,029.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,200.00	0.00	0.00	6,129.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,300.00	0.00	0.00	6,229.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,400.00	0.00	0.00	6,329.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,500.00	0.00	0.00	6,429.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,600.00	0.00	0.00	6,529.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,700.00	0.00	0.00	6,629.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,800.00	0.00	0.00	6,729.84	681.86	-543.12	871.73	0.00	0.00	0.00
6,900.00	0.00	0.00	6,829.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,000.00	0.00	0.00	6,929.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,100.00	0.00	0.00	7,029.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,200.00	0.00	0.00	7,129.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,300.00	0.00	0.00	7,229.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,400.00	0.00	0.00	7,329.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,490.16	0.00	0.00	7,420.00	681.86	-543.12	871.73	0.00	0.00	0.00
KMGAS									
7,500.00	0.00	0.00	7,429.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,600.00	0.00	0.00	7,529.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,700.00	0.00	0.00	7,629.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,800.00	0.00	0.00	7,729.84	681.86	-543.12	871.73	0.00	0.00	0.00
7,900.00	0.00	0.00	7,829.84	681.86	-543.12	871.73	0.00	0.00	0.00
8,000.00	0.00	0.00	7,929.84	681.86	-543.12	871.73	0.00	0.00	0.00
8,100.00	0.00	0.00	8,029.84	681.86	-543.12	871.73	0.00	0.00	0.00
8,200.00	0.00	0.00	8,129.84	681.86	-543.12	871.73	0.00	0.00	0.00
8,300.00	0.00	0.00	8,229.84	681.86	-543.12	871.73	0.00	0.00	0.00
8,400.00	0.00	0.00	8,329.84	681.86	-543.12	871.73	0.00	0.00	0.00
8,500.00	0.00	0.00	8,429.84	681.86	-543.12	871.73	0.00	0.00	0.00
8,591.16	0.00	0.00	8,521.00	681.86	-543.12	871.73	0.00	0.00	0.00
CMEO									
8,600.00	0.00	0.00	8,529.84	681.86	-543.12	871.73	0.00	0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 23-12 - Slot SR 23-12 (B2)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Site:</b>	SR 23-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 23-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 31Oct2016 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	8,629.84	681.86	-543.12	871.73	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,729.84	681.86	-543.12	871.73	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,829.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,929.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,029.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,129.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,229.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,329.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,443.16	0.00	0.00	9,373.00	681.86	-543.12	871.73	0.00	0.00	0.00	
RLNS										
9,500.00	0.00	0.00	9,429.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,529.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,629.84	681.86	-543.12	871.73	0.00	0.00	0.00	
9,773.16	0.00	0.00	9,703.00	681.86	-543.12	871.73	0.00	0.00	0.00	
SR 23-12 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 23-12 BTV	0.00	0.00	5,842.00	681.86	-543.12	1,598,405.60	2,339,716.40	39.4530601	-107.8385996
- plan hits target center									
- Circle (radius 25.00)									
SR 23-12 PBHL	0.00	0.00	9,703.00	681.86	-543.12	1,598,405.60	2,339,716.40	39.4530601	-107.8385996
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (in)	Hole Diameter (in)
1,100.00	1,089.89	9 5/8" @ 1100' MD		9.62	9.62

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,555.70	3,512.00	GSAND		0.00	0.00
5,456.08	5,387.00	LOWER WASATCH		0.00	0.00
5,812.15	5,742.00	OCRK		0.00	0.00
5,912.16	5,842.00	UMVRD		0.00	0.00
7,490.16	7,420.00	KMVGAS		0.00	0.00
8,591.16	8,521.00	CMEQ		0.00	0.00
9,443.16	9,373.00	RLNS		0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well SR 23-12 - Slot SR 23-12 (B2)
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7478' & RKB 24' @ 7502.00usft (H&P 318)
<b>Site:</b>	SR 23-12 Pad	<b>North Reference:</b>	True
<b>Well:</b>	SR 23-12	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 31Oct2016 jcsdi		