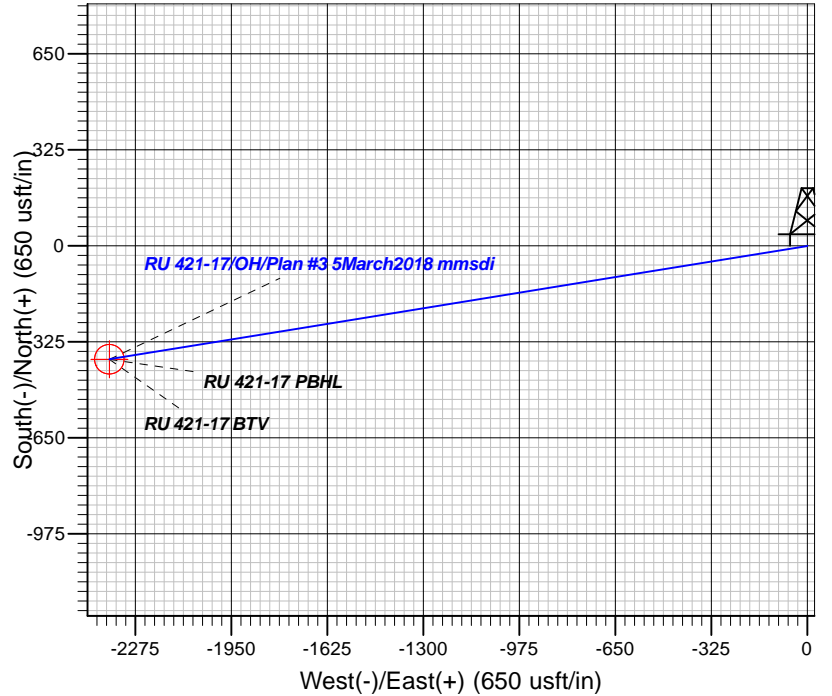
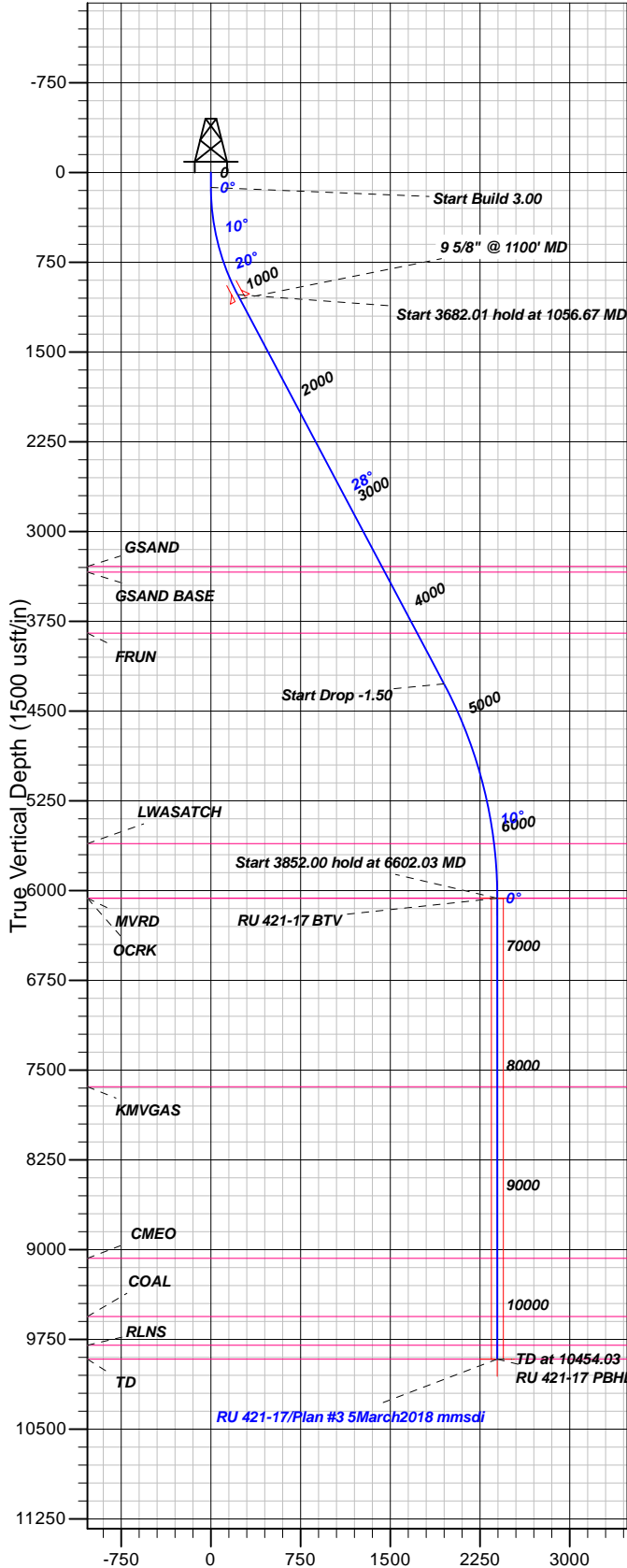


## Well Details: RU 421-17

GL 7859' & RKB 24' @ 7883.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1506965.30	2351766.00	39.4499508	-107.7958085	RU 421-17



## FORMATION TOP DETAILS

TVDPth	MDPath	Formation
3291.00	3627.37	GSAND
3340.00	3682.84	GSAND BASE
3850.00	4260.19	FRUN
5608.00	6145.95	LWASATCH
6063.00	6602.03	MVRD
6063.00	6602.03	OCRK
7639.00	8178.03	KMGAS
9073.00	9612.03	CMEO
9558.00	10097.03	COAL
9798.00	10337.03	RLNS
9915.00	10454.03	TD

Plan: Plan #3 5March2018 mmsdi

15:39, March 06 2018  
Created By: Mel Mireles

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
1058.43	1100.00	9 5/8" @ 1100' MD	9.62

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	125.00	0.00	0.00	125.00	0.00	0.00	0.00	0.00	0.00	
3	1056.67	27.95	260.78	1020.16	-35.70	-219.90	3.00	260.78	222.77	
4	4738.68	27.95	260.78	4272.68	-312.24	-1923.37	0.00	0.00	0.00	
5	6602.03	0.00	0.00	6063.00	-383.64	-2363.16	1.50	180.00	2394.10	RU 421-17 BTM
6	10454.03	0.00	0.00	9915.00	-383.64	-2363.16	0.00	0.00	2394.10	RU 421-17 PBHL

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
RU 421-17 BTM	6063.00	-383.64	-2363.16	1596641.50	2349394.80	39.4488972	-107.8041769	Circle (Radius: 50.00)
- plan hits target center								
RU 421-17 PBHL	9915.00	-383.64	-2363.16	1596641.50	2349394.80	39.4488972	-107.8041769	Point
- plan hits target center								



# **TEP Rocky Mountain LLC**

**Garfield County, CO NAD83**

**RU 31-17 Pad**

**RU 421-17 - Slot RU 421-17**

**OH**

**Plan: Plan #3 5March2018 mmsdi**

## **Standard Planning Report**

**06 March, 2018**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RU 421-17 - Slot RU 421-17
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Site:</b>	RU 31-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 421-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 5March2018 mmsdi		

<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 31-17 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,596,940.40 usft	<b>Latitude:</b> 39.4498852
<b>From:</b> Map		<b>Easting:</b>	2,351,805.70 usft	<b>Longitude:</b> -107.7956689
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b> -1.45 °

<b>Well</b>	RU 421-17 - Slot RU 421-17			
<b>Well Position</b>	<b>+N/-S</b> 23.91 usft	<b>Northing:</b>	1,596,965.30 usft	<b>Latitude:</b> 39.4499508
	<b>+E/-W</b> -39.42 usft	<b>Easting:</b>	2,351,766.90 usft	<b>Longitude:</b> -107.7958085
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b> 7,859.00 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>
	HDGM	2/9/2017	9.30	65.63	51,716

<b>Design</b>	Plan #3 5March2018 mmsdi			
<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	260.78

<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	
125.00	0.00	0.00	125.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,056.67	27.95	260.78	1,020.16	-35.70	-219.90	3.00	3.00	0.00	260.78	
4,738.68	27.95	260.78	4,272.68	-312.24	-1,923.37	0.00	0.00	0.00	0.00	
6,602.03	0.00	0.00	6,063.00	-383.64	-2,363.16	1.50	-1.50	0.00	180.00	RU 421-17 BTW
10,454.03	0.00	0.00	9,915.00	-383.64	-2,363.16	0.00	0.00	0.00	0.00	RU 421-17 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RU 421-17 - Slot RU 421-17
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Site:</b>	RU 31-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 421-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 5March2018 mmsdi		

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	
125.00	0.00	0.00	125.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 3.00										
200.00	2.25	260.78	199.98	-0.24	-1.45	1.47	3.00	3.00	0.00	
300.00	5.25	260.78	299.76	-1.28	-7.91	8.01	3.00	3.00	0.00	
400.00	8.25	260.78	399.05	-3.17	-19.51	19.76	3.00	3.00	0.00	
500.00	11.25	260.78	497.60	-5.88	-36.22	36.70	3.00	3.00	0.00	
600.00	14.25	260.78	595.12	-9.42	-58.01	58.76	3.00	3.00	0.00	
700.00	17.25	260.78	691.35	-13.77	-84.80	85.91	3.00	3.00	0.00	
800.00	20.25	260.78	786.03	-18.92	-116.52	118.05	3.00	3.00	0.00	
900.00	23.25	260.78	878.91	-24.85	-153.09	155.10	3.00	3.00	0.00	
1,000.00	26.25	260.78	969.71	-31.56	-194.41	196.96	3.00	3.00	0.00	
1,056.67	27.95	260.78	1,020.16	-35.70	-219.90	222.77	3.00	3.00	0.00	
Start 3682.01 hold at 1056.67 MD										
1,100.00	27.95	260.78	1,058.43	-38.95	-239.94	243.08	0.00	0.00	0.00	
9 5/8" @ 1100' MD										
1,200.00	27.95	260.78	1,146.77	-46.46	-286.21	289.95	0.00	0.00	0.00	
1,300.00	27.95	260.78	1,235.10	-53.97	-332.47	336.82	0.00	0.00	0.00	
1,400.00	27.95	260.78	1,323.44	-61.48	-378.74	383.69	0.00	0.00	0.00	
1,500.00	27.95	260.78	1,411.77	-68.99	-425.00	430.56	0.00	0.00	0.00	
1,600.00	27.95	260.78	1,500.11	-76.51	-471.26	477.43	0.00	0.00	0.00	
1,700.00	27.95	260.78	1,588.44	-84.02	-517.53	524.30	0.00	0.00	0.00	
1,800.00	27.95	260.78	1,676.78	-91.53	-563.79	571.18	0.00	0.00	0.00	
1,900.00	27.95	260.78	1,765.12	-99.04	-610.06	618.05	0.00	0.00	0.00	
2,000.00	27.95	260.78	1,853.45	-106.55	-656.32	664.92	0.00	0.00	0.00	
2,100.00	27.95	260.78	1,941.79	-114.06	-702.59	711.79	0.00	0.00	0.00	
2,200.00	27.95	260.78	2,030.12	-121.57	-748.85	758.66	0.00	0.00	0.00	
2,300.00	27.95	260.78	2,118.46	-129.08	-795.12	805.53	0.00	0.00	0.00	
2,400.00	27.95	260.78	2,206.79	-136.59	-841.38	852.40	0.00	0.00	0.00	
2,500.00	27.95	260.78	2,295.13	-144.10	-887.65	899.27	0.00	0.00	0.00	
2,600.00	27.95	260.78	2,383.46	-151.61	-933.91	946.14	0.00	0.00	0.00	
2,700.00	27.95	260.78	2,471.80	-159.12	-980.18	993.01	0.00	0.00	0.00	
2,800.00	27.95	260.78	2,560.14	-166.63	-1,026.44	1,039.88	0.00	0.00	0.00	
2,900.00	27.95	260.78	2,648.47	-174.14	-1,072.71	1,086.75	0.00	0.00	0.00	
3,000.00	27.95	260.78	2,736.81	-181.65	-1,118.97	1,133.62	0.00	0.00	0.00	
3,100.00	27.95	260.78	2,825.14	-189.16	-1,165.24	1,180.49	0.00	0.00	0.00	
3,200.00	27.95	260.78	2,913.48	-196.68	-1,211.50	1,227.36	0.00	0.00	0.00	
3,300.00	27.95	260.78	3,001.81	-204.19	-1,257.76	1,274.23	0.00	0.00	0.00	
3,400.00	27.95	260.78	3,090.15	-211.70	-1,304.03	1,321.10	0.00	0.00	0.00	
3,500.00	27.95	260.78	3,178.48	-219.21	-1,350.29	1,367.97	0.00	0.00	0.00	
3,600.00	27.95	260.78	3,266.82	-226.72	-1,396.56	1,414.84	0.00	0.00	0.00	
3,627.37	27.95	260.78	3,291.00	-228.77	-1,409.22	1,427.67	0.00	0.00	0.00	
GSAND										
3,682.84	27.95	260.78	3,340.00	-232.94	-1,434.89	1,453.67	0.00	0.00	0.00	
GSAND BASE										
3,700.00	27.95	260.78	3,355.16	-234.23	-1,442.82	1,461.71	0.00	0.00	0.00	
3,800.00	27.95	260.78	3,443.49	-241.74	-1,489.09	1,508.58	0.00	0.00	0.00	
3,900.00	27.95	260.78	3,531.83	-249.25	-1,535.35	1,555.45	0.00	0.00	0.00	
4,000.00	27.95	260.78	3,620.16	-256.76	-1,581.62	1,602.32	0.00	0.00	0.00	
4,100.00	27.95	260.78	3,708.50	-264.27	-1,627.88	1,649.19	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RU 421-17 - Slot RU 421-17
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Site:</b>	RU 31-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 421-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 5March2018 mmsdi		

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)
4,200.00	27.95	260.78	3,796.83	-271.78	-1,674.15	1,696.06	0.00	0.00	0.00
4,260.19	27.95	260.78	3,850.00	-276.30	-1,701.99	1,724.27	0.00	0.00	0.00
<b>FRUN</b>									
4,300.00	27.95	260.78	3,885.17	-279.29	-1,720.41	1,742.93	0.00	0.00	0.00
4,400.00	27.95	260.78	3,973.50	-286.80	-1,766.68	1,789.81	0.00	0.00	0.00
4,500.00	27.95	260.78	4,061.84	-294.31	-1,812.94	1,836.68	0.00	0.00	0.00
4,600.00	27.95	260.78	4,150.18	-301.82	-1,859.21	1,883.55	0.00	0.00	0.00
4,700.00	27.95	260.78	4,238.51	-309.33	-1,905.47	1,930.42	0.00	0.00	0.00
4,738.68	27.95	260.78	4,272.68	-312.24	-1,923.37	1,948.55	0.00	0.00	0.00
<b>Start Drop -1.50</b>									
4,800.00	27.03	260.78	4,327.07	-316.78	-1,951.31	1,976.85	1.50	-1.50	0.00
4,900.00	25.53	260.78	4,416.74	-323.87	-1,995.01	2,021.13	1.50	-1.50	0.00
5,000.00	24.03	260.78	4,507.53	-330.59	-2,036.38	2,063.04	1.50	-1.50	0.00
5,100.00	22.53	260.78	4,599.38	-336.92	-2,075.39	2,102.56	1.50	-1.50	0.00
5,200.00	21.03	260.78	4,692.24	-342.87	-2,112.02	2,139.67	1.50	-1.50	0.00
5,300.00	19.53	260.78	4,786.04	-348.42	-2,146.23	2,174.33	1.50	-1.50	0.00
5,400.00	18.03	260.78	4,880.71	-353.58	-2,178.01	2,206.52	1.50	-1.50	0.00
5,500.00	16.53	260.78	4,976.19	-358.34	-2,207.33	2,236.22	1.50	-1.50	0.00
5,600.00	15.03	260.78	5,072.42	-362.70	-2,234.17	2,263.42	1.50	-1.50	0.00
5,700.00	13.53	260.78	5,169.33	-366.65	-2,258.52	2,288.08	1.50	-1.50	0.00
5,800.00	12.03	260.78	5,266.85	-370.19	-2,280.35	2,310.21	1.50	-1.50	0.00
5,900.00	10.53	260.78	5,364.91	-373.33	-2,299.66	2,329.77	1.50	-1.50	0.00
6,000.00	9.03	260.78	5,463.46	-376.05	-2,316.43	2,346.75	1.50	-1.50	0.00
6,100.00	7.53	260.78	5,562.41	-378.36	-2,330.64	2,361.15	1.50	-1.50	0.00
6,145.95	6.84	260.78	5,608.00	-379.28	-2,336.32	2,366.90	1.50	-1.50	0.00
<b>LWASATCH</b>									
6,200.00	6.03	260.78	5,661.71	-380.25	-2,342.30	2,372.96	1.50	-1.50	0.00
6,300.00	4.53	260.78	5,761.28	-381.72	-2,351.38	2,382.16	1.50	-1.50	0.00
6,400.00	3.03	260.78	5,861.06	-382.78	-2,357.89	2,388.76	1.50	-1.50	0.00
6,500.00	1.53	260.78	5,960.98	-383.42	-2,361.82	2,392.74	1.50	-1.50	0.00
6,600.00	0.03	260.78	6,060.97	-383.64	-2,363.16	2,394.10	1.50	-1.50	0.00
6,602.03	0.00	0.00	6,063.00	-383.64	-2,363.16	2,394.10	1.50	-1.50	4,884.91
<b>Start 3852.00 hold at 6602.03 MD - OCRK - MVRD - RU 421-17 BTW</b>									
6,700.00	0.00	0.00	6,160.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
6,800.00	0.00	0.00	6,260.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
6,900.00	0.00	0.00	6,360.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,000.00	0.00	0.00	6,460.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,100.00	0.00	0.00	6,560.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,200.00	0.00	0.00	6,660.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,300.00	0.00	0.00	6,760.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,400.00	0.00	0.00	6,860.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,500.00	0.00	0.00	6,960.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,600.00	0.00	0.00	7,060.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,700.00	0.00	0.00	7,160.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,800.00	0.00	0.00	7,260.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
7,900.00	0.00	0.00	7,360.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
8,000.00	0.00	0.00	7,460.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
8,100.00	0.00	0.00	7,560.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
8,178.03	0.00	0.00	7,639.00	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00
<b>KMVGAS</b>									
8,200.00	0.00	0.00	7,660.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RU 421-17 - Slot RU 421-17
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Site:</b>	RU 31-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 421-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 5March2018 mmsdi		

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)	
8,300.00	0.00	0.00	7,760.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
8,400.00	0.00	0.00	7,860.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
8,500.00	0.00	0.00	7,960.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,060.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,160.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,260.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,360.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,460.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,560.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,660.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,300.00	0.00	0.00	8,760.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,400.00	0.00	0.00	8,860.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,500.00	0.00	0.00	8,960.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,060.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,612.03	0.00	0.00	9,073.00	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
<b>CMEO</b>										
9,700.00	0.00	0.00	9,160.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,260.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,360.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,460.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
10,097.03	0.00	0.00	9,558.00	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
<b>COAL</b>										
10,100.00	0.00	0.00	9,560.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
10,200.00	0.00	0.00	9,660.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
10,300.00	0.00	0.00	9,760.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
10,337.03	0.00	0.00	9,798.00	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
<b>RLNS</b>										
10,400.00	0.00	0.00	9,860.97	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
10,454.03	0.00	0.00	9,915.00	-383.64	-2,363.16	2,394.10	0.00	0.00	0.00	
<b>TD at 10454.03 - TD - RU 421-17 PBHL</b>										

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									
RU 421-17 BTV	0.00	0.00	6,063.00	-383.64	-2,363.16	1,596,641.50	2,349,394.80	39.4488972	-107.8041770
- plan hits target center									
- Circle (radius 50.00)									
RU 421-17 PBHL	0.00	0.00	9,915.00	-383.64	-2,363.16	1,596,641.50	2,349,394.80	39.4488972	-107.8041770
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,100.00	1,058.43	9 5/8" @ 1100' MD	9.62	9.62	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well RU 421-17 - Slot RU 421-17
<b>Company:</b>	TEP Rocky Mountain LLC	<b>TVD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 7859' & RKB 24' @ 7883.00usft (H&P 318)
<b>Site:</b>	RU 31-17 Pad	<b>North Reference:</b>	True
<b>Well:</b>	RU 421-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #3 5March2018 mmsdi		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,627.37	3,291.00	GSAND		0.00	0.00
3,682.84	3,340.00	GSAND BASE		0.00	0.00
4,260.19	3,850.00	FRUN		0.00	0.00
6,145.95	5,608.00	LWASATCH		0.00	0.00
6,602.03	6,063.00	OCRK		0.00	0.00
6,602.03	6,063.00	MVRD		0.00	0.00
8,178.03	7,639.00	KMVGAS		0.00	0.00
9,612.03	9,073.00	CMEO		0.00	0.00
10,097.03	9,558.00	COAL		0.00	0.00
10,337.03	9,798.00	RLNS		0.00	0.00
10,454.03	9,915.00	TD		0.00	0.00

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
125.00	125.00	0.00	0.00	Start Build 3.00
1,056.67	1,020.16	-35.70	-219.90	Start 3682.01 hold at 1056.67 MD
4,738.68	4,272.68	-312.24	-1,923.37	Start Drop -1.50
6,602.03	6,063.00	-383.64	-2,363.16	Start 3852.00 hold at 6602.03 MD
10,454.03	9,915.00	-383.64	-2,363.16	TD at 10454.03