

#### Well Details: NR 323-3

TVD Reference: GL 6720' & RKB 24' @ 6744.00usft  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.00 0.00 1634922.56 2329756.72 39.5525717 -107.8772426 NR 323-3 (B8)

#### REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well NR 323-3 - Slot NR 323-3 (B8), True North  
 Vertical (TVD) Reference: GL 6720' & RKB 24' @ 6744.00usft  
 Section (VS) Reference: Slot - NR 323-3 (B8)(0.00N, 0.00E)  
 Measured Depth Reference: GL 6720' & RKB 24' @ 6744.00usft  
 Calculation Method: Minimum Curvature

#### 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

Plan: OH

11:52, October 09 2018  
 Created By: Mel Mireles Jr.

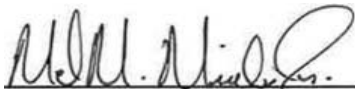


## Directional Survey Certification

2948 I-70 Business Loop  
Grand Junction, CO 81504  
(970)-245-9447 Fax (970)-245-9454

Operator	TEP Rocky Mountain, LLC.
Well Name & No.	NR 323-3
County & State	Garfield County, CO
SDI Job No.	OP.013327
Rig	H&P 318

I, Mel Mireles Jr., having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 121 feet to a measured depth of 9,951 feet is true and correct as determined from all available records.

  
Signature

09-Oct-18  
Date

**Mel Mireles Jr.**  
Grand Junction Assistant Well Planner  
Scientific Drilling - Colorado District

<b>Company:</b>	TEP Rocky Mountain LLC	<b>Local Co-ordinate Reference:</b>	Well NR 323-3 - Slot NR 323-3 (B8)
<b>Project:</b>	Garfield County, CO NAD83	<b>TVD Reference:</b>	GL 6720' & RKB 24' @ 6744.00usft
<b>Site:</b>	NR 23-3 Pad	<b>MD Reference:</b>	GL 6720' & RKB 24' @ 6744.00usft
<b>Well:</b>	NR 323-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

<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		

Site		NR 23-3 Pad			
Site Position:		Northing:	1,634,904.55 usft	Latitude:	39.5525224
From:	Map	Easting:	2,329,757.66 usft	Longitude:	-107.8772377
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.50 °

Well	NR 323-3 - Slot NR 323-3 (B8)					
Well Position	+N/-S	0.00 usft	Northing:	1,634,922.56 usft	Latitude:	39.5525717
	+E/-W	0.00 usft	Easting:	2,329,756.72 usft	Longitude:	-107.8772427
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,720.00 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	9/26/2018	9.43	65.78	51,534

<b>Design</b>	OH				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<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	82.83	

<b>Survey Program</b>	<b>Date</b>	10/9/2018			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
121.00	672.00	Survey #1 - Gyro MWD Survey (OH)	Gyro MWD 105	Gyro MWD Error Model Ver 1.0.5	
745.00	1,070.00	Survey #2 - Surface MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	
1,179.00	9,951.00	Survey #3 - Production MWD Survey (OH)	MWD+HDGM	OWSG MWD + HDGM	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
121.00	0.62	45.35	121.00	0.46	0.47	0.52	0.51	0.51	0.00	
<b>First SDI Gyro MWD Survey</b>										
213.00	3.78	80.51	212.92	1.31	3.81	3.95	3.58	3.43	38.22	
305.00	6.07	90.79	304.58	1.74	11.67	11.79	2.66	2.49	11.17	
397.00	6.95	91.05	395.98	1.57	22.10	22.12	0.96	0.96	0.28	
489.00	6.16	89.21	487.38	1.54	32.60	32.54	0.89	-0.86	-2.00	
580.00	5.72	85.72	577.89	1.95	42.00	41.92	0.63	-0.48	-3.84	
672.00	5.38	78.63	669.46	3.14	50.80	50.80	0.83	-0.37	-7.71	

<b>Company:</b>	TEP Rocky Mountain LLC	<b>Local Co-ordinate Reference:</b>	Well NR 323-3 - Slot NR 323-3 (B8)
<b>Project:</b>	Garfield County, CO NAD83	<b>TVD Reference:</b>	GL 6720' & RKB 24' @ 6744.00usft
<b>Site:</b>	NR 23-3 Pad	<b>MD Reference:</b>	GL 6720' & RKB 24' @ 6744.00usft
<b>Well:</b>	NR 323-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

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)
<b>Last SDI Gyro MWD Survey</b>									
745.00	4.41	76.83	742.19	4.45	56.89	57.00	1.35	-1.33	-2.47
<b>First SDI Surface MWD Survey</b>									
840.00	4.02	86.08	836.94	5.51	63.77	63.96	0.82	-0.41	9.74
934.00	4.96	76.70	930.65	6.67	71.01	71.29	1.27	1.00	-9.98
1,028.00	5.72	70.87	1,024.24	9.14	79.39	79.91	0.99	0.81	-6.20
1,070.00	5.72	71.74	1,066.03	10.48	83.36	84.01	0.21	0.00	2.07
<b>Last SDI Surface MWD Survey</b>									
1,179.00	5.14	71.22	1,174.54	13.76	93.14	94.13	0.53	-0.53	-0.48
<b>First SDI Production MWD Survey</b>									
1,273.00	4.68	73.75	1,268.20	16.19	100.81	102.04	0.54	-0.49	2.69
1,368.00	5.45	88.97	1,362.83	17.35	109.04	110.35	1.62	0.81	16.02
1,463.00	5.06	89.52	1,457.43	17.47	117.74	119.00	0.41	-0.41	0.58
1,557.00	5.08	90.07	1,551.06	17.50	126.04	127.24	0.06	0.02	0.59
1,651.00	4.84	88.53	1,644.71	17.59	134.17	135.32	0.29	-0.26	-1.64
1,746.00	4.48	88.53	1,739.40	17.79	141.89	143.00	0.38	-0.38	0.00
1,840.00	5.01	93.45	1,833.08	17.64	149.65	150.69	0.71	0.56	5.23
1,935.00	6.51	89.67	1,927.59	17.42	159.18	160.11	1.63	1.58	-3.98
2,030.00	6.13	89.78	2,022.02	17.47	169.64	170.49	0.40	-0.40	0.12
2,124.00	5.63	92.22	2,115.52	17.31	179.26	180.02	0.59	-0.53	2.60
2,218.00	5.52	93.20	2,209.08	16.88	188.39	189.02	0.15	-0.12	1.04
2,313.00	5.54	92.31	2,303.63	16.44	197.53	198.04	0.09	0.02	-0.94
2,407.00	5.17	92.91	2,397.22	16.04	206.29	206.68	0.40	-0.39	0.64
2,502.00	4.94	95.39	2,491.85	15.44	214.64	214.89	0.33	-0.24	2.61
2,596.00	5.72	81.15	2,585.45	15.78	223.30	223.52	1.63	0.83	-15.15
2,691.00	5.38	79.99	2,680.01	17.29	232.36	232.70	0.38	-0.36	-1.22
2,786.00	5.28	82.20	2,774.60	18.65	241.08	241.52	0.24	-0.11	2.33
2,880.00	5.21	81.49	2,868.20	19.87	249.58	250.11	0.10	-0.07	-0.76
2,974.00	4.94	81.96	2,961.83	21.07	257.81	258.43	0.29	-0.29	0.50
3,069.00	4.46	87.11	3,056.51	21.83	265.55	266.20	0.67	-0.51	5.42
3,164.00	5.80	74.38	3,151.13	23.31	273.86	274.63	1.84	1.41	-13.40
3,258.00	5.32	78.27	3,244.69	25.47	282.71	283.67	0.65	-0.51	4.14
3,353.00	5.23	75.63	3,339.29	27.44	291.21	292.36	0.27	-0.09	-2.78
3,448.00	5.11	75.06	3,433.90	29.61	299.49	300.85	0.14	-0.13	-0.60
3,542.00	4.70	80.29	3,527.56	31.33	307.34	308.84	0.64	-0.44	5.56
3,637.00	5.63	81.06	3,622.17	32.72	315.78	317.39	0.98	0.98	0.81
3,731.00	5.36	82.82	3,715.74	33.98	324.69	326.39	0.34	-0.29	1.87
3,826.00	5.10	83.17	3,810.34	35.04	333.28	335.05	0.28	-0.27	0.37
3,920.00	4.75	83.29	3,904.00	35.99	341.29	343.12	0.37	-0.37	0.13
4,015.00	6.52	81.47	3,998.53	37.25	350.54	352.44	1.87	1.86	-1.92
4,110.00	5.98	83.79	4,092.97	38.58	360.79	362.78	0.63	-0.57	2.44
4,204.00	5.47	85.04	4,186.50	39.50	370.12	372.16	0.56	-0.54	1.33
4,299.00	4.96	85.57	4,281.11	40.21	378.73	380.78	0.54	-0.54	0.56
4,393.00	6.57	87.77	4,374.63	40.73	388.15	390.20	1.73	1.71	2.34

<b>Company:</b>	TEP Rocky Mountain LLC	<b>Local Co-ordinate Reference:</b>	Well NR 323-3 - Slot NR 323-3 (B8)
<b>Project:</b>	Garfield County, CO NAD83	<b>TVD Reference:</b>	GL 6720' & RKB 24' @ 6744.00usft
<b>Site:</b>	NR 23-3 Pad	<b>MD Reference:</b>	GL 6720' & RKB 24' @ 6744.00usft
<b>Well:</b>	NR 323-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

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)
4,488.00	6.47	87.72	4,469.01	41.16	398.93	400.95	0.11	-0.11	-0.05
4,583.00	6.07	87.21	4,563.45	41.61	409.30	411.29	0.43	-0.42	-0.54
4,677.00	5.58	91.81	4,656.96	41.71	418.83	420.76	0.72	-0.52	4.89
4,772.00	5.00	91.32	4,751.56	41.47	427.58	429.42	0.61	-0.61	-0.52
4,866.00	4.55	96.43	4,845.23	40.96	435.38	437.09	0.66	-0.48	5.44
4,961.00	5.45	89.94	4,939.87	40.54	443.64	445.23	1.12	0.95	-6.83
5,055.00	4.85	93.56	5,033.49	40.30	452.07	453.56	0.73	-0.64	3.85
5,150.00	6.13	90.71	5,128.05	39.99	461.15	462.54	1.38	1.35	-3.00
5,244.00	6.89	81.58	5,221.45	40.75	471.75	473.14	1.36	0.81	-9.71
5,339.00	6.09	83.13	5,315.84	42.19	482.39	483.88	0.86	-0.84	1.63
5,433.00	5.63	86.07	5,409.35	43.10	491.94	493.47	0.58	-0.49	3.13
5,527.00	6.47	80.02	5,502.82	44.33	501.75	503.36	1.12	0.89	-6.44
5,622.00	5.59	79.96	5,597.30	46.07	511.58	513.33	0.93	-0.93	-0.06
5,716.00	4.77	78.26	5,690.91	47.66	519.92	521.80	0.89	-0.87	-1.81
5,811.00	4.48	81.15	5,785.60	49.04	527.45	529.45	0.39	-0.31	3.04
5,906.00	6.07	68.05	5,880.20	51.49	535.78	538.01	2.09	1.67	-13.79
6,000.00	5.40	63.81	5,973.73	55.30	544.35	547.00	0.84	-0.71	-4.51
6,095.00	4.40	70.78	6,068.38	58.47	551.81	554.79	1.22	-1.05	7.34
6,189.00	5.72	69.20	6,162.01	61.32	559.59	562.87	1.41	1.40	-1.68
6,284.00	6.33	69.67	6,256.49	64.82	568.93	572.57	0.64	0.64	0.49
6,378.00	5.36	72.54	6,350.00	67.94	577.98	581.93	1.08	-1.03	3.05
6,473.00	4.57	78.25	6,444.64	70.04	585.91	590.07	0.98	-0.83	6.01
6,568.00	6.16	72.62	6,539.22	72.33	594.48	598.86	1.76	1.67	-5.93
6,663.00	5.72	73.33	6,633.71	75.21	603.88	608.55	0.47	-0.46	0.75
6,757.00	5.10	79.22	6,727.29	77.34	612.47	617.34	0.88	-0.66	6.27
6,852.00	4.42	79.21	6,821.97	78.81	620.22	625.21	0.72	-0.72	-0.01
6,947.00	3.69	72.89	6,916.73	80.40	626.74	631.87	0.90	-0.77	-6.65
7,041.00	4.35	67.10	7,010.50	82.68	632.91	638.28	0.82	0.70	-6.16
7,136.00	5.07	82.84	7,105.18	84.60	640.40	645.95	1.55	0.76	16.57
7,231.00	5.28	90.94	7,199.79	85.05	648.93	654.47	0.80	0.22	8.53
7,325.00	3.61	69.37	7,293.51	86.02	656.03	661.63	2.48	-1.78	-22.95
7,393.61	3.20	57.95	7,362.00	87.80	659.67	665.47	1.16	-0.60	-16.65
NR 323-3 BTV									
7,419.00	3.08	53.02	7,387.36	88.59	660.81	666.70	1.16	-0.46	-19.41
7,514.00	2.64	60.58	7,482.24	91.20	664.76	670.94	0.61	-0.46	7.96
7,609.00	1.02	247.95	7,577.21	91.95	665.88	672.15	3.85	-1.71	-181.72
7,703.00	2.81	241.02	7,671.16	90.52	663.09	669.20	1.92	1.90	-7.37
7,798.00	0.88	269.59	7,766.10	89.39	660.32	666.32	2.19	-2.03	30.07
7,892.00	0.88	21.38	7,860.10	90.06	659.86	665.94	1.55	0.00	118.93
7,987.00	0.70	10.66	7,955.09	91.31	660.24	666.47	0.24	-0.19	-11.28
8,081.00	0.44	342.89	8,049.08	92.22	660.24	666.58	0.40	-0.28	-29.54
8,175.00	0.53	242.34	8,143.08	92.36	659.75	666.11	0.80	0.10	-106.97
8,270.00	0.31	320.70	8,238.08	92.35	659.19	665.57	0.59	-0.23	82.48

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<b>Well:</b>	NR 323-3	<b>North Reference:</b>	True
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	OH	<b>Database:</b>	Grand Junction District

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)	
8,364.00	0.09	224.15	8,332.08	92.50	658.98	665.37	0.35	-0.23	-102.71	
8,459.00	0.99	41.59	8,427.07	93.06	659.47	665.93	1.14	0.95	186.78	
8,553.00	1.41	36.15	8,521.05	94.60	660.70	667.34	0.46	0.45	-5.79	
8,648.00	0.88	25.07	8,616.03	96.20	661.69	668.53	0.60	-0.56	-11.66	
8,742.00	0.74	49.30	8,710.03	97.25	662.46	669.42	0.39	-0.15	25.78	
8,837.00	0.26	48.89	8,805.02	97.79	663.09	670.11	0.51	-0.51	-0.43	
8,931.00	0.79	197.08	8,899.02	97.32	663.06	670.02	1.09	0.56	157.65	
9,025.00	1.06	241.99	8,993.01	96.29	662.10	668.94	0.80	0.29	47.78	
9,120.00	1.41	235.13	9,087.99	95.21	660.37	667.08	0.40	0.37	-7.22	
9,214.00	2.10	240.31	9,181.94	93.69	657.92	664.47	0.75	0.73	5.51	
9,308.00	2.64	236.89	9,275.86	91.66	654.61	660.93	0.59	0.57	-3.64	
9,403.00	2.46	238.12	9,370.77	89.38	651.05	657.11	0.20	-0.19	1.29	
9,496.00	1.85	236.19	9,463.70	87.50	648.10	653.96	0.66	-0.66	-2.08	
9,591.00	2.73	226.61	9,558.62	85.09	645.19	650.76	1.01	0.93	-10.08	
9,686.00	3.61	217.99	9,653.48	81.18	641.70	646.82	1.05	0.93	-9.07	
9,780.00	4.44	215.88	9,747.25	75.90	637.75	642.23	0.90	0.88	-2.24	
9,874.00	4.75	214.48	9,840.94	69.74	633.41	637.16	0.35	0.33	-1.49	
9,891.00	5.10	216.59	9,857.88	68.55	632.56	636.17	2.32	2.06	12.41	
<b>Last SDI Production MWD Survey</b>										
9,951.00	5.10	216.59	9,917.64	64.27	629.38	632.48	0.00	0.00	0.00	
<b>Projection to TD - NR 323-3 PBHL</b>										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
121.00	121.00	0.46	0.47	First SDI Gyro MWD Survey	
672.00	669.46	3.14	50.80	Last SDI Gyro MWD Survey	
745.00	742.19	4.45	56.89	First SDI Surface MWD Survey	
1,070.00	1,066.03	10.48	83.36	Last SDI Surface MWD Survey	
1,179.00	1,174.54	13.76	93.14	First SDI Production MWD Survey	
9,891.00	9,857.88	68.55	632.56	Last SDI Production MWD Survey	
9,951.00	9,917.64	64.27	629.38	Projection to TD	

Checked By: _____	Approved By: _____	Date: _____
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