




Directional Survey Certification

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

Operator	<u>WPX Energy Rocky Mountain, LLC.</u>
Well Name & No.	<u>RGU 44-23-198</u>
County & State	<u>Rio Blanco, CO</u>
SDI Job No.	<u>420115DMPK242321</u>
Rig	<u>Aztec 1000</u>

I, Mel Mireles Jr., having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 0 feet to a measured depth of 12,629 feet is true and correct as determined from all available records.


Signature

29-Jan-15
Date

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

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well RGU 44-23-198
Project:	Rio Blanco County, CO NAD83	TVD Reference:	KB @ 6592.01ft (Aztec 1000)
Site:	RGU 43-23-198 Pad	MD Reference:	KB @ 6592.01ft (Aztec 1000)
Well:	RGU 44-23-198	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Project	Rio Blanco County, CO NAD83, Rio Blanco County, CO, NAD 1983		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	RGU 43-23-198 Pad		
Site Position:		Northing:	1,781,556.00 usft
From:	Map	Easting:	2,199,927.00 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in
		Latitude:	39.9446860
		Longitude:	-108.3537828
		Grid Convergence:	-1.80 °

Well	RGU 44-23-198		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	6/27/2012	10.44
			Dip Angle
			(°)
			66.01
			Field Strength
			(nT)
			52,337

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			4.74

Survey Program	Date	1/26/2015		
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
84.00	536.00	Survey #1 - Gyro MWD (Wellbore #1)	SDI Gyro MWD 104	SDI Gyro MWD Error Model Ver 1.0.4
613.00	3,847.00	Survey #2 - Surface MWD (Wellbore #1)	MWD SDI	MWD - Standard ver 1.0.1
3,998.00	12,629.00	Survey #3 - Production MWD (Wellbore #1)	MWD SDI	MWD - Standard ver 1.0.1

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
84.00	0.26	97.82	84.00	-0.03	0.19	-0.01	0.31	0.31	0.00
First SDI Gyro MWD Survey									
173.00	0.53	36.65	173.00	0.28	0.63	0.33	0.52	0.30	-68.73
263.00	0.62	40.34	262.99	0.98	1.20	1.08	0.11	0.10	4.10
354.00	0.18	338.73	353.99	1.49	1.47	1.61	0.61	-0.48	-67.70
446.00	0.70	17.23	445.99	2.16	1.58	2.28	0.62	0.57	41.85
536.00	1.50	349.54	535.97	3.85	1.53	3.96	1.04	0.89	-30.77

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Well:	RGU 44-23-198	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Last SDI Gyro MWD Survey									
613.00	2.64	356.74	612.92	6.61	1.24	6.69	1.52	1.48	9.35
First SDI Surface MWD Survey									
703.00	3.43	354.29	702.79	11.36	0.86	11.39	0.89	0.88	-2.72
793.00	4.26	353.67	792.59	17.36	0.22	17.32	0.92	0.92	-0.69
883.00	4.04	348.84	882.35	23.79	-0.76	23.65	0.46	-0.24	-5.37
974.00	4.24	347.45	973.12	30.22	-2.11	29.94	0.25	0.22	-1.53
1,068.00	3.77	348.66	1,066.89	36.64	-3.47	36.23	0.51	-0.50	1.29
1,163.00	3.18	6.52	1,161.71	42.32	-3.79	41.86	1.29	-0.62	18.80
1,258.00	3.12	9.47	1,256.57	47.49	-3.06	47.07	0.18	-0.06	3.11
1,353.00	3.17	6.42	1,351.43	52.65	-2.35	52.27	0.18	0.05	-3.21
1,447.00	2.73	353.50	1,445.30	57.46	-2.31	57.07	0.85	-0.47	-13.74
1,542.00	3.17	355.61	1,540.18	62.32	-2.77	61.88	0.48	0.46	2.22
1,637.00	3.34	358.97	1,635.02	67.71	-3.02	67.23	0.27	0.18	3.54
1,721.00	3.48	353.96	1,718.88	72.69	-3.33	72.17	0.39	0.17	-5.96
1,816.00	3.77	352.94	1,813.69	78.66	-4.02	78.06	0.31	0.31	-1.07
1,911.00	3.45	350.96	1,908.50	84.58	-4.85	83.89	0.36	-0.34	-2.08
2,006.00	3.15	8.00	2,003.34	89.99	-4.93	89.27	1.08	-0.32	17.94
2,101.00	3.37	14.40	2,098.19	95.28	-3.88	94.63	0.45	0.23	6.74
2,196.00	3.70	17.43	2,193.01	100.91	-2.26	100.37	0.40	0.35	3.19
2,291.00	4.09	20.60	2,287.79	107.00	-0.15	106.62	0.47	0.41	3.34
2,386.00	4.36	12.97	2,382.53	113.69	1.85	113.46	0.66	0.28	-8.03
2,481.00	4.88	12.15	2,477.22	121.16	3.51	121.04	0.55	0.55	-0.86
2,576.00	5.34	15.01	2,571.84	129.38	5.50	129.39	0.55	0.48	3.01
2,671.00	4.67	13.03	2,666.48	137.42	7.52	137.57	0.73	-0.71	-2.08
2,765.00	3.48	4.18	2,760.24	143.99	8.59	144.21	1.43	-1.27	-9.41
2,860.00	3.21	10.63	2,855.08	149.48	9.29	149.74	0.49	-0.28	6.79
2,955.00	3.25	9.14	2,949.93	154.76	10.21	155.07	0.10	0.04	-1.57
3,050.00	2.25	17.04	3,044.82	159.20	11.19	159.58	1.12	-1.05	8.32
3,145.00	2.01	25.42	3,139.76	162.48	12.45	162.96	0.41	-0.25	8.82
3,240.00	0.77	23.74	3,234.73	164.57	13.42	165.12	1.31	-1.31	-1.77
3,334.00	0.47	5.30	3,328.72	165.54	13.71	166.10	0.38	-0.32	-19.62
3,429.00	0.57	336.75	3,423.72	166.36	13.56	166.91	0.29	0.11	-30.05
3,524.00	0.57	333.93	3,518.71	167.22	13.16	167.73	0.03	0.00	-2.97
3,619.00	0.53	334.14	3,613.71	168.04	12.77	168.52	0.04	-0.04	0.22
3,714.00	0.55	328.97	3,708.70	168.82	12.34	169.26	0.06	0.02	-5.44
3,809.00	0.55	325.02	3,803.70	169.59	11.84	169.99	0.04	0.00	-4.16
3,847.00	0.58	327.15	3,841.70	169.90	11.63	170.28	0.10	0.08	5.61
Last SDI Surface MWD Survey									
3,998.00	0.54	14.86	3,992.69	171.23	11.40	171.58	0.30	-0.03	31.60
First SDI Production MWD Survey									
4,093.00	0.10	174.38	4,087.69	171.58	11.52	171.94	0.67	-0.46	167.92
4,188.00	0.27	173.49	4,182.69	171.27	11.56	171.64	0.18	0.18	-0.94
4,282.00	0.34	205.27	4,276.69	170.80	11.46	171.16	0.19	0.07	33.81

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Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,378.00	0.48	199.36	4,372.68	170.16	11.21	170.51	0.15	0.15	-6.16
4,472.00	0.90	87.13	4,466.68	169.83	11.82	170.22	1.24	0.45	-119.39
4,567.00	0.60	62.55	4,561.67	170.10	13.00	170.59	0.46	-0.32	-25.87
4,663.00	0.52	78.43	4,657.67	170.42	13.87	170.98	0.18	-0.08	16.54
4,758.00	0.38	101.10	4,752.66	170.44	14.61	171.06	0.24	-0.15	23.86
4,852.00	0.28	54.21	4,846.66	170.52	15.10	171.18	0.30	-0.11	-49.88
4,948.00	0.33	151.81	4,942.66	170.41	15.42	171.10	0.48	0.05	101.67
5,043.00	0.15	218.40	5,037.66	170.07	15.47	170.77	0.32	-0.19	70.09
5,138.00	0.79	180.32	5,132.66	169.32	15.39	170.01	0.71	0.67	-40.08
5,233.00	0.39	114.80	5,227.65	168.53	15.68	169.25	0.76	-0.42	-68.97
5,328.00	0.90	85.17	5,322.65	168.45	16.72	169.26	0.62	0.54	-31.19
5,423.00	0.63	79.75	5,417.64	168.61	17.97	169.52	0.29	-0.28	-5.71
5,518.00	0.74	88.98	5,512.63	168.71	19.10	169.72	0.16	0.12	9.72
5,613.00	0.57	103.83	5,607.63	168.61	20.17	169.70	0.25	-0.18	15.63
5,708.00	0.42	199.21	5,702.62	168.17	20.52	169.29	0.78	-0.16	100.40
5,803.00	0.49	204.07	5,797.62	167.47	20.24	168.57	0.08	0.07	5.12
5,898.00	0.48	227.10	5,892.62	166.83	19.78	167.89	0.20	-0.01	24.24
5,992.00	0.57	177.83	5,986.61	166.09	19.51	167.14	0.47	0.10	-52.41
6,088.00	0.53	176.29	6,082.61	165.17	19.56	166.22	0.04	-0.04	-1.60
6,183.00	0.90	174.94	6,177.60	163.99	19.65	165.05	0.39	0.39	-1.42
6,277.00	0.60	197.39	6,271.59	162.79	19.57	163.85	0.44	-0.32	23.88
6,372.00	0.43	159.26	6,366.59	161.98	19.55	163.04	0.39	-0.18	-40.14
6,467.00	0.55	101.60	6,461.59	161.55	20.12	162.66	0.51	0.13	-60.69
6,562.00	0.82	139.23	6,556.58	160.95	21.01	162.13	0.54	0.28	39.61
6,657.00	1.04	110.68	6,651.57	160.13	22.26	161.42	0.53	0.23	-30.05
6,752.00	1.34	103.74	6,746.55	159.56	24.15	161.01	0.35	0.32	-7.31
6,847.00	1.03	77.49	6,841.53	159.48	26.06	161.09	0.65	-0.33	-27.63
6,942.00	0.96	348.58	6,936.52	160.45	26.74	162.11	1.47	-0.07	-93.59
7,037.00	1.09	307.54	7,031.51	161.78	25.86	163.36	0.77	0.14	-43.20
7,132.00	0.71	303.03	7,126.49	162.65	24.65	164.13	0.41	-0.40	-4.75
7,227.00	0.67	274.10	7,221.49	163.01	23.60	164.40	0.37	-0.04	-30.45
7,322.00	0.82	275.23	7,316.48	163.11	22.37	164.40	0.16	0.16	1.19
7,417.00	1.62	254.46	7,411.46	162.81	20.40	163.94	0.95	0.84	-21.86
7,511.00	1.17	337.26	7,505.44	163.34	18.75	164.33	2.00	-0.48	88.09
7,607.00	2.31	24.23	7,601.40	166.01	19.17	167.03	1.81	1.19	48.93
7,702.00	1.90	37.82	7,696.33	169.00	20.92	170.15	0.68	-0.43	14.31
7,796.00	1.19	31.21	7,790.30	171.07	22.38	172.33	0.78	-0.76	-7.03
7,891.00	1.47	45.10	7,885.27	172.77	23.75	174.14	0.45	0.29	14.62
7,986.00	1.21	41.54	7,980.25	174.38	25.28	175.87	0.29	-0.27	-3.75
8,081.00	0.80	41.54	8,075.23	175.63	26.39	177.21	0.43	-0.43	0.00
8,176.00	0.84	18.60	8,170.22	176.78	27.05	178.41	0.35	0.04	-24.15
8,270.00	0.50	8.84	8,264.21	177.84	27.33	179.49	0.38	-0.36	-10.38
8,365.00	1.11	257.43	8,359.21	178.05	26.50	179.63	1.45	0.64	-117.27

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Design:	Wellbore #1	Database:	Grand Junction District

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8,460.00	1.04	252.58	8,454.19	177.59	24.78	179.03	0.12	-0.07	-5.11
8,555.00	1.57	243.39	8,549.17	176.75	22.79	178.03	0.60	0.56	-9.67
8,650.00	1.01	242.48	8,644.14	175.78	20.88	176.91	0.59	-0.59	-0.96
8,745.00	0.55	108.78	8,739.14	175.25	20.57	176.35	1.52	-0.48	-140.74
8,840.00	0.50	147.10	8,834.13	174.75	21.23	175.91	0.37	-0.05	40.34
8,935.00	0.39	171.84	8,929.13	174.09	21.50	175.27	0.23	-0.12	26.04
9,030.00	0.44	172.23	9,024.13	173.40	21.60	174.60	0.05	0.05	0.41
9,124.00	0.66	204.22	9,118.12	172.55	21.42	173.73	0.39	0.23	34.03
9,219.00	0.64	222.36	9,213.12	171.66	20.84	172.80	0.22	-0.02	19.09
9,314.00	0.76	212.84	9,308.11	170.74	20.14	171.82	0.18	0.13	-10.02
9,409.00	1.35	225.04	9,403.09	169.42	19.01	170.41	0.66	0.62	12.84
9,504.00	1.12	231.29	9,498.07	168.05	17.49	168.92	0.28	-0.24	6.58
9,598.00	1.16	241.73	9,592.05	167.02	15.94	167.77	0.22	0.04	11.11
9,693.00	1.14	254.20	9,687.04	166.31	14.18	166.91	0.26	-0.02	13.13
9,788.00	0.98	267.11	9,782.02	166.01	12.46	166.47	0.30	-0.17	13.59
9,883.00	1.63	258.82	9,876.99	165.71	10.32	166.00	0.71	0.68	-8.73
9,978.00	1.57	250.88	9,971.96	165.02	7.77	165.10	0.24	-0.06	-8.36
10,073.00	1.90	246.35	10,066.91	163.96	5.10	163.82	0.38	0.35	-4.77
10,168.00	1.49	267.29	10,161.87	163.27	2.42	162.91	0.77	-0.43	22.04
10,264.00	1.56	261.31	10,257.84	163.02	-0.12	162.45	0.18	0.07	-6.23
10,359.00	1.74	267.95	10,352.80	162.77	-2.84	161.98	0.28	0.19	6.99
10,454.00	2.03	260.85	10,447.75	162.45	-5.94	161.40	0.39	0.31	-7.47
10,549.00	2.36	264.02	10,542.68	161.98	-9.55	160.64	0.37	0.35	3.34
10,645.00	3.07	271.65	10,638.57	161.85	-14.08	160.13	0.83	0.74	7.95
10,740.00	2.42	292.40	10,733.46	162.68	-18.48	160.60	1.24	-0.68	21.84
10,835.00	1.07	343.10	10,828.42	164.30	-20.59	162.03	2.03	-1.42	53.37
10,930.00	1.97	27.80	10,923.39	166.59	-20.09	164.36	1.50	0.95	47.05
11,026.00	1.52	8.10	11,019.35	169.31	-19.14	167.15	0.77	-0.47	-20.52
11,121.00	2.22	46.90	11,114.30	171.82	-17.62	169.77	1.48	0.74	40.84
11,216.00	2.21	39.70	11,209.23	174.48	-15.11	172.64	0.29	-0.01	-7.58
11,311.00	1.73	23.80	11,304.17	177.20	-13.36	175.49	0.76	-0.51	-16.74
11,406.00	1.32	352.00	11,399.14	179.60	-12.93	177.92	0.97	-0.43	-33.47
11,501.00	0.83	87.10	11,494.13	180.72	-12.40	179.08	1.71	-0.52	100.11
11,595.00	0.70	94.00	11,588.12	180.71	-11.14	179.17	0.17	-0.14	7.34
11,691.00	0.45	155.90	11,684.12	180.33	-10.40	178.85	0.66	-0.26	64.48
11,786.00	0.52	271.00	11,779.11	179.99	-10.68	178.50	0.86	0.07	121.16
11,881.00	0.45	235.80	11,874.11	179.79	-11.42	178.23	0.32	-0.07	-37.05
11,976.00	0.53	270.20	11,969.11	179.58	-12.17	177.96	0.32	0.08	36.21
12,071.00	1.52	260.80	12,064.09	179.38	-13.85	177.63	1.05	1.04	-9.89
12,166.00	1.32	244.60	12,159.06	178.71	-16.09	176.77	0.47	-0.21	-17.05
12,261.00	1.13	266.60	12,254.04	178.19	-18.01	176.09	0.53	-0.20	23.16
12,356.00	1.61	250.90	12,349.01	177.70	-20.21	175.42	0.64	0.51	-16.53
12,451.00	1.38	201.30	12,443.99	176.19	-21.88	173.78	1.34	-0.24	-52.21
12,547.00	1.87	247.90	12,539.95	174.53	-23.75	171.97	1.42	0.51	48.54

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Project:	Rio Blanco County, CO NAD83	TVD Reference:	KB @ 6592.01ft (Aztec 1000)
Site:	RGU 43-23-198 Pad	MD Reference:	KB @ 6592.01ft (Aztec 1000)
Well:	RGU 44-23-198	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Last SDI Production MWD Survey									
12,629.00	1.87	247.90	12,621.91	173.52	-26.23	170.76	0.00	0.00	0.00
Projection to Bit									

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
12,547.00	12,539.95	174.53	-23.75	Last SDI Production MWD Survey
12,629.00	12,621.91	173.52	-26.23	Projection to Bit

Checked By: _____	Approved By: _____	Date: _____
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