



Directional Survey Certification

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

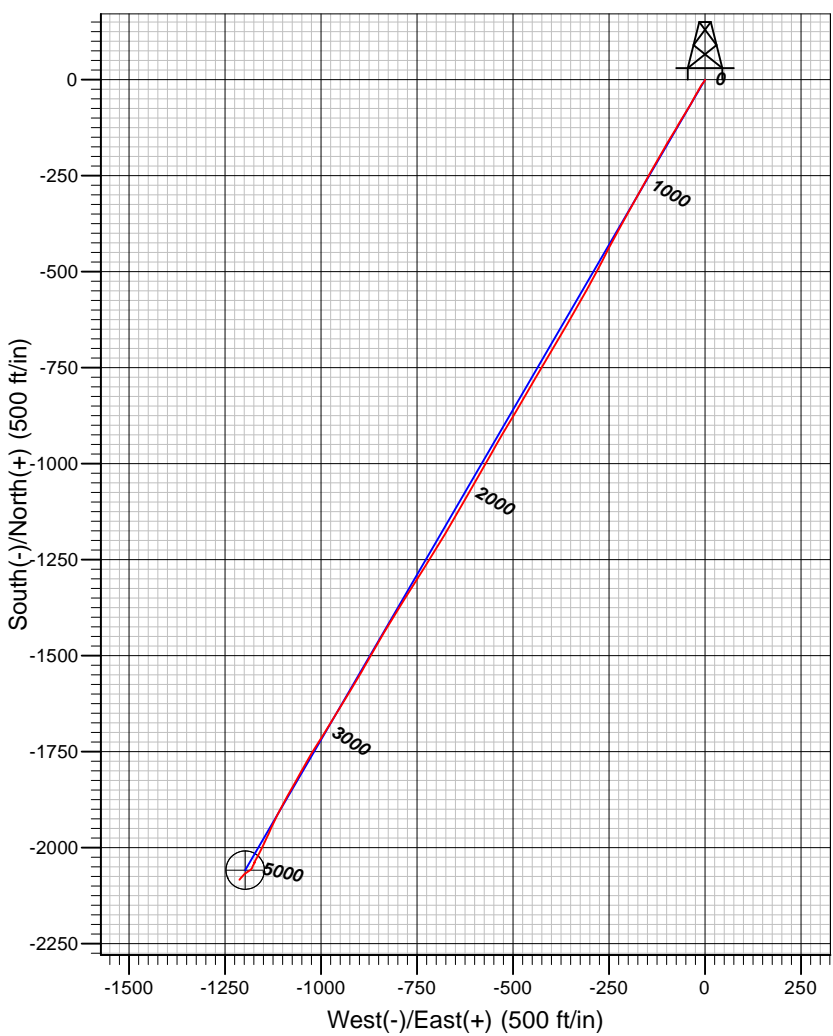
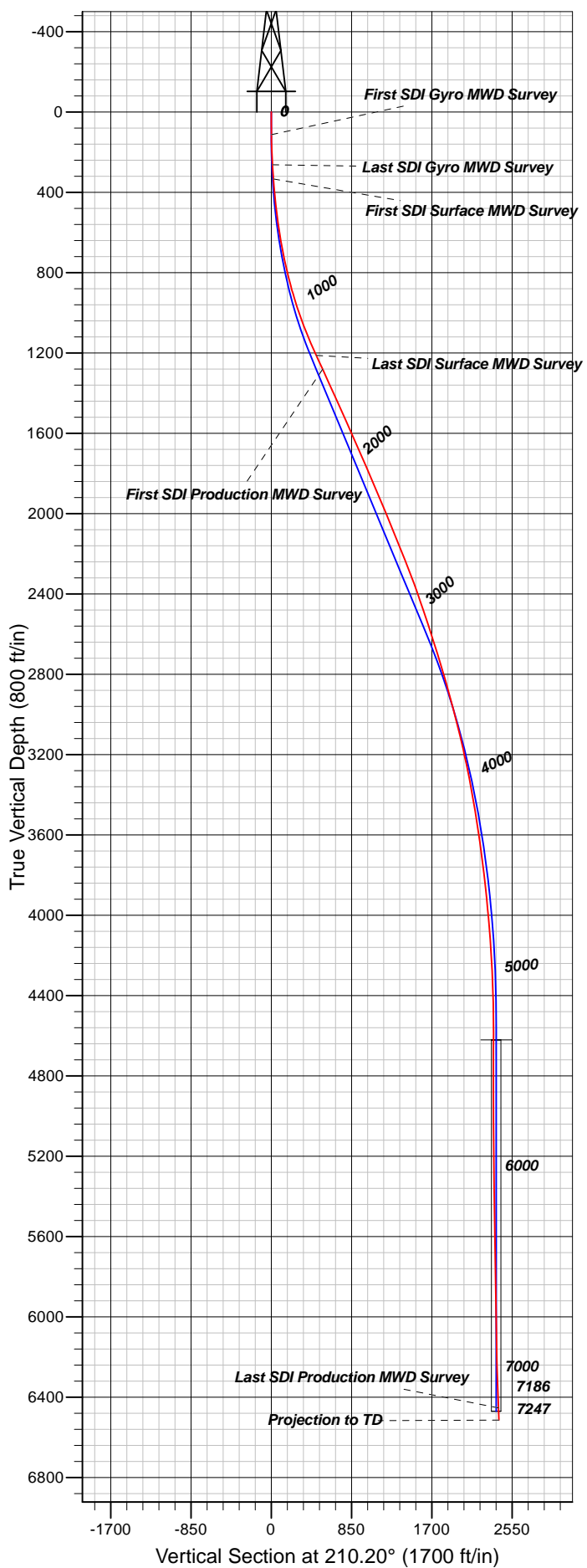
Operator	WPX Energy Rocky Mountain, LLC.
Well Name & No.	GM 43-8
County & State	Garfield County, CO
SDI Job No.	420516DEFK363416
Rig	H&P 318

I, Mel Mireles Jr., having personal knowledge of all the facts, hereby certify that the attached directional survey run from a measured depth of 0 feet to a measured depth of 7,247 feet is true and correct as determined from all available records.


Signature

03-Jun-16
Date

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



Well Details: GM 43-8

TVD Reference: KB @ 6111.01ft (HP 318) Fund Level: 6087.01					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1601944.10	2260322.40	39.4568232	-108.1200120
					Slot A08

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well GM 43-8 - Slot A08, True North
 Vertical (TVD) Reference: KB @ 6111.01ft (HP 318)
 Section (VS) Reference: Slot - A08(0.00N, 0.00E)
 Measured Depth Reference: KB @ 6111.01ft (HP 318)
 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: Wellbore #1

10:17, June 03 2016
 Created By: Mel Mireles



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well GM 43-8 - Slot A08
Project:	Garfield County, CO NAD83	TVD Reference:	KB @ 6111.01ft (HP 318)
Site:	MV 16-9 Pad	MD Reference:	KB @ 6111.01ft (HP 318)
Well:	GM 43-8	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Grand Junction District

Project	Garfield County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	MV 16-9 Pad			
Site Position:		Northing:	1,601,987.30 usft	Latitude: 39.4569442
From: Map		Easting:	2,260,352.30 usft	Longitude: -108.1199106
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: -1.65 °

Well	GM 43-8 - Slot A08			
Well Position	+N/-S	0.00 ft	Northing:	1,601,944.09 usft
	+E/-W	0.00 ft	Easting:	2,260,322.40 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	6,087.01 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2016	5/25/2016	9.75	65.59	51,619

Design	Wellbore #1			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	210.20

Survey Program	Date	6/3/2016		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
113.00	264.00	Survey #1 - Gyro MWD (Wellbore #1)	SDI Gyro MWD 104	SDI Gyro MWD Error Model Ver 1.0.4
335.00	1,342.00	Survey #2 - Surface MWD (Wellbore #1)	MWD SDI	MWD - Standard ver 1.0.1
1,438.00	7,247.00	Survey #3 - Production MWD (Wellbore #1)	MWD SDI	MWD - Standard ver 1.0.1

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1.50	199.42	112.99	-1.39	-0.49	1.45	1.33	1.33	0.00
First SDI Gyro MWD Survey									
173.00	3.43	211.20	172.93	-3.67	-1.68	4.02	3.31	3.22	19.63
264.00	7.48	217.53	263.50	-10.70	-6.70	12.62	4.49	4.45	6.96
Last SDI Gyro MWD Survey									
335.00	9.17	210.65	333.75	-19.23	-12.40	22.86	2.76	2.38	-9.69
First SDI Surface MWD Survey									

Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well GM 43-8 - Slot A08
Project:	Garfield County, CO NAD83	TVD Reference:	KB @ 6111.01ft (HP 318)
Site:	MV 16-9 Pad	MD Reference:	KB @ 6111.01ft (HP 318)
Well:	GM 43-8	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)
426.00	11.61	209.81	423.25	-33.42	-20.65	39.27	2.69	2.68	-0.92
517.00	14.98	208.40	511.80	-51.71	-30.80	60.19	3.72	3.70	-1.55
607.00	18.46	210.87	597.98	-74.18	-43.65	86.07	3.95	3.87	2.74
698.00	21.95	211.62	683.37	-101.04	-59.96	117.49	3.85	3.84	0.82
788.00	25.71	210.36	765.68	-132.22	-78.66	153.84	4.22	4.18	-1.40
879.00	28.93	211.13	846.52	-168.10	-100.02	195.60	3.56	3.54	0.85
971.00	32.60	209.18	925.56	-208.80	-123.61	242.64	4.13	3.99	-2.12
1,065.00	36.55	209.54	1,002.95	-255.28	-149.77	295.97	4.21	4.20	0.38
1,159.00	39.70	209.27	1,076.88	-305.84	-178.25	353.99	3.36	3.35	-0.29
1,254.00	42.41	208.80	1,148.51	-360.39	-208.53	416.37	2.87	2.85	-0.49
1,342.00	43.88	208.23	1,212.72	-413.26	-237.25	476.52	1.73	1.67	-0.65
Last SDI Surface MWD Survey									
1,438.00	44.86	206.90	1,281.35	-472.78	-268.31	543.57	1.41	1.02	-1.39
First SDI Production MWD Survey									
1,532.00	43.91	208.68	1,348.52	-530.94	-298.95	609.26	1.67	-1.01	1.89
1,626.00	43.55	210.15	1,416.45	-587.54	-330.86	674.23	1.15	-0.38	1.56
1,721.00	43.72	210.14	1,485.21	-644.23	-363.79	739.78	0.18	0.18	-0.01
1,815.00	43.68	210.44	1,553.17	-700.31	-396.54	804.73	0.22	-0.04	0.32
1,910.00	43.58	210.42	1,621.93	-756.83	-429.74	870.28	0.11	-0.11	-0.02
2,004.00	42.64	209.84	1,690.55	-812.39	-461.99	934.51	1.09	-1.00	-0.62
2,098.00	42.86	211.05	1,759.58	-867.39	-494.32	998.32	0.90	0.23	1.29
2,192.00	42.40	210.45	1,828.74	-922.10	-526.87	1,061.98	0.65	-0.49	-0.64
2,287.00	41.55	209.29	1,899.37	-977.19	-558.52	1,125.51	1.21	-0.89	-1.22
2,381.00	42.11	210.03	1,969.41	-1,031.67	-589.54	1,188.20	0.79	0.60	0.79
2,475.00	41.81	209.96	2,039.31	-1,086.10	-620.96	1,251.05	0.32	-0.32	-0.07
2,569.00	39.97	209.99	2,110.37	-1,139.40	-651.70	1,312.58	1.96	-1.96	0.03
2,663.00	40.29	211.13	2,182.24	-1,191.57	-682.51	1,373.16	0.85	0.34	1.21
2,757.00	39.97	211.62	2,254.11	-1,243.29	-714.05	1,433.73	0.48	-0.34	0.52
2,851.00	39.26	211.94	2,326.52	-1,294.25	-745.62	1,493.64	0.79	-0.76	0.34
2,946.00	36.72	212.67	2,401.39	-1,343.67	-776.85	1,552.07	2.72	-2.67	0.77
3,040.00	35.41	211.50	2,477.37	-1,390.55	-806.25	1,607.38	1.57	-1.39	-1.24
3,135.00	34.72	210.72	2,555.13	-1,437.27	-834.46	1,661.95	0.87	-0.73	-0.82
3,229.00	34.04	209.56	2,632.71	-1,483.17	-861.11	1,715.02	1.00	-0.72	-1.23
3,323.00	33.51	209.83	2,710.84	-1,528.57	-887.00	1,767.28	0.59	-0.56	0.29
3,417.00	31.54	210.86	2,790.10	-1,572.19	-912.52	1,817.82	2.18	-2.10	1.10
3,512.00	31.55	211.11	2,871.06	-1,614.80	-938.10	1,867.51	0.14	0.01	0.26
3,606.00	29.46	211.57	2,952.04	-1,655.55	-962.92	1,915.22	2.24	-2.22	0.49
3,701.00	28.62	212.06	3,035.10	-1,694.74	-987.22	1,961.31	0.92	-0.88	0.52
3,795.00	26.55	212.45	3,118.41	-1,731.55	-1,010.45	2,004.81	2.21	-2.20	0.41
3,890.00	24.50	210.10	3,204.13	-1,766.51	-1,031.72	2,045.73	2.41	-2.16	-2.47
3,984.00	23.15	208.78	3,290.12	-1,799.57	-1,050.39	2,083.69	1.54	-1.44	-1.40
4,079.00	21.56	209.02	3,377.98	-1,831.20	-1,067.85	2,119.81	1.68	-1.67	0.25
4,173.00	19.81	209.39	3,465.92	-1,860.19	-1,084.05	2,153.01	1.87	-1.86	0.39
4,268.00	17.93	209.08	3,555.81	-1,887.00	-1,099.06	2,183.73	1.98	-1.98	-0.33



Company:	WPX Energy Rocky Mountain, LLC	Local Co-ordinate Reference:	Well GM 43-8 - Slot A08
Project:	Garfield County, CO NAD83	TVD Reference:	KB @ 6111.01ft (HP 318)
Site:	MV 16-9 Pad	MD Reference:	KB @ 6111.01ft (HP 318)
Well:	GM 43-8	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)
4,362.00	16.27	207.44	3,645.65	-1,911.33	-1,112.16	2,211.35	1.84	-1.77	-1.74
4,456.00	15.10	204.37	3,736.15	-1,934.17	-1,123.28	2,236.69	1.53	-1.24	-3.27
4,551.00	13.66	203.43	3,828.17	-1,955.73	-1,132.85	2,260.14	1.54	-1.52	-0.99
4,645.00	12.13	207.26	3,919.80	-1,974.70	-1,141.78	2,281.02	1.86	-1.63	4.07
4,739.00	10.97	202.99	4,011.90	-1,991.71	-1,149.80	2,299.76	1.53	-1.23	-4.54
4,834.00	8.97	207.68	4,105.46	-2,006.59	-1,156.77	2,316.13	2.27	-2.11	4.94
4,928.00	7.40	207.62	4,198.50	-2,018.45	-1,162.98	2,329.50	1.67	-1.67	-0.06
5,023.00	5.42	208.59	4,292.90	-2,027.81	-1,167.97	2,340.10	2.09	-2.08	1.02
5,117.00	3.78	206.56	4,386.59	-2,034.48	-1,171.48	2,347.63	1.75	-1.74	-2.16
5,212.00	1.90	209.76	4,481.47	-2,038.65	-1,173.66	2,352.33	1.99	-1.98	3.37
5,306.00	0.26	337.34	4,575.46	-2,039.80	-1,174.52	2,353.76	2.20	-1.74	135.72
5,400.00	0.51	25.14	4,669.45	-2,039.23	-1,174.42	2,353.21	0.41	0.27	50.85
5,494.00	0.31	39.15	4,763.45	-2,038.65	-1,174.08	2,352.54	0.24	-0.21	14.90
5,589.00	0.22	120.26	4,858.45	-2,038.55	-1,173.76	2,352.29	0.37	-0.09	85.38
5,683.00	0.53	179.73	4,952.45	-2,039.07	-1,173.60	2,352.66	0.49	0.33	63.27
5,777.00	0.78	200.03	5,046.44	-2,040.11	-1,173.82	2,353.67	0.36	0.27	21.60
5,871.00	1.11	205.62	5,140.43	-2,041.53	-1,174.43	2,355.21	0.36	0.35	5.95
5,966.00	1.52	214.10	5,235.40	-2,043.40	-1,175.54	2,357.38	0.48	0.43	8.93
6,060.00	1.29	204.95	5,329.38	-2,045.39	-1,176.68	2,359.68	0.34	-0.24	-9.73
6,155.00	1.67	197.77	5,424.34	-2,047.68	-1,177.56	2,362.09	0.44	0.40	-7.56
6,249.00	1.97	203.54	5,518.30	-2,050.47	-1,178.62	2,365.04	0.37	0.32	6.14
6,343.00	2.33	213.84	5,612.23	-2,053.54	-1,180.33	2,368.55	0.56	0.38	10.96
6,438.00	2.06	223.27	5,707.16	-2,056.38	-1,182.58	2,372.14	0.47	-0.28	9.93
6,532.00	1.82	225.87	5,801.11	-2,058.65	-1,184.81	2,375.22	0.27	-0.26	2.77
6,626.00	1.68	235.72	5,895.06	-2,060.47	-1,187.02	2,377.90	0.35	-0.15	10.48
6,721.00	1.72	240.19	5,990.02	-2,061.96	-1,189.40	2,380.39	0.15	0.04	4.71
6,815.00	2.02	240.40	6,083.97	-2,063.48	-1,192.07	2,383.05	0.32	0.32	0.22
6,909.00	2.81	235.83	6,177.89	-2,065.59	-1,195.41	2,386.56	0.86	0.84	-4.86
7,003.00	4.04	224.31	6,271.72	-2,069.26	-1,199.63	2,391.85	1.49	1.31	-12.26
7,098.00	4.52	220.82	6,366.45	-2,074.48	-1,204.42	2,398.77	0.57	0.51	-3.67
7,186.00	4.66	223.52	6,454.17	-2,079.70	-1,209.15	2,405.66	0.29	0.16	3.07
Last SDI Production MWD Survey									
7,247.00	4.66	223.52	6,514.97	-2,083.29	-1,212.56	2,410.48	0.00	0.00	0.00
Projection to TD									

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------