




Scientific Drilling

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 514-21 |
| County & State | Garfield County, CO |
| SDI Job No. | 421214DEFK234054 |
| Rig | Cyclone 17 |

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 7,266 feet is true and correct as determined from all available records.


Signature

23-Dec-14
Date

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

| | | | |
|------------------|--------------------------------|-------------------------------------|--|
| Company: | WPX Energy Rocky Mountain, LLC | Local Co-ordinate Reference: | Well GM 514-21 - Slot A9 |
| Project: | Garfield County, CO NAD83 | TVD Reference: | KELLY BUSHING @ 5626.01ft (Cyclone 17 (22' RKB) kjs) |
| Site: | GM 11-28 Pad | MD Reference: | KELLY BUSHING @ 5626.01ft (Cyclone 17 (22' RKB) kjs) |
| Well: | GM 514-21 | 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 | | |

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|-----------------------|--------------|--------------|-------------------|-------------------|------------------|
| Site | GM 11-28 Pad | | | | |
| Site Position: | | Northing: | 1,617,299.30 usft | Latitude: | 39° 29' 56.450 N |
| From: | Map | Easting: | 2,260,967.51 usft | Longitude: | 108° 7' 9.465 W |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13.200 in | Grid Convergence: | -1.65 ° |

| Well | GM 514-21 - Slot A9 | | | | | |
|----------------------|---------------------|---------|---------------------|-------------------|---------------|------------------|
| Well Position | +N/-S | 0.00 ft | Northing: | 1,617,282.42 usft | Latitude: | 39° 29' 56.281 N |
| | +E/-W | 0.00 ft | Easting: | 2,260,961.21 usft | Longitude: | 108° 7' 9.539 W |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | ft | Ground Level: | 5,604.01 ft |

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|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 6/14/2013 | 10.15 | 65.66 | 52,037 |

| | | | | | |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|------|
| 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 | 11.24 | |

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|-----------------------|----------------|--|------------------|------------------------------------|--|
| Survey Program | Date | 12/23/2014 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 75.00 | 709.00 | Survey #1 - Gyro MWD (Wellbore #1) | SDI Gyro MWD 104 | SDI Gyro MWD Error Model Ver 1.0.4 | |
| 780.00 | 1,435.00 | Survey #2 - Surface MWD (Wellbore #1) | MWD SDI | MWD - Standard ver 1.0.1 | |
| 1,524.00 | 7,266.00 | Survey #3 - Production MWD (Wellbore #1) | MWD SDI | MWD - Standard ver 1.0.1 | |

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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) | |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 75.00 | 0.26 | 217.53 | 75.00 | -0.13 | -0.10 | -0.15 | 0.35 | 0.35 | 0.00 | |
| First SDI Gyro MWD Survey | | | | | | | | | | |
| 165.00 | 0.70 | 5.63 | 165.00 | 0.25 | -0.17 | 0.21 | 1.03 | 0.49 | 164.56 | |
| 256.00 | 1.94 | 13.80 | 255.97 | 2.30 | 0.25 | 2.30 | 1.37 | 1.36 | 8.98 | |
| 346.00 | 3.70 | 14.50 | 345.86 | 6.59 | 1.34 | 6.73 | 1.96 | 1.96 | 0.78 | |
| 437.00 | 5.63 | 10.63 | 436.55 | 13.82 | 2.90 | 14.12 | 2.15 | 2.12 | -4.25 | |

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|------------------|--------------------------------|-------------------------------------|--|
| Company: | WPX Energy Rocky Mountain, LLC | Local Co-ordinate Reference: | Well GM 514-21 - Slot A9 |
| Project: | Garfield County, CO NAD83 | TVD Reference: | KELLY BUSHING @ 5626.01ft (Cyclone 17 (22' RKB) kjs) |
| Site: | GM 11-28 Pad | MD Reference: | KELLY BUSHING @ 5626.01ft (Cyclone 17 (22' RKB) kjs) |
| Well: | GM 514-21 | 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) |
| 528.00 | 7.83 | 10.46 | 526.92 | 24.31 | 4.85 | 24.78 | 2.42 | 2.42 | -0.19 |
| 618.00 | 9.50 | 10.46 | 615.89 | 37.64 | 7.31 | 38.34 | 1.86 | 1.86 | 0.00 |
| 709.00 | 11.52 | 10.63 | 705.36 | 53.96 | 10.35 | 54.94 | 2.22 | 2.22 | 0.19 |
| Last SDI Gyro MWD Survey | | | | | | | | | |
| 780.00 | 12.91 | 11.18 | 774.75 | 68.71 | 13.19 | 69.96 | 1.96 | 1.96 | 0.77 |
| First SDI Surface MWD Survey | | | | | | | | | |
| 871.00 | 14.66 | 13.08 | 863.13 | 89.90 | 17.77 | 91.64 | 1.99 | 1.92 | 2.09 |
| 961.00 | 15.92 | 12.67 | 949.94 | 113.03 | 23.06 | 115.36 | 1.41 | 1.40 | -0.46 |
| 1,056.00 | 17.94 | 12.04 | 1,040.82 | 140.06 | 28.97 | 143.02 | 2.14 | 2.13 | -0.66 |
| 1,151.00 | 20.28 | 9.61 | 1,130.58 | 170.60 | 34.77 | 174.11 | 2.60 | 2.46 | -2.56 |
| 1,246.00 | 22.52 | 11.42 | 1,219.02 | 204.67 | 41.12 | 208.76 | 2.46 | 2.36 | 1.91 |
| 1,340.00 | 24.09 | 10.92 | 1,305.35 | 241.16 | 48.32 | 245.95 | 1.68 | 1.67 | -0.53 |
| 1,435.00 | 25.76 | 10.60 | 1,391.50 | 280.49 | 55.79 | 285.98 | 1.76 | 1.76 | -0.34 |
| Last SDI Surface MWD Survey | | | | | | | | | |
| 1,524.00 | 26.97 | 9.44 | 1,471.24 | 319.41 | 62.66 | 325.50 | 1.48 | 1.36 | -1.30 |
| First SDI Production MWD Survey | | | | | | | | | |
| 1,618.00 | 24.95 | 10.96 | 1,555.75 | 359.90 | 69.92 | 366.63 | 2.26 | -2.15 | 1.62 |
| 1,713.00 | 23.86 | 13.26 | 1,642.27 | 398.28 | 78.14 | 405.87 | 1.52 | -1.15 | 2.42 |
| 1,807.00 | 23.02 | 13.51 | 1,728.51 | 434.66 | 86.79 | 443.24 | 0.90 | -0.89 | 0.27 |
| 1,900.00 | 23.65 | 13.18 | 1,813.90 | 470.50 | 95.30 | 480.05 | 0.69 | 0.68 | -0.35 |
| 1,994.00 | 23.16 | 12.86 | 1,900.17 | 506.88 | 103.71 | 517.37 | 0.54 | -0.52 | -0.34 |
| 2,087.00 | 23.75 | 12.71 | 1,985.48 | 542.98 | 111.90 | 554.37 | 0.64 | 0.63 | -0.16 |
| 2,180.00 | 23.48 | 9.95 | 2,070.70 | 579.50 | 119.22 | 591.62 | 1.22 | -0.29 | -2.97 |
| 2,273.00 | 23.92 | 9.32 | 2,155.85 | 616.35 | 125.48 | 628.99 | 0.55 | 0.47 | -0.68 |
| 2,366.00 | 26.01 | 10.92 | 2,240.16 | 654.98 | 132.39 | 668.22 | 2.36 | 2.25 | 1.72 |
| 2,460.00 | 25.50 | 10.57 | 2,324.82 | 695.11 | 140.01 | 709.07 | 0.57 | -0.54 | -0.37 |
| 2,553.00 | 26.11 | 10.75 | 2,408.55 | 734.89 | 147.50 | 749.55 | 0.66 | 0.66 | 0.19 |
| 2,648.00 | 24.68 | 9.77 | 2,494.37 | 774.98 | 154.76 | 790.28 | 1.57 | -1.51 | -1.03 |
| 2,741.00 | 24.97 | 10.69 | 2,578.77 | 813.40 | 161.70 | 829.32 | 0.52 | 0.31 | 0.99 |
| 2,834.00 | 25.73 | 13.08 | 2,662.82 | 852.36 | 169.91 | 869.13 | 1.37 | 0.82 | 2.57 |
| 2,930.00 | 25.82 | 12.88 | 2,749.27 | 893.04 | 179.29 | 910.85 | 0.13 | 0.09 | -0.21 |
| 3,023.00 | 25.15 | 12.15 | 2,833.22 | 932.10 | 187.96 | 950.86 | 0.80 | -0.72 | -0.78 |
| 3,118.00 | 24.77 | 12.54 | 2,919.34 | 971.26 | 196.53 | 990.94 | 0.44 | -0.40 | 0.41 |
| 3,212.00 | 25.24 | 12.61 | 3,004.53 | 1,010.04 | 205.18 | 1,030.66 | 0.50 | 0.50 | 0.07 |
| 3,305.00 | 25.42 | 12.00 | 3,088.59 | 1,048.92 | 213.66 | 1,070.44 | 0.34 | 0.19 | -0.66 |
| 3,398.00 | 24.55 | 11.80 | 3,172.89 | 1,087.35 | 221.76 | 1,109.72 | 0.94 | -0.94 | -0.22 |
| 3,492.00 | 23.45 | 12.46 | 3,258.76 | 1,124.73 | 229.79 | 1,147.95 | 1.20 | -1.17 | 0.70 |
| 3,586.00 | 22.88 | 12.63 | 3,345.18 | 1,160.83 | 237.82 | 1,184.92 | 0.61 | -0.61 | 0.18 |
| 3,680.00 | 21.04 | 11.12 | 3,432.36 | 1,195.22 | 245.07 | 1,220.06 | 2.05 | -1.96 | -1.61 |
| 3,775.00 | 20.83 | 11.39 | 3,521.09 | 1,228.51 | 251.70 | 1,254.01 | 0.24 | -0.22 | 0.28 |
| 3,870.00 | 19.09 | 10.85 | 3,610.38 | 1,260.33 | 257.96 | 1,286.43 | 1.84 | -1.83 | -0.57 |
| 3,964.00 | 18.44 | 11.27 | 3,699.38 | 1,290.00 | 263.76 | 1,316.67 | 0.71 | -0.69 | 0.45 |
| 4,059.00 | 16.58 | 11.94 | 3,789.98 | 1,318.00 | 269.50 | 1,345.25 | 1.97 | -1.96 | 0.71 |

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| Well: | GM 514-21 | 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) |
| 4,153.00 | 15.89 | 11.56 | 3,880.23 | 1,343.73 | 274.85 | 1,371.53 | 0.74 | -0.73 | -0.40 |
| 4,248.00 | 14.48 | 10.92 | 3,971.91 | 1,368.14 | 279.71 | 1,396.42 | 1.49 | -1.48 | -0.67 |
| 4,341.00 | 13.54 | 11.77 | 4,062.14 | 1,390.21 | 284.13 | 1,418.93 | 1.03 | -1.01 | 0.91 |
| 4,435.00 | 13.05 | 11.40 | 4,153.62 | 1,411.39 | 288.47 | 1,440.55 | 0.53 | -0.52 | -0.39 |
| 4,530.00 | 11.76 | 12.01 | 4,246.40 | 1,431.37 | 292.61 | 1,460.95 | 1.36 | -1.36 | 0.64 |
| 4,623.00 | 10.73 | 12.76 | 4,337.61 | 1,449.09 | 296.49 | 1,479.08 | 1.12 | -1.11 | 0.81 |
| 4,717.00 | 10.67 | 8.64 | 4,429.98 | 1,466.22 | 299.73 | 1,496.52 | 0.82 | -0.06 | -4.38 |
| 4,811.00 | 9.79 | 7.47 | 4,522.49 | 1,482.75 | 302.08 | 1,513.19 | 0.96 | -0.94 | -1.24 |
| 4,906.00 | 10.46 | 8.46 | 4,616.01 | 1,499.29 | 304.40 | 1,529.86 | 0.73 | 0.71 | 1.04 |
| 5,000.00 | 10.02 | 13.87 | 4,708.51 | 1,515.67 | 307.61 | 1,546.56 | 1.12 | -0.47 | 5.76 |
| 5,094.00 | 9.45 | 15.14 | 4,801.16 | 1,531.06 | 311.59 | 1,562.43 | 0.65 | -0.61 | 1.35 |
| 5,189.00 | 8.73 | 22.21 | 4,894.97 | 1,545.26 | 316.35 | 1,577.28 | 1.40 | -0.76 | 7.44 |
| 5,283.00 | 7.68 | 22.82 | 4,988.00 | 1,557.65 | 321.48 | 1,590.44 | 1.12 | -1.12 | 0.65 |
| 5,377.00 | 7.49 | 24.51 | 5,081.18 | 1,569.02 | 326.46 | 1,602.56 | 0.31 | -0.20 | 1.80 |
| 5,471.00 | 5.66 | 21.39 | 5,174.56 | 1,578.91 | 330.69 | 1,613.09 | 1.98 | -1.95 | -3.32 |
| 5,565.00 | 4.07 | 23.59 | 5,268.22 | 1,586.28 | 333.72 | 1,620.91 | 1.70 | -1.69 | 2.34 |
| 5,659.00 | 2.67 | 35.79 | 5,362.05 | 1,591.12 | 336.34 | 1,626.16 | 1.67 | -1.49 | 12.98 |
| 5,753.00 | 1.02 | 35.09 | 5,456.00 | 1,593.58 | 338.10 | 1,628.91 | 1.76 | -1.76 | -0.74 |
| 5,847.00 | 0.05 | 120.02 | 5,550.00 | 1,594.24 | 338.61 | 1,629.67 | 1.08 | -1.03 | 90.35 |
| 5,941.00 | 0.42 | 311.67 | 5,643.99 | 1,594.45 | 338.39 | 1,629.83 | 0.50 | 0.39 | -179.10 |
| 6,035.00 | 0.12 | 109.44 | 5,737.99 | 1,594.65 | 338.23 | 1,629.99 | 0.57 | -0.32 | 167.84 |
| 6,129.00 | 0.39 | 287.85 | 5,831.99 | 1,594.71 | 338.01 | 1,630.01 | 0.54 | 0.29 | 189.80 |
| 6,223.00 | 0.46 | 230.74 | 5,925.99 | 1,594.57 | 337.42 | 1,629.76 | 0.44 | 0.07 | -60.76 |
| 6,316.00 | 0.66 | 212.75 | 6,018.99 | 1,593.88 | 336.84 | 1,628.97 | 0.28 | 0.22 | -19.34 |
| 6,410.00 | 0.71 | 232.60 | 6,112.98 | 1,593.08 | 336.08 | 1,628.03 | 0.26 | 0.05 | 21.12 |
| 6,504.00 | 1.45 | 229.49 | 6,206.96 | 1,591.95 | 334.72 | 1,626.66 | 0.79 | 0.79 | -3.31 |
| 6,599.00 | 1.78 | 221.56 | 6,301.93 | 1,590.06 | 332.82 | 1,624.44 | 0.42 | 0.35 | -8.35 |
| 6,690.00 | 1.84 | 219.20 | 6,392.88 | 1,587.87 | 330.96 | 1,621.93 | 0.11 | 0.07 | -2.59 |
| 6,784.00 | 2.28 | 210.57 | 6,486.82 | 1,585.10 | 329.06 | 1,618.83 | 0.57 | 0.47 | -9.18 |
| 6,878.00 | 2.40 | 228.89 | 6,580.74 | 1,582.19 | 326.62 | 1,615.51 | 0.80 | 0.13 | 19.49 |
| 6,971.00 | 2.78 | 234.21 | 6,673.65 | 1,579.59 | 323.33 | 1,612.32 | 0.48 | 0.41 | 5.72 |
| 7,065.00 | 2.47 | 223.23 | 6,767.55 | 1,576.78 | 320.09 | 1,608.93 | 0.63 | -0.33 | -11.68 |
| 7,201.00 | 2.78 | 240.90 | 6,903.41 | 1,573.04 | 315.20 | 1,604.31 | 0.63 | 0.23 | 12.99 |
| Last SDI Production MWD Survey | | | | | | | | | |
| 7,266.00 | 2.78 | 240.90 | 6,968.33 | 1,571.51 | 312.45 | 1,602.27 | 0.00 | 0.00 | 0.00 |
| Projection to Bit | | | | | | | | | |

| | | | |
|------------------|--------------------------------|-------------------------------------|--|
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| Project: | Garfield County, CO NAD83 | TVD Reference: | KELLY BUSHING @ 5626.01ft (Cyclone 17 (22' RKB) kjs) |
| Site: | GM 11-28 Pad | MD Reference: | KELLY BUSHING @ 5626.01ft (Cyclone 17 (22' RKB) kjs) |
| Well: | GM 514-21 | North Reference: | True |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | Database: | Grand Junction District |

| Design Annotations | | | | |
|---------------------|---------------------|-------------------|------------|---------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 75.00 | 75.00 | -0.13 | -0.10 | First SDI Gyro MWD Survey |
| 709.00 | 705.36 | 53.96 | 10.35 | Last SDI Gyro MWD Survey |
| 780.00 | 774.75 | 68.71 | 13.19 | First SDI Surface MWD Survey |
| 1,435.00 | 1,391.50 | 280.49 | 55.79 | Last SDI Surface MWD Survey |
| 1,524.00 | 1,471.24 | 319.41 | 62.66 | First SDI Production MWD Survey |
| 7,201.00 | 6,903.41 | 1,573.04 | 315.20 | Last SDI Production MWD Survey |
| 7,266.00 | 6,968.33 | 1,571.51 | 312.45 | Projection to Bit |

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