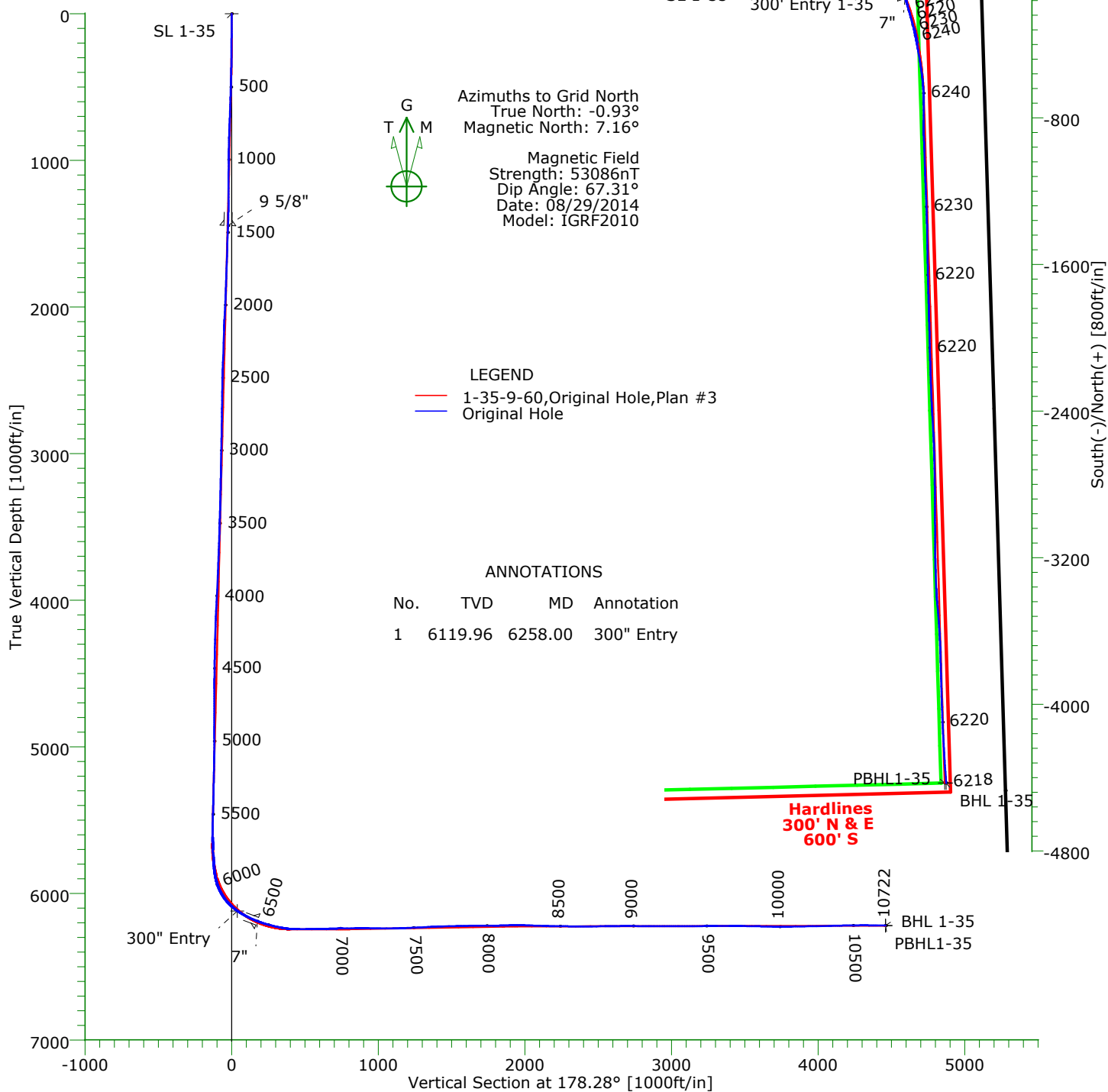




| No. | TVD | MD | Name | Size |
|-----|---------|---------|--------|-------|
| 1 | 1444.31 | 1453.00 | 9 5/8" | 9.625 |
| 2 | 6189.43 | 6421.00 | 7" | 7.000 |



| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Shape |
|-----------------|---------|----------|---------|------------|------------|---------------|----------------|-------|
| SL 1-35 | 0.00 | 0.00 | 0.00 | 1505922.29 | 3400763.64 | 40°42'47.419N | 104°03'15.581W | Point |
| 300' Entry 1-35 | 6119.96 | -13.24 | 849.66 | 1505909.05 | 3401613.30 | 40°42'47.151N | 104°03'04.551W | Point |
| BHL 1-35 | 6218.42 | -4428.55 | 1130.54 | 1501493.74 | 3401894.18 | 40°42'03.483N | 104°03'01.841W | Point |
| PBHL1-35 | 6220.00 | -4428.82 | 1122.65 | 1501493.47 | 3401886.29 | 40°42'03.481N | 104°03'01.944W | Point |

Precision Directional Services, Inc.

Survey Report

| | | | | |
|---|--|---|-----------------------|----------------|
| Company: CARRIZO OIL & GAS, INC. | | Date: 09/16/2014 | Time: 14:46:36 | Page: 1 |
| Field: Niobrara CONZ'83 | | Co-ordinate(NE) Reference: Well: 1-35-9-60, Grid North | | |
| Site: Shull 1-35-9-60 Pad | | Vertical (TVD) Reference: 4923'GL+17"KB 4940.0 | | |
| Well: 1-35-9-60 | | Section (VS) Reference: Well (0.00N,0.00E,178.28Azi) | | |
| Wellpath: Original Hole | | Survey Calculation Method: Minimum Curvature | Db: Adapti | |

| | | | | |
|--|--|--|--|--|
| Field: Niobrara CONZ'83 | | | | |
| Map System: US State Plane Coordinate System 1983 | | Map Zone: Colorado, Northern Zone | | |
| Geo Datum: GRS 1980 | | Coordinate System: Well Centre | | |
| Sys Datum: Mean Sea Level | | Geomagnetic Model: IGRF2010 | | |

| | | | | |
|--------------------------------------|--------------------------------|-----------------------------------|--|--|
| Site: Shull 1-35-9-60 Pad | | | | |
| Weld County, CO | | | | |
| Site Position: | Northing: 1505922.29 ft | Latitude: 40 42 47.419 N | | |
| From: Map | Easting: 3400763.64 ft | Longitude: 104 3 15.581 W | | |
| Position Uncertainty: 0.00 ft | | North Reference: Grid | | |
| Ground Level: 4923.00 ft | | Grid Convergence: 0.93 deg | | |

| | | | | |
|--------------------------------------|--------------------------------|----------------------------------|--|--|
| Well: 1-35-9-60 | | | | |
| Slot Name: | | | | |
| Well Position: +N/-S 0.00 ft | Northing: 1505922.29 ft | Latitude: 40 42 47.419 N | | |
| +E/-W 0.00 ft | Easting : 3400763.64 ft | Longitude: 104 3 15.581 W | | |
| Position Uncertainty: 0.00 ft | | | | |

| | | | | |
|---|--------------------------|---|------------------|--|
| Wellpath: Original Hole | | | | |
| Current Datum: 4923'GL+17"KB | Height 4940.00 ft | Drilled From: Surface | | |
| Magnetic Data: 08/29/2014 | | Tie-on Depth: 0.00 ft | | |
| Field Strength: 53086 nT | | Above System Datum: Mean Sea Level | | |
| Vertical Section: Depth From (TVD) | +N/-S | Declination: 8.09 deg | | |
| ft | ft | Mag Dip Angle: 67.31 deg | | |
| | | +E/-W | Direction | |
| | | ft | bearing | |
| 0.00 | 0.00 | 0.00 | 178.28 | |

| | | | | |
|---|----------------------|-------------------------------|-----------------|------------------|
| Survey Program for Definitive Wellpath | | | | |
| Date: 09/04/2014 | Validated: No | Version: 2 | | |
| Actual From ft | To ft | Survey | Toolcode | Tool Name |
| 135.00 | 10661.00 | Survey #1 (135.00-10661.00) | MWD | Std MWD |
| 10722.00 | 10722.00 | Survey #2 (10722.00-10722.00) | Project | Projection |

| Survey | | | | | | | | | | |
|---------------|-------------|-----------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| MD ft | Incl deg | Azim bearing | TVD ft | +N/-S ft | +E/-W ft | VS ft | DLS deg/100ft | Build deg/100ft | Turn deg/100ft | Tool/Comment |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | TIE LINE |
| 135.00 | 0.90 | 300.90 | 134.99 | 0.54 | -0.91 | -0.57 | 0.67 | 0.67 | 0.00 | MWD |
| 228.00 | 0.70 | 55.70 | 227.99 | 1.24 | -1.07 | -1.27 | 1.45 | -0.22 | 123.44 | MWD |
| 319.00 | 2.10 | 75.40 | 318.96 | 1.97 | 1.01 | -1.94 | 1.60 | 1.54 | 21.65 | MWD |
| 410.00 | 3.60 | 66.00 | 409.85 | 3.56 | 5.23 | -3.40 | 1.72 | 1.65 | -10.33 | MWD |
| 500.00 | 4.60 | 69.00 | 499.61 | 6.00 | 11.18 | -5.66 | 1.14 | 1.11 | 3.33 | MWD |
| 591.00 | 6.50 | 71.80 | 590.18 | 8.92 | 19.48 | -8.33 | 2.11 | 2.09 | 3.08 | MWD |
| 682.00 | 7.00 | 70.40 | 680.55 | 12.38 | 29.60 | -11.49 | 0.58 | 0.55 | -1.54 | MWD |
| 773.00 | 8.30 | 71.10 | 770.74 | 16.37 | 41.04 | -15.13 | 1.43 | 1.43 | 0.77 | MWD |
| 856.00 | 8.90 | 79.40 | 852.81 | 19.49 | 53.01 | -17.89 | 1.66 | 0.72 | 10.00 | MWD |
| 941.00 | 9.00 | 83.10 | 936.78 | 21.50 | 66.08 | -19.51 | 0.69 | 0.12 | 4.35 | MWD |
| 1025.00 | 7.90 | 84.90 | 1019.86 | 22.80 | 78.35 | -20.44 | 1.35 | -1.31 | 2.14 | MWD |
| 1109.00 | 7.60 | 86.30 | 1103.10 | 23.68 | 89.64 | -20.97 | 0.42 | -0.36 | 1.67 | MWD |
| 1195.00 | 7.50 | 86.40 | 1188.35 | 24.40 | 100.92 | -21.36 | 0.12 | -0.12 | 0.12 | MWD |
| 1280.00 | 7.20 | 87.80 | 1272.65 | 24.95 | 111.78 | -21.58 | 0.41 | -0.35 | 1.65 | MWD |
| 1365.00 | 7.10 | 77.80 | 1356.99 | 26.26 | 122.24 | -22.58 | 1.47 | -0.12 | -11.76 | MWD |
| 1417.00 | 7.20 | 72.90 | 1408.59 | 27.90 | 128.49 | -24.03 | 1.19 | 0.19 | -9.42 | MWD |
| 1495.00 | 7.00 | 72.60 | 1485.99 | 30.76 | 137.70 | -26.61 | 0.26 | -0.26 | -0.38 | MWD |
| 1580.00 | 6.90 | 72.90 | 1570.37 | 33.81 | 147.52 | -29.37 | 0.13 | -0.12 | 0.35 | MWD |
| 1664.00 | 6.80 | 72.20 | 1653.77 | 36.81 | 157.08 | -32.08 | 0.16 | -0.12 | -0.83 | MWD |
| 1748.00 | 6.70 | 72.00 | 1737.19 | 39.85 | 166.48 | -34.83 | 0.12 | -0.12 | -0.24 | MWD |
| 1834.00 | 6.30 | 71.10 | 1822.63 | 42.93 | 175.71 | -37.63 | 0.48 | -0.47 | -1.05 | MWD |

Precision Directional Services, Inc.

Survey Report

Company: CARRIZO OIL & GAS, INC.
Field: Niobrara CONZ'83
Site: Shull 1-35-9-60 Pad
Well: 1-35-9-60
Wellpath: Original Hole

Date: 09/16/2014 **Time:** 14:46:36 **Page:** 2
Co-ordinate(NE) Reference: Well: 1-35-9-60, Grid North
Vertical (TVD) Reference: 4923'GL+17"KB 4940.0
Section (VS) Reference: Well (0.00N,0.00E,178.28Azi)
Survey Calculation Method: Minimum Curvature **Db:** Adapti

Survey

| MD ft | Incl deg | Azim bearing | TVD ft | +N/-S ft | +E/-W ft | VS ft | DLS deg/100ft | Build deg/100ft | Turn deg/100ft | Tool/Comment |
|----------|-------------|-----------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 1919.00 | 6.90 | 70.40 | 1907.07 | 46.15 | 184.93 | -40.58 | 0.71 | 0.71 | -0.82 | MWD |
| 2004.00 | 6.70 | 64.50 | 1991.47 | 50.00 | 194.22 | -44.14 | 0.85 | -0.24 | -6.94 | MWD |
| 2089.00 | 7.30 | 60.60 | 2075.84 | 54.78 | 203.40 | -48.65 | 0.90 | 0.71 | -4.59 | MWD |
| 2174.00 | 7.70 | 76.80 | 2160.12 | 58.73 | 213.65 | -52.30 | 2.52 | 0.47 | 19.06 | MWD |
| 2259.00 | 7.70 | 74.50 | 2244.35 | 61.56 | 224.68 | -54.78 | 0.36 | 0.00 | -2.71 | MWD |
| 2344.00 | 7.70 | 74.50 | 2328.59 | 64.60 | 235.66 | -57.50 | 0.00 | 0.00 | 0.00 | MWD |
| 2429.00 | 7.40 | 71.80 | 2412.85 | 67.83 | 246.34 | -60.41 | 0.55 | -0.35 | -3.18 | MWD |
| 2514.00 | 7.90 | 80.50 | 2497.10 | 70.51 | 257.30 | -62.75 | 1.48 | 0.59 | 10.24 | MWD |
| 2598.00 | 7.70 | 81.00 | 2580.32 | 72.34 | 268.56 | -64.25 | 0.25 | -0.24 | 0.60 | MWD |
| 2683.00 | 7.50 | 82.60 | 2664.57 | 73.94 | 279.68 | -65.52 | 0.34 | -0.24 | 1.88 | MWD |
| 2768.00 | 7.70 | 82.00 | 2748.83 | 75.45 | 290.82 | -66.69 | 0.25 | 0.24 | -0.71 | MWD |
| 2853.00 | 7.90 | 81.00 | 2833.04 | 77.16 | 302.23 | -68.05 | 0.28 | 0.24 | -1.18 | MWD |
| 2938.00 | 8.30 | 81.50 | 2917.19 | 78.98 | 314.07 | -69.52 | 0.48 | 0.47 | 0.59 | MWD |
| 3023.00 | 8.40 | 80.60 | 3001.29 | 80.90 | 326.26 | -71.07 | 0.19 | 0.12 | -1.06 | MWD |
| 3108.00 | 8.40 | 81.00 | 3085.38 | 82.88 | 338.52 | -72.69 | 0.07 | 0.00 | 0.47 | MWD |
| 3193.00 | 7.20 | 80.10 | 3169.59 | 84.77 | 349.90 | -74.23 | 1.42 | -1.41 | -1.06 | MWD |
| 3278.00 | 5.50 | 76.20 | 3254.07 | 86.66 | 359.10 | -75.84 | 2.06 | -2.00 | -4.59 | MWD |
| 3363.00 | 4.40 | 67.60 | 3338.75 | 88.87 | 366.07 | -77.84 | 1.56 | -1.29 | -10.12 | MWD |
| 3448.00 | 5.60 | 71.30 | 3423.43 | 91.44 | 373.02 | -80.21 | 1.46 | 1.41 | 4.35 | MWD |
| 3532.00 | 6.90 | 73.10 | 3506.92 | 94.23 | 381.73 | -82.73 | 1.56 | 1.55 | 2.14 | MWD |
| 3617.00 | 7.70 | 73.40 | 3591.24 | 97.34 | 392.07 | -85.53 | 0.94 | 0.94 | 0.35 | MWD |
| 3702.00 | 8.00 | 74.80 | 3675.44 | 100.51 | 403.23 | -88.37 | 0.42 | 0.35 | 1.65 | MWD |
| 3788.00 | 8.50 | 72.60 | 3760.55 | 103.98 | 415.07 | -91.48 | 0.69 | 0.58 | -2.56 | MWD |
| 3873.00 | 9.10 | 71.30 | 3844.55 | 108.02 | 427.44 | -95.14 | 0.74 | 0.71 | -1.53 | MWD |
| 3958.00 | 9.10 | 70.60 | 3928.48 | 112.41 | 440.14 | -99.14 | 0.13 | 0.00 | -0.82 | MWD |
| 4043.00 | 9.10 | 71.10 | 4012.41 | 116.82 | 452.84 | -103.17 | 0.09 | 0.00 | 0.59 | MWD |
| 4127.00 | 8.80 | 70.80 | 4095.39 | 121.08 | 465.19 | -107.06 | 0.36 | -0.36 | -0.36 | MWD |
| 4212.00 | 8.30 | 72.40 | 4179.44 | 125.07 | 477.18 | -110.69 | 0.65 | -0.59 | 1.88 | MWD |
| 4301.00 | 8.30 | 79.80 | 4267.51 | 128.15 | 489.63 | -113.40 | 1.20 | 0.00 | 8.31 | MWD |
| 4385.00 | 8.40 | 81.70 | 4350.62 | 130.11 | 501.67 | -115.00 | 0.35 | 0.12 | 2.26 | MWD |
| 4470.00 | 7.50 | 83.30 | 4434.80 | 131.66 | 513.32 | -116.19 | 1.09 | -1.06 | 1.88 | MWD |
| 4555.00 | 7.40 | 81.50 | 4519.09 | 133.11 | 524.24 | -117.32 | 0.30 | -0.12 | -2.12 | MWD |
| 4640.00 | 6.10 | 88.90 | 4603.50 | 134.01 | 534.17 | -117.92 | 1.84 | -1.53 | 8.71 | MWD |
| 4725.00 | 6.50 | 90.10 | 4687.98 | 134.09 | 543.50 | -117.71 | 0.50 | 0.47 | 1.41 | MWD |
| 4811.00 | 6.20 | 87.30 | 4773.45 | 134.30 | 553.01 | -117.64 | 0.50 | -0.35 | -3.26 | MWD |
| 4896.00 | 5.60 | 84.70 | 4858.00 | 134.90 | 561.72 | -117.98 | 0.77 | -0.71 | -3.06 | MWD |
| 4981.00 | 3.90 | 85.90 | 4942.71 | 135.49 | 568.73 | -118.36 | 2.00 | -2.00 | 1.41 | MWD |
| 5066.00 | 4.00 | 81.70 | 5027.51 | 136.12 | 574.55 | -118.81 | 0.36 | 0.12 | -4.94 | MWD |
| 5152.00 | 5.80 | 79.20 | 5113.19 | 137.37 | 581.79 | -119.84 | 2.11 | 2.09 | -2.91 | MWD |
| 5236.00 | 6.10 | 76.90 | 5196.74 | 139.18 | 590.30 | -121.39 | 0.46 | 0.36 | -2.74 | MWD |
| 5321.00 | 5.20 | 76.60 | 5281.32 | 141.09 | 598.45 | -123.07 | 1.06 | -1.06 | -0.35 | MWD |
| 5406.00 | 6.00 | 72.90 | 5365.92 | 143.29 | 606.44 | -125.02 | 1.03 | 0.94 | -4.35 | MWD |
| 5491.00 | 7.40 | 75.70 | 5450.34 | 145.95 | 615.99 | -127.39 | 1.69 | 1.65 | 3.29 | MWD |
| 5577.00 | 6.50 | 76.60 | 5535.70 | 148.45 | 626.10 | -129.59 | 1.05 | -1.05 | 1.05 | MWD |
| 5618.00 | 5.50 | 78.00 | 5576.48 | 149.39 | 630.28 | -130.41 | 2.46 | -2.44 | 3.41 | MWD |
| 5657.00 | 4.90 | 78.20 | 5615.32 | 150.12 | 633.73 | -131.03 | 1.54 | -1.54 | 0.51 | MWD |
| 5700.00 | 8.00 | 105.10 | 5658.05 | 149.72 | 638.42 | -130.49 | 9.88 | 7.21 | 62.56 | MWD |
| 5743.00 | 12.40 | 102.10 | 5700.36 | 147.97 | 645.83 | -128.52 | 10.30 | 10.23 | -6.98 | MWD |
| 5785.00 | 14.70 | 102.10 | 5741.19 | 145.91 | 655.45 | -126.17 | 5.48 | 5.48 | 0.00 | MWD |
| 5828.00 | 17.40 | 94.90 | 5782.51 | 144.21 | 667.19 | -124.12 | 7.79 | 6.28 | -16.74 | MWD |
| 5870.00 | 21.50 | 99.30 | 5822.11 | 142.43 | 681.05 | -121.93 | 10.36 | 9.76 | 10.48 | MWD |
| 5912.00 | 24.20 | 106.80 | 5860.82 | 138.70 | 696.90 | -117.72 | 9.44 | 6.43 | 17.86 | MWD |
| 5955.00 | 25.40 | 115.40 | 5899.86 | 132.19 | 713.67 | -110.71 | 8.83 | 2.79 | 20.00 | MWD |

Precision Directional Services, Inc.

Survey Report

| | | | |
|---|---|-----------------------|-------------------|
| Company: CARRIZO OIL & GAS, INC. | Date: 09/16/2014 | Time: 14:46:36 | Page: 3 |
| Field: Niobrara CONZ'83 | Co-ordinate(NE) Reference: Well: 1-35-9-60, Grid North | | |
| Site: Shull 1-35-9-60 Pad | Vertical (TVD) Reference: 4923'GL+17"KB 4940.0 | | |
| Well: 1-35-9-60 | Section (VS) Reference: Well (0.00N,0.00E,178.28Azi) | | |
| Wellpath: Original Hole | Survey Calculation Method: Minimum Curvature | | Db: Adapti |

Survey

| MD ft | Incl deg | Azim bearing | TVD ft | +N/-S ft | +E/-W ft | VS ft | DLS deg/100ft | Build deg/100ft | Turn deg/100ft | Tool/Comment |
|----------|-------------|-----------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 5998.00 | 29.20 | 124.90 | 5938.09 | 122.23 | 730.62 | -100.24 | 13.42 | 8.84 | 22.09 | MWD |
| 6040.00 | 34.30 | 131.60 | 5973.80 | 108.50 | 747.89 | -86.00 | 14.75 | 12.14 | 15.95 | MWD |
| 6082.00 | 39.80 | 132.50 | 6007.31 | 91.54 | 766.66 | -68.49 | 13.16 | 13.10 | 2.14 | MWD |
| 6125.00 | 45.50 | 136.40 | 6038.93 | 71.12 | 787.40 | -47.45 | 14.61 | 13.26 | 9.07 | MWD |
| 6167.00 | 50.60 | 140.10 | 6067.00 | 47.81 | 808.16 | -23.53 | 13.79 | 12.14 | 8.81 | MWD |
| 6210.00 | 54.10 | 145.70 | 6093.27 | 20.65 | 828.65 | 4.23 | 13.13 | 8.14 | 13.02 | MWD |
| 6253.00 | 57.90 | 150.10 | 6117.32 | -9.55 | 847.55 | 34.98 | 12.25 | 8.84 | 10.23 | MWD |
| 6258.00 | 58.35 | 150.56 | 6119.96 | -13.24 | 849.66 | 38.73 | 11.82 | 8.94 | 9.12 | 300" Entry |
| 6295.00 | 61.70 | 153.80 | 6138.45 | -41.58 | 864.60 | 67.51 | 11.82 | 9.06 | 8.77 | MWD |
| 6338.00 | 65.00 | 157.50 | 6157.74 | -76.59 | 880.42 | 102.98 | 10.86 | 7.67 | 8.60 | MWD |
| 6385.00 | 67.80 | 159.70 | 6176.56 | -116.68 | 896.12 | 143.53 | 7.34 | 5.96 | 4.68 | MWD |
| 6464.00 | 73.30 | 163.60 | 6202.86 | -187.36 | 919.52 | 214.87 | 8.37 | 6.96 | 4.94 | MWD |
| 6510.00 | 76.00 | 164.30 | 6215.04 | -229.98 | 931.78 | 257.85 | 6.05 | 5.87 | 1.52 | MWD |
| 6553.00 | 77.00 | 165.00 | 6225.08 | -270.30 | 942.85 | 298.48 | 2.81 | 2.33 | 1.63 | MWD |
| 6595.00 | 79.00 | 166.10 | 6233.81 | -310.08 | 953.10 | 338.55 | 5.41 | 4.76 | 2.62 | MWD |
| 6638.00 | 83.70 | 168.50 | 6240.27 | -351.54 | 962.44 | 380.27 | 12.24 | 10.93 | 5.58 | MWD |
| 6679.00 | 88.30 | 169.70 | 6243.13 | -391.69 | 970.17 | 420.63 | 11.59 | 11.22 | 2.93 | MWD |
| 6722.00 | 90.50 | 170.10 | 6243.58 | -434.02 | 977.71 | 463.17 | 5.20 | 5.12 | 0.93 | MWD |
| 6764.00 | 90.50 | 169.90 | 6243.22 | -475.38 | 985.00 | 504.73 | 0.48 | 0.00 | -0.48 | MWD |
| 6849.00 | 90.70 | 172.70 | 6242.33 | -559.39 | 997.85 | 589.09 | 3.30 | 0.24 | 3.29 | MWD |
| 6934.00 | 91.80 | 176.60 | 6240.47 | -643.98 | 1005.78 | 673.88 | 4.77 | 1.29 | 4.59 | MWD |
| 7019.00 | 90.80 | 180.30 | 6238.54 | -728.91 | 1008.07 | 758.84 | 4.51 | -1.18 | 4.35 | MWD |
| 7104.00 | 91.00 | 180.50 | 6237.21 | -813.90 | 1007.48 | 843.77 | 0.33 | 0.24 | 0.24 | MWD |
| 7189.00 | 88.80 | 177.70 | 6237.36 | -898.87 | 1008.82 | 928.75 | 4.19 | -2.59 | -3.29 | MWD |
| 7274.00 | 90.00 | 178.00 | 6238.25 | -983.81 | 1012.00 | 1013.74 | 1.46 | 1.41 | 0.35 | MWD |
| 7359.00 | 90.20 | 178.00 | 6238.10 | -1068.76 | 1014.97 | 1098.74 | 0.24 | 0.24 | 0.00 | MWD |
| 7445.00 | 92.30 | 177.80 | 6236.22 | -1154.67 | 1018.12 | 1184.71 | 2.45 | 2.44 | -0.23 | MWD |
| 7530.00 | 92.90 | 177.70 | 6232.37 | -1239.52 | 1021.45 | 1269.62 | 0.72 | 0.71 | -0.12 | MWD |
| 7615.00 | 93.10 | 178.20 | 6227.92 | -1324.35 | 1024.49 | 1354.50 | 0.63 | 0.24 | 0.59 | MWD |
| 7700.00 | 91.30 | 178.90 | 6224.66 | -1409.25 | 1026.64 | 1439.43 | 2.27 | -2.12 | 0.82 | MWD |
| 7785.00 | 91.50 | 178.90 | 6222.58 | -1494.21 | 1028.27 | 1524.40 | 0.24 | 0.24 | 0.00 | MWD |
| 7870.00 | 90.80 | 179.20 | 6220.87 | -1579.18 | 1029.68 | 1609.38 | 0.90 | -0.82 | 0.35 | MWD |
| 7955.00 | 90.50 | 178.50 | 6219.91 | -1664.16 | 1031.39 | 1694.37 | 0.90 | -0.35 | -0.82 | MWD |
| 8040.00 | 90.00 | 178.40 | 6219.54 | -1749.13 | 1033.68 | 1779.37 | 0.60 | -0.59 | -0.12 | MWD |
| 8125.00 | 91.80 | 178.70 | 6218.20 | -1834.09 | 1035.84 | 1864.35 | 2.15 | 2.12 | 0.35 | MWD |
| 8210.00 | 89.90 | 178.20 | 6216.94 | -1919.04 | 1038.13 | 1949.34 | 2.31 | -2.24 | -0.59 | MWD |
| 8295.00 | 88.20 | 178.90 | 6218.35 | -2004.00 | 1040.29 | 2034.32 | 2.16 | -2.00 | 0.82 | MWD |
| 8380.00 | 87.90 | 178.40 | 6221.24 | -2088.93 | 1042.29 | 2119.27 | 0.69 | -0.35 | -0.59 | MWD |
| 8465.00 | 89.50 | 178.20 | 6223.17 | -2173.86 | 1044.81 | 2204.25 | 1.90 | 1.88 | -0.24 | MWD |
| 8550.00 | 89.20 | 177.70 | 6224.14 | -2258.80 | 1047.85 | 2289.24 | 0.69 | -0.35 | -0.59 | MWD |
| 8636.00 | 90.10 | 177.70 | 6224.66 | -2344.73 | 1051.30 | 2375.23 | 1.05 | 1.05 | 0.00 | MWD |
| 8721.00 | 90.30 | 176.60 | 6224.36 | -2429.63 | 1055.53 | 2460.21 | 1.32 | 0.24 | -1.29 | MWD |
| 8806.00 | 90.60 | 176.60 | 6223.70 | -2514.47 | 1060.57 | 2545.17 | 0.35 | 0.35 | 0.00 | MWD |
| 8891.00 | 90.70 | 178.50 | 6222.73 | -2599.39 | 1064.20 | 2630.16 | 2.24 | 0.12 | 2.24 | MWD |
| 8976.00 | 89.80 | 178.70 | 6222.36 | -2684.36 | 1066.28 | 2715.15 | 1.08 | -1.06 | 0.24 | MWD |
| 9061.00 | 89.70 | 178.90 | 6222.73 | -2769.34 | 1068.06 | 2800.15 | 0.26 | -0.12 | 0.24 | MWD |
| 9146.00 | 89.80 | 179.60 | 6223.10 | -2854.33 | 1069.17 | 2885.14 | 0.83 | 0.12 | 0.82 | MWD |
| 9231.00 | 90.20 | 179.90 | 6223.10 | -2939.33 | 1069.54 | 2970.11 | 0.59 | 0.47 | 0.35 | MWD |
| 9316.00 | 90.00 | 179.40 | 6222.96 | -3024.33 | 1070.06 | 3055.08 | 0.63 | -0.24 | -0.59 | MWD |
| 9401.00 | 90.20 | 179.80 | 6222.81 | -3109.33 | 1070.65 | 3140.06 | 0.53 | 0.24 | 0.47 | MWD |
| 9487.00 | 90.30 | 179.40 | 6222.43 | -3195.32 | 1071.25 | 3226.04 | 0.48 | 0.12 | -0.47 | MWD |
| 9572.00 | 90.20 | 177.80 | 6222.06 | -3280.29 | 1073.33 | 3311.03 | 1.89 | -0.12 | -1.88 | MWD |
| 9656.00 | 90.20 | 177.80 | 6221.77 | -3364.23 | 1076.55 | 3395.03 | 0.00 | 0.00 | 0.00 | MWD |
| 9742.00 | 89.20 | 175.00 | 6222.22 | -3450.05 | 1081.95 | 3480.97 | 3.46 | -1.16 | -3.26 | MWD |

Precision Directional Services, Inc.

Survey Report

| | |
|---|--|
| Company: CARRIZO OIL & GAS, INC. Field: Niobrara CONZ'83 Site: Shull 1-35-9-60 Pad Well: 1-35-9-60 Wellpath: Original Hole | Date: 09/16/2014 Time: 14:46:36 Page: 4 Co-ordinate(NE) Reference: Well: 1-35-9-60, Grid North Vertical (TVD) Reference: 4923'GL+17'KB 4940.0 Section (VS) Reference: Well (0.00N,0.00E,178.28Azi) Survey Calculation Method: Minimum Curvature Db: Adapti |
|---|--|

Survey

| MD ft | Incl deg | Azim bearing | TVD ft | +N/-S ft | +E/-W ft | VS ft | DLS deg/100ft | Build deg/100ft | Turn deg/100ft | Tool/Comment |
|----------|-------------|-----------------|-----------|-------------|-------------|----------|------------------|--------------------|-------------------|--------------|
| 9826.00 | 89.10 | 175.40 | 6223.46 | -3533.75 | 1088.98 | 3564.84 | 0.49 | -0.12 | 0.48 | MWD |
| 9911.00 | 88.70 | 176.60 | 6225.10 | -3618.52 | 1094.91 | 3649.76 | 1.49 | -0.47 | 1.41 | MWD |
| 9996.00 | 89.60 | 178.20 | 6226.36 | -3703.42 | 1098.76 | 3734.73 | 2.16 | 1.06 | 1.88 | MWD |
| 10081.00 | 90.90 | 178.70 | 6225.99 | -3788.39 | 1101.06 | 3819.73 | 1.64 | 1.53 | 0.59 | MWD |
| 10166.00 | 91.00 | 178.20 | 6224.58 | -3873.34 | 1103.36 | 3904.72 | 0.60 | 0.12 | -0.59 | MWD |
| 10251.00 | 91.20 | 178.40 | 6222.94 | -3958.29 | 1105.88 | 3989.70 | 0.33 | 0.24 | 0.24 | MWD |
| 10336.00 | 91.20 | 177.80 | 6221.16 | -4043.23 | 1108.70 | 4074.68 | 0.71 | 0.00 | -0.71 | MWD |
| 10421.00 | 91.30 | 177.30 | 6219.31 | -4128.13 | 1112.33 | 4159.65 | 0.60 | 0.12 | -0.59 | MWD |
| 10506.00 | 90.70 | 176.80 | 6217.83 | -4213.00 | 1116.71 | 4244.62 | 0.92 | -0.71 | -0.59 | MWD |
| 10591.00 | 89.80 | 176.60 | 6217.46 | -4297.86 | 1121.60 | 4329.59 | 1.08 | -1.06 | -0.24 | MWD |
| 10661.00 | 89.50 | 175.90 | 6217.88 | -4367.71 | 1126.18 | 4399.54 | 1.09 | -0.43 | -1.00 | MWD |
| 10722.00 | 89.50 | 175.90 | 6218.42 | -4428.55 | 1130.54 | 4460.49 | 0.00 | 0.00 | 0.00 | Project |

Annotation

| MD ft | TVD ft | |
|----------|-----------|------------|
| 6258.00 | 6119.96 | 300" Entry |