

10.3.0a.840

Chesapeake Appalachia, LLC

HALLIBURTON

Sperry Drilling Services

Project: Wetzel County, WV
Site: Wileyville
Well: Robert Baxter WTZ 8H
Wellbore: Wellbore #1
Design: Plan #5
Rig: Nomac 25

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Annotation |
|----------|-------|--------|---------|----------|---------|------|--------|---------|-----------------|
| 11048.00 | 90.27 | 130.80 | 7009.75 | -3142.43 | 2278.06 | 0.00 | 0.00 | 2172.70 | Tie in |
| 11089.00 | 90.27 | 130.80 | 7009.55 | -3169.93 | 2809.10 | 0.00 | 0.00 | 4213.68 | Start Log |
| 11437.06 | 90.27 | 137.76 | 7007.92 | -3412.00 | 3056.12 | 2.00 | 90.00 | 4561.39 | End Turn |
| 11517.03 | 90.27 | 137.76 | 7007.54 | -3471.20 | 3117.88 | 0.00 | 0.00 | 4641.04 | Start Drop Turn |
| 11773.78 | 89.40 | 132.70 | 7008.29 | -3653.49 | 3292.54 | 2.00 | -99.73 | 4897.46 | End Drop Turn |
| 12863.78 | 89.40 | 132.70 | 7019.70 | -4392.65 | 4093.65 | 0.00 | 0.00 | 5887.40 | TD |

Surface Location:

US State Plane 1927 (Exact solution)
 West Virginia North 4701
 Elevation: GL 1320' + KB 17' @ 1337.00ft (Nomac 25)

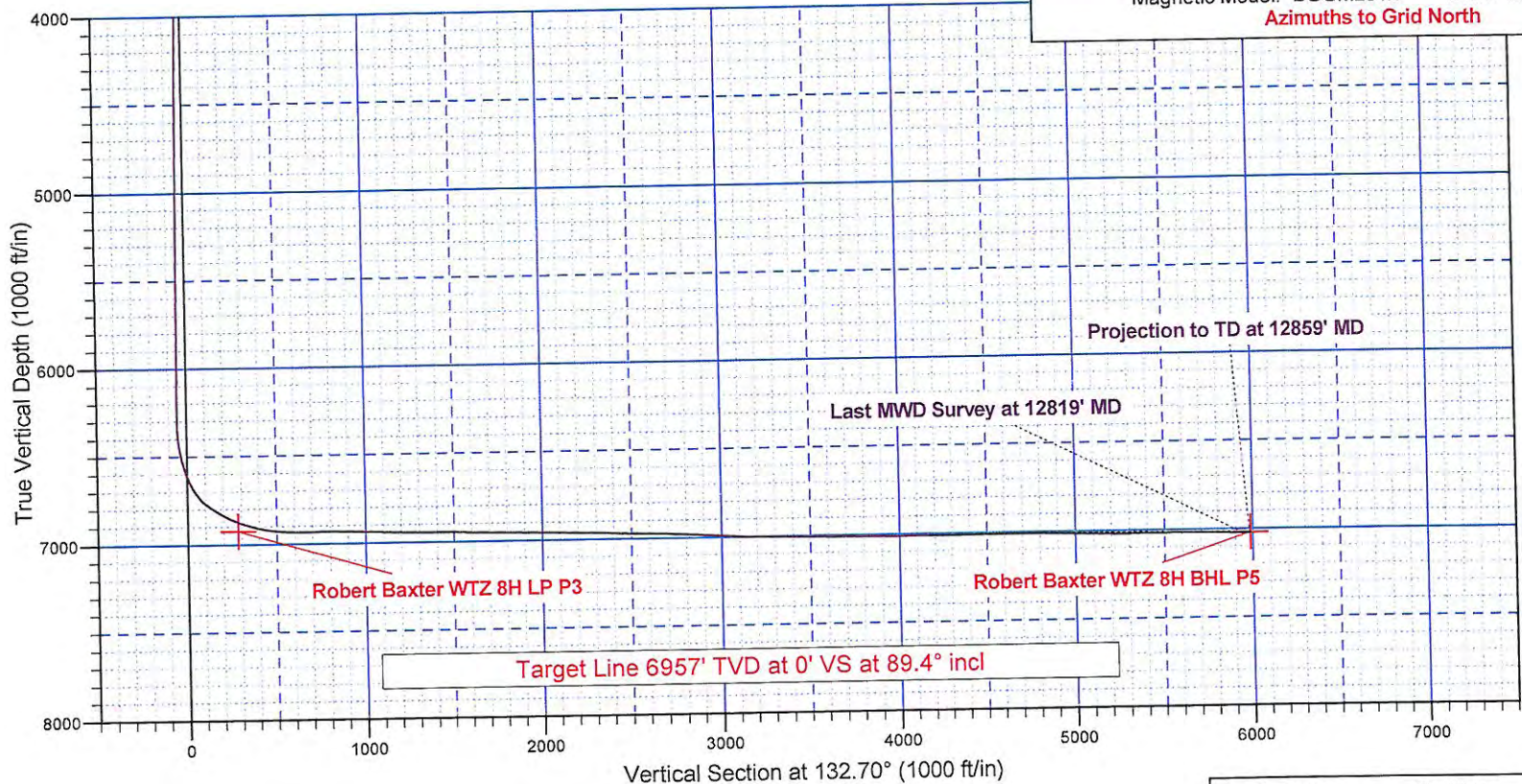
| Northing | Easting | Latitude | Longitude |
|-----------|------------|------------------|------------------|
| 444367.57 | 1654644.64 | 39° 42' 48.830 N | 80° 43' 39.569 W |

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name | TVD | +N/-S | +E/-W | Northing | Easting |
|-----------------------------|---------|----------|---------|-----------|------------|
| Robert Baxter WTZ 8H LP P3 | 6924.97 | -525.05 | -96.93 | 443842.52 | 1654547.72 |
| Robert Baxter WTZ 8H BHL P5 | 7019.70 | -4392.65 | 4093.65 | 439974.92 | 1658738.29 |

To convert a Magnetic Direction to a Grid Direction, Subtract 7.74°

Magnetic Model: BGGM2012 Date: 05-Apr-13
 Azimuths to Grid North



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 WV Department of Environmental Protection
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10302840

Chesapeake Appalachia, LLC

HALLIBURTON
Sperry Drilling Services

Project: Wetzel County, WV
Site: Wileyville
Well: Robert Baxter WTZ 8H
Wellbore: Wellbore #1
Design: Plan #5
Rig: Nomac 25

Surface Location:

US State Plane 1927 (Exact solution)
West Virginia North 4701

Elevation: GL 1320' + KB 17' @ 1337.00ft (Nomac 25)

| Northing | Easting | Latitude | Longitude |
|-----------|------------|------------------|------------------|
| 444367.57 | 1654644.64 | 39° 42' 48.830 N | 80° 43' 39.569 W |



To convert a Magnetic Direction to a Grid Direction, Subtract 7.74°

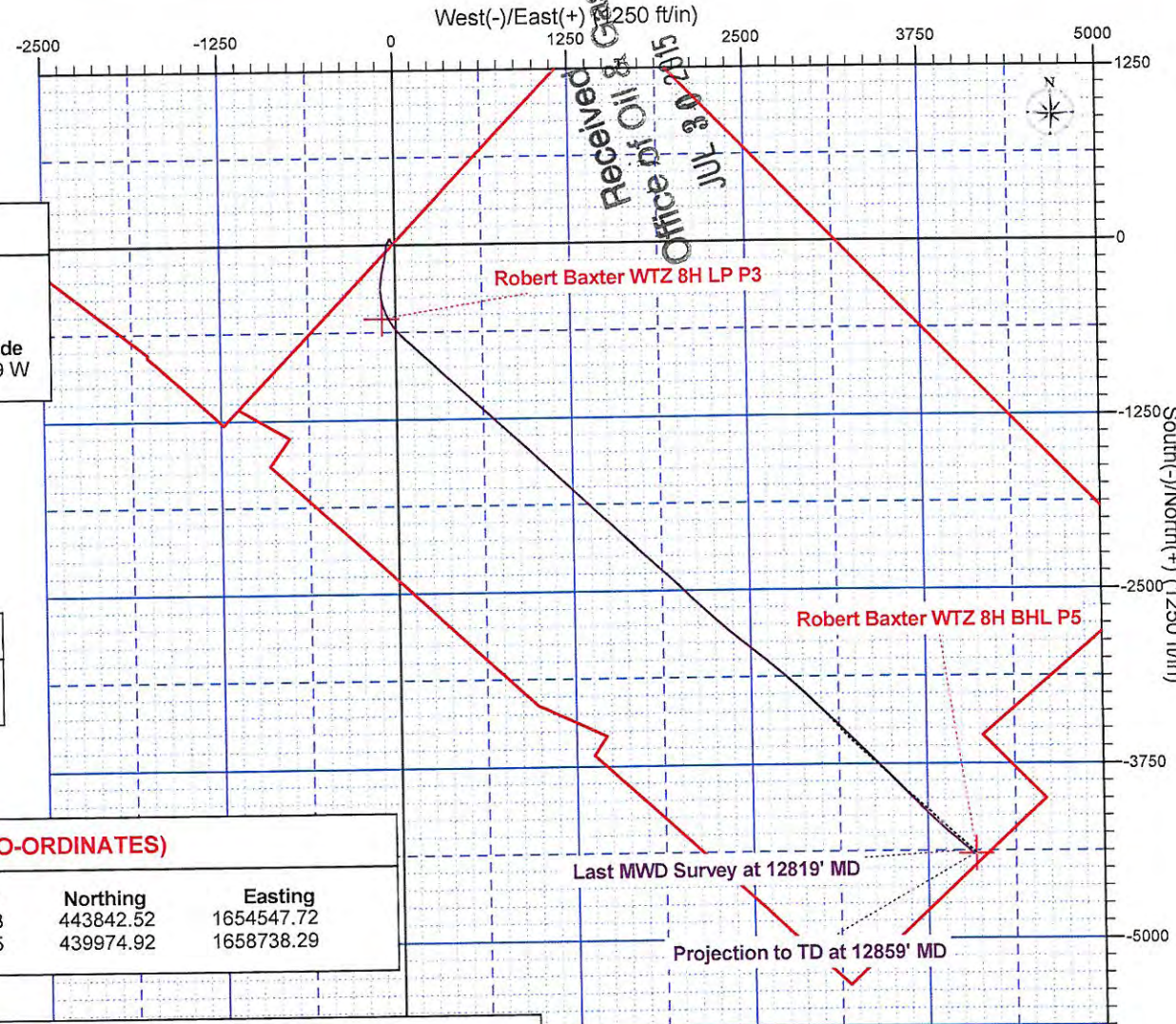
Magnetic Model: BGGM2012 Date: 05-Apr-13
Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name | TVD | +N/-S | +E/-W | Northing | Easting |
|-----------------------------|---------|----------|---------|-----------|------------|
| Robert Baxter WTZ 8H LP P3 | 6924.97 | -525.05 | -96.93 | 443842.52 | 1654547.72 |
| Robert Baxter WTZ 8H BHL P5 | 7019.70 | -4392.65 | 4093.65 | 439974.92 | 1658738.29 |

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | DLeg | TFace | VSec | Annotation |
|----------|-------|--------|---------|----------|---------|------|--------|---------|-----------------|
| 11048.00 | 90.27 | 130.80 | 7009.75 | -3142.43 | 2778.06 | 0.00 | 0.00 | 4172.70 | Tie-On |
| 11089.00 | 90.27 | 130.80 | 7009.55 | -3169.22 | 2809.10 | 0.00 | 0.00 | 4213.68 | Start Turn |
| 11437.06 | 90.27 | 137.76 | 7007.92 | -3412.07 | 3058.12 | 2.00 | 90.00 | 4561.39 | End Turn |
| 11517.03 | 90.27 | 137.76 | 7007.54 | -3471.27 | 3111.88 | 0.00 | 0.00 | 4641.04 | Start Drop/Turn |
| 11773.78 | 89.40 | 132.70 | 7008.29 | -3653.49 | 3292.64 | 2.00 | -99.73 | 4897.46 | End Drop/Turn |
| 12863.78 | 89.40 | 132.70 | 7019.70 | -4392.65 | 4093.65 | 0.00 | 0.00 | 5987.40 | TD |



Chesapeake Appalachia, LLC

Wetzel County, WV
Wileyville
Robert Baxter WTZ 8H

Wellbore #1

Design: Surveys

Sperry Drilling Services Standard Report

29 April, 2013

Well Coordinates: 444,367.57 N, 1,654,644.64 E (39° 42' 48.83" N, 080° 43' 39.57" W)
Ground Level: 1,320.00 ft

| | |
|--------------------------|------------------------------------------|
| Local Coordinate Origin: | Centered on Well Robert Baxter WTZ 8H |
| Viewing Datum: | GL 1320' + KB 17' @ 1337.00ft (Nomac 25) |
| TVDs to System: | N |
| North Reference: | Grid |
| Unit System: | API-US Survey Feet |

Version: 2003.16 Build: 431

Received
Office of Oil & Gas
JUL 30 2015

HALLIBURTON

Design Report for Robert Baxter WTZ 8H - Surveys

103-02840

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.43 | 12.31 | 100.00 | 0.37 | 0.08 | -0.19 | 0.43 |
| 200.00 | 0.34 | 31.97 | 200.00 | 0.98 | 0.32 | -0.43 | 0.16 |
| 300.00 | 0.13 | 51.39 | 300.00 | 1.31 | 0.56 | -0.47 | 0.22 |
| 400.00 | 0.11 | 52.26 | 400.00 | 1.44 | 0.73 | -0.44 | 0.02 |
| 500.00 | 0.04 | 267.24 | 500.00 | 1.49 | 0.77 | -0.45 | 0.14 |
| 600.00 | 0.14 | 162.70 | 600.00 | 1.38 | 0.77 | -0.37 | 0.15 |
| 700.00 | 0.16 | 172.40 | 700.00 | 1.12 | 0.82 | -0.15 | 0.03 |
| 800.00 | 0.02 | 145.72 | 800.00 | 0.97 | 0.85 | -0.03 | 0.14 |
| 900.00 | 0.05 | 50.59 | 900.00 | 0.98 | 0.90 | -0.01 | 0.06 |
| 1,000.00 | 0.10 | 326.50 | 1,000.00 | 1.08 | 0.88 | -0.09 | 0.11 |
| 1,100.00 | 0.37 | 5.52 | 1,099.99 | 1.48 | 0.86 | -0.37 | 0.30 |
| 1,200.00 | 0.31 | 9.33 | 1,199.99 | 2.06 | 0.94 | -0.71 | 0.06 |
| 1,300.00 | 0.36 | 352.00 | 1,299.99 | 2.64 | 0.94 | -1.10 | 0.11 |
| 1,400.00 | 0.42 | 342.20 | 1,399.99 | 3.30 | 0.78 | -1.66 | 0.09 |
| 1,500.00 | 0.42 | 318.59 | 1,499.99 | 3.93 | 0.43 | -2.35 | 0.17 |
| 1,600.00 | 0.27 | 295.49 | 1,599.98 | 4.30 | -0.03 | -2.94 | 0.20 |
| 1,700.00 | 0.34 | 302.50 | 1,699.98 | 4.56 | -0.49 | -3.45 | 0.08 |
| 1,800.00 | 0.18 | 269.38 | 1,799.98 | 4.72 | -0.90 | -3.86 | 0.21 |
| 1,900.00 | 0.21 | 273.83 | 1,899.98 | 4.73 | -1.24 | -4.12 | 0.03 |
| 2,000.00 | 0.40 | 249.50 | 1,999.98 | 4.62 | -1.75 | -4.42 | 0.23 |
| 2,100.00 | 0.53 | 243.43 | 2,099.98 | 4.29 | -2.49 | -4.74 | 0.14 |
| 2,200.00 | 0.33 | 241.62 | 2,199.97 | 3.95 | -3.15 | -4.99 | 0.20 |
| 2,300.00 | 0.30 | 283.72 | 2,299.97 | 3.87 | -3.66 | -5.32 | 0.23 |
| 2,400.00 | 0.21 | 265.19 | 2,399.97 | 3.92 | -4.10 | -5.67 | 0.12 |
| 2,500.00 | 0.33 | 294.55 | 2,499.97 | 4.02 | -4.54 | -6.07 | 0.18 |
| 2,600.00 | 0.43 | 298.89 | 2,599.97 | 4.33 | -5.13 | -6.71 | 0.10 |
| 2,700.00 | 0.57 | 310.82 | 2,699.96 | 4.83 | -5.84 | -7.57 | 0.17 |
| 2,800.00 | 0.67 | 311.74 | 2,799.96 | 5.55 | -6.65 | -8.65 | 0.10 |
| 2,900.00 | 0.73 | 310.63 | 2,899.95 | 6.35 | -7.57 | -9.87 | 0.06 |
| 3,000.00 | 0.98 | 327.75 | 2,999.94 | 7.49 | -8.51 | -11.33 | 0.35 |
| 3,100.00 | 1.12 | 316.61 | 3,099.92 | 8.92 | -9.64 | -13.13 | 0.25 |
| 3,200.00 | 1.17 | 315.88 | 3,199.90 | 10.37 | -11.02 | -15.13 | 0.25 |
| 3,300.00 | 1.11 | 306.19 | 3,299.88 | 11.67 | -12.51 | -17.14 | 0.20 |
| 3,400.00 | 0.87 | 300.61 | 3,399.87 | 12.63 | -13.95 | -18.81 | 0.26 |
| 3,500.00 | 0.93 | 309.78 | 3,499.86 | 13.53 | -15.22 | -20.57 | 0.26 |
| 3,600.00 | 0.96 | 314.62 | 3,599.84 | 14.64 | -16.44 | -22.01 | 0.09 |
| 3,700.00 | 0.99 | 310.33 | 3,699.83 | 15.79 | -17.70 | -23.72 | 0.08 |
| 3,800.00 | 1.07 | 316.10 | 3,799.81 | 17.02 | -19.01 | -25.51 | 0.13 |
| 3,900.00 | 1.02 | 312.72 | 3,899.80 | 18.30 | -20.31 | -27.33 | 0.08 |
| 4,000.00 | 1.03 | 321.28 | 3,999.78 | 19.60 | -21.52 | -29.11 | 0.15 |
| 4,100.00 | 1.00 | 317.82 | 4,099.76 | 20.95 | -22.67 | -30.87 | 0.07 |
| 4,200.00 | 0.89 | 332.95 | 4,199.75 | 22.29 | -23.61 | -32.47 | 0.27 |
| 4,300.00 | 0.64 | 315.59 | 4,299.74 | 23.38 | -24.35 | -33.75 | 0.34 |
| 4,400.00 | 0.53 | 314.94 | 4,399.74 | 24.11 | -25.07 | -34.77 | 0.11 |
| 4,500.00 | 0.48 | 332.66 | 4,499.73 | 24.80 | -25.59 | -35.63 | 0.16 |
| 4,600.00 | 0.59 | 334.58 | 4,599.73 | 25.64 | -26.01 | -36.50 | 0.11 |
| 4,700.00 | 0.75 | 350.31 | 4,699.72 | 26.75 | -26.34 | -37.50 | 0.24 |
| 4,800.00 | 0.75 | 356.69 | 4,799.71 | 28.05 | -26.48 | -38.49 | 0.08 |
| 4,900.00 | 0.74 | 356.26 | 4,899.70 | 29.35 | -26.56 | -39.43 | 0.01 |

Received
Office of Oil & Gas
JUL 30 2015

Design Report for Robert Baxter WTZ 8H - Surveys

103-02840

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|
| 5,000.00 | 0.72 | 355.32 | 4,999.70 | 30.62 | -26.66 | -40.36 | 0.02 |
| 5,100.00 | 0.62 | 351.99 | 5,099.69 | 31.78 | -26.78 | -41.24 | 0.11 |
| 5,200.00 | 0.63 | 341.21 | 5,199.68 | 32.84 | -27.04 | -42.14 | 0.12 |
| 5,300.00 | 0.54 | 328.46 | 5,299.68 | 33.76 | -27.46 | -43.07 | 0.16 |
| 5,400.00 | 0.65 | 319.50 | 5,399.67 | 34.59 | -28.08 | -44.09 | 0.14 |
| 5,500.00 | 0.59 | 325.01 | 5,499.67 | 35.45 | -28.74 | -45.16 | 0.08 |
| 5,600.00 | 0.69 | 326.66 | 5,599.66 | 36.37 | -29.36 | -46.25 | 0.10 |
| 5,700.00 | 0.63 | 345.76 | 5,699.65 | 37.41 | -29.83 | -47.29 | 0.23 |
| 5,800.00 | 0.65 | 334.91 | 5,799.65 | 38.45 | -30.21 | -48.28 | 0.12 |
| 5,900.00 | 0.47 | 320.11 | 5,899.64 | 39.28 | -30.71 | -49.21 | 0.23 |
| 6,000.00 | 0.35 | 317.54 | 5,999.64 | 39.82 | -31.18 | -49.92 | 0.12 |
| 6,075.00 | 0.55 | 293.36 | 6,074.64 | 40.13 | -31.66 | -50.49 | 0.36 |
| 6,149.00 | 0.53 | 281.16 | 6,148.63 | 40.34 | -32.33 | -51.11 | 0.16 |
| 6,212.00 | 0.78 | 269.35 | 6,211.63 | 40.39 | -33.04 | -51.67 | 0.45 |
| 6,244.00 | 2.53 | 232.65 | 6,243.62 | 39.96 | -33.82 | -51.95 | 6.13 |
| 6,275.00 | 3.69 | 229.28 | 6,274.57 | 38.89 | -35.12 | -52.19 | 3.79 |
| 6,307.00 | 8.22 | 212.77 | 6,306.39 | 36.30 | -37.14 | -51.91 | 14.99 |
| 6,338.00 | 11.91 | 209.26 | 6,336.91 | 31.64 | -39.90 | -50.78 | 12.06 |
| 6,369.00 | 15.65 | 208.23 | 6,367.01 | 25.16 | -43.45 | -49.00 | 12.09 |
| 6,401.00 | 17.39 | 204.30 | 6,397.69 | 17.00 | -47.46 | -46.41 | 6.46 |
| 6,432.00 | 17.82 | 202.68 | 6,427.24 | 8.40 | -51.19 | -43.32 | 2.10 |
| 6,463.00 | 19.12 | 194.78 | 6,456.65 | -0.88 | -54.32 | -39.32 | 9.09 |
| 6,495.00 | 21.28 | 194.46 | 6,486.68 | -11.58 | -57.10 | -34.12 | 6.76 |
| 6,526.00 | 23.21 | 187.40 | 6,515.37 | -23.08 | -59.30 | -27.92 | 10.62 |
| 6,558.00 | 26.25 | 186.44 | 6,544.43 | -36.37 | -60.90 | -20.09 | 9.58 |
| 6,589.00 | 27.75 | 189.39 | 6,572.06 | -50.31 | -62.85 | -12.07 | 6.49 |
| 6,621.00 | 32.30 | 190.60 | 6,599.76 | -66.07 | -65.64 | -3.43 | 14.34 |
| 6,652.00 | 36.28 | 190.40 | 6,625.36 | -83.24 | -68.82 | 5.87 | 12.84 |
| 6,683.00 | 40.20 | 190.09 | 6,649.71 | -102.12 | -72.23 | 16.17 | 12.66 |
| 6,715.00 | 44.00 | 189.66 | 6,673.44 | -123.25 | -75.90 | 27.80 | 11.91 |
| 6,746.00 | 49.01 | 190.44 | 6,694.77 | -145.38 | -79.83 | 39.92 | 16.26 |
| 6,777.00 | 53.65 | 192.77 | 6,714.14 | -169.08 | -84.72 | 52.40 | 16.08 |
| 6,809.00 | 57.53 | 193.53 | 6,732.22 | -194.78 | -90.73 | 65.42 | 12.28 |
| 6,840.00 | 59.86 | 190.99 | 6,748.33 | -220.66 | -96.34 | 78.84 | 10.27 |
| 6,871.00 | 62.20 | 186.98 | 6,763.35 | -247.44 | -100.57 | 93.90 | 13.60 |
| 6,902.00 | 64.57 | 182.25 | 6,777.24 | -275.05 | -102.78 | 110.99 | 15.64 |
| 6,934.00 | 64.37 | 179.15 | 6,791.04 | -303.92 | -103.14 | 130.31 | 8.76 |
| 6,965.00 | 64.91 | 178.67 | 6,804.31 | -331.93 | -102.60 | 149.70 | 2.23 |
| 6,997.00 | 64.66 | 175.39 | 6,817.95 | -360.84 | -101.10 | 170.40 | 9.31 |
| 7,028.00 | 64.11 | 169.69 | 6,831.36 | -388.54 | -97.48 | 191.85 | 16.67 |
| 7,059.00 | 65.46 | 164.20 | 6,844.57 | -415.84 | -91.14 | 215.03 | 16.60 |
| 7,090.00 | 67.62 | 162.01 | 6,856.92 | -443.05 | -82.87 | 239.55 | 9.52 |
| 7,121.00 | 69.44 | 159.85 | 6,868.26 | -470.31 | -73.45 | 264.97 | 8.75 |
| 7,153.00 | 71.83 | 156.10 | 6,878.88 | -498.28 | -62.12 | 292.26 | 13.34 |
| 7,184.00 | 73.12 | 152.84 | 6,888.21 | -524.95 | -49.38 | 319.71 | 10.86 |
| 7,215.00 | 74.82 | 149.11 | 6,896.78 | -551.00 | -34.92 | 348.00 | 12.80 |
| 7,247.00 | 76.47 | 145.51 | 6,904.71 | -577.08 | -18.18 | 377.99 | 12.06 |
| 7,278.00 | 77.41 | 141.78 | 6,911.72 | -601.39 | -0.28 | 407.63 | 12.11 |
| 7,310.00 | 78.34 | 139.10 | 6,918.44 | -625.51 | 19.64 | 438.63 | 8.69 |
| 7,341.00 | 80.65 | 136.28 | 6,924.09 | -648.05 | 40.16 | 468.99 | 11.64 |

Design Report for Robert Baxter WTZ 8H - Surveys

103-02840

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|
| 7,373.00 | 83.00 | 134.33 | 6,928.64 | -670.56 | 62.44 | 500.63 | 9.50 |
| 7,405.00 | 85.93 | 132.67 | 6,931.73 | -692.48 | 85.54 | 532.47 | 10.51 |
| 7,436.00 | 88.92 | 131.49 | 6,933.12 | -713.23 | 108.52 | 563.44 | 10.37 |
| 7,468.00 | 89.26 | 131.53 | 6,933.63 | -734.44 | 132.48 | 595.42 | 1.07 |
| 7,531.00 | 89.97 | 131.63 | 6,934.06 | -776.24 | 179.60 | 658.41 | 1.14 |
| 7,594.00 | 90.27 | 131.80 | 6,933.92 | -818.17 | 226.63 | 721.40 | 0.55 |
| 7,657.00 | 91.01 | 132.05 | 6,933.22 | -860.26 | 273.50 | 784.39 | 1.24 |
| 7,721.00 | 89.19 | 132.13 | 6,933.11 | -903.15 | 320.99 | 848.38 | 2.85 |
| 7,784.00 | 89.56 | 132.31 | 6,933.80 | -945.49 | 367.65 | 911.38 | 0.65 |
| 7,847.00 | 87.51 | 132.30 | 6,935.41 | -987.87 | 414.22 | 974.35 | 3.25 |
| 7,910.00 | 87.65 | 132.78 | 6,938.07 | -1,030.43 | 460.60 | 1,037.30 | 0.79 |
| 7,973.00 | 88.02 | 133.02 | 6,940.45 | -1,073.29 | 506.71 | 1,100.25 | 0.70 |
| 8,036.00 | 88.29 | 132.88 | 6,942.47 | -1,116.19 | 552.80 | 1,163.22 | 0.48 |
| 8,100.00 | 88.66 | 132.79 | 6,944.18 | -1,159.69 | 599.72 | 1,227.19 | 0.59 |
| 8,162.00 | 89.06 | 132.17 | 6,945.41 | -1,201.55 | 645.44 | 1,289.18 | 1.19 |
| 8,225.00 | 89.40 | 132.20 | 6,946.26 | -1,243.85 | 692.11 | 1,352.17 | 0.54 |
| 8,289.00 | 89.53 | 132.28 | 6,946.86 | -1,286.87 | 739.49 | 1,416.17 | 0.24 |
| 8,351.00 | 89.97 | 132.79 | 6,947.13 | -1,328.79 | 785.18 | 1,478.17 | 1.09 |
| 8,411.00 | 87.75 | 132.92 | 6,948.32 | -1,369.58 | 829.15 | 1,538.15 | 3.71 |
| 8,474.00 | 87.81 | 132.85 | 6,950.76 | -1,412.43 | 875.28 | 1,601.10 | 0.15 |
| 8,536.00 | 88.19 | 133.10 | 6,952.92 | -1,454.66 | 920.61 | 1,663.07 | 0.73 |
| 8,599.00 | 88.69 | 133.08 | 6,954.64 | -1,497.69 | 966.60 | 1,726.04 | 0.79 |
| 8,662.00 | 89.16 | 133.68 | 6,955.82 | -1,540.95 | 1,012.38 | 1,789.02 | 1.21 |
| 8,725.00 | 89.60 | 133.10 | 6,956.50 | -1,584.22 | 1,058.16 | 1,852.02 | 1.16 |
| 8,787.00 | 90.30 | 133.84 | 6,956.56 | -1,626.88 | 1,103.16 | 1,914.01 | 1.64 |
| 8,850.00 | 88.08 | 134.56 | 6,957.45 | -1,670.79 | 1,148.31 | 1,976.98 | 3.70 |
| 8,913.00 | 88.08 | 134.27 | 6,959.56 | -1,714.86 | 1,193.29 | 2,039.91 | 0.46 |
| 8,975.00 | 88.29 | 133.34 | 6,961.52 | -1,757.75 | 1,238.01 | 2,101.87 | 1.54 |
| 9,039.00 | 88.82 | 134.16 | 6,963.14 | -1,801.99 | 1,284.23 | 2,165.84 | 1.53 |
| 9,101.00 | 88.99 | 133.64 | 6,964.32 | -1,844.98 | 1,328.89 | 2,227.81 | 0.88 |
| 9,164.00 | 89.26 | 132.51 | 6,965.28 | -1,888.00 | 1,374.91 | 2,290.80 | 1.84 |
| 9,227.00 | 87.55 | 133.03 | 6,967.04 | -1,930.76 | 1,421.13 | 2,353.78 | 2.84 |
| 9,290.00 | 87.68 | 132.05 | 6,969.66 | -1,973.32 | 1,467.51 | 2,416.72 | 1.57 |
| 9,352.00 | 88.79 | 133.29 | 6,971.57 | -2,015.32 | 1,513.08 | 2,478.69 | 2.68 |
| 9,415.00 | 88.52 | 133.59 | 6,973.05 | -2,058.62 | 1,558.81 | 2,541.67 | 0.64 |
| 9,478.00 | 88.62 | 134.07 | 6,974.62 | -2,102.24 | 1,604.24 | 2,604.63 | 0.78 |
| 9,542.00 | 88.59 | 133.94 | 6,976.18 | -2,146.69 | 1,650.26 | 2,668.60 | 0.21 |
| 9,605.00 | 88.72 | 133.42 | 6,977.66 | -2,190.19 | 1,695.81 | 2,731.57 | 0.85 |
| 9,668.00 | 87.15 | 132.57 | 6,979.93 | -2,233.12 | 1,741.86 | 2,794.53 | 0.83 |
| 9,731.00 | 86.30 | 132.55 | 6,983.52 | -2,275.66 | 1,788.19 | 2,857.42 | 0.33 |
| 9,794.00 | 86.09 | 132.44 | 6,987.71 | -2,318.12 | 1,834.53 | 2,920.26 | 0.38 |
| 9,857.00 | 85.87 | 132.19 | 6,992.12 | -2,360.43 | 1,881.01 | 2,983.13 | 0.53 |
| 9,920.00 | 87.04 | 132.33 | 6,996.02 | -2,402.72 | 1,927.54 | 3,046.00 | 1.87 |
| 9,983.00 | 86.97 | 132.31 | 6,999.31 | -2,445.07 | 1,974.06 | 3,108.92 | 0.12 |
| 10,046.00 | 88.69 | 134.07 | 7,001.69 | -2,488.16 | 2,019.96 | 3,171.86 | 3.90 |
| 10,105.00 | 89.49 | 134.94 | 7,002.63 | -2,529.51 | 2,062.03 | 3,230.83 | 2.00 |
| 10,168.00 | 88.86 | 132.91 | 7,003.54 | -2,573.21 | 2,107.40 | 3,293.80 | 3.37 |
| 10,230.00 | 88.96 | 132.42 | 7,004.72 | -2,615.22 | 2,152.98 | 3,355.79 | 0.81 |
| 10,294.00 | 89.33 | 132.88 | 7,005.67 | -2,658.57 | 2,200.05 | 3,419.78 | 0.92 |
| 10,355.00 | 89.19 | 131.90 | 7,006.46 | -2,699.69 | 2,245.09 | 3,480.78 | 1.62 |
| 10,418.00 | 89.29 | 131.23 | 7,007.30 | -2,741.49 | 2,292.23 | 3,543.76 | 1.08 |

Design Report for Robert Baxter WTZ 8H - Surveys

103.02840

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) |
|--------------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|
| 10,481.00 | 88.86 | 130.31 | 7,008.31 | -2,782.62 | 2,339.93 | 3,606.71 | 1.61 |
| 10,544.00 | 89.06 | 129.85 | 7,009.46 | -2,823.18 | 2,388.13 | 3,669.64 | 0.80 |
| 10,607.00 | 88.25 | 128.81 | 7,010.94 | -2,863.10 | 2,436.84 | 3,732.51 | 2.09 |
| 10,670.00 | 90.07 | 129.38 | 7,011.86 | -2,902.82 | 2,485.73 | 3,795.38 | 3.03 |
| 10,734.00 | 90.23 | 129.27 | 7,011.69 | -2,943.38 | 2,535.24 | 3,859.26 | 0.30 |
| 10,796.00 | 90.07 | 128.96 | 7,011.53 | -2,982.49 | 2,583.34 | 3,921.14 | 0.56 |
| 10,859.00 | 89.97 | 128.97 | 7,011.51 | -3,022.11 | 2,632.33 | 3,984.01 | 0.16 |
| 10,921.00 | 90.74 | 129.16 | 7,011.12 | -3,061.18 | 2,680.47 | 4,045.88 | 1.28 |
| 10,984.00 | 90.74 | 129.57 | 7,010.31 | -3,101.13 | 2,729.17 | 4,108.77 | 0.65 |
| 11,048.00 | 90.27 | 130.80 | 7,009.75 | -3,142.43 | 2,778.06 | 4,172.70 | 2.06 |
| 11,110.00 | 89.46 | 132.35 | 7,009.89 | -3,183.57 | 2,824.44 | 4,234.69 | 2.82 |
| 11,174.00 | 90.00 | 133.33 | 7,010.19 | -3,227.09 | 2,871.37 | 4,298.69 | 1.75 |
| 11,236.00 | 90.44 | 132.95 | 7,009.96 | -3,269.48 | 2,916.61 | 4,360.69 | 0.94 |
| 11,299.00 | 90.03 | 133.63 | 7,009.70 | -3,312.68 | 2,962.46 | 4,423.68 | 1.26 |
| 11,362.00 | 90.34 | 133.48 | 7,009.49 | -3,356.09 | 3,008.12 | 4,486.67 | 0.55 |
| 11,426.00 | 90.50 | 134.07 | 7,009.02 | -3,400.36 | 3,054.33 | 4,550.66 | 0.96 |
| 11,489.00 | 90.47 | 133.87 | 7,008.49 | -3,444.10 | 3,099.67 | 4,613.64 | 0.32 |
| 11,551.00 | 90.50 | 134.64 | 7,007.97 | -3,487.37 | 3,144.07 | 4,675.62 | 1.24 |
| 11,614.00 | 88.83 | 134.28 | 7,008.33 | -3,531.49 | 3,189.04 | 4,738.58 | 2.71 |
| 11,678.00 | 88.69 | 134.75 | 7,009.72 | -3,576.35 | 3,234.66 | 4,802.54 | 0.77 |
| 11,741.00 | 88.82 | 135.25 | 7,011.09 | -3,620.89 | 3,279.20 | 4,865.47 | 0.82 |
| 11,803.00 | 89.19 | 135.45 | 7,012.17 | -3,664.99 | 3,322.76 | 4,927.40 | 0.68 |
| 11,866.00 | 88.72 | 135.17 | 7,013.31 | -3,709.77 | 3,367.06 | 4,990.32 | 0.87 |
| 11,929.00 | 88.25 | 134.56 | 7,014.98 | -3,754.20 | 3,411.70 | 5,053.25 | 1.22 |
| 11,992.00 | 88.56 | 134.46 | 7,016.73 | -3,798.34 | 3,456.61 | 5,116.20 | 0.52 |
| 12,054.00 | 88.79 | 135.06 | 7,018.17 | -3,841.99 | 3,500.62 | 5,178.14 | 1.04 |
| 12,117.00 | 89.50 | 135.43 | 7,019.11 | -3,886.72 | 3,544.97 | 5,241.07 | 1.27 |
| 12,179.00 | 90.40 | 135.98 | 7,019.16 | -3,931.10 | 3,588.27 | 5,302.98 | 1.70 |
| 12,242.00 | 90.77 | 136.41 | 7,018.52 | -3,976.56 | 3,631.88 | 5,365.86 | 0.90 |
| 12,305.00 | 90.81 | 135.96 | 7,017.65 | -4,022.02 | 3,675.49 | 5,428.74 | 0.72 |
| 12,368.00 | 90.57 | 135.56 | 7,016.89 | -4,067.15 | 3,719.44 | 5,491.64 | 0.74 |
| 12,431.00 | 90.37 | 135.67 | 7,016.37 | -4,112.17 | 3,763.50 | 5,554.56 | 0.36 |
| 12,494.00 | 89.83 | 133.00 | 7,016.26 | -4,156.19 | 3,808.56 | 5,617.53 | 4.32 |
| 12,557.00 | 88.55 | 131.23 | 7,017.15 | -4,198.43 | 3,855.29 | 5,680.52 | 3.47 |
| 12,620.00 | 89.03 | 131.77 | 7,018.48 | -4,240.17 | 3,902.46 | 5,743.49 | 1.15 |
| 12,683.00 | 88.62 | 131.80 | 7,019.78 | -4,282.14 | 3,949.43 | 5,806.47 | 0.65 |
| 12,746.00 | 88.66 | 132.01 | 7,021.27 | -4,324.21 | 3,996.30 | 5,869.44 | 0.34 |
| 12,809.00 | 88.09 | 131.51 | 7,023.06 | -4,366.15 | 4,043.28 | 5,932.41 | 1.01 |
| 12,819.00 | 88.02 | 131.40 | 7,023.40 | -4,372.76 | 4,050.77 | 5,942.40 | 1.30 |
| Last MWD Survey at 12819' MD | | | | | | | |
| 12,859.00 | 88.02 | 131.40 | 7,024.78 | -4,399.20 | 4,080.75 | 5,982.37 | 0.00 |
| Projection to TD at 12859' MD | | | | | | | |

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Design Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
|---------------------|---------------------|-------------------|------------|-------------------------------|
| | | +N/-S (ft) | +E/-W (ft) | |
| 12,819.00 | 7,023.40 | -4,372.76 | 4,050.77 | Last MWD Survey at 12819' MD |
| 12,859.00 | 7,024.78 | -4,399.20 | 4,080.75 | Projection to TD at 12859' MD |

Design Report for Robert Baxter WTZ 8H - Surveys

103-02840

Vertical Section Information

| Angle Type | Target | Azimuth (°) | Origin Type | Origin +N/_S (ft) | Origin +E/-W (ft) | Start TVD (ft) |
|------------|----------------------|-------------|-------------|-------------------|-------------------|----------------|
| User | No Target (Freehand) | 132.70 | Slot | 0.00 | 0.00 | 0.00 |

Survey tool program

| From (ft) | To (ft) | Survey/Plan | Survey Tool |
|-----------|-----------|-------------|-----------------|
| 100.00 | 6,075.00 | MS Gyro | NSG-CT_csg+cent |
| 6,149.00 | 12,859.00 | Sperry MWD | MWD |

Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
|-------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|----------|------------|------------|---------------|--------------|------------------|------------------|
| Robert Baxter WTZ : - actual wellpath misses target center by 15.33ft at 12859.00ft MD (7024.78 TVD, -4399.20 N, 4080.75 E) - Point | 0.00 | 0.00 | 7,019.70 | -4,392.65 | 4,093.65 | 439,974.92 | 1,658,738.29 | 39° 42' 5.969 N | 80° 42' 46.429 W |
| Robert Baxter WTZ : - actual wellpath misses target center by 59.34ft at 7175.61ft MD (6885.75 TVD, -517.79 N, -52.99 E) - Point | 0.00 | 0.00 | 6,924.97 | -525.05 | -96.93 | 443,842.52 | 1,654,547.72 | 39° 42' 43.628 N | 80° 43' 40.717 W |

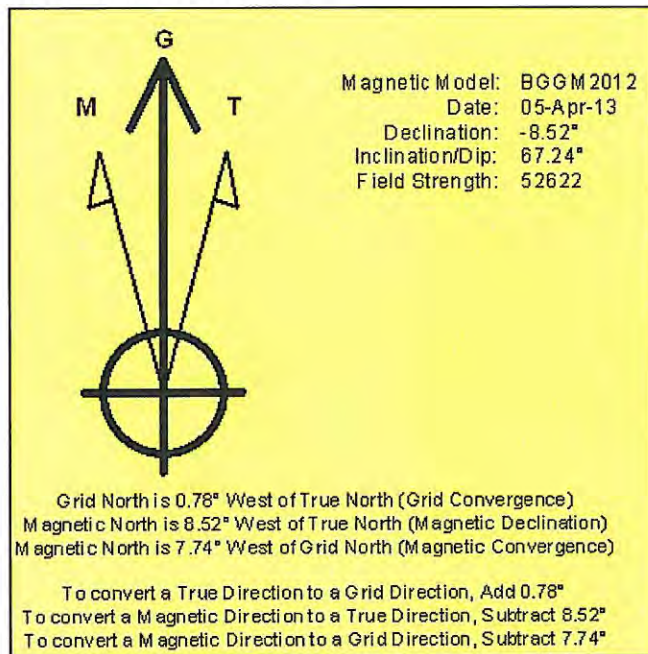
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North Reference Sheet for Wileyville - Robert Baxter WTZ 8H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.
Vertical Depths are relative to GL 1320' + KB 17' @ 1337.00ft (Nomac 25). Northing and Easting are relative to Robert Baxter WTZ 8H
Coordinate System is US State Plane 1927 (Exact solution), West Virginia North 4701 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866
Projection method is Lambert Conformal Conic (2 parallel)
Central Meridian is 79° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 15' 0.000 N°
False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99994191

Grid Coordinates of Well: 444,367.57 ft N, 1,654,644.64 ft E
Geographical Coordinates of Well: 39° 42' 48.83" N, 080° 43' 39.57" W
Grid Convergence at Surface is: -0.78°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,859.00ft
the Bottom Hole Displacement is 6,000.46ft in the Direction of 137.15° (Grid).
Magnetic Convergence at surface is: 7.74° (5 April 2013, , BGGM2012)



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