



EP Energy E&P Company, L.P.

Crockett Co, TX

University Salt Draw 3820

HH

OH

Design: Surveys

Standard Survey Report

01 March, 2017



| | | | |
|------------------|-----------------------------|-------------------------------------|--------------------|
| Company: | EP Energy E&P Company, L.P. | Local Co-ordinate Reference: | Well HH |
| Project: | Crockett Co, TX | TVD Reference: | KB=30' @ 2642.00ft |
| Site: | University Salt Draw 3820 | MD Reference: | KB=30' @ 2642.00ft |
| Well: | HH | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Surveys | Database: | RyanUSA_Compass |

| | | | |
|--------------------|--------------------------------------|----------------------|----------------|
| Project | Crockett Co, TX, Crockett Co, TX | | |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 (NADCON CONUS) | | |
| Map Zone: | Texas Central 4203 | | |

| | | | |
|------------------------------|---------------------------|--------------------------|--------------------|
| Site | University Salt Draw 3820 | | |
| Site Position: | | Northing: | 498,904.940 usft |
| From: | Map | Easting: | 1,757,113.810 usft |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13-3/16 " |
| | | Latitude: | 31° 2' 10.13259 N |
| | | Longitude: | 101° 6' 31.95308 W |
| | | Grid Convergence: | -0.40 ° |

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|-----------------------------|--------------|----------------------------|--------------------|
| Well | HH | | |
| Well Position | +N/-S | 0.00 ft | Northing: |
| | +E/-W | 0.00 ft | Easting: |
| Position Uncertainty | 0.00 ft | Wellhead Elevation: | ft |
| | | Latitude: | 31° 2' 13.05958 N |
| | | Longitude: | 101° 6' 13.07295 W |
| | | Ground Level: | 2,612.00 ft |

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|------------------|-------------------|--------------------|----------------------------|
| Wellbore | OH | | |
| Magnetics | Model Name | Sample Date | Declination (°) |
| | HDGM | 1/23/2017 | 5.50 |
| | | | Dip Angle (°) |
| | | | 59.65 |
| | | | Field Strength (nT) |
| | | | 47,602.60000000 |

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|--------------------------|------------------------------|----------------------|----------------------|
| Design | Surveys | | |
| Audit Notes: | | | |
| Version: | 1.0 | Phase: | ACTUAL |
| | | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) |
| | 0.00 | 0.00 | 0.00 |
| | | | Direction (°) |
| | | | 180.33 |

| | | | | |
|-----------------------|----------------|--------------------------|------------------|-----------------------|
| Survey Program | Date | 3/1/2017 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 30.00 | 899.00 | Survey #1 (OH) | GYRO-NS | OWSG Gyrocompass Gyro |
| 1,018.00 | 17,077.00 | Survey #2 (OH) | MWD+HRGM | OWSG MWD + HRGM |

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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 | |
| 30.00 | 0.00 | 0.00 | 30.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 80.00 | 1.96 | 108.71 | 79.99 | -0.27 | 0.81 | 0.27 | 3.92 | 3.92 | 0.00 | |
| 130.00 | 2.15 | 106.46 | 129.96 | -0.81 | 2.52 | 0.80 | 0.41 | 0.38 | -4.50 | |
| 180.00 | 1.70 | 113.24 | 179.93 | -1.37 | 4.10 | 1.35 | 1.01 | -0.90 | 13.56 | |
| 230.00 | 1.36 | 116.30 | 229.91 | -1.93 | 5.31 | 1.90 | 0.70 | -0.68 | 6.12 | |
| 280.00 | 1.13 | 114.18 | 279.90 | -2.39 | 6.30 | 2.36 | 0.47 | -0.46 | -4.24 | |
| 330.00 | 0.88 | 119.43 | 329.89 | -2.78 | 7.08 | 2.74 | 0.53 | -0.50 | 10.50 | |
| 380.00 | 0.72 | 117.30 | 379.89 | -3.12 | 7.69 | 3.07 | 0.33 | -0.32 | -4.26 | |
| 430.00 | 0.66 | 115.20 | 429.88 | -3.38 | 8.23 | 3.34 | 0.13 | -0.12 | -4.20 | |

| | | | |
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| Site: | University Salt Draw 3820 | MD Reference: | KB=30' @ 2642.00ft |
| Well: | HH | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Surveys | Database: | RyanUSA_Compass |

| 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) |
| 480.00 | 0.57 | 118.52 | 479.88 | -3.62 | 8.71 | 3.57 | 0.19 | -0.18 | 6.64 |
| 530.00 | 0.53 | 112.68 | 529.88 | -3.83 | 9.14 | 3.78 | 0.14 | -0.08 | -11.68 |
| 580.00 | 0.63 | 113.37 | 579.88 | -4.03 | 9.61 | 3.98 | 0.20 | 0.20 | 1.38 |
| 630.00 | 0.52 | 123.35 | 629.87 | -4.26 | 10.05 | 4.21 | 0.30 | -0.22 | 19.96 |
| 680.00 | 0.46 | 110.33 | 679.87 | -4.46 | 10.43 | 4.40 | 0.25 | -0.12 | -26.04 |
| 730.00 | 0.48 | 124.11 | 729.87 | -4.65 | 10.79 | 4.58 | 0.23 | 0.04 | 27.56 |
| 780.00 | 0.37 | 125.79 | 779.87 | -4.86 | 11.10 | 4.79 | 0.22 | -0.22 | 3.36 |
| 830.00 | 0.56 | 121.94 | 829.87 | -5.08 | 11.43 | 5.02 | 0.38 | 0.38 | -7.70 |
| 880.00 | 0.75 | 89.62 | 879.86 | -5.21 | 11.97 | 5.14 | 0.82 | 0.38 | -64.64 |
| 899.00 | 0.70 | 73.75 | 898.86 | -5.18 | 12.20 | 5.11 | 1.09 | -0.26 | -83.53 |
| 1,018.00 | 0.13 | 138.61 | 1,017.86 | -5.07 | 12.99 | 5.00 | 0.55 | -0.48 | 54.50 |
| 1,174.00 | 3.19 | 286.80 | 1,173.78 | -3.95 | 8.95 | 3.90 | 2.12 | 1.96 | 94.99 |
| 1,362.00 | 5.38 | 289.44 | 1,361.24 | 0.49 | -4.37 | -0.47 | 1.17 | 1.16 | 1.40 |
| 1,551.00 | 7.25 | 290.67 | 1,549.09 | 7.65 | -23.88 | -7.52 | 0.99 | 0.99 | 0.65 |
| 1,739.00 | 9.13 | 286.97 | 1,735.16 | 16.20 | -49.25 | -15.91 | 1.04 | 1.00 | -1.97 |
| 1,927.00 | 12.13 | 284.86 | 1,919.92 | 25.62 | -82.62 | -25.14 | 1.61 | 1.60 | -1.12 |
| 2,115.00 | 10.94 | 283.11 | 2,104.12 | 34.73 | -119.08 | -34.04 | 0.66 | -0.63 | -0.93 |
| 2,303.00 | 11.00 | 287.33 | 2,288.69 | 44.12 | -153.58 | -43.23 | 0.43 | 0.03 | 2.24 |
| 2,490.00 | 10.19 | 286.80 | 2,472.50 | 54.21 | -186.45 | -53.14 | 0.44 | -0.43 | -0.28 |
| 2,677.00 | 9.06 | 285.74 | 2,656.86 | 62.99 | -216.46 | -61.74 | 0.61 | -0.60 | -0.57 |
| 2,865.00 | 11.56 | 285.57 | 2,841.81 | 72.06 | -248.85 | -70.63 | 1.33 | 1.33 | -0.09 |
| 3,053.00 | 9.81 | 280.65 | 3,026.55 | 80.08 | -282.74 | -78.45 | 1.05 | -0.93 | -2.62 |
| 3,242.00 | 13.44 | 286.10 | 3,211.65 | 89.15 | -319.68 | -87.31 | 2.00 | 1.92 | 2.88 |
| 3,430.00 | 13.94 | 284.34 | 3,394.31 | 100.82 | -362.61 | -98.73 | 0.35 | 0.27 | -0.94 |
| 3,618.00 | 12.44 | 288.73 | 3,577.34 | 112.93 | -403.73 | -110.60 | 0.96 | -0.80 | 2.34 |
| 3,806.00 | 11.63 | 281.00 | 3,761.22 | 123.05 | -441.52 | -120.50 | 0.96 | -0.43 | -4.11 |
| 3,995.00 | 13.38 | 281.88 | 3,945.73 | 131.18 | -481.62 | -128.41 | 0.93 | 0.93 | 0.47 |
| 4,183.00 | 9.50 | 277.13 | 4,129.97 | 137.59 | -518.31 | -134.60 | 2.12 | -2.06 | -2.53 |
| 4,370.00 | 6.00 | 280.47 | 4,315.23 | 141.28 | -543.25 | -138.15 | 1.89 | -1.87 | 1.79 |
| 4,558.00 | 1.81 | 324.42 | 4,502.78 | 145.49 | -554.64 | -142.29 | 2.59 | -2.23 | 23.38 |
| 4,746.00 | 1.06 | 324.24 | 4,690.72 | 149.31 | -557.39 | -146.10 | 0.40 | -0.40 | -0.10 |
| 4,934.00 | 0.38 | 316.51 | 4,878.71 | 151.18 | -558.83 | -147.95 | 0.36 | -0.36 | -4.11 |
| 5,122.00 | 0.13 | 72.70 | 5,066.70 | 151.69 | -559.06 | -148.47 | 0.24 | -0.13 | 61.80 |
| 5,309.00 | 0.25 | 132.64 | 5,253.70 | 151.48 | -558.55 | -148.26 | 0.12 | 0.06 | 32.05 |
| 5,497.00 | 0.25 | 96.43 | 5,441.70 | 151.15 | -557.84 | -147.94 | 0.08 | 0.00 | -19.26 |
| 5,685.00 | 0.31 | 127.54 | 5,629.70 | 150.80 | -557.03 | -147.59 | 0.09 | 0.03 | 16.55 |
| 5,873.00 | 0.38 | 135.10 | 5,817.70 | 150.05 | -556.19 | -146.84 | 0.04 | 0.04 | 4.02 |
| 6,060.00 | 0.63 | 137.38 | 6,004.69 | 148.85 | -555.06 | -145.65 | 0.13 | 0.13 | 1.22 |
| 6,151.00 | 4.88 | 175.35 | 6,095.57 | 144.62 | -554.40 | -141.43 | 4.84 | 4.67 | 41.73 |
| 6,245.00 | 16.19 | 178.69 | 6,187.83 | 127.48 | -553.78 | -124.29 | 12.04 | 12.03 | 3.55 |
| 6,339.00 | 27.13 | 181.86 | 6,275.06 | 92.85 | -554.17 | -89.66 | 11.70 | 11.64 | 3.37 |
| 6,434.00 | 35.69 | 186.95 | 6,356.08 | 43.59 | -558.24 | -40.38 | 9.43 | 9.01 | 5.36 |
| 6,528.00 | 45.06 | 196.97 | 6,427.69 | -15.64 | -571.31 | 18.93 | 12.10 | 9.97 | 10.66 |

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| Site: | University Salt Draw 3820 | MD Reference: | KB=30' @ 2642.00ft |
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| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Surveys | Database: | RyanUSA_Compass |

| 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) | |
| 6,590.00 | 55.75 | 199.26 | 6,467.15 | -60.95 | -586.21 | 64.33 | 17.47 | 17.24 | 3.69 | |
| 6,646.00 | 64.75 | 197.33 | 6,494.91 | -107.07 | -601.42 | 110.54 | 16.35 | 16.07 | -3.45 | |
| 6,740.00 | 77.63 | 192.05 | 6,525.18 | -192.97 | -623.78 | 196.56 | 14.69 | 13.70 | -5.62 | |
| 6,803.00 | 83.81 | 184.85 | 6,535.34 | -254.40 | -632.87 | 258.04 | 14.94 | 9.81 | -11.43 | |
| 6,834.00 | 83.69 | 182.56 | 6,538.72 | -285.15 | -634.86 | 288.80 | 7.35 | -0.39 | -7.39 | |
| 6,928.00 | 84.94 | 177.11 | 6,548.04 | -378.65 | -634.59 | 382.30 | 5.92 | 1.33 | -5.80 | |
| 7,022.00 | 88.75 | 175.70 | 6,553.21 | -472.30 | -628.70 | 475.92 | 4.32 | 4.05 | -1.50 | |
| 7,116.00 | 89.81 | 175.18 | 6,554.39 | -566.00 | -621.23 | 569.56 | 1.26 | 1.13 | -0.55 | |
| 7,131.70 | 89.85 | 174.86 | 6,554.44 | -581.63 | -619.86 | 585.19 | 2.08 | 0.27 | -2.06 | |
| 3820HH_FTP | | | | | | | | | | |
| 7,210.00 | 90.06 | 173.24 | 6,554.50 | -659.51 | -611.74 | 663.02 | 2.08 | 0.27 | -2.06 | |
| 7,304.00 | 91.56 | 178.87 | 6,553.17 | -753.24 | -605.28 | 756.71 | 6.20 | 1.60 | 5.99 | |
| 7,398.00 | 90.69 | 179.92 | 6,551.32 | -847.21 | -604.29 | 850.68 | 1.45 | -0.93 | 1.12 | |
| 7,492.00 | 88.88 | 180.10 | 6,551.68 | -941.21 | -604.30 | 944.67 | 1.94 | -1.93 | 0.19 | |
| 7,586.00 | 88.69 | 179.75 | 6,553.67 | -1,035.19 | -604.18 | 1,038.65 | 0.42 | -0.20 | -0.37 | |
| 7,680.00 | 89.44 | 180.45 | 6,555.20 | -1,129.17 | -604.35 | 1,132.64 | 1.09 | 0.80 | 0.74 | |
| 7,774.00 | 91.13 | 181.68 | 6,554.73 | -1,223.15 | -606.09 | 1,226.62 | 2.22 | 1.80 | 1.31 | |
| 7,867.00 | 88.38 | 180.80 | 6,555.13 | -1,316.12 | -608.10 | 1,319.60 | 3.10 | -2.96 | -0.95 | |
| 7,961.00 | 87.38 | 177.46 | 6,558.61 | -1,410.03 | -606.68 | 1,413.50 | 3.71 | -1.06 | -3.55 | |
| 8,055.00 | 90.38 | 178.17 | 6,560.45 | -1,503.93 | -603.10 | 1,507.38 | 3.28 | 3.19 | 0.76 | |
| 8,150.00 | 92.56 | 178.87 | 6,558.01 | -1,598.86 | -600.64 | 1,602.30 | 2.41 | 2.29 | 0.74 | |
| 8,244.00 | 88.69 | 178.17 | 6,556.99 | -1,692.81 | -598.22 | 1,696.22 | 4.18 | -4.12 | -0.74 | |
| 8,338.00 | 89.63 | 178.87 | 6,558.36 | -1,786.76 | -595.79 | 1,790.17 | 1.25 | 1.00 | 0.74 | |
| 8,432.00 | 89.81 | 178.87 | 6,558.82 | -1,880.74 | -593.94 | 1,884.13 | 0.19 | 0.19 | 0.00 | |
| 8,526.00 | 90.88 | 179.92 | 6,558.26 | -1,974.73 | -592.94 | 1,978.12 | 1.59 | 1.14 | 1.12 | |
| 8,602.56 | 91.43 | 180.35 | 6,556.72 | -2,051.27 | -593.12 | 2,054.66 | 0.91 | 0.72 | 0.56 | |
| 3820HH_T1 | | | | | | | | | | |
| 8,621.00 | 91.56 | 180.45 | 6,556.23 | -2,069.71 | -593.25 | 2,073.09 | 0.91 | 0.72 | 0.56 | |
| 8,715.00 | 91.88 | 180.63 | 6,553.41 | -2,163.67 | -594.13 | 2,167.05 | 0.39 | 0.34 | 0.19 | |
| 8,809.00 | 92.38 | 180.80 | 6,549.92 | -2,257.59 | -595.31 | 2,260.98 | 0.56 | 0.53 | 0.18 | |
| 8,903.00 | 89.94 | 178.34 | 6,548.02 | -2,351.56 | -594.60 | 2,354.94 | 3.69 | -2.60 | -2.62 | |
| 8,998.00 | 90.75 | 177.46 | 6,547.44 | -2,446.49 | -591.12 | 2,449.85 | 1.26 | 0.85 | -0.93 | |
| 9,092.00 | 90.25 | 175.70 | 6,546.62 | -2,540.31 | -585.51 | 2,543.64 | 1.95 | -0.53 | -1.87 | |
| 9,186.00 | 92.25 | 178.52 | 6,544.57 | -2,634.16 | -580.77 | 2,637.46 | 3.68 | 2.13 | 3.00 | |
| 9,280.00 | 89.50 | 178.87 | 6,543.14 | -2,728.11 | -578.63 | 2,731.40 | 2.95 | -2.93 | 0.37 | |
| 9,374.00 | 90.50 | 179.75 | 6,543.14 | -2,822.10 | -577.50 | 2,825.38 | 1.42 | 1.06 | 0.94 | |
| 9,469.00 | 91.50 | 180.10 | 6,541.48 | -2,917.09 | -577.38 | 2,920.37 | 1.12 | 1.05 | 0.37 | |
| 9,563.00 | 90.19 | 176.41 | 6,540.09 | -3,011.02 | -574.52 | 3,014.28 | 4.17 | -1.39 | -3.93 | |
| 9,657.00 | 91.63 | 182.21 | 6,538.60 | -3,104.96 | -573.38 | 3,108.21 | 6.36 | 1.53 | 6.17 | |
| 9,751.00 | 90.25 | 180.80 | 6,537.06 | -3,198.91 | -575.85 | 3,202.17 | 2.10 | -1.47 | -1.50 | |
| 9,845.00 | 88.94 | 179.40 | 6,537.72 | -3,292.90 | -576.02 | 3,296.16 | 2.04 | -1.39 | -1.49 | |
| 9,939.00 | 89.25 | 178.69 | 6,539.21 | -3,386.87 | -574.45 | 3,390.13 | 0.82 | 0.33 | -0.76 | |
| 10,033.00 | 90.63 | 179.75 | 6,539.30 | -3,480.86 | -573.17 | 3,484.10 | 1.85 | 1.47 | 1.13 | |
| 10,127.00 | 91.56 | 179.57 | 6,537.51 | -3,574.84 | -572.61 | 3,578.08 | 1.01 | 0.99 | -0.19 | |

| | | | |
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| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Surveys | Database: | RyanUSA_Compass |

| Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
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| 10,221.00 | 91.06 | 177.46 | 6,535.36 | -3,668.78 | -570.18 | 3,672.00 | 2.31 | -0.53 | -2.24 |
| 10,315.00 | 90.81 | 176.94 | 6,533.82 | -3,762.65 | -565.59 | 3,765.85 | 0.61 | -0.27 | -0.55 |
| 10,409.00 | 90.75 | 179.57 | 6,532.55 | -3,856.59 | -562.72 | 3,859.77 | 2.80 | -0.06 | 2.80 |
| 10,503.00 | 90.19 | 179.22 | 6,531.77 | -3,950.58 | -561.73 | 3,953.75 | 0.70 | -0.60 | -0.37 |
| 10,597.00 | 91.44 | 180.45 | 6,530.44 | -4,044.57 | -561.46 | 4,047.74 | 1.87 | 1.33 | 1.31 |
| 10,691.00 | 89.88 | 179.57 | 6,529.35 | -4,138.56 | -561.48 | 4,141.73 | 1.91 | -1.66 | -0.94 |
| 10,784.00 | 90.69 | 179.92 | 6,528.89 | -4,231.56 | -561.06 | 4,234.72 | 0.95 | 0.87 | 0.38 |
| 10,878.00 | 91.06 | 180.10 | 6,527.46 | -4,325.55 | -561.08 | 4,328.71 | 0.44 | 0.39 | 0.19 |
| 10,972.00 | 90.13 | 179.04 | 6,526.48 | -4,419.54 | -560.37 | 4,422.69 | 1.50 | -0.99 | -1.13 |
| 11,066.00 | 89.13 | 179.92 | 6,527.09 | -4,513.53 | -559.52 | 4,516.68 | 1.42 | -1.06 | 0.94 |
| 11,160.00 | 91.63 | 182.74 | 6,526.46 | -4,607.48 | -561.70 | 4,610.64 | 4.01 | 2.66 | 3.00 |
| 11,254.00 | 88.38 | 183.79 | 6,526.46 | -4,701.32 | -567.05 | 4,704.51 | 3.63 | -3.46 | 1.12 |
| 11,348.00 | 88.31 | 183.79 | 6,529.17 | -4,795.07 | -573.27 | 4,798.30 | 0.07 | -0.07 | 0.00 |
| 11,442.00 | 91.00 | 184.67 | 6,529.74 | -4,888.81 | -580.20 | 4,892.07 | 3.01 | 2.86 | 0.94 |
| 11,536.00 | 89.06 | 181.33 | 6,529.69 | -4,982.66 | -585.12 | 4,985.95 | 4.11 | -2.06 | -3.55 |
| 11,630.00 | 92.19 | 182.38 | 6,528.66 | -5,076.59 | -588.16 | 5,079.89 | 3.51 | 3.33 | 1.12 |
| 11,724.00 | 87.81 | 182.38 | 6,528.66 | -5,170.49 | -592.06 | 5,173.81 | 4.66 | -4.66 | 0.00 |
| 11,818.00 | 87.50 | 182.21 | 6,532.51 | -5,264.33 | -595.82 | 5,267.68 | 0.38 | -0.33 | -0.18 |
| 11,912.00 | 91.40 | 181.86 | 6,533.41 | -5,358.25 | -599.16 | 5,361.61 | 4.17 | 4.15 | -0.37 |
| 12,004.83 | 92.18 | 182.03 | 6,530.51 | -5,450.99 | -602.31 | 5,454.36 | 0.86 | 0.84 | 0.18 |
| 3820HH_T2 | | | | | | | | | |
| 12,006.00 | 92.19 | 182.03 | 6,530.47 | -5,452.15 | -602.35 | 5,455.53 | 0.86 | 0.84 | 0.18 |
| 12,099.00 | 88.31 | 178.17 | 6,530.06 | -5,545.11 | -602.51 | 5,548.49 | 5.88 | -4.17 | -4.15 |
| 12,193.00 | 88.13 | 177.29 | 6,532.98 | -5,638.99 | -598.79 | 5,642.35 | 0.96 | -0.19 | -0.94 |
| 12,287.00 | 90.38 | 176.23 | 6,534.20 | -5,732.83 | -593.48 | 5,736.15 | 2.65 | 2.39 | -1.13 |
| 12,381.00 | 92.13 | 174.65 | 6,532.14 | -5,826.50 | -586.01 | 5,829.78 | 2.51 | 1.86 | -1.68 |
| 12,475.00 | 93.75 | 179.40 | 6,527.32 | -5,920.22 | -581.13 | 5,923.47 | 5.33 | 1.72 | 5.05 |
| 12,570.00 | 92.56 | 178.34 | 6,522.09 | -6,015.06 | -579.26 | 6,018.29 | 1.68 | -1.25 | -1.12 |
| 12,664.00 | 90.69 | 180.63 | 6,519.42 | -6,109.00 | -578.42 | 6,112.23 | 3.14 | -1.99 | 2.44 |
| 12,758.00 | 89.81 | 181.51 | 6,519.01 | -6,202.98 | -580.17 | 6,206.22 | 1.32 | -0.94 | 0.94 |
| 12,852.00 | 89.81 | 181.68 | 6,519.33 | -6,296.95 | -582.79 | 6,300.20 | 0.18 | 0.00 | 0.18 |
| 12,946.00 | 88.00 | 180.45 | 6,521.12 | -6,390.91 | -584.54 | 6,394.17 | 2.33 | -1.93 | -1.31 |
| 13,040.00 | 87.38 | 179.57 | 6,524.91 | -6,484.83 | -584.55 | 6,488.09 | 1.14 | -0.66 | -0.94 |
| 13,134.00 | 91.56 | 179.57 | 6,525.78 | -6,578.80 | -583.85 | 6,582.06 | 4.45 | 4.45 | 0.00 |
| 13,228.00 | 92.06 | 179.92 | 6,522.81 | -6,672.75 | -583.43 | 6,676.00 | 0.65 | 0.53 | 0.37 |
| 13,323.00 | 89.19 | 177.64 | 6,521.78 | -6,767.71 | -581.41 | 6,770.95 | 3.86 | -3.02 | -2.40 |
| 13,417.00 | 91.38 | 178.69 | 6,521.31 | -6,861.66 | -578.40 | 6,864.87 | 2.58 | 2.33 | 1.12 |
| 13,511.00 | 89.44 | 176.94 | 6,520.63 | -6,955.58 | -574.81 | 6,958.77 | 2.78 | -2.06 | -1.86 |
| 13,605.00 | 92.50 | 179.40 | 6,519.04 | -7,049.50 | -571.81 | 7,052.67 | 4.18 | 3.26 | 2.62 |
| 13,699.00 | 92.44 | 178.34 | 6,514.99 | -7,143.39 | -569.96 | 7,146.55 | 1.13 | -0.06 | -1.13 |
| 13,794.00 | 91.63 | 181.33 | 6,511.62 | -7,238.32 | -569.69 | 7,241.48 | 3.26 | -0.85 | 3.15 |
| 13,888.00 | 92.19 | 182.56 | 6,508.49 | -7,332.21 | -572.88 | 7,335.39 | 1.44 | 0.60 | 1.31 |
| 13,982.00 | 91.31 | 181.15 | 6,505.61 | -7,426.11 | -575.92 | 7,429.31 | 1.77 | -0.94 | -1.50 |

| | | | |
|------------------|-----------------------------|-------------------------------------|--------------------|
| Company: | EP Energy E&P Company, L.P. | Local Co-ordinate Reference: | Well HH |
| Project: | Crockett Co, TX | TVD Reference: | KB=30' @ 2642.00ft |
| Site: | University Salt Draw 3820 | MD Reference: | KB=30' @ 2642.00ft |
| Well: | HH | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Surveys | Database: | RyanUSA_Compass |

| 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) | |
| 14,076.00 | 92.31 | 181.68 | 6,502.65 | -7,520.04 | -578.24 | 7,523.24 | 1.20 | 1.06 | 0.56 | |
| 14,170.00 | 90.88 | 182.38 | 6,500.03 | -7,613.94 | -581.56 | 7,617.16 | 1.69 | -1.52 | 0.74 | |
| 14,265.00 | 90.81 | 182.03 | 6,498.63 | -7,708.86 | -585.22 | 7,712.10 | 0.38 | -0.07 | -0.37 | |
| 14,358.00 | 89.19 | 177.29 | 6,498.63 | -7,801.83 | -584.67 | 7,805.06 | 5.39 | -1.74 | -5.10 | |
| 14,452.00 | 90.81 | 178.52 | 6,498.63 | -7,895.76 | -581.23 | 7,898.97 | 2.16 | 1.72 | 1.31 | |
| 14,546.00 | 90.13 | 179.04 | 6,497.86 | -7,989.73 | -579.23 | 7,992.94 | 0.91 | -0.72 | 0.55 | |
| 14,640.00 | 89.38 | 179.75 | 6,498.26 | -8,083.72 | -578.24 | 8,086.92 | 1.10 | -0.80 | 0.76 | |
| 14,734.00 | 90.81 | 181.68 | 6,498.10 | -8,177.71 | -579.41 | 8,180.91 | 2.56 | 1.52 | 2.05 | |
| 14,828.00 | 90.19 | 181.68 | 6,497.28 | -8,271.67 | -582.17 | 8,274.88 | 0.66 | -0.66 | 0.00 | |
| 14,922.00 | 90.63 | 182.91 | 6,496.61 | -8,365.59 | -585.93 | 8,368.82 | 1.39 | 0.47 | 1.31 | |
| 15,015.00 | 89.06 | 182.21 | 6,496.86 | -8,458.49 | -590.08 | 8,461.75 | 1.85 | -1.69 | -0.75 | |
| 15,109.00 | 88.81 | 179.92 | 6,498.61 | -8,552.45 | -591.83 | 8,555.72 | 2.45 | -0.27 | -2.44 | |
| 15,203.00 | 90.81 | 182.21 | 6,498.92 | -8,646.42 | -593.58 | 8,649.70 | 3.23 | 2.13 | 2.44 | |
| 15,297.00 | 89.50 | 179.92 | 6,498.67 | -8,740.40 | -595.32 | 8,743.68 | 2.81 | -1.39 | -2.44 | |
| 15,391.00 | 91.31 | 182.38 | 6,498.00 | -8,834.37 | -597.21 | 8,837.66 | 3.25 | 1.93 | 2.62 | |
| 15,485.00 | 91.94 | 183.26 | 6,495.34 | -8,928.21 | -601.83 | 8,931.53 | 1.15 | 0.67 | 0.94 | |
| 15,579.00 | 89.38 | 182.56 | 6,494.25 | -9,022.08 | -606.60 | 9,025.42 | 2.82 | -2.72 | -0.74 | |
| 15,673.00 | 89.25 | 182.38 | 6,495.38 | -9,115.98 | -610.66 | 9,119.35 | 0.24 | -0.14 | -0.19 | |
| 15,767.00 | 90.00 | 182.91 | 6,495.99 | -9,209.88 | -614.99 | 9,213.27 | 0.98 | 0.80 | 0.56 | |
| 15,860.00 | 90.31 | 182.74 | 6,495.74 | -9,302.77 | -619.58 | 9,306.18 | 0.38 | 0.33 | -0.18 | |
| 15,954.00 | 90.06 | 179.92 | 6,495.44 | -9,396.73 | -621.76 | 9,400.16 | 3.01 | -0.27 | -3.00 | |
| 16,048.00 | 91.19 | 179.04 | 6,494.41 | -9,490.72 | -620.91 | 9,494.14 | 1.52 | 1.20 | -0.94 | |
| 16,142.00 | 87.00 | 177.46 | 6,495.90 | -9,584.64 | -618.04 | 9,588.04 | 4.76 | -4.46 | -1.68 | |
| 16,236.00 | 86.44 | 176.94 | 6,501.27 | -9,678.37 | -613.45 | 9,681.75 | 0.81 | -0.60 | -0.55 | |
| 16,330.00 | 90.50 | 176.76 | 6,503.78 | -9,772.18 | -608.29 | 9,775.52 | 4.32 | 4.32 | -0.19 | |
| 16,424.00 | 91.19 | 175.18 | 6,502.40 | -9,865.93 | -601.68 | 9,869.23 | 1.83 | 0.73 | -1.68 | |
| 16,518.00 | 88.88 | 178.34 | 6,502.34 | -9,959.76 | -596.37 | 9,963.03 | 4.16 | -2.46 | 3.36 | |
| 16,612.00 | 88.69 | 181.33 | 6,504.33 | -10,053.73 | -596.10 | 10,057.00 | 3.19 | -0.20 | 3.18 | |
| 16,705.00 | 88.00 | 181.33 | 6,507.02 | -10,146.67 | -598.26 | 10,149.94 | 0.74 | -0.74 | 0.00 | |
| 16,799.00 | 89.25 | 181.51 | 6,509.28 | -10,240.61 | -600.59 | 10,243.90 | 1.34 | 1.33 | 0.19 | |
| 16,893.00 | 91.63 | 182.38 | 6,508.55 | -10,334.54 | -603.78 | 10,337.85 | 2.70 | 2.53 | 0.93 | |
| 16,987.00 | 91.19 | 181.68 | 6,506.24 | -10,428.46 | -607.11 | 10,431.78 | 0.88 | -0.47 | -0.74 | |
| 17,028.00 | 91.63 | 181.51 | 6,505.23 | -10,469.43 | -608.25 | 10,472.76 | 1.15 | 1.07 | -0.41 | |
| 17,077.00 | 91.63 | 181.51 | 6,503.84 | -10,518.39 | -609.54 | 10,521.73 | 0.00 | 0.00 | 0.00 | |
| PTB - 3820HH_BHL | | | | | | | | | | |

| Design Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|---------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | | |
| | | +N/-S (ft) | +E/-W (ft) | Comment | |
| 17,077.00 | 6,503.84 | -10,518.39 | -609.54 | PTB | |

| | | | |
|------------------|-----------------------------|-------------------------------------|--------------------|
| Company: | EP Energy E&P Company, L.P. | Local Co-ordinate Reference: | Well HH |
| Project: | Crockett Co, TX | TVD Reference: | KB=30' @ 2642.00ft |
| Site: | University Salt Draw 3820 | MD Reference: | KB=30' @ 2642.00ft |
| Well: | HH | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | Surveys | Database: | RyanUSA_Compass |

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