



Railroad Commission of Texas
Oil and Gas Division
P.O. Box 12967
Capitol Station
Austin, Texas 78711

April 11, 2014

Attn: Pam Johns

Re: Diamondback
UL Digger #5-2H
Andrews County, Texas
API#: 003-45969

Enclosed, please find the original of the survey performed on the referenced well by Crescent Directional Drilling, L.P., (Operator No. 189525) supervised by Ricky Neagle. Other information required by your office is as follows:

| <u>Name & Title of Surveyor</u> | <u>Drainhole Number</u> | <u>Surveyed Depths</u> | <u>Dates Performed</u> | <u>Type of Survey</u> |
|---|-----------------------------|----------------------------|----------------------------|---------------------------|
| Chad Devereaux | 2H | 1833'-15494' | 03/22/14-04/08/14 | MWD |

A certified plat on which the bottom-hole location is oriented to the surface location is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

A handwritten signature in black ink, appearing to read "R. Neagle", is written over a horizontal line.

Ricky Neagle
Coordinator of MWD Operations
Crescent Directional Drilling, L.P.

Enclosures

CRESCENT

DIRECTIONAL DRILLING

Minimum Curvature Calculation

Client: Diamondback E&P LLC
 Well: UL Digger #5-2H
 County: Andrews
 Rig: H & P 393

M.W.D. OPERATORS: C. Devereaux / J. Maier
 DIRECTIONAL DRILLERS: M. Myers / C. Baker
 Tool Azimuth to Grid North: 9.38
 Job #: PB - 141229

Vertical Section Angle: 167.45

API#: 42-003-45969

| Sur # | Meas. Depth | Inc. | Azm. | T.V.D. | Ver.Sect. | +N / -S | +E / -W | DLS |
|--------|-------------|------|--------|---------|-----------|---------|---------|------|
| Tie In | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Gyro | 57.00 | 0.16 | 4.53 | 57.00 | -0.08 | 0.08 | 0.01 | 0.28 |
| Gyro | 97.00 | 0.49 | 358.14 | 97.00 | -0.30 | 0.31 | 0.01 | 0.83 |
| Gyro | 137.00 | 0.54 | 350.12 | 137.00 | -0.65 | 0.66 | -0.03 | 0.22 |
| Gyro | 227.00 | 0.45 | 35.40 | 226.99 | -1.31 | 1.37 | 0.10 | 0.43 |
| Gyro | 317.00 | 0.49 | 44.39 | 316.99 | -1.76 | 1.93 | 0.57 | 0.09 |
| Gyro | 377.00 | 0.69 | 30.07 | 376.99 | -2.17 | 2.43 | 0.93 | 0.41 |
| Gyro | 407.00 | 0.80 | 17.99 | 406.99 | -2.48 | 2.78 | 1.09 | 0.64 |
| Gyro | 497.00 | 0.83 | 16.36 | 496.98 | -3.59 | 4.01 | 1.47 | 0.04 |
| Gyro | 587.00 | 0.99 | 14.03 | 586.97 | -4.86 | 5.39 | 1.84 | 0.18 |
| Gyro | 617.00 | 1.06 | 14.06 | 616.96 | -5.34 | 5.91 | 1.97 | 0.23 |
| Gyro | 647.00 | 1.07 | 11.93 | 646.96 | -5.84 | 6.45 | 2.09 | 0.14 |
| Gyro | 677.00 | 1.12 | 11.76 | 676.95 | -6.36 | 7.01 | 2.21 | 0.17 |
| Gyro | 707.00 | 1.14 | 12.61 | 706.94 | -6.90 | 7.59 | 2.34 | 0.09 |
| Gyro | 737.00 | 1.16 | 10.16 | 736.94 | -7.45 | 8.18 | 2.46 | 0.18 |
| Gyro | 767.00 | 1.15 | 10.52 | 766.93 | -8.01 | 8.77 | 2.56 | 0.04 |
| Gyro | 797.00 | 1.14 | 9.89 | 796.93 | -8.56 | 9.36 | 2.67 | 0.05 |
| Gyro | 827.00 | 1.04 | 11.79 | 826.92 | -9.08 | 9.92 | 2.78 | 0.35 |
| Gyro | 857.00 | 1.00 | 13.57 | 856.92 | -9.57 | 10.45 | 2.89 | 0.17 |
| Gyro | 887.00 | 1.04 | 15.64 | 886.91 | -10.04 | 10.96 | 3.03 | 0.18 |
| Gyro | 917.00 | 1.04 | 15.85 | 916.91 | -10.52 | 11.49 | 3.18 | 0.01 |
| Gyro | 947.00 | 1.04 | 11.69 | 946.90 | -11.01 | 12.01 | 3.31 | 0.25 |
| Gyro | 977.00 | 1.07 | 14.64 | 976.90 | -11.51 | 12.55 | 3.43 | 0.21 |
| Gyro | 1007.00 | 1.13 | 15.82 | 1006.89 | -12.02 | 13.11 | 3.58 | 0.21 |
| Gyro | 1037.00 | 1.07 | 17.72 | 1036.88 | -12.52 | 13.66 | 3.75 | 0.23 |
| Gyro | 1067.00 | 1.17 | 16.00 | 1066.88 | -13.03 | 14.22 | 3.92 | 0.35 |
| Gyro | 1097.00 | 1.18 | 18.38 | 1096.87 | -13.56 | 14.81 | 4.10 | 0.17 |
| Gyro | 1127.00 | 1.27 | 18.48 | 1126.87 | -14.11 | 15.42 | 4.30 | 0.30 |
| Gyro | 1157.00 | 1.28 | 16.59 | 1156.86 | -14.69 | 16.05 | 4.50 | 0.14 |
| Gyro | 1187.00 | 1.36 | 17.08 | 1186.85 | -15.29 | 16.71 | 4.71 | 0.27 |
| Gyro | 1217.00 | 1.44 | 15.53 | 1216.84 | -15.94 | 17.42 | 4.91 | 0.30 |
| Gyro | 1307.00 | 1.78 | 32.12 | 1306.81 | -17.93 | 19.69 | 5.96 | 0.64 |
| Gyro | 1397.00 | 1.95 | 31.16 | 1396.76 | -20.03 | 22.19 | 7.49 | 0.19 |
| Gyro | 1487.00 | 2.11 | 32.89 | 1486.70 | -22.30 | 24.89 | 9.18 | 0.19 |
| Gyro | 1577.00 | 2.10 | 33.30 | 1576.64 | -24.61 | 27.66 | 10.99 | 0.02 |
| Gyro | 1667.00 | 2.08 | 33.73 | 1666.58 | -26.89 | 30.39 | 12.80 | 0.03 |
| Gyro | 1746.00 | 2.00 | 33.20 | 1745.53 | -28.84 | 32.74 | 14.35 | 0.10 |
| 1 | 1833.00 | 2.10 | 23.80 | 1832.48 | -31.18 | 35.47 | 15.83 | 0.40 |
| 2 | 1928.00 | 1.10 | 319.50 | 1927.44 | -33.39 | 37.75 | 15.94 | 2.00 |
| 3 | 2022.00 | 1.40 | 284.70 | 2021.42 | -34.71 | 38.73 | 14.24 | 0.85 |

CRESCENT

DIRECTIONAL DRILLING

Minimum Curvature Calculation

Client: Diamondback E&P LLC
 Well: UL Digger #5-2H
 County: Andrews
 Rig: H & P 393

M.W.D. OPERATORS: C. Devereaux / J. Maier
 DIRECTIONAL DRILLERS: M. Myers / C. Baker
 Tool Azimuth to Grid North: 9.38
 Job #: PB - 141229

Vertical Section Angle: 167.45

API#: 42-003-45969

| Sur # | Meas. Depth | Inc. | Azm. | T.V.D. | Ver.Sect. | +N / -S | +E / -W | DLS |
|-------|-------------|------|--------|---------|-----------|---------|---------|------|
| 4 | 2116.00 | 1.40 | 294.10 | 2115.40 | -35.92 | 39.49 | 12.08 | 0.24 |
| 5 | 2210.00 | 1.41 | 291.30 | 2209.37 | -37.25 | 40.38 | 9.96 | 0.07 |
| 6 | 2304.00 | 1.20 | 295.60 | 2303.34 | -38.51 | 41.23 | 7.99 | 0.25 |
| 7 | 2399.00 | 1.41 | 298.70 | 2398.32 | -39.89 | 42.22 | 6.07 | 0.23 |
| 8 | 2493.00 | 1.40 | 298.40 | 2492.29 | -41.41 | 43.32 | 4.04 | 0.01 |
| 9 | 2588.00 | 1.20 | 290.60 | 2587.27 | -42.71 | 44.22 | 2.09 | 0.28 |
| 10 | 2682.00 | 1.10 | 296.30 | 2681.25 | -43.81 | 44.97 | 0.36 | 0.16 |
| 11 | 2777.00 | 0.90 | 292.40 | 2776.23 | -44.81 | 45.66 | -1.15 | 0.22 |
| 12 | 2871.00 | 0.88 | 296.30 | 2870.22 | -45.69 | 46.26 | -2.48 | 0.07 |
| 13 | 2965.00 | 1.10 | 304.00 | 2964.21 | -46.80 | 47.08 | -3.87 | 0.27 |
| 14 | 3060.00 | 1.06 | 302.60 | 3059.19 | -48.08 | 48.06 | -5.37 | 0.05 |
| 15 | 3154.00 | 0.90 | 295.90 | 3153.18 | -49.16 | 48.86 | -6.76 | 0.21 |
| 16 | 3248.00 | 1.10 | 291.70 | 3247.16 | -50.12 | 49.51 | -8.27 | 0.23 |
| 17 | 3342.00 | 1.06 | 286.80 | 3341.14 | -51.06 | 50.10 | -9.94 | 0.11 |
| 18 | 3437.00 | 0.90 | 291.00 | 3436.13 | -51.90 | 50.62 | -11.47 | 0.18 |
| 19 | 3531.00 | 0.88 | 290.30 | 3530.12 | -52.70 | 51.13 | -12.84 | 0.02 |
| 20 | 3625.00 | 0.90 | 294.50 | 3624.11 | -53.54 | 51.69 | -14.19 | 0.07 |
| 21 | 3720.00 | 0.88 | 292.70 | 3719.10 | -54.41 | 52.28 | -15.54 | 0.04 |
| 22 | 3814.00 | 0.90 | 300.50 | 3813.09 | -55.33 | 52.93 | -16.84 | 0.13 |
| 23 | 3908.00 | 0.88 | 307.90 | 3907.07 | -56.39 | 53.75 | -18.05 | 0.12 |
| 24 | 4003.00 | 1.10 | 309.60 | 4002.06 | -57.67 | 54.78 | -19.33 | 0.23 |
| 25 | 4097.00 | 1.10 | 311.70 | 4096.04 | -59.12 | 55.96 | -20.70 | 0.04 |
| 26 | 4191.00 | 0.90 | 305.00 | 4190.03 | -60.39 | 56.98 | -21.97 | 0.25 |
| 27 | 4286.00 | 0.88 | 309.60 | 4285.02 | -61.52 | 57.87 | -23.15 | 0.08 |
| 28 | 4380.00 | 0.90 | 306.80 | 4379.01 | -62.65 | 58.78 | -24.30 | 0.05 |
| 29 | 4475.00 | 0.70 | 306.80 | 4474.00 | -63.66 | 59.57 | -25.36 | 0.21 |
| 30 | 4569.00 | 0.50 | 297.30 | 4567.99 | -64.35 | 60.10 | -26.18 | 0.24 |
| 31 | 4664.00 | 0.40 | 324.70 | 4662.99 | -64.93 | 60.56 | -26.74 | 0.25 |
| 32 | 4758.00 | 0.50 | 334.20 | 4756.99 | -65.63 | 61.20 | -27.11 | 0.13 |
| 33 | 4853.00 | 0.50 | 337.00 | 4851.98 | -66.44 | 61.95 | -27.45 | 0.03 |
| 34 | 4947.00 | 0.40 | 312.80 | 4945.98 | -67.11 | 62.55 | -27.85 | 0.23 |
| 35 | 5042.00 | 0.40 | 304.70 | 5040.98 | -67.63 | 62.97 | -28.37 | 0.06 |
| 36 | 5136.00 | 0.35 | 302.90 | 5134.97 | -68.07 | 63.31 | -28.88 | 0.05 |
| 37 | 5230.00 | 0.40 | 335.30 | 5228.97 | -68.60 | 63.77 | -29.26 | 0.23 |
| 38 | 5325.00 | 0.50 | 325.40 | 5323.97 | -69.31 | 64.41 | -29.63 | 0.13 |
| 39 | 5419.00 | 0.70 | 329.00 | 5417.96 | -70.23 | 65.24 | -30.16 | 0.22 |
| 40 | 5511.00 | 1.10 | 309.60 | 5509.95 | -71.46 | 66.28 | -31.13 | 0.54 |
| 41 | 5605.00 | 1.10 | 307.20 | 5603.94 | -72.86 | 67.40 | -32.54 | 0.05 |
| 42 | 5699.00 | 1.06 | 308.60 | 5697.92 | -74.23 | 68.49 | -33.94 | 0.05 |
| 43 | 5794.00 | 1.20 | 305.00 | 5792.90 | -75.65 | 69.61 | -35.44 | 0.17 |
| 44 | 5888.00 | 1.20 | 306.80 | 5886.88 | -77.12 | 70.76 | -37.04 | 0.04 |
| 45 | 5983.00 | 1.10 | 312.80 | 5981.86 | -78.63 | 71.98 | -38.50 | 0.16 |
| 46 | 6077.00 | 0.90 | 315.90 | 6075.85 | -80.00 | 73.12 | -39.68 | 0.22 |
| 47 | 6171.00 | 1.10 | 321.20 | 6169.83 | -81.44 | 74.36 | -40.76 | 0.23 |
| 48 | 6265.00 | 0.90 | 324.00 | 6263.82 | -82.92 | 75.66 | -41.76 | 0.22 |
| 49 | 6360.00 | 0.70 | 325.10 | 6358.81 | -84.14 | 76.74 | -42.53 | 0.21 |
| 50 | 6454.00 | 0.70 | 325.10 | 6452.80 | -85.21 | 77.68 | -43.19 | 0.00 |
| 51 | 6548.00 | 0.70 | 318.80 | 6546.79 | -86.24 | 78.58 | -43.89 | 0.08 |
| 52 | 6642.00 | 0.50 | 323.30 | 6640.79 | -87.12 | 79.34 | -44.52 | 0.22 |

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DIRECTIONAL DRILLING

Minimum Curvature Calculation

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 County: Andrews
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 DIRECTIONAL DRILLERS: M. Myers / C. Baker
 Tool Azimuth to Grid North: 9.38
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Vertical Section Angle: 167.45

API#: 42-003-45969

| Sur # | Meas. Depth | Inc. | Azm. | T.V.D. | Ver.Sect. | +N / -S | +E / -W | DLS |
|-------|-------------|-------|--------|---------|-----------|----------|---------|-------|
| 53 | 6737.00 | 0.53 | 335.60 | 6735.79 | -87.93 | 80.07 | -44.95 | 0.12 |
| 54 | 6831.00 | 0.50 | 320.20 | 6829.78 | -88.72 | 80.79 | -45.39 | 0.15 |
| 55 | 6925.00 | 0.40 | 330.70 | 6923.78 | -89.40 | 81.39 | -45.81 | 0.14 |
| 56 | 7020.00 | 0.35 | 326.10 | 7018.78 | -89.98 | 81.92 | -46.13 | 0.06 |
| 57 | 7053.00 | 0.40 | 326.80 | 7051.78 | -90.19 | 82.10 | -46.25 | 0.15 |
| 58 | 7215.00 | 0.50 | 302.20 | 7213.77 | -91.21 | 82.95 | -47.16 | 0.13 |
| 59 | 7309.00 | 0.50 | 289.90 | 7307.77 | -91.72 | 83.30 | -47.89 | 0.11 |
| 60 | 7404.00 | 6.90 | 190.10 | 7402.54 | -86.67 | 77.82 | -49.29 | 7.37 |
| 61 | 7435.00 | 12.80 | 184.50 | 7433.07 | -81.66 | 72.56 | -49.88 | 19.26 |
| 62 | 7467.00 | 19.00 | 183.10 | 7463.83 | -73.25 | 63.82 | -50.44 | 19.41 |
| 63 | 7498.00 | 23.80 | 181.60 | 7492.69 | -62.32 | 52.52 | -50.89 | 15.58 |
| 64 | 7530.00 | 29.00 | 179.90 | 7521.34 | -48.48 | 38.30 | -51.06 | 16.42 |
| 65 | 7561.00 | 33.30 | 177.10 | 7547.86 | -32.74 | 22.27 | -50.61 | 14.63 |
| 66 | 7593.00 | 34.70 | 176.40 | 7574.39 | -15.08 | 4.41 | -49.60 | 4.54 |
| 67 | 7624.00 | 35.40 | 174.60 | 7599.77 | 2.54 | -13.34 | -48.20 | 4.03 |
| 68 | 7655.00 | 36.20 | 173.90 | 7624.91 | 20.55 | -31.38 | -46.38 | 2.90 |
| 69 | 7687.00 | 38.20 | 174.30 | 7650.40 | 39.77 | -50.62 | -44.39 | 6.30 |
| 70 | 7718.00 | 41.90 | 173.60 | 7674.13 | 59.58 | -70.45 | -42.29 | 12.02 |
| 71 | 7750.00 | 46.80 | 172.90 | 7697.00 | 81.83 | -92.66 | -39.65 | 15.39 |
| 72 | 7781.00 | 50.00 | 171.50 | 7717.58 | 104.93 | -115.62 | -36.50 | 10.86 |
| 73 | 7813.00 | 51.40 | 169.70 | 7737.85 | 129.65 | -140.05 | -32.45 | 6.17 |
| 74 | 7844.00 | 53.00 | 168.60 | 7756.85 | 154.13 | -164.10 | -27.84 | 5.87 |
| 75 | 7876.00 | 54.40 | 168.30 | 7775.80 | 179.92 | -189.37 | -22.68 | 4.44 |
| 76 | 7907.00 | 57.20 | 168.60 | 7793.22 | 205.55 | -214.49 | -17.54 | 9.07 |
| 77 | 7938.00 | 60.40 | 169.30 | 7809.28 | 232.06 | -240.51 | -12.46 | 10.50 |
| 78 | 7970.00 | 63.20 | 169.00 | 7824.40 | 260.24 | -268.21 | -7.16 | 8.79 |
| 79 | 8001.00 | 65.80 | 167.60 | 7837.74 | 288.22 | -295.60 | -1.48 | 9.32 |
| 80 | 8033.00 | 67.90 | 166.90 | 7850.32 | 317.64 | -324.30 | 5.02 | 6.86 |
| 81 | 8064.00 | 69.50 | 166.20 | 7861.58 | 346.52 | -352.38 | 11.73 | 5.57 |
| 82 | 8096.00 | 70.90 | 165.10 | 7872.42 | 376.61 | -381.55 | 19.20 | 5.44 |
| 83 | 8127.00 | 72.30 | 165.10 | 7882.21 | 406.00 | -409.98 | 26.76 | 4.52 |
| 84 | 8159.00 | 74.60 | 165.10 | 7891.32 | 436.64 | -439.62 | 34.65 | 7.19 |
| 85 | 8190.00 | 76.50 | 165.10 | 7899.06 | 466.64 | -468.63 | 42.37 | 6.13 |
| 86 | 8222.00 | 77.10 | 163.70 | 7906.36 | 497.75 | -498.63 | 50.74 | 4.65 |
| 87 | 8253.00 | 79.20 | 162.70 | 7912.73 | 528.00 | -527.68 | 59.51 | 7.47 |
| 88 | 8285.00 | 83.20 | 162.70 | 7917.62 | 559.51 | -557.86 | 68.92 | 12.50 |
| 89 | 8316.00 | 85.00 | 163.40 | 7920.81 | 590.25 | -587.36 | 77.91 | 6.23 |
| 90 | 8347.00 | 85.50 | 163.00 | 7923.38 | 621.06 | -616.93 | 86.83 | 2.06 |
| 91 | 8379.00 | 85.70 | 162.30 | 7925.83 | 652.85 | -647.39 | 96.35 | 2.27 |
| 92 | 8410.00 | 87.30 | 161.60 | 7927.72 | 683.65 | -676.80 | 105.94 | 5.63 |
| 93 | 8442.00 | 88.20 | 160.90 | 7928.98 | 715.44 | -707.08 | 116.21 | 3.56 |
| 94 | 8473.00 | 89.60 | 160.90 | 7929.58 | 746.23 | -736.37 | 126.36 | 4.52 |
| 95 | 8505.00 | 91.30 | 161.60 | 7929.32 | 778.04 | -766.67 | 136.64 | 5.75 |
| 96 | 8536.00 | 92.00 | 162.30 | 7928.43 | 808.88 | -796.13 | 146.24 | 3.19 |
| 97 | 8630.00 | 93.30 | 161.60 | 7924.09 | 902.35 | -885.41 | 175.34 | 1.57 |
| 98 | 8725.00 | 92.90 | 161.60 | 7918.95 | 996.72 | -975.42 | 205.28 | 0.42 |
| 99 | 8819.00 | 92.70 | 163.70 | 7914.36 | 1090.27 | -1065.03 | 233.27 | 2.24 |
| 100 | 8913.00 | 94.00 | 163.40 | 7908.86 | 1183.89 | -1155.02 | 259.85 | 1.42 |
| 101 | 9008.00 | 91.70 | 164.10 | 7904.14 | 1278.57 | -1246.11 | 286.40 | 2.53 |

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 DIRECTIONAL DRILLERS: M. Myers / C. Baker
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|-------|-------------|-------|--------|---------|-----------|----------|---------|------|
| 102 | 9102.00 | 91.10 | 165.50 | 7901.84 | 1372.44 | -1336.79 | 311.03 | 1.62 |
| 103 | 9196.00 | 91.70 | 165.50 | 7899.55 | 1466.35 | -1427.77 | 334.56 | 0.64 |
| 104 | 9291.00 | 92.60 | 164.80 | 7895.98 | 1561.21 | -1519.53 | 358.89 | 1.20 |
| 105 | 9385.00 | 91.00 | 166.50 | 7893.03 | 1655.11 | -1610.55 | 382.18 | 2.48 |
| 106 | 9479.00 | 90.80 | 168.30 | 7891.55 | 1749.09 | -1702.27 | 402.68 | 1.93 |
| 107 | 9574.00 | 90.80 | 168.60 | 7890.23 | 1844.07 | -1795.33 | 421.70 | 0.32 |
| 108 | 9668.00 | 91.10 | 167.90 | 7888.67 | 1938.05 | -1887.35 | 440.84 | 0.81 |
| 109 | 9762.00 | 89.90 | 168.30 | 7887.85 | 2032.04 | -1979.33 | 460.22 | 1.35 |
| 110 | 9857.00 | 90.30 | 168.60 | 7887.68 | 2127.02 | -2072.40 | 479.24 | 0.53 |
| 111 | 9951.00 | 91.80 | 169.00 | 7885.96 | 2220.98 | -2164.59 | 497.49 | 1.65 |
| 112 | 10045.00 | 90.40 | 168.60 | 7884.16 | 2314.93 | -2256.78 | 515.75 | 1.55 |
| 113 | 10140.00 | 91.10 | 169.00 | 7882.91 | 2409.89 | -2349.97 | 534.20 | 0.85 |
| 114 | 10234.00 | 91.00 | 167.90 | 7881.19 | 2503.86 | -2442.05 | 553.02 | 1.17 |
| 115 | 10329.00 | 89.40 | 167.20 | 7880.86 | 2598.86 | -2534.81 | 573.50 | 1.84 |
| 116 | 10423.00 | 89.90 | 167.20 | 7881.43 | 2692.86 | -2626.47 | 594.32 | 0.53 |
| 117 | 10518.00 | 88.20 | 166.50 | 7883.01 | 2787.83 | -2718.96 | 615.93 | 1.94 |
| 118 | 10612.00 | 88.30 | 166.50 | 7885.88 | 2881.78 | -2810.32 | 637.86 | 0.11 |
| 119 | 10706.00 | 88.20 | 166.50 | 7888.75 | 2975.72 | -2901.68 | 659.80 | 0.11 |
| 120 | 10801.00 | 88.50 | 166.20 | 7891.48 | 3070.66 | -2993.96 | 682.21 | 0.45 |
| 121 | 10895.00 | 89.40 | 166.20 | 7893.21 | 3164.62 | -3085.23 | 704.62 | 0.96 |
| 122 | 10990.00 | 89.90 | 165.10 | 7893.79 | 3259.57 | -3177.26 | 728.17 | 1.27 |
| 123 | 11084.00 | 89.40 | 166.50 | 7894.36 | 3353.53 | -3268.39 | 751.23 | 1.58 |
| 124 | 11179.00 | 89.70 | 170.70 | 7895.11 | 3448.49 | -3361.49 | 770.00 | 4.43 |
| 125 | 11273.00 | 90.40 | 169.70 | 7895.03 | 3542.38 | -3454.12 | 786.00 | 1.30 |
| 126 | 11368.00 | 91.30 | 168.60 | 7893.62 | 3637.32 | -3547.40 | 803.88 | 1.50 |
| 127 | 11462.00 | 92.60 | 167.60 | 7890.42 | 3731.26 | -3639.33 | 823.25 | 1.74 |
| 128 | 11556.00 | 92.00 | 168.30 | 7886.64 | 3825.18 | -3731.18 | 842.86 | 0.98 |
| 129 | 11651.00 | 91.70 | 167.60 | 7883.58 | 3920.12 | -3824.04 | 862.68 | 0.80 |
| 130 | 11745.00 | 92.20 | 166.90 | 7880.38 | 4014.07 | -3915.67 | 883.41 | 0.91 |
| 131 | 11840.00 | 91.10 | 167.20 | 7877.64 | 4109.02 | -4008.21 | 904.69 | 1.20 |
| 132 | 11934.00 | 91.80 | 167.60 | 7875.27 | 4202.99 | -4099.92 | 925.19 | 0.86 |
| 133 | 12028.00 | 93.40 | 167.20 | 7871.00 | 4296.89 | -4191.56 | 945.68 | 1.75 |
| 134 | 12122.00 | 93.30 | 165.80 | 7865.51 | 4390.72 | -4282.80 | 967.58 | 1.49 |
| 135 | 12217.00 | 90.40 | 166.90 | 7862.44 | 4485.64 | -4375.06 | 989.99 | 3.26 |
| 136 | 12311.00 | 91.00 | 166.50 | 7861.29 | 4579.62 | -4466.53 | 1011.61 | 0.77 |
| 137 | 12406.00 | 91.50 | 166.50 | 7859.22 | 4674.59 | -4558.88 | 1033.78 | 0.53 |
| 138 | 12500.00 | 89.90 | 168.60 | 7858.07 | 4768.57 | -4650.66 | 1054.04 | 2.81 |
| 139 | 12594.00 | 90.10 | 169.30 | 7858.07 | 4862.54 | -4742.91 | 1072.06 | 0.77 |
| 140 | 12689.00 | 90.80 | 167.90 | 7857.33 | 4957.51 | -4836.03 | 1090.83 | 1.65 |
| 141 | 12783.00 | 91.50 | 166.20 | 7855.44 | 5051.49 | -4927.62 | 1111.89 | 1.96 |
| 142 | 12877.00 | 92.60 | 166.50 | 7852.08 | 5145.41 | -5018.91 | 1134.06 | 1.21 |
| 143 | 12972.00 | 93.80 | 165.50 | 7846.77 | 5240.23 | -5110.94 | 1157.01 | 1.64 |
| 144 | 13066.00 | 91.50 | 167.20 | 7842.43 | 5334.10 | -5202.17 | 1179.16 | 3.04 |
| 145 | 13160.00 | 88.90 | 167.60 | 7842.10 | 5428.09 | -5293.90 | 1199.67 | 2.80 |
| 146 | 13254.00 | 86.90 | 170.00 | 7845.54 | 5521.99 | -5386.04 | 1217.91 | 3.32 |
| 147 | 13349.00 | 87.10 | 170.70 | 7850.52 | 5616.74 | -5479.57 | 1233.82 | 0.77 |
| 148 | 13443.00 | 89.70 | 170.40 | 7853.14 | 5710.56 | -5572.25 | 1249.24 | 2.78 |
| 149 | 13538.00 | 90.60 | 168.60 | 7852.89 | 5805.49 | -5665.65 | 1266.55 | 2.12 |
| 150 | 13632.00 | 92.00 | 167.90 | 7850.76 | 5899.45 | -5757.65 | 1285.69 | 1.67 |

Minimum Curvature Calculation

API#: 42-003-45969

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