



K.P. KAUFFMAN

SURVEY REPORT

MUSICK MCCLINTOCK #7

4/10/2018



The **Ultimate Partner** In Wellbore Placement

CUSTOMER K.P. Kauffman
PROJECT Musick McClintock #7
FIELD Hambert

SDI JOB NO. OP.009417
SDI DISTRICT Casper
SDI KIT/UNIT

SITE INFORMATION

Site Name Musick McClintock #7
Lat/Long 40.270492° N, 104.684222° W
Northing
Easting

Section
Township
Range

MAP INFORMATION

North Reference True North
Grid Correction
System US State Plane 1983
Datum North American Datum 1983 (GRS 1980)
Map Zone Colorado North: 0501



WELL INFORMATION

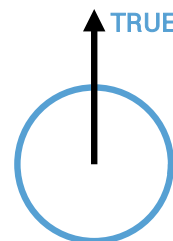
Lat/Long 40.270492° N, 104.684222° W
Northing
Easting
UWI 05-123-15071 UWBI 05-123-15071

DEPTH AND ELEVATION REFERENCE

Ground Level 4890 ft above Mean Sea Level
Reference Datum GL
Reference Height 0 ft above G.L.
Reference Elevation 4890 ft

VERTICAL SECTION REFERENCE

+N/-S 0 ft
+E/-W 0 ft
Proposal Direction 311.84°
Calculation Method Minimum Curvature



LOCAL GRAVITY REFERENCE INFORMATION

Local Gravity 999.064 mG [computed]

WELL NOTES

Keeper gyro wireline survey in 4.5" casing

OPERATORS

P Holbrook

SDI Operator Name (Printed)

SIGNATURE

DATE

| MD | INC | AZIM | TVD | VS | +N/-S | +E/-W | DLS | CLOSURE DIST | CLOSURE DIR |
|--------|------|--------|--------|-------|-------|-------|---------|-----------------|----------------|
| ft | deg | deg | ft | ft | ft | ft | °/100ft | ft | deg |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Invalid | 0.00 | 0.00 |
| 25.00 | 0.12 | 91.44 | 25.00 | -0.02 | 0.00 | 0.03 | 0.46 | 0.03 | 91.44 |
| 50.00 | 0.23 | 91.44 | 50.00 | -0.08 | 0.00 | 0.10 | 0.46 | 0.10 | 91.44 |
| 75.00 | 0.35 | 91.44 | 75.00 | -0.17 | -0.01 | 0.23 | 0.46 | 0.23 | 91.44 |
| 100.00 | 0.42 | 89.37 | 100.00 | -0.30 | -0.01 | 0.39 | 0.32 | 0.39 | 90.95 |
| 125.00 | 0.38 | 77.43 | 125.00 | -0.41 | 0.01 | 0.57 | 0.38 | 0.57 | 88.74 |
| 150.00 | 0.37 | 70.02 | 150.00 | -0.50 | 0.06 | 0.73 | 0.20 | 0.73 | 85.39 |
| 175.00 | 0.40 | 82.47 | 175.00 | -0.60 | 0.10 | 0.89 | 0.35 | 0.89 | 83.72 |
| 200.00 | 0.38 | 81.31 | 200.00 | -0.71 | 0.12 | 1.06 | 0.09 | 1.06 | 83.43 |
| 225.00 | 0.39 | 82.16 | 225.00 | -0.81 | 0.15 | 1.22 | 0.05 | 1.23 | 83.20 |
| 250.00 | 0.37 | 85.19 | 250.00 | -0.92 | 0.16 | 1.39 | 0.11 | 1.40 | 83.25 |
| 275.00 | 0.27 | 69.71 | 275.00 | -1.01 | 0.19 | 1.52 | 0.53 | 1.53 | 82.84 |
| 300.00 | 0.09 | 45.63 | 300.00 | -1.03 | 0.22 | 1.59 | 0.74 | 1.60 | 81.95 |
| 325.00 | 0.18 | 104.52 | 325.00 | -1.07 | 0.23 | 1.64 | 0.63 | 1.66 | 82.07 |
| 350.00 | 0.08 | 126.94 | 349.99 | -1.12 | 0.21 | 1.69 | 0.47 | 1.71 | 82.97 |
| 375.00 | 0.14 | 127.61 | 374.99 | -1.17 | 0.18 | 1.73 | 0.26 | 1.74 | 84.06 |
| 400.00 | 0.12 | 126.11 | 399.99 | -1.23 | 0.15 | 1.78 | 0.06 | 1.78 | 85.32 |
| 425.00 | 0.06 | 134.08 | 424.99 | -1.27 | 0.12 | 1.81 | 0.26 | 1.81 | 86.20 |
| 450.00 | 0.02 | 130.73 | 449.99 | -1.28 | 0.11 | 1.82 | 0.18 | 1.82 | 86.58 |
| 475.00 | 0.03 | 86.65 | 474.99 | -1.29 | 0.11 | 1.83 | 0.07 | 1.83 | 86.66 |
| 500.00 | 0.06 | 90.10 | 499.99 | -1.30 | 0.11 | 1.85 | 0.13 | 1.85 | 86.68 |
| 525.00 | 0.06 | 114.89 | 524.99 | -1.33 | 0.10 | 1.87 | 0.10 | 1.87 | 86.89 |
| 550.00 | 0.01 | 245.31 | 549.99 | -1.34 | 0.10 | 1.88 | 0.26 | 1.88 | 87.09 |
| 575.00 | 0.02 | 73.68 | 574.99 | -1.34 | 0.10 | 1.88 | 0.11 | 1.89 | 87.08 |
| 600.00 | 0.07 | 56.59 | 599.99 | -1.35 | 0.11 | 1.90 | 0.19 | 1.90 | 86.84 |
| 625.00 | 0.11 | 329.91 | 624.99 | -1.33 | 0.13 | 1.90 | 0.48 | 1.91 | 86.00 |
| 650.00 | 0.11 | 281.04 | 649.99 | -1.29 | 0.16 | 1.87 | 0.36 | 1.87 | 85.18 |
| 675.00 | 0.12 | 263.67 | 674.99 | -1.25 | 0.16 | 1.82 | 0.14 | 1.82 | 85.00 |
| 700.00 | 0.16 | 254.09 | 699.99 | -1.21 | 0.15 | 1.76 | 0.19 | 1.76 | 85.23 |
| 725.00 | 0.15 | 263.21 | 724.99 | -1.17 | 0.13 | 1.69 | 0.10 | 1.70 | 85.50 |
| 750.00 | 0.20 | 243.30 | 749.99 | -1.13 | 0.11 | 1.62 | 0.31 | 1.62 | 86.13 |
| 775.00 | 0.26 | 237.68 | 774.99 | -1.10 | 0.06 | 1.53 | 0.24 | 1.54 | 87.76 |

| MD | INC | AZIM | TVD | VS | +N/-S | +E/-W | DLS | CLOSURE DIST | CLOSURE DIR |
|---------|------|--------|---------|-------|-------|-------|---------|-----------------|----------------|
| ft | deg | deg | ft | ft | ft | ft | °/100ft | ft | deg |
| 800.00 | 0.29 | 237.51 | 799.99 | -1.07 | 0.00 | 1.43 | 0.14 | 1.43 | 90.16 |
| 825.00 | 0.33 | 240.93 | 824.99 | -1.03 | -0.07 | 1.32 | 0.17 | 1.32 | 93.18 |
| 850.00 | 0.33 | 237.66 | 849.99 | -0.99 | -0.15 | 1.19 | 0.08 | 1.20 | 97.00 |
| 875.00 | 0.35 | 240.50 | 874.99 | -0.94 | -0.22 | 1.06 | 0.12 | 1.09 | 101.83 |
| 900.00 | 0.38 | 241.17 | 899.99 | -0.89 | -0.30 | 0.92 | 0.11 | 0.97 | 108.04 |
| 925.00 | 0.35 | 229.97 | 924.99 | -0.85 | -0.39 | 0.79 | 0.31 | 0.88 | 116.21 |
| 950.00 | 0.37 | 238.71 | 949.99 | -0.82 | -0.48 | 0.66 | 0.24 | 0.82 | 125.94 |
| 975.00 | 0.36 | 237.84 | 974.99 | -0.77 | -0.57 | 0.53 | 0.06 | 0.77 | 136.94 |
| 1000.00 | 0.37 | 230.16 | 999.99 | -0.74 | -0.66 | 0.40 | 0.20 | 0.77 | 148.71 |
| 1025.00 | 0.43 | 236.17 | 1024.99 | -0.70 | -0.76 | 0.26 | 0.30 | 0.81 | 161.16 |
| 1050.00 | 0.41 | 232.88 | 1049.99 | -0.66 | -0.87 | 0.11 | 0.14 | 0.88 | 172.71 |
| 1075.00 | 0.40 | 219.72 | 1074.99 | -0.65 | -0.99 | -0.02 | 0.37 | 0.99 | 180.87 |
| 1100.00 | 0.44 | 224.17 | 1099.99 | -0.65 | -1.13 | -0.14 | 0.22 | 1.13 | 186.98 |
| 1125.00 | 0.42 | 228.70 | 1124.99 | -0.63 | -1.26 | -0.27 | 0.15 | 1.29 | 192.33 |
| 1150.00 | 0.47 | 235.04 | 1149.99 | -0.60 | -1.38 | -0.43 | 0.26 | 1.44 | 197.27 |
| 1175.00 | 0.49 | 231.59 | 1174.99 | -0.56 | -1.50 | -0.60 | 0.14 | 1.62 | 201.64 |
| 1200.00 | 0.50 | 231.63 | 1199.98 | -0.52 | -1.64 | -0.77 | 0.05 | 1.81 | 205.08 |
| 1225.00 | 0.53 | 240.51 | 1224.98 | -0.47 | -1.76 | -0.95 | 0.33 | 2.00 | 208.40 |
| 1250.00 | 0.52 | 232.81 | 1249.98 | -0.41 | -1.89 | -1.14 | 0.28 | 2.20 | 211.20 |
| 1275.00 | 0.58 | 234.29 | 1274.98 | -0.36 | -2.03 | -1.33 | 0.25 | 2.43 | 213.34 |
| 1300.00 | 0.57 | 233.41 | 1299.98 | -0.31 | -2.18 | -1.54 | 0.04 | 2.66 | 215.24 |
| 1325.00 | 0.56 | 233.19 | 1324.98 | -0.26 | -2.32 | -1.74 | 0.05 | 2.90 | 216.76 |
| 1350.00 | 0.61 | 242.81 | 1349.98 | -0.19 | -2.46 | -1.95 | 0.45 | 3.14 | 218.46 |
| 1375.00 | 0.61 | 240.27 | 1374.98 | -0.09 | -2.59 | -2.19 | 0.11 | 3.39 | 220.24 |
| 1400.00 | 0.60 | 238.90 | 1399.97 | -0.01 | -2.72 | -2.42 | 0.08 | 3.64 | 221.62 |
| 1425.00 | 0.57 | 234.28 | 1424.97 | 0.05 | -2.86 | -2.63 | 0.23 | 3.89 | 222.60 |
| 1450.00 | 0.52 | 213.80 | 1449.97 | 0.06 | -3.03 | -2.79 | 0.80 | 4.12 | 222.71 |
| 1475.00 | 0.52 | 211.77 | 1474.97 | 0.03 | -3.22 | -2.91 | 0.07 | 4.34 | 222.19 |
| 1500.00 | 0.54 | 211.51 | 1499.97 | -0.01 | -3.41 | -3.04 | 0.08 | 4.57 | 221.66 |
| 1525.00 | 0.56 | 204.76 | 1524.97 | -0.07 | -3.62 | -3.15 | 0.27 | 4.80 | 220.99 |
| 1550.00 | 0.51 | 217.18 | 1549.97 | -0.12 | -3.82 | -3.27 | 0.50 | 5.03 | 220.52 |
| 1575.00 | 0.51 | 222.97 | 1574.97 | -0.12 | -3.99 | -3.41 | 0.21 | 5.25 | 220.50 |

| MD ft | INC deg | AZIM deg | TVD ft | VS ft | +N/-S ft | +E/-W ft | DLS °/100ft | CLOSURE DIST ft | CLOSURE DIR deg |
|----------|------------|-------------|-----------|----------|-------------|-------------|----------------|-----------------------|-----------------------|
| 1600.00 | 0.53 | 232.26 | 1599.97 | -0.10 | -4.15 | -3.58 | 0.35 | 5.48 | 220.80 |
| 1625.00 | 0.52 | 241.70 | 1624.96 | -0.04 | -4.27 | -3.77 | 0.35 | 5.70 | 221.44 |
| 1650.00 | 0.55 | 258.26 | 1649.96 | 0.07 | -4.35 | -3.99 | 0.63 | 5.90 | 222.52 |
| 1675.00 | 0.57 | 265.49 | 1674.96 | 0.23 | -4.38 | -4.23 | 0.29 | 6.09 | 223.97 |
| 1700.00 | 0.54 | 265.67 | 1699.96 | 0.39 | -4.40 | -4.47 | 0.12 | 6.27 | 225.43 |
| 1725.00 | 0.52 | 268.75 | 1724.96 | 0.56 | -4.41 | -4.70 | 0.12 | 6.45 | 226.80 |
| 1750.00 | 0.48 | 268.97 | 1749.96 | 0.72 | -4.42 | -4.92 | 0.17 | 6.61 | 228.08 |
| 1775.00 | 0.52 | 274.58 | 1774.96 | 0.88 | -4.41 | -5.14 | 0.24 | 6.77 | 229.35 |
| 1800.00 | 0.47 | 271.07 | 1799.96 | 1.05 | -4.40 | -5.35 | 0.21 | 6.93 | 230.58 |
| 1825.00 | 0.57 | 277.86 | 1824.96 | 1.23 | -4.38 | -5.58 | 0.45 | 7.09 | 231.85 |
| 1850.00 | 0.56 | 280.59 | 1849.96 | 1.44 | -4.34 | -5.82 | 0.11 | 7.26 | 233.29 |
| 1875.00 | 0.52 | 281.25 | 1874.95 | 1.64 | -4.30 | -6.05 | 0.19 | 7.42 | 234.63 |
| 1900.00 | 0.65 | 286.10 | 1899.95 | 1.87 | -4.23 | -6.30 | 0.56 | 7.59 | 236.09 |
| 1925.00 | 0.63 | 289.89 | 1924.95 | 2.12 | -4.15 | -6.56 | 0.19 | 7.76 | 237.71 |
| 1950.00 | 0.59 | 292.37 | 1949.95 | 2.37 | -4.05 | -6.81 | 0.19 | 7.93 | 239.25 |
| 1975.00 | 0.63 | 285.24 | 1974.95 | 2.62 | -3.97 | -7.06 | 0.35 | 8.10 | 240.68 |
| 2000.00 | 0.69 | 287.82 | 1999.95 | 2.88 | -3.88 | -7.34 | 0.26 | 8.31 | 242.12 |
| 2025.00 | 0.64 | 283.37 | 2024.94 | 3.14 | -3.81 | -7.62 | 0.30 | 8.52 | 243.46 |
| 2050.00 | 0.71 | 279.65 | 2049.94 | 3.39 | -3.75 | -7.91 | 0.32 | 8.75 | 244.64 |
| 2075.00 | 0.75 | 280.95 | 2074.94 | 3.66 | -3.69 | -8.22 | 0.20 | 9.01 | 245.82 |
| 2100.00 | 0.81 | 277.14 | 2099.94 | 3.95 | -3.64 | -8.56 | 0.29 | 9.30 | 246.97 |
| 2125.00 | 0.95 | 275.80 | 2124.94 | 4.26 | -3.60 | -8.94 | 0.59 | 9.63 | 248.09 |
| 2150.00 | 0.90 | 271.41 | 2149.93 | 4.58 | -3.57 | -9.34 | 0.35 | 10.00 | 249.09 |
| 2175.00 | 0.90 | 270.20 | 2174.93 | 4.87 | -3.56 | -9.73 | 0.08 | 10.37 | 249.89 |
| 2200.00 | 0.90 | 267.93 | 2199.93 | 5.16 | -3.57 | -10.13 | 0.14 | 10.74 | 250.58 |
| 2225.00 | 0.92 | 268.22 | 2224.92 | 5.45 | -3.58 | -10.53 | 0.08 | 11.12 | 251.20 |
| 2250.00 | 0.97 | 265.64 | 2249.92 | 5.74 | -3.61 | -10.94 | 0.24 | 11.52 | 251.75 |
| 2275.00 | 1.11 | 268.78 | 2274.92 | 6.07 | -3.63 | -11.39 | 0.61 | 11.95 | 252.34 |
| 2300.00 | 1.15 | 268.46 | 2299.91 | 6.42 | -3.64 | -11.88 | 0.17 | 12.43 | 252.97 |
| 2325.00 | 1.04 | 259.67 | 2324.91 | 6.75 | -3.69 | -12.36 | 0.81 | 12.89 | 253.39 |
| 2350.00 | 1.12 | 262.51 | 2349.90 | 7.04 | -3.76 | -12.82 | 0.39 | 13.36 | 253.66 |
| 2375.00 | 1.04 | 257.70 | 2374.90 | 7.34 | -3.84 | -13.29 | 0.48 | 13.83 | 253.88 |

| MD ft | INC deg | AZIM deg | TVD ft | VS ft | +N/-S ft | +E/-W ft | DLS °/100ft | CLOSURE DIST ft | CLOSURE DIR deg |
|----------|------------|-------------|-----------|----------|-------------|-------------|----------------|-----------------------|-----------------------|
| 2400.00 | 1.07 | 255.81 | 2399.89 | 7.60 | -3.94 | -13.73 | 0.18 | 14.29 | 253.97 |
| 2425.00 | 1.11 | 258.82 | 2424.89 | 7.88 | -4.05 | -14.20 | 0.28 | 14.76 | 254.08 |
| 2450.00 | 1.03 | 258.29 | 2449.88 | 8.15 | -4.14 | -14.66 | 0.31 | 15.23 | 254.22 |
| 2475.00 | 1.00 | 259.93 | 2474.88 | 8.42 | -4.23 | -15.09 | 0.17 | 15.67 | 254.36 |
| 2500.00 | 1.02 | 264.05 | 2499.88 | 8.71 | -4.29 | -15.53 | 0.30 | 16.11 | 254.57 |
| 2525.00 | 0.94 | 271.80 | 2524.87 | 9.01 | -4.30 | -15.95 | 0.62 | 16.52 | 254.90 |
| 2550.00 | 0.91 | 284.67 | 2549.87 | 9.35 | -4.25 | -16.35 | 0.84 | 16.89 | 255.44 |
| 2575.00 | 0.89 | 292.56 | 2574.87 | 9.71 | -4.12 | -16.72 | 0.50 | 17.22 | 256.15 |
| 2600.00 | 1.03 | 298.14 | 2599.86 | 10.11 | -3.94 | -17.10 | 0.67 | 17.55 | 257.02 |
| 2625.00 | 1.15 | 301.40 | 2624.86 | 10.57 | -3.71 | -17.51 | 0.53 | 17.90 | 258.05 |
| 2650.00 | 1.23 | 303.51 | 2649.85 | 11.08 | -3.43 | -17.95 | 0.39 | 18.27 | 259.19 |
| 2675.00 | 1.33 | 304.04 | 2674.85 | 11.64 | -3.12 | -18.41 | 0.40 | 18.67 | 260.39 |
| 2700.00 | 1.37 | 306.26 | 2699.84 | 12.22 | -2.78 | -18.89 | 0.26 | 19.10 | 261.64 |
| 2725.00 | 1.37 | 307.09 | 2724.83 | 12.82 | -2.42 | -19.37 | 0.08 | 19.52 | 262.88 |
| 2750.00 | 1.33 | 309.18 | 2749.83 | 13.41 | -2.06 | -19.84 | 0.24 | 19.94 | 264.08 |
| 2775.00 | 1.38 | 308.93 | 2774.82 | 14.00 | -1.68 | -20.30 | 0.17 | 20.37 | 265.26 |
| 2800.00 | 1.41 | 307.68 | 2799.81 | 14.60 | -1.31 | -20.77 | 0.18 | 20.81 | 266.40 |
| 2825.00 | 1.48 | 307.97 | 2824.80 | 15.23 | -0.92 | -21.27 | 0.28 | 21.29 | 267.52 |
| 2850.00 | 1.53 | 307.39 | 2849.79 | 15.88 | -0.52 | -21.79 | 0.22 | 21.80 | 268.63 |
| 2875.00 | 1.60 | 306.78 | 2874.79 | 16.57 | -0.11 | -22.33 | 0.29 | 22.33 | 269.72 |
| 2900.00 | 1.62 | 303.76 | 2899.78 | 17.26 | 0.30 | -22.91 | 0.35 | 22.91 | 270.74 |
| 2925.00 | 1.63 | 301.71 | 2924.77 | 17.96 | 0.68 | -23.51 | 0.24 | 23.52 | 271.66 |
| 2950.00 | 1.68 | 299.27 | 2949.76 | 18.67 | 1.05 | -24.13 | 0.35 | 24.15 | 272.48 |
| 2975.00 | 1.74 | 298.86 | 2974.74 | 19.40 | 1.41 | -24.78 | 0.23 | 24.82 | 273.26 |
| 3000.00 | 1.78 | 298.37 | 2999.73 | 20.15 | 1.78 | -25.46 | 0.19 | 25.52 | 274.00 |
| 3025.00 | 1.84 | 298.04 | 3024.72 | 20.92 | 2.15 | -26.15 | 0.24 | 26.24 | 274.70 |
| 3050.00 | 1.89 | 298.28 | 3049.71 | 21.71 | 2.54 | -26.87 | 0.21 | 26.99 | 275.39 |
| 3075.00 | 2.01 | 300.85 | 3074.69 | 22.54 | 2.96 | -27.61 | 0.59 | 27.77 | 276.11 |
| 3100.00 | 2.12 | 303.25 | 3099.68 | 23.43 | 3.44 | -28.38 | 0.53 | 28.58 | 276.90 |
| 3125.00 | 2.15 | 303.80 | 3124.66 | 24.35 | 3.95 | -29.15 | 0.18 | 29.42 | 277.72 |
| 3150.00 | 2.16 | 304.20 | 3149.64 | 25.28 | 4.48 | -29.93 | 0.07 | 30.27 | 278.51 |
| 3175.00 | 2.21 | 304.65 | 3174.62 | 26.23 | 5.02 | -30.72 | 0.22 | 31.13 | 279.27 |

| MD | INC | AZIM | TVD | VS | +N/-S | +E/-W | DLS | CLOSURE DIST | CLOSURE DIR |
|---------|------|--------|---------|-------|-------|--------|---------|-----------------|----------------|
| ft | deg | deg | ft | ft | ft | ft | °/100ft | ft | deg |
| 3200.00 | 2.20 | 304.13 | 3199.60 | 27.18 | 5.56 | -31.51 | 0.11 | 32.00 | 280.00 |
| 3225.00 | 2.23 | 303.77 | 3224.59 | 28.14 | 6.10 | -32.31 | 0.17 | 32.88 | 280.69 |
| 3250.00 | 2.29 | 303.74 | 3249.57 | 29.12 | 6.65 | -33.13 | 0.22 | 33.79 | 281.34 |
| 3275.00 | 2.37 | 305.22 | 3274.55 | 30.13 | 7.22 | -33.97 | 0.40 | 34.73 | 282.00 |
| 3300.00 | 2.38 | 306.38 | 3299.52 | 31.16 | 7.83 | -34.81 | 0.20 | 35.68 | 282.67 |
| 3325.00 | 2.37 | 308.45 | 3324.50 | 32.19 | 8.46 | -35.64 | 0.35 | 36.63 | 283.35 |
| 3350.00 | 2.39 | 312.17 | 3349.48 | 33.23 | 9.13 | -36.43 | 0.62 | 37.56 | 284.07 |
| 3375.00 | 2.42 | 316.44 | 3374.46 | 34.28 | 9.86 | -37.18 | 0.72 | 38.47 | 284.86 |
| 3400.00 | 2.41 | 322.03 | 3399.44 | 35.32 | 10.66 | -37.87 | 0.94 | 39.34 | 285.72 |
| 3425.00 | 2.34 | 327.59 | 3424.41 | 36.33 | 11.50 | -38.46 | 0.97 | 40.15 | 286.65 |
| 3450.00 | 2.29 | 329.23 | 3449.39 | 37.30 | 12.36 | -38.99 | 0.31 | 40.91 | 287.59 |
| 3475.00 | 2.25 | 334.03 | 3474.37 | 38.23 | 13.23 | -39.46 | 0.78 | 41.62 | 288.54 |
| 3500.00 | 2.20 | 336.28 | 3499.36 | 39.12 | 14.11 | -39.87 | 0.39 | 42.29 | 289.49 |
| 3525.00 | 2.07 | 338.08 | 3524.34 | 39.96 | 14.97 | -40.23 | 0.60 | 42.93 | 290.41 |
| 3550.00 | 2.09 | 339.86 | 3549.32 | 40.76 | 15.82 | -40.56 | 0.27 | 43.53 | 291.31 |
| 3575.00 | 2.06 | 343.73 | 3574.31 | 41.55 | 16.68 | -40.84 | 0.57 | 44.11 | 292.21 |
| 3600.00 | 2.03 | 348.46 | 3599.29 | 42.28 | 17.54 | -41.05 | 0.69 | 44.64 | 293.13 |
| 3625.00 | 2.06 | 354.19 | 3624.27 | 42.97 | 18.42 | -41.19 | 0.82 | 45.12 | 294.09 |
| 3650.00 | 2.04 | 0.51 | 3649.26 | 43.60 | 19.31 | -41.23 | 0.90 | 45.53 | 295.10 |
| 3675.00 | 2.06 | 5.59 | 3674.24 | 44.16 | 20.20 | -41.18 | 0.73 | 45.87 | 296.13 |
| 3700.00 | 1.99 | 8.32 | 3699.23 | 44.66 | 21.08 | -41.07 | 0.46 | 46.17 | 297.17 |
| 3725.00 | 1.95 | 13.25 | 3724.21 | 45.11 | 21.93 | -40.91 | 0.70 | 46.42 | 298.19 |
| 3750.00 | 1.90 | 22.68 | 3749.20 | 45.44 | 22.72 | -40.66 | 1.28 | 46.57 | 299.20 |
| 3775.00 | 1.78 | 31.62 | 3774.18 | 45.65 | 23.44 | -40.29 | 1.25 | 46.61 | 300.18 |
| 3800.00 | 1.60 | 40.42 | 3799.17 | 45.73 | 24.03 | -39.86 | 1.27 | 46.55 | 301.09 |
| 3825.00 | 1.36 | 51.17 | 3824.17 | 45.69 | 24.48 | -39.40 | 1.46 | 46.39 | 301.85 |
| 3850.00 | 1.19 | 55.63 | 3849.16 | 45.58 | 24.82 | -38.96 | 0.77 | 46.19 | 302.50 |
| 3875.00 | 1.10 | 58.10 | 3874.15 | 45.45 | 25.09 | -38.54 | 0.43 | 45.99 | 303.06 |
| 3900.00 | 1.10 | 58.84 | 3899.15 | 45.31 | 25.34 | -38.13 | 0.06 | 45.79 | 303.61 |
| 3925.00 | 1.05 | 58.07 | 3924.15 | 45.18 | 25.59 | -37.73 | 0.19 | 45.59 | 304.14 |
| 3950.00 | 0.98 | 60.52 | 3949.14 | 45.05 | 25.81 | -37.35 | 0.32 | 45.40 | 304.65 |
| 3975.00 | 1.00 | 63.96 | 3974.14 | 44.89 | 26.01 | -36.97 | 0.25 | 45.20 | 305.13 |

| MD ft | INC deg | AZIM deg | TVD ft | VS ft | +N/-S ft | +E/-W ft | DLS °/100ft | CLOSURE DIST ft | CLOSURE DIR deg |
|----------|------------|-------------|-----------|----------|-------------|-------------|----------------|-----------------------|-----------------------|
| 4000.00 | 0.93 | 64.75 | 3999.13 | 44.73 | 26.20 | -36.59 | 0.30 | 45.00 | 305.60 |
| 4025.00 | 0.88 | 64.48 | 4024.13 | 44.58 | 26.36 | -36.23 | 0.18 | 44.81 | 306.04 |
| 4050.00 | 0.87 | 66.76 | 4049.13 | 44.43 | 26.52 | -35.89 | 0.15 | 44.62 | 306.47 |
| 4075.00 | 0.77 | 68.45 | 4074.13 | 44.27 | 26.66 | -35.56 | 0.41 | 44.44 | 306.86 |
| 4100.00 | 0.60 | 68.46 | 4099.12 | 44.14 | 26.77 | -35.28 | 0.68 | 44.29 | 307.19 |
| 4125.00 | 0.41 | 74.39 | 4124.12 | 44.03 | 26.84 | -35.07 | 0.76 | 44.16 | 307.43 |
| 4150.00 | 0.30 | 78.61 | 4149.12 | 43.95 | 26.88 | -34.92 | 0.47 | 44.07 | 307.58 |
| 4175.00 | 0.26 | 80.81 | 4174.12 | 43.87 | 26.90 | -34.80 | 0.15 | 43.99 | 307.70 |
| 4200.00 | 0.27 | 74.49 | 4199.12 | 43.80 | 26.92 | -34.69 | 0.12 | 43.91 | 307.82 |
| 4225.00 | 0.22 | 77.29 | 4224.12 | 43.74 | 26.95 | -34.59 | 0.22 | 43.85 | 307.93 |
| 4250.00 | 0.22 | 73.22 | 4249.12 | 43.69 | 26.97 | -34.49 | 0.07 | 43.79 | 308.03 |
| 4275.00 | 0.40 | 75.80 | 4274.12 | 43.62 | 27.01 | -34.36 | 0.70 | 43.71 | 308.17 |
| 4300.00 | 0.53 | 68.93 | 4299.12 | 43.52 | 27.07 | -34.17 | 0.58 | 43.60 | 308.39 |
| 4325.00 | 0.58 | 45.16 | 4324.12 | 43.46 | 27.20 | -33.97 | 0.93 | 43.52 | 308.68 |
| 4350.00 | 0.58 | 39.02 | 4349.12 | 43.46 | 27.39 | -33.80 | 0.25 | 43.51 | 309.02 |
| 4375.00 | 0.57 | 53.12 | 4374.12 | 43.44 | 27.56 | -33.63 | 0.57 | 43.48 | 309.34 |
| 4400.00 | 0.49 | 58.75 | 4399.12 | 43.38 | 27.69 | -33.44 | 0.37 | 43.41 | 309.63 |
| 4425.00 | 0.48 | 39.57 | 4424.11 | 43.35 | 27.83 | -33.28 | 0.65 | 43.38 | 309.90 |
| 4450.00 | 0.56 | 25.57 | 4449.11 | 43.39 | 28.02 | -33.16 | 0.61 | 43.41 | 310.20 |
| 4475.00 | 0.57 | 24.48 | 4474.11 | 43.46 | 28.24 | -33.05 | 0.06 | 43.48 | 310.51 |
| 4500.00 | 0.48 | 18.31 | 4499.11 | 43.54 | 28.46 | -32.97 | 0.42 | 43.55 | 310.80 |
| 4525.00 | 0.42 | 18.91 | 4524.11 | 43.62 | 28.64 | -32.91 | 0.24 | 43.63 | 311.04 |
| 4550.00 | 0.41 | 12.43 | 4549.11 | 43.70 | 28.82 | -32.86 | 0.19 | 43.70 | 311.25 |
| 4575.00 | 0.39 | 4.22 | 4574.11 | 43.80 | 28.99 | -32.83 | 0.25 | 43.80 | 311.45 |
| 4600.00 | 0.44 | 343.36 | 4599.11 | 43.93 | 29.17 | -32.85 | 0.64 | 43.93 | 311.60 |
| 4625.00 | 0.41 | 339.15 | 4624.11 | 44.09 | 29.35 | -32.91 | 0.18 | 44.09 | 311.72 |
| 4650.00 | 0.50 | 330.30 | 4649.11 | 44.28 | 29.52 | -33.00 | 0.45 | 44.28 | 311.82 |
| 4657.39 | 0.46 | 330.16 | 4656.49 | 44.34 | 29.58 | -33.03 | 0.59 | 44.34 | 311.84 |

