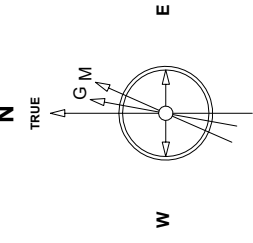


Great Western Operating Company, LLC

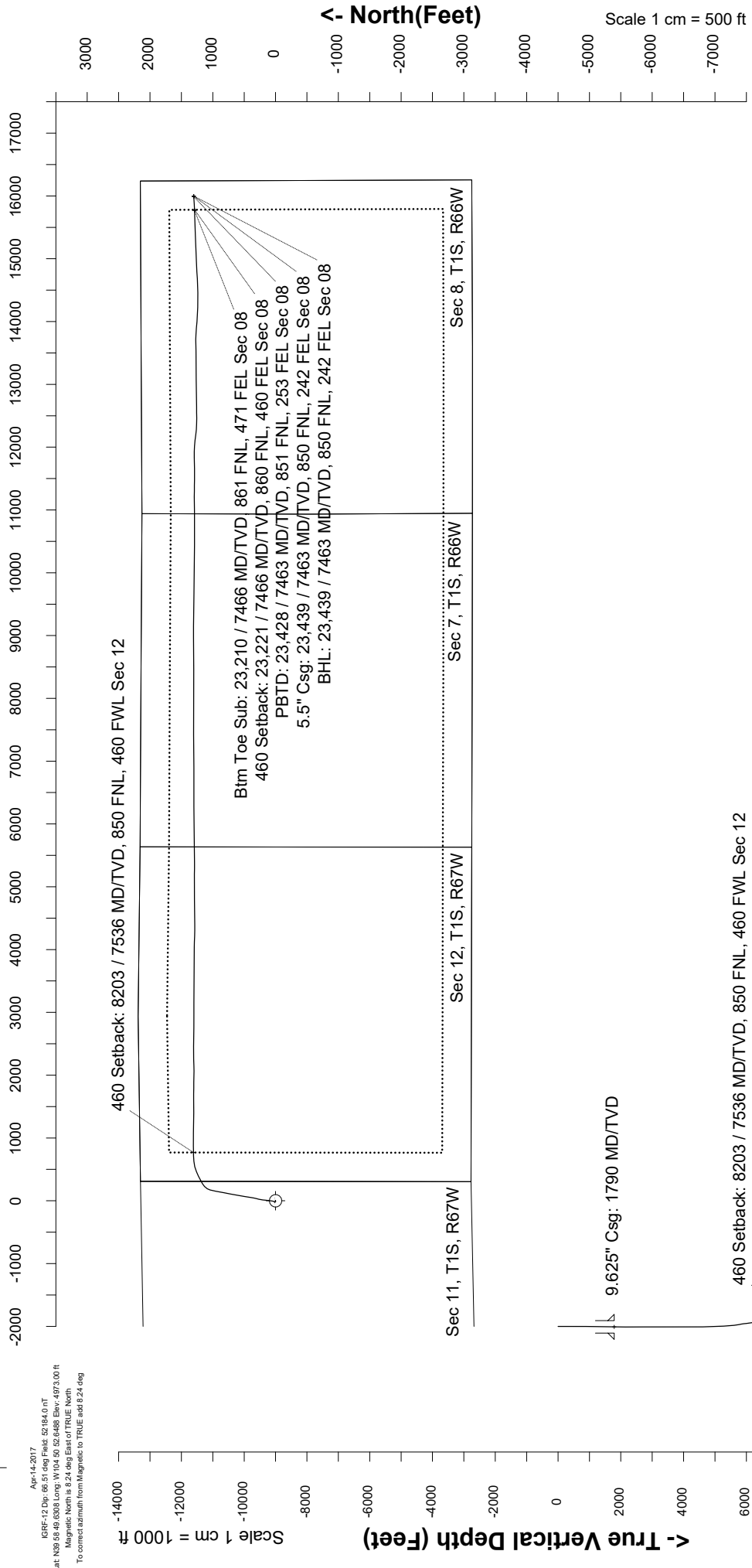
| | | | |
|--------------|------------|----------|-------------------------|
| Location | Colorado | Slot | N10 - Brant LE 08-042HN |
| Field | Wattenburg | Well | Brant LE 08-042HN |
| Installation | Brant | Wellbore | Brant LE 08-042HN (AWB) |

Created by: imount
 Date plotted: 18-Feb-2020
 Plot reference is Brant LE 08-042HN (AWB).
 Ref wellpath is Brant LE 08-042HN (AWP#1).
 Coordinates are in Feet reference N10 - Brant LE 08-042HN.
 True Vertical Depths are reference Rig Datum.
 Measured Depths are reference Rig Datum.
 Rig Datum: Actual Datum #1
 Rig Datum to Mean Sea Level: 4993.00 ft.
 Plot North is aligned to TRUE North.



Scale 1 cm = 500 ft

East (Feet) ->



Apr-14-2017
 KRF: 12.Dwg, 66.51 deg Field, 52784.0 FT
 Lat: N39 58.49 (308) Long: W 104 50 52.648 Elev: 4973.00 ft
 Magnetic North is 9.24 deg East of TRUE North
 To correct azimuth from Magnetic to TRUE add 8.24 deg

<- True Vertical Depth (Feet)

Scale 1 cm = 1000 ft

Scale 1 cm = 1000 ft

Vertical Section (Feet) ->

Azimuth 85.35 with reference 0.00 N, 0.00 E from N10 - Brant LE 08-042HN

Scale 1 cm = 500 ft

<- North(Feet)

Great Western Operating Co, LLC
 Directional Survey Report
 Wellpath: Brant LE 08-042HN
 MDs and TVDs are from Rig Floor 4993.0ft above Mean Sea Level

Wellbore Information

| Date Created | Date Revised | API # | RKB above GL | Well Name |
|--------------|--------------|--------------|--------------|-------------------|
| Feb-10-2020 | Feb-18-2020 | 05-001-10342 | 20.00 | Brant LE 08-042HN |

Slot Coordinates

| Latitude | Longitude |
|-------------|---------------|
| 39.98092100 | -104.84784000 |

Pad Information

| Pad Name | Ground Elev. |
|----------|--------------|
| Brant | 4973.00 |

Field

| Name |
|------------|
| Wattenburg |

Wellpath Report

| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | DLS [deg/100ft] | Vertical Section[ft] | Lat - NAD 83 | Long - NAD 83 |
|---------|----------|----------|---------|-----------|----------|-----------------|----------------------|--------------|---------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.00 | 39.98092100 | -104.84784000 |
| 14.00 | 0.00 | 0.00 | 14.00 | 0.00 | 0.00 | 0.00 | 0.00 | 39.98092100 | -104.84784000 |
| 92.00 | 0.70 | 343.97 | 92.00 | 0.46 | -0.13 | 0.00 | -0.09 | 39.98092226 | -104.84784047 |
| 179.00 | 0.09 | 191.30 | 179.00 | 0.90 | -0.29 | 0.00 | -0.22 | 39.98092348 | -104.84784104 |
| 264.00 | 0.40 | 239.29 | 264.00 | 0.68 | -0.56 | 0.00 | -0.50 | 39.98092288 | -104.84784200 |
| 357.00 | 0.44 | 173.11 | 356.99 | 0.16 | -0.80 | 0.00 | -0.78 | 39.98092145 | -104.84784284 |
| 446.00 | 0.44 | 118.61 | 445.99 | -0.34 | -0.46 | 0.00 | -0.48 | 39.98092007 | -104.84784162 |
| 536.00 | 0.35 | 15.61 | 535.99 | -0.24 | -0.08 | 0.00 | -0.10 | 39.98092034 | -104.84784028 |
| 626.00 | 0.40 | 39.86 | 625.99 | 0.27 | 0.20 | 0.00 | 0.22 | 39.98092173 | -104.84783930 |
| 716.00 | 0.26 | 225.23 | 715.99 | 0.36 | 0.25 | 0.00 | 0.28 | 39.98092200 | -104.84783909 |
| 806.00 | 0.35 | 206.59 | 805.99 | -0.03 | -0.01 | 0.00 | -0.02 | 39.98092093 | -104.84784005 |
| 896.00 | 0.88 | 292.29 | 895.98 | -0.01 | -0.78 | 0.00 | -0.77 | 39.98092097 | -104.84784277 |
| 986.00 | 1.05 | 274.97 | 985.97 | 0.32 | -2.24 | 0.00 | -2.20 | 39.98092189 | -104.84784798 |
| 1076.00 | 1.27 | 274.53 | 1075.95 | 0.47 | -4.05 | 0.00 | -4.00 | 39.98092230 | -104.84785446 |
| 1166.00 | 1.93 | 271.02 | 1165.92 | 0.58 | -6.56 | 0.00 | -6.49 | 39.98092259 | -104.84786342 |
| 1256.00 | 1.54 | 268.29 | 1255.87 | 0.57 | -9.29 | 0.00 | -9.21 | 39.98092257 | -104.84787314 |
| 1346.00 | 0.83 | 257.75 | 1345.85 | 0.40 | -11.13 | 0.00 | -11.06 | 39.98092209 | -104.84787973 |
| 1436.00 | 0.66 | 250.01 | 1435.85 | 0.08 | -12.26 | 0.00 | -12.21 | 39.98092122 | -104.84788374 |
| 1526.00 | 1.54 | 240.69 | 1525.83 | -0.69 | -13.80 | 0.00 | -13.81 | 39.98091911 | -104.84788924 |
| 1616.00 | 0.40 | 233.05 | 1615.81 | -1.47 | -15.10 | 0.00 | -15.17 | 39.98091697 | -104.84789390 |
| 1706.00 | 0.48 | 344.67 | 1705.81 | -1.29 | -15.46 | 0.00 | -15.51 | 39.98091745 | -104.84789515 |
| 1739.00 | 0.44 | 340.63 | 1738.81 | -1.04 | -15.53 | 0.00 | -15.57 | 39.98091814 | -104.84789543 |
| 1873.00 | 0.58 | 148.64 | 1872.81 | -1.14 | -15.35 | 0.00 | -15.39 | 39.98091788 | -104.84789478 |
| 1962.00 | 2.80 | 343.92 | 1961.78 | 0.57 | -15.72 | 0.00 | -15.62 | 39.98092256 | -104.84789609 |
| 2052.00 | 1.15 | 337.57 | 2051.72 | 3.52 | -16.67 | 0.00 | -16.33 | 39.98093065 | -104.84789949 |
| 2142.00 | 0.26 | 317.73 | 2141.72 | 4.50 | -17.15 | 0.00 | -16.73 | 39.98093336 | -104.84790121 |
| 2232.00 | 0.79 | 315.18 | 2231.71 | 5.09 | -17.73 | 0.00 | -17.26 | 39.98093498 | -104.84790327 |
| 2321.00 | 0.01 | 84.82 | 2320.71 | 5.53 | -18.15 | 0.00 | -17.65 | 39.98093618 | -104.84790478 |
| 2411.00 | 0.04 | 305.11 | 2410.71 | 5.55 | -18.17 | 0.00 | -17.66 | 39.98093623 | -104.84790484 |
| 2501.00 | 0.05 | 337.01 | 2500.71 | 5.60 | -18.21 | 0.00 | -17.70 | 39.98093638 | -104.84790499 |
| 2590.00 | 0.02 | 115.11 | 2589.71 | 5.63 | -18.21 | 0.00 | -17.70 | 39.98093646 | -104.84790499 |
| 2680.00 | 0.07 | 60.23 | 2679.71 | 5.65 | -18.15 | 0.00 | -17.63 | 39.98093652 | -104.84790477 |
| 2770.00 | 2.54 | 345.50 | 2769.68 | 7.61 | -18.60 | 0.00 | -17.92 | 39.98094189 | -104.84790639 |
| 2859.00 | 0.10 | 287.13 | 2858.65 | 9.54 | -19.17 | 0.00 | -18.33 | 39.98094720 | -104.84790841 |
| 2949.00 | 0.10 | 154.33 | 2948.65 | 9.50 | -19.21 | 0.00 | -18.38 | 39.98094707 | -104.84790856 |
| 3039.00 | 0.03 | 107.76 | 3038.65 | 9.42 | -19.16 | 0.00 | -18.33 | 39.98094685 | -104.84790836 |
| 3129.00 | 0.01 | 207.26 | 3128.65 | 9.40 | -19.14 | 0.00 | -18.31 | 39.98094681 | -104.84790829 |
| 3218.00 | 0.06 | 248.06 | 3217.65 | 9.38 | -19.18 | 0.00 | -18.36 | 39.98094675 | -104.84790846 |
| 3308.00 | 0.16 | 327.52 | 3307.65 | 9.47 | -19.30 | 0.00 | -18.46 | 39.98094699 | -104.84790885 |
| 3398.00 | 0.00 | 133.74 | 3397.65 | 9.57 | -19.36 | 0.00 | -18.52 | 39.98094728 | -104.84790909 |
| 3487.00 | 0.02 | 150.86 | 3486.65 | 9.56 | -19.36 | 0.00 | -18.52 | 39.98094724 | -104.84790907 |
| 3577.00 | 0.09 | 171.24 | 3576.65 | 9.48 | -19.34 | 0.00 | -18.50 | 39.98094701 | -104.84790900 |
| 3667.00 | 0.04 | 196.68 | 3666.65 | 9.38 | -19.34 | 0.00 | -18.51 | 39.98094674 | -104.84790900 |
| 3756.00 | 0.06 | 167.87 | 3755.65 | 9.30 | -19.33 | 0.00 | -18.52 | 39.98094653 | -104.84790899 |
| 3846.00 | 0.10 | 305.11 | 3845.65 | 9.30 | -19.39 | 0.00 | -18.57 | 39.98094653 | -104.84790919 |
| 3935.00 | 0.09 | 326.56 | 3934.65 | 9.40 | -19.49 | 0.00 | -18.66 | 39.98094681 | -104.84790955 |
| 4025.00 | 0.04 | 301.83 | 4024.65 | 9.48 | -19.56 | 0.00 | -18.72 | 39.98094702 | -104.84790979 |
| 4115.00 | 0.03 | 283.78 | 4114.65 | 9.50 | -19.61 | 0.00 | -18.77 | 39.98094708 | -104.84790996 |
| 4204.00 | 0.07 | 201.32 | 4203.65 | 9.46 | -19.65 | 0.00 | -18.82 | 39.98094696 | -104.84791011 |
| 4294.00 | 0.06 | 23.16 | 4293.65 | 9.45 | -19.65 | 0.00 | -18.82 | 39.98094694 | -104.84791012 |
| 4384.00 | 0.05 | 222.86 | 4383.65 | 9.46 | -19.66 | 0.00 | -18.83 | 39.98094698 | -104.84791015 |
| 4474.00 | 0.27 | 320.25 | 4473.65 | 9.60 | -19.82 | 0.00 | -18.98 | 39.98094734 | -104.84791073 |
| 4563.00 | 0.09 | 249.41 | 4562.65 | 9.73 | -20.02 | 0.00 | -19.16 | 39.98094772 | -104.84791144 |
| 4653.00 | 2.00 | 41.16 | 4652.63 | 10.89 | -19.05 | 0.00 | -18.11 | 39.98095090 | -104.84790799 |
| 4743.00 | 3.19 | 21.90 | 4742.54 | 14.40 | -17.08 | 0.00 | -15.86 | 39.98096052 | -104.84790096 |
| 4832.00 | 6.39 | 19.43 | 4831.22 | 21.37 | -14.51 | 0.00 | -12.73 | 39.98097966 | -104.84789179 |
| 4922.00 | 9.25 | 22.50 | 4920.37 | 32.78 | -10.08 | 0.00 | -7.38 | 39.98101097 | -104.84787596 |
| 5012.00 | 8.17 | 13.46 | 5009.34 | 45.68 | -5.82 | 0.00 | -2.09 | 39.98104639 | -104.84786077 |
| 5101.00 | 10.31 | 9.60 | 5097.18 | 59.68 | -3.02 | 0.00 | 1.83 | 39.98108484 | -104.84785078 |
| 5191.00 | 12.62 | 8.93 | 5185.37 | 77.34 | -0.15 | 0.00 | 6.13 | 39.98113330 | -104.84784054 |
| 5281.00 | 16.09 | 8.49 | 5272.55 | 99.39 | 3.22 | 0.00 | 11.27 | 39.98119385 | -104.84782852 |
| 5371.00 | 16.45 | 2.75 | 5358.95 | 124.46 | 5.67 | 0.00 | 15.75 | 39.98126265 | -104.84781977 |
| 5460.00 | 19.60 | 4.19 | 5443.57 | 151.94 | 7.37 | 0.00 | 19.67 | 39.98133809 | -104.84781371 |
| 5550.00 | 22.50 | 7.00 | 5527.56 | 184.10 | 10.57 | 0.00 | 25.47 | 39.98142636 | -104.84780229 |
| 5640.00 | 25.65 | 10.67 | 5609.73 | 220.34 | 16.28 | 0.00 | 34.10 | 39.98152586 | -104.84778192 |

| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | DLS [deg/100ft] | Vertical Section[ft] | Lat - NAD 83 | Long - NAD 83 |
|----------|----------|----------|---------|-----------|----------|-----------------|----------------------|--------------|---------------|
| 5729.00 | 28.11 | 13.08 | 5689.11 | 259.70 | 24.59 | 0.00 | 45.58 | 39.98163391 | -104.84775226 |
| 5819.00 | 29.87 | 11.91 | 5767.83 | 302.29 | 34.01 | 0.00 | 58.43 | 39.98175081 | -104.84771863 |
| 5908.00 | 30.27 | 12.25 | 5844.85 | 345.89 | 43.35 | 0.00 | 71.27 | 39.98187051 | -104.84768532 |
| 5998.00 | 29.34 | 11.07 | 5922.94 | 389.70 | 52.39 | 0.00 | 83.85 | 39.98199077 | -104.84765304 |
| 6088.00 | 28.66 | 7.79 | 6001.66 | 432.73 | 59.55 | 0.00 | 94.47 | 39.98210888 | -104.84762749 |
| 6177.00 | 28.81 | 8.68 | 6079.71 | 475.07 | 65.68 | 0.00 | 104.02 | 39.98222512 | -104.84760562 |
| 6267.00 | 29.10 | 8.23 | 6158.46 | 518.17 | 72.09 | 0.00 | 113.90 | 39.98234342 | -104.84758276 |
| 6357.00 | 29.47 | 9.29 | 6236.95 | 561.68 | 78.79 | 0.00 | 124.12 | 39.98246286 | -104.84755883 |
| 6446.00 | 29.70 | 10.58 | 6314.35 | 604.96 | 86.38 | 0.00 | 135.19 | 39.98258166 | -104.84753177 |
| 6536.00 | 29.76 | 10.92 | 6392.50 | 648.80 | 94.70 | 0.00 | 147.04 | 39.98270203 | -104.84750206 |
| 6626.00 | 30.00 | 10.92 | 6470.54 | 692.83 | 103.20 | 0.00 | 159.08 | 39.98282289 | -104.84747175 |
| 6715.00 | 29.43 | 11.16 | 6547.84 | 736.13 | 111.64 | 0.00 | 171.02 | 39.98294175 | -104.84744161 |
| 6805.00 | 29.80 | 11.00 | 6626.08 | 779.78 | 120.19 | 0.00 | 183.08 | 39.98306156 | -104.84741111 |
| 6895.00 | 29.81 | 10.32 | 6704.17 | 823.74 | 128.46 | 0.00 | 194.89 | 39.98318224 | -104.84738158 |
| 6984.00 | 29.74 | 10.73 | 6781.43 | 867.19 | 136.54 | 0.00 | 206.46 | 39.98330152 | -104.84735277 |
| 7074.00 | 29.32 | 10.69 | 6859.73 | 910.78 | 144.78 | 0.00 | 218.22 | 39.98342117 | -104.84732335 |
| 7164.00 | 29.66 | 10.76 | 6938.07 | 954.31 | 153.03 | 0.00 | 229.97 | 39.98354067 | -104.84729393 |
| 7253.00 | 29.85 | 10.52 | 7015.34 | 997.72 | 161.18 | 0.00 | 241.62 | 39.98365983 | -104.84726483 |
| 7343.00 | 31.68 | 16.21 | 7092.69 | 1042.45 | 171.87 | 0.00 | 255.90 | 39.98378261 | -104.84722668 |
| 7433.00 | 37.16 | 30.38 | 7167.02 | 1088.70 | 192.26 | 0.00 | 279.98 | 39.98390958 | -104.84715391 |
| 7523.00 | 39.13 | 46.12 | 7237.97 | 1131.94 | 226.57 | 0.00 | 317.68 | 39.98402828 | -104.84703150 |
| 7612.00 | 39.28 | 60.73 | 7307.08 | 1165.25 | 271.48 | 0.00 | 365.15 | 39.98411973 | -104.84687121 |
| 7702.00 | 48.16 | 63.72 | 7372.07 | 1194.09 | 326.51 | 0.00 | 422.34 | 39.98419888 | -104.84667484 |
| 7792.00 | 58.99 | 62.25 | 7425.43 | 1226.99 | 390.90 | 0.00 | 489.18 | 39.98428919 | -104.84644507 |
| 7881.00 | 65.61 | 67.57 | 7466.80 | 1260.27 | 462.23 | 0.00 | 562.99 | 39.98438054 | -104.84619051 |
| 7971.00 | 73.74 | 76.56 | 7498.09 | 1286.03 | 542.41 | 0.00 | 644.99 | 39.98445127 | -104.84590438 |
| 8061.00 | 80.31 | 84.09 | 7518.32 | 1300.68 | 628.76 | 0.00 | 732.25 | 39.98449147 | -104.84559623 |
| 8150.00 | 83.48 | 88.69 | 7530.87 | 1306.21 | 716.66 | 0.00 | 820.31 | 39.98450665 | -104.84528255 |
| 8240.00 | 87.43 | 88.43 | 7538.00 | 1308.46 | 806.34 | 0.00 | 909.87 | 39.98451283 | -104.84496256 |
| 8330.00 | 89.85 | 88.30 | 7540.14 | 1311.03 | 896.27 | 0.00 | 999.71 | 39.98451987 | -104.84464164 |
| 8419.00 | 90.09 | 92.97 | 7540.18 | 1310.05 | 985.24 | 0.00 | 1088.30 | 39.98451715 | -104.84432414 |
| 8509.00 | 90.20 | 91.47 | 7539.96 | 1306.56 | 1075.17 | 0.00 | 1177.65 | 39.98450757 | -104.84400323 |
| 8599.00 | 90.05 | 90.13 | 7539.76 | 1305.30 | 1165.16 | 0.00 | 1267.24 | 39.98450411 | -104.84368210 |
| 8689.00 | 90.42 | 89.73 | 7539.39 | 1305.41 | 1255.15 | 0.00 | 1356.96 | 39.98450440 | -104.84336093 |
| 8778.00 | 90.72 | 89.99 | 7538.50 | 1305.63 | 1344.15 | 0.00 | 1445.67 | 39.98450498 | -104.84304335 |
| 8868.00 | 90.64 | 90.14 | 7537.44 | 1305.53 | 1434.14 | 0.00 | 1535.36 | 39.98450469 | -104.84272221 |
| 8958.00 | 90.68 | 89.72 | 7536.40 | 1305.64 | 1524.14 | 0.00 | 1625.07 | 39.98450498 | -104.84240106 |
| 9047.00 | 90.87 | 90.44 | 7535.20 | 1305.51 | 1613.13 | 0.00 | 1713.76 | 39.98450462 | -104.84208349 |
| 9137.00 | 90.65 | 90.95 | 7534.00 | 1304.42 | 1703.11 | 0.00 | 1803.36 | 39.98450161 | -104.84176238 |
| 9227.00 | 90.58 | 90.70 | 7533.04 | 1303.13 | 1793.10 | 0.00 | 1892.94 | 39.98449803 | -104.84144126 |
| 9316.00 | 90.83 | 90.92 | 7531.94 | 1301.87 | 1882.08 | 0.00 | 1981.53 | 39.98449456 | -104.84112372 |
| 9406.00 | 90.24 | 91.63 | 7531.10 | 1299.87 | 1972.06 | 0.00 | 2071.04 | 39.98448905 | -104.84080265 |
| 9496.00 | 90.61 | 89.25 | 7530.43 | 1299.17 | 2062.04 | 0.00 | 2160.68 | 39.98448713 | -104.84048152 |
| 9585.00 | 90.84 | 89.97 | 7529.31 | 1299.78 | 2151.03 | 0.00 | 2249.42 | 39.98448877 | -104.84016396 |
| 9675.00 | 90.11 | 87.94 | 7528.56 | 1301.42 | 2241.01 | 0.00 | 2339.24 | 39.98449325 | -104.83984287 |
| 9765.00 | 90.05 | 87.07 | 7528.44 | 1303.34 | 2330.92 | 0.00 | 2429.17 | 39.98450399 | -104.83952201 |
| 9854.00 | 90.13 | 90.23 | 7528.30 | 1307.44 | 2419.89 | 0.00 | 2518.01 | 39.98450972 | -104.83920454 |
| 9944.00 | 89.85 | 91.28 | 7528.31 | 1306.25 | 2509.88 | 0.00 | 2607.61 | 39.98450644 | -104.83888340 |
| 10034.00 | 90.61 | 91.71 | 7527.95 | 1303.90 | 2599.85 | 0.00 | 2697.09 | 39.98449997 | -104.83856235 |
| 10124.00 | 90.84 | 91.16 | 7526.81 | 1301.65 | 2689.81 | 0.00 | 2786.57 | 39.98449375 | -104.83824131 |
| 10213.00 | 90.43 | 90.31 | 7525.82 | 1300.51 | 2778.80 | 0.00 | 2875.17 | 39.98449059 | -104.83792376 |
| 10303.00 | 90.32 | 90.43 | 7525.24 | 1299.93 | 2868.79 | 0.00 | 2964.83 | 39.98448897 | -104.83760260 |
| 10393.00 | 90.37 | 89.28 | 7524.69 | 1300.15 | 2958.79 | 0.00 | 3054.54 | 39.98448957 | -104.83728145 |
| 10482.00 | 90.20 | 89.75 | 7524.25 | 1300.91 | 3047.79 | 0.00 | 3143.31 | 39.98449160 | -104.83696386 |
| 10572.00 | 90.29 | 89.21 | 7523.87 | 1301.72 | 3137.78 | 0.00 | 3233.07 | 39.98449382 | -104.83664271 |
| 10662.00 | 90.95 | 91.83 | 7522.89 | 1300.91 | 3227.76 | 0.00 | 3322.69 | 39.98449154 | -104.83632161 |
| 10752.00 | 90.70 | 91.10 | 7521.60 | 1298.61 | 3317.72 | 0.00 | 3412.17 | 39.98448520 | -104.83600058 |
| 10841.00 | 90.39 | 89.61 | 7520.75 | 1298.06 | 3406.72 | 0.00 | 3500.82 | 39.98448365 | -104.83568301 |
| 10931.00 | 90.30 | 90.45 | 7520.21 | 1298.01 | 3496.71 | 0.00 | 3589.52 | 39.98448348 | -104.83536185 |
| 11021.00 | 89.99 | 90.75 | 7519.98 | 1297.07 | 3586.71 | 0.00 | 3680.14 | 39.98448086 | -104.83504070 |
| 11110.00 | 89.90 | 89.64 | 7520.07 | 1296.76 | 3675.71 | 0.00 | 3768.82 | 39.98448000 | -104.83472311 |
| 11200.00 | 90.20 | 89.71 | 7519.99 | 1297.27 | 3765.70 | 0.00 | 3858.56 | 39.98448136 | -104.83440195 |
| 11290.00 | 90.00 | 90.51 | 7519.83 | 1297.10 | 3855.70 | 0.00 | 3948.25 | 39.98448085 | -104.83408078 |
| 11379.00 | 90.50 | 90.43 | 7519.44 | 1296.37 | 3944.70 | 0.00 | 4036.89 | 39.98447880 | -104.83376320 |
| 11469.00 | 90.24 | 90.92 | 7518.86 | 1295.31 | 4034.69 | 0.00 | 4126.50 | 39.98447585 | -104.83344206 |
| 11559.00 | 90.56 | 91.88 | 7518.23 | 1293.11 | 4124.66 | 0.00 | 4216.00 | 39.98446978 | -104.83312100 |
| 11649.00 | 90.29 | 92.76 | 7517.56 | 1289.47 | 4214.58 | 0.00 | 4305.33 | 39.98445974 | -104.83280011 |
| 11738.00 | 90.37 | 90.86 | 7517.05 | 1286.66 | 4303.53 | 0.00 | 4393.76 | 39.98445198 | -104.83248269 |
| 11828.00 | 90.42 | 87.97 | 7516.43 | 1287.58 | 4393.52 | 0.00 | 4483.52 | 39.98445446 | -104.83216158 |
| 11918.00 | 90.11 | 90.66 | 7516.01 | 1288.65 | 4483.50 | 0.00 | 4573.29 | 39.98445737 | -104.83184047 |
| 12007.00 | 90.34 | 89.77 | 7515.67 | 1288.32 | 4572.50 | 0.00 | 4661.97 | 39.98445640 | -104.83152288 |
| 12097.00 | 90.11 | 89.24 | 7515.31 | 1289.10 | 4662.49 | 0.00 | 4751.73 | 39.98445849 | -104.83120172 |
| 12187.00 | 90.18 | 88.79 | 7515.08 | 1290.64 | 4752.48 | 0.00 | 4841.55 | 39.98446269 | -104.83088060 |
| 12276.00 | 90.14 | 89.65 | 7514.84 | 1291.85 | 4841.47 | 0.00 | 4930.34 | 39.98446597 | -104.83056304 |
| 12366.00 | 90.09 | 89.90 | 7514.65 | 1292.21 | 4931.47 | 0.00 | 5020.07 | 39.98446689 | -104.83024187 |
| 12456.00 | 90.42 | 89.38 | 7514.25 | 1292.77 | 5021.47 | 0.00 | 5109.82 | 39.98446840 | -104.82992072 |
| 12546.00 | 90.15 | 89.16 | 7513.81 | 1293.92 | 5111.46 | 0.00 | 5199.61 | 39.98447149 | -104.82959958 |
| 12635.00 | 90.62 | 92.19 | 7513.21 | 1292.87 | 5200.44 | 0.00 | 5288.21 | 39.98446857 | -104.82928205 |
| 12725.00 | 89.98 | 90.56 | 7512.74 | 1290.71 | 5290.41 | 0.00 | 5377.71 | 39.98446259 | -104.82896099 |
| 12815.00 | 89.97 | 90.35 | 7512.78 | 1290.00 | 5380.41 | 0.00 | 5467.35 | 39.98446057 | -104.82863983 |
| 12904.00 | 90.64 | 89.82 | 7512.30 | 1289.87 | 5469.40 | 0.00 | 5556.04 | 39.98446015 | -104.82832224 |
| 12994.00 | 90.87 | 88.41 | 7511.12 | 1291.26 | 5559.38 | 0.00 | 5645.84 | 39.98446392 | -104.82800114 |
| 13084.00 | 90.39 | 87.44 | 7510.13 | 1294.51 | 5649.32 | 0.00 | 5735.74 | 39.98447280 | -104.82768021 |
| 13173.00 | 90.88 | 90.80 | 7509.14 | 1295.88 | 5738.29 | 0.00 | 5824.53 | 39.98447650 | -104.82736271 |
| 13263.00 | 90.35 | 88.57 | 7508.17 | 1296.38 | 5828.28 | 0.00 | 5914.26 | 39.98447780 | -104.82704159 |
| 13353.00 | 90.84 | 89.90 | 7507.24 | 1297.58 | 5918.26 | 0.00 | 6004.04 | 39.98448104 | -104.82672047 |
| 13443.00 | 89.53 | 90.06 | 7506.95 | 1297.61 | 6008.26 | 0.00 | 6093.75 | 39.98448107 | -104.82639931 |
| 13532.00 | 91.00 | 88.57 | 7506.54 | 1298.67 | 6097.25 | 0.00 | 6182.53 | 39.98448393 | -104.82608175 |

| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | DLS [deg/100ft] | Vertical Section[ft] | Lat - NAD 83 | Long - NAD 83 |
|----------|----------|----------|---------|-----------|----------|-----------------|----------------------|--------------|---------------|
| 13622.00 | 90.96 | 89.20 | 7505.00 | 1300.42 | 6187.21 | 0.00 | 6272.34 | 39.98448867 | -104.82576069 |
| 13712.00 | 91.75 | 89.83 | 7502.87 | 1301.18 | 6277.19 | 0.00 | 6362.08 | 39.98449070 | -104.82543963 |
| 13801.00 | 90.49 | 90.71 | 7501.13 | 1300.77 | 6366.16 | 0.00 | 6450.73 | 39.98448949 | -104.82512211 |
| 13891.00 | 90.59 | 90.08 | 7500.28 | 1300.15 | 6456.16 | 0.00 | 6540.38 | 39.98448772 | -104.82480096 |
| 13981.00 | 90.56 | 89.57 | 7499.38 | 1300.42 | 6546.15 | 0.00 | 6630.10 | 39.98448841 | -104.82447981 |
| 14070.00 | 90.95 | 89.66 | 7498.21 | 1301.02 | 6635.14 | 0.00 | 6718.84 | 39.98448999 | -104.82416225 |
| 14160.00 | 90.71 | 90.44 | 7496.90 | 1300.94 | 6725.13 | 0.00 | 6808.53 | 39.98448971 | -104.82384111 |
| 14250.00 | 90.59 | 90.39 | 7495.88 | 1300.29 | 6815.12 | 0.00 | 6898.17 | 39.98448785 | -104.82351998 |
| 14340.00 | 90.49 | 89.57 | 7495.03 | 1300.32 | 6905.12 | 0.00 | 6987.87 | 39.98448787 | -104.82319882 |
| 14429.00 | 90.93 | 89.34 | 7493.93 | 1301.17 | 6994.11 | 0.00 | 7076.63 | 39.98449012 | -104.82288126 |
| 14519.00 | 90.66 | 89.55 | 7492.68 | 1302.04 | 7084.10 | 0.00 | 7166.40 | 39.98449245 | -104.82256014 |
| 14609.00 | 91.61 | 88.80 | 7490.90 | 1303.33 | 7174.07 | 0.00 | 7256.18 | 39.98449593 | -104.82223907 |
| 14699.00 | 91.56 | 90.59 | 7488.41 | 1303.81 | 7264.03 | 0.00 | 7345.88 | 39.98449718 | -104.82191805 |
| 14789.00 | 91.41 | 89.52 | 7486.08 | 1303.73 | 7354.00 | 0.00 | 7435.54 | 39.98449687 | -104.82159699 |
| 14878.00 | 90.99 | 89.92 | 7484.21 | 1304.16 | 7442.97 | 0.00 | 7524.26 | 39.98449799 | -104.82127946 |
| 14968.00 | 90.95 | 90.64 | 7482.69 | 1303.72 | 7532.96 | 0.00 | 7613.92 | 39.98449671 | -104.82095835 |
| 15058.00 | 89.68 | 90.70 | 7482.19 | 1302.67 | 7622.95 | 0.00 | 7703.52 | 39.98449374 | -104.82063721 |
| 15147.00 | 89.72 | 88.58 | 7482.66 | 1303.23 | 7711.94 | 0.00 | 7792.27 | 39.98449520 | -104.82031964 |
| 15237.00 | 91.58 | 88.78 | 7481.64 | 1303.30 | 7801.91 | 0.00 | 7882.11 | 39.98450081 | -104.81999859 |
| 15327.00 | 91.56 | 90.21 | 7479.17 | 1306.09 | 7891.87 | 0.00 | 7971.83 | 39.98450291 | -104.81967756 |
| 15417.00 | 90.42 | 91.24 | 7477.62 | 1304.95 | 7981.85 | 0.00 | 8061.42 | 39.98449971 | -104.81935648 |
| 15506.00 | 90.40 | 89.37 | 7476.98 | 1304.48 | 8070.84 | 0.00 | 8150.08 | 39.98449833 | -104.81903891 |
| 15596.00 | 90.59 | 89.57 | 7476.20 | 1305.31 | 8160.83 | 0.00 | 8239.85 | 39.98450053 | -104.81871776 |
| 15686.00 | 90.23 | 90.49 | 7475.56 | 1305.27 | 8250.83 | 0.00 | 8329.54 | 39.98450032 | -104.81839661 |
| 15776.00 | 89.37 | 90.37 | 7475.87 | 1304.59 | 8340.82 | 0.00 | 8419.19 | 39.98449839 | -104.81807546 |
| 15865.00 | 89.57 | 90.14 | 7476.70 | 1304.19 | 8429.82 | 0.00 | 8507.86 | 39.98449722 | -104.81775787 |
| 15955.00 | 90.55 | 90.98 | 7476.60 | 1303.31 | 8519.81 | 0.00 | 8597.48 | 39.98449472 | -104.81743673 |
| 16045.00 | 89.99 | 90.67 | 7476.18 | 1302.02 | 8609.80 | 0.00 | 8687.07 | 39.98449108 | -104.81711560 |
| 16134.00 | 89.76 | 89.51 | 7476.37 | 1301.88 | 8698.80 | 0.00 | 8775.76 | 39.98449061 | -104.81679801 |
| 16224.00 | 89.59 | 89.27 | 7476.88 | 1302.84 | 8788.79 | 0.00 | 8865.54 | 39.98449315 | -104.81647686 |
| 16314.00 | 89.97 | 88.40 | 7477.23 | 1304.67 | 8878.77 | 0.00 | 8955.37 | 39.98449808 | -104.81615576 |
| 16404.00 | 90.16 | 89.20 | 7477.13 | 1306.55 | 8968.75 | 0.00 | 9045.20 | 39.98450317 | -104.81583467 |
| 16493.00 | 89.99 | 90.36 | 7477.01 | 1306.89 | 9057.75 | 0.00 | 9133.93 | 39.98450402 | -104.81551707 |
| 16583.00 | 90.12 | 90.92 | 7476.92 | 1305.89 | 9147.74 | 0.00 | 9223.55 | 39.98450117 | -104.81519593 |
| 16673.00 | 89.77 | 90.60 | 7477.01 | 1304.69 | 9237.74 | 0.00 | 9313.15 | 39.98449780 | -104.81487479 |
| 16763.00 | 89.50 | 90.85 | 7477.58 | 1303.56 | 9327.73 | 0.00 | 9402.75 | 39.98449458 | -104.81455366 |
| 16853.00 | 91.21 | 90.17 | 7477.03 | 1302.75 | 9417.72 | 0.00 | 9492.38 | 39.98449229 | -104.81423252 |
| 16942.00 | 90.31 | 90.55 | 7475.85 | 1302.20 | 9506.71 | 0.00 | 9581.03 | 39.98449066 | -104.81391496 |
| 17032.00 | 90.25 | 90.87 | 7475.41 | 1301.08 | 9596.70 | 0.00 | 9670.63 | 39.98448751 | -104.81359382 |
| 17121.00 | 89.66 | 91.34 | 7475.48 | 1299.36 | 9685.68 | 0.00 | 9759.18 | 39.98448270 | -104.81327629 |
| 17211.00 | 89.84 | 90.88 | 7475.87 | 1297.62 | 9775.66 | 0.00 | 9848.73 | 39.98447782 | -104.81295519 |
| 17301.00 | 89.85 | 90.36 | 7476.11 | 1296.65 | 9865.66 | 0.00 | 9938.35 | 39.98447505 | -104.81263404 |
| 17391.00 | 90.55 | 89.85 | 7475.80 | 1296.48 | 9955.66 | 0.00 | 10028.03 | 39.98447449 | -104.81231288 |
| 17480.00 | 89.89 | 90.82 | 7475.46 | 1295.96 | 10044.65 | 0.00 | 10116.69 | 39.98447297 | -104.81199529 |
| 17570.00 | 90.35 | 89.91 | 7475.27 | 1295.39 | 10134.65 | 0.00 | 10206.35 | 39.98447129 | -104.81167414 |
| 17660.00 | 91.22 | 92.14 | 7474.03 | 1293.78 | 10224.62 | 0.00 | 10295.89 | 39.98446677 | -104.81135307 |
| 17749.00 | 90.89 | 90.96 | 7472.40 | 1291.37 | 10313.57 | 0.00 | 10384.35 | 39.98446007 | -104.81103565 |
| 17839.00 | 90.50 | 89.75 | 7471.30 | 1290.81 | 10403.56 | 0.00 | 10474.00 | 39.98445843 | -104.81071452 |
| 17929.00 | 91.19 | 89.44 | 7469.98 | 1291.45 | 10493.55 | 0.00 | 10563.74 | 39.98446008 | -104.81039340 |
| 18019.00 | 91.45 | 90.23 | 7467.90 | 1291.71 | 10583.52 | 0.00 | 10653.44 | 39.98446068 | -104.81007232 |
| 18108.00 | 90.97 | 90.20 | 7466.02 | 1291.38 | 10672.50 | 0.00 | 10742.10 | 39.98445966 | -104.80975480 |
| 18198.00 | 90.18 | 90.45 | 7465.12 | 1290.86 | 10762.50 | 0.00 | 10831.76 | 39.98445815 | -104.80943365 |
| 18287.00 | 89.95 | 90.01 | 7465.02 | 1290.51 | 10851.49 | 0.00 | 10920.43 | 39.98445707 | -104.80911606 |
| 18377.00 | 89.19 | 90.45 | 7465.70 | 1290.15 | 10941.49 | 0.00 | 11010.10 | 39.98445597 | -104.80879490 |
| 18467.00 | 89.06 | 89.41 | 7467.07 | 1290.26 | 11031.48 | 0.00 | 11099.80 | 39.98445616 | -104.80847378 |
| 18556.00 | 89.90 | 88.14 | 7467.88 | 1292.16 | 11120.45 | 0.00 | 11188.64 | 39.98446127 | -104.80815627 |
| 18646.00 | 90.13 | 89.18 | 7467.85 | 1294.26 | 11210.43 | 0.00 | 11278.48 | 39.98446694 | -104.80783519 |
| 18736.00 | 90.17 | 91.65 | 7467.62 | 1293.61 | 11300.42 | 0.00 | 11368.12 | 39.98446504 | -104.80751406 |
| 18825.00 | 90.26 | 90.42 | 7467.28 | 1292.00 | 11389.40 | 0.00 | 11456.68 | 39.98446051 | -104.80719652 |
| 18914.00 | 88.74 | 90.33 | 7468.06 | 1291.42 | 11478.39 | 0.00 | 11545.34 | 39.98445880 | -104.80687895 |
| 19004.00 | 88.22 | 90.06 | 7470.45 | 1291.12 | 11568.36 | 0.00 | 11634.98 | 39.98445785 | -104.80655790 |
| 19093.00 | 87.77 | 89.68 | 7473.56 | 1291.32 | 11657.30 | 0.00 | 11723.65 | 39.98445829 | -104.80624050 |
| 19183.00 | 89.46 | 88.83 | 7475.74 | 1292.49 | 11747.27 | 0.00 | 11813.41 | 39.98446138 | -104.80591946 |
| 19272.00 | 90.10 | 87.98 | 7476.08 | 1294.96 | 11836.23 | 0.00 | 11902.28 | 39.98446807 | -104.80560199 |
| 19362.00 | 90.23 | 91.75 | 7475.82 | 1295.18 | 11926.21 | 0.00 | 11991.98 | 39.98446853 | -104.80528088 |
| 19451.00 | 90.17 | 94.08 | 7475.51 | 1290.65 | 12015.09 | 0.00 | 12080.20 | 39.98445599 | -104.80496372 |
| 19541.00 | 90.08 | 96.54 | 7475.31 | 1282.32 | 12104.70 | 0.00 | 12168.84 | 39.98443301 | -104.80464397 |
| 19630.00 | 90.24 | 97.83 | 7475.06 | 1271.19 | 12193.00 | 0.00 | 12255.94 | 39.98440233 | -104.80432889 |
| 19720.00 | 90.67 | 94.65 | 7474.35 | 1261.41 | 12282.45 | 0.00 | 12344.30 | 39.98437536 | -104.80400970 |
| 19810.00 | 91.12 | 91.30 | 7472.94 | 1256.74 | 12372.30 | 0.00 | 12433.48 | 39.98436242 | -104.80368906 |
| 19899.00 | 91.27 | 89.57 | 7471.09 | 1256.06 | 12461.28 | 0.00 | 12522.11 | 39.98436044 | -104.80337155 |
| 19989.00 | 91.10 | 89.85 | 7469.23 | 1256.52 | 12551.26 | 0.00 | 12611.83 | 39.98436157 | -104.80305045 |
| 20078.00 | 90.18 | 89.06 | 7468.23 | 1257.37 | 12640.25 | 0.00 | 12700.59 | 39.98436377 | -104.80273289 |
| 20168.00 | 90.02 | 89.27 | 7468.07 | 1258.68 | 12730.24 | 0.00 | 12790.39 | 39.98436724 | -104.80241176 |
| 20257.00 | 90.01 | 88.92 | 7468.05 | 1260.08 | 12819.22 | 0.00 | 12879.20 | 39.98437098 | -104.80209420 |
| 20347.00 | 89.93 | 89.11 | 7468.10 | 1261.63 | 12909.21 | 0.00 | 12969.02 | 39.98437510 | -104.80177307 |
| 20437.00 | 90.45 | 88.41 | 7467.80 | 1263.58 | 12999.19 | 0.00 | 13058.86 | 39.98438031 | -104.80145198 |
| 20526.00 | 90.50 | 88.66 | 7467.06 | 1265.85 | 13088.16 | 0.00 | 13147.72 | 39.98438643 | -104.80113449 |
| 20616.00 | 90.90 | 91.68 | 7465.96 | 1265.59 | 13178.14 | 0.00 | 13237.38 | 39.98438557 | -104.80081339 |
| 20706.00 | 89.99 | 89.75 | 7465.26 | 1264.46 | 13268.12 | 0.00 | 13326.98 | 39.98438236 | -104.80049228 |
| 20795.00 | 90.04 | 90.24 | 7465.24 | 1264.47 | 13357.12 | 0.00 | 13415.68 | 39.98438225 | -104.80017468 |
| 20885.00 | 89.62 | 89.15 | 7465.51 | 1264.95 | 13447.12 | 0.00 | 13505.42 | 39.98438343 | -104.79985352 |
| 20974.00 | 89.05 | 88.14 | 7466.54 | 1267.06 | 13536.09 | 0.00 | 13594.27 | 39.98438907 | -104.79953603 |
| 21063.00 | 89.36 | 88.29 | 7467.78 | 1269.83 | 13625.04 | 0.00 | 13683.15 | 39.98439655 | -104.79921861 |
| 21153.00 | 90.56 | 90.66 | 7467.84 | 1270.65 | 13715.02 | 0.00 | 13772.91 | 39.98439868 | -104.79889749 |
| 21242.00 | 90.53 | 93.36 | 7466.99 | 1267.53 | 13803.96 | 0.00 | 13861.29 | 39.98438997 | -104.79858013 |
| 21332.00 | 89.99 | 95.36 | 7466.58 | 1260.69 | 13893.69 | 0.00 | 13950.17 | 39.98437105 | -104.79825993 |
| 21422.00 | 90.14 | 95.60 | 7466.48 | 1252.09 | 13983.28 | 0.00 | 14038.77 | 39.98434732 | -104.79794025 |

| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | DLS [deg/100ft] | Vertical Section[ft] | Lat - NAD 83 | Long - NAD 83 |
|----------|----------|----------|---------|-----------|----------|-----------------|----------------------|--------------|---------------|
| 21511.00 | 90.19 | 93.88 | 7466.22 | 1244.74 | 14071.97 | 0.00 | 14126.57 | 39.98432700 | -104.79762376 |
| 21601.00 | 89.89 | 89.62 | 7466.16 | 1241.99 | 14161.91 | 0.00 | 14215.99 | 39.98431931 | -104.79730283 |
| 21691.00 | 89.45 | 91.35 | 7466.68 | 1241.23 | 14251.90 | 0.00 | 14305.62 | 39.98431708 | -104.79698169 |
| 21781.00 | 89.72 | 91.29 | 7467.33 | 1239.16 | 14341.87 | 0.00 | 14395.13 | 39.98431125 | -104.79666062 |
| 21870.00 | 89.65 | 91.07 | 7467.82 | 1237.32 | 14430.85 | 0.00 | 14483.67 | 39.98430608 | -104.79634310 |
| 21960.00 | 89.67 | 87.97 | 7468.36 | 1238.08 | 14520.84 | 0.00 | 14573.42 | 39.98430800 | -104.79602198 |
| 22050.00 | 90.07 | 86.27 | 7468.56 | 1242.60 | 14610.72 | 0.00 | 14663.37 | 39.98432027 | -104.79570123 |
| 22139.00 | 90.80 | 86.73 | 7467.88 | 1248.03 | 14699.55 | 0.00 | 14752.35 | 39.98433504 | -104.79538422 |
| 22229.00 | 90.99 | 86.63 | 7466.48 | 1253.25 | 14789.39 | 0.00 | 14842.31 | 39.98434920 | -104.79506362 |
| 22319.00 | 90.64 | 87.41 | 7465.20 | 1257.92 | 14879.26 | 0.00 | 14932.27 | 39.98436189 | -104.79474291 |
| 22409.00 | 90.67 | 87.48 | 7464.17 | 1261.94 | 14969.16 | 0.00 | 15022.20 | 39.98437276 | -104.79442208 |
| 22498.00 | 90.46 | 87.81 | 7463.29 | 1265.59 | 15058.08 | 0.00 | 15111.12 | 39.98438265 | -104.79410475 |
| 22588.00 | 89.76 | 87.75 | 7463.12 | 1269.08 | 15148.01 | 0.00 | 15201.04 | 39.98439207 | -104.79378382 |
| 22678.00 | 88.82 | 88.09 | 7464.23 | 1272.34 | 15237.95 | 0.00 | 15290.94 | 39.98440089 | -104.79346289 |
| 22768.00 | 89.67 | 87.58 | 7465.42 | 1275.74 | 15327.87 | 0.00 | 15380.85 | 39.98441007 | -104.79314197 |
| 22857.00 | 89.47 | 88.47 | 7466.09 | 1278.81 | 15416.82 | 0.00 | 15469.75 | 39.98441833 | -104.79282457 |
| 22947.00 | 89.09 | 87.51 | 7467.22 | 1281.97 | 15506.75 | 0.00 | 15559.64 | 39.98442685 | -104.79250362 |
| 23037.00 | 89.65 | 89.05 | 7468.21 | 1284.67 | 15596.70 | 0.00 | 15649.52 | 39.98443411 | -104.79218262 |
| 23127.00 | 90.82 | 87.69 | 7467.84 | 1287.23 | 15686.66 | 0.00 | 15739.39 | 39.98444098 | -104.79186159 |
| 23216.00 | 91.26 | 86.87 | 7466.22 | 1291.45 | 15775.55 | 0.00 | 15828.32 | 39.98445241 | -104.79154440 |
| 23306.00 | 91.22 | 88.19 | 7464.28 | 1295.33 | 15865.44 | 0.00 | 15918.23 | 39.98446290 | -104.79122360 |
| 23396.00 | 90.45 | 86.16 | 7462.96 | 1299.76 | 15955.32 | 0.00 | 16008.17 | 39.98447492 | -104.79090287 |
| 23439.00 | 90.45 | 86.16 | 7462.63 | 1302.64 | 15998.22 | 0.00 | 16051.17 | 39.98448275 | -104.79074976 |

Comments

| MD[ft] | TVD[ft] | North[ft] | East[ft] | Lat - NAD 83 | Long - NAD 83 | Comment |
|----------|---------|-----------|----------|--------------|---------------|--|
| 1790.00 | 1789.81 | -0.83 | -15.59 | 39.98091873 | -104.84789562 | 9.625" Csg: 1790 MD/TVD |
| 8202.67 | 7535.79 | 1307.48 | 769.09 | 39.98451012 | -104.84509549 | 460 Setback: 8203 / 7536 MD/TVD, 850 FNL, 460 FWL Sec 12 |
| 23210.23 | 7466.35 | 1291.14 | 15769.79 | 39.98445157 | -104.79156495 | Btm Toe Sub: 23,210 / 7466 MD/TVD, 861 FNL, 471 FEL Sec 08 |
| 23220.78 | 7466.12 | 1291.71 | 15780.32 | 39.98445311 | -104.79152737 | 460 Setback: 23,221 / 7466 MD/TVD, 860 FNL, 460 FEL Sec 08 |
| 23428.15 | 7462.71 | 1301.92 | 15987.39 | 39.98448077 | -104.79078839 | PBTD: 23,428 / 7463 MD/TVD, 851 FNL, 253 FEL Sec 08 |
| 23439.00 | 7462.63 | 1302.64 | 15998.22 | 39.98448275 | -104.79074976 | 5.5" Csg: 23,439 / 7463 MD/TVD, 850 FNL, 242 FEL Sec 08 |
| 23439.00 | 7462.63 | 1302.64 | 15998.22 | 39.98448275 | -104.79074976 | BHL: 23,439 / 7463 MD/TVD, 850 FNL, 242 FEL Sec 08 |

Hole Sections

| Diameter [in] | Start MD[ft] | Start TVD[ft] | Start North[ft] | Start East[ft] | End MD[ft] | End TVD[ft] | End North[ft] | End East[ft] |
|---------------|--------------|---------------|-----------------|----------------|------------|-------------|---------------|--------------|
| 13.500 | 0.00 | 0.00 | 0.00 | 0.00 | 1790.00 | 1789.81 | -0.83 | -15.59 |
| 8.500 | 1790.00 | 1789.81 | -0.83 | -15.59 | 23439.00 | 7462.63 | 1302.64 | 15998.22 |

Casings

| Name | Top MD[ft] | Top TVD[ft] | Top North[ft] | Top East[ft] | Shoe MD[ft] | Shoe TVD[ft] | Shoe North[ft] | Shoe East[ft] |
|----------------|------------|-------------|---------------|--------------|-------------|--------------|----------------|---------------|
| 9 5/8in Casing | 0.00 | 0.00 | 0.00 | 0.00 | 1790.00 | 1789.81 | -0.83 | -15.59 |
| 5 1/2in Casing | 0.00 | 0.00 | 0.00 | 0.00 | 23439.00 | 7462.63 | 1302.64 | 15998.22 |

Survey Tool Program

| Reference | Survey Name | MD[ft] | TVD[ft] | Survey Tool |
|-----------|-----------------------|----------|---------|-------------|
| 783268 | As Drilled - 20200218 | 23439.00 | 7462.63 | MWD |

Coordinates are from Slot
MD's and TVD's are from Rig Floor 4993.0ft above Mean Sea Level
Vertical Section is from Wellhead on azimuth 85.35 degrees
Bottom hole distance is 16051.17 Feet on azimuth 85.35 degrees from Wellhead
Survey calculation uses Minimum Curvature method