

30-015-33168



# Survey Report

|                                                                              |                                                               |
|------------------------------------------------------------------------------|---------------------------------------------------------------|
| Report Date: March 15, 2004                                                  | Survey / DLS Computation Method: Minimum Curvature / Lubinski |
| Client: Nearburg Producing Company                                           | Vertical Section Azimuth: 170.210°                            |
| Field: Eddy County                                                           | Vertical Section Origin: N 0.000 ft, E 0.000 ft               |
| Structure / Slot: McKittrick 11 Fed #4 / McKittrick 11 Fed #4                | TVD Reference Datum: RKB                                      |
| Well: McKittrick 11 Fed #4                                                   | TVD Reference Elevation: 0.0 ft relative to                   |
| Borehole: McKittrick 11 Fed #4                                               | Sea Bed / Ground Level Elevation: 0.000 ft relative to        |
| UWI/API#:                                                                    | Magnetic Declination: 9.042°                                  |
| Survey Name / Date: McKittrick 11 Fed #4 / March 15, 2004                    | Total Field Strength: 49511.867 nT                            |
| Tort / AHD / DDI / ERD ratio: 104.171° / 1344.24 ft / 5.154 / 0.162          | Magnetic Dip: 60.442°                                         |
| Grid Coordinate System: NAD27 New Mexico State Planes, Eastern Zone, US Feet | Declination Date: March 15, 2004                              |
| Location Lat/Long: N 32 24 50.606, W 104 28 29.193                           | Magnetic Declination Model: IGRF 2000                         |
| Location Grid N/E Y/X: N 514377.100 ftUS, E 456351.700 ftUS                  | North Reference: Grid North                                   |
| Grid Convergence Angle: -0.07581815°                                         | Total Corr Mag North -> Grid North: +9.118°                   |
| Grid Scale Factor: 0.99991127                                                | Local Coordinates Referenced To: Well Head                    |

| Comments | Type | Measured Depth (ft) | Inclination (deg) | Azimuth (deg) | TVD (ft) | Vertical Section (ft) | NS (ft) | EW (ft) | Closure (ft) | Closure Azimuth (deg) | DLS (deg/100 ft) | Tool Face (deg) |
|----------|------|---------------------|-------------------|---------------|----------|-----------------------|---------|---------|--------------|-----------------------|------------------|-----------------|
| Tie-In   | ***  | 0.00                | 0.00              | 0.00          | 0.00     | 0.00                  | 0.00    | 0.00    | 0.00         | 0.00                  | 0.00             | 170.00M         |
|          | ***  | 269.00              | 0.50              | 170.00        | 269.00   | 1.17                  | -1.16   | 0.20    | 1.17         | 170.00                | 0.19             | -175.00M        |
|          | ***  | 710.00              | 0.50              | 185.00        | 709.98   | 4.96                  | -4.97   | 0.37    | 4.98         | 175.74                | 0.03             | -170.00M        |
|          | ***  | 1135.00             | 1.00              | 190.00        | 1134.94  | 10.24                 | -10.47  | -0.44   | 10.48        | 182.38                | 0.12             | -100.90M        |
|          | ***  | 1632.00             | 1.90              | 259.10        | 1631.81  | 14.48                 | -16.30  | -9.28   | 18.75        | 209.66                | 0.36             | -111.00M        |
|          | ***  | 1822.00             | 1.90              | 249.00        | 1821.70  | 15.16                 | -18.02  | -15.31  | 23.65        | 220.36                | 0.18             | -106.10M        |
|          | ***  | 2011.00             | 2.20              | 253.90        | 2010.58  | 16.16                 | -20.15  | -21.72  | 29.63        | 227.15                | 0.18             | -119.10M        |
|          | ***  | 2198.00             | 2.30              | 240.90        | 2197.44  | 17.80                 | -22.97  | -28.45  | 36.57        | 231.08                | 0.28             | -122.70M        |
|          | ***  | 2385.00             | 3.00              | 237.30        | 2384.24  | 20.94                 | -27.44  | -35.85  | 45.14        | 232.57                | 0.38             | -117.20M        |
|          | ***  | 2417.00             | 3.10              | 242.80        | 2416.19  | 21.53                 | -28.29  | -37.32  | 46.83        | 232.84                | 0.97             | -120.59M        |
|          | ***  | 2449.00             | 3.70              | 239.41        | 2448.14  | 22.15                 | -29.21  | -38.98  | 48.71        | 233.16                | 1.98             | -123.90M        |
|          | ***  | 2480.00             | 4.10              | 236.10        | 2479.07  | 22.96                 | -30.33  | -40.76  | 50.81        | 233.34                | 1.48             | -124.90M        |
|          | ***  | 2512.00             | 4.10              | 235.10        | 2510.98  | 23.92                 | -31.63  | -42.65  | 53.10        | 233.44                | 0.22             | -127.80M        |
|          | ***  | 2543.00             | 4.30              | 232.20        | 2541.90  | 24.93                 | -32.97  | -44.48  | 55.37        | 233.45                | 0.94             | -134.50M        |
|          | ***  | 2575.00             | 4.60              | 225.50        | 2573.80  | 26.23                 | -34.61  | -46.34  | 57.84        | 233.25                | 1.87             | -150.73M        |
|          | ***  | 2606.00             | 5.80              | 209.27        | 2604.68  | 28.15                 | -36.85  | -47.99  | 60.50        | 232.48                | 6.09             | 90.00G          |
|          | ***  | 2637.00             | 5.80              | 209.60        | 2635.52  | 30.58                 | -39.57  | -49.53  | 63.40        | 231.38                | 0.11             | -63.84G         |
|          | ***  | 2669.00             | 6.60              | 197.80        | 2667.33  | 33.46                 | -42.73  | -50.89  | 66.45        | 229.98                | 4.69             | -63.27G         |
|          | ***  | 2699.00             | 6.90              | 193.20        | 2697.13  | 36.64                 | -46.13  | -51.83  | 69.38        | 228.33                | 2.06             | 90.00G          |
|          | ***  | 2730.00             | 6.90              | 194.10        | 2727.90  | 40.06                 | -49.75  | -52.71  | 72.48        | 226.66                | 0.35             | -34.00G         |
|          | ***  | 2761.00             | 7.60              | 190.60        | 2758.65  | 43.68                 | -53.57  | -53.54  | 75.74        | 224.99                | 2.67             | -75.36G         |
|          | ***  | 2794.00             | 8.10              | 180.40        | 2791.35  | 48.02                 | -58.04  | -53.96  | 79.25        | 222.91                | 4.48             | 23.19G          |
|          | ***  | 2825.00             | 8.20              | 180.70        | 2822.03  | 52.34                 | -62.43  | -54.00  | 82.55        | 220.86                | 0.35             | -40.00G         |
|          | ***  | 2857.00             | 8.90              | 177.00        | 2853.68  | 57.04                 | -67.19  | -53.90  | 86.13        | 218.74                | 2.78             | -28.16G         |
|          | ***  | 2888.00             | 9.20              | 176.00        | 2884.29  | 61.89                 | -72.05  | -53.60  | 89.80        | 216.65                | 1.09             | -47.40G         |
|          | ***  | 2919.00             | 10.00             | 171.20        | 2914.86  | 67.05                 | -77.19  | -53.02  | 93.64        | 214.48                | 3.65             | 116.18G         |
|          | ***  | 2950.00             | 9.80              | 173.70        | 2945.40  | 72.37                 | -82.47  | -52.31  | 97.66        | 212.39                | 1.53             | -48.46G         |
|          | ***  | 2982.00             | 10.60             | 169.00        | 2976.89  | 78.03                 | -88.06  | -51.45  | 101.99       | 210.30                | 3.61             | -49.67G         |
|          | ***  | 3013.00             | 11.80             | 162.50        | 3007.30  | 84.02                 | -93.89  | -49.96  | 106.35       | 208.02                | 5.61             | -33.05G         |
|          | ***  | 3044.00             | 12.40             | 160.70        | 3037.61  | 90.45                 | -100.05 | -47.90  | 110.93       | 205.58                | 2.29             | 41.89G          |
|          | ***  | 3075.00             | 12.80             | 162.30        | 3067.87  | 97.13                 | -106.46 | -45.76  | 115.88       | 203.26                | 1.71             | 0.00G           |
|          | ***  | 3106.00             | 12.90             | 162.30        | 3098.09  | 103.96                | -113.03 | -43.66  | 121.17       | 201.12                | 0.32             | -38.56G         |
|          | ***  | 3138.00             | 13.10             | 161.60        | 3129.27  | 111.08                | -119.88 | -41.43  | 126.83       | 199.07                | 0.80             | -58.21G         |
|          | ***  | 3170.00             | 13.20             | 160.90        | 3160.43  | 118.28                | -126.77 | -39.09  | 132.66       | 197.14                | 0.59             | -54.66G         |
|          | ***  | 3201.00             | 13.40             | 159.70        | 3190.60  | 125.30                | -133.48 | -36.69  | 138.43       | 195.37                | 1.10             | 137.47G         |
|          | ***  | 3233.00             | 13.30             | 160.10        | 3221.73  | 132.57                | -140.42 | -34.15  | 144.51       | 193.67                | 0.43             | 61.96G          |
|          | ***  | 3264.00             | 13.40             | 160.90        | 3251.90  | 139.62                | -147.17 | -31.76  | 150.56       | 192.18                | 0.68             | -62.14G         |
|          | ***  | 3295.00             | 13.50             | 160.10        | 3282.05  | 146.73                | -153.96 | -29.35  | 156.74       | 190.79                | 0.68             | 50.10G          |
|          | ***  | 3326.00             | 13.70             | 161.10        | 3312.18  | 153.92                | -160.84 | -26.93  | 163.08       | 189.51                | 1.00             | -76.93G         |
|          | ***  | 3357.00             | 13.80             | 159.40        | 3342.29  | 161.18                | -167.77 | -24.44  | 169.55       | 188.29                | 1.34             | 90.00G          |
|          | ***  | 3389.00             | 13.80             | 161.10        | 3373.36  | 168.69                | -174.96 | -21.86  | 176.32       | 187.12                | 1.27             | -140.68G        |
|          | ***  | 3420.00             | 13.60             | 160.40        | 3403.48  | 175.93                | -181.89 | -19.44  | 182.93       | 186.10                | 0.84             | 72.58G          |
|          | ***  | 3483.00             | 13.70             | 161.70        | 3464.70  | 190.61                | -195.95 | -14.61  | 196.49       | 184.27                | 0.51             | 13.42G          |
|          | ***  | 3515.00             | 13.80             | 161.80        | 3495.79  | 198.13                | -203.17 | -12.23  | 203.54       | 183.45                | 0.32             | 80.82G          |
|          | ***  | 3597.00             | 13.90             | 164.10        | 3575.40  | 217.60                | -221.94 | -6.48   | 222.03       | 181.67                | 0.68             | -148.02G        |

| Comments | Type | Measured Depth (ft) | Inclination (deg) | Azimuth (deg) | TVD (ft) | Vertical Section (ft) | NS (ft) | EW (ft) | Closure (ft) | Closure Azimuth (deg) | DLS (deg/100 ft) | Tool Face (deg) |
|----------|------|---------------------|-------------------|---------------|----------|-----------------------|---------|---------|--------------|-----------------------|------------------|-----------------|
| ***      |      | 3629.00             | 13.60             | 163.30        | 3606.49  | 225.16                | -229.24 | -4.35   | 229.28       | 181.09                | 1.11             | 29.35G          |
| ***      |      | 3660.00             | 13.90             | 164.00        | 3636.60  | 232.48                | -236.31 | -2.27   | 236.32       | 180.55                | 1.11             | -90.00G         |
| ***      |      | 3691.00             | 13.90             | 162.10        | 3666.69  | 239.87                | -243.43 | -0.10   | 243.43       | 180.02                | 1.47             | 78.61G          |
| ***      |      | 3724.00             | 14.00             | 164.00        | 3698.72  | 247.76                | -251.04 | 2.22    | 251.05       | 179.49                | 1.42             | 0.00G           |
| ***      |      | 3755.00             | 14.20             | 164.00        | 3728.78  | 255.27                | -258.30 | 4.30    | 258.33       | 179.05                | 0.65             | -62.37G         |
| ***      |      | 3787.00             | 14.40             | 162.50        | 3759.79  | 263.11                | -265.87 | 6.58    | 265.95       | 178.58                | 1.32             | -166.13G        |
| ***      |      | 3817.00             | 14.30             | 162.40        | 3788.86  | 270.48                | -272.96 | 8.82    | 273.10       | 178.15                | 0.34             | 90.00G          |
| ***      |      | 3849.00             | 14.30             | 165.90        | 3819.86  | 278.34                | -280.56 | 10.98   | 280.77       | 177.76                | 2.70             | -175.39G        |
| ***      |      | 3880.00             | 14.00             | 165.80        | 3849.92  | 285.89                | -287.90 | 12.83   | 288.19       | 177.45                | 0.97             | 156.96G         |
| ***      |      | 3911.00             | 13.30             | 167.10        | 3880.05  | 293.19                | -295.01 | 14.55   | 295.37       | 177.18                | 2.47             | -159.48G        |
| ***      |      | 3942.00             | 13.00             | 166.60        | 3910.24  | 300.23                | -301.88 | 16.15   | 302.31       | 176.94                | 1.03             | 124.17G         |
| ***      |      | 3974.00             | 12.60             | 169.40        | 3941.44  | 307.31                | -308.81 | 17.63   | 309.32       | 176.73                | 2.31             | 175.94G         |
| ***      |      | 4002.00             | 12.30             | 169.50        | 3968.78  | 313.35                | -314.75 | 18.73   | 315.31       | 176.59                | 1.07             | 38.39G          |
| ***      |      | 4036.00             | 12.90             | 171.60        | 4001.96  | 320.77                | -322.06 | 19.95   | 322.68       | 176.46                | 2.22             | -152.86G        |
| ***      |      | 4068.00             | 12.40             | 170.40        | 4033.19  | 327.77                | -328.99 | 21.04   | 329.66       | 176.34                | 1.77             | -52.59G         |
| ***      |      | 4099.00             | 12.50             | 169.80        | 4063.46  | 334.46                | -335.57 | 22.19   | 336.30       | 176.22                | 0.53             | -90.00G         |
| ***      |      | 4131.00             | 12.50             | 169.40        | 4094.70  | 341.38                | -342.38 | 23.44   | 343.18       | 176.08                | 0.27             | 51.97G          |
| ***      |      | 4162.00             | 12.80             | 171.10        | 4124.95  | 348.17                | -349.07 | 24.59   | 349.94       | 175.97                | 1.54             | -139.64G        |
| ***      |      | 4194.00             | 12.10             | 168.20        | 4156.19  | 355.07                | -355.86 | 25.82   | 356.79       | 175.85                | 2.93             | 128.25G         |
| ***      |      | 4225.00             | 11.80             | 170.10        | 4186.52  | 361.48                | -362.16 | 27.03   | 363.17       | 175.73                | 1.60             | 90.00G          |
| ***      |      | 4256.00             | 11.80             | 171.60        | 4216.87  | 367.82                | -368.42 | 28.04   | 369.48       | 175.65                | 0.99             | -90.00G         |
| ***      |      | 4289.00             | 11.80             | 171.20        | 4249.17  | 374.57                | -375.09 | 29.05   | 376.21       | 175.57                | 0.25             | 17.33G          |
| ***      |      | 4321.00             | 12.00             | 171.50        | 4280.48  | 381.17                | -381.61 | 30.04   | 382.79       | 175.50                | 0.65             | -90.00G         |
| ***      |      | 4351.00             | 12.00             | 170.60        | 4309.83  | 387.40                | -387.78 | 31.01   | 389.01       | 175.43                | 0.62             | 55.50G          |
| ***      |      | 4382.00             | 12.30             | 172.60        | 4340.13  | 393.92                | -394.23 | 31.96   | 395.52       | 175.36                | 1.67             | -81.37G         |
| ***      |      | 4414.00             | 12.50             | 167.80        | 4371.39  | 400.79                | -400.99 | 33.13   | 402.36       | 175.28                | 3.28             | -11.09G         |
| ***      |      | 4444.00             | 13.20             | 167.20        | 4400.63  | 407.45                | -407.51 | 34.58   | 408.97       | 175.15                | 2.38             | 158.28G         |
| ***      |      | 4475.00             | 12.60             | 168.30        | 4430.85  | 414.37                | -414.27 | 36.05   | 415.84       | 175.03                | 2.09             | -164.16G        |
| ***      |      | 4507.00             | 12.30             | 167.90        | 4462.10  | 421.26                | -421.02 | 37.47   | 422.69       | 174.91                | 0.98             | -90.00G         |
| ***      |      | 4538.00             | 12.30             | 167.70        | 4492.39  | 427.86                | -427.48 | 38.87   | 429.24       | 174.80                | 0.14             | 98.79G          |
| ***      |      | 4570.00             | 12.20             | 171.60        | 4523.66  | 434.65                | -434.15 | 40.09   | 436.00       | 174.72                | 2.60             | 168.55G         |
| ***      |      | 4601.00             | 11.70             | 172.10        | 4553.99  | 441.06                | -440.50 | 41.00   | 442.41       | 174.68                | 1.65             | -22.44G         |
| ***      |      | 4632.00             | 11.90             | 171.70        | 4584.33  | 447.40                | -446.78 | 41.89   | 448.74       | 174.64                | 0.70             | -143.43G        |
| ***      |      | 4664.00             | 11.40             | 169.80        | 4615.67  | 453.86                | -453.16 | 42.93   | 455.19       | 174.59                | 1.97             | 132.96G         |
| ***      |      | 4695.00             | 11.00             | 172.10        | 4646.08  | 459.88                | -459.10 | 43.88   | 461.19       | 174.54                | 1.93             | -35.48G         |
| ***      |      | 4727.00             | 11.60             | 170.00        | 4677.46  | 466.15                | -465.30 | 44.85   | 467.45       | 174.49                | 2.27             | 110.32G         |
| ***      |      | 4759.00             | 11.50             | 171.40        | 4708.82  | 472.55                | -471.62 | 45.89   | 473.85       | 174.44                | 0.93             | -164.20G        |
| ***      |      | 4790.00             | 10.90             | 170.50        | 4739.23  | 478.57                | -477.56 | 46.84   | 479.86       | 174.40                | 2.02             | 80.29G          |
| ***      |      | 4822.00             | 11.00             | 173.20        | 4770.64  | 484.65                | -483.58 | 47.70   | 485.93       | 174.37                | 1.63             | -123.74G        |
| ***      |      | 4853.00             | 10.70             | 170.70        | 4801.09  | 490.48                | -489.36 | 48.51   | 491.76       | 174.34                | 1.80             | 101.17G         |
| ***      |      | 4885.00             | 10.60             | 173.90        | 4832.54  | 496.39                | -495.21 | 49.30   | 497.66       | 174.31                | 1.87             | 69.58G          |
| ***      |      | 4917.00             | 10.80             | 176.60        | 4863.98  | 502.30                | -501.13 | 49.80   | 503.60       | 174.33                | 1.69             | -90.00G         |
| ***      |      | 4948.00             | 10.80             | 175.80        | 4894.43  | 508.08                | -506.93 | 50.18   | 509.41       | 174.35                | 0.48             | 90.00G          |
| ***      |      | 4980.00             | 10.80             | 176.40        | 4925.87  | 514.04                | -512.91 | 50.59   | 515.40       | 174.37                | 0.35             | -159.82G        |
| ***      |      | 5011.00             | 10.60             | 176.00        | 4956.33  | 519.77                | -518.66 | 50.97   | 521.15       | 174.39                | 0.69             | -20.57G         |
| ***      |      | 5043.00             | 10.80             | 175.60        | 4987.77  | 525.68                | -524.58 | 51.40   | 527.09       | 174.40                | 0.67             | 153.71G         |
| ***      |      | 5075.00             | 10.40             | 176.70        | 5019.22  | 531.54                | -530.45 | 51.80   | 532.98       | 174.42                | 1.40             | -28.35G         |
| ***      |      | 5106.00             | 11.20             | 174.50        | 5049.67  | 537.32                | -536.24 | 52.25   | 538.78       | 174.43                | 2.90             | 71.87G          |
| ***      |      | 5138.00             | 11.30             | 176.00        | 5081.06  | 543.54                | -542.46 | 52.77   | 545.03       | 174.44                | 0.97             | -106.03G        |
| ***      |      | 5169.00             | 11.20             | 174.10        | 5111.46  | 549.56                | -548.49 | 53.29   | 551.07       | 174.45                | 1.24             | -16.54G         |
| ***      |      | 5201.00             | 12.20             | 172.70        | 5142.80  | 556.04                | -554.93 | 54.04   | 557.56       | 174.44                | 3.25             | -12.22G         |
| ***      |      | 5231.00             | 12.50             | 172.40        | 5172.10  | 562.45                | -561.30 | 54.87   | 563.97       | 174.42                | 1.02             | -147.75G        |
| ***      |      | 5262.00             | 12.20             | 171.50        | 5202.39  | 569.08                | -567.86 | 55.80   | 570.60       | 174.39                | 1.15             | 151.72G         |
| ***      |      | 5293.00             | 11.40             | 173.70        | 5232.73  | 575.41                | -574.15 | 56.62   | 576.93       | 174.37                | 2.96             | -33.70G         |
| ***      |      | 5325.00             | 12.10             | 171.50        | 5264.06  | 581.92                | -580.61 | 57.46   | 583.44       | 174.35                | 2.60             | 19.25G          |
| ***      |      | 5357.00             | 12.80             | 172.60        | 5295.31  | 588.82                | -587.44 | 58.41   | 590.34       | 174.32                | 2.31             | -160.19G        |
| ***      |      | 5388.00             | 12.50             | 172.10        | 5325.56  | 595.60                | -594.17 | 59.32   | 597.12       | 174.30                | 1.03             | -90.00G         |
| ***      |      | 5420.00             | 12.50             | 171.00        | 5356.80  | 602.53                | -601.02 | 60.33   | 604.04       | 174.27                | 0.74             | -102.79G        |
| ***      |      | 5451.00             | 12.20             | 160.80        | 5387.08  | 609.11                | -607.43 | 61.94   | 610.58       | 174.18                | 7.09             | 168.16G         |
| ***      |      | 5483.00             | 12.10             | 160.90        | 5418.37  | 615.76                | -613.79 | 64.15   | 617.13       | 174.03                | 0.32             | -24.01G         |
| ***      |      | 5515.00             | 12.80             | 159.50        | 5449.62  | 622.55                | -620.28 | 66.48   | 623.83       | 173.88                | 2.38             | 139.06G         |

| Comments | Type | Measured Depth (ft) | Inclination (deg) | Azimuth (deg) | TVD (ft) | Vertical Section (ft) | NS (ft)  | EW (ft) | Closure (ft) | Closure Azimuth (deg) | DLS (deg/100 ft) | Tool Face (deg) |
|----------|------|---------------------|-------------------|---------------|----------|-----------------------|----------|---------|--------------|-----------------------|------------------|-----------------|
|          | ***  | 5547.00             | 12.60             | 160.30        | 5480.83  | 629.47                | -626.88  | 68.90   | 630.66       | 173.73                | 0.83             | 27.90G          |
|          | ***  | 5578.00             | 13.30             | 161.90        | 5511.04  | 636.33                | -633.46  | 71.15   | 637.44       | 173.59                | 2.54             | 137.98G         |
|          | ***  | 5611.00             | 13.10             | 162.70        | 5543.17  | 643.79                | -640.64  | 73.44   | 644.83       | 173.46                | 0.82             | 8.78G           |
|          | ***  | 5642.00             | 13.40             | 162.90        | 5573.35  | 650.84                | -647.42  | 75.54   | 651.82       | 173.34                | 0.98             | -90.00G         |
|          | ***  | 5673.00             | 13.40             | 161.50        | 5603.50  | 657.95                | -654.26  | 77.74   | 658.87       | 173.22                | 1.05             | 48.94G          |
|          | ***  | 5704.00             | 14.10             | 164.70        | 5633.61  | 665.26                | -661.31  | 79.87   | 666.12       | 173.11                | 3.33             | -13.43G         |
|          | ***  | 5736.00             | 15.20             | 163.70        | 5664.57  | 673.31                | -669.10  | 82.08   | 674.11       | 173.01                | 3.53             | 90.00G          |
|          | ***  | 5767.00             | 15.20             | 163.90        | 5694.49  | 681.39                | -676.90  | 84.35   | 682.14       | 172.90                | 0.17             | 90.00G          |
|          | ***  | 5799.00             | 15.20             | 165.90        | 5725.37  | 689.74                | -685.00  | 86.53   | 690.45       | 172.80                | 1.64             | -67.53G         |
|          | ***  | 5831.00             | 15.30             | 165.00        | 5756.24  | 698.13                | -693.15  | 88.65   | 698.80       | 172.71                | 0.80             | 85.96G          |
|          | ***  | 5862.00             | 15.40             | 168.70        | 5786.14  | 706.32                | -701.14  | 90.51   | 706.95       | 172.64                | 3.18             | 23.73G          |
|          | ***  | 5893.00             | 15.90             | 169.50        | 5815.99  | 714.68                | -709.35  | 92.09   | 715.30       | 172.60                | 1.76             | 155.68G         |
|          | ***  | 5925.00             | 14.00             | 173.10        | 5846.90  | 722.93                | -717.50  | 93.36   | 723.55       | 172.59                | 6.61             | -171.06G        |
|          | ***  | 5956.00             | 13.00             | 172.40        | 5877.05  | 730.16                | -724.68  | 94.27   | 730.79       | 172.59                | 3.27             | 0.00G           |
|          | ***  | 5988.00             | 13.10             | 172.40        | 5908.22  | 737.38                | -731.84  | 95.23   | 738.01       | 172.59                | 0.31             | 98.06G          |
|          | ***  | 6019.00             | 13.00             | 176.60        | 5938.42  | 744.35                | -738.81  | 95.90   | 745.00       | 172.60                | 3.08             | 90.00G          |
|          | ***  | 6051.00             | 13.00             | 176.80        | 5969.60  | 751.51                | -745.99  | 96.31   | 752.18       | 172.64                | 0.14             | -38.77G         |
|          | ***  | 6082.00             | 13.20             | 176.10        | 5999.79  | 758.49                | -753.00  | 96.75   | 759.19       | 172.68                | 0.82             | -148.54G        |
|          | ***  | 6113.00             | 12.50             | 174.10        | 6030.02  | 765.36                | -759.87  | 97.33   | 766.08       | 172.70                | 2.68             | 75.68G          |
|          | ***  | 6144.00             | 12.60             | 175.80        | 6060.28  | 772.07                | -766.58  | 97.92   | 772.81       | 172.72                | 1.23             | -118.05G        |
|          | ***  | 6175.00             | 12.40             | 174.00        | 6090.54  | 778.76                | -773.26  | 98.52   | 779.52       | 172.74                | 1.41             | -37.49G         |
|          | ***  | 6209.00             | 12.60             | 173.30        | 6123.74  | 786.10                | -780.58  | 99.33   | 786.87       | 172.75                | 0.74             | -18.40G         |
|          | ***  | 6241.00             | 12.80             | 173.00        | 6154.95  | 793.13                | -787.56  | 100.17  | 793.91       | 172.75                | 0.66             | -175.87G        |
|          | ***  | 6271.00             | 12.50             | 172.90        | 6184.23  | 799.69                | -794.08  | 100.98  | 800.48       | 172.75                | 1.00             | 149.97G         |
|          | ***  | 6302.00             | 12.00             | 174.30        | 6214.52  | 806.26                | -800.62  | 101.71  | 807.05       | 172.76                | 1.88             | 174.26G         |
|          | ***  | 6333.00             | 11.60             | 174.50        | 6244.86  | 812.58                | -806.93  | 102.33  | 813.39       | 172.77                | 1.30             | 50.76G          |
|          | ***  | 6365.00             | 11.70             | 175.10        | 6276.21  | 819.02                | -813.36  | 102.92  | 819.85       | 172.79                | 0.49             | 72.61G          |
|          | ***  | 6396.00             | 11.80             | 176.60        | 6306.56  | 825.30                | -819.66  | 103.38  | 826.15       | 172.81                | 1.04             | 90.00G          |
|          | ***  | 6428.00             | 11.80             | 177.40        | 6337.88  | 831.80                | -826.19  | 103.72  | 832.68       | 172.84                | 0.51             | -90.00G         |
|          | ***  | 6459.00             | 11.80             | 175.70        | 6368.22  | 838.10                | -832.52  | 104.10  | 839.00       | 172.87                | 1.12             | -62.02G         |
|          | ***  | 6490.00             | 11.90             | 174.80        | 6398.56  | 844.44                | -838.87  | 104.63  | 845.36       | 172.89                | 0.68             | -39.58G         |
|          | ***  | 6521.00             | 12.40             | 172.90        | 6428.87  | 850.95                | -845.35  | 105.33  | 851.89       | 172.90                | 2.07             | -15.02G         |
|          | ***  | 6553.00             | 12.90             | 172.30        | 6460.09  | 857.95                | -852.30  | 106.23  | 858.90       | 172.90                | 1.62             | 78.40G          |
|          | ***  | 6584.00             | 13.00             | 174.30        | 6490.30  | 864.89                | -859.20  | 107.04  | 865.84       | 172.90                | 1.48             | 81.60G          |
|          | ***  | 6616.00             | 13.10             | 176.90        | 6521.48  | 872.08                | -866.40  | 107.59  | 873.06       | 172.92                | 1.86             | 4.42G           |
|          | ***  | 6647.00             | 13.40             | 177.00        | 6551.65  | 879.14                | -873.50  | 107.97  | 880.14       | 172.95                | 0.97             | 90.00G          |
|          | ***  | 6678.00             | 13.40             | 177.20        | 6581.81  | 886.27                | -880.67  | 108.34  | 887.31       | 172.99                | 0.15             | -173.58G        |
|          | ***  | 6710.00             | 13.00             | 177.00        | 6612.96  | 893.52                | -887.97  | 108.71  | 894.60       | 173.02                | 1.26             | -70.33G         |
|          | ***  | 6741.00             | 13.10             | 175.80        | 6643.16  | 900.48                | -894.96  | 109.15  | 901.59       | 173.05                | 0.93             | 116.64G         |
|          | ***  | 6772.00             | 13.00             | 176.70        | 6673.36  | 907.44                | -901.94  | 109.60  | 908.57       | 173.07                | 0.73             | -24.76G         |
|          | ***  | 6803.00             | 13.30             | 176.10        | 6703.55  | 914.45                | -908.98  | 110.05  | 915.62       | 173.10                | 1.06             | 103.28G         |
|          | ***  | 6835.00             | 13.20             | 178.10        | 6734.70  | 921.73                | -916.30  | 110.42  | 922.93       | 173.13                | 1.47             | 155.63G         |
|          | ***  | 6866.00             | 13.10             | 178.30        | 6764.88  | 928.72                | -923.35  | 110.64  | 929.96       | 173.17                | 0.35             | -155.42G        |
|          | ***  | 6898.00             | 12.40             | 176.80        | 6796.10  | 935.72                | -930.41  | 110.94  | 937.00       | 173.20                | 2.42             | 111.87G         |
|          | ***  | 6930.00             | 12.30             | 178.00        | 6827.36  | 942.51                | -937.24  | 111.25  | 943.82       | 173.23                | 0.86             | -9.37G          |
|          | ***  | 6962.00             | 12.70             | 177.70        | 6858.60  | 949.38                | -944.16  | 111.51  | 950.73       | 173.26                | 1.27             | -44.33G         |
|          | ***  | 6993.00             | 13.10             | 176.00        | 6888.81  | 956.25                | -951.07  | 111.89  | 957.63       | 173.29                | 1.78             | -37.24G         |
|          | ***  | 7024.00             | 13.60             | 174.40        | 6918.98  | 963.38                | -958.21  | 112.49  | 964.79       | 173.30                | 2.01             | -10.01G         |
|          | ***  | 7055.00             | 14.30             | 173.90        | 6949.06  | 970.84                | -965.64  | 113.25  | 972.26       | 173.31                | 2.29             | -135.64G        |
|          | ***  | 7086.00             | 14.20             | 173.50        | 6979.11  | 978.45                | -973.22  | 114.09  | 979.89       | 173.31                | 0.45             | 54.18G          |
|          | ***  | 7118.00             | 14.40             | 174.60        | 7010.12  | 986.34                | -981.09  | 114.91  | 987.79       | 173.32                | 1.05             | 68.65G          |
|          | ***  | 7150.00             | 14.50             | 175.60        | 7041.10  | 994.29                | -989.04  | 115.59  | 995.77       | 173.33                | 0.84             | -4.87G          |
|          | ***  | 7182.00             | 14.80             | 175.50        | 7072.06  | 1002.35               | -997.11  | 116.22  | 1003.86      | 173.35                | 0.94             | -142.77G        |
|          | ***  | 7211.00             | 14.70             | 175.20        | 7100.11  | 1009.71               | -1004.47 | 116.82  | 1011.24      | 173.37                | 0.43             | -79.86G         |
|          | ***  | 7243.00             | 14.80             | 173.20        | 7131.05  | 1017.83               | -1012.57 | 117.64  | 1019.39      | 173.37                | 1.62             | 90.00G          |
|          | ***  | 7274.00             | 14.80             | 173.50        | 7161.03  | 1025.74               | -1020.44 | 118.56  | 1027.30      | 173.37                | 0.25             | -17.60G         |
|          | ***  | 7305.00             | 15.30             | 172.90        | 7190.96  | 1033.78               | -1028.43 | 119.51  | 1035.35      | 173.37                | 1.69             | -65.02G         |
|          | ***  | 7336.00             | 15.60             | 170.60        | 7220.84  | 1042.03               | -1036.60 | 120.70  | 1043.61      | 173.36                | 2.20             | -53.69G         |
|          | ***  | 7368.00             | 15.70             | 170.10        | 7251.66  | 1050.66               | -1045.11 | 122.15  | 1052.23      | 173.33                | 0.52             | -168.81G        |
|          | ***  | 7399.00             | 15.30             | 169.80        | 7281.53  | 1058.95               | -1053.27 | 123.59  | 1060.50      | 173.31                | 1.32             | -81.78G         |
|          | ***  | 7431.00             | 15.40             | 167.50        | 7312.39  | 1067.41               | -1061.57 | 125.26  | 1068.94      | 173.27                | 1.93             | -7.85G          |
|          | ***  | 7461.00             | 16.00             | 167.20        | 7341.27  | 1075.52               | -1069.49 | 127.04  | 1077.01      | 173.23                | 2.02             | 20.90G          |

| Comments | Type | Measured Depth<br>(ft) | Inclination<br>(deg) | Azimuth<br>(deg) | TVD<br>(ft) | Vertical Section<br>(ft) | NS<br>(ft) | EW<br>(ft) | Closure<br>(ft) | Closure Azimuth<br>(deg) | DLS<br>(deg/100 ft) | Tool Face<br>(deg) |
|----------|------|------------------------|----------------------|------------------|-------------|--------------------------|------------|------------|-----------------|--------------------------|---------------------|--------------------|
|          | ***  | 7493.00                | 16.60                | 168.00           | 7371.98     | 1084.49                  | -1078.27   | 128.97     | 1085.95         | 173.18                   | 2.00                | 40.83G             |
|          | ***  | 7524.00                | 16.70                | 168.30           | 7401.68     | 1093.37                  | -1086.96   | 130.79     | 1094.80         | 173.14                   | 0.43                | 111.63G            |
|          | ***  | 7555.00                | 16.60                | 169.20           | 7431.38     | 1102.25                  | -1095.67   | 132.52     | 1103.66         | 173.10                   | 0.89                | 132.01G            |
|          | ***  | 7586.00                | 16.30                | 170.40           | 7461.11     | 1111.03                  | -1104.31   | 134.08     | 1112.42         | 173.08                   | 1.46                | 172.03G            |
|          | ***  | 7618.00                | 14.20                | 171.60           | 7491.98     | 1119.44                  | -1112.62   | 135.40     | 1120.83         | 173.06                   | 6.64                | -178.31G           |
|          | ***  | 7649.00                | 11.50                | 171.20           | 7522.21     | 1126.33                  | -1119.44   | 136.43     | 1127.72         | 173.05                   | 8.71                | -167.64G           |
|          | ***  | 7681.00                | 10.00                | 169.30           | 7553.64     | 1132.30                  | -1125.32   | 137.43     | 1133.68         | 173.04                   | 4.82                | -153.30G           |
|          | ***  | 7712.00                | 9.10                 | 166.40           | 7584.21     | 1137.44                  | -1130.35   | 138.51     | 1138.80         | 173.01                   | 3.29                | -135.08G           |
|          | ***  | 7742.00                | 8.40                 | 161.40           | 7613.86     | 1141.97                  | -1134.73   | 139.77     | 1143.31         | 172.98                   | 3.44                | -90.00G            |
|          | ***  | 7774.00                | 8.40                 | 155.50           | 7645.52     | 1146.54                  | -1139.07   | 141.48     | 1147.83         | 172.92                   | 2.69                | -125.70G           |
|          | ***  | 7805.00                | 8.20                 | 153.50           | 7676.20     | 1150.85                  | -1143.11   | 143.41     | 1152.07         | 172.85                   | 1.13                | -55.15G            |
|          | ***  | 7835.00                | 8.70                 | 149.00           | 7705.87     | 1155.01                  | -1146.97   | 145.53     | 1156.17         | 172.77                   | 2.76                | 14.52G             |
|          | ***  | 7867.00                | 9.90                 | 150.80           | 7737.45     | 1159.87                  | -1151.45   | 148.12     | 1160.94         | 172.67                   | 3.86                | -1.60G             |
|          | ***  | 7898.00                | 11.30                | 150.60           | 7767.92     | 1165.24                  | -1156.42   | 150.91     | 1166.23         | 172.57                   | 4.52                | 8.49G              |
|          | ***  | 7930.00                | 12.30                | 151.30           | 7799.24     | 1171.42                  | -1162.14   | 154.08     | 1172.31         | 172.45                   | 3.16                | 59.51G             |
|          | ***  | 7961.00                | 12.90                | 155.60           | 7829.50     | 1177.89                  | -1168.19   | 157.10     | 1178.71         | 172.34                   | 3.59                | 37.46G             |
|          | ***  | 7993.00                | 13.20                | 156.60           | 7860.67     | 1184.90                  | -1174.80   | 160.03     | 1185.64         | 172.24                   | 1.17                | 66.34G             |
|          | ***  | 8024.00                | 13.40                | 158.50           | 7890.84     | 1191.86                  | -1181.39   | 162.75     | 1192.54         | 172.16                   | 1.55                | 156.02G            |
|          | ***  | 8055.00                | 12.90                | 159.50           | 7921.03     | 1198.77                  | -1187.97   | 165.28     | 1199.41         | 172.08                   | 1.77                | 167.51G            |
|          | ***  | 8086.00                | 12.80                | 159.60           | 7951.25     | 1205.55                  | -1194.43   | 167.69     | 1206.14         | 172.01                   | 0.33                | 54.24G             |
|          | ***  | 8118.00                | 13.10                | 161.40           | 7982.44     | 1212.62                  | -1201.19   | 170.08     | 1213.17         | 171.94                   | 1.57                | -34.71G            |
|          | ***  | 8150.00                | 13.30                | 160.80           | 8013.59     | 1219.83                  | -1208.10   | 172.45     | 1220.35         | 171.88                   | 0.76                | 0.00G              |
|          | ***  | 8181.00                | 13.90                | 160.80           | 8043.72     | 1227.02                  | -1214.99   | 174.84     | 1227.50         | 171.81                   | 1.94                | 40.43G             |
|          | ***  | 8244.00                | 14.80                | 163.74           | 8104.76     | 1242.48                  | -1229.86   | 179.58     | 1242.90         | 171.69                   | 1.84                | 133.88G            |
|          | ***  | 8455.00                | 14.50                | 165.00           | 8308.90     | 1295.57                  | -1281.24   | 193.97     | 1295.84         | 171.39                   | 0.21                | 0.00G              |