



Directional Survey Report

Calpine Corp

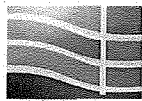
Well ID: Wildhorse St #36

Well Name: Wildhorse State # 36

Field: Geysers

Sect: 3 Town: 11 N Rng: 9 W County: Sonoma State: CA

| Survey Type | Meas. Depth | Inc. | Azimuth | TVD | Coordinates | | Closure | Vertical Section | Dog Leg Severity |
|--------------------------------------|-------------|-------|---------|--|-------------|----------|---------|------------------|------------------|
| | | | | | N-S | E-W | | | |
| Well Bore: Original Well Bore | | | | Plane of Vertical Section: 207.85 | | | | | |
| ** TiIn | 0.0 | 0.00 | 0 | 0.0 | 0.0 | 0.0 | | 0.0 | |
| VERTT | 106.0 | 0.13 | 0 | 106.0 | 0.1 | 0.0 | 0.1 | -0.1 | 0.123 |
| VERTT | 201.0 | 0.70 | 90 | 201.0 | 0.2 | 0.6 | 0.6 | -0.5 | 0.749 |
| VERTT | 356.0 | 0.15 | 180 | 356.0 | 0.0 | 1.5 | 1.5 | -0.7 | 0.462 |
| VERTT | 580.0 | 0.16 | 270 | 580.0 | -0.3 | 1.2 | 1.2 | -0.3 | 0.098 |
| VERTT | 837.0 | 0.18 | 0 | 837.0 | 0.1 | 0.9 | 0.9 | -0.5 | 0.094 |
| VERTT | 1,093.0 | 0.09 | 90 | 1,093.0 | 0.5 | 1.1 | 1.2 | -1.0 | 0.079 |
| VERTT | 1,346.0 | 0.26 | 180 | 1,346.0 | 0.0 | 1.3 | 1.3 | -0.6 | 0.109 |
| VERTT | 1,600.0 | 0.62 | 270 | 1,600.0 | -0.6 | -0.1 | 0.6 | 0.6 | 0.265 |
| VERTT | 1,982.0 | 0.35 | 0 | 1,982.0 | 0.6 | -2.2 | 2.3 | 0.5 | 0.186 |
| VERTT | 2,237.0 | 0.18 | 90 | 2,237.0 | 1.3 | -1.8 | 2.2 | -0.3 | 0.154 |
| VERTT | 2,362.0 | 0.14 | 223 | 2,362.0 | 1.2 | -1.7 | 2.1 | -0.3 | 0.235 |
| VERTT | 2,483.0 | 0.11 | 214 | 2,483.0 | 1.0 | -1.9 | 2.1 | 0.0 | 0.030 |
| VERTT | 2,606.0 | 0.07 | 3.55 | 2,606.0 | 1.0 | -1.9 | 2.2 | 0.0 | 0.141 |
| VERTT | 2,728.0 | 0.22 | 269 | 2,728.0 | 1.1 | -2.1 | 2.4 | 0.1 | 0.194 |
| VERTT | 2,851.0 | 0.18 | 333.97 | 2,851.0 | 1.2 | -2.5 | 2.8 | 0.1 | 0.177 |
| VERTT | 2,973.0 | 0.34 | 255 | 2,973.0 | 1.3 | -2.9 | 3.2 | 0.2 | 0.289 |
| VERTT | 3,098.0 | 0.22 | 45 | 3,098.0 | 1.4 | -3.1 | 3.4 | 0.2 | 0.433 |
| DIGITA | 3,446.0 | 1.60 | 179 | 3,445.9 | -3.0 | -2.5 | 3.9 | 3.8 | 0.506 |
| DIGITA | 3,703.0 | 1.20 | 214 | 3,702.9 | -8.8 | -4.0 | 9.7 | 9.7 | 0.360 |
| ASO | 3,953.0 | 2.75 | 211 | 3,952.7 | -16.1 | -8.5 | 18.2 | 18.2 | 0.621 |
| ASO | 4,256.0 | 4.00 | 211 | 4,255.2 | -31.4 | -17.7 | 36.1 | 36.1 | 0.413 |
| ASO | 4,511.0 | 6.00 | 211 | 4,509.2 | -50.5 | -29.2 | 58.3 | 58.2 | 0.784 |
| ASO | 4,765.0 | 6.00 | 211 | 4,761.8 | -73.2 | -42.8 | 84.8 | 84.8 | 0.000 |
| ASO | 5,019.0 | 6.75 | 211 | 5,014.2 | -97.4 | -57.4 | 113.0 | 112.9 | 0.295 |
| ASO | 5,243.0 | 7.50 | 211 | 5,236.5 | -121.2 | -71.7 | 140.8 | 140.7 | 0.335 |
| DIGITA | 5,499.0 | 9.30 | 211 | | | | | | |
| DIGITA | 5,499.0 | 9.20 | 211 | 5,489.8 | -153.1 | -90.8 | 178.0 | 177.8 | 0.664 |
| DIGITA | 5,722.0 | 9.30 | 208 | 5,709.9 | -184.3 | -108.5 | 213.8 | 213.6 | 0.221 |
| DIGITA | 5,975.0 | 8.20 | 207.6 | 5,959.9 | -218.3 | -126.4 | 252.3 | 252.1 | 0.435 |
| DIGITA | 6,230.0 | 7.90 | 203.3 | 6,212.4 | -250.5 | -141.8 | 287.9 | 287.7 | 0.264 |
| DIGITA | 6,832.0 | 11.10 | 200.3 | 6,806.1 | -342.9 | -178.3 | 386.5 | 386.5 | 0.538 |
| DIGITA | 7,498.0 | 12.40 | 202.4 | 7,458.1 | -469.1 | -227.7 | 521.5 | 521.2 | 0.205 |
| DIGITA | 8,107.0 | 20.00 | 217.6 | 8,042.8 | -612.4 | -316.4 | 689.3 | 689.2 | 1.419 |
| DIGITA | 8,407.0 | 26.10 | 217 | 8,318.7 | -705.8 | -387.5 | 805.2 | 805.1 | 2.035 |
| DIGITA | 8,537.0 | 28.90 | 216 | 8,434.0 | -754.1 | -423.1 | 864.7 | 864.4 | 2.183 |
| DIGITA | 8,696.0 | 32.00 | 209.6 | 8,571.1 | -821.8 | -466.6 | 945.0 | 944.6 | 2.819 |
| DIGITA | 8,991.0 | 34.80 | 204.8 | 8,817.4 | -966.3 | -540.5 | 1,107.2 | 1,106.8 | 1.304 |
| DIGITA | 9,196.0 | 35.00 | 202 | 8,985.5 | -1,073.9 | -587.1 | 1,223.9 | 1,223.7 | 0.787 |
| DIGITA | 9,403.0 | 35.80 | 199.5 | 9,154.2 | -1,186.0 | -629.5 | 1,342.7 | 1,342.7 | 0.799 |
| DIGITA | 9,657.0 | 36.20 | 199.8 | 9,359.7 | -1,326.6 | -679.7 | 1,490.6 | 1,490.5 | 0.172 |
| DIGITA | 10,015.0 | 35.00 | 197.7 | 9,650.8 | -1,523.9 | -746.8 | 1,697.0 | 1,696.2 | 0.478 |
| DIGITA | 10,749.0 | 48.30 | 204.5 | 10,198.3 | -1,976.0 | -925.3 | 2,181.9 | 2,179.4 | 1.912 |
| DIGITA | 12,340.0 | 48.00 | 204 | 11,259.8 | -3,056.6 | -1,412.0 | 3,367.0 | 3,362.2 | 0.030 |



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|-------------|-------------|------|---------|-----|-------------|-----|---------|------------------|------------------|
| | | | | | N-S | E-W | | | |

Calculations using Minimum Curvature Method