

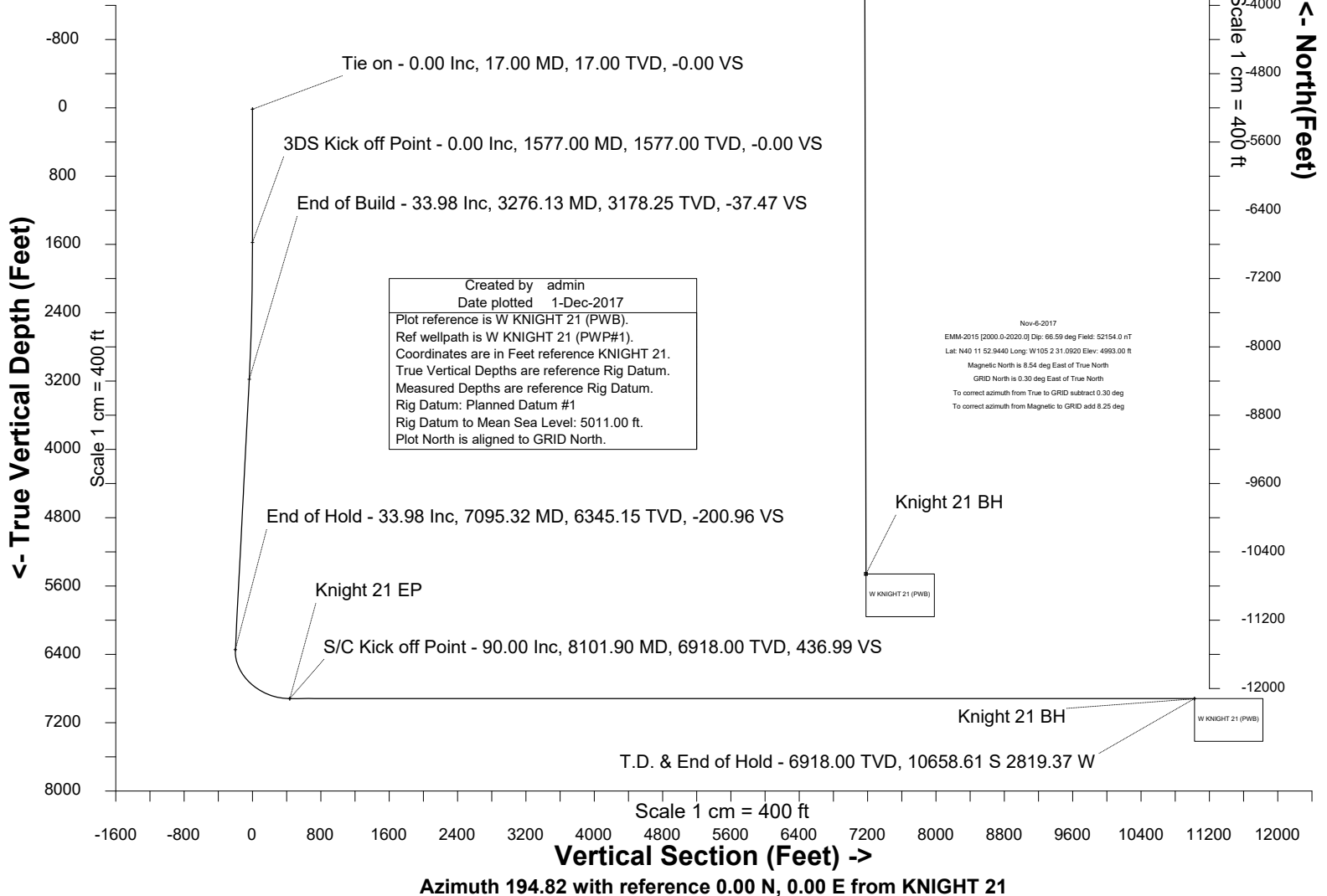
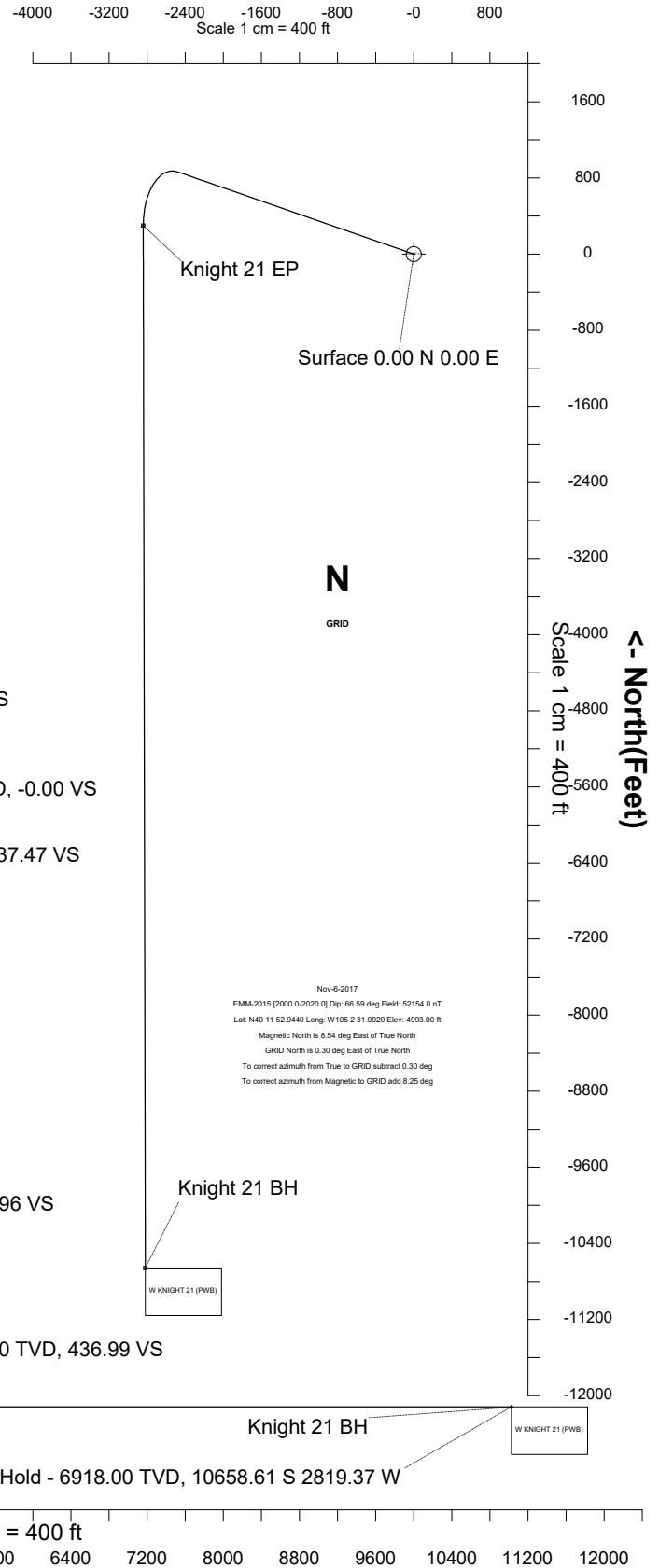
Cub Creek Energy, LLC

| | | | |
|---------------------|------------------------|-----------------|--------------------------|
| Location | Weld County, CO | Slot | KNIGHT 21 |
| Field | WATTENBERG | Well | W KNIGHT 21 |
| Installation | Knight Pad | Wellbore | W KNIGHT 21 (PWB) |

WELL PROFILE DATA

| Point | MD | Inc | Azi | TVD | North | East | deg/100ft | V. Sect |
|----------------------------|----------|-------|--------|---------|------------|-----------|-----------|----------|
| Tie on | 17.00 | 0.00 | 0.00 | 17.00 | S 0.00 | W 0.00 | | -0.00 |
| KOP | 1577.00 | 0.00 | 289.21 | 1577.00 | S 0.00 | W 0.00 | 0.00 | -0.00 |
| End of Build | 3276.13 | 33.98 | 289.21 | 3178.25 | N 160.98 | W 462.05 | 2.00 | -37.47 |
| End of Hold | 7095.32 | 33.98 | 289.21 | 6345.15 | N 863.32 | W 2477.90 | 0.00 | -200.96 |
| Target Knight 21 EP | 8101.90 | 90.00 | 179.89 | 6918.00 | N 299.52 | W 2841.17 | 10.00 | 436.99 |
| T.D. & Target Knight 21 BH | 19060.05 | 90.00 | 179.89 | 6918.00 | S 10658.61 | W 2819.37 | 0.00 | 11025.19 |

East (Feet) ->





SYSDRILL
Well Design Combined Report
Wellbore: W KNIGHT 21 (PWB)



| Wellhead Details | | | | | | | |
|------------------|-------------|---------------|--------------|--------------|--------|--------|-----------------------------|
| Name | Latitude | Longitude | Northing | Easting | North | East | Slot Elevation Above Ground |
| KNIGHT 21 | 40.19791800 | -105.04205500 | 1315274.3377 | 3127922.0349 | 44.57S | 23.52W | 0.00 |

| Declination | | |
|-------------|--------------------------|-------|
| Date | Source | Time |
| Nov-6-2017 | EMM-2015 [2000.0-2020.0] | 14:52 |

| Installation Details | | | | | | |
|----------------------|----------------------------------|-----------------------------------|--------------|--------------|--|-----------------|
| Name | Installation Position (Latitude) | Installation Position (Longitude) | Northing | Easting | Coord System Name | North Alignment |
| Knight Pad | 40.19804000 | -105.04197000 | 1315318.9022 | 3127945.5490 | CO83-NF on NORTH AMERICAN DATUM 1983 datum | Grid |

| Summary Wellpath | | | | | | | | | |
|------------------|----------|----------|---------|-----------|----------|--------------------|----------------------|------------|------------|
| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | Dogleg [deg/100ft] | Vertical Section[ft] | Northing | Easting |
| 17.00 | 0.00 | 0.000 | 17.00 | 0.00N | 0.00E | | 0.00 | 1315274.34 | 3127922.03 |
| 1577.00 | 0.00 | 289.210 | 1577.00 | 0.00N | 0.00E | ==> | 0.00 | 1315274.34 | 3127922.03 |
| 3276.13 | 33.98 | 289.210 | 3178.25 | 160.98N | 462.05W | 2.00 | -37.47 | 1315435.31 | 3127460.01 |
| 7095.32 | 33.98 | 289.210 | 6345.15 | 863.32N | 2477.90W | ==> | -200.96 | 1316137.62 | 3125444.24 |
| 8101.90 | 90.00 | 179.890 | 6918.00 | 299.52N | 2841.17W | 10.00 | 436.99 | 1315573.84 | 3125080.99 |
| 19060.05 | 90.00 | 179.890 | 6918.00 | 10658.61S | 2819.37W | ==> | 11025.19 | 1304616.20 | 3125102.79 |

| Interpolated Wellpath | | | | | | | | |
|-----------------------|----------|----------|---------|-----------|----------|--------------------|----------------------|----------------------|
| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | Dogleg [deg/100ft] | Vertical Section[ft] | All Station Comments |
| 0.00 | 0.00 | 0.000 | 0.00 | 0.00N | 0.00E | | 0.00 | Rig Datum |
| 17.00 | 0.00 | 0.000 | 17.00 | 0.00N | 0.00E | ==> | 0.00 | Slot Datum |
| 100.00 | 0.00 | 0.000 | 100.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 200.00 | 0.00 | 0.000 | 200.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 300.00 | 0.00 | 0.000 | 300.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 400.00 | 0.00 | 0.000 | 400.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 500.00 | 0.00 | 0.000 | 500.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 600.00 | 0.00 | 0.000 | 600.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 700.00 | 0.00 | 0.000 | 700.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 800.00 | 0.00 | 0.000 | 800.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 900.00 | 0.00 | 0.000 | 900.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 1000.00 | 0.00 | 0.000 | 1000.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 1100.00 | 0.00 | 0.000 | 1100.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 1200.00 | 0.00 | 0.000 | 1200.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 1300.00 | 0.00 | 0.000 | 1300.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 1400.00 | 0.00 | 0.000 | 1400.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 1500.00 | 0.00 | 0.000 | 1500.00 | 0.00N | 0.00E | ==> | 0.00 | |
| 1600.00 | 0.46 | 289.210 | 1600.00 | 0.03N | 0.09W | 2.00 | -0.01 | |
| 1700.00 | 2.46 | 289.210 | 1699.96 | 0.87N | 2.49W | 2.00 | -0.20 | |
| 1800.00 | 4.46 | 289.210 | 1799.77 | 2.85N | 8.19W | 2.00 | -0.66 | |
| 1900.00 | 6.46 | 289.210 | 1899.32 | 5.98N | 17.18W | 2.00 | -1.39 | |
| 2000.00 | 8.46 | 289.210 | 1998.46 | 10.26N | 29.44W | 2.00 | -2.39 | |
| 2100.00 | 10.46 | 289.210 | 2097.10 | 15.66N | 44.96W | 2.00 | -3.65 | |
| 2200.00 | 12.46 | 289.210 | 2195.10 | 22.20N | 63.72W | 2.00 | -5.17 | |
| 2300.00 | 14.46 | 289.210 | 2292.35 | 29.86N | 85.70W | 2.00 | -6.95 | |
| 2400.00 | 16.46 | 289.210 | 2388.73 | 38.63N | 110.87W | 2.00 | -8.99 | |
| 2500.00 | 18.46 | 289.210 | 2484.11 | 48.50N | 139.20W | 2.00 | -11.29 | |
| 2600.00 | 20.46 | 289.210 | 2578.40 | 59.46N | 170.66W | 2.00 | -13.84 | |
| 2700.00 | 22.46 | 289.210 | 2671.46 | 71.50N | 205.21W | 2.00 | -16.64 | |
| 2800.00 | 24.46 | 289.210 | 2763.19 | 84.59N | 242.80W | 2.00 | -19.69 | |
| 2900.00 | 26.46 | 289.210 | 2853.47 | 98.74N | 283.39W | 2.00 | -22.98 | |
| 3000.00 | 28.46 | 289.210 | 2942.20 | 113.91N | 326.94W | 2.00 | -26.51 | |
| 3100.00 | 30.46 | 289.210 | 3029.27 | 130.09N | 373.38W | 2.00 | -30.28 | |

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig (Planned Datum #1 5011.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 194.820 degrees
Bottom hole distance is 11025.19 Feet on azimuth 194.82 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 1-Dec-2017



SYSDRILL
Well Design Combined Report
Wellbore: W KNIGHT 21 (PWB)



| Interpolated Wellpath | | | | | | | | |
|-----------------------|----------|----------|---------|-----------|----------|-----------------------|-------------------------|-------------------------|
| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | Dogleg [deg/100ft] | Vertical Section[ft] | All Station Comments |
| 3200.00 | 32.46 | 289.210 | 3114.56 | 147.26N | 422.66W | 2.00 | -34.28 | |
| 3300.00 | 33.98 | 289.210 | 3198.04 | 165.37N | 474.64W | ==> | -38.49 | |
| | | | | | | | | |
| 3400.00 | 33.98 | 289.210 | 3280.96 | 183.76N | 527.43W | ==> | -42.77 | |
| 3500.00 | 33.98 | 289.210 | 3363.88 | 202.15N | 580.21W | ==> | -47.06 | |
| 3600.00 | 33.98 | 289.210 | 3446.80 | 220.54N | 632.99W | ==> | -51.34 | |
| 3700.00 | 33.98 | 289.210 | 3529.72 | 238.93N | 685.77W | ==> | -55.62 | |
| 3800.00 | 33.98 | 289.210 | 3612.65 | 257.32N | 738.56W | ==> | -59.90 | |
| | | | | | | | | |
| 3900.00 | 33.98 | 289.210 | 3695.57 | 275.71N | 791.34W | ==> | -64.18 | |
| 4000.00 | 33.98 | 289.210 | 3778.49 | 294.10N | 844.12W | ==> | -68.46 | |
| 4100.00 | 33.98 | 289.210 | 3861.41 | 312.49N | 896.90W | ==> | -72.74 | |
| 4200.00 | 33.98 | 289.210 | 3944.33 | 330.88N | 949.69W | ==> | -77.02 | |
| 4300.00 | 33.98 | 289.210 | 4027.25 | 349.27N | 1002.47W | ==> | -81.30 | |
| | | | | | | | | |
| 4400.00 | 33.98 | 289.210 | 4110.17 | 367.66N | 1055.25W | ==> | -85.58 | |
| 4500.00 | 33.98 | 289.210 | 4193.09 | 386.05N | 1108.03W | ==> | -89.86 | |
| 4600.00 | 33.98 | 289.210 | 4276.01 | 404.44N | 1160.81W | ==> | -94.14 | |
| 4700.00 | 33.98 | 289.210 | 4358.93 | 422.82N | 1213.60W | ==> | -98.42 | |
| 4800.00 | 33.98 | 289.210 | 4441.85 | 441.21N | 1266.38W | ==> | -102.70 | |
| | | | | | | | | |
| 4900.00 | 33.98 | 289.210 | 4524.77 | 459.60N | 1319.16W | ==> | -106.99 | |
| 5000.00 | 33.98 | 289.210 | 4607.69 | 477.99N | 1371.94W | ==> | -111.27 | |
| 5100.00 | 33.98 | 289.210 | 4690.61 | 496.38N | 1424.73W | ==> | -115.55 | |
| 5200.00 | 33.98 | 289.210 | 4773.53 | 514.77N | 1477.51W | ==> | -119.83 | |
| 5300.00 | 33.98 | 289.210 | 4856.46 | 533.16N | 1530.29W | ==> | -124.11 | |
| | | | | | | | | |
| 5400.00 | 33.98 | 289.210 | 4939.38 | 551.55N | 1583.07W | ==> | -128.39 | |
| 5500.00 | 33.98 | 289.210 | 5022.30 | 569.94N | 1635.86W | ==> | -132.67 | |
| 5600.00 | 33.98 | 289.210 | 5105.22 | 588.33N | 1688.64W | ==> | -136.95 | |
| 5700.00 | 33.98 | 289.210 | 5188.14 | 606.72N | 1741.42W | ==> | -141.23 | |
| 5800.00 | 33.98 | 289.210 | 5271.06 | 625.11N | 1794.20W | ==> | -145.51 | |
| | | | | | | | | |
| 5900.00 | 33.98 | 289.210 | 5353.98 | 643.50N | 1846.98W | ==> | -149.79 | |
| 6000.00 | 33.98 | 289.210 | 5436.90 | 661.89N | 1899.77W | ==> | -154.07 | |
| 6100.00 | 33.98 | 289.210 | 5519.82 | 680.28N | 1952.55W | ==> | -158.35 | |
| 6200.00 | 33.98 | 289.210 | 5602.74 | 698.67N | 2005.33W | ==> | -162.63 | |
| 6300.00 | 33.98 | 289.210 | 5685.66 | 717.06N | 2058.11W | ==> | -166.91 | |
| | | | | | | | | |
| 6400.00 | 33.98 | 289.210 | 5768.58 | 735.45N | 2110.90W | ==> | -171.20 | |
| 6500.00 | 33.98 | 289.210 | 5851.50 | 753.84N | 2163.68W | ==> | -175.48 | |
| 6600.00 | 33.98 | 289.210 | 5934.42 | 772.23N | 2216.46W | ==> | -179.76 | |
| 6700.00 | 33.98 | 289.210 | 6017.35 | 790.62N | 2269.24W | ==> | -184.04 | |
| 6800.00 | 33.98 | 289.210 | 6100.27 | 809.01N | 2322.03W | ==> | -188.32 | |
| | | | | | | | | |
| 6900.00 | 33.98 | 289.210 | 6183.19 | 827.40N | 2374.81W | ==> | -192.60 | |
| 7000.00 | 33.98 | 289.210 | 6266.11 | 845.79N | 2427.59W | ==> | -196.88 | |
| 7100.00 | 33.85 | 288.400 | 6349.03 | 864.16N | 2480.37W | 10.00 | -201.14 | |
| 7200.00 | 32.46 | 270.240 | 6432.95 | 873.09N | 2533.78W | 10.00 | -196.12 | |
| 7300.00 | 33.75 | 252.030 | 6516.93 | 864.61N | 2587.17W | 10.00 | -174.26 | |
| | | | | | | | | |
| 7400.00 | 37.45 | 236.020 | 6598.40 | 838.98N | 2638.95W | 10.00 | -136.25 | |
| 7500.00 | 42.94 | 223.020 | 6674.89 | 796.97N | 2687.52W | 10.00 | -83.22 | |
| 7600.00 | 49.60 | 212.670 | 6744.08 | 739.87N | 2731.42W | 10.00 | -16.79 | |
| 7700.00 | 57.01 | 204.280 | 6803.86 | 669.41N | 2769.31W | 10.00 | 61.02 | |
| 7800.00 | 64.89 | 197.230 | 6852.43 | 587.73N | 2800.03W | 10.00 | 147.84 | |
| | | | | | | | | |
| 7900.00 | 73.07 | 191.050 | 6888.29 | 497.31N | 2822.67W | 10.00 | 241.04 | |
| 8000.00 | 81.42 | 185.400 | 6910.37 | 400.89N | 2836.52W | 10.00 | 337.79 | |
| 8100.00 | 89.84 | 179.990 | 6918.00 | 301.42N | 2841.17W | 10.00 | 435.15 | |
| 8200.00 | 90.00 | 179.890 | 6918.00 | 201.42N | 2840.98W | ==> | 531.77 | |
| 8300.00 | 90.00 | 179.890 | 6918.00 | 101.42N | 2840.78W | ==> | 628.40 | |
| | | | | | | | | |
| 8400.00 | 90.00 | 179.890 | 6918.00 | 1.42N | 2840.58W | ==> | 725.02 | |
| 8500.00 | 90.00 | 179.890 | 6918.00 | 98.58S | 2840.38W | ==> | 821.64 | |
| 8600.00 | 90.00 | 179.890 | 6918.00 | 198.58S | 2840.18W | ==> | 918.27 | |
| 8700.00 | 90.00 | 179.890 | 6918.00 | 298.58S | 2839.98W | ==> | 1014.89 | |
| 8800.00 | 90.00 | 179.890 | 6918.00 | 398.58S | 2839.78W | ==> | 1111.52 | |
| | | | | | | | | |
| 8900.00 | 90.00 | 179.890 | 6918.00 | 498.58S | 2839.58W | ==> | 1208.14 | |
| 9000.00 | 90.00 | 179.890 | 6918.00 | 598.58S | 2839.39W | ==> | 1304.76 | |

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig (Planned Datum #1 5011.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 194.820 degrees
Bottom hole distance is 11025.19 Feet on azimuth 194.82 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 1-Dec-2017



SYSDRILL
Well Design Combined Report
Wellbore: W KNIGHT 21 (PWB)



| Interpolated Wellpath | | | | | | | | |
|-----------------------|----------|----------|---------|-----------|----------|-----------------------|-------------------------|-------------------------|
| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | Dogleg [deg/100ft] | Vertical Section[ft] | All Station Comments |
| 9100.00 | 90.00 | 179.890 | 6918.00 | 698.58S | 2839.19W | ==> | 1401.39 | |
| 9200.00 | 90.00 | 179.890 | 6918.00 | 798.58S | 2838.99W | ==> | 1498.01 | |
| 9300.00 | 90.00 | 179.890 | 6918.00 | 898.58S | 2838.79W | ==> | 1594.64 | |
| 9400.00 | 90.00 | 179.890 | 6918.00 | 998.58S | 2838.59W | ==> | 1691.26 | |
| 9500.00 | 90.00 | 179.890 | 6918.00 | 1098.58S | 2838.39W | ==> | 1787.88 | |
| 9600.00 | 90.00 | 179.890 | 6918.00 | 1198.58S | 2838.19W | ==> | 1884.51 | |
| 9700.00 | 90.00 | 179.890 | 6918.00 | 1298.58S | 2837.99W | ==> | 1981.13 | |
| 9800.00 | 90.00 | 179.890 | 6918.00 | 1398.57S | 2837.79W | ==> | 2077.76 | |
| 9900.00 | 90.00 | 179.890 | 6918.00 | 1498.57S | 2837.60W | ==> | 2174.38 | |
| 10000.00 | 90.00 | 179.890 | 6918.00 | 1598.57S | 2837.40W | ==> | 2271.00 | |
| 10100.00 | 90.00 | 179.890 | 6918.00 | 1698.57S | 2837.20W | ==> | 2367.63 | |
| 10200.00 | 90.00 | 179.890 | 6918.00 | 1798.57S | 2837.00W | ==> | 2464.25 | |
| 10300.00 | 90.00 | 179.890 | 6918.00 | 1898.57S | 2836.80W | ==> | 2560.88 | |
| 10400.00 | 90.00 | 179.890 | 6918.00 | 1998.57S | 2836.60W | ==> | 2657.50 | |
| 10500.00 | 90.00 | 179.890 | 6918.00 | 2098.57S | 2836.40W | ==> | 2754.12 | |
| 10600.00 | 90.00 | 179.890 | 6918.00 | 2198.57S | 2836.20W | ==> | 2850.75 | |
| 10700.00 | 90.00 | 179.890 | 6918.00 | 2298.57S | 2836.00W | ==> | 2947.37 | |
| 10800.00 | 90.00 | 179.890 | 6918.00 | 2398.57S | 2835.81W | ==> | 3044.00 | |
| 10900.00 | 90.00 | 179.890 | 6918.00 | 2498.57S | 2835.61W | ==> | 3140.62 | |
| 11000.00 | 90.00 | 179.890 | 6918.00 | 2598.57S | 2835.41W | ==> | 3237.24 | |
| 11100.00 | 90.00 | 179.890 | 6918.00 | 2698.57S | 2835.21W | ==> | 3333.87 | |
| 11200.00 | 90.00 | 179.890 | 6918.00 | 2798.57S | 2835.01W | ==> | 3430.49 | |
| 11300.00 | 90.00 | 179.890 | 6918.00 | 2898.57S | 2834.81W | ==> | 3527.12 | |
| 11400.00 | 90.00 | 179.890 | 6918.00 | 2998.57S | 2834.61W | ==> | 3623.74 | |
| 11500.00 | 90.00 | 179.890 | 6918.00 | 3098.57S | 2834.41W | ==> | 3720.36 | |
| 11600.00 | 90.00 | 179.890 | 6918.00 | 3198.57S | 2834.21W | ==> | 3816.99 | |
| 11700.00 | 90.00 | 179.890 | 6918.00 | 3298.57S | 2834.01W | ==> | 3913.61 | |
| 11800.00 | 90.00 | 179.890 | 6918.00 | 3398.57S | 2833.82W | ==> | 4010.24 | |
| 11900.00 | 90.00 | 179.890 | 6918.00 | 3498.57S | 2833.62W | ==> | 4106.86 | |
| 12000.00 | 90.00 | 179.890 | 6918.00 | 3598.57S | 2833.42W | ==> | 4203.48 | |
| 12100.00 | 90.00 | 179.890 | 6918.00 | 3698.57S | 2833.22W | ==> | 4300.11 | |
| 12200.00 | 90.00 | 179.890 | 6918.00 | 3798.57S | 2833.02W | ==> | 4396.73 | |
| 12300.00 | 90.00 | 179.890 | 6918.00 | 3898.57S | 2832.82W | ==> | 4493.36 | |
| 12400.00 | 90.00 | 179.890 | 6918.00 | 3998.57S | 2832.62W | ==> | 4589.98 | |
| 12500.00 | 90.00 | 179.890 | 6918.00 | 4098.57S | 2832.42W | ==> | 4686.60 | |
| 12600.00 | 90.00 | 179.890 | 6918.00 | 4198.57S | 2832.22W | ==> | 4783.23 | |
| 12700.00 | 90.00 | 179.890 | 6918.00 | 4298.57S | 2832.03W | ==> | 4879.85 | |
| 12800.00 | 90.00 | 179.890 | 6918.00 | 4398.57S | 2831.83W | ==> | 4976.48 | |
| 12900.00 | 90.00 | 179.890 | 6918.00 | 4498.57S | 2831.63W | ==> | 5073.10 | |
| 13000.00 | 90.00 | 179.890 | 6918.00 | 4598.57S | 2831.43W | ==> | 5169.72 | |
| 13100.00 | 90.00 | 179.890 | 6918.00 | 4698.57S | 2831.23W | ==> | 5266.35 | |
| 13200.00 | 90.00 | 179.890 | 6918.00 | 4798.57S | 2831.03W | ==> | 5362.97 | |
| 13300.00 | 90.00 | 179.890 | 6918.00 | 4898.57S | 2830.83W | ==> | 5459.60 | |
| 13400.00 | 90.00 | 179.890 | 6918.00 | 4998.57S | 2830.63W | ==> | 5556.22 | |
| 13500.00 | 90.00 | 179.890 | 6918.00 | 5098.57S | 2830.43W | ==> | 5652.84 | |
| 13600.00 | 90.00 | 179.890 | 6918.00 | 5198.57S | 2830.24W | ==> | 5749.47 | |
| 13700.00 | 90.00 | 179.890 | 6918.00 | 5298.57S | 2830.04W | ==> | 5846.09 | |
| 13800.00 | 90.00 | 179.890 | 6918.00 | 5398.57S | 2829.84W | ==> | 5942.72 | |
| 13900.00 | 90.00 | 179.890 | 6918.00 | 5498.57S | 2829.64W | ==> | 6039.34 | |
| 14000.00 | 90.00 | 179.890 | 6918.00 | 5598.57S | 2829.44W | ==> | 6135.96 | |
| 14100.00 | 90.00 | 179.890 | 6918.00 | 5698.57S | 2829.24W | ==> | 6232.59 | |
| 14200.00 | 90.00 | 179.890 | 6918.00 | 5798.57S | 2829.04W | ==> | 6329.21 | |
| 14300.00 | 90.00 | 179.890 | 6918.00 | 5898.57S | 2828.84W | ==> | 6425.84 | |
| 14400.00 | 90.00 | 179.890 | 6918.00 | 5998.57S | 2828.64W | ==> | 6522.46 | |
| 14500.00 | 90.00 | 179.890 | 6918.00 | 6098.57S | 2828.44W | ==> | 6619.08 | |
| 14600.00 | 90.00 | 179.890 | 6918.00 | 6198.57S | 2828.25W | ==> | 6715.71 | |
| 14700.00 | 90.00 | 179.890 | 6918.00 | 6298.57S | 2828.05W | ==> | 6812.33 | |
| 14800.00 | 90.00 | 179.890 | 6918.00 | 6398.56S | 2827.85W | ==> | 6908.96 | |
| 14900.00 | 90.00 | 179.890 | 6918.00 | 6498.56S | 2827.65W | ==> | 7005.58 | |

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Vertical Section is from 0.00N 0.00E on azimuth 194.820 degrees
Bottom hole distance is 11025.19 Feet on azimuth 194.82 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 1-Dec-2017



SYS DRILL
Well Design Combined Report
Wellbore: W KNIGHT 21 (PWB)



| Interpolated Wellpath | | | | | | | | |
|-----------------------|----------|----------|---------|-----------|----------|-----------------------|-------------------------|-------------------------|
| MD[ft] | Inc[deg] | Azi[deg] | TVD[ft] | North[ft] | East[ft] | Dogleg [deg/100ft] | Vertical Section[ft] | All Station Comments |
| 15000.00 | 90.00 | 179.890 | 6918.00 | 6598.56S | 2827.45W | ==> | 7102.20 | |
| 15100.00 | 90.00 | 179.890 | 6918.00 | 6698.56S | 2827.25W | ==> | 7198.83 | |
| 15200.00 | 90.00 | 179.890 | 6918.00 | 6798.56S | 2827.05W | ==> | 7295.45 | |
| 15300.00 | 90.00 | 179.890 | 6918.00 | 6898.56S | 2826.85W | ==> | 7392.08 | |
| 15400.00 | 90.00 | 179.890 | 6918.00 | 6998.56S | 2826.65W | ==> | 7488.70 | |
| 15500.00 | 90.00 | 179.890 | 6918.00 | 7098.56S | 2826.46W | ==> | 7585.32 | |
| 15600.00 | 90.00 | 179.890 | 6918.00 | 7198.56S | 2826.26W | ==> | 7681.95 | |
| 15700.00 | 90.00 | 179.890 | 6918.00 | 7298.56S | 2826.06W | ==> | 7778.57 | |
| 15800.00 | 90.00 | 179.890 | 6918.00 | 7398.56S | 2825.86W | ==> | 7875.20 | |
| 15900.00 | 90.00 | 179.890 | 6918.00 | 7498.56S | 2825.66W | ==> | 7971.82 | |
| 16000.00 | 90.00 | 179.890 | 6918.00 | 7598.56S | 2825.46W | ==> | 8068.44 | |
| 16100.00 | 90.00 | 179.890 | 6918.00 | 7698.56S | 2825.26W | ==> | 8165.07 | |
| 16200.00 | 90.00 | 179.890 | 6918.00 | 7798.56S | 2825.06W | ==> | 8261.69 | |
| 16300.00 | 90.00 | 179.890 | 6918.00 | 7898.56S | 2824.86W | ==> | 8358.32 | |
| 16400.00 | 90.00 | 179.890 | 6918.00 | 7998.56S | 2824.67W | ==> | 8454.94 | |
| 16500.00 | 90.00 | 179.890 | 6918.00 | 8098.56S | 2824.47W | ==> | 8551.56 | |
| 16600.00 | 90.00 | 179.890 | 6918.00 | 8198.56S | 2824.27W | ==> | 8648.19 | |
| 16700.00 | 90.00 | 179.890 | 6918.00 | 8298.56S | 2824.07W | ==> | 8744.81 | |
| 16800.00 | 90.00 | 179.890 | 6918.00 | 8398.56S | 2823.87W | ==> | 8841.44 | |
| 16900.00 | 90.00 | 179.890 | 6918.00 | 8498.56S | 2823.67W | ==> | 8938.06 | |
| 17000.00 | 90.00 | 179.890 | 6918.00 | 8598.56S | 2823.47W | ==> | 9034.68 | |
| 17100.00 | 90.00 | 179.890 | 6918.00 | 8698.56S | 2823.27W | ==> | 9131.31 | |
| 17200.00 | 90.00 | 179.890 | 6918.00 | 8798.56S | 2823.07W | ==> | 9227.93 | |
| 17300.00 | 90.00 | 179.890 | 6918.00 | 8898.56S | 2822.88W | ==> | 9324.56 | |
| 17400.00 | 90.00 | 179.890 | 6918.00 | 8998.56S | 2822.68W | ==> | 9421.18 | |
| 17500.00 | 90.00 | 179.890 | 6918.00 | 9098.56S | 2822.48W | ==> | 9517.80 | |
| 17600.00 | 90.00 | 179.890 | 6918.00 | 9198.56S | 2822.28W | ==> | 9614.43 | |
| 17700.00 | 90.00 | 179.890 | 6918.00 | 9298.56S | 2822.08W | ==> | 9711.05 | |
| 17800.00 | 90.00 | 179.890 | 6918.00 | 9398.56S | 2821.88W | ==> | 9807.68 | |
| 17900.00 | 90.00 | 179.890 | 6918.00 | 9498.56S | 2821.68W | ==> | 9904.30 | |
| 18000.00 | 90.00 | 179.890 | 6918.00 | 9598.56S | 2821.48W | ==> | 10000.92 | |
| 18100.00 | 90.00 | 179.890 | 6918.00 | 9698.56S | 2821.28W | ==> | 10097.55 | |
| 18200.00 | 90.00 | 179.890 | 6918.00 | 9798.56S | 2821.08W | ==> | 10194.17 | |
| 18300.00 | 90.00 | 179.890 | 6918.00 | 9898.56S | 2820.89W | ==> | 10290.80 | |
| 18400.00 | 90.00 | 179.890 | 6918.00 | 9998.56S | 2820.69W | ==> | 10387.42 | |
| 18500.00 | 90.00 | 179.890 | 6918.00 | 10098.56S | 2820.49W | ==> | 10484.04 | |
| 18600.00 | 90.00 | 179.890 | 6918.00 | 10198.56S | 2820.29W | ==> | 10580.67 | |
| 18700.00 | 90.00 | 179.890 | 6918.00 | 10298.56S | 2820.09W | ==> | 10677.29 | |
| 18800.00 | 90.00 | 179.890 | 6918.00 | 10398.56S | 2819.89W | ==> | 10773.92 | |
| 18900.00 | 90.00 | 179.890 | 6918.00 | 10498.56S | 2819.69W | ==> | 10870.54 | |
| 19000.00 | 90.00 | 179.890 | 6918.00 | 10598.56S | 2819.49W | ==> | 10967.16 | |
| 19060.05 | 90.00 | 179.890 | 6918.00 | 10658.61S | 2819.37W | ==> | 11025.19 | |

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Calculation method uses Minimum Curvature method
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| Targets | | | | | | | |
|--------------|-----------|----------|---------|-------------|---------------|------------|------------|
| Name | North[ft] | East[ft] | TVD[ft] | Latitude | Longitude | Northing | Easting |
| Knight 21 EP | 299.52N | 2841.17W | 6918.00 | 40.19878000 | -105.05222000 | 1315573.84 | 3125080.99 |
| Knight 21 BH | 10658.61S | 2819.37W | 6918.00 | 40.16870000 | -105.05234000 | 1304616.20 | 3125102.79 |

| Notes |
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