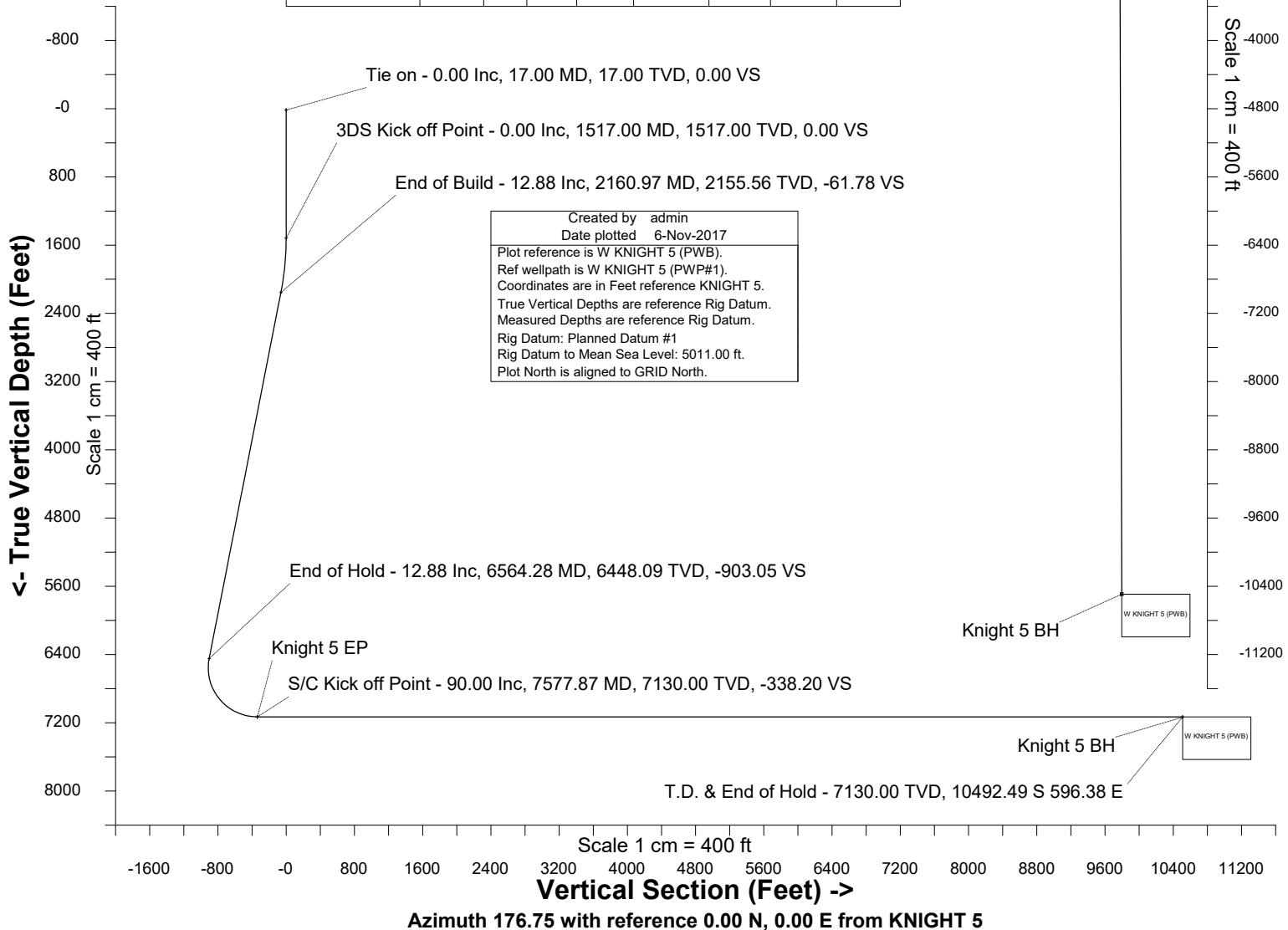
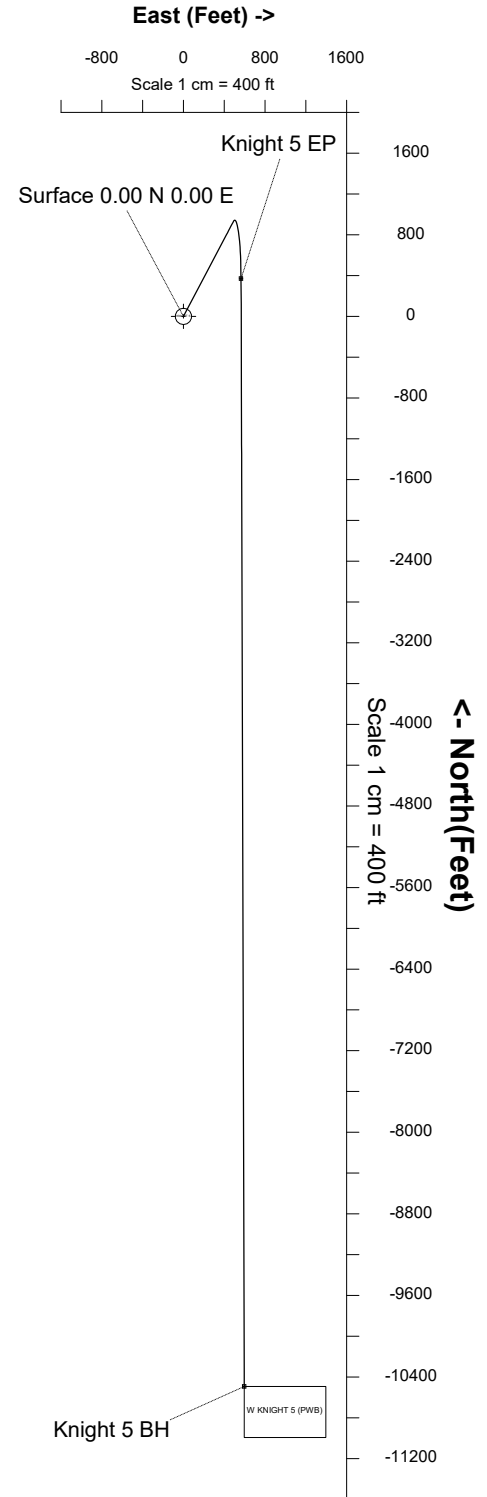


Cub Creek Energy, LLC

| | | | |
|---------------------|------------------------|-----------------|-------------------------|
| Location | Weld County, CO | Slot | KNIGHT 5 |
| Field | WATTENBERG | Well | W KNIGHT 5 |
| Installation | Knight Pad | Wellbore | W KNIGHT 5 (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 | 1517.00 | 0.00 | 27.75 | 1517.00 | S 0.00 | W 0.00 | 0.00 | 0.00 |
| End of Build | 2160.97 | 12.88 | 27.75 | 2155.56 | N 63.78 | E 33.56 | 2.00 | -61.78 |
| End of Hold | 6564.28 | 12.88 | 27.75 | 6448.09 | N 932.39 | E 490.56 | 0.00 | -903.05 |
| Target Knight 5 EP | 7577.87 | 90.00 | 179.84 | 7130.00 | N 370.87 | E 565.17 | 10.00 | -338.20 |
| T.D. & Target Kni... BH | 18441.28 | 90.00 | 179.84 | 7130.00 | S 10492.49 | E 596.38 | 0.00 | 10509.43 |





SYSDRILL
Well Design Combined Report
Wellbore: W KNIGHT 5 (PWB)



Wellhead Details

| Name | Latitude | Longitude | Northing | Easting | North | East | Slot Elevation Above Ground |
|----------|-------------|---------------|--------------|--------------|--------|-------|-----------------------------|
| KNIGHT 5 | 40.19788000 | -105.04197000 | 1315260.6177 | 3127945.8500 | 58.29S | 0.30E | 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 | 1315260.62 | 3127945.85 |
| 1517.00 | 0.00 | 27.750 | 1517.00 | 0.00N | 0.00E | ==> | 0.00 | 1315260.62 | 3127945.85 |
| 2160.97 | 12.88 | 27.750 | 2155.56 | 63.78N | 33.56E | 2.00 | -61.78 | 1315324.40 | 3127979.41 |
| 6564.28 | 12.88 | 27.750 | 6448.09 | 932.39N | 490.56E | ==> | -903.05 | 1316192.97 | 3128436.39 |
| 7577.87 | 90.00 | 179.840 | 7130.00 | 370.87N | 565.17E | 10.00 | -338.20 | 1315631.47 | 3128511.00 |
| 18441.28 | 90.00 | 179.840 | 7130.00 | 10492.49S | 596.38E | ==> | 10509.43 | 1304768.59 | 3128542.20 |

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 | 1.66 | 27.750 | 1599.99 | 1.06N | 0.56E | 2.00 | -1.03 | |
| 1700.00 | 3.66 | 27.750 | 1699.88 | 5.17N | 2.72E | 2.00 | -5.01 | |
| 1800.00 | 5.66 | 27.750 | 1799.54 | 12.36N | 6.50E | 2.00 | -11.97 | |
| 1900.00 | 7.66 | 27.750 | 1898.86 | 22.62N | 11.90E | 2.00 | -21.91 | |
| 2000.00 | 9.66 | 27.750 | 1997.71 | 35.95N | 18.91E | 2.00 | -34.82 | |
| 2100.00 | 11.66 | 27.750 | 2095.98 | 52.32N | 27.53E | 2.00 | -50.67 | |
| 2200.00 | 12.88 | 27.750 | 2193.61 | 71.48N | 37.61E | ==> | -69.23 | |
| 2300.00 | 12.88 | 27.750 | 2291.09 | 91.21N | 47.99E | ==> | -88.34 | |
| 2400.00 | 12.88 | 27.750 | 2388.58 | 110.94N | 58.37E | ==> | -107.45 | |
| 2500.00 | 12.88 | 27.750 | 2486.06 | 130.66N | 68.75E | ==> | -126.55 | |
| 2600.00 | 12.88 | 27.750 | 2583.55 | 150.39N | 79.12E | ==> | -145.66 | |
| 2700.00 | 12.88 | 27.750 | 2681.03 | 170.12N | 89.50E | ==> | -164.76 | |
| 2800.00 | 12.88 | 27.750 | 2778.51 | 189.84N | 99.88E | ==> | -183.87 | |
| 2900.00 | 12.88 | 27.750 | 2876.00 | 209.57N | 110.26E | ==> | -202.97 | |
| 3000.00 | 12.88 | 27.750 | 2973.48 | 229.29N | 120.64E | ==> | -222.08 | |
| 3100.00 | 12.88 | 27.750 | 3070.97 | 249.02N | 131.02E | ==> | -241.18 | |

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5011.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 176.750 degrees
Bottom hole distance is 10509.43 Feet on azimuth 176.75 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 5 (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 | 12.88 | 27.750 | 3168.45 | 268.75N | 141.40E | ==> | -260.29 | |
| 3300.00 | 12.88 | 27.750 | 3265.93 | 288.47N | 151.77E | ==> | -279.40 | |
| | | | | | | | | |
| 3400.00 | 12.88 | 27.750 | 3363.42 | 308.20N | 162.15E | ==> | -298.50 | |
| 3500.00 | 12.88 | 27.750 | 3460.90 | 327.93N | 172.53E | ==> | -317.61 | |
| 3600.00 | 12.88 | 27.750 | 3558.39 | 347.65N | 182.91E | ==> | -336.71 | |
| 3700.00 | 12.88 | 27.750 | 3655.87 | 367.38N | 193.29E | ==> | -355.82 | |
| 3800.00 | 12.88 | 27.750 | 3753.35 | 387.10N | 203.67E | ==> | -374.92 | |
| | | | | | | | | |
| 3900.00 | 12.88 | 27.750 | 3850.84 | 406.83N | 214.05E | ==> | -394.03 | |
| 4000.00 | 12.88 | 27.750 | 3948.32 | 426.56N | 224.42E | ==> | -413.13 | |
| 4100.00 | 12.88 | 27.750 | 4045.81 | 446.28N | 234.80E | ==> | -432.24 | |
| 4200.00 | 12.88 | 27.750 | 4143.29 | 466.01N | 245.18E | ==> | -451.35 | |
| 4300.00 | 12.88 | 27.750 | 4240.78 | 485.74N | 255.56E | ==> | -470.45 | |
| | | | | | | | | |
| 4400.00 | 12.88 | 27.750 | 4338.26 | 505.46N | 265.94E | ==> | -489.56 | |
| 4500.00 | 12.88 | 27.750 | 4435.74 | 525.19N | 276.32E | ==> | -508.66 | |
| 4600.00 | 12.88 | 27.750 | 4533.23 | 544.92N | 286.70E | ==> | -527.77 | |
| 4700.00 | 12.88 | 27.750 | 4630.71 | 564.64N | 297.08E | ==> | -546.87 | |
| 4800.00 | 12.88 | 27.750 | 4728.20 | 584.37N | 307.45E | ==> | -565.98 | |
| | | | | | | | | |
| 4900.00 | 12.88 | 27.750 | 4825.68 | 604.09N | 317.83E | ==> | -585.08 | |
| 5000.00 | 12.88 | 27.750 | 4923.16 | 623.82N | 328.21E | ==> | -604.19 | |
| 5100.00 | 12.88 | 27.750 | 5020.65 | 643.55N | 338.59E | ==> | -623.30 | |
| 5200.00 | 12.88 | 27.750 | 5118.13 | 663.27N | 348.97E | ==> | -642.40 | |
| 5300.00 | 12.88 | 27.750 | 5215.62 | 683.00N | 359.35E | ==> | -661.51 | |
| | | | | | | | | |
| 5400.00 | 12.88 | 27.750 | 5313.10 | 702.73N | 369.73E | ==> | -680.61 | |
| 5500.00 | 12.88 | 27.750 | 5410.58 | 722.45N | 380.10E | ==> | -699.72 | |
| 5600.00 | 12.88 | 27.750 | 5508.07 | 742.18N | 390.48E | ==> | -718.82 | |
| 5700.00 | 12.88 | 27.750 | 5605.55 | 761.90N | 400.86E | ==> | -737.93 | |
| 5800.00 | 12.88 | 27.750 | 5703.04 | 781.63N | 411.24E | ==> | -757.04 | |
| | | | | | | | | |
| 5900.00 | 12.88 | 27.750 | 5800.52 | 801.36N | 421.62E | ==> | -776.14 | |
| 6000.00 | 12.88 | 27.750 | 5898.01 | 821.08N | 432.00E | ==> | -795.25 | |
| 6100.00 | 12.88 | 27.750 | 5995.49 | 840.81N | 442.38E | ==> | -814.35 | |
| 6200.00 | 12.88 | 27.750 | 6092.97 | 860.54N | 452.75E | ==> | -833.46 | |
| 6300.00 | 12.88 | 27.750 | 6190.46 | 880.26N | 463.13E | ==> | -852.56 | |
| | | | | | | | | |
| 6400.00 | 12.88 | 27.750 | 6287.94 | 899.99N | 473.51E | ==> | -871.67 | |
| 6500.00 | 12.88 | 27.750 | 6385.43 | 919.72N | 483.89E | ==> | -890.77 | |
| 6600.00 | 9.89 | 37.730 | 6483.11 | 938.35N | 494.29E | 10.00 | -908.78 | |
| 6700.00 | 6.50 | 109.790 | 6582.29 | 943.23N | 504.90E | 10.00 | -913.06 | |
| 6800.00 | 13.64 | 153.650 | 6680.81 | 930.72N | 515.48E | 10.00 | -899.97 | |
| | | | | | | | | |
| 6900.00 | 23.00 | 165.230 | 6775.67 | 901.20N | 525.72E | 10.00 | -869.91 | |
| 7000.00 | 32.73 | 170.250 | 6863.99 | 855.55N | 535.30E | 10.00 | -823.80 | |
| 7100.00 | 42.57 | 173.140 | 6943.07 | 795.18N | 543.94E | 10.00 | -763.03 | |
| 7200.00 | 52.46 | 175.120 | 7010.53 | 721.90N | 551.37E | 10.00 | -689.45 | |
| 7300.00 | 62.38 | 176.630 | 7064.30 | 637.96N | 557.37E | 10.00 | -605.30 | |
| | | | | | | | | |
| 7400.00 | 72.32 | 177.880 | 7102.77 | 545.89N | 561.75E | 10.00 | -513.13 | |
| 7500.00 | 82.26 | 179.000 | 7124.75 | 448.50N | 564.39E | 10.00 | -415.75 | |
| 7600.00 | 90.00 | 179.840 | 7130.00 | 348.74N | 565.23E | ==> | -316.11 | |
| 7700.00 | 90.00 | 179.840 | 7130.00 | 248.75N | 565.52E | ==> | -216.25 | |
| 7800.00 | 90.00 | 179.840 | 7130.00 | 148.75N | 565.81E | ==> | -116.40 | |
| | | | | | | | | |
| 7900.00 | 90.00 | 179.840 | 7130.00 | 48.75N | 566.10E | ==> | -16.54 | |
| 8000.00 | 90.00 | 179.840 | 7130.00 | 51.25S | 566.38E | ==> | 83.31 | |
| 8100.00 | 90.00 | 179.840 | 7130.00 | 151.25S | 566.67E | ==> | 183.17 | |
| 8200.00 | 90.00 | 179.840 | 7130.00 | 251.25S | 566.96E | ==> | 283.02 | |
| 8300.00 | 90.00 | 179.840 | 7130.00 | 351.25S | 567.24E | ==> | 382.88 | |
| | | | | | | | | |
| 8400.00 | 90.00 | 179.840 | 7130.00 | 451.25S | 567.53E | ==> | 482.73 | |
| 8500.00 | 90.00 | 179.840 | 7130.00 | 551.25S | 567.82E | ==> | 582.59 | |
| 8600.00 | 90.00 | 179.840 | 7130.00 | 651.25S | 568.11E | ==> | 682.44 | |
| 8700.00 | 90.00 | 179.840 | 7130.00 | 751.25S | 568.39E | ==> | 782.29 | |
| 8800.00 | 90.00 | 179.840 | 7130.00 | 851.25S | 568.68E | ==> | 882.15 | |
| | | | | | | | | |
| 8900.00 | 90.00 | 179.840 | 7130.00 | 951.25S | 568.97E | ==> | 982.00 | |
| 9000.00 | 90.00 | 179.840 | 7130.00 | 1051.25S | 569.26E | ==> | 1081.86 | |

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5011.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 176.750 degrees
Bottom hole distance is 10509.43 Feet on azimuth 176.75 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 5 (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 | 179.840 | 7130.00 | 1151.25S | 569.54E | ==> | 1181.71 | |
| 9200.00 | 90.00 | 179.840 | 7130.00 | 1251.25S | 569.83E | ==> | 1281.57 | |
| 9300.00 | 90.00 | 179.840 | 7130.00 | 1351.25S | 570.12E | ==> | 1381.42 | |
| 9400.00 | 90.00 | 179.840 | 7130.00 | 1451.25S | 570.41E | ==> | 1481.28 | |
| 9500.00 | 90.00 | 179.840 | 7130.00 | 1551.25S | 570.69E | ==> | 1581.13 | |
| 9600.00 | 90.00 | 179.840 | 7130.00 | 1651.25S | 570.98E | ==> | 1680.99 | |
| 9700.00 | 90.00 | 179.840 | 7130.00 | 1751.25S | 571.27E | ==> | 1780.84 | |
| 9800.00 | 90.00 | 179.840 | 7130.00 | 1851.25S | 571.55E | ==> | 1880.70 | |
| 9900.00 | 90.00 | 179.840 | 7130.00 | 1951.25S | 571.84E | ==> | 1980.55 | |
| 10000.00 | 90.00 | 179.840 | 7130.00 | 2051.25S | 572.13E | ==> | 2080.41 | |
| 10100.00 | 90.00 | 179.840 | 7130.00 | 2151.24S | 572.42E | ==> | 2180.26 | |
| 10200.00 | 90.00 | 179.840 | 7130.00 | 2251.24S | 572.70E | ==> | 2280.12 | |
| 10300.00 | 90.00 | 179.840 | 7130.00 | 2351.24S | 572.99E | ==> | 2379.97 | |
| 10400.00 | 90.00 | 179.840 | 7130.00 | 2451.24S | 573.28E | ==> | 2479.83 | |
| 10500.00 | 90.00 | 179.840 | 7130.00 | 2551.24S | 573.57E | ==> | 2579.68 | |
| 10600.00 | 90.00 | 179.840 | 7130.00 | 2651.24S | 573.85E | ==> | 2679.54 | |
| 10700.00 | 90.00 | 179.840 | 7130.00 | 2751.24S | 574.14E | ==> | 2779.39 | |
| 10800.00 | 90.00 | 179.840 | 7130.00 | 2851.24S | 574.43E | ==> | 2879.24 | |
| 10900.00 | 90.00 | 179.840 | 7130.00 | 2951.24S | 574.71E | ==> | 2979.10 | |
| 11000.00 | 90.00 | 179.840 | 7130.00 | 3051.24S | 575.00E | ==> | 3078.95 | |
| 11100.00 | 90.00 | 179.840 | 7130.00 | 3151.24S | 575.29E | ==> | 3178.81 | |
| 11200.00 | 90.00 | 179.840 | 7130.00 | 3251.24S | 575.58E | ==> | 3278.66 | |
| 11300.00 | 90.00 | 179.840 | 7130.00 | 3351.24S | 575.86E | ==> | 3378.52 | |
| 11400.00 | 90.00 | 179.840 | 7130.00 | 3451.24S | 576.15E | ==> | 3478.37 | |
| 11500.00 | 90.00 | 179.840 | 7130.00 | 3551.24S | 576.44E | ==> | 3578.23 | |
| 11600.00 | 90.00 | 179.840 | 7130.00 | 3651.24S | 576.73E | ==> | 3678.08 | |
| 11700.00 | 90.00 | 179.840 | 7130.00 | 3751.24S | 577.01E | ==> | 3777.94 | |
| 11800.00 | 90.00 | 179.840 | 7130.00 | 3851.24S | 577.30E | ==> | 3877.79 | |
| 11900.00 | 90.00 | 179.840 | 7130.00 | 3951.24S | 577.59E | ==> | 3977.65 | |
| 12000.00 | 90.00 | 179.840 | 7130.00 | 4051.24S | 577.87E | ==> | 4077.50 | |
| 12100.00 | 90.00 | 179.840 | 7130.00 | 4151.24S | 578.16E | ==> | 4177.36 | |
| 12200.00 | 90.00 | 179.840 | 7130.00 | 4251.24S | 578.45E | ==> | 4277.21 | |
| 12300.00 | 90.00 | 179.840 | 7130.00 | 4351.24S | 578.74E | ==> | 4377.07 | |
| 12400.00 | 90.00 | 179.840 | 7130.00 | 4451.24S | 579.02E | ==> | 4476.92 | |
| 12500.00 | 90.00 | 179.840 | 7130.00 | 4551.24S | 579.31E | ==> | 4576.78 | |
| 12600.00 | 90.00 | 179.840 | 7130.00 | 4651.23S | 579.60E | ==> | 4676.63 | |
| 12700.00 | 90.00 | 179.840 | 7130.00 | 4751.23S | 579.89E | ==> | 4776.48 | |
| 12800.00 | 90.00 | 179.840 | 7130.00 | 4851.23S | 580.17E | ==> | 4876.34 | |
| 12900.00 | 90.00 | 179.840 | 7130.00 | 4951.23S | 580.46E | ==> | 4976.19 | |
| 13000.00 | 90.00 | 179.840 | 7130.00 | 5051.23S | 580.75E | ==> | 5076.05 | |
| 13100.00 | 90.00 | 179.840 | 7130.00 | 5151.23S | 581.03E | ==> | 5175.90 | |
| 13200.00 | 90.00 | 179.840 | 7130.00 | 5251.23S | 581.32E | ==> | 5275.76 | |
| 13300.00 | 90.00 | 179.840 | 7130.00 | 5351.23S | 581.61E | ==> | 5375.61 | |
| 13400.00 | 90.00 | 179.840 | 7130.00 | 5451.23S | 581.90E | ==> | 5475.47 | |
| 13500.00 | 90.00 | 179.840 | 7130.00 | 5551.23S | 582.18E | ==> | 5575.32 | |
| 13600.00 | 90.00 | 179.840 | 7130.00 | 5651.23S | 582.47E | ==> | 5675.18 | |
| 13700.00 | 90.00 | 179.840 | 7130.00 | 5751.23S | 582.76E | ==> | 5775.03 | |
| 13800.00 | 90.00 | 179.840 | 7130.00 | 5851.23S | 583.05E | ==> | 5874.89 | |
| 13900.00 | 90.00 | 179.840 | 7130.00 | 5951.23S | 583.33E | ==> | 5974.74 | |
| 14000.00 | 90.00 | 179.840 | 7130.00 | 6051.23S | 583.62E | ==> | 6074.60 | |
| 14100.00 | 90.00 | 179.840 | 7130.00 | 6151.23S | 583.91E | ==> | 6174.45 | |
| 14200.00 | 90.00 | 179.840 | 7130.00 | 6251.23S | 584.19E | ==> | 6274.31 | |
| 14300.00 | 90.00 | 179.840 | 7130.00 | 6351.23S | 584.48E | ==> | 6374.16 | |
| 14400.00 | 90.00 | 179.840 | 7130.00 | 6451.23S | 584.77E | ==> | 6474.02 | |
| 14500.00 | 90.00 | 179.840 | 7130.00 | 6551.23S | 585.06E | ==> | 6573.87 | |
| 14600.00 | 90.00 | 179.840 | 7130.00 | 6651.23S | 585.34E | ==> | 6673.73 | |
| 14700.00 | 90.00 | 179.840 | 7130.00 | 6751.23S | 585.63E | ==> | 6773.58 | |
| 14800.00 | 90.00 | 179.840 | 7130.00 | 6851.23S | 585.92E | ==> | 6873.43 | |
| 14900.00 | 90.00 | 179.840 | 7130.00 | 6951.23S | 586.21E | ==> | 6973.29 | |

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5011.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 176.750 degrees
Bottom hole distance is 10509.43 Feet on azimuth 176.75 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 5 (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 | 179.840 | 7130.00 | 7051.22S | 586.49E | ==> | 7073.14 | |
| 15100.00 | 90.00 | 179.840 | 7130.00 | 7151.22S | 586.78E | ==> | 7173.00 | |
| 15200.00 | 90.00 | 179.840 | 7130.00 | 7251.22S | 587.07E | ==> | 7272.85 | |
| 15300.00 | 90.00 | 179.840 | 7130.00 | 7351.22S | 587.35E | ==> | 7372.71 | |
| 15400.00 | 90.00 | 179.840 | 7130.00 | 7451.22S | 587.64E | ==> | 7472.56 | |
| 15500.00 | 90.00 | 179.840 | 7130.00 | 7551.22S | 587.93E | ==> | 7572.42 | |
| 15600.00 | 90.00 | 179.840 | 7130.00 | 7651.22S | 588.22E | ==> | 7672.27 | |
| 15700.00 | 90.00 | 179.840 | 7130.00 | 7751.22S | 588.50E | ==> | 7772.13 | |
| 15800.00 | 90.00 | 179.840 | 7130.00 | 7851.22S | 588.79E | ==> | 7871.98 | |
| 15900.00 | 90.00 | 179.840 | 7130.00 | 7951.22S | 589.08E | ==> | 7971.84 | |
| 16000.00 | 90.00 | 179.840 | 7130.00 | 8051.22S | 589.37E | ==> | 8071.69 | |
| 16100.00 | 90.00 | 179.840 | 7130.00 | 8151.22S | 589.65E | ==> | 8171.55 | |
| 16200.00 | 90.00 | 179.840 | 7130.00 | 8251.22S | 589.94E | ==> | 8271.40 | |
| 16300.00 | 90.00 | 179.840 | 7130.00 | 8351.22S | 590.23E | ==> | 8371.26 | |
| 16400.00 | 90.00 | 179.840 | 7130.00 | 8451.22S | 590.51E | ==> | 8471.11 | |
| 16500.00 | 90.00 | 179.840 | 7130.00 | 8551.22S | 590.80E | ==> | 8570.97 | |
| 16600.00 | 90.00 | 179.840 | 7130.00 | 8651.22S | 591.09E | ==> | 8670.82 | |
| 16700.00 | 90.00 | 179.840 | 7130.00 | 8751.22S | 591.38E | ==> | 8770.67 | |
| 16800.00 | 90.00 | 179.840 | 7130.00 | 8851.22S | 591.66E | ==> | 8870.53 | |
| 16900.00 | 90.00 | 179.840 | 7130.00 | 8951.22S | 591.95E | ==> | 8970.38 | |
| 17000.00 | 90.00 | 179.840 | 7130.00 | 9051.22S | 592.24E | ==> | 9070.24 | |
| 17100.00 | 90.00 | 179.840 | 7130.00 | 9151.22S | 592.53E | ==> | 9170.09 | |
| 17200.00 | 90.00 | 179.840 | 7130.00 | 9251.22S | 592.81E | ==> | 9269.95 | |
| 17300.00 | 90.00 | 179.840 | 7130.00 | 9351.22S | 593.10E | ==> | 9369.80 | |
| 17400.00 | 90.00 | 179.840 | 7130.00 | 9451.21S | 593.39E | ==> | 9469.66 | |
| 17500.00 | 90.00 | 179.840 | 7130.00 | 9551.21S | 593.68E | ==> | 9569.51 | |
| 17600.00 | 90.00 | 179.840 | 7130.00 | 9651.21S | 593.96E | ==> | 9669.37 | |
| 17700.00 | 90.00 | 179.840 | 7130.00 | 9751.21S | 594.25E | ==> | 9769.22 | |
| 17800.00 | 90.00 | 179.840 | 7130.00 | 9851.21S | 594.54E | ==> | 9869.08 | |
| 17900.00 | 90.00 | 179.840 | 7130.00 | 9951.21S | 594.82E | ==> | 9968.93 | |
| 18000.00 | 90.00 | 179.840 | 7130.00 | 10051.21S | 595.11E | ==> | 10068.79 | |
| 18100.00 | 90.00 | 179.840 | 7130.00 | 10151.21S | 595.40E | ==> | 10168.64 | |
| 18200.00 | 90.00 | 179.840 | 7130.00 | 10251.21S | 595.69E | ==> | 10268.50 | |
| 18300.00 | 90.00 | 179.840 | 7130.00 | 10351.21S | 595.97E | ==> | 10368.35 | |
| 18400.00 | 90.00 | 179.840 | 7130.00 | 10451.21S | 596.26E | ==> | 10468.21 | |
| 18441.28 | 90.00 | 179.840 | 7130.00 | 10492.49S | 596.38E | ==> | 10509.43 | |

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 176.750 degrees
Bottom hole distance is 10509.43 Feet on azimuth 176.75 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Microsoft
Date Printed: 1-Dec-2017



| Targets | | | | | | | |
|-------------|-----------|----------|---------|-------------|---------------|------------|------------|
| Name | North[ft] | East[ft] | TVD[ft] | Latitude | Longitude | Northing | Easting |
| Knight 5 EP | 370.87N | 565.17E | 7130.00 | 40.19889000 | -105.03994000 | 1315631.47 | 3128511.00 |
| Knight 5 BH | 10492.49S | 596.38E | 7130.00 | 40.16907000 | -105.04003000 | 1304768.59 | 3128542.20 |

| Notes |
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