

1 General

1.1 Customer Information

| | |
|----------------|--------------|
| Company | PICEANCE VLY |
| Representative | |
| Address | |

1.2 Well/Wellbore Information

| | | | |
|--------------------------|--------------------------------------|----------------------|---------------|
| Well | RWF 421-4 | Wellbore No. | 00 |
| Wellbore Legal Name | RWF 421-4 | Common Wellbore Name | RWF 421-4 |
| Project | RU 04-07S-094W | Site | RMV 108-4 Pad |
| Vertical Section Azimuth | 236.32 (°) | North reference | True |
| Origin N/S | | Origin E/W | |
| Spud date | 11/22/2013 | UWI | RWF 421-4 |
| Active datum | KB @5,820.0ft (above Mean Sea Level) | | |

2 Survey Name

2.1 Survey Name: Survey #1

| | | | |
|--------------|------------|----------|--|
| Survey Name | Survey #1 | Company | |
| Date Started | 11/22/2013 | Ended | |
| Tool Name | MWD | Engineer | |

2.1.1 Tie On Point

| MD (ft) | Inc. (°) | Azi. (°) | TVD (ft) | N/S (ft) | E/W (ft) |
|---------|----------|----------|----------|----------|----------|
| 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

2.1.2 Survey Stations

| Date | Type | MD (ft) | Inc. (°) | Azi. (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. sec. (ft) | DLS (°/100usft) | Build Rate (°/100usft) | Turn (°/100usft) | Tface (°) |
|------------|--------|---------|----------|----------|----------|----------|----------|--------------|-----------------|------------------------|------------------|-----------|
| 11/22/2013 | Tie On | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11/22/2013 | NORMAL | 103.0 | 1.14 | 304.37 | 102.99 | 0.58 | -0.85 | 0.38 | 1.11 | 1.11 | 0.00 | 304.37 |
| | NORMAL | 134.0 | 1.06 | 288.72 | 133.99 | 0.84 | -1.37 | 0.67 | 1.00 | -0.26 | -50.48 | 247.35 |
| | NORMAL | 163.0 | 1.58 | 282.04 | 162.98 | 1.01 | -2.02 | 1.12 | 1.87 | 1.79 | -23.03 | 340.16 |
| | NORMAL | 194.0 | 1.50 | 272.29 | 193.97 | 1.12 | -2.84 | 1.74 | 0.88 | -0.26 | -31.45 | 248.19 |
| | NORMAL | 224.0 | 2.73 | 272.72 | 223.95 | 1.17 | -3.95 | 2.64 | 4.10 | 4.10 | 1.43 | 0.95 |
| | NORMAL | 254.0 | 2.73 | 266.04 | 253.91 | 1.15 | -5.37 | 3.83 | 1.06 | 0.00 | -22.27 | 266.66 |
| | NORMAL | 284.0 | 3.61 | 262.35 | 283.87 | 0.98 | -7.02 | 5.30 | 3.01 | 2.93 | -12.30 | 345.10 |
| | NORMAL | 314.0 | 3.96 | 252.69 | 313.80 | 0.54 | -8.95 | 7.14 | 2.42 | 1.17 | -32.20 | 293.88 |
| | NORMAL | 344.0 | 4.22 | 245.21 | 343.73 | -0.23 | -10.94 | 9.23 | 1.98 | 0.87 | -24.93 | 292.22 |
| | NORMAL | 374.0 | 5.45 | 244.42 | 373.62 | -1.30 | -13.22 | 11.73 | 4.11 | 4.10 | -2.63 | 356.51 |
| | NORMAL | 404.0 | 5.81 | 242.40 | 403.47 | -2.62 | -15.86 | 14.65 | 1.37 | 1.20 | -6.73 | 330.16 |
| | NORMAL | 434.0 | 6.69 | 237.30 | 433.30 | -4.27 | -18.67 | 17.91 | 3.47 | 2.93 | -17.00 | 325.20 |
| | NORMAL | 465.0 | 8.27 | 238.80 | 464.03 | -6.40 | -22.10 | 21.94 | 5.14 | 5.10 | 4.84 | 7.79 |
| | NORMAL | 495.0 | 10.56 | 237.48 | 493.63 | -9.00 | -26.26 | 26.84 | 7.67 | 7.63 | -4.40 | 353.96 |
| 11/23/2013 | NORMAL | 600.0 | 12.78 | 234.41 | 596.45 | -20.93 | -43.82 | 48.07 | 2.19 | 2.11 | -2.92 | 342.86 |
| | NORMAL | 690.0 | 15.25 | 238.01 | 683.77 | -33.00 | -61.96 | 69.66 | 2.91 | 2.74 | 4.00 | 21.20 |
| | NORMAL | 779.0 | 18.59 | 231.86 | 768.91 | -47.96 | -83.05 | 95.71 | 4.25 | 3.75 | -6.91 | 328.84 |
| | NORMAL | 870.0 | 20.92 | 234.93 | 854.55 | -66.26 | -107.76 | 126.42 | 2.80 | 2.56 | 3.37 | 25.46 |
| | NORMAL | 961.0 | 22.20 | 234.49 | 939.18 | -85.58 | -135.05 | 159.84 | 1.42 | 1.41 | -0.48 | 352.60 |
| | NORMAL | 1,056.0 | 23.12 | 233.44 | 1,026.85 | -107.12 | -164.65 | 196.41 | 1.06 | 0.97 | -1.11 | 335.78 |

2.1.2 Survey Stations (Continued)

| Date | Type | MD (ft) | Inc. (°) | Azi. (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. sec. (ft) | DLS (°/100usft) | Build Rate (°/100usft) | Turn (°/100usft) | Tface (°) |
|------------|--------|------------|-------------|-------------|-------------|-------------|-------------|-----------------|--------------------|---------------------------|---------------------|--------------|
| 11/23/2013 | NORMAL | 1,135.0 | 24.09 | 232.65 | 1,099.24 | -126.14 | -189.92 | 227.99 | 1.29 | 1.23 | -1.00 | 341.58 |
| 11/24/2013 | NORMAL | 1,248.0 | 24.61 | 233.35 | 1,202.18 | -154.17 | -227.13 | 274.50 | 0.53 | 0.46 | 0.62 | 29.35 |
| | NORMAL | 1,344.0 | 22.55 | 232.91 | 1,290.16 | -177.21 | -257.85 | 312.85 | 2.15 | -2.15 | -0.46 | 184.68 |
| | NORMAL | 1,440.0 | 20.40 | 234.32 | 1,379.50 | -198.07 | -286.13 | 347.95 | 2.30 | -2.24 | 1.47 | 167.15 |
| | NORMAL | 1,535.0 | 19.03 | 235.90 | 1,468.93 | -216.41 | -312.41 | 379.98 | 1.55 | -1.44 | 1.66 | 159.48 |
| | NORMAL | 1,630.0 | 18.33 | 240.47 | 1,558.93 | -232.46 | -338.23 | 410.37 | 1.71 | -0.74 | 4.81 | 117.71 |
| | NORMAL | 1,725.0 | 17.76 | 241.26 | 1,649.25 | -246.79 | -363.94 | 439.71 | 0.65 | -0.60 | 0.83 | 157.14 |
| | NORMAL | 1,821.0 | 17.85 | 241.17 | 1,740.65 | -260.92 | -389.66 | 468.95 | 0.10 | 0.09 | -0.09 | 342.95 |
| | NORMAL | 1,916.0 | 19.03 | 239.42 | 1,830.78 | -275.83 | -415.75 | 498.93 | 1.37 | 1.24 | -1.84 | 334.04 |
| 11/25/2013 | NORMAL | 2,011.0 | 19.47 | 236.51 | 1,920.47 | -292.44 | -442.29 | 530.23 | 1.11 | 0.46 | -3.06 | 293.26 |
| 11/25/2013 | NORMAL | 2,107.0 | 19.30 | 236.08 | 2,011.02 | -310.12 | -468.80 | 562.09 | 0.23 | -0.18 | -0.45 | 219.81 |
| | NORMAL | 2,203.0 | 19.08 | 234.67 | 2,101.69 | -328.05 | -494.77 | 593.64 | 0.53 | -0.23 | -1.47 | 243.94 |
| | NORMAL | 2,298.0 | 20.53 | 237.92 | 2,191.07 | -345.88 | -521.55 | 625.81 | 1.92 | 1.53 | 3.42 | 38.75 |
| | NORMAL | 2,393.0 | 20.48 | 238.18 | 2,280.05 | -363.49 | -549.79 | 659.08 | 0.11 | -0.05 | 0.27 | 118.89 |
| | NORMAL | 2,488.0 | 20.61 | 237.22 | 2,369.01 | -381.30 | -577.97 | 692.41 | 0.38 | 0.14 | -1.01 | 290.65 |
| | NORMAL | 2,584.0 | 20.48 | 238.01 | 2,458.91 | -399.35 | -606.42 | 726.09 | 0.32 | -0.14 | 0.82 | 115.49 |
| | NORMAL | 2,680.0 | 18.73 | 237.22 | 2,549.34 | -416.59 | -633.62 | 758.29 | 1.84 | -1.82 | -0.82 | 188.24 |
| | NORMAL | 2,774.0 | 17.23 | 237.04 | 2,638.74 | -432.34 | -657.99 | 787.30 | 1.60 | -1.60 | -0.19 | 182.04 |
| | NORMAL | 2,869.0 | 20.00 | 236.78 | 2,728.77 | -448.90 | -683.39 | 817.62 | 2.92 | 2.92 | -0.27 | 358.16 |
| | NORMAL | 2,965.0 | 19.47 | 237.39 | 2,819.13 | -466.51 | -710.60 | 850.03 | 0.59 | -0.55 | 0.64 | 159.05 |
| | NORMAL | 3,061.0 | 20.84 | 234.41 | 2,909.25 | -485.07 | -737.97 | 883.10 | 1.78 | 1.43 | -3.10 | 321.74 |
| | NORMAL | 3,156.0 | 20.92 | 234.05 | 2,998.01 | -504.87 | -765.44 | 916.94 | 0.16 | 0.08 | -0.38 | 301.78 |
| | NORMAL | 3,252.0 | 20.66 | 233.26 | 3,087.76 | -525.06 | -792.89 | 950.97 | 0.40 | -0.27 | -0.82 | 226.79 |
| 11/26/2013 | NORMAL | 3,347.0 | 20.88 | 237.31 | 3,176.59 | -544.23 | -820.57 | 984.64 | 1.53 | 0.23 | 4.26 | 83.19 |
| | NORMAL | 3,443.0 | 20.66 | 237.66 | 3,266.35 | -562.53 | -849.27 | 1,018.67 | 0.26 | -0.23 | 0.36 | 150.73 |
| | NORMAL | 3,538.0 | 20.92 | 236.87 | 3,355.17 | -580.76 | -877.64 | 1,052.39 | 0.40 | 0.27 | -0.83 | 312.47 |
| | NORMAL | 3,633.0 | 20.66 | 237.31 | 3,443.98 | -599.08 | -905.94 | 1,086.10 | 0.32 | -0.27 | 0.46 | 149.21 |
| | NORMAL | 3,729.0 | 19.91 | 235.37 | 3,534.03 | -617.52 | -933.65 | 1,119.38 | 1.05 | -0.78 | -2.02 | 220.98 |
| | NORMAL | 3,824.0 | 18.20 | 237.04 | 3,623.82 | -634.78 | -959.41 | 1,150.39 | 1.89 | -1.80 | 1.76 | 163.10 |
| | NORMAL | 3,919.0 | 18.07 | 237.57 | 3,714.10 | -650.76 | -984.29 | 1,179.96 | 0.22 | -0.14 | 0.56 | 128.49 |
| | NORMAL | 4,014.0 | 16.92 | 236.43 | 3,804.71 | -666.30 | -1,008.25 | 1,208.51 | 1.26 | -1.21 | -1.20 | 196.05 |
| | NORMAL | 4,110.0 | 14.81 | 235.99 | 3,897.04 | -680.89 | -1,030.06 | 1,234.75 | 2.20 | -2.20 | -0.46 | 183.05 |
| | NORMAL | 4,205.0 | 14.99 | 235.81 | 3,988.85 | -694.59 | -1,050.29 | 1,259.18 | 0.20 | 0.19 | -0.19 | 345.49 |
| | NORMAL | 4,300.0 | 14.15 | 239.77 | 4,080.80 | -707.34 | -1,070.48 | 1,283.06 | 1.37 | -0.88 | 4.17 | 132.04 |
| | NORMAL | 4,396.0 | 11.87 | 237.48 | 4,174.33 | -718.56 | -1,088.95 | 1,304.65 | 2.43 | -2.38 | -2.39 | 191.63 |
| | NORMAL | 4,491.0 | 11.56 | 237.75 | 4,267.35 | -728.89 | -1,105.24 | 1,323.93 | 0.33 | -0.33 | 0.28 | 170.10 |
| | NORMAL | 4,587.0 | 11.60 | 236.34 | 4,361.39 | -739.37 | -1,121.41 | 1,343.20 | 0.30 | 0.04 | -1.47 | 277.35 |
| | NORMAL | 4,682.0 | 9.85 | 234.76 | 4,454.73 | -749.35 | -1,136.00 | 1,360.87 | 1.87 | -1.84 | -1.66 | 188.76 |
| 11/27/2013 | NORMAL | 4,777.0 | 8.62 | 239.06 | 4,548.50 | -757.70 | -1,148.74 | 1,376.11 | 1.48 | -1.29 | 4.53 | 152.82 |
| | NORMAL | 4,873.0 | 8.31 | 238.71 | 4,643.45 | -765.00 | -1,160.84 | 1,390.23 | 0.33 | -0.32 | -0.36 | 189.26 |
| | NORMAL | 4,968.0 | 6.77 | 232.65 | 4,737.63 | -771.97 | -1,171.16 | 1,402.67 | 1.82 | -1.62 | -6.38 | 204.33 |
| | NORMAL | 5,063.0 | 6.24 | 229.92 | 4,832.02 | -778.69 | -1,179.56 | 1,413.39 | 0.65 | -0.56 | -2.87 | 208.91 |
| | NORMAL | 5,159.0 | 4.70 | 236.51 | 4,927.58 | -784.22 | -1,186.83 | 1,422.51 | 1.73 | -1.60 | 6.86 | 161.07 |
| | NORMAL | 5,254.0 | 4.57 | 241.88 | 5,022.27 | -788.15 | -1,193.42 | 1,430.17 | 0.48 | -0.14 | 5.65 | 109.34 |
| | NORMAL | 5,349.0 | 3.96 | 244.16 | 5,117.01 | -791.36 | -1,199.71 | 1,437.19 | 0.67 | -0.64 | 2.40 | 165.60 |
| | NORMAL | 5,445.0 | 2.73 | 228.87 | 5,212.84 | -794.31 | -1,204.41 | 1,442.74 | 1.57 | -1.28 | -15.93 | 208.48 |
| | NORMAL | 5,541.0 | 2.64 | 222.72 | 5,308.74 | -797.44 | -1,207.63 | 1,447.15 | 0.31 | -0.09 | -6.41 | 249.60 |
| 11/28/2013 | NORMAL | 5,636.0 | 1.93 | 214.81 | 5,403.66 | -800.36 | -1,210.03 | 1,450.77 | 0.82 | -0.75 | -8.33 | 200.03 |
| | NORMAL | 5,732.0 | 0.53 | 172.88 | 5,499.64 | -802.13 | -1,210.90 | 1,452.47 | 1.64 | -1.46 | -43.68 | 192.99 |
| | NORMAL | 5,827.0 | 0.53 | 117.51 | 5,594.64 | -802.77 | -1,210.45 | 1,452.46 | 0.52 | 0.00 | -58.28 | 242.32 |
| | NORMAL | 5,923.0 | 0.53 | 119.09 | 5,690.63 | -803.19 | -1,209.67 | 1,452.04 | 0.02 | 0.00 | 1.65 | 90.79 |
| | NORMAL | 6,019.0 | 0.48 | 59.33 | 5,786.63 | -803.20 | -1,208.94 | 1,451.43 | 0.53 | -0.05 | -62.25 | 235.20 |
| | NORMAL | 6,112.0 | 0.57 | 358.86 | 5,879.63 | -802.54 | -1,208.61 | 1,450.80 | 0.57 | 0.10 | -65.02 | 248.13 |
| | NORMAL | 6,209.0 | 0.44 | 315.70 | 5,976.62 | -801.79 | -1,208.88 | 1,450.61 | 0.40 | -0.13 | -44.49 | 230.39 |
| 11/29/2013 | NORMAL | 6,302.0 | 0.97 | 280.63 | 6,069.62 | -801.39 | -1,209.91 | 1,451.23 | 0.71 | 0.57 | -37.71 | 302.42 |
| | NORMAL | 6,406.0 | 1.10 | 273.96 | 6,173.60 | -801.16 | -1,211.77 | 1,452.65 | 0.17 | 0.12 | -6.41 | 313.81 |

2.1.2 Survey Stations (Continued)

| Date | Type | MD (ft) | Inc. (°) | Azi. (°) | TVD (ft) | N/S (ft) | E/W (ft) | V. sec. (ft) | DLS (°/100usft) | Build Rate (°/100usft) | Turn (°/100usft) | Tface (°) |
|------------|--------|------------|-------------|-------------|-------------|-------------|-------------|-----------------|--------------------|---------------------------|---------------------|--------------|
| 11/29/2013 | NORMAL | 6,502.0 | 0.35 | 338.38 | 6,269.59 | -800.82 | -1,212.79 | 1,453.32 | 1.04 | -0.78 | 67.10 | 161.60 |
| | NORMAL | 6,598.0 | 0.31 | 350.77 | 6,365.59 | -800.29 | -1,212.94 | 1,453.15 | 0.08 | -0.04 | 12.91 | 125.37 |
| | NORMAL | 6,692.0 | 0.40 | 6.77 | 6,459.59 | -799.72 | -1,212.95 | 1,452.84 | 0.14 | 0.10 | 17.02 | 55.95 |
| | NORMAL | 6,788.0 | 0.61 | 26.98 | 6,555.59 | -798.93 | -1,212.67 | 1,452.17 | 0.28 | 0.22 | 21.05 | 50.71 |
| | NORMAL | 6,881.0 | 0.53 | 12.92 | 6,648.58 | -798.07 | -1,212.35 | 1,451.43 | 0.17 | -0.09 | -15.12 | 233.33 |
| 11/30/2013 | NORMAL | 6,977.0 | 0.31 | 32.26 | 6,744.58 | -797.42 | -1,212.12 | 1,450.87 | 0.27 | -0.23 | 20.15 | 156.62 |
| | NORMAL | 7,072.0 | 0.26 | 50.10 | 6,839.58 | -797.06 | -1,211.81 | 1,450.42 | 0.11 | -0.05 | 18.78 | 128.12 |
| | NORMAL | 7,167.0 | 0.26 | 84.73 | 6,934.58 | -796.90 | -1,211.43 | 1,450.02 | 0.16 | 0.00 | 36.45 | 107.31 |
| | NORMAL | 7,261.0 | 0.44 | 94.31 | 7,028.58 | -796.91 | -1,210.86 | 1,449.54 | 0.20 | 0.19 | 10.19 | 22.84 |
| | NORMAL | 7,357.0 | 0.35 | 98.35 | 7,124.57 | -796.98 | -1,210.20 | 1,449.04 | 0.10 | -0.09 | 4.21 | 164.82 |
| | NORMAL | 7,452.0 | 0.66 | 127.53 | 7,219.57 | -797.36 | -1,209.48 | 1,448.64 | 0.41 | 0.33 | 30.72 | 54.89 |
| | NORMAL | 7,548.0 | 0.79 | 101.87 | 7,315.56 | -797.83 | -1,208.40 | 1,448.00 | 0.36 | 0.14 | -26.73 | 278.66 |
| | NORMAL | 7,642.0 | 0.66 | 79.63 | 7,409.56 | -797.86 | -1,207.23 | 1,447.05 | 0.33 | -0.14 | -23.66 | 234.36 |
| | NORMAL | 7,738.0 | 1.05 | 82.09 | 7,505.55 | -797.64 | -1,205.81 | 1,445.75 | 0.41 | 0.41 | 2.56 | 6.61 |
| | NORMAL | 7,833.0 | 1.41 | 78.84 | 7,600.52 | -797.30 | -1,203.81 | 1,443.89 | 0.39 | 0.38 | -3.42 | 347.41 |
| | NORMAL | 7,929.0 | 1.63 | 76.64 | 7,696.49 | -796.75 | -1,201.32 | 1,441.52 | 0.24 | 0.23 | -2.29 | 344.04 |
| | NORMAL | 8,024.0 | 2.07 | 72.07 | 7,791.44 | -795.91 | -1,198.37 | 1,438.60 | 0.49 | 0.46 | -4.81 | 339.17 |
| | NORMAL | 8,120.0 | 2.55 | 71.02 | 7,887.36 | -794.68 | -1,194.70 | 1,434.86 | 0.50 | 0.50 | -1.09 | 354.44 |
| | NORMAL | 8,195.0 | 2.33 | 74.18 | 7,982.30 | -793.73 | -1,191.66 | 1,431.80 | 0.34 | -0.29 | 4.21 | 150.13 |
| | NORMAL | 8,240.0 | 2.33 | 74.18 | 8,007.26 | -793.23 | -1,189.90 | 1,430.06 | 0.00 | 0.00 | 0.00 | 0.00 |