

1 General

1.1 Customer Information

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

1.2 Well/Wellbore Information

| | | | |
|--------------------------|--------------------------------------|----------------------|-------------|
| Well | PA 324-6 | Wellbore No. | 00 |
| Wellbore Legal Name | PA 324-6 | Common Wellbore Name | PA 324-6 |
| Project | PA 06-07S-095W | Site | PA 14-6 Pad |
| Vertical Section Azimuth | 35.15 (°) | North reference | True |
| Origin N/S | | Origin E/W | |
| Spud date | 3/8/2014 | UWI | PA 324-6 |
| Active datum | KB @5,179.0ft (above Mean Sea Level) | | |

2 Survey Name

2.1 Survey Name: Survey #1

| | | | |
|--------------|-----------|----------|--|
| Survey Name | Survey #1 | Company | |
| Date Started | 3/8/2014 | 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 (°) |
|-----------|--------|---------|----------|----------|----------|----------|----------|--------------|-----------------|------------------------|------------------|-----------|
| 3/8/2014 | Tie On | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3/8/2014 | NORMAL | 105.0 | 0.35 | 354.02 | 105.00 | 0.32 | -0.03 | 0.24 | 0.33 | 0.33 | 0.00 | 354.02 |
| | NORMAL | 134.0 | 1.06 | 13.45 | 134.00 | 0.67 | 0.02 | 0.56 | 2.55 | 2.45 | 67.00 | 28.49 |
| | NORMAL | 164.0 | 1.23 | 29.00 | 163.99 | 1.22 | 0.24 | 1.14 | 1.18 | 0.57 | 51.83 | 69.24 |
| | NORMAL | 195.0 | 1.85 | 36.12 | 194.98 | 1.91 | 0.70 | 1.97 | 2.09 | 2.00 | 22.97 | 20.73 |
| | NORMAL | 225.0 | 1.94 | 47.20 | 224.96 | 2.65 | 1.35 | 2.95 | 1.26 | 0.30 | 36.93 | 81.78 |
| | NORMAL | 255.0 | 2.64 | 40.87 | 254.94 | 3.52 | 2.18 | 4.13 | 2.48 | 2.33 | -21.10 | 336.95 |
| 3/9/2014 | NORMAL | 285.0 | 3.17 | 42.36 | 284.90 | 4.65 | 3.19 | 5.64 | 1.78 | 1.77 | 4.97 | 8.85 |
| | NORMAL | 315.0 | 4.05 | 42.71 | 314.84 | 6.05 | 4.47 | 7.52 | 2.93 | 2.93 | 1.17 | 1.61 |
| | NORMAL | 346.0 | 4.40 | 42.54 | 345.76 | 7.73 | 6.01 | 9.78 | 1.13 | 1.13 | -0.55 | 357.87 |
| | NORMAL | 376.0 | 5.19 | 41.84 | 375.65 | 9.58 | 7.70 | 12.27 | 2.64 | 2.63 | -2.33 | 355.42 |
| | NORMAL | 406.0 | 5.63 | 36.21 | 405.52 | 11.78 | 9.47 | 15.09 | 2.30 | 1.47 | -18.77 | 306.83 |
| | NORMAL | 437.0 | 6.07 | 34.45 | 436.36 | 14.36 | 11.30 | 18.25 | 1.53 | 1.42 | -5.68 | 336.94 |
| | NORMAL | 528.0 | 6.77 | 32.96 | 526.79 | 22.83 | 16.94 | 28.42 | 0.79 | 0.77 | -1.64 | 345.87 |
| | NORMAL | 619.0 | 8.89 | 30.76 | 616.93 | 33.37 | 23.45 | 40.79 | 2.35 | 2.33 | -2.42 | 350.86 |
| | NORMAL | 690.0 | 9.51 | 30.62 | 687.02 | 43.14 | 29.25 | 52.11 | 0.87 | 0.87 | -0.20 | 357.86 |
| | NORMAL | 780.0 | 9.18 | 39.52 | 775.83 | 55.07 | 37.60 | 66.68 | 1.65 | -0.37 | 9.89 | 107.23 |
| | NORMAL | 871.0 | 8.41 | 32.87 | 865.76 | 66.26 | 45.83 | 80.57 | 1.40 | -0.85 | -7.31 | 229.61 |
| | NORMAL | 963.0 | 9.43 | 33.45 | 956.65 | 78.20 | 53.64 | 94.82 | 1.11 | 1.11 | 0.63 | 5.33 |
| | NORMAL | 1,027.0 | 9.66 | 35.30 | 1,019.76 | 86.96 | 59.63 | 105.43 | 0.60 | 0.36 | 2.89 | 54.05 |
| 3/10/2014 | NORMAL | 1,158.0 | 9.71 | 37.97 | 1,148.90 | 104.64 | 72.78 | 127.46 | 0.34 | 0.04 | 2.04 | 84.97 |

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 (°) |
|-----------|--------|------------|-------------|-------------|-------------|-------------|-------------|-----------------|--------------------|---------------------------|---------------------|--------------|
| 3/10/2014 | NORMAL | 1,254.0 | 8.44 | 33.12 | 1,243.69 | 116.92 | 81.61 | 142.58 | 1.54 | -1.32 | -5.05 | 208.68 |
| | NORMAL | 1,349.0 | 8.31 | 33.49 | 1,337.68 | 128.48 | 89.21 | 156.41 | 0.15 | -0.14 | 0.39 | 157.67 |
| | NORMAL | 1,445.0 | 8.53 | 31.82 | 1,432.65 | 140.32 | 96.79 | 170.46 | 0.34 | 0.23 | -1.74 | 311.15 |
| | NORMAL | 1,540.0 | 7.82 | 40.69 | 1,526.68 | 151.21 | 104.72 | 183.92 | 1.52 | -0.75 | 9.34 | 123.72 |
| | NORMAL | 1,635.0 | 7.30 | 43.68 | 1,620.86 | 160.47 | 113.10 | 196.33 | 0.69 | -0.55 | 3.15 | 144.37 |
| | NORMAL | 1,730.0 | 7.34 | 33.58 | 1,715.09 | 169.89 | 120.63 | 208.36 | 1.35 | 0.04 | -10.63 | 286.77 |
| | NORMAL | 1,826.0 | 8.18 | 37.62 | 1,810.21 | 180.41 | 128.19 | 221.31 | 1.04 | 0.88 | 4.21 | 35.01 |
| | NORMAL | 1,921.0 | 9.41 | 31.29 | 1,904.09 | 192.40 | 136.35 | 235.82 | 1.65 | 1.29 | -6.66 | 318.64 |
| | NORMAL | 2,017.0 | 8.97 | 31.47 | 1,998.86 | 205.49 | 144.33 | 251.11 | 0.46 | -0.46 | 0.19 | 176.35 |
| | NORMAL | 2,112.0 | 9.10 | 32.17 | 2,092.68 | 218.17 | 152.20 | 266.01 | 0.18 | 0.14 | 0.74 | 40.56 |
| | NORMAL | 2,207.0 | 9.19 | 32.70 | 2,186.48 | 230.91 | 160.29 | 281.09 | 0.13 | 0.09 | 0.56 | 43.37 |
| | NORMAL | 2,302.0 | 8.97 | 31.82 | 2,280.29 | 243.59 | 168.30 | 296.06 | 0.27 | -0.23 | -0.93 | 211.83 |
| | NORMAL | 2,397.0 | 9.36 | 38.32 | 2,374.07 | 255.94 | 176.99 | 311.17 | 1.16 | 0.41 | 6.84 | 72.59 |
| 3/11/2014 | NORMAL | 2,493.0 | 9.67 | 37.44 | 2,468.75 | 268.47 | 186.73 | 327.02 | 0.36 | 0.32 | -0.92 | 334.43 |
| | NORMAL | 2,588.0 | 9.32 | 36.12 | 2,562.45 | 281.02 | 196.12 | 342.69 | 0.43 | -0.37 | -1.39 | 211.24 |
| | NORMAL | 2,683.0 | 9.28 | 36.12 | 2,656.20 | 293.42 | 205.17 | 358.04 | 0.04 | -0.04 | 0.00 | 180.00 |
| | NORMAL | 2,779.0 | 9.19 | 36.21 | 2,750.96 | 305.86 | 214.26 | 373.44 | 0.09 | -0.09 | 0.09 | 170.93 |
| | NORMAL | 2,874.0 | 9.14 | 36.12 | 2,844.75 | 318.07 | 223.19 | 388.57 | 0.05 | -0.05 | -0.09 | 195.95 |
| | NORMAL | 2,969.0 | 9.05 | 35.25 | 2,938.55 | 330.27 | 231.95 | 403.58 | 0.17 | -0.09 | -0.92 | 236.37 |
| | NORMAL | 3,065.0 | 9.10 | 35.33 | 3,033.35 | 342.63 | 240.70 | 418.73 | 0.05 | 0.05 | 0.08 | 14.20 |
| | NORMAL | 3,160.0 | 8.70 | 35.25 | 3,127.21 | 354.63 | 249.19 | 433.42 | 0.42 | -0.42 | -0.08 | 181.73 |
| | NORMAL | 3,256.0 | 8.75 | 35.60 | 3,222.10 | 366.49 | 257.63 | 447.99 | 0.08 | 0.05 | 0.36 | 46.89 |
| | NORMAL | 3,352.0 | 8.79 | 36.04 | 3,316.98 | 378.36 | 266.20 | 462.62 | 0.08 | 0.04 | 0.46 | 59.41 |
| | NORMAL | 3,447.0 | 8.57 | 35.77 | 3,410.89 | 389.97 | 274.61 | 476.96 | 0.24 | -0.23 | -0.28 | 190.36 |
| | NORMAL | 3,542.0 | 8.13 | 37.35 | 3,504.88 | 401.06 | 282.82 | 490.75 | 0.52 | -0.46 | 1.66 | 153.24 |
| 3/12/2014 | NORMAL | 3,637.0 | 7.60 | 36.30 | 3,598.99 | 411.46 | 290.61 | 503.74 | 0.58 | -0.56 | -1.11 | 194.65 |
| | NORMAL | 3,733.0 | 7.25 | 36.83 | 3,694.18 | 421.43 | 298.00 | 516.14 | 0.37 | -0.36 | 0.55 | 169.19 |
| | NORMAL | 3,828.0 | 6.77 | 35.16 | 3,788.47 | 430.80 | 304.82 | 527.73 | 0.55 | -0.51 | -1.76 | 202.18 |
| | NORMAL | 3,923.0 | 5.89 | 33.75 | 3,882.89 | 439.43 | 310.75 | 538.21 | 0.94 | -0.93 | -1.48 | 189.32 |
| | NORMAL | 4,019.0 | 5.28 | 35.42 | 3,978.44 | 447.13 | 316.05 | 547.55 | 0.66 | -0.64 | 1.74 | 165.91 |
| | NORMAL | 4,114.0 | 4.75 | 34.98 | 4,073.07 | 453.91 | 320.84 | 555.85 | 0.56 | -0.56 | -0.46 | 183.93 |
| | NORMAL | 4,210.0 | 3.96 | 22.76 | 4,168.80 | 460.23 | 324.40 | 563.07 | 1.27 | -0.82 | -12.73 | 223.61 |
| | NORMAL | 4,305.0 | 3.25 | 24.96 | 4,263.61 | 465.69 | 326.80 | 568.92 | 0.76 | -0.75 | 2.32 | 170.07 |
| | NORMAL | 4,401.0 | 2.24 | 10.81 | 4,359.50 | 470.00 | 328.30 | 573.31 | 1.26 | -1.05 | -14.74 | 206.93 |
| | NORMAL | 4,497.0 | 0.97 | 23.38 | 4,455.46 | 472.59 | 328.98 | 575.81 | 1.36 | -1.32 | 13.09 | 170.73 |
| 3/13/2014 | NORMAL | 4,592.0 | 0.88 | 38.58 | 4,550.45 | 473.90 | 329.75 | 577.33 | 0.27 | -0.09 | 16.00 | 117.63 |
| | NORMAL | 4,688.0 | 0.40 | 45.97 | 4,646.44 | 474.71 | 330.45 | 578.39 | 0.51 | -0.50 | 7.70 | 173.92 |
| | NORMAL | 4,783.0 | 0.40 | 352.27 | 4,741.44 | 475.27 | 330.65 | 578.96 | 0.38 | 0.00 | -56.53 | 243.15 |
| | NORMAL | 4,878.0 | 0.22 | 89.03 | 4,836.44 | 475.60 | 330.79 | 579.31 | 0.50 | -0.19 | 101.85 | 152.84 |
| | NORMAL | 4,973.0 | 0.09 | 155.48 | 4,931.44 | 475.54 | 331.00 | 579.38 | 0.21 | -0.14 | 69.95 | 155.85 |
| | NORMAL | 5,069.0 | 0.31 | 156.45 | 5,027.44 | 475.23 | 331.13 | 579.21 | 0.23 | 0.23 | 1.01 | 1.37 |
| | NORMAL | 5,164.0 | 0.75 | 156.18 | 5,122.43 | 474.42 | 331.49 | 578.76 | 0.46 | 0.46 | -0.28 | 359.54 |
| | NORMAL | 5,260.0 | 0.83 | 174.55 | 5,218.42 | 473.16 | 331.81 | 577.90 | 0.28 | 0.08 | 19.14 | 81.80 |
| | NORMAL | 5,355.0 | 0.88 | 189.14 | 5,313.41 | 471.75 | 331.76 | 576.73 | 0.23 | 0.05 | 15.36 | 84.43 |
| | NORMAL | 5,451.0 | 0.92 | 206.81 | 5,409.40 | 470.34 | 331.29 | 575.30 | 0.29 | 0.04 | 18.41 | 90.70 |
| | NORMAL | 5,546.0 | 1.01 | 221.92 | 5,504.39 | 469.03 | 330.39 | 573.71 | 0.28 | 0.09 | 15.91 | 78.18 |
| | NORMAL | 5,640.0 | 0.79 | 210.32 | 5,598.38 | 467.86 | 329.51 | 572.25 | 0.30 | -0.23 | -12.34 | 213.93 |
| | NORMAL | 5,735.0 | 1.32 | 219.90 | 5,693.36 | 466.45 | 328.48 | 570.50 | 0.59 | 0.56 | 10.08 | 23.24 |
| | NORMAL | 5,830.0 | 1.50 | 220.08 | 5,788.33 | 464.66 | 326.97 | 568.17 | 0.19 | 0.19 | 0.19 | 1.50 |
| | NORMAL | 5,925.0 | 1.54 | 220.25 | 5,883.30 | 462.74 | 325.35 | 565.66 | 0.04 | 0.04 | 0.18 | 6.52 |
| | NORMAL | 6,021.0 | 2.20 | 227.29 | 5,979.25 | 460.50 | 323.16 | 562.58 | 0.73 | 0.69 | 7.33 | 22.73 |
| | NORMAL | 6,116.0 | 2.46 | 227.64 | 6,074.17 | 457.89 | 320.31 | 558.80 | 0.27 | 0.27 | 0.37 | 3.31 |
| | NORMAL | 6,211.0 | 3.21 | 221.66 | 6,169.05 | 454.53 | 317.04 | 554.17 | 0.85 | 0.79 | -6.29 | 335.47 |
| | NORMAL | 6,307.0 | 3.34 | 222.63 | 6,264.90 | 450.46 | 313.36 | 548.73 | 0.15 | 0.14 | 1.01 | 23.57 |
| 3/14/2014 | NORMAL | 6,402.0 | 3.82 | 222.45 | 6,359.71 | 446.09 | 309.35 | 542.84 | 0.51 | 0.51 | -0.19 | 358.57 |
| | NORMAL | 6,497.0 | 3.91 | 227.29 | 6,454.50 | 441.56 | 304.83 | 536.54 | 0.36 | 0.09 | 5.09 | 77.00 |

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 (°) |
|-----------|--------|------------|-------------|-------------|-------------|-------------|-------------|-----------------|--------------------|---------------------------|---------------------|--------------|
| 3/14/2014 | NORMAL | 6,567.0 | 3.91 | 227.29 | 6,524.33 | 438.32 | 301.33 | 531.87 | 0.00 | 0.00 | 0.00 | 0.00 |