

# 1 General

## 1.1 Customer Information

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

## 1.2 Well Information

|                          |                                      |                 |              |
|--------------------------|--------------------------------------|-----------------|--------------|
| Well                     | GM 433-22                            | Wellbore No.    |              |
| Well Name                | GM 433-22                            | Common Name     | GM 433-22    |
| Project                  | GV 23-06S-096W                       | Site            | MV 10-23 Pad |
| Vertical Section Azimuth | 274.01 (°)                           | North Reference | True         |
| Origin N/S               |                                      | Origin E/W      |              |
| Spud Date                | 6/9/2011                             | UWI             | GM 433-22    |
| Active Datum             | KB @6,002.0ft (above Mean Sea Level) |                 |              |

# 2 Survey Name

## 2.1 Survey Name: Survey #1

|             |           |          |  |
|-------------|-----------|----------|--|
| Survey Name | Survey #1 | Company  |  |
| Started     | 6/9/2011  | 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) | DLeg (°/100ft) | Build (°/100ft) | Turn (°/100ft) | TFace (°) |
|-----------|--------|---------|---------|---------|----------|----------|----------|-------------|----------------|-----------------|----------------|-----------|
| 6/9/2011  | Tie On | 0.0     | 0.00    | 0.00    | 0.00     | 0.00     | 0.00     | 0.00        | 0.00           | 0.00            | 0.00           | 0.00      |
| 6/9/2011  | NORMAL | 74.0    | 0.35    | 209.09  | 74.00    | -0.20    | -0.11    | 0.10        | 0.47           | 0.47            | 0.00           | 209.09    |
|           | NORMAL | 177.0   | 2.02    | 288.90  | 176.98   | 0.12     | -1.98    | 1.98        | 1.93           | 1.62            | 77.49          | 89.78     |
| 6/10/2011 | NORMAL | 268.0   | 5.19    | 267.98  | 267.79   | 0.49     | -7.61    | 7.63        | 3.72           | 3.48            | -22.99         | 326.79    |
|           | NORMAL | 360.0   | 8.36    | 274.66  | 359.14   | 0.89     | -18.44   | 18.46       | 3.54           | 3.45            | 7.26           | 17.30     |
|           | NORMAL | 451.0   | 11.26   | 275.98  | 448.80   | 2.35     | -33.87   | 33.95       | 3.20           | 3.19            | 1.45           | 5.09      |
|           | NORMAL | 523.0   | 14.10   | 274.70  | 519.03   | 3.80     | -49.61   | 49.75       | 3.96           | 3.94            | -1.78          | 353.72    |
|           | NORMAL | 614.0   | 18.09   | 270.47  | 606.45   | 4.83     | -74.79   | 74.95       | 4.57           | 4.38            | -4.65          | 341.58    |
|           | NORMAL | 706.0   | 22.86   | 269.40  | 692.61   | 4.76     | -106.96  | 107.04      | 5.20           | 5.18            | -1.16          | 355.01    |
|           | NORMAL | 797.0   | 23.74   | 271.95  | 776.19   | 5.19     | -142.95  | 142.96      | 1.47           | 0.97            | 2.80           | 50.07     |
|           | NORMAL | 888.0   | 24.53   | 276.00  | 859.24   | 7.79     | -180.05  | 180.15      | 2.02           | 0.87            | 4.45           | 66.35     |
|           | NORMAL | 978.0   | 29.71   | 277.32  | 939.32   | 12.59    | -220.77  | 221.11      | 5.79           | 5.76            | 1.47           | 7.22      |
|           | NORMAL | 1,074.0 | 32.96   | 276.01  | 1,021.31 | 18.36    | -270.35  | 270.98      | 3.46           | 3.39            | -1.36          | 347.60    |
|           | NORMAL | 1,169.0 | 37.64   | 274.94  | 1,098.82 | 23.56    | -324.99  | 325.84      | 4.97           | 4.93            | -1.13          | 352.03    |
|           | NORMAL | 1,265.0 | 40.17   | 272.95  | 1,173.53 | 27.68    | -385.13  | 386.12      | 2.94           | 2.64            | -2.07          | 332.93    |
|           | NORMAL | 1,289.0 | 40.36   | 272.48  | 1,191.84 | 28.42    | -400.62  | 401.63      | 1.49           | 0.79            | -1.96          | 301.85    |
| 6/11/2011 | NORMAL | 1,388.0 | 40.57   | 271.27  | 1,267.16 | 30.52    | -464.83  | 465.83      | 0.82           | 0.21            | -1.22          | 284.51    |
|           | NORMAL | 1,452.0 | 40.68   | 271.35  | 1,315.74 | 31.47    | -506.49  | 507.45      | 0.19           | 0.17            | 0.12           | 25.37     |
|           | NORMAL | 1,547.0 | 39.37   | 273.44  | 1,388.48 | 34.01    | -567.53  | 568.52      | 1.98           | -1.38           | 2.20           | 135.06    |
|           | NORMAL | 1,643.0 | 40.17   | 274.02  | 1,462.27 | 38.01    | -628.81  | 629.93      | 0.92           | 0.83            | 0.60           | 25.10     |
|           | NORMAL | 1,738.0 | 40.04   | 273.29  | 1,534.93 | 41.91    | -689.88  | 691.12      | 0.51           | -0.14           | -0.77          | 254.27    |

2.1.2 Survey Stations (Continued)

| Date      | Type   | MD (ft) | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft)  | V. Sec (ft) | DLeg (%/100ft) | Build (%/100ft) | Turn (%/100ft) | TFace (°) |
|-----------|--------|---------|---------|---------|----------|----------|-----------|-------------|----------------|-----------------|----------------|-----------|
| 6/11/2011 | NORMAL | 1,834.0 | 40.55   | 274.94  | 1,608.16 | 46.37    | -751.80   | 753.20      | 1.23           | 0.53            | 1.72           | 65.09     |
|           | NORMAL | 1,928.0 | 40.54   | 272.83  | 1,679.59 | 50.51    | -812.76   | 814.30      | 1.46           | -0.01           | -2.24          | 268.78    |
|           | NORMAL | 2,023.0 | 41.06   | 273.97  | 1,751.51 | 54.19    | -874.72   | 876.37      | 0.96           | 0.55            | 1.20           | 55.51     |
|           | NORMAL | 2,119.0 | 40.45   | 275.38  | 1,824.23 | 59.29    | -937.18   | 939.03      | 1.15           | -0.64           | 1.47           | 124.06    |
|           | NORMAL | 2,215.0 | 40.71   | 275.47  | 1,897.14 | 65.20    | -999.35   | 1,001.46    | 0.28           | 0.27            | 0.09           | 12.72     |
|           | NORMAL | 2,310.0 | 39.66   | 275.64  | 1,969.72 | 71.13    | -1,060.36 | 1,062.74    | 1.11           | -1.11           | 0.18           | 174.10    |
|           | NORMAL | 2,406.0 | 40.71   | 276.70  | 2,043.06 | 77.79    | -1,121.94 | 1,124.64    | 1.31           | 1.09            | 1.10           | 33.49     |
|           | NORMAL | 2,501.0 | 41.31   | 274.59  | 2,114.75 | 83.92    | -1,183.97 | 1,186.94    | 1.59           | 0.63            | -2.22          | 292.63    |
|           | NORMAL | 2,594.0 | 40.49   | 275.05  | 2,185.04 | 89.03    | -1,244.65 | 1,247.82    | 0.94           | -0.88           | 0.49           | 160.01    |
|           | NORMAL | 2,689.0 | 40.27   | 273.10  | 2,257.41 | 93.41    | -1,306.03 | 1,309.36    | 1.35           | -0.23           | -2.05          | 259.38    |
|           | NORMAL | 2,785.0 | 39.35   | 273.82  | 2,331.15 | 97.11    | -1,367.38 | 1,370.82    | 1.07           | -0.96           | 0.75           | 153.66    |
|           | NORMAL | 2,880.0 | 38.25   | 272.74  | 2,405.19 | 100.53   | -1,426.81 | 1,430.34    | 1.36           | -1.16           | -1.14          | 211.18    |
|           | NORMAL | 2,976.0 | 38.18   | 272.64  | 2,480.62 | 103.31   | -1,486.13 | 1,489.71    | 0.10           | -0.07           | -0.10          | 221.43    |
|           | NORMAL | 3,069.0 | 40.39   | 276.36  | 2,552.61 | 107.98   | -1,544.80 | 1,548.57    | 3.47           | 2.38            | 4.00           | 48.28     |
|           | NORMAL | 3,162.0 | 40.13   | 275.43  | 2,623.58 | 114.15   | -1,604.58 | 1,608.64    | 0.70           | -0.28           | -1.00          | 246.25    |
|           | NORMAL | 3,257.0 | 40.89   | 275.91  | 2,695.80 | 120.25   | -1,665.99 | 1,670.32    | 0.86           | 0.80            | 0.51           | 22.49     |
|           | NORMAL | 3,352.0 | 40.01   | 272.92  | 2,768.10 | 125.01   | -1,727.43 | 1,731.94    | 2.24           | -0.93           | -3.15          | 244.47    |
|           | NORMAL | 3,448.0 | 39.48   | 272.04  | 2,841.92 | 127.67   | -1,788.75 | 1,793.30    | 0.81           | -0.55           | -0.92          | 226.37    |
|           | NORMAL | 3,543.0 | 37.69   | 273.32  | 2,916.18 | 130.42   | -1,847.93 | 1,852.52    | 2.06           | -1.88           | 1.35           | 156.46    |
|           | NORMAL | 3,639.0 | 37.65   | 276.84  | 2,992.17 | 135.62   | -1,906.34 | 1,911.16    | 2.24           | -0.04           | 3.67           | 92.46     |
| 6/12/2011 | NORMAL | 3,735.0 | 38.06   | 276.97  | 3,067.97 | 142.70   | -1,964.83 | 1,970.00    | 0.44           | 0.43            | 0.14           | 11.06     |
|           | NORMAL | 3,830.0 | 39.63   | 276.95  | 3,141.96 | 149.92   | -2,023.97 | 2,029.50    | 1.65           | 1.65            | -0.02          | 359.53    |
|           | NORMAL | 3,924.0 | 39.66   | 272.85  | 3,214.35 | 155.04   | -2,083.70 | 2,089.44    | 2.78           | 0.03            | -4.36          | 269.08    |
|           | NORMAL | 4,019.0 | 41.67   | 272.59  | 3,286.41 | 157.97   | -2,145.53 | 2,151.33    | 2.12           | 2.12            | -0.27          | 355.08    |
|           | NORMAL | 4,114.0 | 41.07   | 272.85  | 3,357.70 | 160.95   | -2,208.25 | 2,214.10    | 0.66           | -0.63           | 0.27           | 164.12    |
|           | NORMAL | 4,210.0 | 40.80   | 273.10  | 3,430.23 | 164.22   | -2,271.06 | 2,276.99    | 0.33           | -0.28           | 0.26           | 148.85    |
|           | NORMAL | 4,305.0 | 38.37   | 274.21  | 3,503.44 | 168.06   | -2,331.47 | 2,337.51    | 2.66           | -2.56           | 1.17           | 164.20    |
|           | NORMAL | 4,399.0 | 37.12   | 274.89  | 3,577.77 | 172.62   | -2,388.83 | 2,395.05    | 1.40           | -1.33           | 0.72           | 161.85    |
|           | NORMAL | 4,494.0 | 36.30   | 274.87  | 3,653.92 | 177.45   | -2,445.41 | 2,451.83    | 0.86           | -0.86           | -0.02          | 180.83    |
|           | NORMAL | 4,588.0 | 36.19   | 276.14  | 3,729.74 | 182.78   | -2,500.73 | 2,507.39    | 0.81           | -0.12           | 1.35           | 98.85     |
|           | NORMAL | 4,684.0 | 34.03   | 273.71  | 3,808.27 | 187.55   | -2,555.72 | 2,562.58    | 2.68           | -2.25           | -2.53          | 211.92    |
|           | NORMAL | 4,780.0 | 33.38   | 272.82  | 3,888.13 | 190.59   | -2,608.91 | 2,615.85    | 0.85           | -0.68           | -0.93          | 216.86    |
|           | NORMAL | 4,875.0 | 32.10   | 273.69  | 3,968.04 | 193.50   | -2,660.20 | 2,667.22    | 1.44           | -1.35           | 0.92           | 160.18    |
|           | NORMAL | 4,971.0 | 29.44   | 273.51  | 4,050.52 | 196.59   | -2,709.21 | 2,716.33    | 2.77           | -2.77           | -0.19          | 181.91    |
|           | NORMAL | 5,067.0 | 26.31   | 271.51  | 4,135.37 | 198.59   | -2,754.04 | 2,761.18    | 3.40           | -3.26           | -2.08          | 195.75    |
|           | NORMAL | 5,162.0 | 25.59   | 271.86  | 4,220.79 | 199.81   | -2,795.59 | 2,802.72    | 0.77           | -0.76           | 0.37           | 168.15    |
|           | NORMAL | 5,258.0 | 23.83   | 274.15  | 4,308.00 | 201.89   | -2,835.66 | 2,842.84    | 2.09           | -1.83           | 2.39           | 152.49    |
|           | NORMAL | 5,353.0 | 23.13   | 274.41  | 4,395.13 | 204.71   | -2,873.40 | 2,880.69    | 0.74           | -0.74           | 0.27           | 171.70    |
| 6/13/2011 | NORMAL | 5,448.0 | 21.19   | 273.45  | 4,483.11 | 207.18   | -2,909.15 | 2,916.52    | 2.08           | -2.04           | -1.01          | 190.13    |
|           | NORMAL | 5,544.0 | 19.19   | 272.67  | 4,573.21 | 208.96   | -2,942.23 | 2,949.64    | 2.10           | -2.08           | -0.81          | 187.30    |
|           | NORMAL | 5,640.0 | 17.06   | 274.15  | 4,664.44 | 210.71   | -2,972.04 | 2,979.50    | 2.27           | -2.22           | 1.54           | 168.50    |
|           | NORMAL | 5,735.0 | 16.60   | 275.23  | 4,755.37 | 212.96   | -2,999.45 | 3,007.00    | 0.59           | -0.48           | 1.14           | 146.31    |
|           | NORMAL | 5,831.0 | 14.54   | 274.15  | 4,847.84 | 215.08   | -3,025.13 | 3,032.77    | 2.17           | -2.15           | -1.13          | 187.49    |
|           | NORMAL | 5,926.0 | 12.86   | 273.52  | 4,940.13 | 216.59   | -3,047.58 | 3,055.27    | 1.78           | -1.77           | -0.66          | 184.77    |
|           | NORMAL | 6,022.0 | 12.29   | 272.53  | 5,033.83 | 217.70   | -3,068.45 | 3,076.16    | 0.63           | -0.59           | -1.03          | 200.23    |
|           | NORMAL | 6,117.0 | 10.77   | 271.58  | 5,126.91 | 218.39   | -3,087.43 | 3,095.14    | 1.61           | -1.60           | -1.00          | 186.66    |
|           | NORMAL | 6,213.0 | 9.11    | 274.34  | 5,221.47 | 219.21   | -3,103.97 | 3,111.70    | 1.80           | -1.73           | 2.88           | 165.34    |
|           | NORMAL | 6,308.0 | 7.14    | 276.43  | 5,315.51 | 220.44   | -3,117.34 | 3,125.12    | 2.10           | -2.07           | 2.20           | 172.51    |
| 6/14/2011 | NORMAL | 6,404.0 | 6.16    | 275.82  | 5,410.86 | 221.63   | -3,128.39 | 3,136.23    | 1.02           | -1.02           | -0.64          | 183.82    |
|           | NORMAL | 6,500.0 | 5.10    | 268.70  | 5,506.40 | 222.06   | -3,137.78 | 3,145.63    | 1.32           | -1.10           | -7.42          | 209.87    |
|           | NORMAL | 6,595.0 | 4.04    | 260.97  | 5,601.10 | 221.44   | -3,145.31 | 3,153.09    | 1.29           | -1.12           | -8.14          | 206.34    |
|           | NORMAL | 6,690.0 | 3.17    | 262.46  | 5,695.91 | 220.57   | -3,151.22 | 3,158.93    | 0.92           | -0.92           | 1.57           | 174.60    |
| 6/15/2011 | NORMAL | 6,785.0 | 2.11    | 279.42  | 5,790.81 | 220.51   | -3,155.55 | 3,163.24    | 1.37           | -1.12           | 17.85          | 151.88    |
|           | NORMAL | 6,880.0 | 2.20    | 281.47  | 5,885.74 | 221.16   | -3,159.06 | 3,166.79    | 0.12           | 0.09            | 2.16           | 41.61     |
|           | NORMAL | 6,975.0 | 1.87    | 272.55  | 5,980.68 | 221.59   | -3,162.39 | 3,170.15    | 0.48           | -0.35           | -9.39          | 219.43    |
|           | NORMAL | 7,071.0 | 1.08    | 238.01  | 6,076.65 | 221.18   | -3,164.73 | 3,172.45    | 1.20           | -0.82           | -35.98         | 211.99    |
|           | NORMAL | 7,166.0 | 0.71    | 172.56  | 6,171.64 | 220.12   | -3,165.41 | 3,173.05    | 1.07           | -0.39           | -68.89         | 219.45    |

2.1.2 Survey Stations (Continued)

| Date      | Type   | MD (ft) | Inc (°) | Azi (°) | TVD (ft) | N/S (ft) | E/W (ft)  | V. Sec (ft) | DLeg (°/100ft) | Build (°/100ft) | Turn (°/100ft) | TFace (°) |
|-----------|--------|---------|---------|---------|----------|----------|-----------|-------------|----------------|-----------------|----------------|-----------|
| 6/15/2011 | NORMAL | 7,261.0 | 1.58    | 112.48  | 6,266.62 | 219.04   | -3,164.12 | 3,171.70    | 1.44           | 0.92            | -63.24         | 273.27    |
|           | NORMAL | 7,356.0 | 1.58    | 103.73  | 6,361.59 | 218.23   | -3,161.64 | 3,169.16    | 0.25           | 0.00            | -9.21          | 265.63    |
|           | NORMAL | 7,451.0 | 1.37    | 108.21  | 6,456.56 | 217.56   | -3,159.29 | 3,166.77    | 0.25           | -0.22           | 4.72           | 153.45    |
|           | NORMAL | 7,546.0 | 1.06    | 50.38   | 6,551.54 | 217.77   | -3,157.53 | 3,165.03    | 1.27           | -0.33           | -60.87         | 228.08    |
|           | NORMAL | 7,641.0 | 1.67    | 324.77  | 6,646.52 | 219.46   | -3,157.66 | 3,165.27    | 2.01           | 0.64            | -90.12         | 240.77    |
|           | NORMAL | 7,737.0 | 1.58    | 303.15  | 6,742.48 | 221.32   | -3,159.57 | 3,167.31    | 0.64           | -0.09           | -22.52         | 250.94    |
|           | NORMAL | 7,831.0 | 1.54    | 267.73  | 6,836.45 | 221.98   | -3,161.92 | 3,169.70    | 1.01           | -0.04           | -37.68         | 250.00    |
|           | NORMAL | 7,927.0 | 0.62    | 274.06  | 6,932.43 | 221.97   | -3,163.73 | 3,171.50    | 0.96           | -0.96           | 6.59           | 175.77    |
|           | NORMAL | 8,020.0 | 0.82    | 197.60  | 7,025.42 | 221.37   | -3,164.43 | 3,172.16    | 0.97           | 0.22            | -82.22         | 241.77    |
| 6/16/2011 | NORMAL | 8,116.0 | 1.70    | 200.69  | 7,121.40 | 219.38   | -3,165.14 | 3,172.73    | 0.92           | 0.92            | 3.22           | 5.96      |
|           | NORMAL | 8,211.0 | 1.32    | 227.83  | 7,216.37 | 217.33   | -3,166.45 | 3,173.89    | 0.84           | -0.40           | 28.57          | 131.10    |
|           | NORMAL | 8,307.0 | 1.70    | 237.98  | 7,312.33 | 215.83   | -3,168.48 | 3,175.81    | 0.48           | 0.40            | 10.57          | 40.28     |
|           | NORMAL | 8,403.0 | 2.76    | 247.94  | 7,408.26 | 214.21   | -3,171.82 | 3,179.04    | 1.17           | 1.10            | 10.38          | 25.11     |
|           | NORMAL | 8,439.0 | 2.81    | 248.49  | 7,444.22 | 213.56   | -3,173.45 | 3,180.61    | 0.16           | 0.14            | 1.53           | 28.40     |
|           | NORMAL | 8,505.0 | 2.90    | 249.48  | 7,510.14 | 212.38   | -3,176.52 | 3,183.59    | 0.16           | 0.14            | 1.50           | 29.21     |