

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	GM 333-22	Wellbore No.	
Well Name	GM 333-22	Common Name	GM 333-22
Project	GV 23-06S-096W	Site	MV 10-23 Pad
Vertical Section Azimuth	282.53 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	5/28/2011	UWI	GM 333-22
Active Datum	KB @6,002.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	5/28/2011	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)	DLS (°/100ft)	Buidl Rate (°/100ft)	Turn (°/100ft)	TFace (°)
5/28/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/28/2011	NORMAL	90.0	0.70	279.23	90.00	0.09	-0.54	0.55	0.78	0.78	0.00	279.23
	NORMAL	177.0	2.64	301.64	176.96	1.22	-2.77	2.97	2.31	2.23	25.76	30.03
	NORMAL	268.0	4.66	285.82	267.77	3.33	-8.11	8.64	2.46	2.22	-17.38	325.46
	NORMAL	340.0	7.48	285.48	339.36	5.38	-15.45	16.25	3.92	3.92	-0.47	359.10
	NORMAL	431.0	11.08	283.48	429.15	9.00	-29.66	30.91	3.97	3.96	-2.20	353.89
5/29/2011	NORMAL	523.0	13.98	279.87	518.95	12.97	-49.21	50.85	3.26	3.15	-3.92	343.12
	NORMAL	614.0	18.11	278.38	606.39	16.91	-74.04	75.95	4.56	4.54	-1.64	353.59
	NORMAL	706.0	21.37	279.87	692.97	21.87	-104.71	106.96	3.59	3.54	1.62	9.48
	NORMAL	797.0	24.18	281.19	776.87	28.33	-139.34	142.17	3.14	3.09	1.45	10.92
	NORMAL	888.0	26.78	283.01	859.01	36.57	-177.60	181.31	2.98	2.86	2.00	17.58
	NORMAL	978.0	31.83	284.18	937.47	46.95	-220.39	225.33	5.65	5.61	1.30	6.98
	NORMAL	1,074.0	33.41	284.53	1,018.33	59.78	-270.53	277.05	1.66	1.65	0.36	6.96
	NORMAL	1,169.0	35.35	282.16	1,096.73	72.14	-322.72	330.68	2.48	2.04	-2.49	324.42
	NORMAL	1,260.0	38.78	281.72	1,169.33	83.47	-376.37	385.52	3.78	3.77	-0.48	355.40
5/30/2011	NORMAL	1,357.0	39.90	282.37	1,244.35	96.31	-436.51	447.00	1.23	1.15	0.67	20.45
	NORMAL	1,453.0	40.27	281.10	1,317.80	108.88	-497.03	508.81	0.93	0.39	-1.32	293.86
	NORMAL	1,548.0	40.01	280.54	1,390.43	120.38	-557.18	570.03	0.47	-0.27	-0.59	234.02
	NORMAL	1,644.0	40.01	282.77	1,463.96	132.84	-617.62	631.73	1.49	0.00	2.32	90.85
	NORMAL	1,739.0	40.63	281.19	1,536.39	145.60	-677.75	693.19	1.26	0.65	-1.66	300.63
5/31/2011	NORMAL	1,835.0	40.80	283.83	1,609.16	159.16	-738.87	755.80	1.80	0.18	2.75	85.36

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (%/100ft)	Build Rate (%/100ft)	Turn (%/100ft)	TFace (°)
5/31/2011	NORMAL	1,929.0	41.30	283.12	1,680.05	173.54	-798.90	817.53	0.73	0.53	-0.76	316.73
	NORMAL	2,024.0	39.82	284.30	1,752.23	188.17	-858.91	879.28	1.75	-1.56	1.24	153.04
	NORMAL	2,120.0	38.63	284.87	1,826.59	203.46	-917.66	939.95	1.30	-1.24	0.59	163.37
	NORMAL	2,216.0	38.96	283.74	1,901.42	218.32	-975.95	1,000.06	0.81	0.34	-1.18	294.55
	NORMAL	2,311.0	38.50	282.71	1,975.53	231.92	-1,033.80	1,059.49	0.83	-0.48	-1.08	234.08
	NORMAL	2,407.0	39.07	281.60	2,050.36	244.57	-1,092.59	1,119.63	0.94	0.59	-1.16	308.91
	NORMAL	2,502.0	39.41	281.56	2,123.94	256.64	-1,151.46	1,179.71	0.36	0.36	-0.04	355.73
	NORMAL	2,595.0	39.28	282.31	2,195.86	268.83	-1,209.14	1,238.67	0.53	-0.14	0.81	105.58
	NORMAL	2,690.0	39.20	282.03	2,269.44	281.50	-1,267.89	1,298.76	0.20	-0.08	-0.29	245.58
	NORMAL	2,786.0	40.60	281.15	2,343.08	293.86	-1,328.21	1,360.33	1.57	1.46	-0.92	337.70
	NORMAL	2,881.0	40.35	281.18	2,415.35	305.80	-1,388.71	1,421.98	0.26	-0.26	0.03	175.56
	NORMAL	2,977.0	42.54	281.35	2,487.30	318.22	-1,451.02	1,485.50	2.28	2.28	0.18	3.01
	NORMAL	3,070.0	41.42	283.66	2,556.44	331.67	-1,511.75	1,547.70	2.05	-1.20	2.48	126.79
	NORMAL	3,163.0	41.25	283.33	2,626.27	346.00	-1,571.47	1,609.11	0.30	-0.18	-0.35	231.92
	NORMAL	3,258.0	44.05	281.54	2,696.14	359.84	-1,634.32	1,673.46	3.21	2.95	-1.88	335.92
	NORMAL	3,353.0	43.35	282.07	2,764.82	373.26	-1,698.57	1,739.09	0.83	-0.74	0.56	152.58
	NORMAL	3,449.0	41.15	281.72	2,835.88	386.57	-1,761.72	1,803.63	2.30	-2.29	-0.36	185.98
	NORMAL	3,544.0	38.01	284.56	2,909.10	400.28	-1,820.66	1,864.13	3.81	-3.31	2.99	151.13
	NORMAL	3,640.0	37.54	283.82	2,984.98	414.69	-1,877.67	1,922.91	0.68	-0.49	-0.77	223.67
	NORMAL	3,736.0	38.95	281.89	3,060.37	427.90	-1,935.60	1,982.33	1.92	1.47	-2.01	318.96
	NORMAL	3,831.0	39.42	281.46	3,134.01	440.04	-1,994.38	2,042.35	0.57	0.49	-0.45	329.80
	NORMAL	3,925.0	40.35	281.79	3,206.14	452.19	-2,053.42	2,102.62	1.01	0.99	0.35	12.95
	NORMAL	4,021.0	40.41	282.35	3,279.27	465.20	-2,114.24	2,164.81	0.38	0.06	0.58	80.82
6/1/2011	NORMAL	4,115.0	39.33	284.65	3,351.41	479.25	-2,172.83	2,225.05	1.94	-1.15	2.45	127.10
	NORMAL	4,211.0	40.67	284.24	3,424.95	494.64	-2,232.58	2,286.72	1.42	1.40	-0.43	348.72
	NORMAL	4,306.0	40.62	283.11	3,497.04	509.27	-2,292.71	2,348.59	0.78	-0.05	-1.19	265.69
	NORMAL	4,400.0	39.16	282.73	3,569.16	522.75	-2,351.46	2,408.87	1.57	-1.55	-0.40	189.33
	NORMAL	4,495.0	36.83	285.67	3,644.03	537.05	-2,408.15	2,467.31	3.11	-2.45	3.09	143.31
	NORMAL	4,589.0	34.28	284.07	3,720.49	551.10	-2,460.96	2,521.91	2.89	-2.71	-1.70	199.40
	NORMAL	4,685.0	33.52	282.84	3,800.18	563.56	-2,513.03	2,575.44	1.07	-0.79	-1.28	221.56
	NORMAL	4,781.0	33.15	283.39	3,880.38	575.53	-2,564.41	2,628.20	0.50	-0.39	0.57	140.99
	NORMAL	4,875.0	30.78	282.33	3,960.12	586.62	-2,612.92	2,677.95	2.59	-2.52	-1.13	192.87
	NORMAL	4,972.0	30.07	279.43	4,043.77	595.90	-2,661.14	2,727.04	1.68	-0.73	-2.99	242.95
	NORMAL	5,068.0	27.35	283.83	4,127.97	605.12	-2,706.29	2,773.12	3.59	-2.83	4.58	144.06
	NORMAL	5,163.0	25.61	283.92	4,213.00	615.27	-2,747.42	2,815.46	1.83	-1.83	0.09	178.72
	NORMAL	5,259.0	24.80	283.65	4,299.86	625.02	-2,787.12	2,856.34	0.85	-0.84	-0.28	187.96
	NORMAL	5,354.0	23.21	282.22	4,386.64	633.68	-2,824.78	2,894.98	1.78	-1.67	-1.51	199.44
	NORMAL	5,449.0	21.28	283.21	4,474.57	641.58	-2,859.86	2,930.94	2.07	-2.03	1.04	169.47
6/2/2011	NORMAL	5,545.0	19.43	282.77	4,564.57	649.10	-2,892.40	2,964.33	1.93	-1.93	-0.46	184.52
	NORMAL	5,641.0	17.15	281.89	4,655.71	655.54	-2,921.82	2,994.45	2.39	-2.38	-0.92	186.49
	NORMAL	5,736.0	16.62	280.06	4,746.62	660.80	-2,948.91	3,022.03	0.79	-0.56	-1.93	224.21
	NORMAL	5,832.0	14.87	280.71	4,839.01	665.49	-2,974.53	3,048.06	1.83	-1.82	0.68	174.56
	NORMAL	5,927.0	12.30	282.24	4,931.35	669.90	-2,996.40	3,070.37	2.73	-2.71	1.61	172.78
	NORMAL	6,023.0	11.61	282.69	5,025.26	674.19	-3,015.82	3,090.26	0.73	-0.72	0.47	172.53
	NORMAL	6,118.0	10.79	282.61	5,118.45	678.23	-3,033.82	3,108.71	0.86	-0.86	-0.08	181.05
	NORMAL	6,214.0	9.31	280.74	5,212.98	681.64	-3,050.22	3,125.46	1.58	-1.54	-1.95	191.52
6/3/2011	NORMAL	6,309.0	8.09	279.70	5,306.88	684.20	-3,064.36	3,139.81	1.29	-1.28	-1.09	186.83
	NORMAL	6,405.0	6.56	280.70	5,402.10	686.36	-3,076.41	3,152.04	1.60	-1.59	1.04	175.73
	NORMAL	6,501.0	4.76	286.87	5,497.63	688.53	-3,085.61	3,161.50	1.98	-1.88	6.43	164.37
	NORMAL	6,596.0	2.47	307.38	5,592.43	690.92	-3,091.01	3,167.28	2.73	-2.41	21.59	160.52
	NORMAL	6,691.0	1.58	334.80	5,687.38	693.34	-3,093.19	3,169.94	1.36	-0.94	28.86	145.72
	NORMAL	6,786.0	1.33	62.17	5,782.35	695.04	-3,092.78	3,169.90	2.12	-0.26	91.97	138.82
6/4/2011	NORMAL	6,881.0	1.24	70.29	5,877.33	695.91	-3,090.83	3,168.19	0.21	-0.09	8.55	120.32
	NORMAL	6,976.0	1.23	77.78	5,972.31	696.47	-3,088.87	3,166.40	0.17	-0.01	7.88	97.28
	NORMAL	7,072.0	1.14	74.12	6,068.29	696.95	-3,086.94	3,164.62	0.12	-0.09	-3.81	218.24
	NORMAL	7,167.0	0.88	78.08	6,163.27	697.36	-3,085.32	3,163.13	0.28	-0.27	4.17	166.95
	NORMAL	7,262.0	0.70	112.00	6,258.27	697.29	-3,084.07	3,161.89	0.52	-0.19	35.71	127.44

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
6/4/2011	NORMAL	7,357.0	0.75	141.96	6,353.26	696.58	-3,083.15	3,160.84	0.40	0.05	31.54	97.64
	NORMAL	7,452.0	0.67	143.89	6,448.25	695.64	-3,082.44	3,159.94	0.09	-0.08	2.03	164.32
	NORMAL	7,547.0	0.63	152.22	6,543.24	694.73	-3,081.87	3,159.19	0.11	-0.04	8.77	117.07
	NORMAL	7,642.0	0.79	135.47	6,638.24	693.80	-3,081.16	3,158.30	0.27	0.17	-17.63	299.06
	NORMAL	7,738.0	1.32	136.61	6,734.22	692.53	-3,079.94	3,156.83	0.55	0.55	1.19	2.84
6/7/2011	NORMAL	7,832.0	0.68	157.78	6,828.21	691.23	-3,078.99	3,155.61	0.78	-0.68	22.52	160.30
	NORMAL	7,928.0	0.47	157.90	6,924.20	690.33	-3,078.62	3,155.07	0.22	-0.22	0.12	179.73
	NORMAL	8,021.0	0.34	286.18	7,017.20	690.06	-3,078.74	3,155.12	0.79	-0.14	137.94	158.59
	NORMAL	8,117.0	0.73	308.90	7,113.20	690.52	-3,079.49	3,155.96	0.45	0.41	23.67	40.22
	NORMAL	8,212.0	1.29	291.15	7,208.18	691.29	-3,080.96	3,157.56	0.67	0.59	-18.68	321.74
	NORMAL	8,308.0	2.10	281.01	7,304.14	692.01	-3,083.70	3,160.38	0.90	0.84	-10.56	334.56
	NORMAL	8,404.0	2.25	284.19	7,400.07	692.81	-3,087.25	3,164.02	0.20	0.16	3.31	40.42
	NORMAL	8,475.0	2.37	288.49	7,471.01	693.62	-3,089.99	3,166.88	0.30	0.17	6.06	57.46
	NORMAL	8,541.0	2.37	288.49	7,536.95	694.48	-3,092.58	3,169.59	0.00	0.00	0.00	0.00