

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	GM 513-27	Wellbore No.	
Well Name	GM 513-27	Common Name	GM 513-27
Project	GV 27-06S-096W	Site	GM 24-27 Pad
Vertical Section	279.89 (°)	North Reference	
Azimuth		Origin E/W	
Origin N/S		UWI	GM 513-27
Spud Date	4/28/2011		
Active Datum	KB @5,628.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Started	4/28/2011	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)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
4/28/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/28/2011	NORMAL	72.0	0.35	237.13	72.00	-0.12	-0.18	0.16	0.49	0.49	0.00	237.13
	NORMAL	133.0	1.23	237.66	132.99	-0.57	-0.89	0.78	1.44	1.44	0.87	0.74
	NORMAL	224.0	4.13	238.71	223.88	-2.80	-4.52	3.97	3.19	3.19	1.15	1.49
	NORMAL	315.0	6.86	247.50	314.46	-6.58	-12.34	11.03	3.13	3.00	9.66	21.55
	NORMAL	406.0	7.30	257.17	404.77	-9.94	-23.00	20.95	1.39	0.48	10.63	74.58
	NORMAL	498.0	8.01	266.57	495.95	-11.62	-35.10	32.58	1.56	0.77	10.22	65.16
	NORMAL	590.0	9.77	272.81	586.84	-11.62	-49.30	46.57	2.18	1.91	6.78	31.83
	NORMAL	661.0	11.36	270.58	656.64	-11.26	-62.31	59.45	2.31	2.24	-3.14	344.48
	NORMAL	753.0	12.17	272.91	746.71	-10.67	-81.05	78.01	1.02	0.88	2.53	31.54
	NORMAL	845.0	12.66	272.24	836.55	-9.79	-100.81	97.63	0.56	0.53	-0.73	343.29
	NORMAL	936.0	13.21	272.22	925.24	-9.00	-121.17	117.82	0.60	0.60	-0.02	359.52
4/29/2011	NORMAL	1,027.0	14.48	275.06	1,013.60	-7.59	-142.89	139.46	1.58	1.40	3.12	29.54
	NORMAL	1,121.0	15.79	277.55	1,104.34	-4.87	-167.27	163.95	1.56	1.39	2.65	27.60
	NORMAL	1,216.0	17.19	280.46	1,195.43	-0.62	-193.89	190.91	1.71	1.47	3.06	31.94
	NORMAL	1,310.0	19.09	280.20	1,284.75	4.62	-222.69	220.17	2.02	2.02	-0.28	357.44
	NORMAL	1,404.0	20.68	279.17	1,373.15	9.99	-254.20	252.14	1.73	1.69	-1.10	347.09
	NORMAL	1,499.0	22.45	277.95	1,461.49	15.17	-288.73	287.04	1.92	1.86	-1.28	345.22
	NORMAL	1,593.0	23.46	277.49	1,548.05	20.09	-325.06	323.68	1.09	1.07	-0.49	349.72
	NORMAL	1,688.0	24.90	278.27	1,634.71	25.43	-363.60	362.57	1.55	1.52	0.82	12.87
	NORMAL	1,782.0	26.16	278.74	1,719.53	31.43	-403.67	403.07	1.36	1.34	0.50	9.35

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 (°)
4/29/2011	NORMAL	1,876.0	26.47	279.97	1,803.79	38.20	-444.78	444.73	0.67	0.33	1.31	60.93
	NORMAL	1,971.0	27.66	280.87	1,888.39	46.03	-487.29	487.95	1.32	1.25	0.95	19.39
	NORMAL	2,065.0	29.76	282.10	1,970.83	55.03	-531.53	533.09	2.32	2.23	1.31	16.26
	NORMAL	2,127.0	31.16	282.24	2,024.27	61.66	-562.26	564.49	2.26	2.26	0.23	2.96
4/30/2011	NORMAL	2,232.0	31.20	283.20	2,114.10	73.63	-615.28	618.78	0.47	0.04	0.91	85.81
	NORMAL	2,294.0	31.50	282.00	2,167.05	80.67	-646.76	651.00	1.12	0.48	-1.94	295.15
	NORMAL	2,389.0	30.80	281.50	2,248.35	90.67	-694.87	700.12	0.79	-0.74	-0.53	200.06
	NORMAL	2,483.0	31.60	281.70	2,328.76	100.47	-742.57	748.79	0.86	0.85	0.21	7.46
	NORMAL	2,578.0	30.40	280.30	2,410.19	109.81	-790.59	797.71	1.47	-1.26	-1.47	210.40
	NORMAL	2,671.0	30.90	280.10	2,490.19	118.21	-837.25	845.12	0.55	0.54	-0.22	348.39
	NORMAL	2,766.0	31.90	279.00	2,571.28	126.41	-886.06	894.61	1.21	1.05	-1.16	329.71
	NORMAL	2,860.0	31.50	280.60	2,651.26	134.81	-934.73	944.00	0.99	-0.43	1.70	116.12
	NORMAL	2,955.0	30.20	285.00	2,732.83	145.57	-982.22	992.62	2.74	-1.37	4.63	121.83
	NORMAL	3,049.0	30.20	283.80	2,814.07	157.32	-1,028.01	1,039.76	0.64	0.00	-1.28	269.48
5/1/2011	NORMAL	3,143.0	29.30	283.40	2,895.68	168.29	-1,073.35	1,086.30	0.98	-0.96	-0.43	192.26
	NORMAL	3,238.0	28.10	282.90	2,979.01	178.68	-1,117.77	1,131.85	1.29	-1.26	-0.53	191.10
	NORMAL	3,332.0	27.40	282.00	3,062.20	188.12	-1,160.51	1,175.57	0.87	-0.74	-0.96	210.51
	NORMAL	3,426.0	26.40	282.40	3,146.02	197.10	-1,202.07	1,218.06	1.08	-1.06	0.43	169.92
	NORMAL	3,521.0	25.70	282.20	3,231.37	205.99	-1,242.84	1,259.75	0.74	-0.74	-0.21	187.06
	NORMAL	3,615.0	25.00	282.50	3,316.32	214.60	-1,282.15	1,299.96	0.76	-0.74	0.32	169.74
	NORMAL	3,709.0	24.10	281.30	3,401.82	222.66	-1,320.36	1,338.98	1.09	-0.96	-1.28	208.44
	NORMAL	3,804.0	22.60	281.70	3,489.04	230.16	-1,357.26	1,376.62	1.59	-1.58	0.42	174.15
	NORMAL	3,898.0	21.70	281.00	3,576.10	237.14	-1,392.01	1,412.05	1.00	-0.96	-0.74	196.02
	NORMAL	3,993.0	20.20	281.30	3,664.82	243.70	-1,425.33	1,446.01	1.58	-1.58	0.32	176.05
	NORMAL	4,087.0	18.60	282.90	3,753.48	250.23	-1,455.86	1,477.21	1.79	-1.70	1.70	162.38
	NORMAL	4,181.0	17.50	284.30	3,842.85	257.07	-1,484.17	1,506.27	1.26	-1.17	1.49	159.14
	NORMAL	4,276.0	15.80	283.90	3,933.87	263.70	-1,510.57	1,533.41	1.79	-1.79	-0.42	183.67
	NORMAL	4,370.0	14.50	285.90	4,024.60	270.00	-1,534.31	1,557.88	1.49	-1.38	2.13	159.06
	NORMAL	4,464.0	13.30	283.60	4,115.84	275.77	-1,556.14	1,580.38	1.41	-1.28	-2.45	203.61
	NORMAL	4,558.0	11.20	281.70	4,207.70	280.16	-1,575.59	1,600.29	2.27	-2.23	-2.02	189.94
	NORMAL	4,653.0	9.50	283.20	4,301.15	283.82	-1,592.26	1,617.34	1.81	-1.79	1.58	171.73
	NORMAL	4,747.0	7.80	281.50	4,394.08	286.87	-1,606.06	1,631.46	1.83	-1.81	-1.81	187.71
	NORMAL	4,841.0	7.20	278.50	4,487.27	289.01	-1,618.14	1,643.73	0.76	-0.64	-3.19	211.65
	NORMAL	4,935.0	5.70	286.20	4,580.68	291.18	-1,628.45	1,654.26	1.84	-1.60	8.19	153.82
	NORMAL	5,030.0	4.10	288.30	4,675.33	293.57	-1,636.20	1,662.31	1.69	-1.68	2.21	174.65
	NORMAL	5,124.0	3.30	284.60	4,769.13	295.30	-1,642.01	1,668.33	0.89	-0.85	-3.94	194.78
	NORMAL	5,218.0	2.30	283.20	4,863.02	296.42	-1,646.46	1,672.91	1.07	-1.06	-1.49	183.21
	NORMAL	5,312.0	1.70	280.80	4,956.96	297.11	-1,649.67	1,676.19	0.64	-0.64	-2.55	186.75
	NORMAL	5,407.0	1.30	254.20	5,051.93	297.06	-1,652.09	1,678.57	0.83	-0.42	-28.00	227.28
	NORMAL	5,501.0	0.80	283.90	5,145.91	296.95	-1,653.76	1,680.18	0.77	-0.53	31.60	146.77
5/2/2011	NORMAL	5,596.0	0.70	334.20	5,240.91	297.63	-1,654.65	1,681.18	0.68	-0.11	52.95	123.23
	NORMAL	5,690.0	1.10	14.60	5,334.89	299.02	-1,654.67	1,681.44	0.77	0.43	42.98	79.07
	NORMAL	5,785.0	0.40	49.50	5,429.89	300.12	-1,654.19	1,681.16	0.85	-0.74	36.74	163.49
	NORMAL	5,879.0	0.40	301.50	5,523.88	300.50	-1,654.22	1,681.25	0.69	0.00	-114.89	216.00
	NORMAL	5,973.0	0.70	271.50	5,617.88	300.69	-1,655.08	1,682.13	0.43	0.32	-31.91	300.51
	NORMAL	6,068.0	0.50	163.40	5,712.88	300.30	-1,655.54	1,682.51	1.03	-0.21	-113.79	209.06
	NORMAL	6,162.0	1.10	149.80	5,806.87	299.13	-1,654.97	1,681.75	0.67	0.64	-14.47	335.56
	NORMAL	6,256.0	1.10	115.40	5,900.85	297.96	-1,653.70	1,680.30	0.69	0.00	-36.60	252.80
	NORMAL	6,351.0	1.10	145.40	5,995.83	296.82	-1,652.36	1,678.78	0.60	0.00	31.58	105.00
	NORMAL	6,445.0	2.20	178.80	6,089.80	294.28	-1,651.81	1,677.80	1.51	1.17	35.53	58.68
	NORMAL	6,540.0	1.90	181.60	6,184.74	290.88	-1,651.81	1,677.23	0.33	-0.32	2.95	162.93
	NORMAL	6,634.0	1.40	173.60	6,278.70	288.18	-1,651.73	1,676.68	0.58	-0.53	-8.51	200.77
	NORMAL	6,728.0	2.90	203.30	6,372.63	284.85	-1,652.54	1,676.91	1.94	1.60	31.60	52.07
	NORMAL	6,789.0	2.90	203.30	6,433.55	282.02	-1,653.76	1,677.62	0.00	0.00	0.00	0.00