

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	GM 44-27	Wellbore No.	
Well Name	GM 44-27	Common Name	GM 44-27
Project	GV 27-06S-096W	Site	MV 29-27 Pad
Vertical Section	127.99 (°)	North Reference	True
Azimuth			
Origin N/S		Origin E/W	
Spud Date	3/4/2011	UWI	GM 44-27
Active Datum	KB @5,683.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	SCIENTIFIC
Started	3/4/2011	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 (°)
3/4/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/4/2011	NORMAL	84.0	0.44	178.77	84.00	-0.32	0.01	0.20	0.52	0.52	0.00	178.77
	NORMAL	113.0	1.06	150.38	113.00	-0.67	0.14	0.52	2.43	2.14	-97.90	314.34
	NORMAL	144.0	1.41	135.62	143.99	-1.19	0.55	1.17	1.52	1.13	-47.61	310.19
	NORMAL	172.0	2.02	126.04	171.98	-1.73	1.19	2.00	2.40	2.18	-34.21	329.99
	NORMAL	205.0	2.73	130.25	204.95	-2.58	2.26	3.37	2.21	2.15	12.76	15.91
	NORMAL	235.0	3.52	124.37	234.90	-3.56	3.57	5.00	2.84	2.63	-19.60	334.96
	NORMAL	263.0	4.75	121.03	262.83	-4.64	5.27	7.01	4.47	4.39	-11.93	347.25
	NORMAL	296.0	5.81	122.78	295.69	-6.25	7.84	10.03	3.25	3.21	5.30	9.51
	NORMAL	326.0	6.77	121.03	325.51	-7.98	10.64	13.30	3.26	3.20	-5.83	347.83
	NORMAL	355.0	8.09	120.41	354.26	-9.90	13.86	17.02	4.56	4.55	-2.14	356.22
	NORMAL	387.0	9.06	125.86	385.91	-12.51	17.84	21.77	3.95	3.03	17.03	42.67
	NORMAL	417.0	9.59	132.54	415.51	-15.59	21.60	26.62	4.01	1.77	22.27	67.23
	NORMAL	446.0	9.94	133.15	444.09	-18.93	25.21	31.52	1.26	1.21	2.10	16.77
	NORMAL	477.0	10.65	131.13	474.59	-22.64	29.32	37.04	2.57	2.29	-6.52	332.05
	NORMAL	508.0	11.35	127.79	505.02	-26.40	33.88	42.95	3.05	2.26	-10.77	316.04
	NORMAL	538.0	12.84	127.71	534.36	-30.25	38.85	49.24	4.97	4.97	-0.27	359.32
	NORMAL	568.0	14.08	127.62	563.53	-34.51	44.38	56.22	4.13	4.13	-0.30	358.99
	NORMAL	611.0	15.40	128.85	605.12	-41.29	52.97	67.16	3.15	3.07	2.86	13.93
	NORMAL	643.0	16.57	127.23	635.88	-46.71	59.91	75.97	3.91	3.66	-5.06	338.35
	NORMAL	702.0	18.04	127.38	692.21	-57.35	73.87	93.52	2.49	2.49	0.25	1.81

## 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 (°)
3/4/2011	NORMAL	772.0	18.66	127.03	758.65	-70.67	91.43	115.56	0.90	0.89	-0.50	349.76
3/5/2011	NORMAL	878.0	19.54	127.09	858.81	-91.58	119.10	150.24	0.83	0.83	0.06	1.31
	NORMAL	968.0	19.38	128.91	943.67	-110.03	142.73	180.22	0.70	-0.18	2.02	105.64
	NORMAL	1,063.0	18.60	128.48	1,033.50	-129.36	166.86	211.13	0.83	-0.82	-0.45	189.97
	NORMAL	1,157.0	18.93	128.26	1,122.50	-148.13	190.56	241.36	0.36	0.35	-0.23	347.79
	NORMAL	1,251.0	17.88	128.19	1,211.69	-166.50	213.88	271.04	1.12	-1.12	-0.07	181.17
	NORMAL	1,346.0	18.09	127.90	1,302.05	-184.57	236.98	300.38	0.24	0.22	-0.31	336.77
	NORMAL	1,440.0	19.73	129.27	1,390.97	-203.58	260.78	330.83	1.81	1.74	1.46	15.80
	NORMAL	1,535.0	19.18	129.29	1,480.55	-223.61	285.27	362.47	0.58	-0.58	0.02	179.32
	NORMAL	1,629.0	18.94	128.43	1,569.40	-242.87	309.17	393.16	0.39	-0.26	-0.91	229.08
	NORMAL	1,723.0	19.15	126.96	1,658.25	-261.63	333.44	423.83	0.56	0.22	-1.56	292.95
	NORMAL	1,818.0	19.06	126.86	1,748.02	-280.30	358.31	454.92	0.10	-0.09	-0.11	199.94
	NORMAL	1,912.0	19.51	127.75	1,836.74	-299.12	383.00	485.96	0.57	0.48	0.95	33.57
	NORMAL	2,006.0	19.56	127.37	1,925.33	-318.28	407.91	517.39	0.15	0.05	-0.40	291.30
	NORMAL	2,101.0	19.71	126.23	2,014.81	-337.40	433.47	549.31	0.43	0.16	-1.20	290.85
	NORMAL	2,195.0	19.29	126.34	2,103.42	-355.97	458.77	580.67	0.45	-0.45	0.12	175.06
3/6/2011	NORMAL	2,289.0	19.68	127.95	2,192.03	-374.90	483.76	612.02	0.71	0.41	1.71	54.77
	NORMAL	2,384.0	18.81	127.49	2,281.72	-394.06	508.52	643.33	0.93	-0.92	-0.48	189.67
	NORMAL	2,478.0	18.82	129.79	2,370.70	-412.99	532.20	673.64	0.79	0.01	2.45	90.32
	NORMAL	2,573.0	18.06	130.60	2,460.83	-432.38	555.15	703.66	0.84	-0.80	0.85	161.75
	NORMAL	2,667.0	18.11	128.82	2,550.18	-451.02	577.60	732.83	0.59	0.05	-1.89	274.32
	NORMAL	2,761.0	17.67	125.74	2,639.64	-468.51	600.56	761.69	1.11	-0.47	-3.28	243.60
	NORMAL	2,856.0	17.67	128.00	2,730.16	-485.81	623.63	790.52	0.72	0.00	2.38	91.08
	NORMAL	2,950.0	18.91	127.85	2,819.41	-503.94	646.90	820.02	1.32	1.32	-0.16	357.75
	NORMAL	3,045.0	18.02	127.66	2,909.52	-522.36	670.68	850.11	0.94	-0.94	-0.20	183.78
	NORMAL	3,139.0	18.87	127.54	2,998.69	-540.51	694.25	879.85	0.91	0.90	-0.13	357.39
	NORMAL	3,233.0	19.96	127.50	3,087.34	-559.54	719.03	911.09	1.16	1.16	-0.04	359.28
	NORMAL	3,328.0	19.08	127.15	3,176.88	-578.79	744.27	942.83	0.93	-0.93	-0.37	187.41
	NORMAL	3,422.0	19.17	128.82	3,265.69	-597.74	768.54	973.62	0.59	0.10	1.78	81.45
	NORMAL	3,516.0	18.61	128.83	3,354.63	-616.82	792.25	1,004.05	0.60	-0.60	0.01	179.67
	NORMAL	3,611.0	17.64	129.00	3,444.91	-635.38	815.25	1,033.60	1.02	-1.02	0.18	176.96
	NORMAL	3,705.0	18.47	126.89	3,534.28	-653.28	838.22	1,062.73	1.12	0.88	-2.24	320.76
	NORMAL	3,800.0	17.88	126.90	3,624.54	-671.07	861.92	1,092.36	0.62	-0.62	0.01	179.70
	NORMAL	3,894.0	17.32	128.29	3,714.14	-688.41	884.44	1,120.78	0.74	-0.60	1.48	143.77
	NORMAL	3,988.0	16.17	126.70	3,804.16	-704.90	905.92	1,147.86	1.32	-1.22	-1.69	200.96
	NORMAL	4,083.0	15.49	127.36	3,895.55	-720.50	926.61	1,173.77	0.74	-0.72	0.69	165.49
	NORMAL	4,177.0	15.01	126.82	3,986.24	-735.42	946.33	1,198.49	0.53	-0.51	-0.57	196.22
	NORMAL	4,271.0	14.26	126.04	4,077.19	-749.52	965.44	1,222.23	0.82	-0.80	-0.83	194.35
	NORMAL	4,366.0	13.77	125.55	4,169.36	-762.98	984.10	1,245.22	0.53	-0.52	-0.52	193.38
	NORMAL	4,460.0	12.75	124.86	4,260.86	-775.41	1,001.71	1,266.75	1.10	-1.09	-0.73	188.48
	NORMAL	4,554.0	11.50	124.93	4,352.76	-786.71	1,017.91	1,286.47	1.33	-1.33	0.07	179.36
	NORMAL	4,649.0	10.53	125.58	4,446.01	-797.18	1,032.73	1,304.60	1.03	-1.02	0.68	173.02
	NORMAL	4,743.0	9.60	123.82	4,538.56	-806.54	1,046.23	1,321.00	1.04	-0.99	-1.87	197.44
3/7/2011	NORMAL	4,837.0	8.53	123.11	4,631.38	-814.71	1,058.58	1,335.76	1.14	-1.14	-0.76	185.62
	NORMAL	4,932.0	7.02	120.24	4,725.51	-821.49	1,069.50	1,348.54	1.64	-1.59	-3.02	193.00
	NORMAL	5,026.0	5.94	122.12	4,818.91	-826.97	1,078.58	1,359.07	1.17	-1.15	2.00	169.82
	NORMAL	5,121.0	4.40	128.50	4,913.52	-831.85	1,085.60	1,367.60	1.73	-1.62	6.72	162.69
	NORMAL	5,215.0	3.56	111.02	5,007.29	-835.14	1,091.14	1,374.00	1.56	-0.89	-18.60	226.79
	NORMAL	5,309.0	2.39	116.41	5,101.17	-837.06	1,095.62	1,378.71	1.28	-1.24	5.73	169.23
	NORMAL	5,404.0	0.79	0.00	5,196.14	-837.28	1,097.40	1,380.25	2.98	-1.68	-122.54	194.48
3/8/2011	NORMAL	5,498.0	0.70	139.63	5,290.14	-837.07	1,097.77	1,380.41	1.49	-0.10	148.54	161.09
	NORMAL	5,593.0	0.70	166.26	5,385.13	-838.08	1,098.28	1,381.43	0.34	0.00	28.03	103.31
	NORMAL	5,687.0	0.87	188.24	5,479.12	-839.34	1,098.32	1,382.24	0.36	0.18	23.38	71.85
	NORMAL	5,781.0	0.47	273.93	5,573.12	-840.02	1,097.83	1,382.27	1.02	-0.43	91.16	150.68
	NORMAL	5,876.0	0.44	236.66	5,668.11	-840.20	1,097.14	1,381.83	0.31	-0.03	-39.23	245.78
	NORMAL	5,970.0	0.88	236.92	5,762.11	-840.79	1,096.23	1,381.49	0.47	0.47	0.28	0.52
	NORMAL	6,065.0	0.79	267.42	5,857.10	-841.22	1,094.96	1,380.75	0.47	-0.09	32.11	116.43

## 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 (°)
3/8/2011	NORMAL	6,159.0	0.97	267.42	5,951.09	-841.28	1,093.52	1,379.65	0.19	0.19	0.00	0.00
	NORMAL	6,253.0	0.63	357.91	6,045.08	-840.80	1,092.71	1,378.72	1.24	-0.36	96.27	147.14
	NORMAL	6,348.0	0.73	4.12	6,140.07	-839.68	1,092.73	1,378.04	0.13	0.11	6.54	39.52
	NORMAL	6,442.0	0.77	331.10	6,234.07	-838.53	1,092.47	1,377.13	0.46	0.04	-35.13	258.63
	NORMAL	6,536.0	0.64	300.38	6,328.06	-837.71	1,091.71	1,376.03	0.42	-0.14	-32.68	236.09
	NORMAL	6,631.0	0.59	268.59	6,423.05	-837.45	1,090.77	1,375.12	0.36	-0.05	-33.46	245.98
	NORMAL	6,725.0	1.07	252.92	6,517.04	-837.72	1,089.44	1,374.25	0.56	0.51	-16.67	326.72
	NORMAL	6,820.0	0.98	261.10	6,612.03	-838.11	1,087.79	1,373.18	0.18	-0.09	8.61	125.64
3/9/2011	NORMAL	6,914.0	0.72	293.40	6,706.02	-838.00	1,086.46	1,372.06	0.57	-0.28	34.36	133.99
	NORMAL	7,008.0	0.59	283.40	6,800.01	-837.65	1,085.44	1,371.05	0.18	-0.14	-10.64	216.40
	NORMAL	7,103.0	0.62	202.65	6,895.01	-838.01	1,084.77	1,370.74	0.83	0.03	-85.00	231.30
	NORMAL	7,197.0	0.72	205.40	6,989.00	-839.01	1,084.32	1,371.01	0.11	0.11	2.93	19.20
	NORMAL	7,280.0	0.62	202.65	7,072.00	-839.90	1,083.92	1,371.24	0.13	-0.12	-3.31	196.45
	NORMAL	7,337.0	0.62	202.65	7,128.99	-840.47	1,083.69	1,371.40	0.00	0.00	0.00	0.00