

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	GM 331-12	Wellbore No.	
Well Name	GM 331-12	Common Name	GM 331-12
Project	GV 01-07S-096W	Site	GM 44-1 Pad
Vertical Section Azimuth	212.64 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	12/8/2012	UWI	GM 331-12
Active Datum	KB @5,230.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	12/8/2012	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

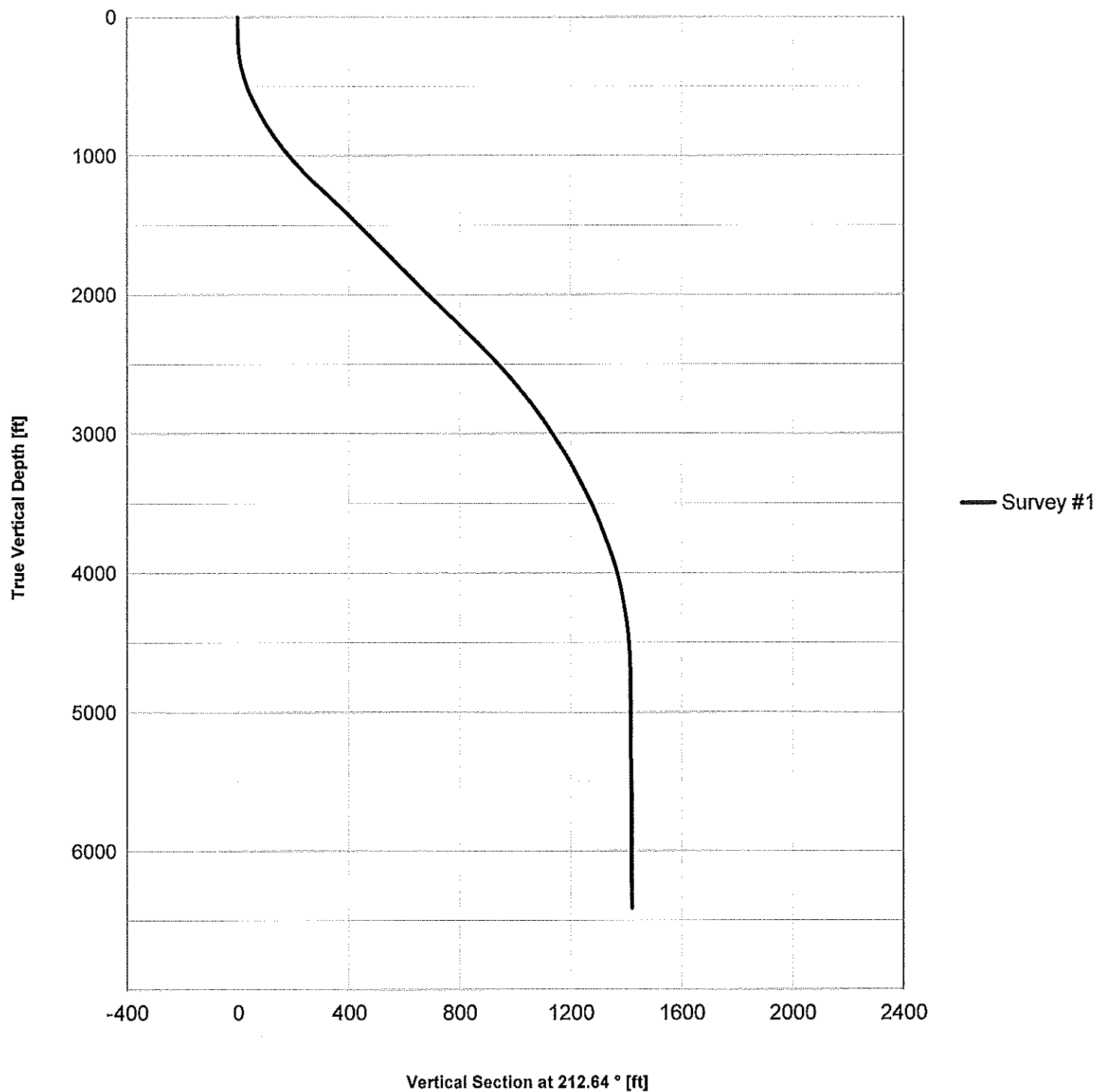
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
12/8/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/8/2012	NORMAL	80.0	0.09	2.46	80.00	0.06	0.00	-0.05	0.11	0.11	0.00	2.46
	NORMAL	165.0	1.32	222.89	164.99	-0.59	-0.66	0.85	1.63	1.45	-164.20	218.02
	NORMAL	257.0	3.26	214.54	256.92	-3.52	-2.87	4.51	2.13	2.11	-9.08	346.05
	NORMAL	347.0	5.98	211.64	346.61	-9.62	-6.78	11.76	3.03	3.02	-3.22	353.64
	NORMAL	438.0	8.80	209.88	436.85	-19.69	-12.73	23.45	3.11	3.10	-1.93	354.54
	NORMAL	529.0	11.35	211.90	526.44	-33.33	-20.93	39.36	2.83	2.80	2.22	8.89
	NORMAL	619.0	13.64	212.61	614.30	-49.79	-31.33	58.83	2.55	2.54	0.79	4.18
	NORMAL	697.0	15.28	212.39	689.83	-66.22	-41.80	78.31	2.10	2.10	-0.28	357.97
	NORMAL	788.0	17.19	212.82	777.20	-87.65	-55.51	103.75	2.10	2.10	0.47	3.81
	NORMAL	879.0	18.99	212.94	863.69	-111.38	-70.85	132.00	1.98	1.98	0.13	1.24
	NORMAL	970.0	21.21	213.09	949.15	-137.60	-87.89	163.27	2.44	2.44	0.16	1.40
	NORMAL	1,063.0	23.45	213.18	1,035.17	-167.18	-107.20	198.60	2.41	2.41	0.10	0.92
	NORMAL	1,157.0	26.13	212.49	1,120.50	-200.30	-128.56	238.01	2.87	2.85	-0.73	353.52
	NORMAL	1,251.0	27.79	211.94	1,204.28	-236.36	-151.28	280.62	1.79	1.77	-0.59	351.21
	NORMAL	1,295.0	28.58	211.71	1,243.06	-254.02	-162.23	301.40	1.81	1.80	-0.52	352.07
12/9/2012	NORMAL	1,432.0	27.69	210.72	1,363.87	-309.26	-195.72	365.98	0.73	-0.65	-0.72	207.24
	NORMAL	1,525.0	26.73	212.15	1,446.58	-345.55	-217.89	408.50	1.25	-1.03	1.54	146.37
	NORMAL	1,620.0	26.49	212.74	1,531.52	-381.46	-240.72	451.05	0.38	-0.25	0.62	132.51
	NORMAL	1,713.0	26.58	212.90	1,614.72	-416.37	-263.23	492.59	0.12	0.10	0.17	38.53
12/10/2012	NORMAL	1,808.0	26.39	212.34	1,699.75	-452.05	-286.07	534.96	0.33	-0.20	-0.59	232.49

## 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 (°)
12/10/2012	NORMAL	1,901.0	27.12	213.11	1,782.79	-487.27	-308.71	576.83	0.87	0.78	0.83	25.74
	NORMAL	1,996.0	26.92	213.66	1,867.43	-523.31	-332.46	619.98	0.34	-0.21	0.58	128.92
	NORMAL	2,090.0	26.16	212.99	1,951.52	-558.40	-355.53	661.98	0.87	-0.81	-0.71	201.20
	NORMAL	2,186.0	27.37	212.62	2,037.23	-594.74	-378.95	705.21	1.27	1.26	-0.39	351.99
	NORMAL	2,280.0	27.48	212.35	2,120.67	-631.26	-402.21	748.50	0.18	0.12	-0.29	311.37
	NORMAL	2,372.0	27.32	211.47	2,202.35	-667.20	-424.59	790.84	0.47	-0.17	-0.96	248.05
	NORMAL	2,467.0	27.30	211.34	2,286.76	-704.40	-447.30	834.41	0.07	-0.02	-0.14	251.40
	NORMAL	2,559.0	26.64	211.36	2,368.75	-740.03	-469.00	876.13	0.72	-0.72	0.02	179.22
	NORMAL	2,653.0	25.41	213.03	2,453.22	-774.94	-490.97	917.36	1.52	-1.31	1.78	149.97
	NORMAL	2,747.0	24.18	212.15	2,538.55	-808.15	-512.20	956.78	1.37	-1.31	-0.94	196.30
	NORMAL	2,840.0	22.77	212.72	2,623.85	-839.42	-532.07	993.83	1.54	-1.52	0.61	171.11
	NORMAL	2,933.0	22.17	211.37	2,709.79	-869.54	-550.93	1,029.37	0.85	-0.65	-1.45	220.07
	NORMAL	3,028.0	20.81	212.26	2,798.19	-899.12	-569.27	1,064.17	1.47	-1.43	0.94	166.93
	NORMAL	3,122.0	19.12	212.73	2,886.54	-926.19	-586.51	1,096.26	1.81	-1.80	0.50	174.80
	NORMAL	3,215.0	18.03	213.88	2,974.69	-950.95	-602.77	1,125.88	1.24	-1.17	1.24	161.97
12/11/2012	NORMAL	3,309.0	17.95	213.60	3,064.09	-975.09	-618.89	1,154.91	0.13	-0.09	-0.30	227.10
	NORMAL	3,404.0	16.87	212.33	3,154.74	-998.93	-634.37	1,183.33	1.21	-1.14	-1.34	198.78
	NORMAL	3,497.0	15.40	213.01	3,244.08	-1,020.69	-648.31	1,209.17	1.59	-1.58	0.73	173.00
	NORMAL	3,590.0	14.40	215.54	3,333.95	-1,040.46	-661.76	1,233.07	1.28	-1.08	2.72	148.17
	NORMAL	3,685.0	14.23	214.74	3,426.00	-1,059.67	-675.28	1,256.54	0.27	-0.18	-0.84	228.94
	NORMAL	3,779.0	13.04	215.50	3,517.35	-1,077.79	-688.02	1,278.68	1.28	-1.27	0.81	171.81
	NORMAL	3,873.0	11.70	212.59	3,609.16	-1,094.46	-699.31	1,298.80	1.57	-1.43	-3.10	203.53
	NORMAL	3,967.0	10.82	210.97	3,701.35	-1,110.05	-708.99	1,317.15	0.99	-0.94	-1.72	198.98
	NORMAL	4,061.0	10.64	211.45	3,793.71	-1,125.02	-718.06	1,334.64	0.21	-0.19	0.51	153.83
	NORMAL	4,154.0	9.34	211.54	3,885.30	-1,138.78	-726.48	1,350.77	1.40	-1.40	0.10	179.36
	NORMAL	4,248.0	8.03	214.26	3,978.22	-1,150.71	-734.17	1,364.96	1.46	-1.39	2.89	163.93
	NORMAL	4,341.0	6.28	213.26	4,070.49	-1,160.33	-740.62	1,376.54	1.89	-1.88	-1.08	183.58
	NORMAL	4,436.0	5.93	212.59	4,164.95	-1,168.81	-746.11	1,386.65	0.38	-0.37	-0.71	191.17
	NORMAL	4,530.0	4.64	214.02	4,258.55	-1,176.05	-750.85	1,395.30	1.38	-1.37	1.52	174.88
	NORMAL	4,624.0	4.24	210.31	4,352.27	-1,182.20	-754.73	1,402.58	0.52	-0.43	-3.95	213.84
12/12/2012	NORMAL	4,718.0	3.21	225.38	4,446.07	-1,187.05	-758.36	1,408.62	1.50	-1.10	16.03	143.81
	NORMAL	4,811.0	1.78	231.48	4,538.98	-1,189.78	-761.34	1,412.52	1.56	-1.54	6.56	172.52
	NORMAL	4,904.0	0.86	216.27	4,631.96	-1,191.24	-762.89	1,414.59	1.05	-0.99	-16.35	193.36
	NORMAL	4,998.0	0.52	197.20	4,725.95	-1,192.22	-763.43	1,415.70	0.43	-0.36	-20.29	204.75
	NORMAL	5,092.0	0.72	215.32	4,819.94	-1,193.11	-763.90	1,416.70	0.30	0.21	19.28	53.73
	NORMAL	5,186.0	0.26	0.36	4,913.94	-1,193.38	-764.24	1,417.11	1.01	-0.49	154.30	170.93
	NORMAL	5,281.0	0.29	346.63	5,008.94	-1,192.93	-764.29	1,416.76	0.08	0.03	-14.45	287.51
	NORMAL	5,375.0	0.18	295.75	5,102.94	-1,192.63	-764.48	1,416.62	0.24	-0.12	-54.13	218.36
	NORMAL	5,469.0	0.31	172.78	5,196.94	-1,192.82	-764.58	1,416.83	0.46	0.14	-130.82	216.72
12/13/2012	NORMAL	5,562.0	0.30	210.13	5,289.94	-1,193.28	-764.67	1,417.27	0.21	-0.01	40.16	111.45
	NORMAL	5,656.0	0.59	210.41	5,383.94	-1,193.91	-765.04	1,418.00	0.31	0.31	0.30	0.57
	NORMAL	5,751.0	0.47	226.57	5,478.93	-1,194.60	-765.57	1,418.86	0.20	-0.13	17.01	136.65
	NORMAL	5,846.0	0.71	176.25	5,573.93	-1,195.46	-765.82	1,419.71	0.58	0.25	-52.97	268.25
	NORMAL	5,940.0	0.62	26.53	5,667.92	-1,195.58	-765.55	1,419.68	1.37	-0.10	-159.28	194.09
	NORMAL	6,034.0	0.41	319.88	5,761.92	-1,194.87	-765.54	1,419.07	0.63	-0.22	-70.90	219.45
	NORMAL	6,129.0	0.35	338.72	5,856.92	-1,194.34	-765.86	1,418.80	0.15	-0.06	19.83	124.87
	NORMAL	6,223.0	0.62	301.74	5,950.92	-1,193.80	-766.40	1,418.64	0.43	0.29	-39.34	291.28
	NORMAL	6,317.0	0.65	291.90	6,044.91	-1,193.34	-767.33	1,418.75	0.12	0.03	-10.47	280.43
	NORMAL	6,409.0	0.44	293.01	6,136.91	-1,193.01	-768.14	1,418.90	0.23	-0.23	1.21	177.68
	NORMAL	6,503.0	0.65	260.03	6,230.90	-1,192.96	-769.00	1,419.32	0.39	0.22	-35.09	286.57
12/14/2012	NORMAL	6,599.0	0.89	256.34	6,326.89	-1,193.23	-770.26	1,420.23	0.26	0.25	-3.84	346.48
	NORMAL	6,683.0	0.89	256.34	6,410.88	-1,193.54	-771.52	1,421.18	0.00	0.00	0.00	0.00

### 3 Charts

#### 3.1 Vertical Section View



### 3.2 Plan View

