

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	GM 414-14	Wellbore No.	
Well Name	GM 414-14	Common Name	GM 414-14
Project	SG 23-07S-096W	Site	GV 18-23 Pad
Vertical Section Azimuth	329.57 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	3/13/2012	UWI	GM 414-14
Active Datum	KB @5,158.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	3/13/2012	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

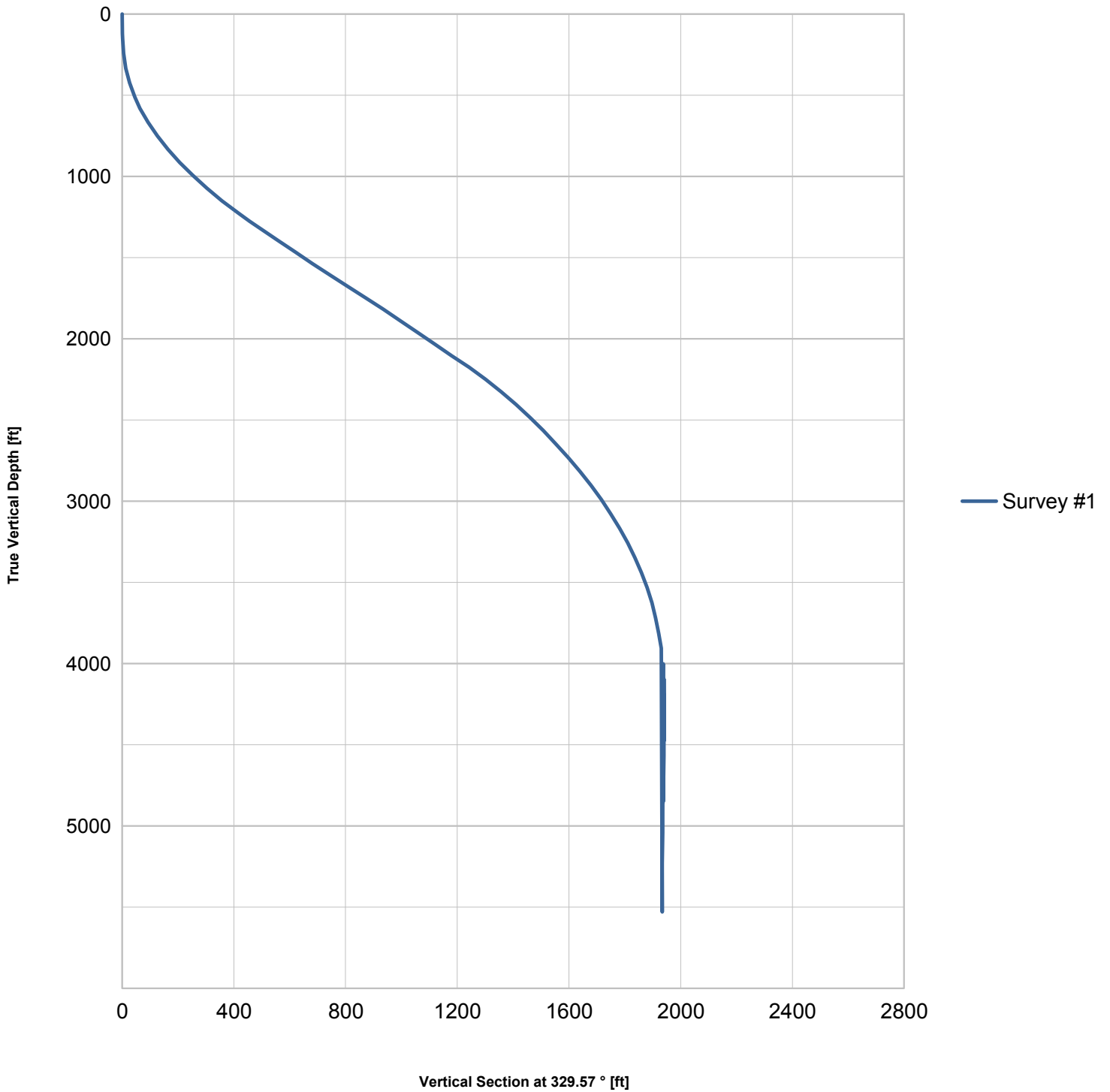
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
3/13/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3/13/2012	NORMAL	122.0	0.97	340.49	121.99	0.97	-0.34	1.01	0.80	0.80	0.00	340.49
	NORMAL	153.0	1.41	326.60	152.99	1.54	-0.64	1.65	1.69	1.42	-44.81	319.68
	NORMAL	243.0	3.34	313.68	242.91	4.27	-3.15	5.28	2.21	2.14	-14.36	337.98
	NORMAL	335.0	7.30	307.79	334.49	9.71	-9.71	13.29	4.34	4.30	-6.40	349.21
	NORMAL	425.0	10.65	314.65	423.38	19.06	-20.15	26.64	3.90	3.72	7.62	21.13
	NORMAL	516.0	13.55	321.33	512.35	33.30	-32.79	45.32	3.53	3.19	7.34	29.07
	NORMAL	587.0	16.54	329.20	580.92	48.48	-43.17	63.66	5.09	4.21	11.08	38.19
	NORMAL	678.0	20.59	332.88	667.17	73.86	-57.10	92.60	4.63	4.45	4.04	17.89
	NORMAL	769.0	23.07	330.20	751.64	103.58	-73.26	126.41	2.94	2.73	-2.95	336.86
	NORMAL	859.0	26.05	329.67	833.49	135.94	-92.01	163.82	3.32	3.31	-0.59	355.53
	NORMAL	950.0	29.17	329.21	914.11	172.25	-113.45	205.98	3.44	3.43	-0.51	355.89
	NORMAL	1,042.0	31.93	328.47	993.34	212.25	-137.66	252.74	3.03	3.00	-0.80	351.92
	NORMAL	1,136.0	33.49	327.64	1,072.43	255.35	-164.54	303.51	1.73	1.66	-0.88	343.61
3/14/2012	NORMAL	1,231.0	35.94	327.64	1,150.51	301.05	-193.50	357.58	2.58	2.58	0.00	0.00
	NORMAL	1,231.0	35.94	327.64	1,150.51	301.05	-193.50	357.58	0.00	0.00	0.00	0.00
	NORMAL	1,325.0	38.81	329.30	1,225.20	349.69	-223.31	414.62	3.24	3.05	1.77	20.01
	NORMAL	1,325.0	38.81	329.30	1,225.20	349.69	-223.31	414.62	0.00	0.00	0.00	0.00
	NORMAL	1,390.0	40.10	330.21	1,275.39	385.37	-244.11	455.92	2.17	1.98	1.40	24.50
	NORMAL	1,390.0	40.10	330.21	1,275.39	385.37	-244.11	455.92	0.00	0.00	0.00	0.00
3/15/2012	NORMAL	1,546.0	41.20	330.70	1,393.75	473.78	-294.21	557.53	0.73	0.71	0.31	16.37

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 (°)
3/15/2012	NORMAL	1,640.0	40.60	332.20	1,464.80	527.84	-323.63	619.04	1.22	-0.64	1.60	121.99
	NORMAL	1,735.0	41.60	331.40	1,536.39	582.87	-353.14	681.44	1.19	1.05	-0.84	331.96
	NORMAL	1,830.0	41.90	330.40	1,607.26	638.15	-383.91	744.68	0.77	0.32	-1.05	293.88
	NORMAL	1,924.0	42.10	330.00	1,677.12	692.73	-415.17	807.58	0.36	0.21	-0.43	306.62
	NORMAL	2,019.0	42.70	329.20	1,747.27	747.97	-447.59	871.64	0.85	0.63	-0.84	317.75
	NORMAL	2,113.0	41.30	330.00	1,817.13	802.22	-479.42	934.53	1.59	-1.49	0.85	159.37
	NORMAL	2,208.0	40.10	330.70	1,889.15	856.05	-510.07	996.47	1.35	-1.26	0.74	159.44
	NORMAL	2,302.0	40.50	331.10	1,960.84	909.18	-539.64	1,057.25	0.51	0.43	0.43	33.05
	NORMAL	2,397.0	40.50	329.50	2,033.08	962.77	-570.20	1,118.94	1.09	0.00	-1.68	269.39
	NORMAL	2,491.0	41.40	328.28	2,104.08	1,015.51	-602.04	1,180.54	1.28	0.96	-1.30	317.92
	NORMAL	2,586.0	40.36	329.51	2,175.91	1,068.74	-634.16	1,242.71	1.38	-1.09	1.29	142.72
	NORMAL	2,680.0	36.93	331.79	2,249.32	1,119.87	-662.96	1,301.39	3.95	-3.65	2.43	158.34
	NORMAL	2,775.0	35.09	332.85	2,326.16	1,169.32	-688.92	1,357.17	2.04	-1.94	1.12	161.72
	NORMAL	2,869.0	33.33	331.27	2,403.89	1,216.01	-713.66	1,409.96	2.10	-1.87	-1.68	206.13
	NORMAL	2,963.0	31.48	330.92	2,483.25	1,260.11	-738.01	1,460.32	1.98	-1.97	-0.37	185.64
	NORMAL	3,058.0	28.84	332.15	2,565.39	1,302.05	-760.77	1,508.01	0.00	0.00	0.00	0.00
3/16/2012	NORMAL	3,058.0	28.84	332.15	2,565.39	1,302.05	-760.77	1,508.01	2.85	-2.78	1.29	167.36
	NORMAL	3,153.0	28.58	331.97	2,648.71	1,342.37	-782.15	1,553.61	0.29	-0.27	-0.19	198.32
	NORMAL	3,247.0	27.26	331.79	2,731.76	1,381.19	-802.90	1,597.58	1.41	-1.40	-0.19	183.57
	NORMAL	3,342.0	25.15	331.09	2,817.00	1,418.04	-822.94	1,639.51	2.24	-2.22	-0.74	188.02
	NORMAL	3,436.0	24.01	331.09	2,902.48	1,452.26	-841.84	1,678.59	1.21	-1.21	0.00	180.00
	NORMAL	3,531.0	21.98	330.39	2,989.92	1,484.64	-859.97	1,715.70	2.16	-2.14	-0.74	187.35
	NORMAL	3,625.0	19.96	329.86	3,077.69	1,513.82	-876.72	1,749.33	2.16	-2.15	-0.56	185.12
	NORMAL	3,720.0	19.26	329.86	3,167.18	1,541.39	-892.73	1,781.22	0.74	-0.74	0.00	180.00
	NORMAL	3,814.0	17.15	333.20	3,256.47	1,567.17	-906.77	1,810.55	2.50	-2.24	3.55	155.26
	NORMAL	3,909.0	14.42	332.67	3,347.88	1,590.18	-918.52	1,836.35	2.88	-2.87	-0.56	182.77
	NORMAL	4,003.0	13.72	330.04	3,439.06	1,610.24	-929.46	1,859.18	1.01	-0.74	-2.80	221.14
	NORMAL	4,098.0	11.26	332.15	3,531.81	1,628.20	-939.42	1,879.72	2.63	-2.59	2.22	170.52
	NORMAL	4,193.0	9.40	332.15	3,625.26	1,643.27	-947.37	1,896.74	1.96	-1.96	0.00	180.00
	NORMAL	4,287.0	7.30	328.45	3,718.26	1,655.14	-954.09	1,910.38	2.30	-2.23	-3.94	192.53
	NORMAL	4,382.0	6.16	321.07	3,812.61	1,664.25	-960.45	1,921.45	1.50	-1.20	-7.77	213.56
	NORMAL	4,476.0	5.10	328.63	3,906.16	1,671.74	-965.79	1,930.62	1.37	-1.13	8.04	148.74
	NORMAL	4,571.0	2.99	346.91	4,000.92	1,677.76	-968.55	1,937.21	2.58	-2.22	19.24	157.47
3/17/2012	NORMAL	4,665.0	0.79	4.67	4,094.86	1,680.80	-969.05	1,940.08	2.39	-2.34	18.89	173.85
	NORMAL	4,760.0	0.44	309.12	4,189.86	1,681.68	-969.28	1,940.95	0.69	-0.37	-58.47	213.84
	NORMAL	4,854.0	0.44	243.73	4,283.85	1,681.75	-969.89	1,941.32	0.51	0.00	-69.56	237.31
	NORMAL	4,949.0	0.79	227.20	4,378.85	1,681.14	-970.69	1,941.20	0.41	0.37	-17.40	324.69
	NORMAL	5,043.0	0.70	215.95	4,472.84	1,680.24	-971.51	1,940.84	0.18	-0.10	-11.97	232.85
	NORMAL	5,138.0	1.32	210.33	4,567.83	1,678.82	-972.40	1,940.07	0.66	0.65	-5.92	348.11
	NORMAL	5,232.0	0.53	180.97	4,661.81	1,677.45	-972.95	1,939.17	0.95	-0.84	-31.23	196.85
	NORMAL	5,327.0	1.06	201.72	4,756.80	1,676.20	-973.29	1,938.25	0.63	0.56	21.84	39.15
	NORMAL	5,421.0	0.62	154.96	4,850.79	1,674.93	-973.39	1,937.22	0.83	-0.47	-49.74	215.41
	NORMAL	5,516.0	0.79	193.45	4,945.79	1,673.83	-973.33	1,936.23	0.52	0.18	40.52	90.19
	NORMAL	5,610.0	1.14	215.43	5,039.77	1,672.43	-974.02	1,935.38	0.54	0.37	23.38	57.95
	NORMAL	5,705.0	1.58	230.19	5,134.75	1,670.83	-975.58	1,934.78	0.59	0.46	15.54	46.06
	NORMAL	5,799.0	1.93	236.17	5,228.70	1,669.11	-977.89	1,934.48	0.42	0.37	6.36	30.63
	NORMAL	5,894.0	2.90	239.33	5,323.62	1,667.00	-981.28	1,934.37	1.03	1.02	3.33	9.40
	NORMAL	6,055.0	2.90	239.33	5,484.41	1,662.84	-988.29	1,934.34	0.00	0.00	0.00	0.00
	NORMAL	6,100.0	2.90	239.33	5,529.35	1,661.68	-990.25	1,934.33	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

