

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	GM 422-27	Wellbore No.	
Well Name	GM 422-27	Common Name	GM 422-27
Project	GV 27-06S-096W	Site	GM 24-27 Pad
Vertical Section Azimuth	338.00 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	4/15/2011	UWI	GM 422-27
Active Datum	KB @5,628.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	4/15/2011	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)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
4/15/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/15/2011	NORMAL	71.0	0.35	287.75	71.00	0.07	-0.21	0.14	0.49	0.49	0.00	287.75
	NORMAL	101.0	0.79	306.30	101.00	0.22	-0.46	0.37	1.57	1.47	61.83	32.21
	NORMAL	132.0	1.32	321.24	131.99	0.62	-0.86	0.90	1.91	1.71	48.19	35.03
	NORMAL	162.0	2.55	336.18	161.98	1.50	-1.34	1.89	4.40	4.10	49.80	29.88
	NORMAL	223.0	4.84	339.43	222.84	5.15	-2.79	5.82	3.77	3.75	5.33	6.85
	NORMAL	253.0	6.07	336.71	252.71	7.79	-3.87	8.68	4.19	4.10	-9.07	346.77
	NORMAL	284.0	7.74	335.13	283.48	11.19	-5.39	12.40	5.42	5.39	-5.10	352.73
	NORMAL	345.0	9.50	338.64	343.79	19.61	-8.95	21.54	3.01	2.89	5.75	18.38
	NORMAL	416.0	11.48	339.10	413.60	31.67	-13.61	34.46	2.79	2.79	0.65	2.65
	NORMAL	508.0	14.86	336.93	503.17	51.08	-21.50	55.42	3.71	3.67	-2.36	350.62
	NORMAL	599.0	19.09	338.01	590.18	75.63	-31.65	81.97	4.66	4.65	1.19	4.78
	NORMAL	691.0	21.10	338.87	676.58	105.03	-43.25	113.58	2.21	2.18	0.93	8.77
	NORMAL	783.0	23.36	339.17	761.74	137.52	-55.71	148.38	2.46	2.46	0.33	3.01
	NORMAL	874.0	25.06	338.69	844.73	172.34	-69.13	185.69	1.88	1.87	-0.53	353.18
	NORMAL	965.0	27.64	337.80	926.27	209.85	-84.11	226.08	2.87	2.84	-0.98	350.90
	NORMAL	1,060.0	30.43	336.91	1,009.32	252.39	-101.88	272.17	2.97	2.94	-0.94	350.81
	NORMAL	1,154.0	33.83	338.00	1,088.91	298.56	-121.02	322.16	3.67	3.62	1.16	10.14
	NORMAL	1,160.0	33.97	337.85	1,093.89	301.66	-122.28	325.50	2.72	2.33	-2.50	329.08
4/16/2011	NORMAL	1,256.0	35.30	339.00	1,172.88	352.40	-142.33	380.06	1.54	1.39	1.20	26.65
	NORMAL	1,350.0	35.70	337.60	1,249.41	403.11	-162.52	434.64	0.96	0.43	-1.49	295.63

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 (°)
4/16/2011	NORMAL	1,445.0			1,338.38	429.60	-173.43	463.29	37.58	-37.58	0.00	180.00
4/17/2011	NORMAL	1,539.0	36.10	338.10	1,426.28	456.18	-184.12	491.94	38.40	38.40	0.00	338.10
	NORMAL	1,634.0	36.40	336.70	1,502.90	508.04	-205.71	548.11	0.93	0.32	-1.47	289.35
	NORMAL	1,728.0	37.10	337.00	1,578.21	559.75	-227.82	604.34	0.77	0.74	0.32	14.50
	NORMAL	1,822.0	37.20	338.10	1,653.14	612.22	-249.49	661.10	0.71	0.11	1.17	81.88
	NORMAL	1,916.0	35.90	338.40	1,728.65	664.21	-270.24	717.08	1.40	-1.38	0.32	172.30
	NORMAL	2,011.0	34.70	339.50	1,806.18	715.44	-289.96	771.96	1.43	-1.26	1.16	152.54
	NORMAL	2,105.0	35.50	339.30	1,883.09	766.03	-308.98	826.00	0.86	0.85	-0.21	351.74
	NORMAL	2,199.0	35.40	339.30	1,959.66	817.03	-328.25	880.50	0.11	-0.11	0.00	180.00
	NORMAL	2,293.0	33.90	339.10	2,036.99	866.99	-347.23	933.93	1.60	-1.60	-0.21	184.25
	NORMAL	2,388.0	34.40	338.40	2,115.61	916.69	-366.56	987.26	0.67	0.53	-0.74	321.55
	NORMAL	2,482.0	32.30	338.10	2,194.12	964.69	-385.70	1,038.93	2.24	-2.23	-0.32	184.37
	NORMAL	2,577.0	32.40	338.60	2,274.38	1,011.94	-404.46	1,089.76	0.30	0.11	0.53	69.72
	NORMAL	2,671.0	33.20	337.40	2,353.39	1,059.14	-423.54	1,140.68	1.10	0.85	-1.28	320.40
	NORMAL	2,765.0	33.70	339.30	2,431.83	1,107.30	-442.65	1,192.49	1.23	0.53	2.02	65.27
	NORMAL	2,859.0	34.50	337.90	2,509.66	1,156.36	-461.88	1,245.18	1.19	0.85	-1.49	314.96
	NORMAL	2,954.0	35.40	337.70	2,587.53	1,206.75	-482.44	1,299.60	0.96	0.95	-0.21	352.66
	NORMAL	3,048.0	35.70	336.50	2,664.01	1,257.09	-503.71	1,354.25	0.81	0.32	-1.28	292.78
	NORMAL	3,142.0	35.00	337.00	2,740.68	1,307.06	-525.18	1,408.62	0.81	-0.74	0.53	157.75
	NORMAL	3,237.0	34.90	336.50	2,818.55	1,357.06	-546.66	1,463.03	0.32	-0.11	-0.53	250.55
	NORMAL	3,331.0	35.20	336.30	2,895.50	1,406.53	-568.28	1,516.99	0.34	0.32	-0.21	338.97
	NORMAL	3,425.0	32.50	336.90	2,973.56	1,454.57	-589.08	1,569.33	2.89	-2.87	0.64	173.19
	NORMAL	3,520.0	31.90	337.70	3,053.95	1,501.27	-608.62	1,619.95	0.77	-0.63	0.84	144.94
	NORMAL	3,614.0	29.40	340.40	3,134.81	1,545.99	-625.78	1,667.84	3.04	-2.66	2.87	152.32
	NORMAL	3,708.0	27.70	337.90	3,217.38	1,587.98	-641.74	1,712.75	2.21	-1.81	-2.66	214.01
	NORMAL	3,803.0	26.20	340.00	3,302.07	1,628.15	-657.22	1,755.79	1.87	-1.58	2.21	148.54
	NORMAL	3,992.0	24.50	342.00	3,484.95	1,667.03	-670.64	1,796.87	26.06	26.06	0.00	342.00
	NORMAL	4,086.0	21.10	337.60	3,571.60	1,701.22	-683.12	1,833.24	4.04	-3.62	-4.68	204.62
	NORMAL	4,180.0	21.10	337.60	3,659.30	1,732.51	-696.01	1,867.08	0.00	0.00	0.00	0.00
4/18/2011	NORMAL	3,898.0			3,393.79	1,648.20	-664.52	1,777.12	27.58	-27.58	0.00	180.00
	NORMAL	4,275.0	19.70	337.70	3,748.34	1,763.13	-708.60	1,900.19	1.47	-1.47	0.11	178.62
	NORMAL	4,369.0	18.10	340.00	3,837.27	1,791.51	-719.61	1,930.63	1.88	-1.70	2.45	156.12
	NORMAL	4,463.0	17.00	338.80	3,926.89	1,818.05	-729.58	1,958.97	1.23	-1.17	-1.28	197.64
	NORMAL	4,557.0	15.20	342.00	4,017.20	1,842.58	-738.35	1,985.00	2.13	-1.91	3.40	155.29
	NORMAL	4,652.0	13.60	340.90	4,109.21	1,864.98	-745.86	2,008.58	1.71	-1.68	-1.16	189.17
	NORMAL	4,746.0	12.20	339.00	4,200.84	1,884.70	-753.03	2,029.55	1.56	-1.49	-2.02	195.93
	NORMAL	4,840.0	11.50	338.60	4,292.84	1,902.69	-760.01	2,048.85	0.75	-0.74	-0.43	186.50
	NORMAL	4,934.0	9.40	337.20	4,385.27	1,918.50	-766.41	2,065.90	2.25	-2.23	-1.49	186.21
	NORMAL	5,029.0	8.40	332.50	4,479.13	1,931.80	-772.62	2,080.57	1.30	-1.05	-4.95	213.72
	NORMAL	5,123.0	7.80	339.70	4,572.19	1,943.88	-778.00	2,093.78	1.25	-0.64	7.66	124.13
	NORMAL	5,217.0	6.80	342.30	4,665.43	1,955.16	-781.91	2,105.70	1.12	-1.06	2.77	163.00
4/19/2011	NORMAL	5,312.0	5.50	344.80	4,759.88	1,964.91	-784.81	2,115.83	1.40	-1.37	2.63	169.60
	NORMAL	5,406.0	4.00	349.90	4,853.56	1,972.49	-786.57	2,123.51	1.66	-1.60	5.43	166.81
	NORMAL	5,500.0	3.50	351.80	4,947.35	1,978.56	-787.55	2,129.51	0.55	-0.53	2.02	166.99
	NORMAL	5,595.0	3.10	347.80	5,042.20	1,983.94	-788.51	2,134.85	0.49	-0.42	-4.21	207.94
	NORMAL	5,689.0	1.90	355.10	5,136.11	1,987.97	-789.18	2,138.85	1.32	-1.28	7.77	168.77
	NORMAL	5,784.0	1.10	345.30	5,231.07	1,990.43	-789.54	2,141.26	0.88	-0.84	-10.32	192.92
	NORMAL	5,878.0	1.10	37.10	5,325.06	1,992.02	-789.23	2,142.62	1.02	0.00	55.11	115.90
	NORMAL	5,972.0	0.90	39.10	5,419.04	1,993.31	-788.22	2,143.44	0.22	-0.21	2.13	171.10
	NORMAL	6,067.0	0.40	39.60	5,514.04	1,994.15	-787.53	2,143.96	0.53	-0.53	0.53	179.60
	NORMAL	6,161.0	0.10	230.20	5,608.04	1,994.35	-787.39	2,144.09	0.53	-0.32	-180.21	182.11
	NORMAL	6,255.0	0.20	84.80	5,702.04	1,994.31	-787.29	2,144.01	0.31	0.11	-154.68	203.23
4/20/2011	NORMAL	6,350.0	0.60	52.80	5,797.03	1,994.62	-786.73	2,144.10	0.47	0.42	-33.68	314.17
	NORMAL	6,444.0	0.50	153.30	5,891.03	1,994.56	-786.15	2,143.82	0.90	-0.11	106.91	144.57
	NORMAL	6,539.0	0.70	177.60	5,986.03	1,993.61	-785.94	2,142.86	0.34	0.21	25.58	64.40
	NORMAL	6,633.0	0.80	199.00	6,080.02	1,992.41	-786.13	2,141.82	0.31	0.11	22.77	81.26
	NORMAL	6,727.0	0.70	188.30	6,174.01	1,991.22	-786.43	2,140.83	0.18	-0.11	-11.38	229.20

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 (°)
4/20/2011	NORMAL	6,822.0	1.40	209.90	6,268.99	1,989.64	-787.09	2,139.61	0.83	0.74	22.74	40.58
	NORMAL	6,916.0	0.40	220.80	6,362.98	1,988.40	-787.88	2,138.75	1.07	-1.06	11.60	175.71
	NORMAL	7,010.0	0.70	204.00	6,456.98	1,987.63	-788.32	2,138.21	0.36	0.32	-17.87	323.17
	NORMAL	7,104.0	1.20	214.30	6,550.96	1,986.29	-789.11	2,137.26	0.56	0.53	10.96	24.05
	NORMAL	7,199.0	1.40	222.40	6,645.94	1,984.61	-790.45	2,136.21	0.29	0.21	8.53	46.67
	NORMAL	7,293.0	2.10	240.00	6,739.90	1,982.90	-792.72	2,135.47	0.93	0.74	18.72	46.53
	NORMAL	7,388.0	2.20	233.30	6,834.83	1,980.94	-795.69	2,134.77	0.28	0.11	-7.05	288.32
	NORMAL	7,482.0	2.00	225.10	6,928.77	1,978.70	-798.30	2,133.67	0.38	-0.21	-8.72	232.30
	NORMAL	7,571.0	2.00	218.70	7,017.71	1,976.40	-800.37	2,132.31	0.25	0.00	-7.19	266.80
	NORMAL	7,616.0	2.00	218.70	7,062.68	1,975.17	-801.35	2,131.54	0.00	0.00	0.00	0.00