

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	GM 512-27	Wellbore No.	
Well Name	GM 512-27	Common Name	GM 512-27
Project	GV 27-06S-096W	Site	GM 24-27 Pad
Vertical Section Azimuth	325.29 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	5/7/2011	UWI	GM 512-27
Active Datum	KB @5,628.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Started	5/7/2011	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 (°)
5/7/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/7/2011	NORMAL	71.0	0.44	351.91	71.00	0.27	-0.04	0.24	0.62	0.62	0.00	351.91
	NORMAL	162.0	2.29	337.50	161.97	2.30	-0.78	2.33	2.05	2.03	-15.84	342.23
	NORMAL	254.0	4.66	326.34	253.79	7.11	-3.56	7.87	2.67	2.58	-12.13	338.45
	NORMAL	345.0	6.86	320.71	344.33	14.39	-9.05	16.98	2.49	2.42	-6.19	342.78
	NORMAL	436.0	9.41	327.04	434.41	24.84	-16.54	29.84	2.97	2.80	6.96	22.51
	NORMAL	478.0	10.98	325.70	475.74	31.02	-20.66	37.27	3.78	3.74	-3.19	350.75
	NORMAL	569.0	14.68	327.70	564.46	47.94	-31.71	57.46	4.09	4.07	2.20	7.82
	NORMAL	661.0	17.19	326.02	652.92	69.07	-45.54	82.71	2.77	2.73	-1.83	348.78
	NORMAL	752.0	20.15	325.64	739.12	93.16	-61.91	111.83	3.26	3.25	-0.42	357.47
	NORMAL	844.0	22.60	325.91	824.78	120.89	-80.76	145.36	2.67	2.66	0.29	2.43
	NORMAL	935.0	24.92	325.51	908.06	151.17	-101.42	182.02	2.56	2.55	-0.44	355.84
	NORMAL	1,027.0	27.57	324.10	990.57	184.40	-124.88	222.70	2.96	2.88	-1.53	346.13
	NORMAL	1,121.0	30.92	324.52	1,072.58	221.70	-151.66	268.61	3.57	3.56	0.45	3.69
	NORMAL	1,215.0	34.08	324.11	1,151.85	262.71	-181.13	319.10	3.37	3.36	-0.44	355.84
	NORMAL	1,235.0	34.89	324.67	1,168.34	271.92	-187.72	330.42	4.35	4.05	2.80	21.61
5/8/2011	NORMAL	1,351.0	35.70	324.90	1,263.01	326.68	-226.37	397.44	0.71	0.70	0.20	9.41
	NORMAL	1,445.0	35.00	323.10	1,339.68	370.67	-258.33	451.81	1.33	-0.74	-1.91	235.36
	NORMAL	1,540.0	34.80	323.10	1,417.60	414.14	-290.96	506.12	0.21	-0.21	0.00	180.00
	NORMAL	1,634.0	32.50	323.30	1,495.84	455.84	-322.16	558.17	2.45	-2.45	0.21	177.32
	NORMAL	1,728.0	32.00	327.00	1,575.35	496.98	-350.82	608.31	2.17	-0.53	3.94	105.77

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 (°)
5/8/2011	NORMAL	1,823.0	32.10	327.20	1,655.87	539.31	-378.21	658.70	0.15	0.11	0.21	46.79
	NORMAL	1,917.0	32.00	327.20	1,735.54	581.24	-405.23	708.55	0.11	-0.11	0.00	180.00
	NORMAL	2,011.0	33.40	327.00	1,814.64	623.88	-432.81	759.31	1.49	1.49	-0.21	355.50
	NORMAL	2,106.0	32.10	325.60	1,894.54	666.63	-461.31	810.69	1.58	-1.37	-1.47	209.64
	NORMAL	2,200.0	32.20	325.30	1,974.13	707.83	-489.68	860.71	0.20	0.11	-0.32	301.94
	NORMAL	2,294.0	31.60	325.60	2,053.93	748.74	-517.85	910.38	0.66	-0.64	0.32	165.33
	NORMAL	2,388.0	32.00	325.10	2,133.82	789.49	-546.02	959.91	0.51	0.43	-0.53	326.41
	NORMAL	2,483.0	30.40	323.30	2,215.08	829.41	-574.79	1,009.11	1.95	-1.68	-1.89	209.47
	NORMAL	2,577.0	30.40	324.60	2,296.15	867.87	-602.78	1,056.66	0.70	0.00	1.38	90.56
	NORMAL	2,671.0	30.90	327.20	2,377.03	907.54	-629.63	1,104.57	1.51	0.53	2.77	70.45
5/9/2011	NORMAL	2,765.0	30.90	324.70	2,457.69	947.53	-656.66	1,152.83	1.37	0.00	-2.66	268.93
	NORMAL	2,860.0	31.00	324.20	2,539.16	987.28	-685.06	1,201.68	0.29	0.11	-0.53	291.04
	NORMAL	2,954.0	31.80	325.60	2,619.40	1,027.35	-713.22	1,250.65	1.15	0.85	1.49	42.96
	NORMAL	3,048.0	33.40	326.00	2,698.58	1,069.24	-741.68	1,301.29	1.72	1.70	0.43	7.84
	NORMAL	3,143.0	32.50	324.40	2,778.30	1,111.67	-771.16	1,352.96	1.32	-0.95	-1.68	223.37
	NORMAL	3,237.0	31.70	323.70	2,857.93	1,152.11	-800.48	1,402.90	0.94	-0.85	-0.74	204.64
	NORMAL	3,332.0	31.90	324.90	2,938.67	1,192.76	-829.69	1,452.95	0.70	0.21	1.26	72.96
	NORMAL	3,426.0	32.70	325.80	3,018.13	1,234.08	-858.24	1,503.18	0.99	0.85	0.96	31.39
	NORMAL	3,520.0	32.90	324.70	3,097.14	1,275.92	-887.27	1,554.10	0.67	0.21	-1.17	288.09
	NORMAL	3,615.0	30.40	324.90	3,178.00	1,316.65	-916.00	1,603.94	2.63	-2.63	0.21	177.68
	NORMAL	3,709.0	27.90	326.30	3,260.09	1,354.41	-941.89	1,649.72	2.76	-2.66	1.49	165.35
	NORMAL	3,803.0	26.00	325.00	3,343.88	1,389.59	-965.91	1,692.32	2.12	-2.02	-1.38	196.65
	NORMAL	3,898.0	24.50	323.70	3,429.80	1,422.52	-989.51	1,732.83	1.68	-1.58	-1.37	199.70
	NORMAL	3,992.0	24.40	327.40	3,515.38	1,454.59	-1,011.51	1,771.72	1.63	-0.11	3.94	95.42
	NORMAL	4,086.0	22.70	325.60	3,601.55	1,485.92	-1,032.22	1,809.26	1.96	-1.81	-1.91	202.11
	NORMAL	4,181.0	21.20	327.20	3,689.66	1,515.48	-1,051.89	1,844.76	1.70	-1.58	1.68	159.00
	NORMAL	4,275.0	19.30	326.10	3,777.85	1,542.66	-1,069.76	1,877.28	2.06	-2.02	-1.17	190.82
	NORMAL	4,369.0	18.10	329.80	3,866.89	1,568.18	-1,085.77	1,907.38	1.79	-1.28	3.94	137.07
	NORMAL	4,464.0	15.70	329.30	3,957.78	1,591.99	-1,099.76	1,934.91	2.53	-2.53	-0.53	183.23
	NORMAL	4,558.0	14.00	329.50	4,048.63	1,612.72	-1,112.02	1,958.94	1.81	-1.81	0.21	178.37
5/10/2011	NORMAL	4,652.0	12.40	332.30	4,140.15	1,631.46	-1,122.49	1,980.30	1.83	-1.70	2.98	159.58
	NORMAL	4,746.0	10.80	331.90	4,232.23	1,648.16	-1,131.33	1,999.07	1.70	-1.70	-0.43	182.68
	NORMAL	4,841.0	9.60	335.30	4,325.72	1,663.21	-1,138.83	2,015.71	1.41	-1.26	3.58	155.02
	NORMAL	4,935.0	9.00	330.50	4,418.49	1,676.73	-1,145.72	2,030.75	1.04	-0.64	-5.11	229.93
	NORMAL	5,029.0	7.50	324.70	4,511.51	1,688.14	-1,152.89	2,044.21	1.82	-1.60	-6.17	206.17
	NORMAL	5,124.0	5.50	320.30	4,605.90	1,696.70	-1,159.38	2,054.95	2.17	-2.11	-4.63	191.81
	NORMAL	5,218.0	4.20	312.60	4,699.56	1,702.50	-1,164.79	2,062.79	1.54	-1.38	-8.19	202.80
	NORMAL	5,312.0	4.00	313.50	4,793.32	1,707.09	-1,169.71	2,069.36	0.22	-0.21	0.96	162.61
	NORMAL	5,407.0	1.80	333.90	4,888.20	1,710.71	-1,172.77	2,074.08	2.52	-2.32	21.47	164.82
	NORMAL	5,501.0	1.40	3.00	4,982.16	1,713.18	-1,173.36	2,076.45	0.95	-0.43	30.96	130.26
5/11/2011	NORMAL	5,595.0	1.20	55.40	5,076.14	1,714.89	-1,172.49	2,077.35	1.24	-0.21	55.74	125.08
	NORMAL	5,690.0	1.00	76.70	5,171.12	1,715.64	-1,170.86	2,077.05	0.48	-0.21	22.42	126.45
	NORMAL	5,784.0	0.40	94.10	5,265.12	1,715.81	-1,169.73	2,076.54	0.67	-0.64	18.51	169.05
	NORMAL	5,878.0	0.90	91.50	5,359.11	1,715.76	-1,168.67	2,075.90	0.53	0.53	-2.77	355.32
	NORMAL	5,973.0	0.80	76.50	5,454.10	1,715.90	-1,167.28	2,075.22	0.26	-0.11	-15.79	238.42
	NORMAL	6,067.0	0.70	192.20	5,548.09	1,715.49	-1,166.76	2,074.59	1.35	-0.11	123.09	150.25
	NORMAL	6,160.0	1.10	60.20	5,641.09	1,715.38	-1,166.11	2,074.13	1.78	0.43	-141.94	209.65
	NORMAL	6,255.0	1.00	58.80	5,736.07	1,716.26	-1,164.61	2,074.00	0.11	-0.11	-1.47	193.69
	NORMAL	6,349.0	0.20	75.60	5,830.07	1,716.73	-1,163.75	2,073.89	0.86	-0.85	17.87	175.91
	NORMAL	6,444.0	0.50	166.70	5,925.07	1,716.37	-1,163.49	2,073.45	0.57	0.32	95.89	112.75
5/11/2011	NORMAL	6,538.0	0.20	134.20	6,019.06	1,715.85	-1,163.28	2,072.90	0.37	-0.32	-34.57	197.97
	NORMAL	6,632.0	0.40	180.10	6,113.06	1,715.41	-1,163.16	2,072.47	0.32	0.21	48.83	74.74
	NORMAL	6,727.0	0.60	202.70	6,208.06	1,714.62	-1,163.35	2,071.93	0.29	0.21	23.79	56.27
	NORMAL	6,821.0	1.00	239.80	6,302.05	1,713.75	-1,164.25	2,071.73	0.68	0.43	39.47	71.86
	NORMAL	6,915.0	1.30	243.90	6,396.03	1,712.87	-1,165.92	2,071.96	0.33	0.32	4.36	17.39
	NORMAL	7,010.0	1.90	238.20	6,490.99	1,711.57	-1,168.22	2,072.20	0.65	0.63	-6.00	342.28
	NORMAL	7,104.0	2.40	233.70	6,584.93	1,709.58	-1,171.14	2,072.22	0.56	0.53	-4.79	339.09

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 (°)
5/11/2011	NORMAL	7,198.0	2.80	240.20	6,678.83	1,707.27	-1,174.71	2,072.37	0.53	0.43	6.91	39.67
	NORMAL	7,293.0	3.80	246.90	6,773.67	1,704.89	-1,179.62	2,073.20	1.13	1.05	7.05	24.46
	NORMAL	7,387.0	2.40	245.60	6,867.53	1,702.85	-1,184.28	2,074.18	1.49	-1.49	-1.38	182.23
	NORMAL	7,481.0	3.50	234.00	6,961.41	1,700.35	-1,188.39	2,074.46	1.33	1.17	-12.34	325.64
	NORMAL	7,531.0	5.50	305.00	7,011.28	1,700.83	-1,191.59	2,076.68	10.94	4.00	142.00	108.10