

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	GM 341-12	Wellbore No.	1
Well Name	GM 341-12	Common Name	GM 341-12
Project	GV 01-07S-096W	Site	GM 44-1 Pad
Vertical Section Azimuth	159.88 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	11/26/2012	UWI	GM 341-12
Active Datum	KB @5,230.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	Scientific Drilling
Date Started	11/26/2012	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

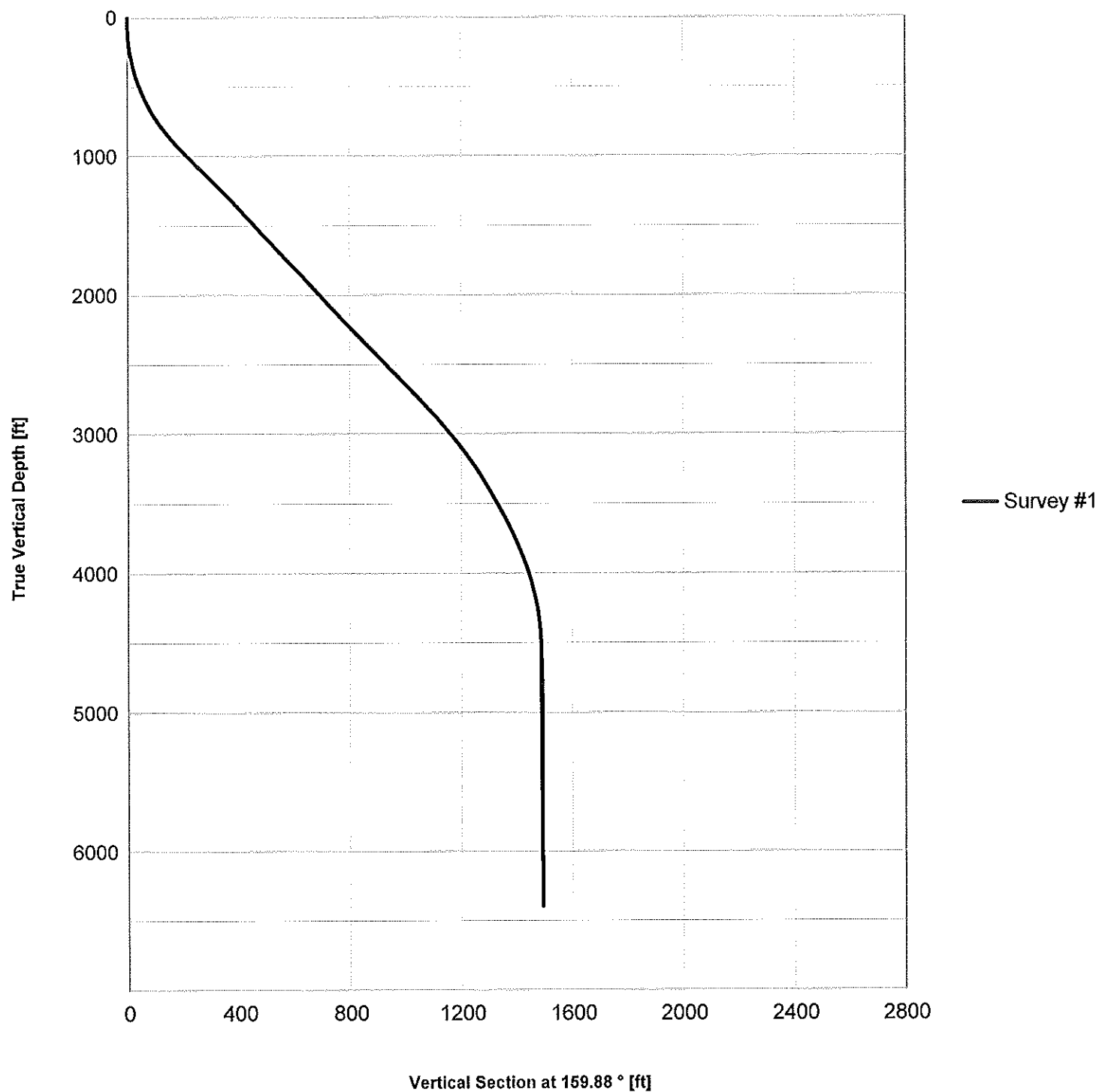
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
11/26/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/26/2012	NORMAL	74.0	0.53	101.34	74.00	-0.07	0.34	0.18	0.72	0.72	0.00	101.34
	NORMAL	166.0	3.34	131.40	165.94	-1.92	2.76	2.76	3.15	3.05	32.67	35.32
	NORMAL	257.0	5.28	136.67	256.68	-6.72	7.63	8.94	2.17	2.13	5.79	14.17
	NORMAL	347.0	6.77	145.55	346.18	-14.11	13.47	17.88	1.95	1.66	9.87	36.50
	NORMAL	438.0	9.33	151.61	436.28	-25.02	20.01	30.38	2.96	2.81	6.66	21.36
	NORMAL	516.0	11.72	151.19	512.96	-37.53	26.84	44.47	3.07	3.06	-0.54	357.95
	NORMAL	607.0	13.63	150.11	601.74	-54.93	36.63	64.18	2.11	2.10	-1.19	352.40
	NORMAL	697.0	16.47	153.98	688.64	-75.59	47.52	87.32	3.35	3.16	4.30	21.36
	NORMAL	788.0	19.75	161.30	775.13	-101.76	58.11	115.54	4.38	3.60	8.04	38.27
	NORMAL	880.0	22.70	162.89	860.89	-133.45	68.32	148.81	3.27	3.21	1.73	11.78
	NORMAL	970.0	25.72	162.33	942.96	-168.67	79.36	185.67	3.37	3.36	-0.62	355.40
	NORMAL	1,064.0	26.09	160.20	1,027.52	-207.55	92.55	226.72	1.07	0.39	-2.27	290.72
11/27/2012	NORMAL	1,185.0	27.40	159.48	1,135.57	-258.66	111.33	281.17	1.12	1.08	-0.60	345.79
	NORMAL	1,248.0	27.50	159.56	1,191.48	-285.87	121.49	310.21	0.17	0.16	0.13	20.28
	NORMAL	1,342.0	25.69	159.53	1,275.53	-325.29	136.19	352.29	1.93	-1.93	-0.03	180.41
11/28/2012	NORMAL	1,436.0	25.11	158.89	1,360.44	-362.99	150.50	392.61	0.68	-0.62	-0.68	205.04
	NORMAL	1,530.0	24.71	158.85	1,445.70	-399.92	164.77	432.19	0.43	-0.43	-0.04	182.39
	NORMAL	1,624.0	24.38	161.59	1,531.20	-436.65	177.99	471.23	1.26	-0.35	2.91	107.41
	NORMAL	1,718.0	24.70	160.78	1,616.71	-473.60	190.58	510.26	0.49	0.34	-0.86	313.20
	NORMAL	1,812.0	25.85	160.11	1,701.71	-511.42	204.02	550.39	1.26	1.22	-0.71	345.73

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 (°)
11/28/2012	NORMAL	1,906.0	25.76	161.19	1,786.34	-550.03	217.58	591.31	0.51	-0.10	1.15	101.32
	NORMAL	2,000.0	25.47	160.84	1,871.10	-588.46	230.80	631.94	0.35	-0.31	-0.37	207.40
	NORMAL	2,095.0	24.45	158.90	1,957.23	-626.09	244.58	672.02	1.38	-1.07	-2.04	217.87
	NORMAL	2,190.0	24.66	158.91	2,043.64	-662.93	258.79	711.49	0.22	0.22	0.01	1.14
	NORMAL	2,285.0	25.36	160.19	2,129.73	-700.56	272.82	751.65	0.93	0.74	1.35	38.29
	NORMAL	2,377.0	25.03	159.97	2,212.98	-737.38	286.16	790.82	0.37	-0.36	-0.24	195.74
	NORMAL	2,471.0	25.98	161.98	2,297.82	-775.64	299.34	831.28	1.37	1.01	2.14	43.25
	NORMAL	2,564.0	25.98	162.29	2,381.42	-814.42	311.84	871.99	0.15	0.00	0.33	90.14
	NORMAL	2,658.0	25.83	161.60	2,465.98	-853.46	324.56	913.03	0.36	-0.16	-0.73	243.24
	NORMAL	2,752.0	25.99	161.15	2,550.53	-892.39	337.68	954.09	0.27	0.17	-0.48	308.93
	NORMAL	2,845.0	25.66	161.80	2,634.24	-930.80	350.56	994.58	0.47	-0.35	0.70	139.66
	NORMAL	2,938.0	25.55	161.16	2,718.11	-968.91	363.32	1,034.76	0.32	-0.12	-0.69	248.02
	NORMAL	3,033.0	24.71	160.66	2,804.11	-1,007.03	376.51	1,075.09	0.91	-0.88	-0.53	193.96
	NORMAL	3,127.0	24.37	160.42	2,889.62	-1,043.84	389.52	1,114.13	0.38	-0.36	-0.26	196.23
	NORMAL	3,220.0	22.60	161.84	2,974.92	-1,078.90	401.52	1,151.18	2.00	-1.90	1.53	162.92
	NORMAL	3,314.0	21.65	161.63	3,061.99	-1,112.52	412.61	1,186.57	1.01	-1.01	-0.22	184.66
	NORMAL	3,408.0	19.77	161.01	3,149.92	-1,144.02	423.25	1,219.79	2.01	-2.00	-0.66	186.36
	NORMAL	3,501.0	18.67	162.01	3,237.73	-1,173.05	432.97	1,250.40	1.23	-1.18	1.08	163.81
	NORMAL	3,595.0	17.01	161.24	3,327.21	-1,200.38	442.04	1,279.18	1.78	-1.77	-0.82	187.72
	NORMAL	3,690.0	16.20	159.14	3,418.25	-1,225.92	451.23	1,306.32	1.06	-0.85	-2.21	215.53
	NORMAL	3,784.0	15.49	158.44	3,508.67	-1,249.85	460.51	1,331.98	0.78	-0.76	-0.74	194.73
11/29/2012	NORMAL	3,878.0	14.77	158.96	3,599.41	-1,272.70	469.42	1,356.51	0.78	-0.77	0.55	169.58
	NORMAL	3,972.0	13.18	161.35	3,690.63	-1,294.04	477.15	1,379.21	1.80	-1.69	2.54	161.21
	NORMAL	4,066.0	12.43	160.08	3,782.29	-1,313.71	484.03	1,400.04	0.85	-0.80	-1.35	199.95
	NORMAL	4,159.0	11.45	158.33	3,873.28	-1,331.70	490.84	1,419.27	1.12	-1.05	-1.88	199.42
	NORMAL	4,252.0	9.76	159.16	3,964.69	-1,347.64	497.06	1,436.38	1.82	-1.82	0.89	175.24
	NORMAL	4,346.0	7.82	159.35	4,057.58	-1,361.08	502.15	1,450.75	2.06	-2.06	0.20	179.24
	NORMAL	4,441.0	6.83	162.19	4,151.80	-1,372.50	506.15	1,462.85	1.11	-1.04	2.99	161.31
	NORMAL	4,535.0	5.20	162.89	4,245.28	-1,381.89	509.12	1,472.69	1.74	-1.73	0.74	177.77
	NORMAL	4,629.0	3.47	155.78	4,339.01	-1,388.56	511.54	1,479.79	1.92	-1.84	-7.56	193.73
	NORMAL	4,723.0	1.62	151.27	4,432.91	-1,392.32	513.34	1,483.94	1.98	-1.97	-4.80	183.93
	NORMAL	4,816.0	1.64	152.45	4,525.88	-1,394.65	514.59	1,486.56	0.04	0.02	1.27	59.80
	NORMAL	4,909.0	0.75	127.68	4,618.86	-1,396.21	515.69	1,488.39	1.09	-0.96	-26.63	198.14
	NORMAL	5,002.0	0.67	182.03	4,711.85	-1,397.12	516.15	1,489.41	0.70	-0.09	58.44	123.44
	NORMAL	5,097.0	0.38	312.14	4,806.85	-1,397.46	515.90	1,489.65	1.01	-0.31	136.96	162.37
	NORMAL	5,191.0	0.65	34.44	4,900.84	-1,396.82	515.97	1,489.06	0.75	0.29	87.55	114.45
	NORMAL	5,380.0	0.20	10.54	5,089.84	-1,395.61	516.63	1,488.16	0.25	-0.24	-12.65	189.84
	NORMAL	5,473.0	0.62	65.47	5,182.84	-1,395.24	517.12	1,487.98	0.57	0.45	59.06	72.89
	NORMAL	5,566.0	0.61	47.66	5,275.83	-1,394.70	517.95	1,487.75	0.21	-0.01	-19.15	258.13
11/30/2012	NORMAL	5,661.0	0.40	75.02	5,370.83	-1,394.27	518.64	1,487.59	0.33	-0.22	28.80	144.18
	NORMAL	5,756.0	0.47	125.08	5,465.82	-1,394.41	519.28	1,487.94	0.39	0.07	52.69	105.25
	NORMAL	5,850.0	0.40	155.40	5,559.82	-1,394.93	519.73	1,488.58	0.25	-0.07	32.26	121.70
	NORMAL	5,945.0	0.40	169.95	5,654.82	-1,395.56	519.93	1,489.24	0.11	0.00	15.32	97.27
	NORMAL	6,039.0	0.35	213.83	5,748.82	-1,396.12	519.82	1,489.73	0.30	-0.05	46.68	121.34
	NORMAL	6,134.0	0.38	203.00	5,843.82	-1,396.65	519.54	1,490.13	0.08	0.03	-11.40	288.02
	NORMAL	6,228.0	0.30	216.09	5,937.81	-1,397.13	519.27	1,490.50	0.12	-0.09	13.93	142.26
	NORMAL	6,322.0	0.18	245.12	6,031.81	-1,397.40	518.99	1,490.65	0.18	-0.13	30.88	148.51
	NORMAL	6,414.0	0.30	258.10	6,123.81	-1,397.51	518.63	1,490.62	0.14	0.13	14.11	30.96
	NORMAL	6,508.0	0.38	246.15	6,217.81	-1,397.68	518.10	1,490.61	0.11	0.09	-12.71	312.37
	NORMAL	6,604.0	0.71	249.07	6,313.81	-1,398.02	517.26	1,490.64	0.34	0.34	3.04	6.27
	NORMAL	6,625.0	0.73	247.17	6,334.81	-1,398.12	517.01	1,490.65	0.15	0.10	-9.05	309.00
	NORMAL	6,685.0	0.79	241.74	6,394.80	-1,398.47	516.29	1,490.72	0.16	0.10	-9.05	307.06

3 Charts

3.1 Vertical Section View



3.2 Plan View

