

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	GM 343-22	Wellbore No.	
Well Name	GM 343-22	Common Name	GM 343-22
Project	GV 23-06S-096W	Site	MV 10-23 Pad
Vertical Section	288.44 (°)	North Reference	True
Azimuth		Origin E/W	
Origin N/S		UWI	GM 343-22
Spud Date	6/25/2011		
Active Datum	KB @6,002.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Started	6/24/2011	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 (°)
6/24/2011	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/24/2011	NORMAL	74.0	0.18	230.89	74.00	-0.07	-0.09	0.06	0.24	0.24	0.00	230.89
	NORMAL	177.0	2.55	297.07	176.96	0.87	-2.26	2.41	2.41	2.30	64.25	69.98
6/25/2011	NORMAL	269.0	4.49	294.26	268.79	3.28	-7.36	8.02	2.12	2.11	-3.05	353.51
	NORMAL	360.0	6.95	288.90	359.33	6.53	-15.82	17.07	2.76	2.70	-5.89	345.07
	NORMAL	451.0	9.24	286.61	449.41	10.40	-28.03	29.88	2.54	2.52	-2.52	350.85
	NORMAL	543.0	11.79	289.34	539.86	15.62	-43.98	46.66	2.82	2.77	2.97	12.40
	NORMAL	614.0	15.62	289.16	608.83	21.16	-59.86	63.48	5.39	5.39	-0.25	359.27
	NORMAL	706.0	19.10	284.26	696.63	28.94	-86.16	90.89	4.10	3.78	-5.33	334.86
	NORMAL	797.0	19.96	286.01	782.39	36.89	-115.52	121.26	1.14	0.95	1.92	35.05
	NORMAL	888.0	21.63	286.89	867.46	46.05	-146.50	153.54	1.87	1.84	0.97	11.01
	NORMAL	919.0	22.34	287.33	896.21	49.46	-157.59	165.14	2.35	2.29	1.42	13.27
6/26/2011	NORMAL	910.0	22.34	287.33	887.86	48.47	-154.37	161.78	3.31	3.23	2.00	13.27
	NORMAL	1,006.0	22.69	287.76	976.55	59.56	-189.42	198.53	0.40	0.36	0.45	25.39
	NORMAL	1,070.0	22.98	286.32	1,035.53	66.83	-213.16	223.36	0.98	0.45	-2.25	296.76
	NORMAL	1,165.0	23.64	286.66	1,122.78	77.50	-249.21	260.93	0.71	0.69	0.36	11.68
	NORMAL	1,261.0	24.65	288.95	1,210.38	89.52	-286.59	300.19	1.43	1.05	2.39	43.89
	NORMAL	1,357.0	24.89	288.04	1,297.55	102.28	-324.73	340.41	0.47	0.25	-0.95	301.78
	NORMAL	1,452.0	23.57	291.20	1,384.18	115.34	-361.45	379.38	1.95	-1.39	3.33	136.94
	NORMAL	1,548.0	23.65	290.39	1,472.14	128.99	-397.39	417.79	0.35	0.08	-0.84	283.48
	NORMAL	1,643.0	24.27	289.00	1,558.96	141.99	-433.72	456.36	0.88	0.65	-1.46	317.05

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 (°)
6/26/2011	NORMAL	1,739.0	24.44	288.55	1,646.41	154.73	-471.20	495.95	0.26	0.18	-0.47	312.29
	NORMAL	1,835.0	24.03	286.47	1,733.95	166.59	-508.77	535.34	0.99	-0.43	-2.17	243.40
	NORMAL	1,928.0	24.45	288.84	1,818.76	178.17	-545.15	573.51	1.14	0.45	2.55	67.74
	NORMAL	2,024.0	23.90	287.24	1,906.34	190.35	-582.52	612.82	0.89	-0.57	-1.67	229.26
	NORMAL	2,119.0	23.60	290.45	1,993.30	202.70	-618.72	651.07	1.40	-0.32	3.38	104.53
	NORMAL	2,215.0	22.56	289.28	2,081.61	215.49	-654.11	688.69	1.18	-1.08	-1.22	203.26
	NORMAL	2,311.0	23.21	288.65	2,170.05	227.62	-689.42	726.02	0.72	0.68	-0.66	339.06
	NORMAL	2,406.0	23.57	290.50	2,257.25	240.26	-724.95	763.72	0.86	0.38	1.95	64.74
	NORMAL	2,501.0	24.11	292.34	2,344.14	254.29	-760.68	802.06	0.97	0.57	1.94	54.86
	NORMAL	2,595.0	24.05	291.65	2,429.96	268.65	-796.25	840.34	0.31	-0.06	-0.73	257.65
	NORMAL	2,690.0	23.43	290.88	2,516.93	282.53	-831.88	878.54	0.73	-0.65	-0.81	206.21
	NORMAL	2,785.0	23.13	288.56	2,604.19	295.20	-867.22	916.07	1.02	-0.32	-2.44	250.82
	NORMAL	2,881.0	23.30	288.00	2,692.42	307.07	-903.15	953.91	0.29	0.18	-0.58	307.34
	NORMAL	2,976.0	23.63	287.26	2,779.56	318.52	-939.20	991.73	0.47	0.35	-0.78	317.90
6/27/2011	NORMAL	3,070.0	23.79	285.39	2,865.63	329.14	-975.47	1,029.50	0.82	0.17	-1.99	281.16
	NORMAL	3,162.0	23.24	285.57	2,949.99	338.94	-1,010.85	1,066.16	0.60	-0.60	0.20	172.64
	NORMAL	3,258.0	22.63	287.52	3,038.40	349.58	-1,046.71	1,103.54	1.01	-0.64	2.03	129.65
	NORMAL	3,353.0	23.48	288.78	3,125.81	361.18	-1,082.06	1,140.74	1.03	0.89	1.33	30.72
	NORMAL	3,448.0	23.72	288.02	3,212.87	373.18	-1,118.14	1,178.78	0.41	0.25	-0.80	307.92
	NORMAL	3,544.0	23.65	287.60	3,300.78	384.98	-1,154.86	1,217.34	0.19	-0.07	-0.44	247.27
	NORMAL	3,639.0	24.24	288.53	3,387.61	396.94	-1,191.51	1,255.89	0.74	0.62	0.98	33.03
	NORMAL	3,735.0	23.87	289.26	3,475.27	409.61	-1,228.54	1,295.02	0.49	-0.39	0.76	141.53
	NORMAL	3,830.0	24.89	289.82	3,561.80	422.73	-1,265.49	1,334.23	1.10	1.07	0.59	13.02
	NORMAL	3,924.0	24.96	288.85	3,647.04	435.84	-1,302.87	1,373.84	0.44	0.07	-1.03	279.28
	NORMAL	4,020.0	23.83	288.21	3,734.47	448.45	-1,340.46	1,413.48	1.21	-1.18	-0.67	192.88
	NORMAL	4,115.0	23.80	287.25	3,821.38	460.13	-1,377.00	1,451.84	0.41	-0.03	-1.01	265.14
	NORMAL	4,211.0	23.31	287.73	3,909.38	471.66	-1,413.59	1,490.20	0.55	-0.51	0.50	158.84
	NORMAL	4,306.0	21.68	287.41	3,997.15	482.63	-1,448.24	1,526.54	1.72	-1.72	-0.34	184.15
6/28/2011	NORMAL	4,399.0	21.28	287.51	4,083.69	492.85	-1,480.72	1,560.59	0.43	-0.43	0.11	174.82
	NORMAL	4,494.0	19.64	289.18	4,172.70	503.28	-1,512.24	1,593.79	1.83	-1.73	1.76	161.19
	NORMAL	4,589.0	17.19	290.81	4,262.83	513.52	-1,540.45	1,623.79	2.64	-2.58	1.72	168.90
	NORMAL	4,685.0	16.32	289.49	4,354.75	523.06	-1,566.43	1,651.45	0.99	-0.91	-1.38	202.99
	NORMAL	4,780.0	16.09	289.29	4,445.97	531.86	-1,591.44	1,677.96	0.25	-0.24	-0.21	193.54
	NORMAL	4,876.0	14.27	290.26	4,538.62	540.35	-1,615.09	1,703.09	1.91	-1.90	1.01	172.52
	NORMAL	4,971.0	12.42	289.25	4,631.05	547.77	-1,635.72	1,725.01	1.96	-1.95	-1.06	186.69
	NORMAL	5,067.0	10.61	288.25	4,725.12	553.95	-1,653.87	1,744.17	1.90	-1.89	-1.04	185.80
	NORMAL	5,162.0	9.05	293.15	4,818.72	559.62	-1,669.04	1,760.36	1.86	-1.64	5.16	154.20
	NORMAL	5,258.0	7.58	289.32	4,913.71	564.69	-1,681.96	1,774.22	1.64	-1.53	-3.99	198.76
	NORMAL	5,353.0	7.75	289.36	5,007.86	568.88	-1,693.92	1,786.89	0.18	0.18	0.04	1.82
	NORMAL	5,449.0	6.73	284.42	5,103.09	572.43	-1,705.47	1,798.97	1.24	-1.06	-5.15	208.96
	NORMAL	5,544.0	6.47	280.32	5,197.47	574.77	-1,716.13	1,809.82	0.57	-0.27	-4.32	239.09
	NORMAL	5,640.0	5.72	285.14	5,292.92	576.99	-1,726.07	1,819.95	0.95	-0.78	5.02	148.07
6/29/2011	NORMAL	5,736.0	4.65	290.12	5,388.53	579.58	-1,734.34	1,828.62	1.21	-1.11	5.19	159.65
	NORMAL	5,831.0	2.72	304.82	5,483.33	582.19	-1,739.81	1,834.63	2.25	-2.03	15.47	161.13
	NORMAL	5,927.0	2.61	304.45	5,579.23	584.73	-1,743.48	1,838.92	0.12	-0.11	-0.39	188.70
	NORMAL	6,022.0	2.30	296.83	5,674.14	586.81	-1,746.96	1,842.88	0.47	-0.33	-8.02	222.71
	NORMAL	6,118.0	2.81	295.24	5,770.04	588.69	-1,750.81	1,847.13	0.54	0.53	-1.66	351.29
	NORMAL	6,213.0	1.75	322.28	5,864.97	590.83	-1,753.81	1,850.64	1.56	-1.12	28.46	147.55
	NORMAL	6,309.0	0.97	14.43	5,960.95	592.77	-1,754.50	1,851.92	1.44	-0.81	54.32	146.44
	NORMAL	6,404.0	1.41	51.03	6,055.93	594.29	-1,753.39	1,851.34	0.90	0.46	38.53	79.09
	NORMAL	6,500.0	1.06	40.36	6,151.90	595.71	-1,751.90	1,850.38	0.43	-0.36	-11.11	208.05
	NORMAL	6,595.0	0.47	36.88	6,246.89	596.69	-1,751.09	1,849.93	0.62	-0.62	-3.66	182.76
	NORMAL	6,691.0	0.47	76.59	6,342.89	597.10	-1,750.48	1,849.47	0.33	0.00	41.36	109.85
	NORMAL	6,785.0	0.32	155.06	6,436.89	596.95	-1,749.99	1,848.96	0.55	-0.16	83.48	142.32
	NORMAL	6,880.0	0.40	216.04	6,531.89	596.44	-1,750.07	1,848.88	0.39	0.08	64.19	109.80
	NORMAL	6,976.0	0.97	51.52	6,627.88	596.67	-1,749.63	1,848.53	1.42	0.59	-171.38	190.98
	NORMAL	7,071.0	1.14	73.97	6,722.87	597.43	-1,748.10	1,847.32	0.47	0.18	23.63	79.13

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 (°)
6/30/2011	NORMAL	7,167.0	1.13	85.49	6,818.85	597.77	-1,746.23	1,845.66	0.24	-0.01	12.00	98.26
	NORMAL	7,261.0	0.88	353.78	6,912.84	598.56	-1,745.39	1,845.10	1.55	-0.27	-97.56	217.27
	NORMAL	7,357.0	1.54	324.90	7,008.82	600.35	-1,746.21	1,846.45	0.92	0.69	-30.08	302.21
	NORMAL	7,451.0	1.32	290.67	7,102.79	601.77	-1,747.95	1,848.55	0.92	-0.23	-36.41	238.86
	NORMAL	7,546.0	1.55	243.33	7,197.77	601.58	-1,750.12	1,850.55	1.23	0.24	-49.83	256.70
	NORMAL	7,642.0	2.20	243.04	7,293.71	600.16	-1,752.92	1,852.76	0.68	0.68	-0.30	359.02
	NORMAL	7,738.0	2.64	244.62	7,389.63	598.37	-1,756.56	1,855.65	0.46	0.46	1.65	9.41
	NORMAL	7,831.0	2.94	247.17	7,482.52	596.53	-1,760.70	1,858.99	0.35	0.32	2.74	23.75
	NORMAL	7,866.0	2.86	251.06	7,517.47	595.90	-1,762.35	1,860.35	0.61	-0.23	11.11	114.06
	NORMAL	7,923.0	2.73	257.40	7,574.40	595.14	-1,765.02	1,862.65	0.59	-0.23	11.12	115.95