

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	SG 322-23	Wellbore No.	OH
Well Name	SG 322-23	Common Name	SG 322-23
Project	SG 23-07S-096W	Site	GV 18-23 Pad
Vertical Section Azimuth	161.06 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	2/12/2012	UWI	SG 322-23
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	2/12/2012	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 (°)
2/12/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/13/2012	NORMAL	91.0	0.62	163.30	91.00	-0.47	0.14	0.49	0.68	0.68	0.00	163.30
	NORMAL	151.0	2.02	181.23	150.98	-1.84	0.21	1.81	2.40	2.33	29.88	25.53
	NORMAL	242.0	4.40	152.23	241.84	-6.53	1.80	6.76	3.09	2.62	-31.87	310.63
	NORMAL	333.0	8.01	153.37	332.29	-15.29	6.27	16.50	3.97	3.97	1.25	2.52
	NORMAL	424.0	11.00	153.19	422.03	-28.71	13.03	31.39	3.29	3.29	-0.20	359.34
	NORMAL	514.0	13.64	158.73	509.95	-46.27	20.76	50.50	3.21	2.93	6.16	26.85
	NORMAL	605.0	17.16	164.62	597.68	-69.22	28.21	74.63	4.23	3.87	6.47	26.82
	NORMAL	676.0	20.15	162.34	664.94	-90.98	34.70	97.31	4.33	4.21	-3.21	345.21
	NORMAL	767.0	21.32	162.27	750.04	-121.67	44.50	129.52	1.29	1.29	-0.08	358.75
	NORMAL	858.0	22.82	162.30	834.37	-154.24	54.90	163.71	1.65	1.65	0.03	0.44
	NORMAL	949.0	24.53	162.09	917.71	-189.03	66.07	200.24	1.88	1.88	-0.23	357.08
	NORMAL	972.0	24.62	160.94	938.63	-198.10	69.11	209.80	2.12	0.39	-5.00	280.13
2/14/2012	NORMAL	1,073.0	25.20	160.90	1,030.23	-238.30	83.01	252.34	0.00	0.00	0.00	0.00
	NORMAL	1,168.0	24.50	159.90	1,116.44	-275.91	96.40	292.26	0.00	0.00	0.00	0.00
	NORMAL	1,262.0	22.40	160.60	1,202.67	-311.11	109.05	329.66	0.00	0.00	0.00	0.00
	NORMAL	1,357.0	22.60	160.80	1,290.44	-345.42	121.06	366.02	0.23	0.21	0.21	21.03
	NORMAL	1,451.0	22.30	159.70	1,377.31	-379.21	133.19	401.91	0.55	-0.32	-1.17	233.96
	NORMAL	1,546.0	20.40	160.60	1,465.79	-411.73	144.95	436.49	2.03	-2.00	0.95	170.63
	NORMAL	1,640.0	20.90	163.10	1,553.75	-443.23	155.26	469.63	1.08	0.53	2.66	61.62
	NORMAL	1,735.0	21.40	162.20	1,642.35	-475.95	165.49	503.89	0.63	0.53	-0.95	326.58

2.1.2 Survey Stations (Continued)

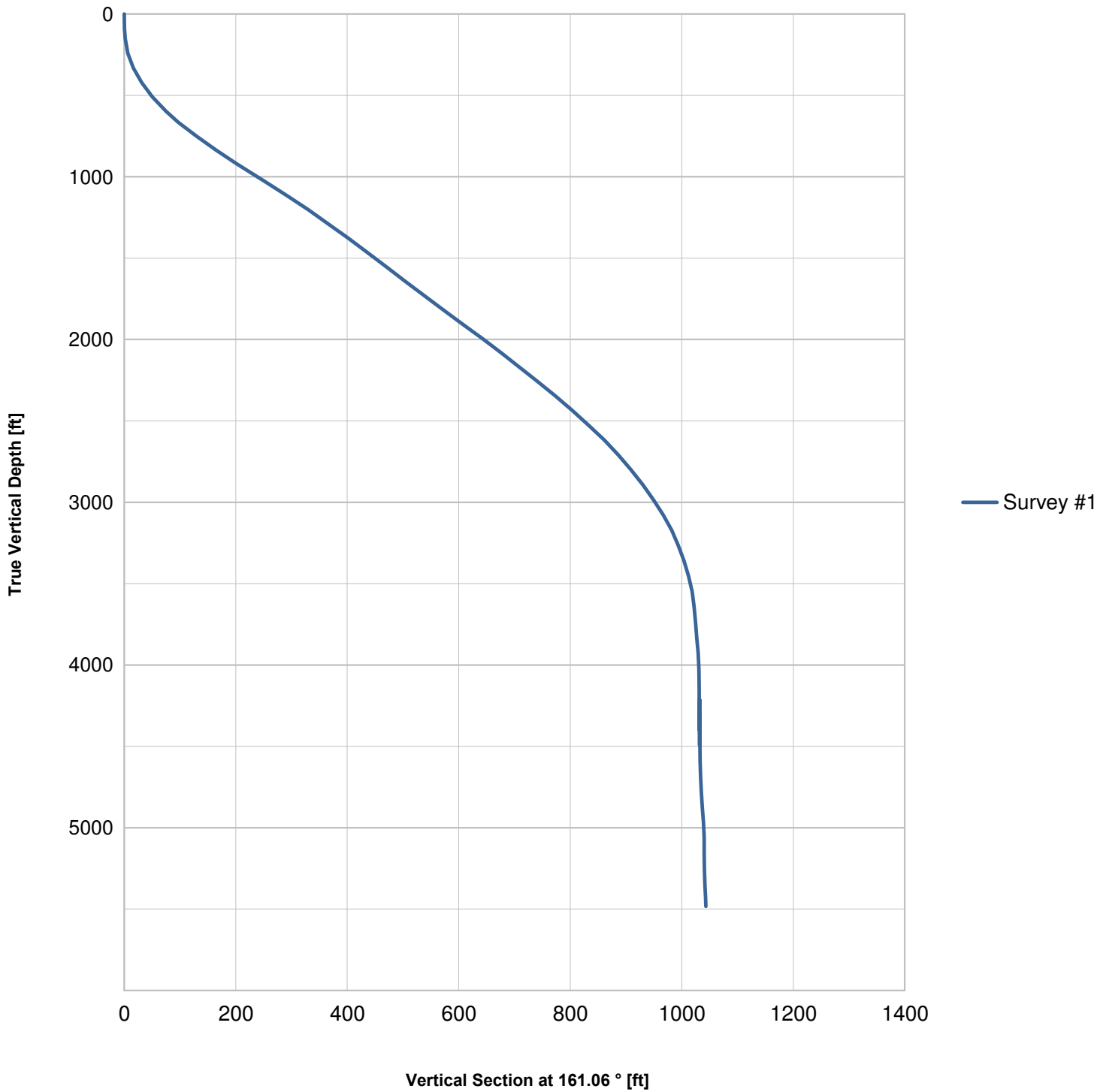
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
2/14/2012	NORMAL	1,829.0	21.10	162.20	1,729.96	-508.38	175.90	537.95	0.00	0.00	0.00	0.00
	NORMAL	1,924.0	21.50	160.60	1,818.47	-541.09	186.91	572.46	0.74	0.42	-1.68	303.79
	NORMAL	2,019.0	21.80	159.50	1,906.77	-574.03	198.87	607.50	0.53	0.32	-1.16	305.96
	NORMAL	2,113.0	21.30	159.50	1,994.20	-606.46	210.71	642.03	0.64	-0.53	-0.96	213.05
	NORMAL	2,208.0	20.80	160.10	2,082.86	-638.49	222.49	676.14	0.57	-0.53	0.63	156.96
	NORMAL	2,302.0	20.30	160.20	2,170.88	-669.52	233.69	709.13	0.00	0.00	0.00	0.00
	NORMAL	2,397.0	19.80	159.40	2,260.12	-700.09	244.94	741.69	0.60	-0.53	-0.84	208.37
2/15/2012	NORMAL	2,491.0	19.90	159.00	2,348.53	-729.93	256.27	773.59	0.00	0.00	0.00	0.00
	NORMAL	1,073.0	25.20	160.90	1,030.23	-238.30	83.01	252.34	0.57	0.57	-0.04	358.32
	NORMAL	1,168.0	24.50	159.90	1,116.44	-275.91	96.40	292.26	0.86	-0.74	-1.05	210.53
	NORMAL	1,262.0	22.40	160.60	1,202.67	-311.11	109.05	329.66	2.25	-2.23	0.74	172.76
	NORMAL	1,357.0	22.60	160.80	1,290.44	-345.42	121.06	366.02	0.23	0.21	0.21	21.03
	NORMAL	1,451.0	22.30	159.70	1,377.31	-379.21	133.19	401.91	0.55	-0.32	-1.17	233.96
	NORMAL	1,546.0	20.40	160.60	1,465.79	-411.73	144.95	436.49	2.03	-2.00	0.95	170.63
	NORMAL	1,640.0	20.90	163.10	1,553.75	-443.23	155.26	469.63	1.08	0.53	2.66	61.62
	NORMAL	1,735.0	21.40	162.20	1,642.35	-475.95	165.49	503.89	0.63	0.53	-0.95	326.58
	NORMAL	1,829.0	21.10	162.20	1,729.96	-508.38	175.90	537.95	0.32	-0.32	0.00	180.00
	NORMAL	1,924.0	21.50	160.60	1,818.47	-541.09	186.91	572.46	0.74	0.42	-1.68	303.79
	NORMAL	2,019.0	21.80	160.40	1,906.77	-574.12	198.61	607.50	0.33	0.32	-0.21	346.09
	NORMAL	2,113.0	21.30	159.50	1,994.20	-606.56	210.45	642.02	0.64	-0.53	-0.96	213.05
	NORMAL	2,208.0	20.80	160.10	2,082.86	-638.58	222.23	676.13	0.57	-0.53	0.63	156.96
	NORMAL	2,302.0	20.30	160.20	2,170.88	-669.62	233.43	709.13	0.53	-0.53	0.11	176.03
	NORMAL	2,397.0	19.80	159.40	2,260.12	-700.18	244.68	741.69	0.60	-0.53	-0.84	208.37
	NORMAL	2,491.0	19.90	159.00	2,348.53	-730.02	256.01	773.59	0.18	0.11	-0.43	306.17
2/16/2012	NORMAL	2,586.0	17.90	160.60	2,438.41	-758.89	266.66	804.35	2.17	-2.11	1.68	166.23
	NORMAL	2,680.0	17.70	161.10	2,527.91	-786.03	276.08	833.09	0.27	-0.21	0.53	142.85
	NORMAL	2,775.0	16.50	160.60	2,618.71	-812.42	285.24	861.02	1.27	-1.26	-0.53	186.75
	NORMAL	2,869.0	14.70	159.70	2,709.24	-836.20	293.82	886.29	1.93	-1.91	-0.96	187.23
	NORMAL	2,963.0	13.50	161.80	2,800.41	-857.81	301.38	909.19	1.39	-1.28	2.23	157.93
	NORMAL	3,058.0	12.20	162.90	2,893.03	-877.94	307.80	930.31	1.39	-1.37	1.16	169.88
	NORMAL	3,153.0	11.00	163.10	2,986.09	-896.21	313.38	949.40	1.26	-1.26	0.21	178.18
	NORMAL	3,247.0	10.20	156.70	3,078.48	-912.43	319.28	966.66	1.51	-0.85	-6.81	232.69
	NORMAL	3,342.0	8.00	156.20	3,172.28	-926.21	325.28	981.64	2.32	-2.32	-0.53	181.81
	NORMAL	3,436.0	6.80	151.10	3,265.50	-937.07	330.61	993.64	1.45	-1.28	-5.43	206.18
	NORMAL	3,531.0	5.60	155.10	3,359.94	-946.19	335.28	1,003.79	1.34	-1.26	4.21	162.18
	NORMAL	3,625.0	4.60	149.70	3,453.57	-953.61	339.11	1,012.05	1.18	-1.06	-5.74	202.97
	NORMAL	3,720.0	3.30	140.90	3,548.34	-959.02	342.76	1,018.35	1.51	-1.37	-9.26	200.65
	NORMAL	3,814.0	1.80	130.20	3,642.25	-962.07	345.59	1,022.16	1.67	-1.60	-11.38	192.31
	NORMAL	3,909.0	1.40	139.70	3,737.21	-963.92	347.48	1,024.52	0.50	-0.42	10.00	151.14
	NORMAL	4,003.0	1.40	157.60	3,831.18	-965.86	348.66	1,026.73	0.46	0.00	19.04	98.95
	NORMAL	4,098.0	1.60	163.90	3,926.15	-968.21	349.47	1,029.22	0.27	0.21	6.63	42.69
	NORMAL	4,192.0	0.30	201.40	4,020.13	-969.70	349.74	1,030.72	1.46	-1.38	39.89	172.36
	NORMAL	4,287.0	0.80	234.60	4,115.13	-970.31	349.11	1,031.09	0.60	0.53	34.95	49.86
	NORMAL	4,382.0	1.40	222.80	4,210.11	-971.55	347.78	1,031.83	0.67	0.63	-12.42	333.35
	NORMAL	4,476.0	1.50	268.00	4,304.09	-972.43	345.77	1,032.02	1.19	0.11	48.09	107.86
	NORMAL	4,571.0	0.50	253.90	4,399.07	-972.59	344.13	1,031.63	1.08	-1.05	-14.84	186.84
	NORMAL	4,665.0	1.10	224.90	4,493.06	-973.34	343.10	1,032.01	0.75	0.64	-30.85	310.91
	NORMAL	4,760.0	0.50	166.90	4,588.05	-974.39	342.55	1,032.82	0.99	-0.63	-61.05	206.92
	NORMAL	4,854.0	0.80	197.70	4,682.05	-975.42	342.45	1,033.76	0.48	0.32	32.77	65.44
	NORMAL	4,949.0	1.20	206.90	4,777.03	-976.94	341.79	1,034.98	0.45	0.42	9.68	26.51
2/17/2012	NORMAL	5,043.0	1.60	202.60	4,871.00	-979.03	340.84	1,036.65	0.44	0.43	-4.57	343.13
	NORMAL	5,138.0	2.10	208.90	4,965.95	-981.78	339.49	1,038.81	0.57	0.53	6.63	25.30
	NORMAL	5,232.0	1.10	249.70	5,059.92	-983.60	337.82	1,039.99	1.55	-1.06	43.40	150.44
	NORMAL	5,327.0	1.60	245.50	5,154.89	-984.46	335.75	1,040.14	0.54	0.53	-4.42	346.70
	NORMAL	5,426.0	1.80	240.20	5,253.85	-985.81	333.15	1,040.57	0.26	0.20	-5.35	319.16
	NORMAL	5,520.0	2.90	236.70	5,347.77	-987.85	329.88	1,041.44	1.18	1.17	-3.72	350.82
	NORMAL	5,610.0	2.40	235.30	5,437.67	-990.17	326.43	1,042.51	0.56	-0.56	-1.56	186.68

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 (°)
2/18/2012	NORMAL	5,655.0	2.40	235.30	5,482.63	-991.15	325.14	1,043.02	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

