

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	SG 33-23	Wellbore No.	
Well Name	SG 33-23	Common Name	SG 33-23
Project	SG 23-07S-096W	Site	SG 32-23 Pad
Vertical Section Azimuth	138.84 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	12/3/2012	UWI	SG 33-23
Active Datum	KB @5,064.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	12/3/2012	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

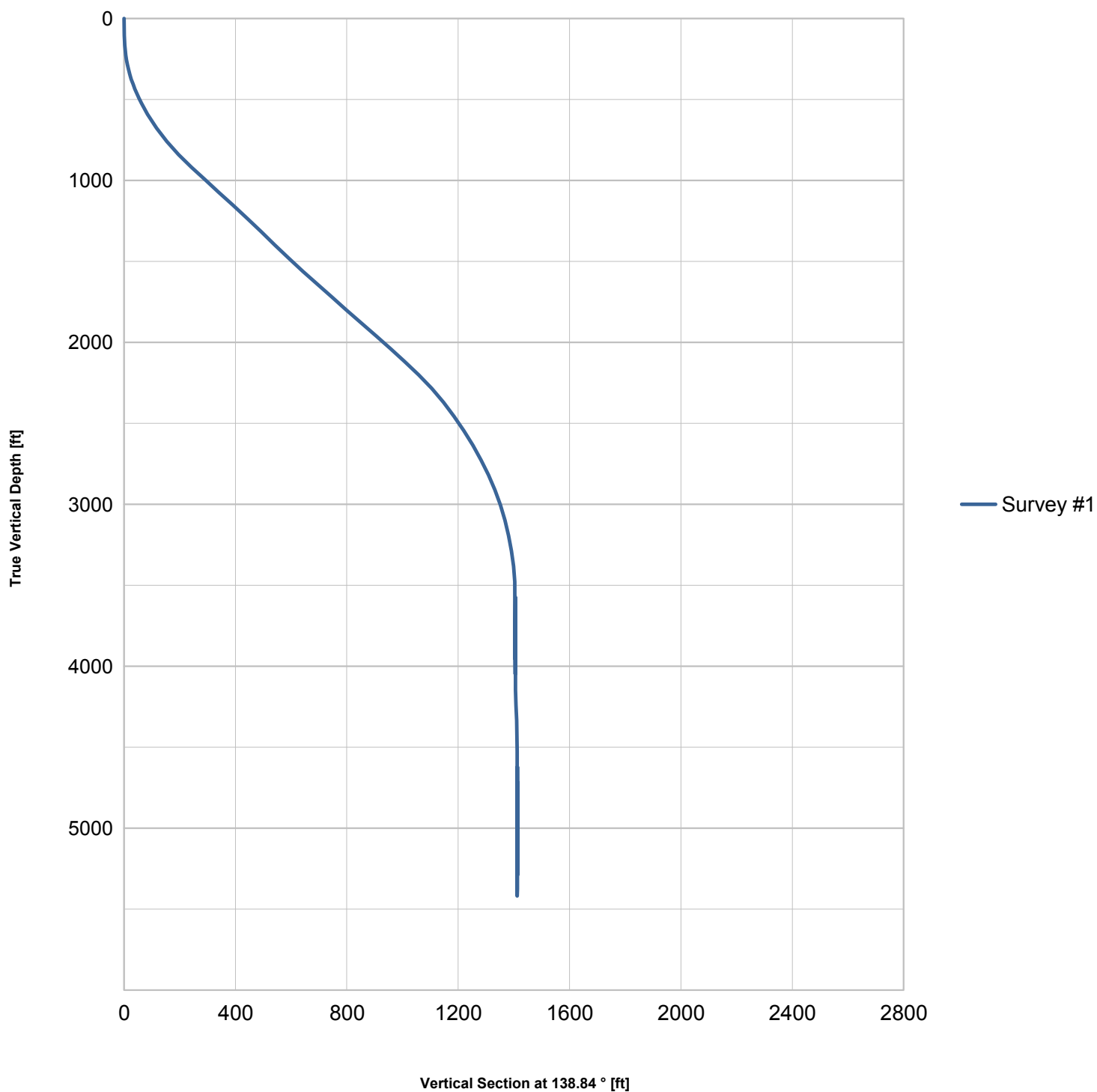
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
12/3/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/3/2012	NORMAL	105.0	1.23	149.59	104.99	-0.97	0.57	1.11	1.17	1.17	0.00	149.59
	NORMAL	135.0	1.67	159.08	134.98	-1.66	0.89	1.83	1.67	1.47	31.63	33.42
	NORMAL	165.0	2.20	146.25	164.97	-2.55	1.37	2.81	2.27	1.77	-42.77	314.21
	NORMAL	196.0	3.17	136.05	195.93	-3.66	2.29	4.26	3.48	3.13	-32.90	328.62
	NORMAL	226.0	4.40	133.24	225.87	-5.04	3.71	6.23	4.15	4.10	-9.37	350.02
	NORMAL	256.0	5.63	131.13	255.75	-6.80	5.65	8.84	4.15	4.10	-7.03	350.42
	NORMAL	286.0	6.95	133.51	285.57	-9.02	8.08	12.10	4.48	4.40	7.93	12.36
	NORMAL	317.0	8.18	133.51	316.30	-11.83	11.04	16.17	3.97	3.97	0.00	0.00
	NORMAL	347.0	9.50	136.23	345.94	-15.08	14.30	20.77	4.61	4.40	9.07	18.92
	NORMAL	378.0	11.09	140.36	376.44	-19.23	17.97	26.30	5.65	5.13	13.32	26.94
	NORMAL	408.0	12.32	140.63	405.82	-23.92	21.84	32.39	4.10	4.10	0.90	2.68
	NORMAL	439.0	13.11	143.00	436.06	-29.29	26.05	39.20	3.05	2.55	7.65	34.60
	NORMAL	469.0	14.52	140.98	465.19	-34.93	30.47	46.35	4.97	4.70	-6.73	340.13
	NORMAL	499.0	15.57	139.83	494.16	-40.93	35.43	54.13	3.64	3.50	-3.83	343.57
	NORMAL	530.0	16.89	139.92	523.92	-47.55	41.02	62.80	4.26	4.26	0.29	1.13
	NORMAL	601.0	19.04	139.92	591.46	-64.31	55.12	84.69	3.03	3.03	0.00	0.00
	NORMAL	692.0	22.09	138.92	676.65	-88.57	75.92	116.65	3.37	3.35	-1.10	352.96
	NORMAL	783.0	25.95	139.19	759.75	-116.55	100.19	153.68	4.24	4.24	0.30	1.75
	NORMAL	874.0	29.32	137.18	840.36	-147.97	128.35	195.88	3.84	3.70	-2.21	343.64
	NORMAL	965.0	31.92	137.46	918.67	-182.04	159.77	242.21	2.86	2.86	0.31	3.26

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 (°)
12/3/2012	NORMAL	1,055.0	32.50	138.86	994.82	-217.78	191.76	290.17	1.05	0.64	1.56	52.74
12/4/2012	NORMAL	1,149.0	32.26	138.86	1,074.20	-255.69	224.88	340.51	0.26	-0.26	0.00	180.00
	NORMAL	1,244.0	32.62	137.98	1,154.38	-293.81	258.70	391.47	0.62	0.38	-0.93	306.96
	NORMAL	1,339.0	31.91	138.86	1,234.71	-331.74	292.36	442.18	0.90	-0.75	0.93	146.88
	NORMAL	1,435.0	31.03	136.93	1,316.59	-368.93	325.95	492.29	1.39	-0.92	-2.01	228.05
	NORMAL	1,531.0	30.77	138.42	1,398.96	-405.37	359.15	541.57	0.84	-0.27	1.55	109.41
12/5/2012	NORMAL	1,626.0	32.04	138.69	1,480.05	-442.48	391.91	591.07	1.35	1.34	0.28	6.44
	NORMAL	1,721.0	32.97	139.48	1,560.16	-481.06	425.34	642.12	1.08	0.98	0.83	24.87
	NORMAL	1,816.0	32.88	138.16	1,639.91	-519.92	459.34	693.76	0.76	-0.09	-1.39	262.30
	NORMAL	1,912.0	33.27	139.57	1,720.35	-559.38	493.80	746.14	0.90	0.41	1.47	63.71
	NORMAL	2,007.0	33.54	138.69	1,799.66	-598.93	528.02	798.44	0.58	0.28	-0.93	298.76
	NORMAL	2,103.0	33.45	141.41	1,879.72	-639.53	562.03	851.40	1.57	-0.09	2.83	94.56
	NORMAL	2,199.0	34.20	139.92	1,959.47	-680.86	595.91	904.81	1.16	0.78	-1.55	311.50
	NORMAL	2,295.0	32.62	140.71	2,039.60	-721.53	629.67	957.65	1.71	-1.65	0.82	164.94
	NORMAL	2,390.0	32.40	140.88	2,119.72	-761.10	661.94	1,008.68	0.25	-0.23	0.18	157.52
	NORMAL	2,485.0	30.73	139.65	2,200.66	-799.34	693.72	1,058.39	1.88	-1.76	-1.29	200.56
	NORMAL	2,581.0	27.69	137.72	2,284.44	-834.55	724.61	1,105.22	3.31	-3.17	-2.01	196.38
	NORMAL	2,677.0	24.53	136.31	2,370.64	-865.47	753.39	1,147.44	3.35	-3.29	-1.47	190.48
	NORMAL	2,772.0	22.64	137.10	2,457.70	-893.12	779.46	1,185.42	2.02	-1.99	0.83	170.87
	NORMAL	2,867.0	20.79	136.93	2,545.95	-918.84	803.42	1,220.55	1.95	-1.95	-0.18	181.87
	NORMAL	2,963.0	18.81	138.42	2,636.27	-942.86	825.33	1,253.06	2.13	-2.06	1.55	166.40
	NORMAL	3,059.0	17.14	137.28	2,727.59	-964.83	845.20	1,282.68	1.78	-1.74	-1.19	191.35
	NORMAL	3,154.0	15.08	133.15	2,818.85	-983.57	863.72	1,308.98	2.48	-2.17	-4.35	207.12
	NORMAL	3,250.0	12.84	132.27	2,912.01	-999.29	880.72	1,332.00	2.34	-2.33	-0.92	184.99
	NORMAL	3,345.0	11.12	130.16	3,004.94	-1,012.30	895.54	1,351.55	1.87	-1.81	-2.22	193.26
	NORMAL	3,441.0	8.97	125.06	3,099.46	-1,022.57	908.74	1,367.97	2.42	-2.24	-5.31	199.98
	NORMAL	3,536.0	7.38	124.62	3,193.50	-1,030.29	919.83	1,381.08	1.67	-1.67	-0.46	182.04
	NORMAL	3,631.0	5.50	116.63	3,287.89	-1,035.80	928.92	1,391.21	2.19	-1.98	-8.41	201.55
	NORMAL	3,726.0	4.09	122.16	3,382.56	-1,039.64	935.86	1,398.67	1.56	-1.48	5.82	164.59
	NORMAL	3,822.0	2.15	119.44	3,478.41	-1,042.35	940.32	1,403.65	2.03	-2.02	-2.83	183.01
	NORMAL	3,917.0	1.27	213.66	3,573.38	-1,044.10	941.29	1,405.60	2.71	-0.93	99.18	150.54
	NORMAL	4,012.0	1.85	237.04	3,668.35	-1,045.81	939.42	1,405.66	0.89	0.61	24.61	59.74
	NORMAL	4,107.0	0.70	267.62	3,763.32	-1,046.67	937.55	1,405.08	1.37	-1.21	32.19	164.06
12/6/2012	NORMAL	4,201.0	0.66	240.11	3,857.32	-1,046.97	936.51	1,404.61	0.35	-0.04	-29.27	249.39
	NORMAL	4,297.0	0.88	227.98	3,953.31	-1,047.74	935.48	1,404.52	0.28	0.23	-12.64	317.30
	NORMAL	4,393.0	0.70	106.69	4,049.31	-1,048.40	935.50	1,405.02	1.44	-0.19	-126.34	205.69
	NORMAL	4,488.0	1.05	116.63	4,144.29	-1,048.95	936.83	1,406.32	0.40	0.37	10.46	28.47
	NORMAL	4,584.0	1.10	125.33	4,240.28	-1,049.88	938.37	1,408.03	0.18	0.05	9.06	77.35
	NORMAL	4,679.0	1.14	158.02	4,335.26	-1,051.29	939.47	1,409.81	0.66	0.04	34.41	102.86
	NORMAL	4,774.0	0.83	97.11	4,430.25	-1,052.25	940.50	1,411.22	1.09	-0.33	-64.12	224.57
	NORMAL	4,869.0	0.83	87.18	4,525.24	-1,052.30	941.87	1,412.16	0.15	0.00	-10.45	265.04
	NORMAL	4,964.0	0.70	103.71	4,620.23	-1,052.40	943.12	1,413.06	0.27	-0.14	17.40	128.59
	NORMAL	5,060.0	0.40	133.15	4,716.23	-1,052.77	943.94	1,413.87	0.42	-0.31	30.67	150.79
	NORMAL	5,155.0	0.31	184.65	4,811.22	-1,053.25	944.16	1,414.38	0.34	-0.09	54.21	130.47
	NORMAL	5,250.0	1.23	223.68	4,906.21	-1,054.25	943.44	1,414.65	1.06	0.97	41.08	50.19
	NORMAL	5,346.0	1.98	227.46	5,002.18	-1,056.11	941.50	1,414.78	0.79	0.78	3.94	9.93
	NORMAL	5,442.0	2.33	231.41	5,098.11	-1,058.45	938.75	1,414.74	0.40	0.36	4.11	24.98
	NORMAL	5,537.0	2.94	235.37	5,193.01	-1,061.04	935.24	1,414.37	0.67	0.64	4.17	18.60
	NORMAL	5,632.0	3.21	239.76	5,287.87	-1,063.76	930.94	1,413.59	0.38	0.28	4.62	43.30
	NORMAL	5,718.0	3.56	237.39	5,373.72	-1,066.42	926.61	1,412.74	0.44	0.41	-2.76	337.02
	NORMAL	5,763.0	3.56	237.39	5,418.63	-1,067.92	924.25	1,412.32	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

