

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	SG 342-23	Wellbore No.	
Well Name	SG 342-23	Common Name	SG 342-23
Project	SG 23-07S-096W	Site	SG 32-23 Pad
Vertical Section Azimuth	92.27 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	11/8/2012	UWI	SG 342-23
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	11/8/2012	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 (°)
11/8/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11/8/2012	NORMAL	119.0	2.11	85.79	118.97	0.16	2.19	2.18	1.77	1.77	0.00	85.79
	NORMAL	149.0	2.99	90.27	148.94	0.20	3.52	3.51	3.01	2.93	14.93	15.01
	NORMAL	180.0	3.82	86.93	179.89	0.25	5.36	5.34	2.75	2.68	-10.77	344.89
	NORMAL	209.0	4.66	90.86	208.81	0.28	7.50	7.48	3.06	2.90	13.55	21.05
	NORMAL	240.0	5.85	93.87	239.68	0.16	10.34	10.32	3.94	3.84	9.71	14.55
	NORMAL	270.0	7.08	92.55	269.49	-0.03	13.71	13.70	4.13	4.10	-4.40	352.45
	NORMAL	300.0	8.66	91.85	299.20	-0.18	17.81	17.81	5.28	5.27	-2.33	356.18
	NORMAL	331.0	9.93	92.29	329.80	-0.37	22.82	22.81	4.10	4.10	1.42	3.42
	NORMAL	361.0	11.52	93.34	359.27	-0.64	28.39	28.40	5.34	5.30	3.50	7.52
	NORMAL	391.0	12.40	93.78	388.62	-1.03	34.60	34.61	2.95	2.93	1.47	6.13
	NORMAL	422.0	13.06	93.70	418.86	-1.48	41.41	41.44	2.13	2.13	-0.26	358.43
11/9/2012	NORMAL	452.0	13.89	93.70	448.03	-1.93	48.39	48.43	2.77	2.77	0.00	0.00
	NORMAL	482.0	14.68	92.64	477.10	-2.33	55.78	55.83	2.77	2.63	-3.53	341.17
	NORMAL	513.0	15.69	92.64	507.02	-2.71	63.89	63.95	3.26	3.26	0.00	0.00
	NORMAL	543.0	16.97	91.67	535.81	-3.02	72.32	72.38	4.36	4.27	-3.23	347.51
	NORMAL	573.0	18.11	90.88	564.41	-3.22	81.36	81.42	3.88	3.80	-2.63	347.83
	NORMAL	604.0	19.25	91.15	593.78	-3.40	91.29	91.35	3.69	3.68	0.87	4.47
	NORMAL	635.0	20.44	91.32	622.94	-3.63	101.81	101.87	3.84	3.84	0.55	2.86
	NORMAL	665.0	21.50	91.32	650.95	-3.87	112.54	112.61	3.53	3.53	0.00	0.00
	NORMAL	695.0	22.50	92.38	678.77	-4.24	123.77	123.84	3.59	3.33	3.53	22.15

2.1.2 Survey Stations (Continued)

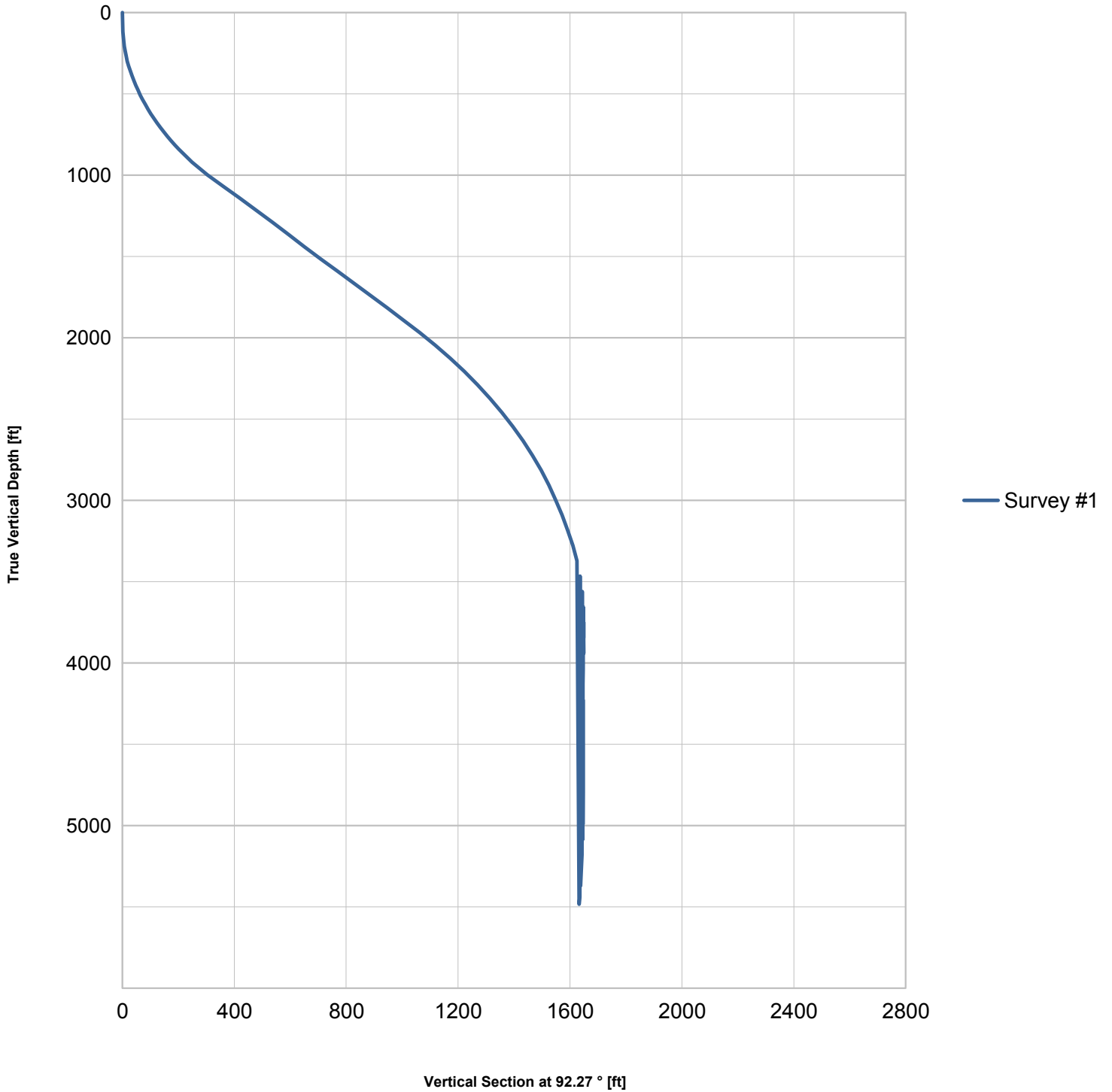
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
11/9/2012	NORMAL	725.0	23.60	92.73	706.37	-4.76	135.51	135.59	3.69	3.67	1.17	7.26
	NORMAL	755.0	24.61	93.43	733.76	-5.42	147.74	147.84	3.50	3.37	2.33	16.12
	NORMAL	786.0	25.63	93.26	761.82	-6.19	160.88	161.00	3.30	3.29	-0.55	355.88
	NORMAL	816.0	26.90	93.26	788.72	-6.94	174.13	174.27	4.23	4.23	0.00	0.00
	NORMAL	846.0	27.96	92.47	815.35	-7.63	187.93	188.09	3.74	3.53	-2.63	340.70
	NORMAL	876.0	28.92	92.29	841.73	-8.23	202.21	202.38	3.21	3.20	-0.60	354.82
	NORMAL	968.0	32.88	93.17	920.66	-10.50	249.39	249.61	4.33	4.30	0.96	6.89
	NORMAL	1,063.0	37.76	91.94	998.15	-12.91	304.24	304.51	5.19	5.14	-1.29	351.20
	NORMAL	1,158.0	39.03	91.23	1,072.60	-14.54	363.22	363.51	1.42	1.34	-0.75	340.57
	NORMAL	1,187.0	39.30	91.06	1,095.09	-14.90	381.53	381.82	1.00	0.93	-0.59	338.25
11/11/2012	NORMAL	1,244.0	39.12	89.83	1,139.25	-15.18	417.56	417.83	1.40	-0.32	-2.16	256.49
	NORMAL	1,339.0	37.71	90.18	1,213.69	-15.18	476.59	476.82	1.50	-1.48	0.37	171.37
	NORMAL	1,435.0	37.89	90.80	1,289.54	-15.69	535.42	535.63	0.44	0.19	0.65	64.90
	NORMAL	1,530.0	36.88	92.82	1,365.03	-17.50	593.07	593.30	1.67	-1.06	2.13	130.27
	NORMAL	1,625.0	37.63	93.70	1,440.65	-20.77	650.48	650.80	0.97	0.79	0.93	35.74
	NORMAL	1,721.0	38.07	93.08	1,516.45	-24.25	709.29	709.69	0.61	0.46	-0.65	318.91
	NORMAL	1,816.0	38.77	91.59	1,590.88	-26.65	768.27	768.72	1.22	0.74	-1.57	306.50
	NORMAL	1,911.0	38.11	92.55	1,665.29	-28.78	827.29	827.78	0.94	-0.69	1.01	138.25
	NORMAL	2,007.0	38.20	93.34	1,740.78	-31.83	886.52	887.08	0.52	0.09	0.82	79.86
	NORMAL	2,103.0	37.93	92.64	1,816.36	-34.92	945.62	946.27	0.53	-0.28	-0.73	237.69
	NORMAL	2,199.0	37.49	92.20	1,892.31	-37.40	1,004.29	1,004.98	0.54	-0.46	-0.46	211.28
	NORMAL	2,294.0	37.06	91.94	1,967.90	-39.48	1,061.79	1,062.52	0.48	-0.45	-0.27	200.01
	NORMAL	2,390.0	34.46	91.94	2,045.80	-41.38	1,117.85	1,118.62	2.71	-2.71	0.00	180.00
	NORMAL	2,485.0	32.95	91.15	2,124.83	-42.81	1,170.55	1,171.33	1.66	-1.59	-0.83	195.86
11/12/2012	NORMAL	2,581.0	31.21	91.32	2,206.17	-43.90	1,221.52	1,222.30	1.81	-1.81	0.18	177.10
	NORMAL	2,676.0	27.87	92.11	2,288.81	-45.29	1,268.33	1,269.13	3.54	-3.52	0.83	173.69
	NORMAL	2,772.0	27.39	92.47	2,373.86	-47.07	1,312.82	1,313.65	0.53	-0.50	0.38	160.98
	NORMAL	2,867.0	25.54	91.59	2,458.90	-48.58	1,355.12	1,355.98	1.99	-1.95	-0.93	191.58
	NORMAL	2,963.0	23.65	93.96	2,546.19	-50.48	1,395.02	1,395.93	2.22	-1.97	2.47	153.51
	NORMAL	3,058.0	21.63	92.82	2,633.86	-52.66	1,431.52	1,432.49	2.18	-2.13	-1.20	191.73
	NORMAL	3,154.0	19.82	91.50	2,723.65	-53.95	1,465.47	1,466.46	1.95	-1.89	-1.38	193.85
	NORMAL	3,250.0	17.76	89.48	2,814.53	-54.25	1,496.38	1,497.36	2.25	-2.15	-2.10	196.57
	NORMAL	3,345.0	15.43	89.56	2,905.56	-54.02	1,523.51	1,524.46	2.45	-2.45	0.08	179.48
	NORMAL	3,440.0	14.29	91.15	2,997.39	-54.16	1,547.87	1,548.80	1.27	-1.20	1.67	161.09
	NORMAL	3,536.0	12.92	90.09	3,090.69	-54.41	1,570.45	1,571.38	1.45	-1.43	-1.10	189.80
	NORMAL	3,631.0	11.96	90.27	3,183.46	-54.47	1,590.92	1,591.83	1.01	-1.01	0.19	177.77
	NORMAL	3,726.0	10.02	92.29	3,276.71	-54.85	1,609.02	1,609.93	2.08	-2.04	2.13	169.76
	NORMAL	3,822.0	7.74	90.44	3,371.56	-55.23	1,623.83	1,624.74	2.39	-2.38	-1.93	186.23
	NORMAL	3,917.0	5.80	81.57	3,465.89	-54.58	1,634.98	1,635.86	2.31	-2.04	-9.34	203.97
	NORMAL	4,012.0	3.60	81.74	3,560.57	-53.45	1,642.68	1,643.51	2.32	-2.32	0.18	179.72
	NORMAL	4,106.0	1.80	58.10	3,654.46	-52.24	1,646.85	1,647.63	2.21	-1.91	-25.15	200.30
	NORMAL	4,201.0	0.26	90.27	3,749.44	-51.46	1,648.34	1,649.08	1.67	-1.62	33.86	174.99
	NORMAL	4,297.0	0.44	206.76	3,845.44	-51.79	1,648.39	1,649.14	0.63	0.19	121.34	139.20
11/13/2012	NORMAL	4,392.0	0.66	221.49	3,940.44	-52.52	1,647.86	1,648.65	0.27	0.23	15.51	40.24
	NORMAL	4,488.0	1.27	224.21	4,036.42	-53.70	1,646.75	1,647.59	0.64	0.64	2.83	5.66
	NORMAL	4,583.0	0.88	194.42	4,131.41	-55.16	1,645.84	1,646.73	0.70	-0.41	-31.36	220.81
	NORMAL	4,678.0	0.31	206.64	4,226.40	-56.10	1,645.54	1,646.47	0.61	-0.60	12.86	173.51
	NORMAL	4,774.0	0.66	203.38	4,322.40	-56.84	1,645.20	1,646.16	0.37	0.36	-3.40	353.86
	NORMAL	4,869.0	0.83	275.89	4,417.39	-57.27	1,644.30	1,645.28	0.94	0.18	76.33	117.41
	NORMAL	4,964.0	0.53	0.44	4,512.39	-56.76	1,643.62	1,644.58	0.99	-0.32	89.00	145.91
	NORMAL	5,059.0	0.35	348.40	4,607.38	-56.03	1,643.57	1,644.50	0.21	-0.19	-12.67	201.25
	NORMAL	5,155.0	1.01	43.71	4,703.38	-55.13	1,644.09	1,644.99	0.90	0.69	57.61	74.85
	NORMAL	5,250.0	0.70	63.55	4,798.37	-54.27	1,645.19	1,646.05	0.45	-0.33	20.88	145.95
11/14/2012	NORMAL	5,345.0	0.18	46.06	4,893.36	-53.91	1,645.82	1,646.66	0.56	-0.55	-18.41	185.85
	NORMAL	5,442.0	0.26	282.40	4,990.36	-53.76	1,645.71	1,646.55	0.40	0.08	-127.48	213.73
	NORMAL	5,537.0	1.01	275.72	5,085.36	-53.63	1,644.67	1,645.50	0.79	0.79	-7.03	351.02
	NORMAL	5,632.0	1.58	281.26	5,180.33	-53.29	1,642.55	1,643.37	0.61	0.60	5.83	15.17

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 (°)
11/14/2012	NORMAL	5,727.0	1.63	269.48	5,275.29	-53.04	1,639.91	1,640.73	0.35	0.05	-12.40	272.70
	NORMAL	5,821.0	2.20	263.06	5,369.24	-53.27	1,636.79	1,637.61	0.65	0.61	-6.83	336.15
	NORMAL	5,890.0	2.37	263.59	5,438.19	-53.59	1,634.05	1,634.89	0.25	0.25	0.77	7.35
	NORMAL	5,935.0	2.36	263.59	5,483.15	-53.80	1,632.21	1,633.06	0.02	-0.02	0.00	180.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

