

Deviation Summary

PICEANCE VLY

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	SG 31-22	Wellbore No.	00
Well Name	SG 31-22	Common Name	SG 31-22
Project	SG 22-07S-096W	Site	SG 42-22 Pad
Vertical Section Azimuth	311.21 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	8/20/2013	UWI	SG 31-22
Active Datum	KB @5,243.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	8/20/2013	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 (°)
8/20/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/20/2013	NORMAL	76.0	0.18	19.95	76.00	0.11	0.04	0.04	0.24	0.24	0.00	19.95
8/21/2013	NORMAL	168.0	2.73	318.96	167.96	1.90	-1.35	2.27	2.88	2.77	-66.29	295.60
	NORMAL	259.0	5.72	313.77	258.71	6.67	-6.05	8.95	3.31	3.29	-5.70	350.12
	NORMAL	350.0	9.15	310.17	348.93	14.48	-14.85	20.71	3.80	3.77	-3.96	350.48
	NORMAL	441.0	12.76	311.04	438.26	25.75	-27.97	38.00	3.97	3.97	0.96	3.05
	NORMAL	531.0	16.54	311.48	525.31	40.77	-45.07	60.76	4.20	4.20	0.49	1.90
	NORMAL	603.0	19.46	311.24	593.78	55.46	-61.77	83.01	4.06	4.06	-0.33	358.43
	NORMAL	695.0	23.09	310.51	679.50	77.29	-87.02	116.38	3.96	3.95	-0.79	355.49
	NORMAL	787.0	26.72	310.42	762.93	102.43	-116.49	155.12	3.95	3.95	-0.10	359.36
	NORMAL	878.0	30.61	311.14	842.76	130.95	-149.52	198.76	4.29	4.27	0.79	5.39
	NORMAL	970.0	34.71	312.36	920.20	164.02	-186.53	248.39	4.51	4.46	1.33	9.64
	NORMAL	1,065.0	37.22	312.80	997.08	201.77	-227.61	304.16	2.66	2.64	0.46	6.06
	NORMAL	1,155.0	37.93	311.97	1,068.41	238.77	-268.15	359.03	0.97	0.79	-0.92	324.19
8/22/2013	NORMAL	1,249.0	38.39	311.33	1,142.32	277.36	-311.54	417.11	0.65	0.49	-0.68	319.06
	NORMAL	1,343.0	38.68	311.03	1,215.85	315.92	-355.62	475.67	0.37	0.31	-0.32	327.08
	NORMAL	1,437.0	38.23	309.83	1,289.47	353.83	-400.12	534.12	0.93	-0.48	-1.28	238.44
	NORMAL	1,531.0	38.61	311.98	1,363.12	392.08	-444.26	592.52	1.48	0.40	2.29	74.97
	NORMAL	1,625.0	38.66	310.89	1,436.54	430.92	-488.25	651.21	0.73	0.05	-1.16	273.78
	NORMAL	1,720.0	37.93	312.72	1,511.10	470.15	-532.14	710.07	1.42	-0.77	1.93	123.49
	NORMAL	1,814.0	37.99	312.80	1,585.22	509.41	-574.59	767.87	0.08	0.06	0.09	39.39

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 (°)
8/22/2013	NORMAL	1,910.0	37.38	310.29	1,661.20	548.33	-618.50	826.55	1.72	-0.64	-2.61	247.33
8/23/2013	NORMAL	2,004.0	37.37	312.88	1,735.90	586.19	-661.17	883.60	1.67	-0.01	2.76	91.39
	NORMAL	2,098.0	37.03	312.69	1,810.77	624.80	-702.88	940.41	0.38	-0.36	-0.20	198.59
	NORMAL	2,192.0	37.46	313.15	1,885.60	663.54	-744.54	997.27	0.54	0.46	0.49	33.10
	NORMAL	2,286.0	37.20	312.71	1,960.35	702.36	-786.28	1,054.25	0.40	-0.28	-0.47	225.57
	NORMAL	2,382.0	37.11	312.55	2,036.86	741.63	-828.94	1,112.21	0.14	-0.09	-0.17	226.97
	NORMAL	2,475.0	36.05	311.21	2,111.54	778.64	-870.19	1,167.63	1.43	-1.14	-1.44	216.46
	NORMAL	2,569.0	35.70	310.51	2,187.71	814.67	-911.85	1,222.71	0.57	-0.37	-0.74	229.25
	NORMAL	2,663.0	34.09	312.13	2,264.81	850.16	-952.25	1,276.48	1.98	-1.71	1.72	150.74
	NORMAL	2,757.0	33.68	311.48	2,342.84	885.10	-991.31	1,328.88	0.58	-0.44	-0.69	221.20
	NORMAL	2,852.0	32.82	312.60	2,422.29	919.97	-1,030.00	1,380.96	1.11	-0.91	1.18	144.94
	NORMAL	2,947.0	32.54	312.36	2,502.25	954.62	-1,067.83	1,432.25	0.32	-0.29	-0.25	204.73
	NORMAL	3,041.0	30.56	311.27	2,582.35	987.42	-1,104.47	1,481.42	2.19	-2.11	-1.16	195.61
	NORMAL	3,135.0	29.05	313.28	2,663.92	1,018.83	-1,139.05	1,528.13	1.93	-1.61	2.14	147.38
	NORMAL	3,229.0	27.96	314.73	2,746.52	1,049.98	-1,171.32	1,572.94	1.37	-1.16	1.54	148.23
	NORMAL	3,323.0	25.27	313.78	2,830.56	1,079.38	-1,201.47	1,614.98	2.90	-2.86	-1.01	188.57
	NORMAL	3,417.0	23.00	313.54	2,916.33	1,105.91	-1,229.27	1,653.38	2.42	-2.41	-0.26	182.37
	NORMAL	3,512.0	21.63	313.23	3,004.22	1,130.69	-1,255.48	1,689.42	1.45	-1.44	-0.33	184.77
	NORMAL	3,605.0	20.04	311.23	3,091.13	1,152.94	-1,279.96	1,722.49	1.87	-1.71	-2.15	203.17
	NORMAL	3,698.0	18.55	309.94	3,178.91	1,172.94	-1,303.29	1,753.22	1.67	-1.60	-1.39	195.36
	NORMAL	3,791.0	17.95	311.35	3,267.23	1,191.90	-1,325.39	1,782.34	0.80	-0.65	1.52	144.32
	NORMAL	3,886.0	16.42	310.57	3,357.99	1,210.31	-1,346.58	1,810.40	1.63	-1.61	-0.82	188.19
	NORMAL	3,980.0	15.92	312.80	3,448.27	1,227.71	-1,366.13	1,836.58	0.85	-0.53	2.37	129.9'
	NORMAL	4,075.0	13.28	309.54	3,540.19	1,243.51	-1,384.10	1,860.51	2.91	-2.78	-3.43	195.72
	NORMAL	4,168.0	11.60	310.53	3,631.01	1,256.39	-1,399.45	1,880.54	1.82	-1.81	1.06	173.25
	NORMAL	4,262.0	10.02	311.58	3,723.34	1,267.95	-1,412.75	1,898.17	1.69	-1.68	1.12	173.4'
	NORMAL	4,357.0 ✓	8.19	313.86	3,817.14	1,278.13	-1,423.81	1,913.19	1.96	-1.93	2.40	169.97
	NORMAL	4,450.0	5.55	309.71	3,909.46	1,285.59	-1,432.05	1,924.31	2.89	-2.84	-4.46	188.59
	NORMAL	4,544.0	3.92	305.39	4,003.14	1,290.36	-1,438.17	1,932.05	1.77	-1.73	-4.60	190.19
8/24/2013	NORMAL	4,639.0	2.17	301.36	4,098.00	1,293.18	-1,442.35	1,937.05	1.85	-1.84	-4.24	184.96
	NORMAL	4,733.0	1.43	286.64	4,191.95	1,294.44	-1,444.99	1,939.87	0.92	-0.79	-15.66	204.78
	NORMAL	4,827.0	1.57	277.76	4,285.92	1,294.95	-1,447.39	1,942.01	0.29	0.15	-9.45	296.57
	NORMAL	4,921.0	1.48	291.53	4,379.89	1,295.57	-1,449.80	1,944.23	0.40	-0.10	14.65	110.62
	NORMAL	5,014.0	1.39	281.31	4,472.86	1,296.23	-1,452.02	1,946.34	0.29	-0.10	-10.99	245.57
	NORMAL	5,108.0	1.14	252.68	4,566.84	1,296.17	-1,454.03	1,947.82	0.71	-0.27	-30.46	234.52
	NORMAL	5,200.0	1.32	243.82	4,658.81	1,295.43	-1,455.86	1,948.70	0.28	0.20	-9.63	308.94
	NORMAL	5,295.0	1.93	254.79	4,753.78	1,294.53	-1,458.38	1,950.01	0.72	0.64	11.55	32.57
	NORMAL	5,389.0	2.02	255.23	4,847.72	1,293.69	-1,461.51	1,951.81	0.10	0.10	0.47	9.78
	NORMAL	5,484.0	2.20	251.01	4,942.66	1,292.67	-1,464.86	1,953.65	0.25	0.19	-4.44	317.08
	NORMAL	5,578.0	2.17	252.12	5,036.59	1,291.54	-1,468.26	1,955.46	0.06	-0.03	1.18	125.89
	NORMAL	5,672.0	2.67	249.44	5,130.50	1,290.23	-1,472.00	1,957.41	0.55	0.53	-2.85	345.9'
	NORMAL	5,764.0	2.81	246.09	5,222.40	1,288.56	-1,476.07	1,959.37	0.23	0.15	-3.64	309.48
	NORMAL	5,859.0	2.44	233.48	5,317.30	1,286.41	-1,479.82	1,960.78	0.72	-0.39	-13.27	231.16
	NORMAL	5,953.0	2.37	220.16	5,411.22	1,283.74	-1,482.68	1,961.17	0.60	-0.07	-14.17	256.24
	NORMAL	6,005.0	2.46	228.07	5,463.17	1,282.17	-1,484.21	1,961.29	0.66	0.17	15.21	78.86
	NORMAL	6,070.0	2.46	228.07	5,528.11	1,280.30	-1,486.28	1,961.62	0.00	0.00	0.00	0.00