

# Deviation Summary

PICEANCE VLY

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	SG 411-27	Wellbore No.	0
Wellbore Legal Name	SG 411-27	Common Wellbore Name	SG 411-27
Project	SG 27-07S-096W	Site	SG 21-27 Pad
Vertical Section Azimuth	263.90 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	1/16/2014	UWI	SG 411-27
Active datum	KB @5,283.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	1/16/2014	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 (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
1/16/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/16/2014	NORMAL	103.0	0.09	57.13	103.00	0.04	0.07	-0.07	0.09	0.09	0.00	57.13
	NORMAL	164.0	0.26	275.62	164.00	0.08	-0.03	0.02	0.55	0.28	-231.98	208.87
	NORMAL	256.0	2.02	251.89	255.98	-0.40	-1.78	1.81	1.94	1.91	-25.79	332.91
1/17/2014	NORMAL	348.0	5.54	253.74	347.76	-2.15	-7.58	7.77	3.83	3.83	2.01	2.91
	NORMAL	439.0	8.53	258.13	438.07	-4.77	-18.41	18.81	3.34	3.29	4.82	12.38
	NORMAL	531.0	11.26	263.67	528.69	-7.16	-34.02	34.58	3.14	2.97	6.02	21.97
	NORMAL	604.0	13.29	262.67	600.02	-9.02	-49.42	50.10	2.80	2.78	-1.37	353.53
	NORMAL	695.0	16.00	263.99	688.06	-11.67	-72.27	73.11	3.00	2.98	1.45	7.66
	NORMAL	785.0	20.18	264.52	773.59	-14.45	-100.08	101.04	4.65	4.64	0.59	2.51
	NORMAL	876.0	23.90	265.63	857.93	-17.35	-134.09	135.18	4.11	4.09	1.22	6.90
	NORMAL	967.0	26.58	265.93	940.23	-20.20	-172.79	173.96	2.95	2.95	0.33	2.87
	NORMAL	1,063.0	29.99	264.85	1,024.76	-23.88	-218.12	219.42	3.59	3.55	-1.13	350.99
	NORMAL	1,158.0	32.93	263.12	1,105.79	-29.11	-267.41	268.99	3.24	3.09	-1.82	342.19
	NORMAL	1,254.0	37.02	262.92	1,184.43	-35.80	-322.02	324.00	4.26	4.26	-0.21	358.31
	NORMAL	1,349.0	40.55	264.63	1,258.48	-42.22	-381.17	383.50	3.88	3.72	1.80	17.55
	NORMAL	1,444.0	43.57	265.10	1,329.00	-47.90	-444.55	447.12	3.20	3.18	0.49	6.13
	NORMAL	1,511.0	46.24	264.11	1,376.45	-52.36	-491.63	494.41	4.12	3.99	-1.48	344.98
1/19/2014	NORMAL	1,630.0	46.50	261.53	1,458.57	-63.13	-577.07	580.52	1.58	0.22	-2.17	277.03
	NORMAL	1,725.0	45.78	262.90	1,524.39	-72.41	-644.94	648.98	1.29	-0.76	1.44	126.56
	NORMAL	1,820.0	45.76	263.45	1,590.66	-80.50	-712.53	717.05	0.42	-0.02	0.58	93.10

## 2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
1/19/2014	NORMAL	1,915.0	46.54	263.77	1,656.47	-88.12	-780.61	785.56	0.86	0.82	0.34	16.59
	NORMAL	2,010.0	45.46	265.14	1,722.47	-94.73	-848.62	853.89	1.54	-1.14	1.44	138.09
	NORMAL	2,104.0	44.58	265.03	1,788.91	-100.43	-914.87	920.36	0.94	-0.94	-0.12	185.01
	NORMAL	2,199.0	42.52	266.11	1,857.76	-105.50	-980.12	985.78	2.31	-2.17	1.14	160.53
	NORMAL	2,294.0	41.62	265.85	1,928.28	-109.96	-1,043.62	1,049.39	0.96	-0.95	-0.27	190.86
	NORMAL	2,389.0	39.04	266.26	2,000.70	-114.19	-1,104.95	1,110.83	2.73	-2.72	0.43	174.28
	NORMAL	2,483.0	36.84	267.05	2,074.83	-117.58	-1,162.64	1,168.55	2.40	-2.34	0.84	167.86
	NORMAL	2,578.0	35.00	266.78	2,151.76	-120.57	-1,218.29	1,224.20	1.94	-1.94	-0.28	184.81
	NORMAL	2,673.0	32.80	267.58	2,230.61	-123.19	-1,271.21	1,277.10	2.36	-2.32	0.84	168.87
	NORMAL	2,768.0	29.99	266.26	2,311.69	-125.82	-1,320.62	1,326.51	3.05	-2.96	-1.39	193.19
	NORMAL	2,863.0	28.31	264.59	2,394.66	-129.50	-1,366.74	1,372.76	1.96	-1.77	-1.76	205.11
	NORMAL	2,957.0	26.38	265.55	2,478.15	-133.22	-1,409.76	1,415.93	2.11	-2.05	1.02	167.56
	NORMAL	3,052.0	24.36	266.61	2,563.98	-136.02	-1,450.36	1,456.60	2.18	-2.13	1.12	167.81
	NORMAL	3,147.0	22.77	264.76	2,651.06	-138.85	-1,488.23	1,494.56	1.85	-1.67	-1.95	204.10
	NORMAL	3,242.0	20.75	262.39	2,739.29	-142.76	-1,523.22	1,529.77	2.32	-2.13	-2.49	202.41
	NORMAL	3,337.0	19.35	262.30	2,828.53	-147.10	-1,555.50	1,562.32	1.47	-1.47	-0.09	181.22
	NORMAL	3,431.0	17.23	263.27	2,917.78	-150.82	-1,584.76	1,591.81	2.28	-2.26	1.03	172.29
	NORMAL	3,527.0	15.56	262.64	3,009.87	-154.13	-1,611.65	1,618.91	1.75	-1.74	-0.66	185.78
	NORMAL	3,621.0	13.98	263.53	3,100.76	-157.03	-1,635.44	1,642.87	1.70	-1.68	0.95	172.26
	NORMAL	3,716.0	12.70	265.35	3,193.20	-159.17	-1,657.25	1,664.78	1.42	-1.35	1.92	162.72
	NORMAL	3,811.0	9.90	261.30	3,286.35	-161.25	-1,675.74	1,683.38	3.06	-2.95	-4.26	193.85
	NORMAL	3,906.0	8.24	261.12	3,380.16	-163.54	-1,690.54	1,698.34	1.75	-1.75	-0.19	180.89
1/20/2014	NORMAL	4,001.0	8.05	256.52	3,474.20	-166.14	-1,703.73	1,711.74	0.71	-0.20	-4.84	251.48
	NORMAL	4,095.0	7.27	262.25	3,567.36	-168.47	-1,716.02	1,724.21	1.16	-0.83	6.10	138.42
	NORMAL	4,190.0	5.54	267.14	3,661.77	-169.51	-1,726.56	1,734.80	1.91	-1.82	5.15	164.92
	NORMAL	4,285.0	3.42	271.07	3,756.47	-169.69	-1,733.98	1,742.19	2.25	-2.23	4.14	173.72
	NORMAL	4,379.0	1.85	286.38	3,850.37	-169.21	-1,738.24	1,746.37	1.82	-1.67	16.29	163.37
	NORMAL	4,474.0	1.76	274.96	3,945.32	-168.65	-1,741.16	1,749.22	0.39	-0.09	-12.02	250.29
	NORMAL	4,569.0	0.80	241.57	4,040.30	-168.84	-1,743.20	1,751.27	1.24	-1.01	-35.15	201.96
	NORMAL	4,664.0	1.04	223.51	4,135.29	-169.78	-1,744.37	1,752.54	0.39	0.25	-19.01	300.35
	NORMAL	4,759.0	1.23	243.67	4,230.27	-170.86	-1,745.88	1,754.15	0.46	0.20	21.22	74.86
	NORMAL	4,853.0	0.63	202.21	4,324.26	-171.79	-1,746.98	1,755.34	0.92	-0.64	-44.11	208.83
	NORMAL	4,948.0	0.88	203.68	4,419.25	-172.94	-1,747.47	1,755.95	0.26	0.26	1.55	5.17
	NORMAL	5,043.0	0.25	211.25	4,514.24	-173.78	-1,747.87	1,756.44	0.67	-0.66	7.97	177.02
	NORMAL	5,138.0	0.53	180.54	4,609.24	-174.40	-1,747.98	1,756.62	0.36	0.29	-32.33	307.23
	NORMAL	5,233.0	0.60	208.12	4,704.24	-175.28	-1,748.22	1,756.95	0.29	0.07	29.03	89.62
	NORMAL	5,328.0	0.84	175.65	4,799.23	-176.41	-1,748.40	1,757.25	0.49	0.25	-34.18	283.55
	NORMAL	5,422.0	0.81	156.84	4,893.22	-177.71	-1,748.09	1,757.08	0.29	-0.03	-20.01	254.33
	NORMAL	5,517.0	1.07	177.69	4,988.21	-179.21	-1,747.79	1,756.94	0.45	0.27	21.95	63.49
	NORMAL	5,612.0	1.22	177.61	5,083.19	-181.11	-1,747.71	1,757.06	0.16	0.16	-0.08	359.35
1/21/2014	NORMAL	5,707.0	1.23	186.63	5,178.17	-183.13	-1,747.79	1,757.35	0.20	0.01	9.49	91.55
	NORMAL	5,755.0	1.23	182.28	5,226.16	-184.16	-1,747.87	1,757.54	0.19	0.00	-9.06	267.83
	NORMAL	5,820.0	1.23	182.28	5,291.14	-185.55	-1,747.92	1,757.74	0.00	0.00	0.00	0.00