

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	SG 413-27	Wellbore No.	
Well Name	SG 413-27	Common Name	SG 413-27
Project	SG 27-07S-096W	Site	SG 24-27 Pad
Vertical Section Azimuth	280.37 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	5/20/2012	UWI	SG 413-27
Active Datum	KB @5,038.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	5/20/2012	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 (°)
5/20/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/20/2012	NORMAL	76.0	0.79	268.07	76.00	-0.02	-0.52	0.51	1.04	1.04	0.00	268.07
	NORMAL	168.0	3.17	284.85	167.94	0.61	-3.62	3.67	2.64	2.59	18.24	22.17
	NORMAL	259.0	6.07	282.66	258.63	2.31	-10.74	10.99	3.19	3.19	-2.41	355.43
	NORMAL	350.0	9.85	276.86	348.74	4.30	-23.17	23.57	4.24	4.15	-6.37	345.12
	NORMAL	441.0	13.81	281.78	437.79	7.45	-41.54	42.20	4.49	4.35	5.41	16.71
	NORMAL	532.0	17.16	282.04	525.48	12.46	-65.31	66.48	3.68	3.68	0.29	1.31
	NORMAL	604.0	20.30	281.28	593.65	17.12	-87.95	89.60	4.37	4.36	-1.06	355.20
	NORMAL	694.0	23.55	280.53	677.13	23.47	-120.95	123.19	3.62	3.61	-0.83	354.73
	NORMAL	786.0	26.44	279.54	760.51	30.22	-159.22	162.06	3.17	3.14	-1.08	351.31
	NORMAL	876.0	30.93	279.66	839.44	37.43	-201.81	205.25	4.99	4.99	0.13	0.79
	NORMAL	968.0	34.28	279.46	916.93	45.65	-250.68	254.81	3.64	3.64	-0.22	358.07
	NORMAL	1,063.0	37.46	280.96	993.91	55.55	-305.45	310.46	3.47	3.35	1.58	16.06
	NORMAL	1,159.0	39.02	280.14	1,069.31	66.42	-363.87	369.88	1.71	1.63	-0.85	341.65
5/22/2012	NORMAL	1,283.0	39.71	280.20	1,165.17	80.31	-441.28	448.53	0.56	0.56	0.05	3.18
	NORMAL	1,346.0	39.47	279.52	1,213.72	87.18	-480.83	488.67	0.79	-0.38	-1.08	240.76
	NORMAL	1,442.0	38.72	280.81	1,288.23	97.86	-540.42	549.21	1.15	-0.78	1.34	133.17
	NORMAL	1,537.0	38.70	281.03	1,362.36	109.11	-598.75	608.62	0.15	-0.02	0.23	98.36
	NORMAL	1,632.0	37.67	280.70	1,437.03	120.19	-656.43	667.34	1.11	-1.08	-0.35	191.07
	NORMAL	1,727.0	36.49	279.83	1,512.82	130.40	-712.79	724.62	1.36	-1.24	-0.92	203.62
	NORMAL	1,822.0	34.48	278.45	1,590.17	139.17	-767.23	779.75	2.28	-2.12	-1.45	201.17

## 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 (°)
5/22/2012	NORMAL	1,917.0	32.55	277.61	1,669.38	146.51	-819.16	832.15	2.09	-2.03	-0.88	193.16
	NORMAL	2,013.0	31.13	279.41	1,750.93	153.99	-869.24	882.76	1.78	-1.48	1.88	146.99
	NORMAL	2,108.0	29.44	280.61	1,832.96	162.30	-916.42	930.67	1.89	-1.78	1.26	160.82
	NORMAL	2,203.0	27.28	281.78	1,916.56	171.05	-960.69	975.79	2.35	-2.27	1.23	166.08
	NORMAL	2,298.0	25.02	279.64	2,001.83	178.86	-1,001.81	1,017.64	2.58	-2.38	-2.25	201.69
	NORMAL	2,392.0	24.09	281.38	2,087.33	185.97	-1,040.22	1,056.70	1.25	-0.99	1.85	142.92
	NORMAL	2,486.0	22.85	282.14	2,173.55	193.60	-1,076.87	1,094.13	1.36	-1.32	0.81	166.63
	NORMAL	2,585.0	20.87	280.58	2,265.43	200.88	-1,113.00	1,130.98	2.08	-2.00	-1.58	195.63
	NORMAL	2,677.0	18.78	281.48	2,351.97	206.83	-1,143.63	1,162.18	2.30	-2.27	0.98	172.11
	NORMAL	2,772.0	16.41	284.29	2,442.52	213.19	-1,171.62	1,190.86	2.65	-2.49	2.96	161.62
	NORMAL	2,868.0	15.59	284.42	2,534.80	219.75	-1,197.25	1,217.25	0.85	-0.85	0.14	177.56
	NORMAL	2,963.0	14.68	284.31	2,626.51	225.90	-1,221.28	1,242.00	0.96	-0.96	-0.12	181.75
	NORMAL	3,058.0	14.31	283.81	2,718.48	231.68	-1,244.35	1,265.73	0.41	-0.39	-0.53	198.45
	NORMAL	3,153.0	12.15	283.36	2,810.95	236.80	-1,265.48	1,287.43	2.28	-2.27	-0.47	182.51
	NORMAL	3,248.0	10.90	285.81	2,904.04	241.55	-1,283.85	1,306.36	1.41	-1.32	2.58	159.81
	NORMAL	3,343.0	9.10	287.03	2,997.59	246.20	-1,299.67	1,322.76	1.91	-1.89	1.28	173.89
	NORMAL	3,439.0	7.13	281.20	3,092.63	249.58	-1,312.78	1,336.26	2.22	-2.05	-6.07	199.80
	NORMAL	3,534.0	5.25	277.20	3,187.07	251.27	-1,322.88	1,346.50	2.03	-1.98	-4.21	190.94
5/23/2012	NORMAL	3,629.0	3.79	271.07	3,281.77	251.87	-1,330.33	1,353.94	1.62	-1.54	-6.45	195.27
	NORMAL	3,724.0	2.12	265.12	3,376.64	251.78	-1,335.22	1,358.73	1.78	-1.76	-6.26	187.45
	NORMAL	3,820.0	0.36	307.20	3,472.62	251.82	-1,337.23	1,360.71	1.95	-1.83	43.83	172.58
	NORMAL	3,915.0	0.37	44.76	3,567.62	252.21	-1,337.25	1,360.81	0.58	0.01	102.69	138.09
	NORMAL	4,010.0	0.32	37.04	3,662.61	252.64	-1,336.87	1,360.51	0.07	-0.05	-8.13	219.10
	NORMAL	4,106.0	0.54	42.40	3,758.61	253.19	-1,336.41	1,360.15	0.23	0.23	5.58	13.05
	NORMAL	4,201.0	0.88	340.64	3,853.60	254.21	-1,336.35	1,360.28	0.83	0.36	-65.01	260.94
	NORMAL	4,296.0	1.00	332.27	3,948.59	255.63	-1,336.97	1,361.15	0.19	0.13	-8.81	306.92
	NORMAL	4,391.0	0.35	319.93	4,043.58	256.59	-1,337.55	1,361.89	0.70	-0.68	-12.99	186.48
	NORMAL	4,486.0	0.15	189.39	4,138.58	256.69	-1,337.75	1,362.11	0.49	-0.21	-137.41	194.29
	NORMAL	4,581.0	0.32	85.65	4,233.58	256.58	-1,337.51	1,361.85	0.40	0.18	-109.20	233.98
	NORMAL	4,676.0	0.56	88.03	4,328.58	256.62	-1,336.78	1,361.14	0.25	0.25	2.51	5.55
	NORMAL	4,772.0	0.31	266.15	4,424.58	256.62	-1,336.57	1,360.93	0.91	-0.26	185.54	179.33
	NORMAL	4,867.0	1.02	254.21	4,519.57	256.37	-1,337.64	1,361.94	0.76	0.75	-12.57	342.95
	NORMAL	4,962.0	1.20	256.27	4,614.55	255.91	-1,339.42	1,363.61	0.19	0.19	2.17	13.53
	NORMAL	5,058.0	1.28	254.53	4,710.53	255.38	-1,341.43	1,365.49	0.09	0.08	-1.81	333.92
	NORMAL	5,153.0	1.52	238.12	4,805.50	254.43	-1,343.52	1,367.38	0.49	0.25	-17.27	292.53
	NORMAL	5,248.0	1.41	229.64	4,900.47	253.01	-1,345.48	1,369.05	0.26	-0.12	-8.93	238.90
	NORMAL	5,275.0	1.33	227.15	4,927.47	252.58	-1,345.97	1,369.45	0.37	-0.30	-9.22	215.41
	NORMAL	5,340.0	1.14	221.16	4,992.45	251.58	-1,346.95	1,370.23	0.35	-0.29	-9.22	211.23