

## I General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 44-2	Wellbore No.	
Well Name	PA 44-2	Common Name	PA 44-2
Project	PA 01-07S-095W	Site	GV 84-1 Pad
Vertical Section Azimuth	223.45 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	2/3/2013	UWI	PA 44-2
Active Datum	KB @6,053.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	2/3/2013	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 (°)
2/3/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/3/2013	NORMAL	104.0	2.20	223.68	103.97	-1.44	-1.38	2.00	2.12	2.12	0.00	223.68
	NORMAL	135.0	2.90	222.10	134.94	-2.46	-2.32	3.38	2.27	2.26	-5.10	353.48
	NORMAL	166.0	3.34	222.98	165.90	-3.70	-3.46	5.06	1.43	1.42	2.84	6.65
	NORMAL	196.0	3.61	222.28	195.84	-5.04	-4.69	6.88	0.91	0.90	-2.33	350.72
	NORMAL	227.0	3.52	218.32	226.78	-6.51	-5.93	8.80	0.85	-0.29	-12.77	247.95
	NORMAL	257.0	3.78	218.50	256.72	-8.00	-7.12	10.71	0.87	0.87	0.60	2.6'
	NORMAL	287.0	4.13	222.98	286.65	-9.57	-8.47	12.77	1.56	1.17	14.93	43.69
	NORMAL	317.0	4.49	225.62	316.57	-11.18	-10.05	15.03	1.37	1.20	8.80	30.18
	NORMAL	347.0	4.93	219.81	346.46	-12.99	-11.71	17.49	2.16	1.47	-19.37	309.77
2/4/2013	NORMAL	416.0	6.77	225.10	415.10	-18.14	-16.49	24.51	2.78	2.67	7.67	18.98
	NORMAL	506.0	9.41	221.32	504.20	-27.41	-25.11	37.17	2.99	2.93	-4.20	346.73
	NORMAL	597.0	12.36	224.69	593.55	-39.92	-36.87	54.34	3.31	3.24	3.70	13.83
	NORMAL	687.0	14.18	223.37	681.15	-54.79	-51.22	75.00	2.05	2.02	-1.47	349.90
	NORMAL	778.0	16.00	223.69	769.01	-71.96	-67.54	98.69	2.00	2.00	0.35	2.78
	NORMAL	869.0	18.20	222.55	855.98	-91.50	-85.81	125.44	2.45	2.42	-1.25	350.79
	NORMAL	960.0	20.31	222.99	941.88	-113.52	-106.20	155.45	2.32	2.32	0.48	4.14
	NORMAL	1,055.0	22.27	223.65	1,030.39	-138.61	-129.86	189.94	2.08	2.06	0.69	7.28
	NORMAL	1,135.0	23.72	224.97	1,104.04	-160.96	-151.70	221.18	1.92	1.81	1.65	20.19
2/5/2013	NORMAL	1,240.0	24.13	225.19	1,200.01	-191.03	-181.85	263.75	0.40	0.39	0.21	12.38
	NORMAL	1,336.0	24.26	222.02	1,287.58	-219.51	-208.98	303.08	1.36	0.14	-3.30	274.27

## 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 (°)
2/5/2013	NORMAL	1,431.0	23.34	223.34	1,374.51	-247.70	-234.96	341.41	1.12	-0.97	1.39	150.53
	NORMAL	1,527.0	22.90	221.59	1,462.80	-275.50	-260.41	379.10	0.85	-0.46	-1.82	236.56
	NORMAL	1,623.0	22.02	221.50	1,551.51	-302.95	-284.73	415.75	0.92	-0.92	-0.09	182.20
	NORMAL	1,718.0	21.76	223.69	1,639.67	-329.02	-308.70	451.16	0.90	-0.27	2.31	108.68
	NORMAL	1,814.0	21.85	223.61	1,728.80	-354.82	-333.31	486.82	0.10	0.09	-0.08	341.69
	NORMAL	1,909.0	21.71	222.29	1,817.02	-380.62	-357.33	522.06	0.54	-0.15	-1.39	253.44
	NORMAL	2,004.0	22.68	224.75	1,904.98	-406.63	-382.05	557.94	1.41	1.02	2.59	44.92
	NORMAL	2,099.0	23.34	224.13	1,992.42	-433.14	-408.04	595.07	0.74	0.69	-0.65	339.55
	NORMAL	2,193.0	23.87	224.13	2,078.55	-460.16	-434.25	632.71	0.56	0.56	0.00	0.00
	NORMAL	2,288.0	23.60	222.11	2,165.52	-488.06	-460.39	670.94	0.90	-0.28	-2.13	250.71
	NORMAL	2,383.0	23.96	222.55	2,252.45	-516.38	-486.19	709.24	0.42	0.38	0.46	26.44
2/6/2013	NORMAL	2,478.0	23.65	223.52	2,339.37	-544.41	-512.35	747.58	0.53	-0.33	1.02	128.81
	NORMAL	2,573.0	22.86	222.99	2,426.65	-571.73	-538.05	785.09	0.86	-0.83	-0.56	194.59
	NORMAL	2,669.0	23.52	222.64	2,514.90	-599.46	-563.75	822.89	0.70	0.69	-0.36	348.04
	NORMAL	2,764.0	22.02	223.87	2,602.49	-626.24	-588.93	859.66	1.66	-1.58	1.29	162.96
	NORMAL	2,860.0	22.55	223.34	2,691.32	-652.60	-614.04	896.06	0.59	0.55	-0.55	338.95
	NORMAL	2,955.0	22.50	224.93	2,779.07	-678.72	-639.38	932.45	0.64	-0.05	1.67	95.43
	NORMAL	3,051.0	23.08	224.22	2,867.58	-705.21	-665.47	969.63	0.67	0.60	-0.74	334.30
	NORMAL	3,147.0	21.45	224.40	2,956.42	-731.24	-690.88	1,005.99	1.70	-1.70	0.19	177.69
	NORMAL	3,242.0	21.06	224.66	3,044.96	-755.79	-715.03	1,040.43	0.42	-0.41	0.27	166.53
	NORMAL	3,337.0	20.75	224.13	3,133.70	-780.01	-738.74	1,074.32	0.38	-0.33	-0.56	211.14
	NORMAL	3,432.0	22.20	225.19	3,222.10	-804.74	-763.20	1,109.09	1.58	1.53	1.12	15.48
	NORMAL	3,528.0	22.77	224.57	3,310.81	-830.76	-789.10	1,145.79	0.64	0.59	-0.65	337.13
	NORMAL	3,623.0	22.99	223.78	3,398.33	-857.25	-814.84	1,182.72	0.40	0.23	-0.83	305.25
	NORMAL	3,718.0	23.12	224.93	3,485.74	-883.85	-840.85	1,219.92	0.49	0.14	1.21	74.43
	NORMAL	3,813.0	23.34	225.01	3,573.04	-910.36	-867.33	1,257.38	0.23	0.23	0.08	8.20
	NORMAL	3,909.0	23.34	221.59	3,661.19	-938.04	-893.39	1,295.40	1.43	0.00	-3.60	268.41
	NORMAL	4,004.0	23.12	222.20	3,748.49	-965.94	-918.40	1,332.85	0.36	-0.23	0.68	130.93
	NORMAL	4,099.0	23.69	220.97	3,835.67	-994.16	-943.45	1,370.57	0.79	0.60	-1.29	318.83
	NORMAL	4,195.0	22.73	223.87	3,923.91	-1,022.10	-968.95	1,408.38	1.55	-1.00	3.02	131.36
	NORMAL	4,290.0	23.03	224.31	4,011.43	-1,048.63	-994.65	1,445.31	0.36	0.32	0.46	29.90
	NORMAL	4,385.0	21.54	223.78	4,099.33	-1,074.52	-1,019.69	1,481.34	1.58	-1.57	-0.56	187.44
	NORMAL	4,480.0	20.66	222.64	4,187.96	-1,099.44	-1,043.11	1,515.53	1.02	-0.93	-1.20	204.47
	NORMAL	4,575.0	19.60	223.87	4,277.16	-1,123.25	-1,065.51	1,548.23	1.20	-1.12	1.29	158.81
2/7/2013	NORMAL	4,670.0	17.80	222.64	4,367.14	-1,145.42	-1,086.39	1,578.68	1.94	-1.89	-1.29	191.78
	NORMAL	4,765.0	16.48	224.05	4,457.92	-1,165.79	-1,105.60	1,606.68	1.46	-1.39	1.48	163.20
	NORMAL	4,860.0	14.86	223.17	4,549.39	-1,184.36	-1,123.30	1,632.33	1.72	-1.71	-0.93	187.92
	NORMAL	4,955.0	13.19	223.08	4,641.55	-1,201.16	-1,139.04	1,655.36	1.76	-1.76	-0.09	180.70
	NORMAL	5,051.0	12.18	223.52	4,735.21	-1,216.51	-1,153.49	1,676.44	1.06	-1.05	0.46	174.75
	NORMAL	5,146.0	9.89	225.10	4,828.44	-1,229.53	-1,166.17	1,694.61	2.43	-2.41	1.66	173.25
	NORMAL	5,242.0	8.88	225.36	4,923.16	-1,240.56	-1,177.29	1,710.26	1.05	-1.05	0.27	177.72
	NORMAL	5,337.0	6.86	226.16	5,017.26	-1,249.64	-1,186.60	1,723.26	2.13	-2.13	0.84	177.29
	NORMAL	5,432.0	5.76	224.31	5,111.68	-1,256.99	-1,194.02	1,733.69	1.18	-1.16	-1.95	189.55
	NORMAL	5,528.0	4.13	222.82	5,207.32	-1,262.97	-1,199.74	1,741.97	1.70	-1.70	-1.55	183.76
	NORMAL	5,623.0	3.08	225.10	5,302.13	-1,267.28	-1,203.87	1,747.94	1.12	-1.11	2.40	173.36
	NORMAL	5,718.0	2.29	223.52	5,397.03	-1,270.46	-1,206.98	1,752.39	0.84	-0.83	-1.66	184.56
2/8/2013	NORMAL	5,813.0	1.45	206.58	5,491.98	-1,272.91	-1,208.83	1,755.44	1.05	-0.88	-17.83	205.08
	NORMAL	5,909.0	1.14	205.77	5,587.95	-1,274.85	-1,209.79	1,757.51	0.32	-0.32	-0.84	182.97
	NORMAL	6,003.0	0.18	121.57	5,681.95	-1,275.77	-1,210.07	1,758.37	1.21	-1.02	-89.57	189.07
	NORMAL	6,098.0	0.44	237.14	5,776.94	-1,276.05	-1,210.25	1,758.69	0.57	0.27	121.65	132.98
	NORMAL	6,193.0	1.36	228.62	5,871.93	-1,276.99	-1,211.40	1,760.17	0.98	0.97	-8.97	347.45
	NORMAL	6,289.0	0.26	259.90	5,967.92	-1,277.78	-1,212.47	1,761.48	1.19	-1.15	32.58	173.23
	NORMAL	6,384.0	0.75	238.02	6,062.92	-1,278.15	-1,213.21	1,762.25	0.55	0.52	-23.03	327.34
2/9/2013	NORMAL	6,486.0	0.61	322.22	6,164.91	-1,278.08	-1,214.11	1,762.82	0.90	-0.14	82.55	138.60
	NORMAL	6,581.0	2.59	16.98	6,259.87	-1,275.62	-1,213.79	1,760.82	2.41	2.08	57.64	67.30
	NORMAL	6,676.0	1.93	8.01	6,354.80	-1,271.99	-1,212.94	1,757.59	0.79	-0.69	-9.44	203.76
	NORMAL	6,771.0	1.93	28.84	6,449.75	-1,269.00	-1,211.95	1,754.74	0.73	0.00	21.93	100.41



## 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 (°)
2/9/2013	NORMAL	6,866.0	0.66	94.32	6,544.72	-1,267.64	-1,210.63	1,752.85	1.85	-1.34	68.93	160.07
	NORMAL	6,961.0	2.33	196.80	6,639.70	-1,269.53	-1,210.64	1,754.23	2.69	1.76	107.87	117.08
	NORMAL	7,056.0	2.64	193.90	6,734.61	-1,273.50	-1,211.72	1,757.86	0.35	0.33	-3.05	336.47
	NORMAL	7,151.0	1.76	227.56	6,829.54	-1,276.61	-1,213.33	1,761.22	1.61	-0.93	35.43	140.30
2/10/2013	NORMAL	7,246.0	1.54	277.66	6,924.51	-1,277.43	-1,215.67	1,763.42	1.49	-0.23	52.74	123.16
	NORMAL	7,342.0	2.02	333.38	7,020.47	-1,275.74	-1,217.71	1,763.60	1.79	0.50	58.04	103.54
	NORMAL	7,437.0	1.58	13.37	7,115.42	-1,272.97	-1,218.15	1,761.89	1.37	-0.46	42.09	128.56
	NORMAL	7,533.0	1.23	90.54	7,211.40	-1,271.69	-1,216.82	1,760.05	1.85	-0.36	80.39	137.45
	NORMAL	7,628.0	1.10	137.03	7,306.38	-1,272.37	-1,215.17	1,759.41	0.98	-0.14	48.94	120.64
	NORMAL	7,723.0	1.58	173.51	7,401.36	-1,274.34	-1,214.41	1,760.31	1.00	0.51	38.40	79.71
	NORMAL	7,818.0	1.71	191.79	7,496.32	-1,277.03	-1,214.55	1,762.36	0.57	0.14	19.24	85.34
	NORMAL	7,913.0	2.68	212.80	7,591.25	-1,280.28	-1,216.04	1,765.75	1.31	1.02	22.12	50.50
	NORMAL	8,009.0	3.25	215.52	7,687.12	-1,284.38	-1,218.84	1,770.65	0.61	0.59	2.83	15.23
	NORMAL	8,103.0	3.30	219.47	7,780.97	-1,288.64	-1,222.10	1,775.99	0.25	0.05	4.20	79.48
	NORMAL	8,148.0	3.30	215.00	7,825.89	-1,290.70	-1,223.67	1,778.56	0.57	0.00	-9.93	267.77