

## General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well Information

Well	PA 534-2	Wellbore No.	
Well Name	PA 534-2	Common Name	PA 534-2
Project	PA 01-07S-095W	Site	GV 84-1 Pad
Vertical Section Azimuth	226.69 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	12/30/2012	UWI	PA 534-2
Active Datum	KB @6,053.0ft (above Mean Sea Level)		

## Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	12/31/2012	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 (°)
12/31/2012	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/31/2012	NORMAL	104.0	0.88	265.43	104.00	-0.06	-0.80	0.62	0.85	0.85	0.00	265.43
	NORMAL	134.0	2.29	227.72	133.98	-0.49	-1.47	1.40	5.61	4.70	-125.70	303.64
	NORMAL	165.0	2.55	221.75	164.96	-1.42	-2.39	2.71	1.17	0.84	-19.26	312.88
	NORMAL	195.0	3.26	225.26	194.92	-2.51	-3.44	4.23	2.44	2.37	11.70	15.82
	NORMAL	225.0	4.49	222.98	224.85	-3.97	-4.84	6.25	4.13	4.10	-7.60	351.72
	NORMAL	265.0	5.81	230.10	264.69	-6.42	-7.46	9.83	3.66	3.30	17.80	29.41
	NORMAL	287.0	6.86	230.45	286.55	-7.97	-9.33	12.26	4.78	4.77	1.59	2.28
	NORMAL	317.0	7.48	231.06	316.32	-10.34	-12.23	15.99	2.08	2.07	2.03	7.30
	NORMAL	327.0	7.56	231.88	326.23	-11.15	-13.26	17.30	1.34	0.80	8.20	53.70
1/1/2013	NORMAL	418.0	10.33	230.39	416.12	-20.05	-24.25	31.40	3.05	3.04	-1.64	354.48
	NORMAL	509.0	13.65	224.19	505.12	-32.96	-38.03	50.28	3.91	3.65	-6.81	335.74
	NORMAL	600.0	16.94	223.28	592.89	-50.31	-54.61	74.25	3.62	3.62	-1.00	355.38
	NORMAL	691.0	18.82	226.13	679.49	-70.14	-74.28	102.16	2.28	2.07	3.13	26.32
	NORMAL	782.0	22.12	227.13	764.73	-91.97	-97.42	133.98	3.65	3.63	1.10	6.52
	NORMAL	873.0	26.48	226.73	847.65	-117.55	-124.76	171.42	4.79	4.79	-0.44	357.65
	NORMAL	965.0	29.43	226.43	928.91	-147.19	-156.08	214.54	3.21	3.21	-0.33	357.14
	NORMAL	1,059.0	32.38	227.19	1,009.55	-180.22	-191.29	262.81	3.17	3.14	0.81	7.86
	NORMAL	1,154.0	35.53	227.92	1,088.34	-216.02	-230.45	315.86	3.34	3.32	0.77	7.68
	NORMAL	1,249.0	38.95	227.22	1,163.96	-254.81	-272.86	373.33	3.63	3.60	-0.74	352.66
	NORMAL	1,340.0	40.10	224.76	1,234.16	-295.05	-314.50	431.23	2.13	1.26	-2.70	305.35

## 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 (°)
1/3/2013	NORMAL	1,443.0	36.69	224.14	1,314.87	-340.70	-359.30	495.15	3.33	-3.31	-0.60	186.20
	NORMAL	1,538.0	38.64	235.90	1,390.17	-377.75	-403.69	552.86	7.83	2.05	12.38	79.53
	NORMAL	1,632.0	39.03	227.75	1,463.44	-414.12	-449.93	611.46	5.45	0.41	-8.67	271.18
	NORMAL	1,728.0	38.81	226.96	1,538.13	-454.98	-494.29	671.76	0.57	-0.23	-0.82	245.79
	NORMAL	1,823.0	38.51	225.20	1,612.31	-496.14	-537.04	731.10	1.20	-0.32	-1.85	254.05
	NORMAL	1,918.0	38.90	226.60	1,686.45	-537.48	-579.70	790.50	1.01	0.41	1.47	66.53
	NORMAL	2,013.0	39.91	228.19	1,759.86	-578.29	-624.08	850.79	1.50	1.06	1.67	45.60
	NORMAL	2,107.0	40.40	227.31	1,831.70	-619.05	-668.95	911.40	0.80	0.52	-0.94	310.47
	NORMAL	2,203.0	38.68	227.75	1,905.73	-660.31	-714.03	972.50	1.82	-1.79	0.46	170.92
	NORMAL	2,298.0	38.81	227.40	1,979.83	-700.42	-757.92	1,031.95	0.27	0.14	-0.37	300.55
	NORMAL	2,393.0	38.64	227.13	2,053.94	-740.75	-801.57	1,091.38	0.25	-0.18	-0.28	224.71
	NORMAL	2,488.0	38.20	225.73	2,128.37	-781.44	-844.34	1,150.41	1.03	-0.46	-1.47	242.62
	NORMAL	2,583.0	38.59	228.45	2,202.83	-821.60	-887.55	1,209.40	1.82	0.41	2.86	78.07
	NORMAL	2,679.0	38.77	227.75	2,277.78	-861.67	-932.21	1,269.38	0.49	0.19	-0.73	292.09
	NORMAL	2,774.0	39.87	226.96	2,351.27	-902.45	-976.48	1,329.57	1.27	1.16	-0.83	335.22
	NORMAL	2,870.0	40.18	226.52	2,424.78	-944.76	-1,021.44	1,391.31	0.44	0.32	-0.46	317.44
	NORMAL	2,966.0	40.31	225.99	2,498.06	-987.64	-1,066.25	1,453.33	0.38	0.14	-0.55	290.59
	NORMAL	3,061.0	40.35	224.76	2,570.48	-1,030.83	-1,110.00	1,514.79	0.84	0.04	-1.29	272.41
	NORMAL	3,157.0	40.97	224.76	2,643.31	-1,075.25	-1,154.05	1,577.31	0.65	0.65	0.00	0.00
	NORMAL	3,252.0	39.87	225.11	2,715.63	-1,118.85	-1,197.55	1,638.87	1.18	-1.16	0.37	168.48
	NORMAL	3,348.0	38.90	226.87	2,789.83	-1,161.18	-1,241.35	1,699.78	1.54	-1.01	1.83	131.65
	NORMAL	3,443.0	38.59	225.81	2,863.92	-1,202.22	-1,284.36	1,759.23	0.77	-0.33	-1.12	244.54
	NORMAL	3,538.0	38.95	227.22	2,937.99	-1,243.16	-1,327.53	1,818.71	1.00	0.38	1.48	68.37
	NORMAL	3,633.0	38.90	226.60	3,011.90	-1,283.93	-1,371.11	1,878.40	0.41	-0.05	-0.65	262.44
	NORMAL	3,728.0	39.56	227.04	3,085.49	-1,325.04	-1,414.93	1,938.48	0.75	0.69	0.46	23.03
	NORMAL	3,824.0	39.96	225.81	3,159.29	-1,367.37	-1,459.40	1,999.88	0.92	0.42	-1.28	296.48
	NORMAL	3,919.0	39.60	227.40	3,232.30	-1,409.13	-1,503.57	2,060.66	1.14	-0.38	1.67	110.10
	NORMAL	4,014.0	39.56	227.48	3,305.52	-1,450.07	-1,548.15	2,121.18	0.07	-0.04	0.08	128.15
	NORMAL	4,109.0	39.25	226.78	3,378.92	-1,491.09	-1,592.35	2,181.49	0.57	-0.33	-0.74	234.83
	NORMAL	4,205.0	38.90	226.25	3,453.45	-1,532.73	-1,636.26	2,242.00	0.50	-0.36	-0.55	223.46
	NORMAL	4,300.0	38.73	227.57	3,527.47	-1,573.41	-1,679.74	2,301.54	0.89	-0.18	1.39	102.12
	NORMAL	4,395.0	38.68	226.52	3,601.61	-1,613.89	-1,723.21	2,360.94	0.69	-0.05	-1.11	265.24
	NORMAL	4,490.0	39.03	227.31	3,675.59	-1,654.60	-1,766.74	2,420.54	0.64	0.37	0.83	55.08
	NORMAL	4,585.0	38.42	227.66	3,749.70	-1,694.76	-1,810.55	2,479.96	0.68	-0.64	0.37	160.39
	NORMAL	4,680.0	38.02	226.43	3,824.34	-1,734.81	-1,853.56	2,538.73	0.90	-0.42	-1.29	241.79
	NORMAL	4,775.0	36.09	228.19	3,900.15	-1,773.63	-1,895.62	2,595.97	2.32	-2.03	1.85	151.91
	NORMAL	4,870.0	35.03	225.99	3,977.44	-1,811.23	-1,936.09	2,651.21	1.75	-1.12	-2.32	229.47
	NORMAL	4,966.0	32.26	226.87	4,057.35	-1,847.90	-1,974.61	2,704.39	2.93	-2.89	0.92	170.38
	NORMAL	5,061.0	30.07	226.25	4,138.64	-1,881.69	-2,010.31	2,753.55	2.33	-2.31	-0.65	188.07
	NORMAL	5,156.0	27.78	224.32	4,221.78	-1,913.99	-2,042.98	2,799.47	2.60	-2.41	-2.03	201.34
	NORMAL	5,252.0	26.03	226.60	4,307.39	-1,944.48	-2,073.92	2,842.90	2.12	-1.82	2.38	150.49
	NORMAL	5,347.0	24.70	228.98	4,393.23	-1,971.83	-2,104.04	2,883.58	1.76	-1.40	2.51	143.60
	NORMAL	5,443.0	22.77	228.28	4,481.11	-1,997.36	-2,133.04	2,922.19	2.03	-2.01	-0.73	187.99
	NORMAL	5,538.0	21.01	225.90	4,569.26	-2,021.45	-2,159.00	2,957.60	2.07	-1.85	-2.51	205.66
	NORMAL	5,633.0	19.43	225.20	4,658.40	-2,044.43	-2,182.44	2,990.43	1.68	-1.66	-0.74	188.38
	NORMAL	5,728.0	17.32	226.43	4,748.55	-2,065.32	-2,203.90	3,020.37	2.26	-2.22	1.29	170.17
	NORMAL	5,823.0	15.60	227.48	4,839.65	-2,083.70	-2,223.56	3,047.28	1.84	-1.81	1.11	170.69
	NORMAL	5,918.0	13.49	226.34	4,931.60	-2,099.98	-2,240.99	3,071.14	2.24	-2.22	-1.20	187.18
1/5/2013	NORMAL	6,013.0	11.91	223.09	5,024.28	-2,114.79	-2,255.71	3,092.00	1.82	-1.66	-3.42	202.75
1/6/2013	NORMAL	6,109.0	10.11	223.18	5,118.51	-2,128.17	-2,268.24	3,110.30	1.88	-1.88	0.09	179.50
1/7/2013	NORMAL	6,204.0	6.24	230.38	5,212.53	-2,137.55	-2,277.93	3,123.78	4.21	-4.07	7.58	168.73
	NORMAL	6,299.0	5.23	234.43	5,307.05	-2,143.36	-2,285.43	3,133.23	1.14	-1.06	4.26	160.17
	NORMAL	6,395.0	2.59	232.05	5,402.82	-2,147.24	-2,290.70	3,139.72	2.75	-2.75	-2.48	182.33
	NORMAL	6,490.0	0.57	329.26	5,497.79	-2,148.15	-2,292.63	3,141.76	2.86	-2.13	102.33	168.00
	NORMAL	6,586.0	0.70	17.60	5,593.78	-2,147.18	-2,292.70	3,141.14	0.56	0.14	50.35	101.32
	NORMAL	6,681.0	0.66	6.88	5,688.77	-2,146.09	-2,292.46	3,140.21	0.14	-0.04	-11.28	247.23
	NORMAL	6,776.0	1.98	22.08	5,783.75	-2,144.02	-2,291.78	3,138.30	1.43	1.39	16.00	22.54

## 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 (°)
1/7/2013	NORMAL	6,871.0	2.02	21.82	5,878.69	-2,140.95	-2,290.54	3,135.29	0.04	0.04	-0.27	347.09
	NORMAL	6,966.0	1.58	21.56	5,973.64	-2,138.17	-2,289.43	3,132.58	0.46	-0.46	-0.27	180.93
	NORMAL	7,061.0	1.01	19.01	6,068.62	-2,136.17	-2,288.68	3,130.66	0.60	-0.60	-2.68	184.50
1/8/2013	NORMAL	7,156.0	0.75	23.40	6,163.61	-2,134.80	-2,288.16	3,129.34	0.28	-0.27	4.62	167.65
	NORMAL	7,251.0	0.66	3.98	6,258.60	-2,133.69	-2,287.87	3,128.37	0.27	-0.09	-20.44	239.83
	NORMAL	7,346.0	0.48	34.39	6,353.59	-2,132.81	-2,287.61	3,127.58	0.36	-0.19	32.01	135.36
	NORMAL	7,441.0	0.22	141.09	6,448.59	-2,132.63	-2,287.27	3,127.21	0.61	-0.27	112.32	158.80
	NORMAL	7,537.0	0.44	189.43	6,544.59	-2,133.13	-2,287.22	3,127.51	0.35	0.23	50.35	77.57
	NORMAL	7,632.0	0.75	205.69	6,639.59	-2,134.05	-2,287.55	3,128.38	0.37	0.33	17.12	36.87
	NORMAL	7,727.0	0.88	247.08	6,734.58	-2,134.90	-2,288.49	3,129.65	0.62	0.14	43.57	98.77
1/9/2013	NORMAL	7,823.0	1.10	224.06	6,830.56	-2,135.85	-2,289.81	3,131.26	0.47	0.23	-23.98	287.11
	NORMAL	7,918.0	0.57	235.48	6,925.55	-2,136.77	-2,290.83	3,132.64	0.58	-0.56	12.02	168.22
	NORMAL	8,013.0	1.27	226.16	7,020.54	-2,137.77	-2,291.98	3,134.16	0.75	0.74	-9.81	343.25
	NORMAL	8,109.0	0.57	250.16	7,116.53	-2,138.67	-2,293.20	3,135.66	0.82	-0.73	25.00	162.81
1/10/2013	NORMAL	8,204.0	0.53	151.63	7,211.52	-2,139.21	-2,293.43	3,136.21	0.88	-0.04	-103.72	218.94
	NORMAL	8,300.0	0.57	141.26	7,307.52	-2,139.98	-2,292.92	3,136.36	0.11	0.04	-10.80	286.65
	NORMAL	8,395.0	0.70	163.94	7,402.51	-2,140.90	-2,292.47	3,136.66	0.30	0.14	23.87	74.30
	NORMAL	8,490.0	0.70	177.74	7,497.51	-2,142.04	-2,292.28	3,137.31	0.18	0.00	14.53	96.90
	NORMAL	8,586.0	1.14	225.02	7,593.50	-2,143.30	-2,292.93	3,138.65	0.88	0.46	49.25	84.99
	NORMAL	8,681.0	1.54	223.26	7,688.47	-2,144.90	-2,294.48	3,140.87	0.42	0.42	-1.85	353.24
	NORMAL	8,726.0	1.54	223.26	7,733.45	-2,145.78	-2,295.31	3,142.07	0.00	0.00	0.00	0.00