

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	PA 34-2	Wellbore No.	
Well Name	PA 34-2	Common Name	PA 34-2
Project	PA 01-07S-095W	Site	GV 84-1 Pad
Vertical Section Azimuth	244.55 (°)	North Reference	
Origin N/S		Origin E/W	
Spud Date	2/21/2013	UWI	PA 34-2
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	2/21/2013	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 (°)
2/21/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2/21/2013	NORMAL	104.0	0.62	284.41	104.00	0.14	-0.54	0.43	0.60	0.60	0.00	284.41
	NORMAL	134.0	1.41	270.70	133.99	0.18	-1.07	0.89	2.74	2.63	-45.70	335.98
	NORMAL	165.0	2.02	263.67	164.98	0.13	-2.00	1.75	2.08	1.97	-22.68	337.43
	NORMAL	197.0	2.11	236.78	196.96	-0.26	-3.05	2.86	3.01	0.28	-84.03	261.77
	NORMAL	224.0	3.26	227.20	223.93	-1.05	-4.03	4.09	4.56	4.26	-35.48	333.85
	NORMAL	254.0	3.52	229.04	253.88	-2.23	-5.35	5.79	0.94	0.87	6.13	23.63
	NORMAL	285.0	3.87	238.89	284.81	-3.40	-6.96	7.75	2.33	1.13	31.77	66.10
	NORMAL	315.0	4.93	245.92	314.72	-4.45	-9.01	10.04	3.96	3.53	23.43	30.50
	NORMAL	345.0	6.25	248.29	344.58	-5.58	-11.70	12.96	4.47	4.40	7.90	11.10
	NORMAL	376.0	7.57	248.47	375.35	-6.95	-15.17	16.68	4.26	4.26	0.58	1.03
	NORMAL	406.0	8.09	245.04	405.07	-8.57	-18.92	20.77	2.33	1.73	-11.43	316.35
	NORMAL	436.0	8.97	243.54	434.74	-10.50	-22.93	25.22	3.03	2.93	-5.00	345.07
	NORMAL	466.0	9.77	242.49	464.34	-12.72	-27.28	30.10	2.73	2.67	-3.50	347.42
	NORMAL	496.0	10.73	243.81	493.86	-15.13	-32.04	35.43	3.29	3.20	4.40	14.40
	NORMAL	526.0	11.52	243.98	523.30	-17.67	-37.24	41.22	2.64	2.63	0.57	2.46
	NORMAL	557.0	12.49	246.18	553.62	-20.38	-43.09	47.67	3.46	3.13	7.10	26.33
	NORMAL	586.0	13.37	246.01	581.89	-23.01	-49.02	54.16	3.04	3.03	-0.59	357.44
	NORMAL	617.0	14.43	246.01	611.98	-26.04	-55.83	61.60	3.42	3.42	0.00	0.00
	NORMAL	647.0	15.22	244.78	640.98	-29.24	-62.80	69.27	2.83	2.63	-4.10	337.68
	NORMAL	657.0	15.48	245.22	650.62	-30.36	-65.20	71.92	2.85	2.60	4.40	24.34

2.1.2 Survey Stations (Continued)

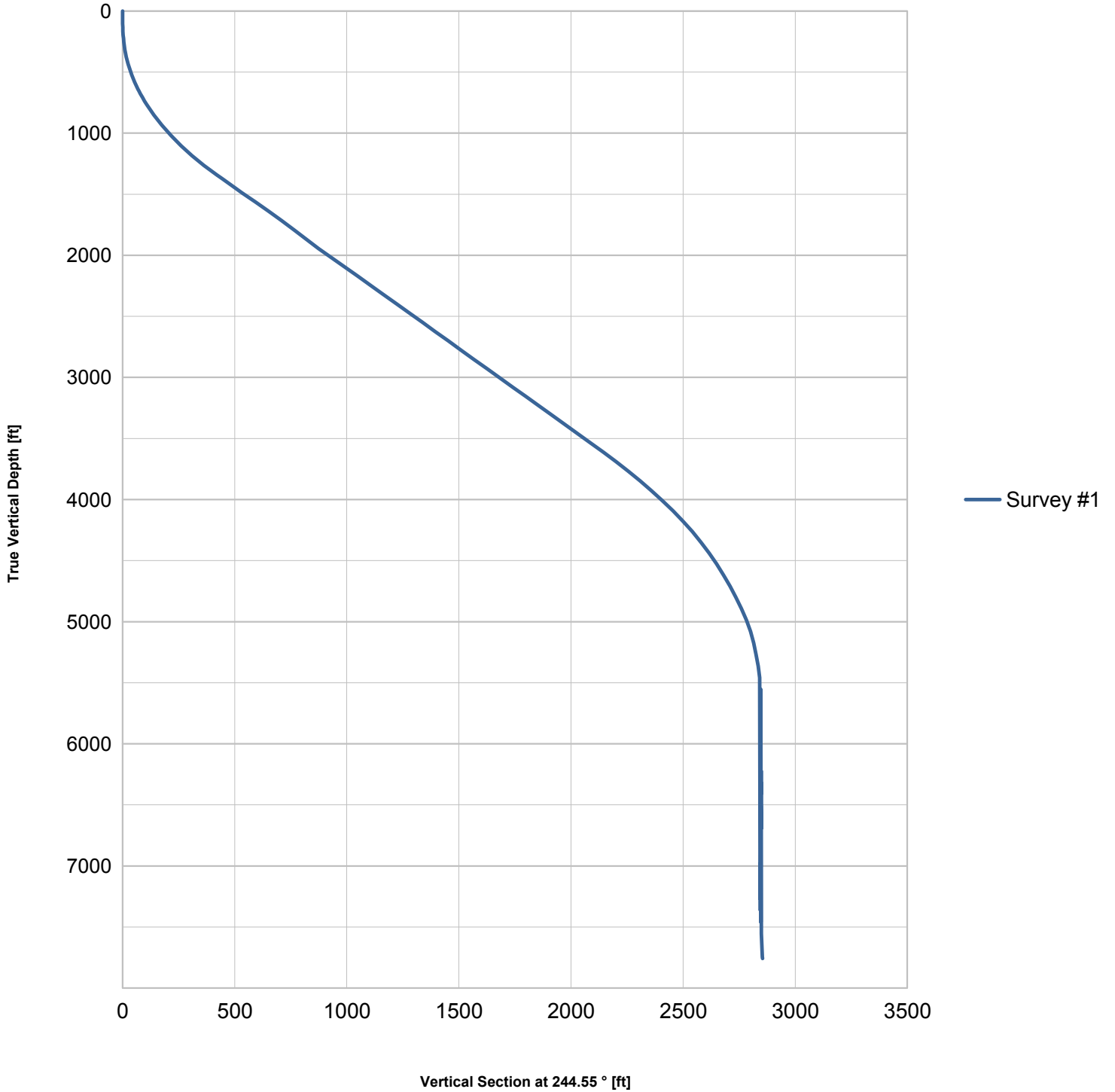
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
2/21/2013	NORMAL	687.0	16.54	244.80	679.46	-33.85	-72.70	80.20	3.55	3.53	-1.40	353.56
	NORMAL	717.0	17.32	244.43	708.16	-37.60	-80.59	88.93	2.62	2.60	-1.23	351.96
	NORMAL	748.0	18.03	243.64	737.69	-41.72	-89.06	98.34	2.42	2.29	-2.55	340.96
	NORMAL	778.0	19.02	244.56	766.14	-45.88	-97.63	107.87	3.44	3.30	3.07	16.89
	NORMAL	869.0	21.72	243.64	851.44	-59.73	-126.11	139.54	2.99	2.97	-1.01	352.80
	NORMAL	960.0	24.87	241.70	935.01	-76.28	-158.06	175.50	3.56	3.46	-2.13	345.42
	NORMAL	1,055.0	27.08	241.70	1,020.41	-96.01	-194.69	217.06	2.33	2.33	0.00	0.00
	NORMAL	1,150.0	29.02	242.32	1,104.25	-116.97	-234.14	261.68	2.07	2.04	0.65	8.82
	NORMAL	1,244.0	32.40	244.39	1,185.06	-138.45	-277.05	309.66	3.77	3.60	2.20	18.26
	NORMAL	1,340.0	36.14	245.48	1,264.38	-161.32	-326.02	363.71	3.95	3.90	1.14	9.77
	NORMAL	1,435.0	36.58	245.83	1,340.88	-184.54	-377.33	420.02	0.51	0.46	0.37	25.39
	NORMAL	1,476.0	36.76	246.10	1,373.77	-194.51	-399.70	444.50	0.59	0.44	0.66	41.96
2/23/2013	NORMAL	1,558.0	37.89	245.93	1,438.97	-214.72	-445.12	494.20	1.38	1.38	-0.21	354.72
	NORMAL	1,621.0	38.07	244.61	1,488.63	-230.94	-480.33	532.96	1.32	0.29	-2.10	281.97
	NORMAL	1,717.0	38.55	244.00	1,563.96	-256.75	-533.96	592.47	0.64	0.50	-0.64	321.53
	NORMAL	1,812.0	37.49	245.14	1,638.80	-281.88	-586.80	650.99	1.34	-1.12	1.20	146.93
	NORMAL	1,908.0	36.18	246.11	1,715.64	-305.64	-639.21	708.53	1.49	-1.36	1.01	156.45
	NORMAL	2,003.0	36.04	245.58	1,792.38	-328.55	-690.30	764.50	0.36	-0.15	-0.56	245.64
	NORMAL	2,097.0	35.30	245.49	1,868.75	-351.25	-740.19	819.30	0.79	-0.79	-0.10	184.02
	NORMAL	2,191.0	36.48	245.05	1,944.90	-374.30	-790.24	874.40	1.28	1.26	-0.47	347.49
	NORMAL	2,285.0	38.24	244.79	2,019.61	-398.48	-841.90	931.44	1.88	1.87	-0.28	354.77
	NORMAL	2,380.0	37.93	244.79	2,094.39	-423.44	-894.92	990.04	0.33	-0.33	0.00	180.00
	NORMAL	2,475.0	36.97	245.84	2,169.81	-447.57	-947.40	1,047.80	1.21	-1.01	1.11	146.79
	NORMAL	2,571.0	37.49	245.40	2,246.24	-471.55	-1,000.30	1,105.87	0.61	0.54	-0.46	332.72
	NORMAL	2,665.0	37.85	245.76	2,320.65	-495.30	-1,052.61	1,163.30	0.45	0.38	0.38	31.57
	NORMAL	2,761.0	37.19	243.73	2,396.79	-520.23	-1,105.48	1,221.76	1.46	-0.69	-2.11	241.10
	NORMAL	2,856.0	37.27	243.21	2,472.43	-545.90	-1,156.91	1,279.23	0.34	0.08	-0.55	284.06
	NORMAL	2,952.0	37.19	242.85	2,548.87	-572.24	-1,208.67	1,337.29	0.24	-0.08	-0.38	249.69
	NORMAL	3,047.0	37.19	243.12	2,624.55	-598.33	-1,259.83	1,394.69	0.17	0.00	0.28	90.11
	NORMAL	3,143.0	37.10	243.21	2,701.07	-624.50	-1,311.56	1,452.64	0.11	-0.09	0.09	148.91
	NORMAL	3,238.0	37.01	244.00	2,776.89	-649.94	-1,362.83	1,509.88	0.51	-0.09	0.83	101.02
	NORMAL	3,334.0	37.36	244.44	2,853.37	-675.18	-1,415.08	1,567.90	0.46	0.36	0.46	37.40
	NORMAL	3,429.0	37.23	243.82	2,928.94	-700.29	-1,466.87	1,625.46	0.42	-0.14	-0.65	250.67
	NORMAL	3,525.0	37.14	244.79	3,005.43	-725.45	-1,519.15	1,683.48	0.62	-0.09	1.01	99.11
2/24/2013	NORMAL	3,620.0	37.58	245.32	3,080.94	-749.76	-1,571.42	1,741.12	0.57	0.46	0.56	36.38
	NORMAL	3,715.0	37.54	245.14	3,156.24	-774.02	-1,624.01	1,799.03	0.12	-0.04	-0.19	249.90
	NORMAL	3,811.0	37.23	244.96	3,232.52	-798.61	-1,676.86	1,857.32	0.34	-0.32	-0.19	199.35
	NORMAL	3,906.0	36.62	245.05	3,308.47	-822.73	-1,728.58	1,914.39	0.64	-0.64	0.09	174.97
	NORMAL	4,002.0	37.27	245.05	3,385.19	-847.07	-1,780.90	1,972.09	0.68	0.68	0.00	0.00
	NORMAL	4,097.0	37.36	245.40	3,460.75	-871.20	-1,833.19	2,029.67	0.24	0.09	0.37	67.15
	NORMAL	4,193.0	37.06	245.93	3,537.20	-895.12	-1,886.08	2,087.71	0.46	-0.31	0.55	133.32
	NORMAL	4,288.0	36.84	245.49	3,613.12	-918.61	-1,938.13	2,144.81	0.36	-0.23	-0.46	230.07
	NORMAL	4,383.0	35.87	245.58	3,689.63	-941.94	-1,989.39	2,201.11	1.02	-1.02	0.09	176.89
	NORMAL	4,478.0	34.59	245.67	3,767.23	-964.55	-2,039.31	2,255.91	1.35	-1.35	0.09	177.71
	NORMAL	4,573.0	32.62	245.32	3,846.35	-986.36	-2,087.15	2,308.47	2.08	-2.07	-0.37	185.47
	NORMAL	4,668.0	31.30	245.40	3,926.95	-1,007.32	-2,132.86	2,358.75	1.39	-1.39	0.08	178.20
	NORMAL	4,764.0	30.59	245.23	4,009.28	-1,027.94	-2,177.71	2,408.11	0.75	-0.74	-0.18	186.95
	NORMAL	4,859.0	28.53	243.65	4,091.92	-1,048.14	-2,219.99	2,454.97	2.32	-2.17	-1.66	200.04
	NORMAL	4,955.0	26.73	244.26	4,176.96	-1,067.69	-2,259.99	2,499.49	1.90	-1.88	0.64	171.34
	NORMAL	5,050.0	25.14	245.76	4,262.39	-1,085.25	-2,297.64	2,541.03	1.81	-1.67	1.58	158.25
	NORMAL	5,146.0	22.99	245.23	4,350.05	-1,101.48	-2,333.26	2,580.17	2.25	-2.24	-0.55	185.50
	NORMAL	5,242.0	21.06	243.73	4,439.04	-1,116.97	-2,365.75	2,616.17	2.09	-2.01	-1.56	195.56
2/25/2013	NORMAL	5,337.0	19.74	244.17	4,528.08	-1,131.52	-2,395.50	2,649.28	1.40	-1.39	0.46	173.58
	NORMAL	5,433.0	18.20	243.29	4,618.86	-1,145.32	-2,423.48	2,680.48	1.63	-1.60	-0.92	190.11
	NORMAL	5,528.0	17.01	244.44	4,709.41	-1,157.99	-2,449.27	2,709.21	1.30	-1.25	1.21	164.25
	NORMAL	5,623.0	14.86	245.84	4,800.75	-1,168.97	-2,472.93	2,735.29	2.30	-2.26	1.47	170.54
	NORMAL	5,719.0	14.64	248.66	4,893.59	-1,178.42	-2,495.46	2,759.70	0.78	-0.23	2.94	108.40

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 (°)
2/26/2013	NORMAL	5,815.0	13.23	249.18	4,986.76	-1,186.74	-2,517.03	2,782.75	1.47	-1.47	0.54	175.18
	NORMAL	5,910.0	9.10	246.02	5,079.95	-1,193.66	-2,534.06	2,801.10	4.39	-4.35	-3.33	186.88
	NORMAL	6,006.0	7.25	245.76	5,174.97	-1,199.24	-2,546.52	2,814.75	1.93	-1.93	-0.27	181.02
	NORMAL	6,102.0	6.11	244.35	5,270.31	-1,203.94	-2,556.65	2,825.92	1.19	-1.18	-1.47	187.53
	NORMAL	6,197.0	4.97	250.41	5,364.87	-1,207.51	-2,565.09	2,835.07	1.35	-1.21	6.38	155.92
	NORMAL	6,292.0	3.34	247.51	5,459.62	-1,209.94	-2,571.53	2,841.93	1.73	-1.72	-3.05	185.90
	NORMAL	6,387.0	1.45	206.82	5,554.53	-1,212.08	-2,574.63	2,845.64	2.56	-1.99	-42.83	202.88
	NORMAL	6,483.0	0.57	113.04	5,650.52	-1,213.35	-2,574.73	2,846.29	1.66	-0.92	-97.69	200.93
	NORMAL	6,577.0	0.61	146.44	5,744.52	-1,213.95	-2,574.03	2,845.91	0.36	0.04	35.53	100.25
2/27/2013	NORMAL	6,673.0	0.44	14.69	5,840.52	-1,214.02	-2,573.65	2,845.60	1.00	-0.18	-137.24	199.98
	NORMAL	6,768.0	0.44	307.28	5,935.51	-1,213.44	-2,573.85	2,845.53	0.51	0.00	-70.96	236.30
	NORMAL	6,864.0	0.57	313.08	6,031.51	-1,212.89	-2,574.49	2,845.87	0.15	0.14	6.04	24.38
	NORMAL	6,959.0	0.83	282.32	6,126.50	-1,212.42	-2,575.51	2,846.59	0.47	0.27	-32.38	288.65
	NORMAL	7,054.0	0.88	285.18	6,221.49	-1,212.09	-2,576.89	2,847.69	0.07	0.05	3.01	41.92
	NORMAL	7,149.0	0.26	291.99	6,316.49	-1,211.81	-2,577.79	2,848.39	0.66	-0.65	7.17	177.16
	NORMAL	7,244.0	0.88	21.72	6,411.48	-1,211.06	-2,577.72	2,848.00	0.96	0.65	94.45	106.21
	NORMAL	7,340.0	0.18	97.92	6,507.48	-1,210.39	-2,577.30	2,847.33	0.89	-0.73	79.38	168.20
	NORMAL	7,434.0	0.13	186.69	6,601.48	-1,210.52	-2,577.16	2,847.26	0.23	-0.05	94.44	143.74
	NORMAL	7,529.0	0.44	280.47	6,696.48	-1,210.56	-2,577.53	2,847.62	0.49	0.33	98.72	109.91
2/28/2013	NORMAL	7,624.0	1.05	51.96	6,791.47	-1,209.96	-2,577.21	2,847.06	1.45	0.64	138.41	145.29
	NORMAL	7,720.0	0.92	60.74	6,887.46	-1,209.04	-2,575.84	2,845.44	0.21	-0.14	9.15	135.07
3/1/2013	NORMAL	7,815.0	0.57	63.91	6,982.45	-1,208.46	-2,574.75	2,844.20	0.37	-0.37	3.34	174.87
3/2/2013	NORMAL	7,910.0	0.35	97.13	7,077.45	-1,208.28	-2,574.04	2,843.48	0.35	-0.23	34.97	145.33
	NORMAL	8,006.0	0.35	165.77	7,173.45	-1,208.61	-2,573.68	2,843.29	0.41	0.00	71.50	124.32
	NORMAL	8,101.0	1.01	195.57	7,268.44	-1,209.69	-2,573.83	2,843.90	0.77	0.69	31.37	43.63
	NORMAL	8,197.0	1.27	195.57	7,364.42	-1,211.53	-2,574.34	2,845.15	0.27	0.27	0.00	0.00
	NORMAL	8,292.0	1.32	201.72	7,459.40	-1,213.56	-2,575.03	2,846.65	0.16	0.05	6.47	73.31
	NORMAL	8,387.0	1.58	209.19	7,554.37	-1,215.72	-2,576.07	2,848.52	0.34	0.27	7.86	39.79
	NORMAL	8,482.0	1.93	212.71	7,649.32	-1,218.21	-2,577.58	2,850.95	0.39	0.37	3.71	18.88
	NORMAL	8,577.0	1.85	221.06	7,744.27	-1,220.72	-2,579.45	2,853.71	0.30	-0.08	8.79	110.34
	NORMAL	8,590.0	1.85	221.06	7,757.26	-1,221.03	-2,579.73	2,854.10	0.00	0.00	0.00	0.00

3 Charts

3.1 Vertical Section View



3.2 Plan View

