

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	PA 411-7 ✓	Wellbore No.	00
Wellbore Legal Name	PA 411-7	Common Wellbore Name	PA 411-7
Project	PA 06-07S-095W	Site	PA 14-6 Pad
Vertical Section Azimuth	203.87 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	5/20/2014	UWI	PA 411-7
Active datum	KB @5,179.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	5/20/2014	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)	Trace (°)
5/20/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5/20/2014	NORMAL	104.0	0.35	150.38	104.00	-0.28	0.16	0.19	0.34	0.34	0.00	150.38
	NORMAL	135.0	1.23	197.67	135.00	-0.68	0.10	0.58	3.31	2.84	152.55	61.81
	NORMAL	165.0	1.67	196.87	164.99	-1.40	-0.12	1.33	1.47	1.47	-2.67	356.97
	NORMAL	195.0	2.29	201.97	194.97	-2.37	-0.47	2.36	2.15	2.07	17.00	18.42
	NORMAL	225.0	3.52	203.47	224.93	-3.78	-1.06	3.88	4.11	4.10	5.00	4.29
	NORMAL	256.0	4.22	206.98	255.86	-5.66	-1.96	5.97	2.38	2.26	11.32	20.45
	NORMAL	286.0	5.54	211.11	285.75	-7.89	-3.21	8.51	4.55	4.40	13.77	16.97
	NORMAL	316.0	6.51	208.65	315.58	-10.62	-4.77	11.64	3.35	3.23	-8.20	343.87
	NORMAL	346.0	7.48	210.46	345.36	-13.80	-6.58	15.28	3.32	3.23	6.03	13.70
	NORMAL	376.0	8.45	209.18	375.07	-17.40	-8.64	19.41	3.29	3.23	-4.27	349.00
	NORMAL	406.0	9.59	205.49	404.70	-21.58	-10.79	24.11	4.26	3.80	-12.30	331.26
	NORMAL	436.0	11.00	203.29	434.22	-26.47	-13.00	29.47	4.88	4.70	-7.33	343.33
	NORMAL	466.0	12.49	204.87	463.59	-32.04	-15.50	35.57	5.08	4.97	5.27	12.96
	NORMAL	497.0	13.37	205.22	493.80	-38.33	-18.43	42.51	2.85	2.84	1.13	5.26
	NORMAL	527.0	14.34	204.08	522.93	-44.86	-21.43	49.69	3.36	3.23	-3.80	343.73
5/21/2014	NORMAL	556.0	15.31	203.38	550.96	-51.65	-24.41	57.11	3.40	3.34	-2.41	349.20
	NORMAL	586.0	16.19	203.20	579.84	-59.13	-27.63	65.25	2.94	2.93	-0.60	356.74
	NORMAL	616.0	16.89	205.84	608.59	-66.90	-31.18	73.79	3.42	2.33	8.80	48.31
	NORMAL	647.0	17.95	206.02	638.17	-75.24	-35.24	83.06	3.42	3.42	0.58	3.00
	NORMAL	677.0	18.65	206.37	666.66	-83.69	-39.40	92.48	2.36	2.33	1.17	9.09

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc. (°)	Azl. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
5/21/2014	NORMAL	707.0	19.44	205.66	695.01	-92.49	-43.69	102.26	2.74	2.63	-2.37	343.32
	NORMAL	778.0	22.23	208.40	761.37	-114.96	-55.19	127.46	4.16	3.93	3.86	20.54
	NORMAL	868.0	26.03	208.80	843.49	-147.25	-72.81	164.12	4.23	4.22	0.44	2.65
	NORMAL	959.0	29.84	205.35	923.87	-185.23	-92.13	206.67	4.55	4.19	-3.79	335.48
	NORMAL	1,054.0	32.94	199.66	1,004.98	-230.93	-110.95	256.08	4.51	3.26	-5.99	313.83
	NORMAL	1,149.0	31.31	198.29	1,085.43	-278.69	-127.39	306.41	1.88	-1.72	-1.44	203.50
	NORMAL	1,245.0	29.82	201.38	1,168.09	-324.61	-143.92	355.08	2.26	-1.55	3.22	134.80
	NORMAL	1,270.0	30.07	201.66	1,189.76	-336.22	-148.50	367.55	1.15	1.00	1.12	29.33
5/22/2014	NORMAL	1,343.0	31.13	201.94	1,252.59	-370.72	-162.30	404.69	1.47	1.45	0.38	7.78
	NORMAL	1,438.0	32.01	201.24	1,333.53	-416.97	-180.60	454.38	1.00	0.93	-0.74	337.09
	NORMAL	1,534.0	32.01	203.00	1,414.94	-464.11	-199.76	505.24	0.97	0.00	1.83	90.75
	NORMAL	1,629.0	32.01	204.76	1,495.49	-510.15	-220.14	555.59	0.98	0.00	1.85	90.75
	NORMAL	1,725.0	32.71	204.76	1,576.59	-556.81	-241.66	606.97	0.73	0.73	0.00	0.00
	NORMAL	1,820.0	31.57	204.05	1,657.03	-602.83	-262.55	657.51	1.26	-1.20	-0.75	198.03
	NORMAL	1,915.0	30.25	203.17	1,738.53	-647.54	-282.10	706.30	1.47	-1.39	-0.93	198.53
	NORMAL	2,011.0	29.02	204.58	1,821.97	-690.94	-301.30	753.77	1.47	-1.28	1.47	151.07
	NORMAL	2,106.0	26.64	204.58	1,905.98	-731.27	-319.74	798.11	2.51	-2.51	0.00	180.00
	NORMAL	2,201.0	27.26	204.05	1,990.66	-770.51	-337.47	841.17	0.70	0.65	-0.56	338.59
	NORMAL	2,296.0	25.68	204.40	2,075.70	-809.13	-354.84	883.51	1.67	-1.66	0.37	174.52
	NORMAL	2,391.0	24.27	204.93	2,161.82	-845.58	-371.58	923.62	1.50	-1.48	0.56	171.22
5/23/2014	NORMAL	2,487.0	23.04	204.40	2,249.75	-880.58	-387.65	962.13	1.30	-1.28	-0.55	189.57
	NORMAL	2,582.0	21.72	203.88	2,337.59	-913.58	-402.45	998.30	1.41	-1.39	-0.55	188.29
	NORMAL	2,677.0	20.40	204.58	2,426.24	-944.72	-416.45	1,032.43	1.41	-1.39	0.74	169.54
	NORMAL	2,773.0	19.34	202.65	2,516.53	-974.60	-429.54	1,065.06	1.30	-1.10	-2.01	210.85
	NORMAL	2,868.0	18.20	203.17	2,606.48	-1,002.76	-441.43	1,095.62	1.21	-1.20	0.55	171.90
	NORMAL	2,963.0	16.97	204.23	2,697.04	-1,029.04	-452.96	1,124.32	1.34	-1.29	1.12	165.91
	NORMAL	3,057.0	15.04	204.05	2,787.39	-1,052.69	-463.56	1,150.24	2.05	-2.05	-0.19	181.39
	NORMAL	3,153.0	14.16	203.17	2,880.29	-1,074.86	-473.26	1,174.43	0.95	-0.92	-0.92	193.72
	NORMAL	3,249.0	12.75	203.17	2,973.65	-1,095.40	-482.04	1,196.77	1.47	-1.47	0.00	180.00
	NORMAL	3,345.0	10.64	206.34	3,067.65	-1,113.08	-490.15	1,216.22	2.30	-2.20	3.30	164.61
	NORMAL	3,440.0	9.50	205.46	3,161.19	-1,128.02	-497.41	1,232.82	1.21	-1.20	-0.93	187.25
	NORMAL	3,535.0	9.41	205.46	3,254.90	-1,142.11	-504.12	1,248.42	0.09	-0.09	0.00	180.00
	NORMAL	3,631.0	8.71	204.23	3,349.70	-1,155.83	-510.47	1,263.53	0.76	-0.73	-1.28	194.86
	NORMAL	3,726.0	7.12	207.92	3,443.79	-1,167.59	-516.18	1,276.60	1.76	-1.67	3.88	164.10
	NORMAL	3,821.0	5.89	208.27	3,538.18	-1,177.08	-521.25	1,287.33	1.30	-1.29	0.37	178.33
	NORMAL	3,916.0	4.40	201.94	3,632.79	-1,184.76	-524.92	1,295.84	1.68	-1.57	-6.66	197.72
	NORMAL	4,012.0	2.99	200.19	3,728.59	-1,190.52	-527.16	1,302.01	1.47	-1.47	-1.82	183.70
5/24/2014	NORMAL	4,107.0	4.40	204.76	3,823.39	-1,196.16	-529.54	1,308.13	1.52	1.48	4.81	14.08
	NORMAL	4,203.0	3.17	205.81	3,919.18	-1,201.89	-532.24	1,314.47	1.28	-1.28	1.09	177.30
	NORMAL	4,298.0	1.14	194.56	4,014.11	-1,205.17	-533.62	1,318.02	2.17	-2.14	-11.84	186.19
	NORMAL	4,393.0	0.26	69.05	4,109.11	-1,206.01	-533.66	1,318.81	1.38	-0.93	-132.12	189.31
	NORMAL	4,488.0	0.26	12.28	4,204.10	-1,205.72	-533.41	1,318.44	0.26	0.00	-59.76	241.62
	NORMAL	4,583.0	0.26	14.21	4,299.10	-1,205.30	-533.31	1,318.02	0.01	0.00	2.03	90.96
	NORMAL	4,679.0	0.18	290.36	4,395.10	-1,205.04	-533.40	1,317.81	0.31	-0.08	-87.34	216.63
	NORMAL	4,774.0	0.35	282.80	4,490.10	-1,204.92	-533.82	1,317.88	0.18	0.18	-7.96	344.58
	NORMAL	4,869.0	0.44	286.85	4,585.10	-1,204.75	-534.45	1,317.98	0.10	0.09	4.26	19.27
5/25/2014	NORMAL	4,965.0	0.35	288.25	4,681.10	-1,204.55	-535.08	1,318.05	0.09	-0.09	1.46	174.58
	NORMAL	5,061.0	0.53	275.24	4,777.10	-1,204.42	-535.80	1,318.22	0.21	0.19	-13.55	324.36
	NORMAL	5,157.0	0.53	286.85	4,873.09	-1,204.25	-536.67	1,318.42	0.11	0.00	12.09	95.80
	NORMAL	5,253.0	0.53	297.79	4,969.09	-1,203.92	-537.49	1,318.44	0.11	0.00	11.40	95.47
	NORMAL	5,348.0	0.79	277.70	5,064.08	-1,203.62	-538.53	1,318.59	0.36	0.27	-21.15	307.99
	NORMAL	5,443.0	0.88	275.24	5,159.07	-1,203.47	-539.90	1,319.01	0.10	0.09	-2.59	337.05
	NORMAL	5,538.0	0.97	266.28	5,254.06	-1,203.45	-541.43	1,319.62	0.18	0.09	-9.43	297.36
	NORMAL	5,634.0	1.05	267.16	5,350.05	-1,203.55	-543.12	1,320.39	0.08	0.08	0.92	11.41
5/26/2014	NORMAL	5,729.0	0.88	255.56	5,445.03	-1,203.78	-544.70	1,321.23	0.27	-0.18	-12.21	223.27
	NORMAL	5,824.0	0.88	257.31	5,540.02	-1,204.12	-546.12	1,322.12	0.03	0.00	1.84	90.87

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 (°)
5/26/2014	NORMAL	5,919.0	1.23	249.23	5,635.01	-1,204.64	-547.78	1,323.27	0.40	0.37	-8.51	332.90
	NORMAL	6,015.0	1.76	241.67	5,730.97	-1,205.70	-550.04	1,325.16	0.59	0.55	-7.88	335.78
	NORMAL	6,110.0	2.37	236.57	5,825.91	-1,207.48	-552.96	1,327.96	0.67	0.64	-5.37	340.68
	NORMAL	6,206.0	2.73	236.75	5,921.82	-1,209.83	-556.53	1,331.55	0.38	0.38	0.19	1.36
	NORMAL	6,301.0	1.50	223.04	6,016.75	-1,211.98	-559.27	1,334.63	1.39	-1.29	-14.43	195.61
	NORMAL	6,397.0	1.50	234.99	6,112.72	-1,213.62	-561.16	1,336.89	0.33	0.00	12.45	95.97
	NORMAL	6,492.0	1.58	239.03	6,207.68	-1,215.00	-563.30	1,339.03	0.14	0.08	4.25	55.65
	NORMAL	6,586.0	2.11	233.58	6,301.63	-1,216.70	-565.81	1,341.59	0.59	0.56	-5.80	338.95
5/27/2014	NORMAL	6,681.0	2.11	227.61	6,396.57	-1,218.91	-568.50	1,344.71	0.23	0.00	-6.28	267.02
	NORMAL	6,720.0	1.85	227.96	6,435.55	-1,219.82	-569.50	1,345.94	0.67	-0.67	0.90	177.51
	NORMAL	6,765.0	1.85	227.96	6,480.52	-1,220.79	-570.58	1,347.27	0.00	0.00	0.00	0.00