

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	PA 524-2	Wellbore No.	00
Wellbore Legal Name	PA 524-2	Common Wellbore Name	PA 524-2
Project	PA 02-07S-095W	Site	GV 86-2 Pad
Vertical Section Azimuth	163.55 (°)	North reference	
Origin N/S		Origin E/W	
Spud date	4/10/2014	UWI	PA 524-2
Active datum	KB @5,847.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	4/10/2014	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)	Tface (°)
4/10/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4/10/2014	NORMAL	100.0	0.62	122.32	100.00	-0.29	0.46	0.41	0.62	0.62	0.00	122.32
	NORMAL	161.0	2.82	161.72	160.97	-1.89	1.21	2.16	3.89	3.61	64.59	48.94
	NORMAL	251.0	5.98	161.02	250.69	-8.43	3.43	9.05	3.51	3.51	-0.78	358.68
	NORMAL	342.0	9.50	166.64	340.85	-20.22	6.70	21.29	3.95	3.87	6.18	14.93
	NORMAL	432.0	12.32	167.70	429.21	-36.83	10.47	38.29	3.14	3.13	1.18	4.59
	NORMAL	523.0	14.96	165.41	517.64	-57.69	15.49	59.71	2.96	2.90	-2.52	347.32
	NORMAL	615.0	18.21	163.04	605.80	-82.94	22.68	85.96	3.61	3.53	-2.58	347.10
	NORMAL	689.0	21.98	161.39	675.29	-107.13	30.48	111.37	5.15	5.09	-2.23	350.67
	NORMAL	781.0	26.97	161.32	758.99	-143.23	42.66	149.45	5.42	5.42	-0.08	359.64
	NORMAL	854.0	26.19	163.27	824.28	-174.34	52.60	182.10	1.60	-1.07	2.67	132.66
4/12/2014	NORMAL	961.0	25.99	164.08	920.38	-219.50	65.83	229.16	0.38	-0.19	0.76	119.68
	NORMAL	1,056.0	26.47	163.69	1,005.59	-259.84	77.48	271.14	0.54	0.51	-0.41	340.07
	NORMAL	1,150.0	26.79	163.31	1,089.62	-300.24	89.45	313.28	0.39	0.34	-0.40	331.81
	NORMAL	1,246.0	26.56	162.57	1,175.41	-341.44	102.09	356.37	0.42	-0.24	-0.77	234.97
	NORMAL	1,340.0	27.64	164.38	1,259.09	-382.49	114.26	399.19	1.45	1.15	1.93	38.17
	NORMAL	1,435.0	26.98	163.42	1,343.50	-424.36	126.34	442.77	0.84	-0.69	-1.01	213.29
	NORMAL	1,530.0	26.06	162.76	1,428.50	-464.95	138.68	485.19	1.02	-0.97	-0.69	197.47
	NORMAL	1,625.0	26.45	164.31	1,513.70	-505.25	150.58	527.21	0.83	0.41	1.63	61.07
	NORMAL	1,720.0	25.04	162.84	1,599.27	-544.83	162.24	568.47	1.63	-1.48	-1.55	203.70
	NORMAL	1,814.0	25.46	165.31	1,684.29	-583.38	173.23	608.56	1.21	0.45	2.63	69.39

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 (")
4/12/2014	NORMAL	1,909.0	26.40	168.42	1,769.73	-623.83	182.65	650.01	1.74	0.99	3.27	56.75
	NORMAL	2,004.0	26.41	169.75	1,854.82	-665.31	190.65	692.06	0.62	0.01	1.40	89.63
	NORMAL	2,099.0	26.20	169.10	1,939.98	-706.69	198.37	733.94	0.38	-0.22	-0.68	233.62
	NORMAL	2,193.0	26.06	167.86	2,024.38	-747.25	206.64	775.18	0.60	-0.15	-1.32	255.07
	NORMAL	2,288.0	25.47	166.26	2,109.93	-787.50	215.88	816.40	0.96	-0.62	-1.68	228.97
	NORMAL	2,383.0	27.54	164.60	2,194.94	-828.52	226.56	858.76	2.31	2.18	-1.75	339.56
	NORMAL	2,478.0	27.20	164.53	2,279.31	-870.62	238.19	902.43	0.36	-0.36	-0.07	185.38
	NORMAL	2,573.0	26.97	161.58	2,363.90	-911.99	250.79	945.67	1.43	-0.24	-3.11	258.97
	NORMAL	2,668.0	26.94	161.02	2,448.58	-952.77	264.59	988.70	0.27	-0.03	-0.59	263.01
	NORMAL	2,763.0	26.46	160.43	2,533.45	-993.07	278.68	1,031.33	0.58	-0.51	-0.62	208.65
	NORMAL	2,858.0	25.69	160.61	2,618.78	-1,032.43	292.61	1,073.03	0.81	-0.81	0.19	174.21
	NORMAL	2,953.0	24.88	160.26	2,704.67	-1,070.67	306.19	1,113.55	0.87	-0.85	-0.37	190.30
	NORMAL	3,048.0	25.86	161.31	2,790.51	-1,109.10	319.58	1,154.20	1.14	1.03	1.11	25.13
	NORMAL	3,143.0	25.71	160.21	2,876.05	-1,148.12	333.20	1,195.48	0.53	-0.16	-1.16	252.10
4/13/2014	NORMAL	3,238.0	25.24	159.21	2,961.82	-1,186.44	347.37	1,236.25	0.67	-0.49	-1.05	222.01
	NORMAL	3,332.0	25.01	160.78	3,046.92	-1,223.94	361.02	1,276.08	0.75	-0.24	1.67	109.75
	NORMAL	3,428.0	24.98	159.75	3,133.93	-1,262.12	374.72	1,316.57	0.45	-0.03	-1.07	265.59
	NORMAL	3,522.0	24.10	162.11	3,219.44	-1,299.01	387.48	1,355.57	1.40	-0.94	2.51	132.99
	NORMAL	3,618.0	23.54	161.81	3,307.27	-1,335.88	399.49	1,394.32	0.60	-0.58	-0.31	192.07
	NORMAL	3,712.0	22.80	161.09	3,393.69	-1,370.94	411.25	1,431.28	0.84	-0.79	-0.77	200.62
	NORMAL	3,807.0	21.72	160.53	3,481.60	-1,404.93	423.08	1,467.23	1.16	-1.14	-0.59	190.85
	NORMAL	3,902.0	20.74	159.19	3,570.16	-1,437.23	434.91	1,501.55	1.15	-1.03	-1.41	205.72
	NORMAL	3,997.0	20.14	159.56	3,659.17	-1,468.28	446.60	1,534.64	0.65	-0.63	0.39	168.02
	NORMAL	4,092.0	19.70	158.51	3,748.49	-1,498.50	458.18	1,566.91	0.60	-0.46	-1.11	218.62
	NORMAL	4,187.0	17.17	159.90	3,838.61	-1,526.57	468.86	1,596.86	2.70	-2.66	1.46	170.80
	NORMAL	4,281.0	16.71	160.00	3,928.53	-1,552.30	478.25	1,624.19	0.49	-0.49	0.11	176.42
	NORMAL	4,376.0	15.80	159.69	4,019.73	-1,577.26	487.41	1,650.73	0.96	-0.96	-0.33	185.30
	NORMAL	4,471.0	15.54	158.89	4,111.20	-1,601.27	496.49	1,676.32	0.36	-0.27	-0.84	219.34
	NORMAL	4,566.0	13.81	160.00	4,203.10	-1,623.79	504.95	1,700.32	1.84	-1.82	1.17	171.30
	NORMAL	4,661.0	13.28	161.15	4,295.46	-1,644.77	512.35	1,722.54	0.63	-0.56	1.21	153.62
	NORMAL	4,756.0	13.04	161.64	4,387.96	-1,665.27	519.25	1,744.15	0.28	-0.25	0.52	155.31
	NORMAL	4,851.0	11.17	167.30	4,480.85	-1,684.42	524.65	1,764.05	2.33	-1.97	5.96	150.34
	NORMAL	4,945.0	10.29	165.80	4,573.21	-1,701.45	528.71	1,781.52	0.98	-0.94	-1.60	196.87
	NORMAL	5,040.0	9.24	165.40	4,666.83	-1,717.05	532.72	1,797.62	1.11	-1.11	-0.42	183.50
	NORMAL	5,135.0	8.62	168.44	4,760.68	-1,731.41	536.07	1,812.34	0.82	-0.65	3.20	144.22
	NORMAL	5,230.0	7.31	161.00	4,854.76	-1,744.10	539.46	1,825.47	1.75	-1.38	-7.83	214.56
	NORMAL	5,324.0	5.84	157.53	4,948.14	-1,754.17	543.24	1,836.20	1.62	-1.56	-3.69	193.41
	NORMAL	5,419.0	4.00	157.50	5,042.79	-1,761.70	546.35	1,844.30	1.94	-1.94	-0.03	180.07
	NORMAL	5,514.0	1.58	166.95	5,137.67	-1,766.04	547.92	1,848.91	2.58	-2.55	9.95	173.93
	NORMAL	5,609.0	1.28	150.09	5,232.64	-1,768.23	548.74	1,851.25	0.54	-0.32	-17.75	226.28
	NORMAL	5,704.0	1.04	172.97	5,327.62	-1,770.01	549.38	1,853.13	0.54	-0.25	24.08	128.52
	NORMAL	5,799.0	1.32	192.57	5,422.60	-1,771.93	549.24	1,854.94	0.51	0.29	20.63	65.31
	NORMAL	5,893.0	1.58	204.53	5,516.57	-1,774.17	548.47	1,856.86	0.42	0.28	12.72	55.42
	NORMAL	5,988.0	1.34	208.82	5,611.54	-1,776.33	547.39	1,858.63	0.28	-0.25	4.52	157.65
	NORMAL	6,083.0	0.97	212.47	5,706.52	-1,777.99	546.42	1,859.94	0.40	-0.39	3.84	170.57
	NORMAL	6,178.0	0.34	265.16	5,801.51	-1,778.69	545.71	1,860.41	0.85	-0.66	55.46	160.51
	NORMAL	6,273.0	1.73	65.08	5,896.50	-1,778.11	546.73	1,860.15	2.16	1.46	168.34	163.18
	NORMAL	6,368.0	1.41	59.81	5,991.47	-1,776.92	549.04	1,859.66	0.37	-0.34	-5.55	201.67
	NORMAL	6,463.0	0.79	59.54	6,086.45	-1,776.00	550.62	1,859.22	0.65	-0.65	-0.28	180.34
	NORMAL	6,558.0	0.34	92.50	6,181.44	-1,775.68	551.46	1,859.15	0.57	-0.47	34.69	159.87
	NORMAL	6,652.0	0.26	174.42	6,275.44	-1,775.90	551.76	1,859.45	0.42	-0.09	87.15	139.69
	NORMAL	6,747.0	0.85	227.00	6,370.44	-1,776.60	551.27	1,859.98	0.76	0.62	55.35	69.19
	NORMAL	6,842.0	1.49	221.88	6,465.42	-1,778.00	549.93	1,860.94	0.68	0.67	-5.39	348.16
4/14/2014	NORMAL	6,937.0	1.81	232.45	6,560.38	-1,779.83	547.91	1,862.13	0.46	0.34	11.13	48.93
	NORMAL	7,032.0	2.02	243.67	6,655.33	-1,781.49	545.22	1,862.96	0.45	0.22	11.81	66.43
	NORMAL	7,127.0	2.19	252.78	6,750.26	-1,782.77	541.99	1,863.27	0.39	0.18	9.59	67.67

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)	Bulld Rate (°/100usft)	Turn (°/100usft)	Tface (°)
4/14/2014	NORMAL	7,222.0	2.43	253.82	6,845.19	-1,783.87	538.32	1,863.29	0.26	0.25	1.09	10.43
	NORMAL	7,317.0	2.64	245.43	6,940.09	-1,785.34	534.40	1,863.59	0.45	0.22	-8.83	295.27
	NORMAL	7,411.0	2.92	251.08	7,033.98	-1,787.01	530.16	1,864.00	0.42	0.30	6.01	47.23
	NORMAL	7,506.0	2.88	256.89	7,128.86	-1,788.34	525.55	1,863.96	0.31	-0.04	6.12	100.64
	NORMAL	7,601.0	2.81	261.34	7,223.75	-1,789.23	520.92	1,863.51	0.24	-0.07	4.68	109.80
	NORMAL	7,696.0	3.25	256.42	7,318.61	-1,790.21	516.00	1,863.06	0.54	0.46	-5.18	326.94
	NORMAL	7,784.0	3.12	254.49	7,406.48	-1,791.44	511.27	1,862.89	0.19	-0.15	-2.19	218.56
	NORMAL	7,850.0	3.12	254.49	7,472.38	-1,792.40	507.81	1,862.83	0.00	0.00	0.00	0.00