

# Deviation Summary

PICEANCE VLY

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	RWF 34-25	Wellbore No.	00
Wellbore Legal Name	RWF 34-25	Common Wellbore Name	RWF 34-25
Project	RU 25-06S-094W	Site	RWF 43-25 Pad
Vertical Section Azimuth	255.08 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	9/6/2014	UWI	RWF 34-25
Active datum	KB @6,259.0ft (above Mean Sea Level)		

## 2 Survey Name

### 2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	9/6/2014	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 (°)
9/6/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/6/2014	NORMAL	146.0	1.41	271.25	145.99	0.04	-1.80	1.73	0.97	0.97	0.00	271.25
	NORMAL	176.0	2.42	288.91	175.97	0.25	-2.76	2.61	3.86	3.37	58.87	39.32
	NORMAL	207.0	2.50	280.12	206.94	0.58	-4.05	3.76	1.24	0.26	-28.35	277.56
	NORMAL	237.0	2.81	270.02	236.91	0.70	-5.43	5.07	1.87	1.03	-33.67	298.42
	NORMAL	267.0	3.43	272.83	266.86	0.74	-7.06	6.63	2.13	2.07	9.37	15.26
	NORMAL	297.0	3.69	267.12	296.81	0.74	-8.92	8.43	1.46	0.87	-19.03	303.38
	NORMAL	328.0	4.35	257.98	327.73	0.44	-11.07	10.58	2.96	2.13	-29.48	311.23
	NORMAL	358.0	4.97	258.85	357.63	-0.04	-13.45	13.01	2.08	2.07	2.90	6.94
	NORMAL	388.0	5.36	260.00	387.51	-0.54	-16.11	15.71	1.34	1.30	3.83	15.44
	NORMAL	418.0	5.89	255.07	417.36	-1.18	-18.98	18.64	2.39	1.77	-16.43	315.17
9/7/2014	NORMAL	449.0	6.15	251.82	448.19	-2.11	-22.09	21.89	1.38	0.84	-10.48	305.71
	NORMAL	509.0	7.21	250.94	507.79	-4.34	-28.70	28.85	1.77	1.77	-1.47	354.05
	NORMAL	539.0	7.65	249.63	537.53	-5.65	-32.36	32.72	1.57	1.47	-4.37	338.29
	NORMAL	569.0	7.82	250.07	567.26	-7.04	-36.15	36.74	0.60	0.57	1.47	19.42
	NORMAL	599.0	8.13	248.57	596.97	-8.51	-40.04	40.88	1.24	1.03	-5.00	325.38
	NORMAL	630.0	8.35	248.66	627.65	-10.13	-44.18	45.30	0.71	0.71	0.29	3.40
	NORMAL	660.0	9.01	250.15	657.31	-11.72	-48.41	49.80	2.32	2.20	4.97	19.55
	NORMAL	690.0	8.92	251.38	686.94	-13.26	-52.83	54.46	0.71	-0.30	4.10	115.76
	NORMAL	780.0	8.92	264.57	775.86	-16.15	-66.39	68.31	2.27	0.00	14.66	96.52
	NORMAL	841.0	9.80	262.46	836.05	-17.28	-76.24	78.12	1.55	1.44	-3.46	337.65

## 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 (°)
9/7/2014	NORMAL	871.0	9.85	261.93	865.61	-17.97	-81.31	83.20	0.34	0.17	-1.77	298.68
	NORMAL	962.0	10.24	253.05	955.22	-21.42	-96.76	99.01	1.75	0.43	-9.76	279.73
	NORMAL	1,058.0	9.63	252.35	1,049.78	-26.35	-112.57	115.56	0.65	-0.64	-0.73	190.85
	NORMAL	1,088.0	9.49	250.15	1,079.36	-27.95	-117.29	120.53	1.30	-0.47	-7.33	247.95
9/8/2014	NORMAL	1,169.0	8.88	252.00	1,159.33	-32.15	-129.52	133.43	0.84	-0.75	2.28	155.08
	NORMAL	1,264.0	8.70	252.70	1,253.21	-36.55	-143.35	147.93	0.22	-0.19	0.74	149.62
	NORMAL	1,359.0	8.62	252.70	1,347.13	-40.80	-157.01	162.22	0.08	-0.08	0.00	180.00
	NORMAL	1,454.0	8.57	253.84	1,441.08	-44.89	-170.60	176.41	0.19	-0.05	1.20	106.92
	NORMAL	1,548.0	10.11	256.39	1,533.81	-48.78	-185.35	191.66	1.70	1.64	2.71	16.30
	NORMAL	1,644.0	10.07	256.66	1,628.33	-52.70	-201.71	208.48	0.06	-0.04	0.28	130.35
	NORMAL	1,739.0	9.71	257.71	1,721.92	-56.32	-217.62	224.78	0.42	-0.38	1.11	153.91
	NORMAL	1,834.0	9.49	257.98	1,815.59	-59.66	-233.10	240.61	0.24	-0.23	0.28	168.57
	NORMAL	1,929.0	10.77	253.76	1,909.10	-63.77	-249.29	257.30	1.56	1.35	-4.44	327.80
	NORMAL	2,024.0	10.55	254.63	2,002.46	-68.56	-266.19	274.87	0.29	-0.23	0.92	144.24
	NORMAL	2,120.0	11.87	251.47	2,096.63	-74.03	-284.03	293.52	1.52	1.38	-3.29	333.49
	NORMAL	2,215.0	11.82	250.77	2,189.61	-80.34	-302.48	312.97	0.16	-0.05	-0.74	250.47
	NORMAL	2,311.0	11.60	249.27	2,283.61	-86.99	-320.79	332.37	0.39	-0.23	-1.56	233.41
	NORMAL	2,405.0	10.37	250.15	2,375.89	-93.21	-337.59	350.21	1.32	-1.31	0.94	172.67
	NORMAL	2,501.0	9.14	255.87	2,470.50	-98.00	-353.11	366.44	1.63	-1.28	5.96	144.56
	NORMAL	2,596.0	9.28	254.99	2,564.28	-101.83	-367.83	381.64	0.21	0.15	-0.93	314.39
	NORMAL	2,691.0	9.10	254.90	2,658.06	-105.77	-382.48	396.82	0.19	-0.19	-0.09	184.52
9/9/2014	NORMAL	2,786.0	8.92	255.25	2,751.88	-109.60	-396.85	411.69	0.20	-0.19	0.37	163.24
	NORMAL	2,882.0	8.57	254.72	2,846.77	-113.38	-410.95	426.29	0.37	-0.36	-0.55	192.70
	NORMAL	2,977.0	8.31	254.28	2,940.74	-117.11	-424.39	440.23	0.28	-0.27	-0.46	193.73
	NORMAL	3,073.0	8.09	253.58	3,035.76	-120.90	-437.55	453.92	0.25	-0.23	-0.73	204.06
	NORMAL	3,168.0	8.53	258.68	3,129.76	-124.17	-450.87	467.64	0.90	0.46	5.37	61.71
	NORMAL	3,264.0	8.26	257.98	3,224.73	-127.00	-464.59	481.63	0.30	-0.28	-0.73	200.39
	NORMAL	3,359.0	8.00	257.71	3,318.78	-129.83	-477.73	495.05	0.28	-0.27	-0.28	188.22
	NORMAL	3,455.0	8.97	257.01	3,413.73	-132.94	-491.55	509.20	1.02	1.01	-0.73	353.58
	NORMAL	3,550.0	8.70	257.98	3,507.60	-136.10	-505.79	523.78	0.32	-0.28	1.02	151.59
	NORMAL	3,646.0	8.35	256.66	3,602.54	-139.22	-519.67	538.00	0.42	-0.36	-1.38	208.56
	NORMAL	3,741.0	8.00	256.75	3,698.57	-142.33	-532.82	551.50	0.37	-0.37	0.09	177.95
	NORMAL	3,835.0	9.19	257.71	3,789.52	-145.42	-546.52	565.54	1.28	1.27	1.02	7.35
	NORMAL	3,930.0	8.84	257.01	3,883.34	-148.68	-561.05	580.41	0.39	-0.37	-0.74	197.05
	NORMAL	4,025.0	8.70	257.18	3,977.23	-151.91	-575.17	594.89	0.15	-0.15	0.18	169.60
	NORMAL	4,120.0	8.40	257.54	4,071.18	-155.00	-588.95	609.00	0.32	-0.32	0.38	170.06
	NORMAL	4,216.0	8.26	255.95	4,166.17	-158.19	-602.48	622.90	0.28	-0.15	-1.66	237.93
	NORMAL	4,312.0	8.13	256.39	4,261.19	-161.46	-615.77	636.58	0.15	-0.14	0.46	154.46
	NORMAL	4,407.0	7.96	254.55	4,355.25	-164.80	-628.64	649.88	0.32	-0.18	-1.94	235.66
	NORMAL	4,502.0	7.74	253.76	4,449.36	-168.34	-641.12	662.85	0.26	-0.23	-0.83	205.73
	NORMAL	4,598.0	8.62	256.39	4,544.38	-171.84	-654.32	676.51	1.00	0.92	2.74	24.34
	NORMAL	4,693.0	8.62	255.25	4,638.31	-175.33	-668.13	690.74	0.18	0.00	-1.20	269.44
	NORMAL	4,789.0	8.31	252.70	4,733.27	-179.22	-681.71	704.87	0.51	-0.32	-2.66	229.19
	NORMAL	4,885.0	9.14	255.87	4,828.15	-183.15	-695.72	719.42	1.00	0.86	3.30	31.66
	NORMAL	4,980.0	9.19	256.31	4,921.94	-186.78	-710.41	734.55	0.09	0.05	0.46	54.71
	NORMAL	5,076.0	9.10	256.22	5,016.72	-190.41	-725.23	749.81	0.09	-0.09	-0.09	188.99
	NORMAL	5,171.0	9.14	256.04	5,110.52	-194.01	-739.85	764.86	0.05	0.04	-0.19	324.41
9/10/2014	NORMAL	5,267.0	8.09	254.02	5,205.44	-197.71	-753.75	779.24	1.14	-1.09	-2.10	195.08
	NORMAL	5,362.0	6.99	255.51	5,299.61	-201.00	-765.77	791.70	1.18	-1.16	1.57	170.66
	NORMAL	5,456.0	5.54	254.46	5,393.05	-203.65	-775.68	801.96	1.55	-1.54	-1.12	184.00
	NORMAL	5,552.0	5.36	252.53	5,488.62	-206.24	-784.42	811.07	0.27	-0.19	-2.01	224.56
	NORMAL	5,647.0	4.35	249.01	5,583.27	-208.86	-792.02	819.09	1.11	-1.06	-3.71	194.69
	NORMAL	5,743.0	3.87	242.68	5,678.03	-211.65	-798.29	825.87	0.69	-0.50	-6.59	220.26
	NORMAL	5,838.0	2.46	235.65	5,773.88	-214.27	-802.83	830.93	1.54	-1.48	-7.40	191.90
	NORMAL	5,934.0	1.19	227.04	5,869.83	-216.11	-805.26	833.75	1.35	-1.32	-8.97	187.90
	NORMAL	6,030.0	0.53	87.91	5,965.83	-216.78	-805.54	834.20	1.70	-0.69	-144.93	192.30

## 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 (°)
9/10/2014	NORMAL	6,125.0	0.40	138.80	6,060.82	-217.01	-804.89	833.62	0.44	-0.14	53.57	131.82
	NORMAL	6,220.0	0.53	196.45	6,155.82	-217.68	-804.79	833.71	0.49	0.14	60.68	104.57
	NORMAL	6,315.0	1.01	80.52	6,250.82	-217.96	-804.09	833.10	1.40	0.51	-122.03	223.07
9/11/2014	NORMAL	6,411.0	1.10	92.30	6,346.80	-217.86	-802.33	831.38	0.24	0.09	12.27	73.42
	NORMAL	6,506.0	1.01	117.44	6,441.78	-218.28	-800.68	829.89	0.49	-0.09	26.46	113.40
9/12/2014	NORMAL	6,604.0	0.88	145.04	6,539.77	-219.30	-799.48	828.99	0.48	-0.13	28.16	119.44
	NORMAL	6,698.0	0.79	159.63	6,633.76	-220.50	-798.84	828.68	0.24	-0.10	15.52	120.13
	NORMAL	6,794.0	0.79	65.50	6,729.76	-220.84	-798.01	827.97	1.20	0.00	-98.05	222.94
	NORMAL	6,889.0	0.61	73.58	6,824.75	-220.43	-796.93	826.82	0.22	-0.19	8.51	155.26
9/13/2014	NORMAL	6,984.0	0.66	89.58	6,919.74	-220.28	-795.90	825.78	0.19	0.05	16.84	82.35
	NORMAL	7,080.0	0.57	4.85	7,015.74	-219.80	-795.30	825.08	0.87	-0.09	-88.26	223.05
	NORMAL	7,176.0	2.33	20.76	7,111.71	-217.50	-794.57	823.78	1.86	1.83	16.57	20.92
	NORMAL	7,271.0	1.93	19.53	7,206.64	-214.19	-793.35	821.75	0.42	-0.42	-1.29	185.91
	NORMAL	7,367.0	1.85	26.56	7,302.59	-211.28	-792.12	819.81	0.26	-0.08	7.32	112.53
	NORMAL	7,462.0	1.50	18.21	7,397.55	-208.73	-791.05	818.12	0.45	-0.37	-8.79	210.76
	NORMAL	7,557.0	1.23	7.40	7,492.52	-206.53	-790.53	817.05	0.39	-0.28	-11.38	218.33
	NORMAL	7,653.0	0.61	17.07	7,588.51	-205.02	-790.24	816.39	0.66	-0.65	10.07	170.74
	NORMAL	7,747.0	0.57	16.45	7,682.50	-204.10	-789.96	815.88	0.04	-0.04	-0.66	188.76
	NORMAL	7,843.0	0.70	7.49	7,778.50	-203.06	-789.75	815.41	0.17	0.14	-9.33	318.09
	NORMAL	7,938.0	0.57	307.63	7,873.49	-202.19	-790.05	815.47	0.68	-0.14	-63.01	229.99
	NORMAL	8,034.0	0.66	275.20	7,969.49	-201.85	-790.98	816.28	0.37	0.09	-33.78	267.91
	NORMAL	8,129.0	1.10	220.88	8,064.48	-202.49	-792.12	817.55	0.94	0.46	-57.18	268.82
9/14/2014	NORMAL	8,224.0	1.54	220.01	8,159.45	-204.16	-793.54	819.35	0.46	0.46	-0.92	356.96
	NORMAL	8,320.0	2.07	215.88	8,255.41	-206.55	-795.38	821.75	0.57	0.55	-4.30	344.14
	NORMAL	8,415.0	2.42	208.32	8,350.33	-209.71	-797.34	824.45	0.48	0.37	-7.96	315.95
	NORMAL	8,511.0	2.94	213.42	8,446.23	-213.55	-799.66	827.68	0.60	0.54	5.31	27.20
	NORMAL	8,606.0	3.30	216.32	8,541.09	-217.78	-802.62	831.63	0.41	0.38	3.05	25.13
	NORMAL	8,701.0	3.52	213.77	8,635.92	-222.41	-805.86	835.96	0.28	0.23	-2.68	324.14
	NORMAL	8,797.0	3.52	215.61	8,731.74	-227.26	-809.21	840.44	0.12	0.00	1.92	90.92
	NORMAL	8,863.0	3.69	214.82	8,797.61	-230.65	-811.61	843.63	0.27	0.26	-1.20	343.32
	NORMAL	8,908.0	3.69	214.82	8,842.51	-233.02	-813.26	845.84	0.00	0.00	0.00	0.00