

# Deviation Summary

PICEANCE VLY

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	RWF 434-25	Wellbore No.	00
Wellbore Legal Name	RWF 434-25	Common Wellbore Name	RWF 434-25
Project	RU 25-06S-094W	Site	RWF 43-25 Pad
Vertical Section Azimuth	159.07 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	9/26/2014	UWI	RWF 434-25
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	9/26/2014	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 (°)
9/26/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/26/2014	NORMAL	72.0	0.09	289.42	72.00	0.02	-0.05	-0.04	0.12	0.12	0.00	289.42
	NORMAL	102.0	0.79	199.42	102.00	-0.17	-0.14	0.11	2.65	2.33	-300.00	263.50
	NORMAL	132.0	1.41	156.62	131.99	-0.70	-0.07	0.63	3.30	2.07	-142.67	284.33
9/27/2014	NORMAL	163.0	2.64	158.73	162.97	-1.72	0.34	1.73	3.97	3.97	6.81	4.52
	NORMAL	193.0	3.43	166.38	192.93	-3.23	0.81	3.31	2.95	2.63	25.50	31.00
	NORMAL	223.0	3.52	166.64	222.88	-5.00	1.23	5.11	0.30	0.30	0.87	10.06
	NORMAL	253.0	4.13	168.22	252.81	-6.96	1.66	7.09	2.06	2.03	5.27	10.59
	NORMAL	283.0	4.40	163.39	282.73	-9.12	2.21	9.30	1.50	0.90	-16.10	304.51
	NORMAL	313.0	5.01	166.20	312.63	-11.49	2.85	11.75	2.17	2.03	9.37	22.10
	NORMAL	343.0	5.63	161.19	342.50	-14.16	3.64	14.52	2.58	2.07	-16.70	320.65
	NORMAL	373.0	6.69	161.46	372.32	-17.21	4.67	17.74	3.53	3.53	0.90	1.70
	NORMAL	404.0	7.65	163.92	403.08	-20.90	5.82	21.60	3.25	3.10	7.94	18.96
	NORMAL	434.0	7.83	162.16	432.81	-24.76	7.00	25.63	0.99	0.60	-5.87	306.34
	NORMAL	444.0	7.75	159.91	442.72	-26.05	7.44	26.98	3.15	-0.80	-22.50	254.19
	NORMAL	474.0	7.84	158.70	472.44	-29.85	8.87	31.05	0.62	0.30	-4.03	298.14
	NORMAL	504.0	8.07	158.70	502.15	-33.72	10.38	35.20	0.77	0.77	0.00	0.00
	NORMAL	595.0	9.20	161.82	592.12	-46.58	14.97	48.86	1.34	1.24	3.43	24.06
	NORMAL	685.0	10.38	160.85	680.81	-61.08	19.88	64.15	1.32	1.31	-1.08	351.56
	NORMAL	776.0	11.26	159.71	770.19	-77.16	25.65	81.23	1.00	0.97	-1.25	345.77
	NORMAL	867.0	11.08	158.48	859.46	-93.62	31.94	98.86	0.33	-0.20	-1.35	232.33

## 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 (°)
9/27/2014	NORMAL	958.0	9.76	154.52	948.96	-108.72	38.46	115.29	1.65	-1.45	-4.35	206.55
9/28/2014	NORMAL	1,054.0	10.85	153.27	1,043.41	-124.14	46.03	132.39	1.16	1.14	-1.30	347.79
	NORMAL	1,081.0	11.30	153.39	1,069.91	-128.77	48.36	137.55	1.67	1.67	0.44	2.99
9/29/2014	NORMAL	1,170.0	10.90	154.43	1,157.24	-144.16	55.89	154.61	0.50	-0.45	1.17	153.92
	NORMAL	1,266.0	9.76	158.21	1,251.69	-159.90	62.83	171.80	1.38	-1.19	3.94	151.12
	NORMAL	1,361.0	9.41	159.35	1,345.36	-174.65	68.56	187.62	0.42	-0.37	1.20	152.09
	NORMAL	1,456.0	9.76	159.97	1,439.04	-189.48	74.06	203.43	0.38	0.37	0.65	16.74
	NORMAL	1,551.0	9.80	159.44	1,532.66	-204.62	79.65	219.57	0.10	0.04	-0.56	293.69
	NORMAL	1,646.0	9.98	159.70	1,626.24	-219.91	85.35	235.89	0.20	0.19	0.27	14.06
	NORMAL	1,742.0	9.93	158.74	1,720.80	-235.42	91.24	252.48	0.18	-0.05	-1.00	252.76
	NORMAL	1,838.0	9.93	159.35	1,815.36	-250.88	97.16	269.04	0.11	0.00	0.64	90.30
	NORMAL	1,933.0	9.67	158.82	1,908.97	-265.99	102.93	285.21	0.29	-0.27	-0.56	198.87
	NORMAL	2,029.0	9.54	157.16	2,003.63	-280.84	108.93	301.22	0.32	-0.14	-1.73	244.04
	NORMAL	2,125.0	9.54	156.01	2,098.30	-295.44	115.25	317.11	0.20	0.00	-1.20	269.43
	NORMAL	2,220.0	9.41	155.48	2,192.01	-309.70	121.67	332.73	0.16	-0.14	-0.56	213.61
	NORMAL	2,316.0	10.20	158.91	2,286.60	-324.77	127.99	348.06	1.02	0.82	3.57	38.18
	NORMAL	2,409.0	10.51	157.95	2,378.09	-340.31	134.14	365.77	0.38	0.33	-1.03	330.43
	NORMAL	2,504.0	10.07	158.30	2,471.56	-356.06	140.46	382.74	0.47	-0.46	0.37	172.08
	NORMAL	2,599.0	10.07	156.80	2,565.10	-371.41	146.80	399.35	0.28	0.00	-1.58	269.26
	NORMAL	2,695.0	9.89	157.33	2,659.65	-386.73	153.29	415.97	0.21	-0.19	0.55	153.23
	NORMAL	2,789.0	9.85	156.01	2,752.25	-401.53	159.67	432.07	0.24	-0.04	-1.40	259.32
	NORMAL	2,884.0	11.16	159.97	2,845.66	-417.59	166.12	449.38	1.57	1.38	4.17	30.82
	NORMAL	2,979.0	11.03	160.67	2,938.89	-434.80	172.28	467.65	0.20	-0.14	0.74	134.32
	NORMAL	3,074.0	11.52	160.41	3,032.05	-452.31	178.47	486.22	0.52	0.52	-0.27	353.95
	NORMAL	3,169.0	10.55	161.46	3,125.30	-469.50	184.41	504.40	1.04	-1.02	1.11	168.81
	NORMAL	3,265.0	10.77	162.16	3,219.64	-486.37	189.96	522.13	0.27	0.23	0.73	30.82
	NORMAL	3,360.0	9.89	161.20	3,313.10	-502.54	195.30	539.15	0.94	-0.93	-1.01	190.60
9/30/2014	NORMAL	3,455.0	9.80	161.72	3,406.70	-517.94	200.47	555.38	0.13	-0.09	0.55	135.60
	NORMAL	3,551.0	9.49	162.69	3,501.34	-533.25	205.39	571.44	0.36	-0.32	1.01	152.81
	NORMAL	3,646.0	9.89	155.92	3,594.99	-548.18	211.05	587.40	1.27	0.42	-7.13	285.98
	NORMAL	3,741.0	9.67	157.07	3,688.61	-562.98	217.48	603.52	0.31	-0.23	1.21	138.96
	NORMAL	3,837.0	9.76	155.92	3,783.23	-577.83	223.95	619.70	0.22	0.09	-1.20	294.31
	NORMAL	3,932.0	9.49	157.16	3,876.90	-592.40	230.27	635.57	0.36	-0.28	1.31	143.09
	NORMAL	4,027.0	9.54	155.13	3,970.59	-606.76	236.62	651.25	0.36	0.05	-2.14	277.47
	NORMAL	4,123.0	9.63	156.10	4,065.25	-621.32	243.22	667.21	0.19	0.09	1.01	61.35
	NORMAL	4,218.0	9.67	155.75	4,158.91	-635.86	249.72	683.11	0.07	0.04	-0.37	304.11
	NORMAL	4,313.0	10.15	156.80	4,252.49	-650.83	256.29	699.44	0.54	0.51	1.11	21.15
	NORMAL	4,409.0	10.15	157.51	4,346.99	-666.42	262.86	716.35	0.13	0.00	0.74	90.35
	NORMAL	4,504.0	10.46	158.82	4,440.45	-682.19	269.18	733.34	0.41	0.33	1.38	37.73
	NORMAL	4,600.0	10.55	158.12	4,534.85	-698.47	275.60	750.84	0.16	0.09	-0.73	304.85
	NORMAL	4,695.0	10.51	162.69	4,628.25	-714.82	281.42	768.18	0.88	-0.04	4.81	94.99
	NORMAL	4,790.0	10.37	164.19	4,721.68	-731.32	286.33	785.35	0.32	-0.15	1.58	117.99
	NORMAL	4,886.0	9.71	166.82	4,816.21	-747.51	290.53	801.97	0.84	-0.69	2.74	146.50
	NORMAL	4,981.0	10.11	160.93	4,909.79	-763.19	295.08	818.25	1.15	0.42	-6.20	288.62
	NORMAL	5,075.0	10.15	161.29	5,002.32	-778.84	300.43	834.77	0.08	0.04	0.38	57.90
	NORMAL	5,170.0	10.07	161.29	5,095.85	-794.63	305.78	851.43	0.08	-0.08	0.00	180.00
	NORMAL	5,266.0	9.67	163.57	5,190.43	-810.31	310.75	867.86	0.58	-0.42	2.36	136.78
10/1/2014	NORMAL	5,361.0	8.84	167.53	5,284.19	-825.09	314.59	883.03	1.10	-0.87	4.17	144.44
	NORMAL	5,456.0	7.36	168.05	5,378.24	-838.19	317.43	896.28	1.54	-1.54	0.55	177.38
	NORMAL	5,552.0	5.58	166.03	5,473.62	-848.75	319.83	907.00	1.89	-1.88	-2.10	186.22
	NORMAL	5,647.0	4.35	165.59	5,568.27	-856.73	321.84	915.17	1.30	-1.29	-0.46	181.55
	NORMAL	5,743.0	3.34	166.73	5,664.05	-862.97	323.39	921.56	1.06	-1.05	1.19	176.24
	NORMAL	5,838.0	2.20	160.04	5,758.94	-867.25	324.93	926.10	1.46	-1.20	-17.57	207.14
	NORMAL	5,934.0	1.98	164.19	5,854.87	-870.44	326.31	929.57	0.58	-0.23	14.74	120.05
	NORMAL	6,030.0	1.01	173.24	5,950.84	-872.88	326.86	932.04	1.04	-1.01	9.43	170.82
	NORMAL	6,125.0	0.53	350.16	6,045.84	-873.27	326.88	932.42	1.62	-0.51	186.23	178.94

## 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 (°)
10/1/2014	NORMAL	6,220.0	0.53	315.53	6,140.83	-872.53	326.50	931.59	0.33	0.00	-36.45	252.69
10/3/2014	NORMAL	6,320.0	1.80	14.77	6,240.81	-870.68	326.58	929.89	1.60	1.27	59.24	75.82
	NORMAL	6,416.0	1.54	14.86	6,336.77	-867.97	327.29	927.62	0.27	-0.27	0.09	179.47
	NORMAL	6,511.0	1.27	20.66	6,431.74	-865.76	327.99	925.80	0.32	-0.28	6.11	155.10
	NORMAL	6,607.0	1.05	27.52	6,527.73	-863.98	328.77	924.42	0.27	-0.23	7.15	151.14
	NORMAL	6,701.0	0.61	17.50	6,621.72	-862.74	329.32	923.45	0.49	-0.47	-10.66	193.29
10/4/2014	NORMAL	6,796.0	0.35	353.68	6,716.71	-861.97	329.44	922.78	0.34	-0.27	-25.07	206.00
	NORMAL	6,891.0	1.85	34.11	6,811.69	-860.41	330.27	921.62	1.68	1.58	42.56	48.58
	NORMAL	6,987.0	2.15	31.03	6,907.63	-857.58	332.06	919.62	0.33	0.31	-3.21	338.74
	NORMAL	7,082.0	1.80	23.21	7,002.58	-854.69	333.57	917.45	0.46	-0.37	-8.23	213.73
	NORMAL	7,178.0	1.45	9.32	7,098.54	-852.10	334.36	915.32	0.55	-0.36	-14.47	221.57
	NORMAL	7,274.0	1.98	31.21	7,194.50	-849.48	335.42	913.25	0.87	0.55	22.80	62.31
10/5/2014	NORMAL	7,370.0	3.30	68.30	7,290.40	-847.04	338.85	912.20	2.18	1.38	38.64	71.82
	NORMAL	7,465.0	3.12	69.88	7,385.25	-845.14	343.81	912.20	0.21	-0.19	1.66	154.61
	NORMAL	7,560.0	2.99	76.03	7,480.12	-843.66	348.65	912.53	0.37	-0.14	6.47	114.69
	NORMAL	7,656.0	2.94	74.19	7,575.99	-842.38	353.44	913.06	0.11	-0.05	-1.92	241.37
	NORMAL	7,750.0	2.68	86.23	7,669.88	-841.58	357.96	913.92	0.68	-0.28	12.81	119.71
	NORMAL	7,846.0	1.14	89.66	7,765.82	-841.43	361.15	914.92	1.61	-1.60	3.57	177.47
	NORMAL	7,941.0	0.88	112.86	7,860.81	-841.70	362.77	915.76	0.50	-0.27	24.42	133.69
	NORMAL	8,036.0	1.05	165.33	7,955.80	-842.83	363.66	917.13	0.91	0.18	55.23	106.10
	NORMAL	8,132.0	1.41	199.78	8,051.77	-844.79	363.48	918.90	0.84	0.38	35.89	81.95
10/6/2014	NORMAL	8,227.0	2.02	213.49	8,146.73	-847.29	362.16	920.76	0.77	0.64	14.43	40.91
	NORMAL	8,322.0	2.81	215.51	8,241.65	-850.58	359.89	923.02	0.84	0.83	2.13	7.16
	NORMAL	8,418.0	3.34	217.89	8,337.51	-854.70	356.80	925.77	0.57	0.55	2.48	14.73
	NORMAL	8,513.0	3.60	222.02	8,432.33	-859.10	353.11	928.56	0.38	0.27	4.35	45.95
	NORMAL	8,609.0	5.36	227.03	8,528.04	-864.40	347.81	931.61	1.88	1.83	5.22	15.04
	NORMAL	8,704.0	4.31	226.24	8,622.70	-869.89	341.98	934.66	1.11	-1.11	-0.83	183.24
	NORMAL	8,799.0	4.70	225.36	8,717.41	-875.10	336.64	937.61	0.42	0.41	-0.93	349.51
	NORMAL	8,837.0	4.70	226.15	8,755.28	-877.27	334.41	938.84	0.17	0.00	2.08	90.39
	NORMAL	8,882.0	4.70	226.15	8,800.13	-879.82	331.75	940.28	0.00	0.00	0.00	0.00