

# Deviation Summary

PICEANCE VLY

## 1 General

### 1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	RWF 443-25	Wellbore No.	00
Wellbore Legal Name	RWF 443-25	Common Wellbore Name	RWF 443-25
Project	RU 25-06S-094W	Site	RWF 43-25 Pad
Vertical Section Azimuth	38.99 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	6/3/2014	UWI	RWF 443-25
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	6/3/2014	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 (°)
6/3/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/3/2014	NORMAL	101.0	1.50	53.09	100.99	0.79	1.06	1.28	1.49	1.49	0.00	53.09
	NORMAL	162.0	3.70	55.81	161.92	2.38	3.32	3.94	3.61	3.61	4.46	4.57
	NORMAL	253.0	4.75	48.52	252.67	6.53	8.58	10.47	1.29	1.15	-8.01	329.24
	NORMAL	343.0	7.48	39.46	342.16	13.52	15.09	20.00	3.21	3.03	-10.07	335.99
	NORMAL	434.0	11.00	39.55	431.96	24.79	24.39	34.61	3.87	3.87	0.10	0.28
	NORMAL	525.0	11.26	38.58	521.25	38.43	35.46	52.18	0.35	0.29	-1.07	323.76
	NORMAL	615.0	11.79	38.50	609.43	52.49	46.66	70.16	0.59	0.59	-0.09	358.23
	NORMAL	689.0	12.05	40.65	681.84	64.27	56.40	85.44	0.70	0.35	2.91	60.71
	NORMAL	779.0	12.47	38.63	769.79	78.99	68.58	104.55	0.67	0.47	-2.24	313.41
	NORMAL	871.0	13.19	40.39	859.49	94.74	81.59	124.97	0.89	0.78	1.91	29.35
	NORMAL	961.0	13.17	38.44	947.12	110.59	94.61	145.49	0.49	-0.02	-2.17	266.48
6/4/2014	NORMAL	1,056.0	14.24	38.88	1,039.41	128.17	108.68	168.00	1.13	1.13	0.46	5.78
	NORMAL	1,102.0	14.79	37.66	1,083.94	137.22	115.82	179.52	1.37	1.20	-2.65	330.34
6/5/2014	NORMAL	1,169.0	15.34	38.63	1,148.64	150.91	126.57	196.94	0.90	0.82	1.45	25.10
	NORMAL	1,264.0	16.22	37.14	1,240.06	171.31	142.43	222.76	1.02	0.93	-1.57	334.56
	NORMAL	1,360.0	14.64	37.14	1,332.60	191.67	157.85	248.29	1.65	-1.65	0.00	180.00
	NORMAL	1,454.0	15.21	36.34	1,423.43	211.07	172.33	272.48	0.64	0.61	-0.85	339.74
	NORMAL	1,550.0	13.76	38.98	1,516.37	230.09	186.97	296.48	1.66	-1.51	2.75	156.79
	NORMAL	1,646.0	12.48	38.19	1,609.87	247.12	200.57	318.27	1.35	-1.33	-0.82	187.59
	NORMAL	1,741.0	12.84	37.66	1,702.56	263.54	213.37	339.09	0.40	0.38	-0.56	341.86



## 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 (°)
6/5/2014	NORMAL	1,837.0	13.19	36.96	1,796.09	280.74	226.47	360.70	0.40	0.36	-0.73	335.41
	NORMAL	1,932.0	13.49	36.17	1,888.53	298.35	239.52	382.60	0.37	0.32	-0.83	328.33
	NORMAL	2,028.0	13.80	37.14	1,981.82	316.51	253.05	405.22	0.40	0.32	1.01	36.91
	NORMAL	2,123.0	14.02	37.14	2,074.03	334.72	266.83	428.05	0.23	0.23	0.00	0.00
	NORMAL	2,219.0	13.10	40.12	2,167.35	352.31	280.87	450.55	1.20	-0.96	3.10	144.23
	NORMAL	2,314.0	13.01	40.12	2,259.90	368.72	294.69	472.00	0.09	-0.09	0.00	180.00
	NORMAL	2,409.0	13.23	38.72	2,352.42	385.38	308.38	493.57	0.41	0.23	-1.47	304.01
	NORMAL	2,505.0	12.97	38.37	2,445.92	402.39	321.94	515.32	0.28	-0.27	-0.36	196.80
	NORMAL	2,601.0	12.75	38.63	2,539.51	419.11	335.24	536.69	0.24	-0.23	0.27	165.39
	NORMAL	2,696.0	12.97	38.45	2,632.13	435.65	348.42	557.83	0.24	0.23	-0.19	349.59
	NORMAL	2,791.0	12.53	38.45	2,724.79	452.07	361.46	578.80	0.46	-0.46	0.00	180.00
	NORMAL	2,887.0	12.53	38.72	2,818.50	468.35	374.45	599.63	0.06	0.00	0.28	90.13
	NORMAL	2,982.0	12.79	38.81	2,911.19	484.59	387.48	620.45	0.27	0.27	0.09	4.38
	NORMAL	3,078.0	12.53	38.28	3,004.86	501.04	400.59	641.48	0.30	-0.27	-0.55	203.81
	NORMAL	3,173.0	12.62	38.19	3,097.58	517.29	413.39	662.17	0.10	0.09	-0.09	347.67
	NORMAL	3,268.0	12.66	38.54	3,190.28	533.59	426.30	682.95	0.09	0.04	0.37	62.59
	NORMAL	3,362.0	12.53	38.02	3,282.01	549.68	438.99	703.45	0.18	-0.14	-0.55	220.84
	NORMAL	3,456.0	12.40	38.02	3,373.80	565.66	451.49	723.73	0.14	-0.14	0.00	180.00
	NORMAL	3,552.0	12.18	38.72	3,467.60	581.68	464.17	744.17	0.28	-0.23	0.73	146.23
	NORMAL	3,647.0	12.26	38.45	3,560.45	597.40	476.72	764.28	0.10	0.08	-0.28	324.33
	NORMAL	3,743.0	12.04	38.54	3,654.30	613.22	489.29	784.48	0.23	-0.23	0.09	175.12
	NORMAL	3,838.0	12.26	38.37	3,747.17	628.87	501.73	804.47	0.23	0.23	-0.18	350.68
6/6/2014	NORMAL	3,934.0	12.40	38.37	3,840.95	644.95	514.45	824.97	0.15	0.15	0.00	0.00
	NORMAL	4,029.0	12.31	37.75	3,933.75	660.95	526.98	845.30	0.17	-0.09	-0.65	235.54
	NORMAL	4,125.0	12.92	40.04	4,027.44	677.26	540.15	866.26	0.82	0.64	2.39	40.47
	NORMAL	4,219.0	12.75	40.56	4,119.09	693.18	553.66	887.13	0.22	-0.18	0.55	146.06
	NORMAL	4,315.0	12.31	40.56	4,212.80	709.01	567.20	907.95	0.46	-0.46	0.00	180.00
	NORMAL	4,409.0	12.66	39.69	4,304.58	724.55	580.30	928.27	0.42	0.37	-0.93	331.32
	NORMAL	4,505.0	13.14	39.51	4,398.15	741.06	593.96	949.70	0.50	0.50	-0.19	355.13
	NORMAL	4,600.0	13.01	39.51	4,490.69	757.64	607.63	971.19	0.14	-0.14	0.00	180.00
	NORMAL	4,695.0	13.19	40.12	4,583.22	774.18	621.42	992.72	0.24	0.19	0.64	37.83
	NORMAL	4,790.0	12.35	40.21	4,675.87	790.23	634.96	1,013.72	0.88	-0.88	0.09	178.69
	NORMAL	4,885.0	11.96	41.18	4,768.74	805.39	648.00	1,033.71	0.46	-0.41	1.02	152.83
	NORMAL	4,981.0	11.56	41.27	4,862.72	820.11	660.89	1,053.26	0.42	-0.42	0.09	177.42
	NORMAL	5,107.0	11.16	43.20	4,986.26	838.49	677.57	1,078.04	0.44	-0.32	1.53	137.40
	NORMAL	5,173.0	11.16	43.73	5,051.01	847.76	686.36	1,090.77	0.16	0.00	0.80	90.26
	NORMAL	5,267.0	10.07	40.30	5,143.40	860.60	697.96	1,108.05	1.34	-1.16	-3.65	208.42
	NORMAL	5,361.0	9.54	40.39	5,236.02	872.80	708.32	1,124.06	0.56	-0.56	0.10	178.39
	NORMAL	5,457.0	8.75	41.27	5,330.80	884.35	718.30	1,139.31	0.84	-0.82	0.92	170.39
6/7/2014	NORMAL	5,553.0	8.53	41.44	5,425.71	895.17	727.82	1,153.72	0.23	-0.23	0.18	173.46
	NORMAL	5,647.0	7.47	42.67	5,518.80	904.89	736.58	1,166.78	1.14	-1.13	1.31	171.43
	NORMAL	5,742.0	6.99	45.84	5,613.04	913.46	744.91	1,178.68	0.66	-0.51	3.34	141.83
	NORMAL	5,838.0	6.86	46.63	5,708.34	921.47	753.27	1,190.16	0.17	-0.14	0.82	144.16
	NORMAL	5,933.0	6.72	49.62	5,802.68	928.97	761.63	1,201.25	0.40	-0.15	3.15	113.09
	NORMAL	6,029.0	5.23	48.91	5,898.15	935.48	769.21	1,211.08	1.55	-1.55	-0.74	182.49
	NORMAL	6,124.0	4.70	50.94	5,992.80	940.78	775.49	1,219.15	0.59	-0.56	2.14	162.67
	NORMAL	6,219.0	3.82	29.58	6,087.54	945.98	780.08	1,226.08	1.89	-0.93	-22.48	230.62
	NORMAL	6,314.0	3.25	29.75	6,182.36	951.07	782.97	1,231.86	0.60	-0.60	0.18	179.03
	NORMAL	6,411.0	2.81	30.98	6,279.22	955.50	785.56	1,236.93	0.46	-0.45	1.27	172.21
6/8/2014	NORMAL	6,507.0	2.46	32.74	6,375.12	959.25	787.89	1,241.31	0.37	-0.36	1.83	167.86
	NORMAL	6,603.0	2.11	33.45	6,471.04	962.46	789.98	1,245.12	0.37	-0.36	0.74	175.73
	NORMAL	6,699.0	2.15	30.46	6,566.98	965.48	791.86	1,248.66	0.12	0.04	-3.11	288.30
	NORMAL	6,795.0	1.93	26.85	6,662.92	968.48	793.51	1,252.02	0.27	-0.23	-3.76	208.49
	NORMAL	6,891.0	1.50	24.22	6,758.87	971.07	794.75	1,254.81	0.46	-0.45	-2.74	189.06
	NORMAL	6,987.0	0.97	15.60	6,854.85	973.00	795.49	1,256.77	0.58	-0.55	-8.98	195.04
	NORMAL	7,082.0	0.88	7.25	6,949.84	974.49	795.79	1,258.13	0.17	-0.09	-8.79	232.14

## 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 (°)
6/8/2014	NORMAL	7,178.0	0.48	356.18	7,045.83	975.63	795.86	1,259.05	0.44	-0.42	-11.53	192.70
6/9/2014	NORMAL	7,273.0	0.31	351.70	7,140.83	976.28	795.80	1,259.52	0.18	-0.18	-4.72	188.06
	NORMAL	7,369.0	0.26	352.05	7,236.83	976.75	795.73	1,259.85	0.05	-0.05	0.36	178.18
	NORMAL	7,463.0	0.26	296.06	7,330.83	977.06	795.51	1,259.94	0.26	0.00	-59.56	242.01
	NORMAL	7,558.0	0.70	242.10	7,425.82	976.88	794.80	1,259.36	0.62	0.46	-56.80	285.02
	NORMAL	7,653.0	1.14	231.90	7,520.81	976.02	793.54	1,257.91	0.49	0.46	-10.74	334.43
	NORMAL	7,749.0	1.71	235.86	7,616.78	974.63	791.61	1,255.60	0.60	0.59	4.13	11.79
	NORMAL	7,845.0	1.93	239.72	7,712.73	973.01	789.03	1,252.72	0.26	0.23	4.02	31.07
	NORMAL	7,939.0	2.24	241.48	7,806.67	971.34	786.05	1,249.54	0.34	0.33	1.87	12.55
	NORMAL	8,034.0	2.77	238.32	7,901.58	969.24	782.46	1,245.66	0.58	0.56	-3.33	343.81
6/12/2014	NORMAL	8,128.0	3.30	233.48	7,995.45	966.44	778.35	1,240.90	0.63	0.56	-5.15	331.77
	NORMAL	8,224.0	3.69	231.11	8,091.27	962.86	773.73	1,235.20	0.43	0.41	-2.47	338.49
	NORMAL	8,319.0	3.96	233.83	8,186.06	959.00	768.70	1,229.04	0.34	0.28	2.86	35.26
	NORMAL	8,415.0	4.53	237.97	8,281.79	955.04	762.81	1,222.26	0.67	0.59	4.31	30.34
6/13/2014	NORMAL	8,510.0	5.01	235.77	8,376.46	950.71	756.20	1,214.74	0.54	0.51	-2.32	338.04
	NORMAL	8,606.0	5.76	233.83	8,472.04	945.51	748.85	1,206.07	0.80	0.78	-2.02	345.39
	NORMAL	8,701.0	6.64	234.10	8,566.48	939.48	740.55	1,196.16	0.93	0.93	0.28	2.03
	NORMAL	8,796.0	6.77	235.15	8,660.83	933.06	731.50	1,185.47	0.19	0.14	1.11	43.84
	NORMAL	8,892.0	6.99	234.80	8,756.14	926.46	722.09	1,174.42	0.23	0.23	-0.36	349.04
	NORMAL	8,941.0	6.90	234.27	8,804.78	923.02	717.26	1,168.71	0.23	-0.18	-1.08	215.19
	NORMAL	8,986.0	6.90	234.27	8,849.46	919.86	712.87	1,163.50	0.00	0.00	0.00	0.00