

Deviation Summary

PICEANCE VLY

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	RWF 311-35	Wellbore No.	00
Wellbore Legal Name	RWF 311-35	Common Wellbore Name	RWF 311-35
Project	RU 35-06S-094W	Site	RWF 11-35 Pad
Vertical Section Azimuth	310.24 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	10/2/2013	UWI	RWF 311-35
Active datum	KB @5,494.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	10/2/2013	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)	Buidl Rate (°/100usft)	Turn (°/100usft)	Tface (°)
10/2/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/2/2013	NORMAL	76.0	0.26	232.56	76.00	-0.10	-0.14	0.04	0.34	0.34	0.00	232.56
	NORMAL	167.0	2.29	298.04	166.97	0.62	-1.91	1.86	2.41	2.23	71.96	71.66
10/3/2013	NORMAL	259.0	3.70	289.42	258.85	2.48	-6.33	6.43	1.60	1.53	-9.37	337.95
	NORMAL	329.0	6.40	296.02	328.57	4.94	-11.97	12.32	3.94	3.86	9.43	15.45
	NORMAL	419.0	9.25	293.69	417.72	10.05	-23.10	24.12	3.19	3.17	-2.59	352.49
	NORMAL	510.0	10.00	301.94	507.45	17.17	-36.50	38.95	1.72	0.82	9.07	65.58
	NORMAL	600.0	10.73	311.28	595.98	26.83	-49.43	55.06	2.03	0.81	10.38	71.16
	NORMAL	690.0	11.69	311.76	684.26	38.43	-62.53	72.55	1.07	1.07	0.53	5.79
	NORMAL	781.0	11.42	310.54	773.42	50.42	-76.25	90.78	0.40	-0.30	-1.34	221.55
	NORMAL	872.0	11.04	311.51	862.68	62.05	-89.62	108.50	0.47	-0.42	1.07	154.04
	NORMAL	963.0	11.70	311.95	951.89	74.00	-103.01	126.43	0.73	0.73	0.48	7.70
	NORMAL	1,058.0	11.12	309.81	1,045.02	86.30	-117.21	145.22	0.76	-0.61	-2.25	215.08
	NORMAL	1,100.0	11.18	309.55	1,086.22	91.49	-123.46	153.34	0.19	0.14	-0.62	319.91
10/4/2013	NORMAL	1,180.0	11.85	308.51	1,164.61	101.54	-135.87	169.31	0.88	0.84	-1.30	342.27
	NORMAL	1,243.0	12.17	308.50	1,226.23	109.70	-146.13	182.41	0.51	0.51	-0.02	359.62
	NORMAL	1,338.0	11.87	311.19	1,319.15	122.37	-161.32	202.19	0.67	-0.32	2.83	119.48
	NORMAL	1,432.0	11.98	311.27	1,411.12	135.17	-175.93	221.61	0.12	0.12	0.09	8.59
	NORMAL	1,526.0	12.28	311.23	1,503.02	148.19	-190.78	241.36	0.32	0.32	-0.04	358.38
	NORMAL	1,621.0	10.85	312.62	1,596.09	160.91	-204.95	260.40	1.53	-1.51	1.46	169.65
	NORMAL	1,716.0	10.66	311.05	1,689.42	172.73	-218.16	278.12	0.37	-0.20	-1.65	236.27

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 (°)
10/4/2013	NORMAL	1,810.0	10.33	311.64	1,781.85	184.04	-231.02	295.23	0.37	-0.35	0.63	162.25
	NORMAL	1,903.0	10.69	309.32	1,873.29	195.05	-243.92	312.19	0.60	0.39	-2.49	309.24
	NORMAL	1,997.0	10.70	308.74	1,965.66	206.03	-257.47	329.64	0.11	0.01	-0.62	275.02
	NORMAL	2,091.0	10.11	313.83	2,058.12	217.21	-270.23	346.59	1.16	-0.63	5.41	125.18
10/5/2013	NORMAL	2,186.0	10.06	313.48	2,151.65	228.69	-282.27	363.20	0.08	-0.05	-0.37	230.62
	NORMAL	2,280.0	10.07	311.36	2,244.20	239.77	-294.39	379.61	0.39	0.01	-2.26	270.50
	NORMAL	2,374.0	9.89	308.66	2,336.78	250.25	-306.86	395.90	0.53	-0.19	-2.87	247.63
	NORMAL	2,469.0	10.55	312.40	2,430.27	261.21	-319.66	412.74	0.98	0.69	3.94	47.01
	NORMAL	2,563.0	10.75	312.15	2,522.65	272.89	-332.51	430.11	0.22	0.21	-0.27	346.87
	NORMAL	2,656.0	10.44	310.71	2,614.07	284.21	-345.33	447.20	0.44	-0.33	-1.55	219.79
	NORMAL	2,750.0	10.05	308.11	2,706.57	294.83	-358.24	463.91	0.64	-0.41	-2.77	228.58
	NORMAL	2,844.0	10.57	313.63	2,799.06	305.84	-370.93	480.72	1.19	0.55	5.87	64.97
	NORMAL	2,938.0	11.52	315.32	2,891.31	318.46	-383.77	498.67	1.07	1.01	1.80	19.65
	NORMAL	3,032.0	11.95	315.82	2,983.35	332.11	-397.15	517.71	0.47	0.46	0.53	13.55
	NORMAL	3,126.0	11.39	310.79	3,075.41	345.16	-410.96	536.68	1.23	-0.60	-5.35	238.72
	NORMAL	3,220.0	11.41	309.80	3,167.55	357.17	-425.14	555.25	0.21	0.02	-1.05	275.35
	NORMAL	3,312.0	11.49	309.60	3,257.72	368.84	-439.19	573.52	0.10	0.09	-0.22	333.51
	NORMAL	3,406.0	11.78	309.65	3,349.79	380.93	-453.79	592.47	0.31	0.31	0.05	2.02
	NORMAL	3,499.0	11.01	313.16	3,440.96	393.06	-467.58	610.84	1.11	-0.83	3.77	139.70
	NORMAL	3,593.0	11.10	313.28	3,533.22	405.40	-480.71	628.84	0.10	0.10	0.13	14.40
10/6/2013	NORMAL	3,687.0	11.53	312.33	3,625.39	417.93	-494.24	647.26	0.50	0.46	-1.01	336.10
	NORMAL	3,780.0	11.59	315.63	3,716.50	430.87	-507.65	665.85	0.71	0.06	3.55	86.43
	NORMAL	3,873.0	11.41	310.97	3,807.64	443.58	-521.13	684.35	1.02	-0.19	-5.01	256.76
	NORMAL	3,968.0	10.80	310.42	3,900.86	455.51	-535.00	702.65	0.65	-0.64	-0.58	189.58
	NORMAL	4,061.0	10.53	309.57	3,992.25	466.58	-548.18	719.86	0.34	-0.29	-0.91	209.81
	NORMAL	4,156.0	10.23	313.21	4,085.70	477.88	-561.02	736.96	0.76	-0.32	3.83	116.36
	NORMAL	4,250.0	8.91	316.27	4,178.39	488.86	-572.14	752.54	1.50	-1.40	3.26	160.43
	NORMAL	4,344.0	7.68	324.17	4,271.41	499.21	-580.85	765.87	1.78	-1.31	8.40	141.04
	NORMAL	4,438.0	6.39	327.00	4,364.70	508.69	-587.38	776.98	1.42	-1.37	3.01	166.36
	NORMAL	4,532.0	5.86	324.87	4,458.16	517.00	-592.99	786.63	0.61	-0.56	-2.27	202.15
	NORMAL	4,624.0	5.26	325.57	4,549.73	524.32	-598.07	795.24	0.66	-0.65	0.76	173.90
	NORMAL	4,719.0	4.65	323.51	4,644.37	531.01	-602.82	803.19	0.67	-0.64	-2.17	195.24
	NORMAL	4,812.0	3.18	325.63	4,737.15	536.17	-606.52	809.35	1.59	-1.58	2.28	175.43
	NORMAL	4,905.0	2.60	324.86	4,830.04	540.02	-609.19	813.88	0.63	-0.62	-0.83	183.44
	NORMAL	4,999.0	2.07	315.11	4,923.96	542.97	-611.62	817.63	0.70	-0.56	-10.37	212.05
10/7/2013	NORMAL	5,093.0	2.12	306.42	5,017.90	545.21	-614.22	821.06	0.34	0.05	-9.24	274.59
	NORMAL	5,186.0	1.57	293.68	5,110.85	546.74	-616.77	823.99	0.73	-0.59	-13.70	210.46
	NORMAL	5,281.0	1.57	307.84	5,205.81	548.06	-618.99	826.54	0.41	0.00	14.91	97.08
	NORMAL	5,374.0	1.83	310.13	5,298.77	549.80	-621.13	829.30	0.29	0.28	2.46	15.79
	NORMAL	5,469.0	0.68	336.78	5,393.75	551.29	-622.51	831.32	1.33	-1.21	28.05	165.99
	NORMAL	5,563.0	0.36	13.81	5,487.74	552.09	-622.66	831.95	0.48	-0.34	39.39	151.09
	NORMAL	5,657.0	0.24	338.46	5,581.74	552.56	-622.66	832.26	0.23	-0.13	-37.61	220.21
	NORMAL	5,750.0	0.26	245.12	5,674.74	552.66	-622.92	832.52	0.39	0.02	-100.37	225.49
	NORMAL	5,846.0	0.34	257.05	5,770.74	552.50	-623.40	832.78	0.11	0.08	12.43	44.05
	NORMAL	5,939.0	0.39	235.16	5,863.74	552.26	-623.93	833.03	0.16	0.05	-23.54	278.56
	NORMAL	6,034.0	0.48	257.15	5,958.74	551.98	-624.58	833.35	0.20	0.09	23.15	72.96
	NORMAL	6,129.0	0.46	229.72	6,053.73	551.65	-625.26	833.65	0.24	-0.02	-28.87	251.30
	NORMAL	6,223.0	0.61	243.31	6,147.73	551.18	-626.00	833.91	0.21	0.16	14.46	47.16
	NORMAL	6,317.0	1.11	230.15	6,241.72	550.37	-627.14	834.26	0.57	0.53	-14.00	331.78
	NORMAL	6,411.0	0.35	326.22	6,335.71	550.03	-628.00	834.69	1.28	-0.81	102.20	163.12
	NORMAL	6,504.0	0.09	139.01	6,428.71	550.21	-628.11	834.89	0.47	-0.28	185.80	178.53
	NORMAL	6,598.0	0.21	5.13	6,522.71	550.32	-628.05	834.92	0.30	0.13	-142.43	212.72
	NORMAL	6,693.0	0.42	49.69	6,617.71	550.72	-627.76	834.96	0.32	0.22	46.91	73.15
	NORMAL	6,788.0	0.40	42.70	6,712.71	551.19	-627.27	834.89	0.06	-0.02	-7.36	244.74
	NORMAL	6,883.0	0.71	60.99	6,807.71	551.72	-626.53	834.67	0.37	0.33	19.25	39.10
	NORMAL	6,978.0	0.81	94.05	6,902.70	551.96	-625.35	833.92	0.47	0.11	34.80	94.03

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 (°)
10/8/2013	NORMAL	7,073.0	0.88	127.51	6,997.69	551.47	-624.10	832.65	0.52	0.07	35.22	98.88
	NORMAL	7,166.0	1.32	139.41	7,090.67	550.22	-622.84	830.88	0.53	0.47	12.80	33.47
	NORMAL	7,260.0	1.38	158.35	7,184.65	548.35	-621.72	828.81	0.48	0.06	20.15	91.88
	NORMAL	7,354.0	1.49	183.08	7,278.62	546.07	-621.36	827.07	0.66	0.12	26.31	92.44
	NORMAL	7,448.0	2.04	209.42	7,372.57	543.39	-622.25	826.02	1.03	0.59	28.02	69.50
	NORMAL	7,543.0	2.16	210.34	7,467.51	540.38	-623.99	825.40	0.13	0.13	0.97	16.15
	NORMAL	7,637.0	2.79	215.24	7,561.42	536.98	-626.20	824.89	0.71	0.67	5.21	21.02
	NORMAL	7,731.0	3.18	218.88	7,655.30	533.08	-629.16	824.63	0.46	0.41	3.87	27.75
	NORMAL	7,825.0	3.20	213.14	7,749.15	528.85	-632.23	824.24	0.34	0.02	-6.11	270.71
	NORMAL	7,890.0	3.20	213.14	7,814.05	525.82	-634.21	823.80	0.00	0.00	0.00	0.00