

1 General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well/Wellbore Information

Well	RWF 312-25	Wellbore No.	00
Wellbore Legal Name	RWF 312-25	Common Wellbore Name	RWF 312-25
Project	RU 25-06S-094W	Site	RWF 22-25 Pad
Vertical Section Azimuth	327.78 (°)	North reference	True
Origin N/S		Origin E/W	
Spud date	1/4/2014	UWI	RWF 312-25
Active datum	KB @6,058.4ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	1/4/2014	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 (°)
1/4/2014	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/4/2014	NORMAL	75.0	0.44	14.77	75.00	0.28	0.07	0.20	0.59	0.59	0.00	14.77
	NORMAL	165.0	2.73	345.23	164.96	2.69	-0.38	2.48	2.62	2.54	-32.82	325.18
	NORMAL	256.0	4.49	326.69	255.78	7.76	-2.89	8.11	2.30	1.93	-20.37	316.96
	NORMAL	346.0	5.45	331.35	345.44	14.45	-6.88	15.89	1.16	1.07	5.18	25.14
	NORMAL	437.0	7.65	323.88	435.84	23.14	-12.52	26.25	2.59	2.42	-8.21	335.09
	NORMAL	527.0	10.29	327.74	524.73	34.78	-20.34	40.27	3.01	2.93	4.29	14.75
	NORMAL	617.0	12.58	328.01	612.94	49.89	-29.83	58.11	2.55	2.54	0.30	1.47
	NORMAL	707.0	14.60	326.69	700.42	67.68	-41.25	79.26	2.27	2.24	-1.47	350.63
	NORMAL	778.0	14.36	326.68	769.16	82.52	-51.00	97.01	0.34	-0.34	-0.01	180.59
	NORMAL	868.0	15.21	325.65	856.18	101.59	-63.79	119.96	0.99	0.94	-1.14	342.32
	NORMAL	958.0	14.07	326.18	943.26	120.43	-76.55	142.70	1.28	-1.27	0.59	173.55
	NORMAL	1,052.0	13.02	329.25	1,034.64	139.02	-88.32	164.70	1.35	-1.12	3.27	147.08
	NORMAL	1,105.0	13.41	329.37	1,086.24	149.44	-94.50	176.82	0.74	0.74	0.23	4.08
1/6/2014	NORMAL	1,207.0	14.02	329.22	1,185.33	170.24	-106.85	200.99	0.60	0.60	-0.15	356.59
	NORMAL	1,239.0	14.18	329.54	1,216.37	176.94	-110.82	208.78	0.56	0.50	1.00	26.13
	NORMAL	1,333.0	14.90	329.34	1,307.36	197.26	-122.82	232.37	0.77	0.77	-0.21	355.91
	NORMAL	1,427.0	15.64	329.01	1,398.04	218.52	-135.51	257.12	0.79	0.79	-0.35	353.14
	NORMAL	1,523.0	15.56	329.26	1,490.50	240.68	-148.75	282.93	0.11	-0.08	0.26	140.08
	NORMAL	1,617.0	15.99	329.17	1,580.96	262.64	-161.83	308.48	0.46	0.46	-0.10	356.70
	NORMAL	1,712.0	16.65	328.19	1,672.13	285.44	-175.71	335.17	0.75	0.69	-1.03	336.88

2.1.2 Survey Stations (Continued)

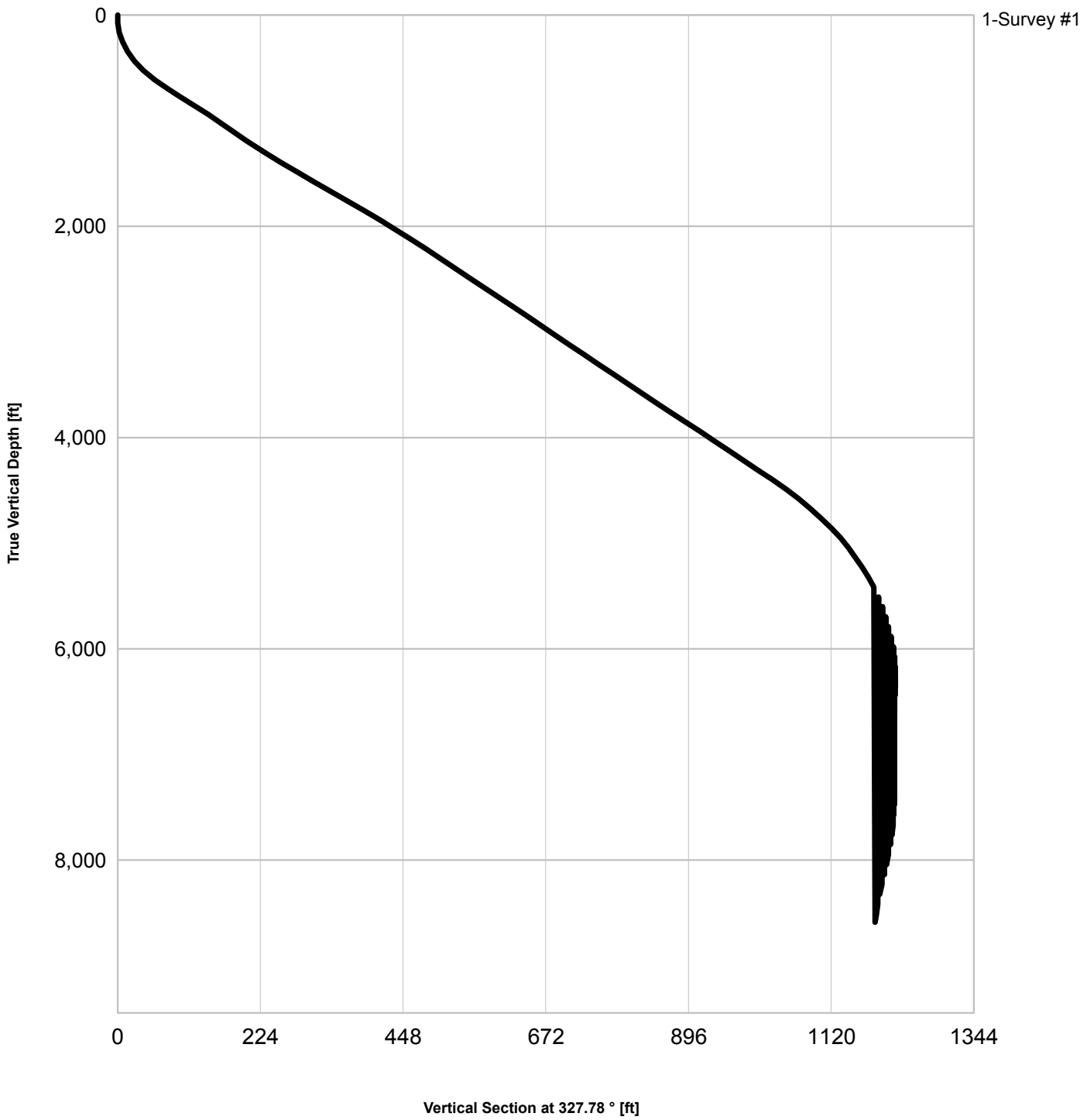
Date	Type	MD (ft)	Inc. (°)	Azi. (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. sec. (ft)	DLS (°/100usft)	Build Rate (°/100usft)	Turn (°/100usft)	Tface (°)
1/6/2014	NORMAL	1,807.0	15.74	328.11	1,763.36	307.95	-189.69	361.66	0.96	-0.96	-0.08	181.37
	NORMAL	1,900.0	16.19	328.34	1,852.77	329.69	-203.16	387.24	0.49	0.48	0.25	8.11
	NORMAL	1,994.0	15.32	326.59	1,943.24	351.21	-216.88	412.76	1.05	-0.93	-1.86	207.80
	NORMAL	2,088.0	14.58	327.59	2,034.06	371.57	-230.06	437.01	0.83	-0.79	1.06	161.26
	NORMAL	2,181.0	15.01	328.03	2,123.98	391.67	-242.71	460.76	0.48	0.46	0.47	14.86
	NORMAL	2,274.0	14.12	327.67	2,213.99	411.47	-255.15	484.14	0.96	-0.96	-0.39	185.63
	NORMAL	2,368.0	13.62	328.24	2,305.25	430.57	-267.11	506.68	0.55	-0.53	0.61	164.99
	NORMAL	2,461.0	13.91	328.28	2,395.57	449.39	-278.75	528.81	0.31	0.31	0.04	1.90
	NORMAL	2,554.0	14.12	327.23	2,485.81	468.43	-290.77	551.33	0.35	0.23	-1.13	309.04
	NORMAL	2,648.0	14.47	327.03	2,576.90	487.93	-303.37	574.54	0.38	0.37	-0.21	351.87
	NORMAL	2,742.0	13.79	328.07	2,668.05	507.29	-315.68	597.48	0.77	-0.72	1.11	160.03
	NORMAL	2,836.0	14.13	327.65	2,759.27	526.49	-327.75	620.16	0.38	0.36	-0.45	343.20
	NORMAL	2,928.0	13.65	330.31	2,848.58	545.41	-339.13	642.23	0.87	-0.52	2.89	128.22
	NORMAL	3,022.0	13.69	329.52	2,939.92	564.63	-350.27	664.43	0.20	0.04	-0.84	281.71
	NORMAL	3,116.0	13.70	329.35	3,031.25	583.79	-361.59	686.68	0.04	0.01	-0.18	283.87
	NORMAL	3,211.0	14.20	329.22	3,123.45	603.48	-373.28	709.57	0.53	0.53	-0.14	356.35
	NORMAL	3,306.0	13.65	327.72	3,215.66	622.97	-385.23	732.43	0.69	-0.58	-1.58	212.55
	NORMAL	3,399.0	14.05	326.67	3,305.95	641.68	-397.30	754.69	0.51	0.43	-1.13	327.35
	NORMAL	3,491.0	14.25	325.58	3,395.16	660.35	-409.83	777.17	0.36	0.22	-1.18	306.36
	NORMAL	3,584.0	13.90	326.31	3,485.37	679.09	-422.50	799.78	0.42	-0.38	0.78	153.46
	NORMAL	3,678.0	13.88	326.09	3,576.62	697.84	-435.05	822.33	0.06	-0.02	-0.23	249.15
	NORMAL	3,772.0	13.99	325.21	3,667.85	716.53	-447.83	844.95	0.25	0.12	-0.94	297.00
	NORMAL	3,866.0	14.31	325.40	3,759.00	735.42	-460.91	867.91	0.34	0.34	0.20	8.35
1/7/2014	NORMAL	3,961.0	14.12	326.93	3,851.09	754.79	-473.90	891.23	0.44	-0.20	1.61	117.57
	NORMAL	4,054.0	14.07	327.32	3,941.29	773.81	-486.19	913.87	0.12	-0.05	0.42	117.95
	NORMAL	4,148.0	14.24	327.80	4,032.44	793.22	-498.52	936.86	0.22	0.18	0.51	34.86
	NORMAL	4,242.0	14.07	328.38	4,123.58	812.73	-510.67	959.85	0.24	-0.18	0.62	140.44
	NORMAL	4,336.0	13.59	327.41	4,214.86	831.76	-522.61	982.32	0.57	-0.51	-1.03	205.31
	NORMAL	4,428.0	14.01	327.95	4,304.20	850.31	-534.34	1,004.26	0.48	0.46	0.59	17.31
	NORMAL	4,523.0	14.16	330.75	4,396.35	870.19	-546.12	1,027.37	0.73	0.16	2.95	78.95
	NORMAL	4,618.0	12.86	333.57	4,488.72	889.80	-556.50	1,049.49	1.53	-1.37	2.97	154.49
	NORMAL	4,711.0	11.53	333.61	4,579.62	907.39	-565.24	1,069.03	1.43	-1.43	0.04	179.66
	NORMAL	4,804.0	10.91	334.29	4,670.84	923.65	-573.19	1,087.02	0.68	-0.67	0.73	168.29
	NORMAL	4,897.0	10.24	333.52	4,762.26	938.98	-580.70	1,103.99	0.74	-0.72	-0.83	191.53
	NORMAL	4,991.0	9.63	335.33	4,854.85	953.60	-587.70	1,120.10	0.73	-0.65	1.93	153.78
	NORMAL	5,086.0	8.24	337.04	4,948.70	967.09	-593.68	1,134.70	1.49	-1.46	1.80	170.03
	NORMAL	5,180.0	7.01	338.27	5,041.86	978.62	-598.43	1,146.99	1.32	-1.31	1.31	173.05
1/8/2014	NORMAL	5,274.0	6.77	337.15	5,135.18	989.06	-602.70	1,158.09	0.29	-0.26	-1.19	208.69
	NORMAL	5,367.0	6.82	341.09	5,227.53	999.33	-606.62	1,168.88	0.50	0.05	4.24	85.84
	NORMAL	5,461.0	5.44	339.52	5,320.99	1,008.79	-609.99	1,178.67	1.48	-1.47	-1.67	186.15
	NORMAL	5,555.0	5.01	340.57	5,414.60	1,016.83	-612.91	1,187.04	0.47	-0.46	1.12	167.99
	NORMAL	5,649.0	4.40	338.76	5,508.28	1,024.06	-615.58	1,194.58	0.67	-0.65	-1.93	192.78
	NORMAL	5,742.0	3.28	337.97	5,601.07	1,029.86	-617.88	1,200.70	1.21	-1.20	-0.85	182.31
	NORMAL	5,836.0	2.78	332.09	5,694.94	1,034.36	-619.95	1,205.62	0.63	-0.53	-6.26	208.95
	NORMAL	5,931.0	2.65	326.79	5,789.83	1,038.24	-622.23	1,210.11	0.30	-0.14	-5.58	239.99
	NORMAL	6,025.0	2.43	330.15	5,883.74	1,041.78	-624.41	1,214.28	0.28	-0.23	3.57	147.58
1/9/2014	NORMAL	6,120.0	1.92	336.11	5,978.67	1,044.99	-626.06	1,217.86	0.59	-0.54	6.27	159.04
	NORMAL	6,215.0	1.01	29.39	6,073.65	1,047.17	-626.29	1,219.84	1.63	-0.96	56.08	148.40
	NORMAL	6,309.0	0.50	17.67	6,167.64	1,048.28	-625.76	1,220.49	0.56	-0.54	-12.47	191.04
	NORMAL	6,402.0	0.53	36.14	6,260.63	1,049.02	-625.39	1,220.91	0.18	0.03	19.86	89.08
	NORMAL	6,495.0	0.38	189.75	6,353.63	1,049.06	-625.19	1,220.84	0.95	-0.16	165.17	169.02
1/10/2014	NORMAL	6,589.0	0.44	153.30	6,447.63	1,048.43	-625.08	1,220.25	0.28	0.06	-38.78	264.30
	NORMAL	6,682.0	0.29	164.40	6,540.63	1,047.88	-624.85	1,219.67	0.18	-0.16	11.94	160.24
	NORMAL	6,777.0	0.79	196.44	6,635.62	1,047.03	-624.97	1,219.01	0.60	0.53	33.73	47.83
	NORMAL	6,870.0	0.38	8.67	6,728.62	1,046.72	-625.11	1,218.82	1.26	-0.44	185.19	177.48
	NORMAL	6,965.0	0.18	22.87	6,823.62	1,047.16	-625.00	1,219.14	0.22	-0.21	14.95	167.87

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 (°)
1/10/2014	NORMAL	7,060.0	0.12	264.98	6,918.62	1,047.29	-625.04	1,219.27	0.27	-0.06	-124.09	204.19
	NORMAL	7,154.0	0.20	255.72	7,012.62	1,047.24	-625.30	1,219.37	0.09	0.09	-9.85	337.42
	NORMAL	7,248.0	0.28	236.36	7,106.62	1,047.08	-625.65	1,219.41	0.12	0.09	-20.60	304.66
	NORMAL	7,342.0	0.77	194.78	7,200.62	1,046.34	-626.00	1,218.98	0.63	0.52	-44.23	300.08
	NORMAL	7,436.0	0.35	100.92	7,294.61	1,046.01	-626.16	1,218.35	1.18	-0.45	175.77	175.39
	NORMAL	7,528.0	0.44	50.99	7,386.61	1,046.52	-625.89	1,218.64	0.38	0.10	55.42	102.06
1/11/2014	NORMAL	7,622.0	0.32	84.25	7,480.61	1,046.77	-625.35	1,218.99	0.26	-0.13	35.38	134.49
	NORMAL	7,716.0	0.62	155.50	7,574.61	1,046.33	-624.88	1,218.37	0.64	0.32	75.80	101.62
	NORMAL	7,810.0	0.77	177.04	7,668.60	1,045.24	-624.63	1,217.32	0.32	0.16	22.91	71.20
	NORMAL	7,904.0	1.73	184.59	7,762.58	1,043.20	-624.71	1,215.63	1.03	1.02	8.03	13.52
	NORMAL	7,996.0	1.95	178.18	7,854.53	1,040.25	-624.77	1,213.17	0.33	0.24	-6.97	313.67
	NORMAL	8,090.0	2.66	183.75	7,948.45	1,036.47	-624.87	1,210.02	0.79	0.76	5.93	20.31
	NORMAL	8,185.0	2.73	203.75	8,043.35	1,032.20	-625.92	1,206.97	0.99	0.07	21.05	95.78
	NORMAL	8,279.0	3.27	194.07	8,137.22	1,027.55	-627.48	1,203.87	0.79	0.57	-10.30	311.93
	NORMAL	8,371.0	3.50	193.93	8,229.06	1,022.28	-628.79	1,200.11	0.25	0.25	-0.15	357.87
	NORMAL	8,465.0	3.43	197.68	8,322.89	1,016.82	-630.33	1,196.31	0.25	-0.07	3.99	109.03
	NORMAL	8,559.0	3.17	213.94	8,416.73	1,011.98	-632.64	1,193.45	1.03	-0.28	17.30	113.54
	NORMAL	8,665.0	3.62	213.08	8,522.55	1,006.75	-636.10	1,190.87	0.43	0.42	-0.81	353.11
	NORMAL	8,730.0	3.90	212.55	8,587.41	1,003.16	-638.41	1,189.07	0.43	0.43	-0.82	352.66

3 Charts

3.1 Vertical Section View



3.2 Plan View

