

I General

1.1 Customer Information

Company	PICEANCE VLY
Representative	
Address	

1.2 Well Information

Well	RWF 323-36	Wellbore No.	
Well Name	RWF 323-36	Common Name	RWF 323-36
Project	RU 36-06S-094W	Site	RWF 33-36 Pad
Vertical Section Azimuth	235.83 (°)	North Reference	True
Origin N/S		Origin E/W	
Spud Date	1/31/2013	UWI	RWF 323-36
Active Datum	KB @6,554.0ft (above Mean Sea Level)		

2 Survey Name

2.1 Survey Name: Survey #1

Survey Name	Survey #1	Company	
Date Started	1/31/2013	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 (°/100ft)	Build Rate (°/100ft)	Turn (°/100ft)	TFace (°)
1/31/2013	Tie On	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/31/2013	NORMAL	118.0	0.88	230.19	118.00	-0.58	-0.70	0.90	0.75	0.75	0.00	230.19
	NORMAL	179.0	1.50	234.32	178.98	-1.35	-1.70	2.17	1.03	1.02	6.77	9.94
	NORMAL	270.0	1.76	221.31	269.95	-3.09	-3.59	4.71	0.50	0.29	-14.30	298.47
	NORMAL	360.0	3.26	237.13	359.86	-5.52	-6.66	8.61	1.82	1.67	17.58	32.83
	NORMAL	452.0	4.49	232.21	451.65	-9.14	-11.70	14.82	1.38	1.34	-5.35	342.4'
2/1/2013	NORMAL	520.0	3.79	236.24	519.47	-12.02	-15.67	19.72	1.11	-1.03	5.93	159.43
	NORMAL	611.0	4.00	239.61	610.26	-15.30	-20.91	25.89	0.34	0.23	3.70	49.16
	NORMAL	701.0	4.46	240.95	700.01	-18.59	-26.68	32.51	0.52	0.51	1.49	12.80
	NORMAL	792.0	5.53	242.93	790.67	-22.30	-33.67	40.39	1.19	1.18	2.18	10.14
	NORMAL	883.0	5.17	233.37	881.27	-26.74	-40.87	48.83	1.05	-0.40	-10.51	243.29
	NORMAL	974.0	4.58	225.15	971.94	-31.75	-46.74	56.50	1.00	-0.65	-9.03	225.77
	NORMAL	1,064.0	4.04	231.28	1,061.69	-36.27	-51.76	63.19	0.79	-0.60	6.81	142.56
	NORMAL	1,124.0	4.19	232.56	1,121.53	-38.92	-55.15	67.49	0.29	0.25	2.13	32.12
2/2/2013	NORMAL	1,256.0	4.58	232.95	1,253.15	-45.03	-63.18	77.57	0.30	0.30	0.30	4.57
	NORMAL	1,351.0	4.54	232.85	1,347.85	-49.59	-69.20	85.11	0.04	-0.04	-0.11	191.19
	NORMAL	1,447.0	4.29	232.60	1,443.56	-54.06	-75.09	92.49	0.26	-0.26	-0.26	184.28
	NORMAL	1,543.0	4.45	229.39	1,539.28	-58.67	-80.77	99.77	0.30	0.17	-3.34	301.58
	NORMAL	1,638.0	3.74	238.86	1,634.04	-62.67	-86.22	106.53	1.03	-0.75	9.97	141.05
	NORMAL	1,734.0	3.64	239.13	1,729.84	-65.85	-91.51	112.70	0.11	-0.10	0.28	170.28
	NORMAL	1,829.0	3.43	237.44	1,824.66	-68.93	-96.49	118.55	0.25	-0.22	-1.78	205.55

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (%/100ft)	Build Rate (%/100ft)	Turn (%/100ft)	TFace (°)
2/2/2013	NORMAL	1,925.0	3.25	240.67	1,920.50	-71.81	-101.29	124.13	0.27	-0.19	3.36	135.33
	NORMAL	2,021.0	2.75	238.70	2,016.37	-74.34	-105.63	129.14	0.53	-0.52	-2.05	190.67
	NORMAL	2,117.0	3.56	243.08	2,112.22	-76.88	-110.25	134.40	0.88	0.84	4.56	18.77
	NORMAL	2,213.0	3.55	244.03	2,208.03	-79.53	-115.58	140.30	0.06	-0.01	0.99	100.11
	NORMAL	2,308.0	4.17	238.68	2,302.82	-82.62	-121.18	146.66	0.75	0.65	-5.63	327.16
2/3/2013	NORMAL	2,402.0	3.97	239.48	2,396.58	-86.05	-126.90	153.32	0.22	-0.21	0.85	164.55
	NORMAL	2,498.0	3.63	230.04	2,492.38	-89.65	-132.04	159.60	0.74	-0.35	-9.83	236.82
	NORMAL	2,593.0	3.73	226.39	2,587.18	-93.71	-136.58	165.64	0.27	0.11	-3.84	291.29
	NORMAL	2,688.0	3.16	237.31	2,682.01	-97.26	-141.02	171.30	0.91	-0.60	11.49	136.34
	NORMAL	2,784.0	2.81	226.09	2,777.88	-100.32	-144.94	176.27	0.71	-0.36	-11.69	233.56
	NORMAL	2,879.0	3.50	240.76	2,872.74	-103.35	-149.15	181.45	1.11	0.73	15.44	56.96
	NORMAL	2,971.0	3.38	240.54	2,964.57	-106.06	-153.96	186.95	0.13	-0.13	-0.24	186.17
	NORMAL	3,067.0	3.52	236.16	3,060.40	-109.09	-158.87	192.72	0.31	0.15	-4.56	295.78
	NORMAL	3,161.0	3.38	233.74	3,154.23	-112.34	-163.51	198.37	0.21	-0.15	-2.57	224.93
	NORMAL	3,257.0	3.04	231.45	3,250.08	-115.60	-167.78	203.74	0.38	-0.35	-2.39	199.52
	NORMAL	3,353.0	4.28	241.38	3,345.88	-118.90	-172.91	209.84	1.45	1.29	10.34	32.09
	NORMAL	3,448.0	4.23	243.05	3,440.62	-122.18	-179.15	216.85	0.14	-0.05	1.76	112.8'
	NORMAL	3,544.0	3.93	242.37	3,536.37	-125.31	-185.22	223.63	0.32	-0.31	-0.71	188.82
	NORMAL	3,639.0	3.93	242.51	3,631.15	-128.33	-190.99	230.10	0.01	0.00	0.15	90.07
	NORMAL	3,734.0	3.70	240.57	3,725.94	-131.34	-196.55	236.38	0.28	-0.24	-2.04	208.34
	NORMAL	3,830.0	3.52	243.84	3,821.75	-134.16	-201.89	242.39	0.28	-0.19	3.41	132.79
	NORMAL	3,925.0	3.63	237.00	3,916.57	-137.08	-207.03	248.28	0.46	0.12	-7.20	281.03
	NORMAL	4,021.0	3.48	237.34	4,012.38	-140.31	-212.03	254.24	0.16	-0.16	0.35	172.17
	NORMAL	4,116.0	3.34	231.95	4,107.21	-143.57	-216.64	259.88	0.37	-0.15	-5.67	243.74
	NORMAL	4,212.0	3.40	233.99	4,203.05	-146.97	-221.15	265.51	0.14	0.06	2.13	64.44
	NORMAL	4,307.0	3.44	233.48	4,297.88	-150.32	-225.71	271.18	0.05	0.04	-0.54	322.49
	NORMAL	4,402.0	4.13	242.01	4,392.67	-153.62	-231.03	277.43	0.94	0.73	8.98	43.52
2/4/2013	NORMAL	4,498.0	4.22	243.28	4,488.42	-156.83	-237.23	284.37	0.13	0.09	1.32	46.4'
	NORMAL	4,594.0	4.06	238.46	4,584.17	-160.20	-243.28	291.26	0.40	-0.17	-5.02	242.92
	NORMAL	4,689.0	3.77	237.27	4,678.94	-163.65	-248.78	297.74	0.32	-0.31	-1.25	195.06
	NORMAL	4,785.0	3.51	236.20	4,774.75	-166.99	-253.88	303.84	0.28	-0.27	-1.11	194.1'
	NORMAL	4,881.0	4.06	234.28	4,870.54	-170.61	-259.08	310.17	0.59	0.57	-2.00	346.06
	NORMAL	4,977.0	3.61	235.35	4,966.32	-174.31	-264.32	316.59	0.47	-0.47	1.11	171.50
	NORMAL	5,073.0	3.85	232.02	5,062.12	-178.01	-269.35	322.83	0.34	0.25	-3.47	316.26
	NORMAL	5,168.0	3.40	234.80	5,156.93	-181.60	-274.16	328.83	0.51	-0.47	2.93	160.05
	NORMAL	5,262.0	3.46	233.58	5,250.76	-184.89	-278.72	334.45	0.10	0.06	-1.30	308.8'
	NORMAL	5,357.0	3.79	231.14	5,345.57	-188.56	-283.48	340.45	0.38	0.35	-2.57	333.72
	NORMAL	5,453.0	3.73	227.40	5,441.37	-192.66	-288.25	346.70	0.26	-0.06	-3.90	254.39
	NORMAL	5,547.0	2.08	243.36	5,535.24	-195.50	-292.02	351.41	1.94	-1.76	16.98	161.7'
	NORMAL	5,642.0	2.56	233.00	5,630.17	-197.55	-295.26	355.24	0.67	0.51	-10.91	313.60
	NORMAL	5,738.0	2.22	229.55	5,726.08	-200.05	-298.38	359.23	0.38	-0.35	-3.59	201.22
	NORMAL	5,834.0	2.04	232.35	5,822.02	-202.30	-301.15	362.78	0.22	-0.19	2.92	151.36
2/5/2013	NORMAL	5,929.0	0.95	225.00	5,916.98	-203.89	-303.05	365.25	1.16	-1.15	-7.74	186.32
	NORMAL	6,022.0	0.27	258.78	6,009.98	-204.47	-303.81	366.20	0.80	-0.73	36.32	168.3'
	NORMAL	6,118.0	0.53	263.01	6,105.97	-204.57	-304.47	366.81	0.27	0.27	4.41	8.60
	NORMAL	6,213.0	0.57	265.26	6,200.97	-204.66	-305.38	367.61	0.05	0.04	2.37	29.49
	NORMAL	6,309.0	0.67	225.21	6,296.96	-205.10	-306.25	368.58	0.45	0.10	-41.72	262.45
	NORMAL	6,404.0	0.70	227.78	6,391.96	-205.88	-307.08	369.70	0.05	0.03	2.71	46.97
	NORMAL	6,500.0	0.13	337.72	6,487.96	-206.17	-307.55	370.26	0.79	-0.59	114.52	170.68
	NORMAL	6,596.0	0.47	34.34	6,583.95	-205.75	-307.37	369.87	0.43	0.35	58.98	71.86
2/6/2013	NORMAL	6,691.0	0.18	15.34	6,678.95	-205.28	-307.11	369.39	0.32	-0.31	-20.00	191.06
	NORMAL	6,787.0	0.33	239.21	6,774.95	-205.28	-307.31	369.55	0.50	0.16	-141.80	208.69
	NORMAL	6,882.0	0.64	214.81	6,869.95	-205.85	-307.85	370.32	0.39	0.33	-25.68	313.72
	NORMAL	6,978.0	0.57	193.40	6,965.94	-206.76	-308.26	371.17	0.24	-0.07	-22.30	242.28
	NORMAL	7,074.0	1.00	183.22	7,061.93	-208.06	-308.42	372.04	0.47	0.45	-10.60	336.90
	NORMAL	7,169.0	0.44	182.51	7,156.93	-209.25	-308.48	372.76	0.59	-0.59	-0.75	180.56
	NORMAL	7,265.0	0.83	345.39	7,252.92	-208.95	-308.67	372.74	1.31	0.41	169.67	168.79

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLS (%/100ft)	Build Rate (%/100ft)	Turn (%/100ft)	TFace (°)
2/6/2013	NORMAL	7,360.0	0.78	335.20	7,347.91	-207.69	-309.12	372.41	0.16	-0.05	-10.73	245.70
	NORMAL	7,456.0	0.84	317.77	7,443.91	-206.58	-309.87	372.40	0.26	0.06	-18.16	274.87
	NORMAL	7,552.0	0.36	289.63	7,539.90	-205.96	-310.62	372.68	0.57	-0.50	-29.31	198.00
	NORMAL	7,647.0	0.89	235.19	7,634.89	-206.28	-311.51	373.59	0.78	0.56	-57.31	282.28
	NORMAL	7,743.0	0.74	236.32	7,730.88	-207.05	-312.64	374.96	0.16	-0.16	1.18	174.45
	NORMAL	7,838.0	0.35	168.71	7,825.88	-207.67	-313.09	375.68	0.72	-0.41	-71.17	208.08
	NORMAL	7,934.0	0.62	123.10	7,921.88	-208.24	-312.60	375.60	0.47	0.28	-47.51	280.70
2/7/2013	NORMAL	8,030.0	0.64	126.29	8,017.87	-208.84	-311.73	375.22	0.04	0.02	3.32	61.91
	NORMAL	8,125.0	0.90	194.30	8,112.87	-209.88	-311.49	375.60	0.93	0.27	71.59	109.95
	NORMAL	8,221.0	0.35	134.96	8,208.86	-210.82	-311.47	376.11	0.81	-0.57	-61.81	202.65
	NORMAL	8,317.0	0.94	171.16	8,304.85	-211.80	-311.14	376.39	0.72	0.61	37.71	53.65
	NORMAL	8,412.0	1.08	200.26	8,399.84	-213.41	-311.33	377.45	0.55	0.15	30.63	89.60
	NORMAL	8,507.0	1.76	234.54	8,494.81	-215.10	-312.83	379.64	1.12	0.72	36.08	69.31
	NORMAL	8,603.0	2.62	225.32	8,590.74	-217.50	-315.59	383.27	0.97	0.90	-9.60	333.07
	NORMAL	8,699.0	2.90	227.16	8,686.63	-220.69	-318.93	387.83	0.31	0.29	1.92	18.48
	NORMAL	8,784.0	3.13	221.31	8,771.51	-223.90	-322.04	392.20	0.45	0.27	-6.88	303.83
	NORMAL	8,845.0	3.13	221.31	8,832.42	-226.40	-324.24	395.42	0.00	0.00	0.00	0.00